International Network for Transport and Accessibility in Low Income Communities

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Report by INTALInC

TRANSPORT AND SOCIAL EXCLUSION IN FIVE AFRICAN CITIES

June 2019

Supported by the Volvo Research and Educational Foundations

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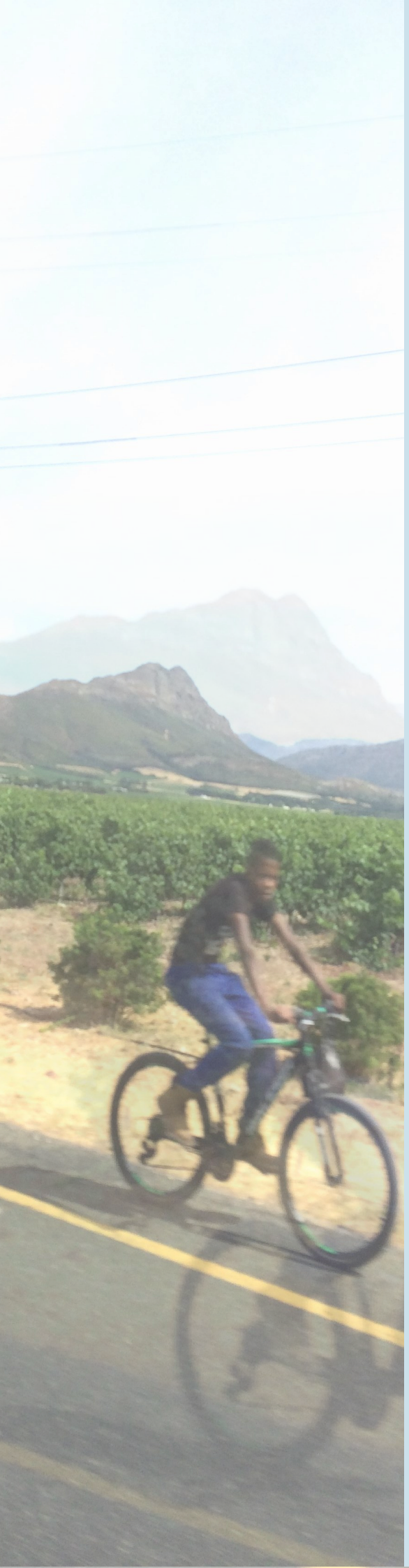

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1. Introduction

This report is a scoping study of the transport conditions and experiences of people and communities living at the margins of Africa's burgeoning cities. The term 'transport' is used in its widest sense to include all aspects of travel from walking and other non-motorized trips to public and private motorized journeys. However, air passenger travel is not included in the study, largely because it does not play a large part in the lives of low-income populations. Urban freight movements and their impacts on cities are also not really considered by the study, although they are sometimes highly relevant, especially those from rural areas into city centres.

The study is also far from comprehensive or systematic in its geographical coverage. Its findings are based on eight randomly selected case study cities and these analysed only the extremely limited, publicly available evidence that could be identified through desk-based research. The simple aim of the study is to offer some high-level insights into the transport needs of the socially excluded populations living in African cities, as well as a flavour of how transport affects their everyday activities and livelihoods. More robust empirical research is definitely needed, encompassing many more cities, to be able to offer a comprehensive picture of the important issues we raise in the report. This is the main intention behind the VREF's major Mobility and Access in African Cities (MAC) programme starting in 2019.

The 'right to transport' becomes ever more pressing in the social development context of African cities as they struggle to thrive under the trend of rapid urbanisation, under-controlled development and extremely limited resources for investment in public services. Transport and mobility are the drivers of any economy which connect citizens to various activity locations. While the challenge of transport is acknowledged to affect most urban dwellers, the situation tends to be worse for low-income households who often walk to their destinations or use unreliable and expensive transport. Affordable and reliable transport is needed to enable poor people to access important opportunities such as education, employment, and health care, which are most often not located within easy walking distances of low-income settlements where most of the vulnerable population groups live. This challenge is exacerbated as cities sprawl to the outer suburbs and rural/urban periphery with employment and services located away from urban poor residents. This type of growth requires well conceptualized spatial planning, mobility and access networks which most African cities have only begun to discuss in the context of the Sustainable Development Goals (SDGs) and under the umbrella of the New Urban Agenda (NUA), which many cities are now signing up to[1].

Across all five studies we have, therefore, focused on the needs of the majority people who are living on or below the poverty threshold for their country (most usually the minimum

[1] See Priya Uteng and Lucas 2018 for a critical analysis of these approaches in the context of social development

resources a person needs to survive, (currently set by the World Bank at $1.90 per day equivalent in local currency). This is an intentional departure from the focus of the mainstream transport strategies for these cities, which are mostly concerned with congestion and meeting the ever-increasing demands for private motorized transport from their minority middle-class and elite populations. The five selected case study cities are Cape Coast in Ghana, Cape Town in South Africa, Kampala in Uganda, Lagos in Nigeria and Nairobi in Kenya. They are cities of quite different sizes, each at quite different stages or urbanization, infrastructure development and social progress. They also have very different economic, ecological and social profiles. In part, this difference between them was quite intentional because we wanted to see how far people's issues and concerns change according to the different dynamics of the places where they live, and which have been classically associated with transport infrastructure development, operational issues and their associated travel outcomes. Three of them are capital cities, which could expect more inward investment and international policy attention, and two of them are secondary cities, which tend to be generally less well-resourced in terms of inward investment from all sources.

In addition, in the report we have tried to draw out the wider travel concerns of vulnerable population groups, such as women and girls, children and older and disabled people, as well as to include the informal residents and slum dwellers that are often left out of official counts and surveys. A further dimension of the study was to identify local projects and programmed interventions that were specifically improving the travel conditions of these usually marginalized groups. However, the local studies were largely unable to identify much literature concerning the 'lived travel experiences' of the excluded populations to which Lucas (2012) refers, and there is also a dearth of qualitative or quantitative analysis to evaluate the outcomes or impacts of increased accessibility or mobility, or the contribution of new transport interventions, especially the impact of pedestrian interventions, which would seem of high importance given the walking dependencies of low-income residents across all the case study cities.

As such, most of the 'evidence' we report is drawn anecdotally from the practical experiences of the academics and NGOs who are carrying out their research and frontline activities in these areas. Each national study was dependent on having local experts to hand in each of these cities to provide the evidence-base, which is otherwise largely hidden from the public domain. In this respect, the report was compiled in close partnership with our university colleagues, policymakers and NGOs in each city and is the amalgamation of five individual national studies and independent stakeholder workshops involving a broad constituency of both transport experts and the NGOs that are working on the frontline with socially excluded populations in each city. This partnership working, combined with participative action research with the people who are affected on

the ground, has proved a hugely productive way to generate the information that is needed to begin to unpack ways to improve the travel environments and circumstances of the most neglected and deprived populations. We collectively refer to these populations in the report as the 'socially excluded', although we also point to difference between social groups and geographical locations.

The UK's Social Exclusion Unit (SEU) defines social exclusion as:

> **'... about more than income poverty. It is a shorthand for what can happen when people or areas face a combination of linked problems such as unemployment, discrimination, poor skills, low incomes, poor housing, high crime, bad health and family breakdown. These problems are linked and mutually reinforcing so that they can create a vicious cycle in people's lives' (SEU, 2004: 4)**

The concept of social exclusion is not as well-recognized within the African context, and especially not in the context of their 'Transport Problem', which is more often framed as one of (spatial) inequity, marginalization, or poverty. Nevertheless, we have borrowed and adapted it to the African urban context for the purposes of this report because it so well communicates the systematic process of almost complete 'lock-out' from resources, rights and opportunities that is experienced by the majority of the urban poor in African cities.

The growing popularity of the concept of social exclusion within social policy is its usefulness in providing novel insights into the nature, causes and consequences of poverty, deprivation and discrimination, which can best be understood as:

> *'... an accumulation of confluent processes with successive ruptures arising from the heart of the economy, politics and society, which gradually distances and places persons, groups, communities and territories in a position of inferiority in relation to centres of power, resources and prevailing values*.' (Estivill 2003:19).

In a case study of Tanzania by the International Labour Organization (ILO), social exclusion was conceptualized as both a state and a process. As a state of being, it is equivalent to the relative concept of social deprivation, whilst as a process it refers to the socially determined structures and practices which impede access to economic resources, social goods, and to the institutions that determine their destinies (Gore & Figueiredo, 1997). The ILO study, thus, serves to emphasis the contribution of access in the process of social exclusion, which is in turn closely related to transport services and resources in their ability to facilitate or inhibit members of society to facilitate their everyday economic and social needs.

Transport-related social exclusion (TRSE) is accordingly:

> '**The process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due in whole or in part to insufficient mobility in a society and environment, built around the assumption of high mobility**' (Kenyon et al 2002: p10).

It is also relevant to note here that social exclusion occurs worldwide despite, or even because of different levels of development, and/or the proposed United Nations Sustainable Development Goals[2].

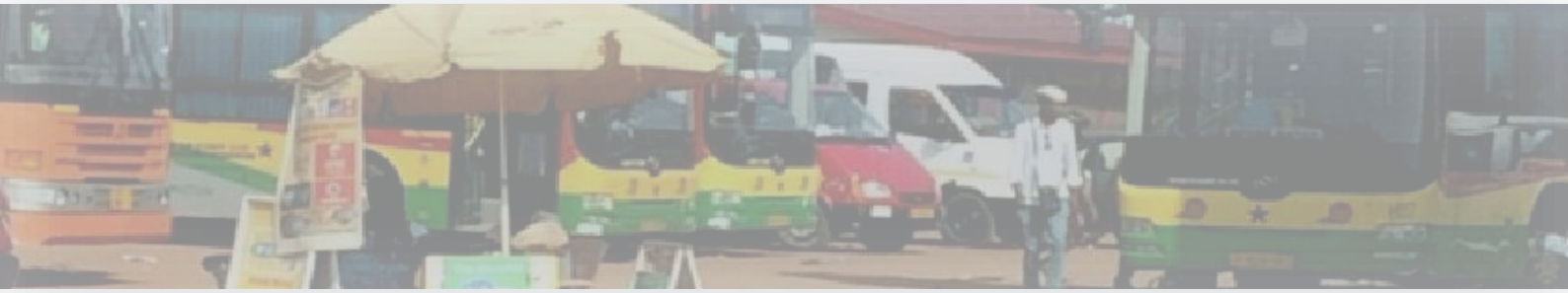
[2] https://sustainabledevelopment.un.org/?menu=1300

2. Setting the transport context in African cities

> ***Things have changed in Nigeria, the population has grown geometrically, the economy has expanded, inter-regional movement has increased, yet the support infrastructure to facilitate this movement has not grown to meet the needs of the country. The neglect of the rural economy has made movement of people from these areas inevitable, giving rise to an unprecedented urbanisation. It has been forecasted by the World Bank that by 2050, Nigeria population will be the 4th largest in the world and 70% of its citizens will live in urban areas. The implication of this is freighting and daunting.*** (Local expert, Nigeria study)

This quote reflects the repeated narrative from all of the cities in this study. Rapid population growth and urbanization makes it almost impossible to plan and deliver the necessary housing, transport and other infrastructures, and as such, all but the richest neighbourhoods lack basic services. The World Resources Institute (2016) finds that up to 70% of city residents in the Global South may be *under-served*, lacking access to one or more core services, such as housing, water and sanitation, energy, and transportation (Beard et al., 2016).

It would be wrong, however, to portray *all* African cities as chaotic, unplanned, under resourced and badly governed in terms of their transport systems. Certainly, cities such as Cape Town, Pretoria, Lagos, Kampala and Nairobi have invested considerable time and resources to the development of their urban road infrastructures in recent years. Nevertheless, many of them still experience heavy congestion, causing severe delays to journeys by privately-run and public service vehicles, and with well-recognized losses to their economies. What is certain and common to all African cities, however, is that their transport investments have not kept pace with the vastly increased demand for travel, and arguably, perhaps they *never can* in light of their predicted future population explosions and rapid and largely unplanned urban expansion. Critical commentators have suggested that investment in developing cities has been mainly in the interests of 'big capital' and globalized capital growth, rather than to meet the needs of the people who live within them (Chatterton, 2018).



That too little has, and is being, invested in public transport services in these cities is clear. As such, most people rely on informal or semi-formal minibus and motorbike taxi services for the majority of their motorized trips. For most low-income populations walking is the overwhelmingly dominant mode, but when longer distance trips are needed, which surprisingly is quite often given their cost in relations to incomes, these informal services account for most of their trips (Salon and Guilyani, 2010; Lucas, 2012; Klopp and Cavioli, 2018). These informal services, as well as non-motorized modes provide the backbone of all motorised trips with in African cities, but they are often 'designed out' in the process of public transport modernisation, which is a paradox given their huge accessibility and inclusion function.

Overall, the urban population growth rate has been higher in sub-Saharan Africa than in any other region of the world, at 4% per year. Projections that 90% of urban growth is expected to occur in Asia and Africa mean that 21% of the world's total urban population will be living in Africa by 2050. Although the proportion of the world's population living in extreme poverty has halved over the last 20 years, polarisation in incomes between the rich and the poor has got worse, especially within in African cities.

As African cities grow further, and with the chronic and widespread poverty that many of the more *struggling* nations[3] are predicted to face (ibid), their transition to inclusive urban development will require extensive cutting-edge innovations, detailed planning and policy interventions and huge financial investments to respond to service needs of people and communities. This, among other strategies, will depend on resource-efficiency, socially and culturally-inclusive system innovations to improve mobility across all Global South cities. Currently, such innovations, where they occur, are primarily technically focused and economically- (rather than socially-) focused. Consequently, they mostly fail to adequately account for people-centred concerns about mobility and accessibility, especially as experienced by the most vulnerable and marginalized who fall below the radar of surveys and rarely have a voice to express their needs.

Geographically, most of these extremely low-income and vulnerable populations live in informal peripheral settlements far from the city centre, which means that they need to make excessively long journeys to access the arc of opportunities that the city provides. Slum clearance programmes often push them further into the periphery, where transport services are non-existent or inadequate. Economically, they often cannot afford to pay for transport, so that they must make most of their journeys on foot to access their livelihoods and daily activities in the city-centre, often in perilous conditions and regularly at a cost to their lives. Socially, they are further marginalized because travel takes up all of the time when they are not working to make money and they have little time for anything else. As such, their families suffer from parental absence in the home, placing a heavy burden of caring responsibilities on the people who stay in the community (often the old, infirm and the very young).

[3]See Behrens et al. (2016) for a comprehensive discussion of informal and paratransit in African cities.

Yet, the need for mobility and accessibility and travel concerns of these socially excluded populations are most often entirely overlooked or poorly understood by (mostly affluent, powerful, middle-aged male) transport professionals, and so are missing from the future visions for transport and new Smart Cities programmes that many African cities have signed up to. These funding programmes are almost solely infrastructure and technology driven and pay too little attention to the planning of social infrastructures and governance measures that must run in tandem with them if improved equity outcomes are to be achieved (Priya Uteng and Lucas, 2018).

As Lucas and Porter identify:

> *...rarely do the planners of major transport projects consider their social impacts on local populations. Particularly overlooked are the lowest income groups, who have no option but to continue to conduct their daily activities in and around new transport developments, often with devastating consequences for their quality of life. On the other hand, sometimes these new transport projects can provide new livelihood opportunities for specific individuals and groups in the population, which also appear to be unplanned for by the developers and promoters of the projects, with equally unforeseen consequences for local residents and traders* (Lucas and Porter, 2016: 130)

The authors thus recommend the need for more bottom-up and transparent planning and policy practices at the international, national and local level, with clear insights into the underlying power structures of transport investment decisions that are so often most unfavourable to the poorest. All new transport investments should also provide adequate physical provisions for local people to continue to use non-motorized trips, rather than planning them out of the urban transport system, and to design-in and cater for existing informal transport. They also suggest that a better understanding of the contribution of low income populations and informal settlement to the overall political economy of cities would help decision-makers to appreciate their vital role in the sustainable development of African cities.

These issues are explored more fully within this report through the five city case studies, and further exploration of these issues can be obtained through the various further reading references that have been included at the end of the document.

3. Background to the case studies and their key travel trends[4]

As will be seen from their descriptions, each of the five cities that were chosen for the case studies are very different from each other and so there is no intention in this report to compare and contrast them in any robust analytical way. Nevertheless, there is some general utility to be gained from painting a more general picture of their populations and socio-economic positioning, to which we now turn our attention.

Table 1 has been compiled from an overview of the World Bank's online data tool[5], in which it is relatively easy to access a wide variety of data at the aggregate national level. In applying these figures, it is important to remember that different cities within the same countries may vary considerably from one another, especially capital and secondary cities. Some socio-economic situations are exacerbated by living in cities (e.g. slum housing, income deprivation, health hazard), whereas other outcomes may be improved compared with more rural areas (e.g. adult and child literacy rates, child mortality and formal employment rates).

Table 1: Comparing the basic national social development statistics for the five case studies

	Annual GDP per capita (USD)	Gini score	% Below poverty line	% Male literacy	% Female literacy	% Slum dwellers
Ghana	2046	42.5	8.4	78	65	38
Kenya	1595	33.7	33.7	84	74	56
Nigeria	1968	43.0	34.1	61	41	50
South Africa	6151	63.0	52.0	95	93	23
Uganda	606	42.8	9.6	79	62	53

Source: Author's compilation from World Bank Open Data online

What is interesting to observe from the table is that although South Africa has by far the highest GDP per capita of the five, its wealth is also the least equally distributed across the population and it also has the highest percentage of the population living below the poverty line. One of the reasons South Africa may appear to have rather a low level of slum dwellers compared with the other four countries, may be because many of the urban poor live in official, albeit very poor-quality, government housing, which would not be counted as 'slum dwellings' in official national surveys. It can be noted that in Kenya, Nigeria and Uganda, half or more of the population live in slums, and this figure can be even higher in the cities.

[4]Each of the five case study countries has produced its own national report, which are available on request from k.lucas@leeds.ac.uk

[5]World Bank Data Online https://data.worldbank.org/ accessed 04.02.19

Another noteworthy statistic at this stage is the figures for male and female literacy, where it can be noted that for all except South Africa, the female literacy rates are significantly below those of males. These gender inequalities play out across other indicators of social development, such as personal income and access to resources, health and transportation. Women are also overwhelmingly responsible for childcare and homeworking duties. For this reason, gender inclusion is an essential consideration in the provision of services if improved overall equality outcomes are to be achieved in African cities (and indeed worldwide).

As previously, noted one of the problems in referring to most statistical databases in the African context is that people living in informal settlements are most often left uncounted in official statistics. In most cases, their indicators of social wellbeing and wealth will anyway be much worse than those averages indicated by the national figures.

Moving on to the city-level of analysis, Table 2 provides an overview of the transport distributions of each city in relation to their overall and projected population levels.

Table 2: City level statistics on population size and mode of transport used

	City population (millions)	% Walk	% Informal bus	% Private bus/BRT	% Private vehicle	% Two wheelers	% Rail
Cape Coast	0.23	21.0	15	n/k	37	n/k	0.0
Cape Town	3.35	21.0	10	8	37	n/k	1.5
Lagos	21.00	40.0	45	1	3	0.5	0.5
Kampala	1.50	39.3	41	n/k	7.9	n/k	0.0
Nairobi	4.50	47.0	33	12	14	6	0.5

These figures are collated from various local unpublished sources and official statistics, BUT they should be treated with extreme caution due to a high degree of variability between the reported data and inbuilt inaccuracies with the data collection and collation process. For example, it is highly unlikely that in countries where more than 60% of the population are living in acute poverty that only 40% use walking as their main mode of transportation. This under-reporting of walking trips is probably due to the travel survey instruments, which often don't record trips of under 1km and/or do not record walking access and egress trips to public transit modes, or the sampling framework, which may not capture the travel patterns of people living in informal settlements. It is also clear that there are similar gaps in the data concerning the increasing use of motorcycle taxis in many of these cities, as well as the absences of other non-motorized modes such as bicycles and three-wheelers.

Once again, clear differences in population size and levels of transport provisions are evident from this table, and as such each case study city should be considered separately, with its own set of unique challenges for transport disadvantage and the related social exclusion outcomes that arise from both the circumstances of poverty and structural failures in service provision within the different cities. However, certain common themes do emerge within each of the narratives in terms of the population groups who are most affected by transport-related social exclusion, the places where they live and the social consequences of their transport poverty.

Cape Coast, Ghana is a secondary southern city with a population of approximately 170,000 people. It is a major trade and transit hub, and a leading centre for higher education, with a large university campus located in its urban periphery about 10kms from the city-centre. Traffic is often gridlocked on poorly maintained, potholed roads. Hold ups are compounded by street hawkers, many of whom are young people, who congregate at busy junctions to sell their wares. Transport problems in the city-centre are exacerbated by the dominance of pre-1900 buildings, which while offering significant potential for tourism, inhibit traffic flow, particularly around markets and other busy areas.

Transport poverty is strongly in evidence in Ghana and even in Cape Coast, which has a relatively small population and physical coverage. While the middle classes have increasing access to private vehicles, this privilege does not extend to the urban poor; a survey of 125 children in the Abura district of Cape Coast, found that only 4.5% of families own a car. There is no public transport in the city, and so non-car owners are dependent on privately-run taxis or walk and cycle to school and work. Many households rely on wood or charcoal for cooking, and porterage of these essentials, often carried out by young girls, leading to further congestion, as well as having significant health risks for load bearers. During the wet season, roads are often flooded or covered in mud. Pedestrians and non-motorized road users are further impeded by the absence of pavements and street lighting.

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In the local workshop that was held with academics, policymakers and non-governmental organisations (NGOs) in Cape Coast[6], the specific focus of the research was on the needs of children and young people.

The workshop concluded that:

- Children face significant challenges and risks every day when walking to and from school and their after school activities, but they are very skilled at interacting with these dangerous travel conditions;
- Even very small children travel unaccompanied, often over long journey distances by foot to reach their schools. This is despite a policy stating that schools should be situated within a 15-minute walk of children's homes, though it is not always possible to attend the nearest school if it is privately run;
- Drivers take priority on the roads and have little consideration for non-motorized road users, especially children who can go unnoticed because of their size. There are low levels of policy understanding of road safety risks faced by children;
- Few systems are in place to promote safety for all road users. Some schools have introduced road calming measures in their local areas but there is generally an absence of safe space and walking infrastructures;
- Men are more likely to use taxis than women. The majority of women walk and risk exposure to attacks and abuse whilst travelling;
- A high level of exposure to road traffic pollution whilst walking is generally ignored. There is no pollution monitoring outside of the capital, Accra. Small children are particularly exposed because they play alongside the main road after school, while their mothers are street-vending.

[6]Link to full report: https://intalinc.leeds.ac.uk/media/africa/

Cape Town, South Africa is the capital city of the Western Cape Province and is an extremely affluent city by African standards, and even within South Africa itself, and it is the legislative centre for the country. It is a highly popular tourist destination due to its coastal location and historic legacy a colonial trading city. Nevertheless, its fortunes are extremely divided between the primarily still affluent whites and the growing middle-class black and ethnic populations that have prospered since the abolition of the Apartheid regime, and the predominantly black urban poor who live in its many informal and government-built settlements.

Significant investment has been made into the city's road and rail infrastructures in the post-Apartheid period, including the development of Cape Town's own Bus Rapid Transit (BRT) system, MyCiTi, which provides a service to approximately 10% of the city and includes an airport link. In the multi-stakeholder workshop that was held at the University of Cape Town, questions were asked about evidence that was available concerning the impacts of the City's Integrated Public Transport Network (IPTN) for marginalised communities and what this means for the way future improvements are envisioned. Cape Town's city planners identified that the IPTN has been less the subject of investigation in terms of its poverty and equity impacts than its more in famous equivalent in Johannesburg and the City does not currently measure the system's impacts in terms of equity/justice. This is perhaps because its first routes were not aimed at serving marginalized low-income communities, but rather the heavily congested, mostly middle-income corridors with relatively few incumbent paratransit operators.

The BRT services do offer more disabled accessible, frequent and faster services into the City, and reduce travel times compared with regular buses and trains but are more expensive and in some cases unaffordable to lower-income users. The institutional gains made from implementation of the IPTN programme, in terms of building technical and managerial sophistication amongst cities in line with the devolution of transport responsibilities towards lower spheres of government was also seen as a positive move towards more equitable cities that are responsive to local needs and aspirations.

However most of the urban poor rely upon partially formalised paratransit *kombi taxi* services, often requiring long walks from their homes to mini-bus stops along the main arterial routes. These services are often over-crowded and charge high fares relative to incomes. Passengers complain about driver misconducts such as drinking, female harassment and poor driving standards. Nevertheless, the kombi services have emerged from persistent failures to provide sufficient public bus services to informal communities and are often the only motorized transport option that is available to the residents of these settlements.

On the question of how cities can better respond to the travel needs of low-income settlements the following thoughts were offered:

- City planners should be honest and humble to express their willingness to learn from affected communities relating to their needs and experiences, including the informal minibus-taxi operators. It was felt that cities should be careful in thinking they can intervene in an industry that they don't fully understand. An incremental light-touch regulatory approach seems to be preferred.

- Institutional renewal is needed to help cities plan better for diverse communities. A continued shift is needed towards the principles of the national transport policy which place user needs at the centre of cities' efforts. Fragmentation between role players at different levels of government needs to be reduced, to allow cities control over all aspects of the multimodal system; rather than current arrangements where different spheres of government and institutions are responsible for a particular mode, making decisions and resource allocation modally driven rather than user/outcome driven.

- More emphasis should be placed on IPTN in the context of a larger multimodal integrated network, to expand their benefits to additional communities. This includes working with existing minibus-taxi operators rather than trying to incorporate and replace them with formal companies.

    - More work is needed to figure out how to optimize and co-exist between formal and informal systems in a complementary fashion, and how to make the business case for this.

    - Fare products and fare levels need a rethink, to address issues of affordability which have not been solved by IPTN interventions and remain a key constraint to low-income mobility

    - Issues of coverage of a multimodal system should also address safety from crime, especially at night on the walking trip to/from bus or taxi stops, which could be a significant barrier to their use by vulnerable users.

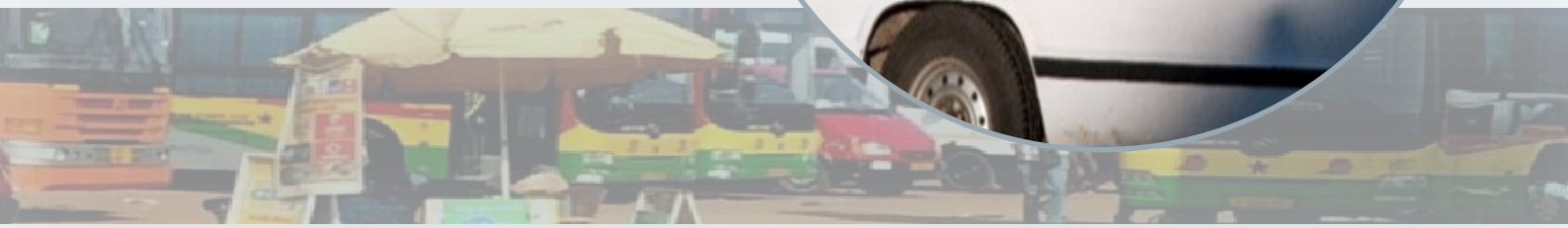
- Cities need better mechanisms to collect disaggregate data to be able to monitor equity impacts and to adapt their analyses and modelling approaches to more people-focused approaches that are better able to capture differential effects across different user groups.

- Cities should be open to the possibilities of IT solutions such as smart cards/mobile phones, as these may create opportunities for introducing user-side subsidies targeted at specific vulnerable user groups. Smart-phone based apps may also help to reinvent the way that formal and informal transport interacts.

Kampala, Uganda is the administrative and economic capital of Uganda with a registered population of approximately 1.5 million, but with an estimated additional 2.5 million informal slum dwellers. Kampala's manufacturing, service and construction industries make it an attractive destination for rural-urban migrants from across Uganda. Kampala's population is estimated to be growing at a rate of 5.4% per annum, continuing to attract large numbers of rural migrants from across the country in search of opportunities and access to services. Kampala's citizenship is also influenced by refugees and displaced persons from bordering countries, escaping violent conflicts. Recent research suggests that the demographic dynamics of the city are also influenced by inflows of refugees and internally displaced persons (IDPs) escaping violent and armed conflict.

More than 1.5 million people also commute into the City to work each day, many of them travelling up to 30 kilometres from rural/urban areas. The city's transport network is characterised by traffic jams, and vulnerable groups such as women, children and the elderly are the most affected. A sizeable proportion of the urban poor population make intra-urban trips on foot, while others use *boda boda* bicycle and motorcycle taxis, or *matatu* 14-seater minibuses.

There is estimated to be more than 120,000 *bodas* operating within the city. These informal motorbike taxis have a number of advantages in terms of their wide availability, low cost fares, spatial penetration and ability to cut through the endless traffic jams. However, passengers and drivers are exposed to high pollution, variable fares and unpredictable timetables; and, particularly in the case of women and girls' harassment and abuse. There is little in the way of safe walking infrastructure in Kampala.



Since 2010, the Kampala Capital City Authority (KCCA) has made improvements to the dilapidated road infrastructure. Feasibility studies have been undertaken for Bus Rapid Transit and Light Rail systems, cable cars and further upgrades to roads. However, the proposed developments are supplier driven, technologically focused and long term, and designed to serve the needs of motorised transport users rather than the urban poor, who mostly walk.

The local workshop in Kampala focused on issues of urban governance in relation to transport provision and access to opportunities for its urban poor,[7] who form the vast majority of the city's population, with approximately 70% living in informal settlements within and on the outskirts of the city. The key issues which emerged were:

- Planning is key to delivering better transport, but the city authority does not control most of the land and so master planning is difficult. The pace of city-growth and urbanisation, particularly in Kampala's growing informal peripheral areas is difficult to keep up with in planning terms;
- Political interference from the elected leaders of Kampala's five districts can derail integrated government planning programmes with 'pet projects', which overtake planned interventions in terms of spending priorities in order to serve the political process;
- Informal transport is key to supporting mobility, accessibility and livelihoods. Micro-level mobility as it relates to different social groups needs to be better understood, but there is a lack of data and research evidence to assist the planning process and a problem of ownership and jurisdiction over infrastructure generally
- There is a serious funding imbalance between levels of investment for major transport projects and for social development and local economic uplift programmes, for example the BRT has received $670 million to develop three routes in Kampala, while Uganda's entire slum upgrade budget totals only $2.3 million
- Although horizontal integration between different policy sectors (e.g. transport, housing, city planning) is evident at national level, there is often tension between local and national government programmes and policies that makes it hard to identify the right levers for change locally.

[7] Link to full report: https://intalinc.leeds.ac.uk/media/africa/

Lagos, Nigeria is the sixth largest city in the world, and one of the most rapidly urbanizing agglomerations in Africa. It has a population between 12.5 and 15 million and an annual growth rate of nearly 6%. Lagos' status as Nigeria's main economic, commercial and industrial hub makes it an attractive destination for economic in-migrants. Conditions of acute poverty and rising urbanisation in Nigeria have generated an increased demand for transport services and infrastructure and impose challenges for the country's under-developing urban transport systems. Lagos is also marked by a complex governance and administrative structure: there is no single administrative unit covering the entire metropolitan area.

Nearly 66% of Nigeria's urban population is dwelling in slums, which translates into problems of accessibility, affordability and insufficiency of transport and accessibility options for its most vulnerable populations. The dynamics of economic and urban growth have resulted in increasing travel distances for accessing income-generating and other 'life chance' opportunities, as well as a greater dependency on motorised transport throughout the country. Larger commuting distances affect individual and collective mobility particularly for low-income communities in a context marked by lack of road infrastructure and disorganised provision of public transport services.

The local workshop in Lagos focused on including the providers of transport services across the city and also on the specific needs of slum dwellers[8], who are increasingly been resettled outside the city through slum clearance programmes.

The workshop in Lagos concluded that:

- In Lagos, more than 22 million trips are made per day, 40 per cent of these are on foot under dangerous conditions and using poor walking infrastructures. Seventy-two per cent of all public transit trips are supplied by yellow *Danfo* minibuses, many of which are old and dilapidated. There is also severe congestion on most routes through the city, which makes journeys slow and uncomfortable on the overcrowded buses.

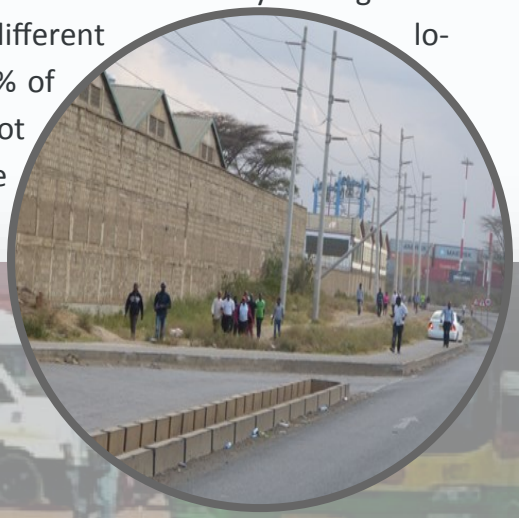
- The continuation of the Makoko community (which formed the focus for the study visit) is under serious threat because of city-centre development and plans to resettle its more than 71,000 residents 100 kilometres upriver. This will disrupt local livelihoods and social networks significantly but could also be an economic problem for formal residents who rely on Makoko's fish industry for food and trade.

- People in Makoko have few problems with transport within their own settlement. They can go everywhere in their community by boat or using the floating pontoons and bridges connecting them to their neighbours. They have access to some local facilities on the water including a small primary school, several churches and floating shops, and the settlement is adjacent to the market where residents trade the fish they catch in the river. In this way, their mobility and accessibility strategies are highly innovative, resilient and resourceful.

- Community leaders identified that one big problem was a lack of access to healthcare facilities and clinics, which are not available within the community. Many older children must also attend school onshore in nearby settlements due to a lack of places in the floating school and no secondary education provision.

- Travelling outside their community, we were told that Makoko's residents experience the same transport problems as everyone else in the City of Lagos – bad traffic congestion casues long, expensive (relative to incomes) and uncomfortable journeys by Danfo bus and dangerous walking conditions.

Nairobi, Kenya owes its origin to colonial zoning which categorised the city into racial group silos with different levels of infrastructure and services. While this retrogressive colonial history is incrementally disappearing, it largely defines how the city is organized and the type of services and infrastructure provided in different locations. Low-income households constitute more than 60% of the City's population, but often their basic needs are not effectively catered for within policy. Over the years, the City and its environs has also experienced rapid growth



Mobility is a major challenge in Nairobi, especially for the low-income groups who mostly rely on non-motorized transport (NMT), which is not well provided for. The City County is in charge of 3,054 km of roads and has 300 km of NMT facilities, 1,735 km of tarmacked roads, 1,867 km of earth roads, 2,600 km of constructed storm drainage system, 12,000 installed floodlights, 39,000 street lights, 52 surveillance cameras, 22 traffic light management system (signalized junctions), 41 flyovers, 75 km railway and 15 railway stations, two airports, 15 terminus and 96 traffic marshals. The current County Integrated Development Plan (CIDP) has a vision of being `the city of choice to invest, work and live in'.

Traffic management and city transport are some of the main pillars for this vision, with a target of `achieving a congestion-free city in which pedestrians have safe walkways; children should not suffer injuries from road accidents and public transport will be so seamlessly connected that private cars are unnecessary in most parts of the city'. However, currently, even on new roads, provision for pedestrians is limited and often taken up by parked cars, so that pedestrians have created their own footpaths to compensate for the lack of walking space.

The CIDP identifies Nairobi's main transport challenges as inadequate mass public transport, the rapid increase in the number of private cars, poor enforcement of traffic regulations and lack of discipline on the part of motorists and pedestrians. In fact, nearly half of all residents (41%) still walk daily along a number of road corridors leading to and out of low-income areas from as early as 4.30 am, while the a majority of others (37%) wait for congested paratransit modes of transport to head to different travel destinations, including sources of employment. Mitullah & Opiyo (2017) note how non-motorised transport users are almost completely ignored by traffic police who control vehicles at traffic light intersections without giving adequate time to NMT users to cross.

In his 2017 Election Manifesto, the Governor of the City County of Nairobi acknowledges that `vulnerability is seen everywhere in the City, but is particularly experienced by street families, people living in informal settlements, and street traders'. Youth, women and people living with disabilities (PwDs)) are identified as *constantly exposed to never-ending cycle of poverty, harassment and more poverty, followed by further harassment*. The Governor's Manifesto commits to addressing traffic and city transport as well as youth, women and social inclusion and promises to create more walkways since most people walk to work and prioritize access to public transport vehicles over cars. It notes that private cars transport people at the greatest congestion cost to all other commuters.

The Manifesto further commits to paving revolution for pedestrians within the CBD, expanding the CBD to the neighbouring areas, deliberately strengthening the participation and inclusion of groups that have been historically marginalized, including PwDs, women and youth.

Another significant group of low-income residents remains hidden in informal settlements either trading, running household businesses or taking care of children, the elderly and the sick, and fitting travel around their multiple roles. This group includes self-employed workers who run their own businesses without any employees, people employed by other informal workers or formal businesses who employ less than five people to support their enterprises. Their struggles relating to housing conditions, service delivery and livelihoods are well researched and documented, but there is little research evidence about their transport disadvantage. Since many of these workers must carry their goods on the *matatus* buses, they are often viewed as a nuisance by other passengers, especially during the morning when people are going to work. Some *matatus* have also created business out of the situation occasionally acting as goods transport. Others, who cannot afford the *matatus,* use hand-carts which take hours to deliver goods to various destinations within the city and which, despite their service utility, are often viewed as an annoyance by both motorized transport and other NMT users due the conflicts they cause as goods are pushed onto both NMT and motorized infrastructures, changing from one infrastructure to the other depending on what is most convenient at the time.

In summary, the local case study review and accompanying stakeholder workshop that was held in Nairobi identifies that:

- Nairobi has been grappling with issues of inclusion for decades, which is intensified by inefficient transport system that undermines the income and employment opportunities for residents. There is currently minimal attempt to cater for the low-income and vulnerable population groups throughout Kenya, although almost all policy and legislation documents mention them. This is partly because the low-income in general, women, children and PwDs have a few advocates and services, while voices are almost mute on the situation of the elderly.

- Many low-income groups, in particular women engage in informal activities within their households and surrounding areas, although they make occasional trips to get supplies and access services not available within their settlements.

- Most low-income settlements are located far from sources of employment, which undermine their employment and income capacities. The situation is worsened by the high cost of transport relative to incomes, which makes many of them walk the full trip or combine walking with informal transport modes in order to reduce cost of transport.

- Pedestrian travel is minimally provided for in terms of infrastructures, which are mostly available only within the CBD and on isolated road corridors. The infrastructure that does exist s inadequate and used by all NMT modes, including hand-carts, which compete and conflict amongst different due to space limitations. In recent years, the infrastructure has also been invaded by speeding motor cycles which cause conflict and compromise the safety of pedestrians and wheelchair users.

- Heavy traffic and congestion in the City results in loss of productivity as several hours are wasted on traffic jams. Many people lose an average of one to two hours on daily basis. This is largely due to poor spatial planning of the city, too many unmanaged vehicles on the roads, inadequate NMT infrastructures and lack of mass transit modes of transport.

- Currently, the city is in advanced stage of developing BRT and light rail, while at the same time continuing to retrofit NMT infrastructure, but both processes have a long way to go before they can be fully realised, especially by the low-income groups.

- Technology is beginning to improve services although the divide between the vulnerable groups and the middle- and high-income groups remain, enabling a number of households in low-income areas and the vulnerable groups to order for goods for door delivery, which reduces travel.

4. What are the key issues for mobility and inclusion?

In a budget debate in April 2012, Jeremy Cronin, then Deputy Minister of Transport (South Africa) stated:

> *Black workers and the urban poor continue to be hugely disadvantaged by their geographical marginalization in dormitory townships. There has to be a determined effort to tackle the root causes of ongoing exclusion. We need integrated public transport systems, mixed-use, mixed-income human settlements, and relatively dense corridor development.' '... But there is a danger... that we will continue to allocate our energies and our scarce resources into [large infrastructure] projects that reinforce dysfunctional patterns, like urban sprawl, that we*

Five key issues were identified across the five national studies with some of them having greater relevance for some cities than others, though they also have significant commonalities between them.

4.1 Spatial exclusion and enforced mobility

Turok (2001), the first paper in South Africa to use the term 'spatial mismatch' to describe the jobs/housing imbalance and resulting transport problems, discusses the private and public costs of transport resulting from persistent polarization. This is a consistent thread throughout Turok's analyses (see incremental papers 2001-2016) and has been influenced by the same basic concern that poverty and social exclusion in South Africa are worsened by the unusually large spatial divide between where people live and where jobs/resources are concentrated. Turok (2013) proposes that instead of perpetuating the bus subsidies and travel patterns unchanged since the Apartheid era, that subsidies to outlying settlements be redirected to housing in better- located areas. Significant evidence of the exclusion imposed on the urban poor through lack of physical access to job opportunities and social networks in South Africa has also been reported by Venter et al (2007) in the context of their accessibility studies.

There is an emerging literature (Pieterse, 2018; Culwick, 2018), however, that suggests that people living on the periphery might be less marginalized than is assumed. Many poor and unemployed people consciously choose to settle in peripheral urban areas because of *greater social connections and support networks, and greater overall quality of life*. Pieterse (2018) argues that the mere fact of peripheral housing location is not 'in and of itself a reliable indicator of destitution, marginalization or urban disconnectedness...' Areas far from the traditional central business district may in fact be close to significant satellite nodes of economic activities. For example, Cross (2014) argues that in many South African cities, subsidized housing is not as poorly located as critics suggest. She argues that while 'core' areas may not be the best places for unskilled and most unemployed people to earn an income, economic opportunities are nevertheless to be found in informal contexts or decentralized economic zones.

Venter and Cross (2011) undertook an in-depth qualitative study of the relationships between the mobility and access opportunities in 32 low-income settlements in South Africa (not necessarily urban). Like Pieterse, above, they argue that it would be wrong to equate isolated locations with 'universally problematic access/mobility environments', particularly where services are within walking distance. Settlement types are more likely to fit into one of a number of typologies, based on its own characteristic mobility/access profile, which uniquely determines the transport needs, constraints and opportunities for intervention that are necessary to reduce exclusion-related poverty (Venter and Cross, 2011). That not only location relative to urban opportunities, but also micro-level transport and infrastructure conditions within settlements, are important determinants of access and exclusion has been highlighted also by Behrens (2005) in the context of barriers to walking within poor neighbourhoods. These spatial development patterns and the dynamics of informal settlements are a common feature of many post-colonial African cities. Nairobi similarly reports that the majority of its low-income population lives in informal peripheral settlement up to 18 km from the City's main economic activities, which are equally distant from formal service provision, such as hospitals, schools and shops.

Ghana's National Housing Policy also identifies declining housing quality and accessibility to housing services as a major challenge requiring urgent action. A U.N. Report (2016) indicates that there are about 78 slum communities spread across Accra and further hinting that an estimated 45% of Ghana's population might be living in slums. Overcrowding and the issue of insecure residential status confronting slum dwellers make them highly vulnerable.

Like many rapidly developing African cities, Lagos State has a policy of slum clearance from its central city waterside CBD. The famous case of the floating slum community of Makoko, which it plans to relocate 100km upstream away from the City, has been well-publicized in international news. There is seemingly little understanding of the economic and social disruption this will cause Makoko's 70,000 residents who rely on selling fish at the local market for their survival, or the new transport problems residents will experience through this relocation policy. Seelige and Turok (2013) and Turok (2013) have used transitions theory and systems-thinking to show how such narrow, insular policy interventions may produce unintended consequences for other parts of the system. For example, they argue that travel subsidies for people living on the periphery, as a poverty-alleviation measure, may inadvertently perpetuate fragmented spatial development patterns and prolong inefficient

transport and bulk infrastructure arrangements, rather than encourage a more compact and integrated urban form.

Kampala, Uganda's capital city currently has the opposite policy to Lagos, mainly concentrating on slum uplift programmes rather than their clearance. As such, the City has become a site of sharply contrasting socio-spatial realms, where small archipelagos of affluent neighbourhoods exist side by side with large swathes of proliferating informal settlements. According to the Slum Profiling Report (2014) presented by NSDFU/ACTogether, Kampala City has about 62 recognised slum settlements, accommodating close to 560,000 families. With an average family size of five, this translates into a total slum population close to 2.5 million people. Notably, this is twice the figure used as a baseline in the Kampala Physical Development Plan [KPDP]. Poor households earn about 50-100 USD per month and therefore cannot afford to meet their basic needs.

4.2 Walking and the travel burdens of the urban poor [9]

A second commonly identified theme across the case studies highlights the extreme travel burdens of the poorest and most vulnerable people in African cities in terms of the overall amount of travel they undertake to access work, education, medical facilities, and markets. This is because overwhelmingly they must rely on walking to access these activities, as has already been noted in Table 2 above. Households who are excluded/vulnerable/poor are heavily dependent on walking as a means to access the activities required to sustain themselves. The time and effort associated with this walking dependence is exacerbated by road safety and personal security problems. These travel burdens are disproportionately borne by women and the children who accompany them, and who are more likely to walk than their male counterparts.

Matrix Development Consultants (1991) note that in Nairobi most of the poor informal settlement dwellers have been pushed to the City's peripheries, occupying only 5% of the City's formal land area. Howe and Bryceson (2000) indicate that such settlements are located between 12 and 18 km from sources of employment such as the CBD and industrial areas, which forces residents to travel long distances to access services. For instance, thousands of workers from Kibera, a high-density, low-income settlement in Nairobi, walk up to 20 km to work and back to their settlements every day. Walking trip rates in Nairobi city, especially along the Jogoo and Mombasa roads have been increasing steadily and currently stand at 2.27 trips per person per day, mainly due to casual labourers who walk to and from industrial areas every day in the morning and evening, with the trip rate of male being higher than that of females.

[9] See Mittulah et al. (2017) for a comprehensive discussion of the issues for non-motorised travellers in Africa

[10] The Institute for Transportation and Development Policy https://www.itdp.org/

Even in Cape Town, which is the most affluent and highly developed and South African city, 33% of the urban poor and 21% of the overall population walk as their main mode of transport to employment and other key activities in the City. Although some people may choose to walk because the CBD and Waterfront area have been mostly pedestrianised, with a high standard of walking infrastructure, most of this walking takes places on the arterial roads leading into the city from the informal settlements. These offer extremely hazardous road conditions for pedestrians due to vehicle speeds and the total absence of sidewalks.

Ghana's Second National Household Transport Survey (GSS, 2012b) also indicates that the majority of people walk. About 64.4% of the workforce travel to work on foot while an even higher percentage (74%) of children walk to school, 6.7% use bicycles and 4.1% utilize the services of school buses. A higher proportion of the employed walk to work in the rural areas (73.9%) than in the urban areas (47.4%) and in both urban and rural settlements, females are more likely to walk to work than their male counterparts. For instance, in urban communities, 59.4% of females walk as against 36.3% of males. In most places, the environment is not conducive to walking, leading to those who can afford it to seek alternative modes.

Pedestrian safety

Janmohammed's analysis (2017) reveals that pedestrians in Cape Town constitute the majority of road fatalities in the city (58%), and that the percentage of fatalities that impact pedestrians and cyclists are more than the percentage of the population that walk and cycle in the city (see figure 4.3 below, extracted from Janmohammed, 2017). Arterial roads tend to be the main site for such incidences, largely because they are specifically designed to cater for fast moving motorized vehicles and have no pedestrian facilities. The intention of the road designers is that people should not be walking along these busy through routes into the City, but the reality is that they often provide the only means of access for pedestrians living in the informal settlements that have sprung up alongside them, and that they are also the main pick-up routes for the informal *kombis* that bring people into the City from further afield.

A growing concern for road safety advocates is the subtle message drivers send that pedestrians do not 'belong', which the absence of pedestrian infrastructure on the majority of urban routes seems to reinforce. However, pedestrian actions often predispose them to injury. The road traffic crash data for 2010 shows that about 70.8% of pedestrian crash fatalities occurred while victims were in the process of crossing the road (Amoako-Sakyi, 2013). Pedestrian activities such as hawking and night walking make them vulnerable to road traffic crashes (Damsere-Dery et al., 2010).

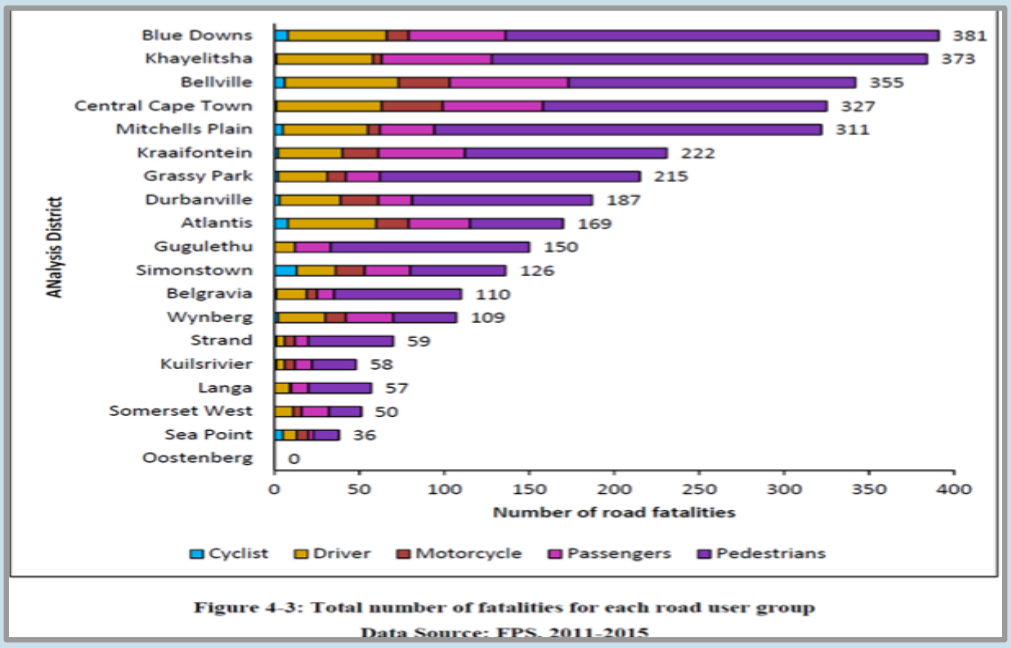


Figure 4-3: Total number of fatalities for each road user group
Data Source: EPS, 2011-2015

In Ghana, pedestrians make up 43% of total fatalities recorded, with children accounting for up to 31% of all pedestrian fatalities (National Road Safety Commission, 2013). Available Records indicate that a total of 879 fatal and 2,421 non-fatal injuries were recorded for the year 2017 (Darko, 2018). In a bid to address the menace of pedestrian crashes, the National Pedestrian Safety campaign was launched in 2012 to educate road users, including motorists, on the need to see pedestrians as legitimate road users, and to ensure motorists' adherence driving methods aimed at helping all road users to feel safe (Kaloustian, 2013). The data shows that Accra leads the other regions in terms of both pedestrian crashes (36.2%) and fatalities as a result of these crashes (27%). This is to be expected as a result of Accra's much larger population, although it also has more kilometres of formal paved sidewalks.

Pollution exposure

High-levels of human exposure to noise and air pollution is also a major problem for people who must walk long distances along congested urban streets, although this much less often mentioned in the urban and transport policies of African cities, or by the research that has been carried out with transport excluded populations. The use of obsolete vehicles for the provision of both formal and informal public transport services, in combination with infrastructure deficits, has worsened conditions of noise and air pollution, and service quality, especially in poor neighbourhoods (Adegbulugbe 1991, Krzyzanowski et al., 2002).

Table 3: Pedestrian accidents for Ghana by regions for 2017

Region	All Pedestrian injuries	Pedestrian Fatalities
Accra	1,196	238
Tema	200	61
Eastern	404	131
Central	307	91
Western	161	57
Ashanti	652	129
Volta	150	49
Northern	47	37
Upper West	16	8
Upper East	29	12
Brong Ahafo	138	66
Total	3,300	879

4.3 Exclusion from public and informal transport

Motorized transport is increasingly necessary to enable all residents of sprawling African cities to access important opportunities such as employment, education, health care, welfare services and local community life. However, jobs and services are mostly located outside the peripheral settlements where most of the poorest and most vulnerable groups live. This challenge continues to grow as cities sprawl further into the outer suburbs with poorly conceptualized and slow responding spatial planning, mobility and access network, which most African cities have only begun to discuss in the context of sustainable development. Studies with low-income populations have repeatedly identified that three key aspects of public transport provision need to be considered if these urban systems are to become more inclusive for all residents within African cities, namely: i) availability and accessibility, ii) affordability, iii) personal security and female harassment.

i. Availability and accessibility

A key objective of urban transportation planning is, or should be, to optimize access to opportunities for all people, yet time spent travelling by the urban poor is enormously costly, both financially and in terms of loss of time for family life (Hitge, 2015). Most public transport networks in African cities are concentrated in the centre of cities and favour the higher-income formal settlements. They focus on providing accessibility to the central business district (CBD), operating only during peak hours to accommodate access to work trips. However, analysis of the travel patterns of low-income populations suggests that an urban transport planning focus based solely on catering for work-commute trips to the CBD is misdirected, if pro-poor inclusion is the intended outcome.

For example, in South Africa (as is the case within most African cities), urban unemployment among the poorest quintile is at approximately 80%, thus regular work-commute trips have little immediate importance in their everyday lives. While congestion at peak times is an issue for the transport and urban planners who are concerned with the economic efficiency of their cities, it is evidently not an immediate priority for the poorest people living within them (Kane 2006). Although the unemployment outcomes might be significantly reduced through transport interventions that enhanced direct access from the urban periphery to employment opportunities in the CBD, many people on the lowest incomes are too old, young or ill to work, and so will have other priority accessibility needs, such as access to healthcare, education and food shopping. Many of these destinations will not be located in the CBD and so may require numerous interchanges en route and long walks at both the access and egress ends of the journey.

South Africa's 2003 National Household Travel Survey (NHTS)[11] was the first of its kind in the country, using a representative sample, to attempt to capture the nature of travel. The survey revealed that more than half of households had limited access to public transport, it either being too far away, or not available at all (Walters, 2008). Overall, low-income households exhibited low levels of mobility, with high-income households travelling 20% more than the poor in urban areas (Kane, 2006). For the urban poor, the most common trip purposes were shopping (28%), visiting friends and families (25%), and access to education (23%). Social networks sustained through visiting were identified as an important asset of the poor, and one that protects them against hardship, through sharing chores, informal care for sick, elderly and children, and informal lending of food and money (Kane, 2006).

To better cater for these diverse travel needs, both Kane and Behrens support Vasconcellos' (2001) proposal that Global South cities require a *sociological approach* to transport, which focuses on individuals instead of vehicles, and lives instead of trips, within a framework of equitable provision. They argue that without detailed understandings of the travel behaviour and unmet travel needs of the poor, inherited inequities in transport systems cannot be successfully redressed (Behrens, 2004). Yet data collection methods and planning models introduce a routine bias by excluding non-motorized modes, for non-work purposes and during off-peak periods. This makes it difficult to precisely identify which groups and in what way people are most transport disadvantaged; what Behrens has described as the *transport equity gap* (2002).

In Ghana, and similar to Nigeria and Kenya, about 95% of transport services are provided by the informal private sector whose activities are sometimes unsafe, unreliable and uncomfortable (Abane, 1993; 2004; Wilson, 2006;). For school children who use public transport, the 2012 Ghanaian National Household Travel Survey reports that 3.6% go by *trotro* (informal minibus), 0.2% by Metro Mass Transit while 2.5% go by public taxis. *Trotros* are usually 14 to 21-seater buses which are operated by private transport owners. They operate cheaper fares than the traditional shared taxi and are therefore popular with travellers especially in the urban areas.

In total, about 10.3% of workers utilise the services of these *trotro* to travel to work. Among them, are 19% who live in urban areas (Ghana Statistical Service, 2012). Irrespective of settlement type, males are more likely to patronise *trotros* than females.

[11] A second NHTS was conducted in 2013 but we were unable to access any published research to update Walter's 2003 analysis. In fact, National Household Travel Surveys are rare within the African context and most cities do not collect any data on the travel patterns of their residents. Even when such surveys are conducted, informal settlements are often not sampled at all, and so robust data about their travel needs and concerns is largely absent.

Partly in response to the gross inadequacies of the minibus taxis, which inevitably get caught up in the same congestion as private cars, most African cities are coming to the realization that motorcycle taxis are part of the public transport system. For example, in Accra and some secondary cities in Ghana, particularly in the north of the country, the commercial operation of *okada* can be found. It is particularly popular among low income urban dwellers. In Kampala the *boda bodas* are everywhere and have become the most utilized and effective form of transport throughout the city; they are used by all sections of society.

To the urban poor, given the poor and inadequate public transport system, the proliferation of these motor cycles has to a large extent solved mobility challenges. In a study conducted in Wa, a secondary city and the capital of the Upper West region by Dinye (2013), it emerged that the high ownership of motorcycles in the municipality had in fact improved upon the livelihoods by creating job opportunities for motorcycle mechanics and spare part dealers. They have also become a good source of revenue for municipal authorities, funding their activities through direct taxation and levies on motor cycle owners/riders, and through the registration and licensing processes.

The downside of these unregulated operations is the wide non-compliance of riders to traffic regulations, and the high incidence of motorcyclist fatalities in crashes due to the unpopularity of wearing helmets. For these reasons, some cities like Lagos have banned them from operating in the central city areas. Nevertheless, informal motorcycle and tricycle auto-rickshaw operations are now the largest passenger transport providers in the low-income peripheral areas, which adds to the growing congestion, noise and air-borne pollution and road safety problems of these settlements (Oyesiku and Odufuwa, 2002).

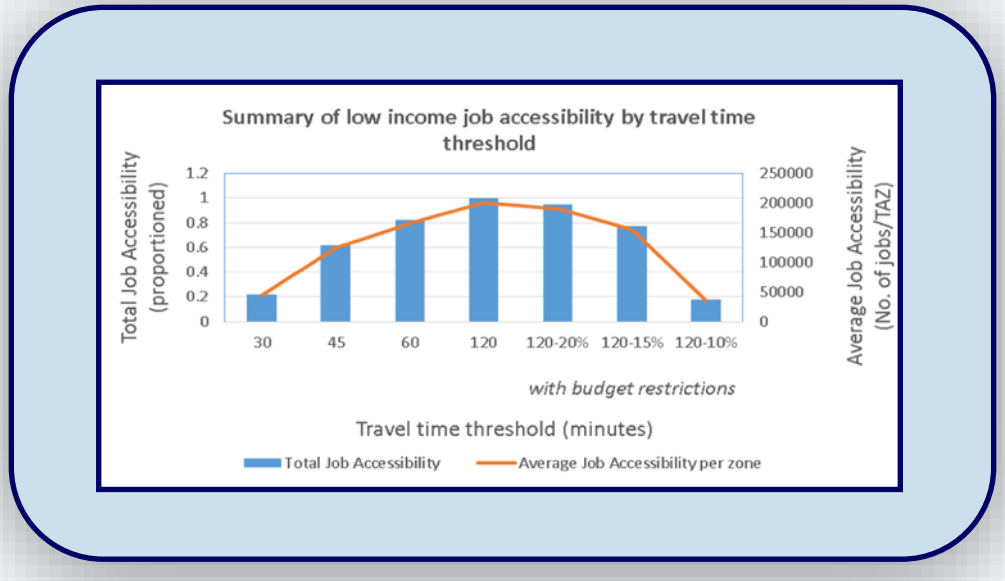
ii Affordability

A second reported problem with public transport in African cities, when low-income populations do need to use them, is their cost. Low-income households spend the most as a proportion of their incomes on public transport even though they may be using these services infrequently. This is clearly a considerable financial burden. In South Africa for example, almost 50% of urban households spend more than 20% of their declared income on public transport (Kane, 2006). A geographical analysis of transport costs in South Africa by Venter (2011) showed that transport expenditures also vary considerably across different urban locations, with public transport users in displaced urban settlements bearing the highest burden.

Based on a scoping study by the University of Cape Town[12], the graph below offers a summary output of measured accessibility to low income jobs, and the implication of budget restrictions for a low-income household with one source of income. The first four bars show potential accessibility level by travel time threshold, while the last three bars show accessibility under various thresholds of travel budget. Accessibility value shown in the chart have been normalised to a maximum value of 1 for travel within 120 minutes. Different travel threshold and budget constraints are measured relative to this maximum value. For travel within 30 minutes, only 20% of the total jobs reachable within 120 mins, is potentially accessible.

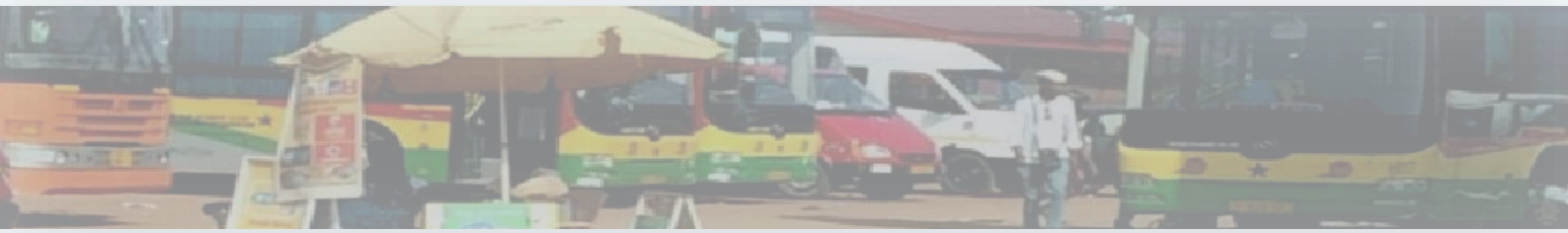
In terms of affordability impact, a 10% of income travel budget applied for a maximum travel time of 120 mins, means only about 18% of the jobs reachable under 120 mins (without budget restriction) is potentially accessible. While the average number of jobs potentially accessible from a zone in the study area within 120 mins is around 200,000 jobs, with a budget limitation of 10% of income, the average is reduced to about 40,000 jobs.

Figure 1: Impact of travel budget on job potential accessibility level for a low-income household



One of the key policy aspects that this study has challenged is the fare policy of public transport in Cape Town, which uses a distance-based pricing model for most of the modes. Though distance-based pricing has been regarded as economically efficient and used by numerous agencies around the world, it could be argued that such approaches to pricing in the context of Cape Town has social and equity implications for the majority of the poor population who reside on the outskirts of the city, not as a matter of their own choice but of the legacy of the apartheid planning system.

[12]Research undertaken by Imuentinyan Aivinhenyo, University of Cape Town



In an earlier qualitative study conducted with different socially excluded groups in the Tshwane Region of South Africa, Lucas (2011) identified that most participants were heavily reliant on the informal *kombi taxis* to meet their weekly subsistence needs, and for more exceptional visits to the clinic. The high cost of these trips was identified as more of an important issue for them than a lack of transport *per se*. Although these informal services were generally available even in the more remote areas of the region, their fares are unregulated, and people also often needed to pay multiple fares to complete their journey as a result of the fixed, corridor-based (rather than flexible as is commonly perceived) operating patterns of these services. As such, people living on even the lowest incomes of less than 1000 rand per annum were having to pay 24 rand for a single journey from their home to the health clinic, market or welfare office. Salon and Giuliano (2010) had similar findings in their study focusing on mobility, poverty and gender and travel choices of slum residents in Nairobi, which also demonstrated an ever-increasing dependence on motorized travel amongst the urban poor as the City rapidly expands. They note that those living within informal settlements do not have travel `choices', they mostly walk because they cannot afford to use motorized transport, so that when they do need to use motorized transport it is usually out of dire need, either to find a job, to sell their wares or to seek urgent medical attention.

In Lagos, Nigeria, a household travel expenditure survey conducted along the BRT corridor for the Lagos Unitary Travel plan, compared the cost of commuting in the danfos (yellow buses) and that of BRT. The study revealed that commuters spend more money when commuting with danfos than the BRT as table 4 demonstrates. Only 3.9% of the sampled population spends N500+ on transportation using the BRT, while 17.3% spend the same amount on transportation using yellow buses.

Table 4: Expenditure for a one-way journey using BRT compared with yellow buses[13]

Travel expenditure	BRT (%)	Yellow buses (%)
N100 – N150	38.2	17.3
N200 – N300	22.5	29.3
N300 – N500	31.4	34.7
N500 and above	3.9	17.3
No response	3.9	1.3

[13]End of project report, 2017

iii Personal security and female harassment

Women not only face the challenge of multiple travel demands and exposure to congested public transport that is difficult for anyone with accompanying shopping and children, or the sick and elderly, but they are also encumbered by harassment. This phenomenon has been widely reported in recent years by a number of international studies and is apparently a ubiquitous problem not only for women travelling in African cities, but also all across Asia and Latin America, as well as in the global North.

In Nairobi, for example, there have been many cases of female harassment, but one 2014 landmark case is worth noting, where three men stripped, robbed and violently assaulted a female commuter on a public transport and bragged about the crime by posting videos in social media. This case became a turning point for women and transport not only in Nairobi but Kenya and the entire African continent through the campaign of `My Dress My Choice'. The crime generated protests across the city, including from high political offices and on 19th July 2017 the three men were sentenced to life in prison. They may appeal as the law allows but the message to the transport sector in respect to women is clear. The campaign has further influenced the city authorities who have acknowledged sexual harassment in public transport in its current CIDP - 2017/2022. The CIDP provides for creation of awareness and advocacy against sexual harassment in road transport system.

4.4 Social exclusion as an outcome of transport exclusion

Social exclusion has been noted as a major global challenge especially in cities. While it is often conceived at macro level, it should be understood in a multi-dimensional manner, including at institutional and individual levels. Lucas (2011) was perhaps the first to direct a social inclusion lens toward the relationship between transport and social disadvantage in the African context, working with the South African National Department of Transport. In particular, she was interested in assessing whether the concept of social exclusion was a valid one, when it is the majority of the population that experiences transport and income poverty (Lucas, 2011). This research involved focus group discussions the urban and peri-urban poor in Tshwane, Gauteng Province. The study aimed to identify:

i. If, and in what physical and social circumstances people on low incomes experience transport and accessibility problems on any kind of regular basis.

ii. The types of problems they experience and/or the underlying causes of such problems, e.g. lack of available transport, access onto the transport system, the cost of travel, lack of information, low travel horizons, the inappropriate location of activity opportunities such as employment, healthcare services and schools near to their homes.

iii. Whether different people are affected differently and when, where and how they are affected, and the longer-term consequences of such problems in terms of their wealth and financial security, physical and mental wellbeing, maintaining family ties and supporting social networks.

iv. What types of locally appropriate solutions could be developed to address these problems from the perspectives of the people who experience them.

She and subsequent authors have particularly demonstrated how already economically disadvantaged and socially vulnerable groups also face major transport challenges since their needs are often not catered for within mainstream transport policies and planning. This is even more the case in African cities where particular sub-sections of the population are more physically marginalized and systematically overlooked due to their informal status. Of particular note in the case of transport, are people with disabilities (PwDs), children and the elderly. There are also marked gender divides in the travel experiences of the urban poor worldwide, which are especially prominent in the African context.

i. Women

Peters (2013) in a study prepared for the Global Report on Human Settlements provides a good summary of the complex situation of African women. Their unique situation is informed by their new responsibilities, which combine work, taking care of household chores and being tied to children and the sick, whom they not only have to take care of but also take to school and hospital. In the low-income areas, health services and schools are not easily accessible, and women often have to travel to other neighbouring locations for such services. This situation is often more complex when women are pregnant and have to attend clinic and later take infants to antenatal clinics located out of their low-income settlements.

Women are generally much more transport disadvantaged than men across all income groups and their travel needs are also very different from men's. Within any given urban setting in the African context women have inferior access to both private and public means of transport, while at the same time assuming a higher share of their households' travel burden and making more trips associated with their own reproductive and care-taking responsibilities of others both within their households and in their communities.

ii. People with disabilities

Even in well-developed cities like Nairobi, where the City Authority has made a good attempt to retrofit wheel chair infrastructure in the Central Business District (CBD), PwDs still face unique transport challenges, especially outside of these central areas where most PwDs live. Along the major transport corridors PwDs struggle to cross certain portions of road corridors, as there are few proper crossings or pavements for wheelchairs. The crossing points in the city with traffic lights also do not have audio applications for blind people and there is no assisted visual information for deaf people. This essentially means that majority of the PwDs have to be supported to cross roads within the city.

A study undertaken on a recently improved Thika Super-Highway in Nairobi provided insights on how the PwDs negotiate their way in the city. The study revealed that like other road users their main trip purpose include work, personal business, school, and social purpose. What was unique was that 20.4 per cent of the sample of PwDs made trips to beg, which reveals their poverty-level and general lack of care. The PwDs appreciated the improvement of the Super-Highway, although the numbers using non-motorized transport (NMT) among them had reduced from 66.7 to 22.2 per cent. They noted that congestion and inappropriate NMT infrastructure and speeding vehicles made them unable to effectively use wheel chairs along the highway. It took too much energy to use foot bridges and there is no dedicated lane for wheel chairs nor assisted crossing. They thus have to mingle with other NMT users including motor cycles that invade NMT facilities. They also risk their safety by crossing the busy highway or covering an extra distance to get to the nearest footbridge which is equally challenging.

The other challenge faced by the PwDs on the highway is the challenge of inter-modal transfer. Over 50 per cent of those interviewed found it difficult to change from NMT to motorized transport and vice versa. They noted the lack of consideration for people living with disabilities, noting the absence of assistance during boarding of the vehicles which are not designed for PWDs and the reluctance of such operators to accommodate wheel chairs. These challenges require both long and medium city transport planning if the PWDs are to be effectively accommodated in the city public transport.

iii. Children

Transport for children has not been publicly provided in Nairobi but the private sector has been providing school transport for many years. School transport was tried in Nairobi but the programme did not work and was withdrawn due to a number of reasons, including funding. Now the transport is by private school systems and private entrepreneurs who offer transport for parents who can afford the service. Both services are not available to the low-income households whose children have to walk or use public transport. While there is not much written about these poor children and how they get to schools, most of them walk, sometimes accompanied by parents when they are very young, but often walking on their own or with other children, and at a much earlier than the children coming from middle- and high-income households. It is normal within the city of Nairobi to see a child below eight years struggling to get into a public transport with a lot of difficulty.

The *matatus* drivers are often reluctant to take them especially when they are a lot of children travelling together, since they pay half fare and over-crowd the vehicles. This reluctance by the *matatus* to carry children was reported by journalist Jeckonia Otieno (Kenyan Standard Media 21/11/2016), who notes that his plea with the matatu touts to carry children after one matatus after another came but did not allow children to board. He further notes how children as young as five years have to board school buses as early as 5am depending on where they live and how far they have to travel to school. A number of school buses seem not to comply with the Traffic Amendment Act of 2016 which require all school buses to operate between 6am and 6pm. However, the law is not clear on how children should be transported, and the matatu operators are free to decide whether to carry them or not.

For those children who do manage to board the public vehicles, there is often no comfort. This also applies to some of the school transport provided by private schools. In public transport, children either stand or are squeezed in-between adults, while in the *matatus* they are overloaded with more than two children in a seat with some standing. Furthermore, most of these transport services have no designated routes. They take children up and down the route as they pick others up for school, with some beginning their journey as early as 5 am and not getting to school until at around 8am, exhausted and unable to effectively learn.

Although the poor provision of school transport has been viewed as a parents' issue, it is also a problem of urban planning and educational policy. Prior to the launch of free primary education in Kenya, low income parents relied on informal schools run by NGOs within low income settlements. However, such schools often did not run on national curriculum and also did not have qualified teachers which further marginalized children from low-income households. Nowadays, the public schools are too few and the available ones are not well-distributed across the city. The low-income settlements often do not have public schools and have to rely on schools outside their neighborhood, which do not plan for extra numbers from neighboring informal settlements. This pushes parents to search for schools further away, requiring travel which is costly for low-income households.

iv. Elderly people

The elderly in low-income urban areas are often living alone or stay at home with children below 15 years, while others have physical disabilities or chronic conditions and can hardly take care of themselves. A study done in Nairobi's informal settlements (Ezeh et al, 2006) found out that a large proportion of the elderly people living in informal settlements live alone. This is contrary to the situation in rural areas where most of the elderly live in large homesteads where they get support from members of the larger family, in cases where they have no immediate family members.

In terms of public transport provision, apart from the majority of older people experiencing mobility difficulties that limit their ability to walk long distances and to gain physical access

onto vehicles, the existing public transport infrastructure does not have dedicated spaces for them. The neglect of the elderly people in the urban context could partly be due to the incorrect assumption that they return to the rural areas once they retire. In fact, cities have many senior citizens, including some who were born in them, and so have no alternative rural homes.

In Kenya, the revised 2014 National Policy on Older Persons and Ageing acknowledges that there is limited accessibility for older persons and expresses a need for age-friendly transport systems and built environments. The policy further notes that there will be review of transport policy to address the needs of older persons. However, both the Constitutional provision and the legislation are still far from being realized, although progressive inclusion of PwDs in elective and appointive bodies has been effectively rolled out. The Kenya Vision 2030 is in alignment with the Kenya Constitution with respect to reducing transport inequalities and improving the social inclusion of vulnerable groups.

4.5 Transport inclusion as essential to realisation of the Sustainable Delivery Goals (SDGs) of African Cities

Globally, the United Nations Sustainable Development Goal (SDG) 11 specifically addresses improving cities and human settlements to make them "inclusive, safe, resilient and sustainable". The seven identified targets for this SDG include affordable housing and slum upgrading and "access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, PWDs and older persons. The 2011-2020 decade of action for road safety also fits within the SDG framework and calls for safer roads and mobility with an aim of promoting needs of all road users as part of sustainable mobility.

A recent report for the report for the World Resources Institute, which focuses on the SDG challenge to provide equitable accessibility opportunities for all eloquently identifies both the reasons why this target is so important for the survival of African cities:

> *Safe, affordable, sustainable, and efficient transportation is vital for people to gain access to the range of social, economic, and educational opportunities the city provides. Yet* ***many urban dwellers in the global south face travel conditions that limit their ability to lead healthy and productive lives***[14]*. To those who are underserved by transportation, the costs are evident in terms of the high proportions of their personal income and time spent on travel; of the high health costs attendant on using unsafe modes in unhealthy conditions; and of foregone opportunities resulting from an inability to access desired spaces.* (Venter et al., 2019: 4)

The report goes on to identify that walking should be at the centre of the urban mobility agenda, with a call to pave all new neighbourhoods and retrofit NMT infrastructures on all urban arterial routes. Full integration of informal transit services with rail, BRT systems and regular public buses is also called for in order to provide multi-model mobility systems that can reach all parts of the city and serve the diverse travel needs of residents operating beyond the daily work commute trips. There is recognition that constraint measures are also needed for the use of private vehicles in cities because unfettered growth in the use of motorcycles and cars within cities cannot be sustained whatever the level of additional road building projects are introduced. Finally, the authors recommend that stronger governance is needed and significantly improved and integrated urban and transport planning. This will require institutional capacity building, skills-training and technical uplifts in the public sector, as well as the establishment of lasting partnerships with the private sector to increase the amount of funding that is available for new projects to be brought forward.

The SDGs and sustainable cities challenge have now been embedded within the policies of most regional and national governments across Africa. For example, the Constitution of Kenya provides for social inclusion by addressing the needs of those considered socially excluded. In addition, one of the principles of the National Urban Development Policy (NUDP) is embedded on cities and urban areas with a goal of catering for all segments of urban residents including marginalized and vulnerable groups. Vulnerable groups are covered by the Bill of Rights which is the pillar for social, economic and cultural policies. The Bill of Rights aims at preserving the dignity of individuals and communities to enable them to realise their full potential as human beings.

Similarly, South Africa's Bill of Rights implicitly locates mobility and the right to mobility within the context of human rights and the struggle for a rights-based society. Mobility is central to rights to access economic opportunities, health care, education, food and clean water (Coggin and Pieterse, 2015). More explicitly, national transport policy recognizes public transport as a 'basic need', placing public transport on an equal footing with other government priorities such as adequate housing, and water and sanitation (NDoT, 2007; Jennings, 2018). This may be why a rights-based or transport-justice based framework Coggin and Pieterse (2015) set out to develop such a rights-based framework, and cite case law to show that the availability, accessibility, efficiency and quality of public transport are crucial determinants of the most vulnerable urban residents' physical access to the socio-economic opportunities offered by cities (thereby impacting on spatial equality).

[14] Authors' own emphasis

Nevertheless, these rights are most threatened in low-income slums and informal settlements where poor households struggle to access services, including efficient and affordable transport. Without adequate and affordable public transport to outlying housing areas, urban housing settlements infringe upon individuals' constitutional right of access to adequate housing, healthcare, education, and thus ultimately undermine people's ability access to livelihoods, their social wellbeing and quality or life. Yet explicit recognition of transport's essential role in the achievement of other SDGs such as in poverty reduction, addressing gender inequalities, improved educational attainment and providing safe and healthy lifestyles is still largely missing from the policy discourse of most African cities and so is poorly recognised by the housing and social welfare agencies who work on the frontline with informal and slum residents. Transport and accessibility is thereby not part of their slum improvement and clearance programmes to the detriment of the low-income residents who are living within cities that are demanding increasing mobility as they grow.

5. Case study examples of projects aimed at transport inclusion

This section of the report identifies five examples of local research projects that have been undertaken in the case study countries in relation to identifying travel behaviours and concerns of low-income populations and vulnerable groups in different urban contexts to meet their various accessibility needs. The case studies are intended to be illustrative rather than comprehensive of the various types of research that has been undertaken, as well as of the project initiatives that have been developed to respond to the problems that have been identified within this report.

Currently, it is very difficult to have sight of many of these local projects due to both their low exposure within the mainstream academic and policy literatures, and the lack of formal social evaluations of their uptake and impacts on people's livelihoods and social wellbeing. Although some appraisal tools are now being developed to assess the gender and social and poverty impacts of major transport investments within African cities[15], many of them are extremely high-level and often the data is lacking to undertake such assessments on smaller projects and at a more local neighbourhood level.

CASE STUDY 1: CHILDREN'S WALK TO SCHOOL STUDIES, GHANA

i. The child transport and mobility study (2006-2009)

This was a 3-year multi-country study that was conducted in Ghana, Malawi and South Africa in collaboration with Durham University and funded by the UK Economic and Social Research Council/Department for International Development[16]. The study focused on the mobility constraints encountered by both in and out–of–school children in their attempt to access healthcare, education and other facilities. The main aim of this study was to provide the much-needed evidence base strong enough to improve policy in the study countries. The peri-urban and urban settlement sites were located in the Cape Coast metropolis and Sunyani municipality.

Qualitative data on young people's mobility in relation to health, education, livelihoods and transport were collected in all the eight study sites. The first phase of fieldwork in Ghana involved 18 'child researchers' who received training to conduct peer research on mobility in their home communities, under supervision from adult academics. Subsequently, adult academic researchers conducted three hundred and twenty three (323) individual in–depth interviews with children (8–18years), parents and key informants, together with 31 child focus–group discussions.

[15]e.g. see Asian Development Bank Guidance 2007 on how to conduct such analyses https://www.adb.org/sites/default/files/publication/27972/poverty-impact-analysis.pdf

[16]For full details of the study see Hampshire, Porter & Abane, 2011; Porter et al., 2010, Hampshire et al, 2012 and http://www.durham.ac.uk/

Additionally, a questionnaire survey was administered to 1005 young people aged 8-18 years across all the eight study sites in the country. A sample of approximately 125 respondents per settlement was obtained by randomly selecting one child per household for interview (households were selected at random along transects within each settlement).

The study findings were very indicative that children's mobilities play a key role in relation to their well-being, education and livelihoods. The children who participated in the study were found to be very mobile, but some forms of mobility (carrying heavy loads, walking long distances over difficult terrain) might be detrimental to educational opportunities, health and well-being. On the other hand, children experience serious constraints on their mobility, which means that access to schools, health services, markets and other places can be impeded, with potentially serious impacts on wellbeing and current and future livelihood opportunities (Hampshire et al, 2011). It was therefore recommended that addressing issues around children's mobility is crucial to the nation's efforts at achieving some development targets such as the recently launched United Nations Sustainable Development Goals.

ii. School path walkability and pedestrian crashes in the Cape Coast Metropolitan Area

The school path walkability study carried out with school children in Cape Coast, Ghana (Amoako-Sakyi, 2017) examined 1745-hundred-meter segments of pupils' route to school to ascertain the walkability of these routes. The study was conducted among self-reported captive walkers aged between 8 and 18 years enrolled in Basic schools in the Cape Coast metropolis. The term 'captive walkers' was operationalised to cover pupils who had no other alternative modes of transportation to school apart from walking. A total of 792 school pupils drawn from 25 schools tasked to assess the walkability of their routes to school through a user perception survey which was based on 4 main indicators including safety, security, attractiveness and convenience of the walking path.

The main objective of the study was to use both subjective and objective methods to collect micro-scale street data to assess the conditions of walking routes (walkability) used by these vulnerable road user population and to ascertain their associations with pedestrian road traffic safety within the metropolis. The subjective assessment involved user perception of physical and built environment characteristics which makes a route walkable while the objective assessment involved observations by field auditors using Pedestrian Environment Data Scan (PEDS) street audit tool.

More specifically, the study:

- Assessed distances walked by basic school pupils to school and how these distances are associated with their perception of traffic safety on routes to school;
- Mapped out pedestrian crash hotspots within the metropolis using police accident report data on the metropolis;
- Assessed the relationship between school path walkability and pedestrian crashes within the metropolis.

Results from the study revealed that distances walked by basic school pupils was associated with age, stage, settlement type and community income levels. Pupils who attended schools in high income areas walked longer distances than their counterparts who attended low income community schools and so were private school pupils and urban school pupils. The distances walked by males and females however, were comparable neither did ownership or non-ownership of vehicles by households have influence on distances walked.

Pupils' perception of their walking routes was also found to be associated with age, settlement type and community income level as younger pupils were found to be more confident of their walking routes and in general walkability scores dropped significantly as age increased. Furthermore, walkability ratings of routes by pupils improved with pupil's community income levels with the low-income communities rating their route as the least walkable. It was also revealed that 97.7% of routes used by school pupils in the Cape Coast metropolis did not have any road crossing amenities. More than half of school pupils in the metropolis indicated that drivers do not stop for them to cross most probably because they cross at unapproved points.

The study further revealed that, the state of pedestrian facilities greatly varied with road attributes and was associated with both frequency of child pedestrian crashes and fatal injury outcomes. In general, the physical conditions of routes in the metropolis were found not to be very supportive of the walking environment and most cases exposes vulnerable child captive walkers to high risk of pedestrian crashes in the district. The study recommended that in order to make the street more accommodative to the young captive walker, urban planners and city authorities must consider revamping the existing pedestrian infrastructure such as constructing sidewalks or creating buffers between the pedestrian path and the road to ensure pedestrian safety.

iii. Road transport infrastructure and mobility needs of students with physical disability in University of Cape Coast

This study was carried out to examine the road transport infrastructure and mobility needs of students with physical disability (Odame, 2017). It sought to assess the extent of physical barriers that impede the movement of students with physical disability, determine the extent of usage of university shuttles by students with physical disability and examine the roles of stakeholders in providing accessible facilities. A sample of 28 visually impaired, 1 wheelchair user and 3 key stakeholders were engaged in the study. The visually impaired were selected by the use of snowballing and the rest were purposively selected. The results revealed that, the dominant passenger facility on campus was the sidewalk but these sidewalks were saddled with path obstructing objects such as potholes and electric poles. When it comes to crossing aids, none of the traffic lights on campus was augmented with audible transmitters to aid the visually impaired. With reference to the passenger environment, the absence of a documented policy to offer free ridership to these students provided the platform for drivers of privately-owned shuttles to deny these students from enjoying free shuttle services. The

study recommended the enforcement of the clause from the PWD Act 715 enjoining transport operators to reserve dedicated seats/space for PWDs on their vehicles and the modification of the pedestrian environment which includes the construction of walkways where unavailable, extension of walkways that end abruptly, inclusion of curb cuts and tactile signage to ensure autonomous travel decisions by PWDs.

CASE STUDY 2: SAFE BODA PROJECTS IN KAMPALA, UGANDA

i. SafeBoda, Taxify and Uber

SafeBoda was created to offer safe, reliable and affordable transport services in a city now known for its chronic traffic gridlock during peak periods, offering a transport option that appealed to a highly mobile population, providing a unique service in an industry bedevilled by a poor safety record. SafeBoda's aim is to modernise informal transportation and ensure safe access to mobility. But These companies are revolutionising the services due to safety concerns. Motorcycle accidents are the highest causes of death in Kampala road accidents. *Boda bodas* are used by all categories of city dwellers from all social backgrounds especially with trips in the city centre where flexibility to get around is critical. The average daily cost for users is UG$ 1000-4000 and the average length of trips for the users is 4.1 km. services are provided both within the city centre and within the Greater Kampala Region, and for all neighbourhoods and different social income groups.

Taxify and Uber have also entered the market offer a combination of both vehicle and motorcycle taxi services that are accessible either by Android-enabled Apps. For each of these companies, the innovation is easy payment and ability to picked up on order. Knowing the rider before you take a ride and the flexible modes of payment are making these transportation options trending in the city. Flexible payment options and flexible operations of picking and dropping without the need to wait at a pick-up stage. The tradition has been in Kampala for motorcycle riders to form cooperatives or organizations and go into informal contractual agreements with landlords and or KCCA to establish what they called stages. Stages are sports along the road network and strategic spots like cross junctions, busy commercial areas, markets, institutions and retail businesses. They often organize themselves with a leadership structure to manage the entry and exit of the riders as members of the stage as well as solving conflicts and disciplining members. These stages still exist and a source of conflicts and political gaming between KCCA, owners of commercial entities and politicians in the city. This is because it involves money collected from the members.

Safeboda, Uber and Taxify all use the same business model which is to use trained, trusted drivers, each equipped with a spare helmet for the passenger. But it is the payment options which make this service unique to the users. These companies work with a community of drivers who receive extensive training to make them the safest and most professional drivers on the streets. Trained in road safety, first aid, bike maintenance and customer care, equipped with hairnets and a spare helmet, identifiable and trackable through our system.

When drivers join the SafeBoda community they typically see their business increase by 30 – 40%, providing valuable income to many men and their families.

The key challenge for user with stage-based riders is the need to haggle the price for a trip. Safeboda, Uber-border and Taxify all use Apps that have GPS maps for navigation and prices are marketed as fair because these are determined on basis of length and time of the trip. The companies have aggressively marketed their service with *get a fair price every time with no hassle bargaining*, cashless payments, GPS navigation systems and easy address locator for safe driving and transport in the city. These companies are revolutionizing the public transport ridded with car congestion and long travel time for short trips in the city.

Safeboda, **Ube**r and *Taxify* are open companies which the riders choose to join and can exit at will. However, there are issues with these companies and the business model. Despite the emphasis on training for safety, many riders still don't follow the traffic rules. The *boda* accidents in which riders from these companies have been involved are on the increase. Safety does not seem to be an issue once they have the passenger even when the passenger can rate the rider on the App. This is related the road use culture in the city where respect for other users and adhering to the rule for example not splitting lanes or no driving on kerbs, all these are not followed. The pedestrians are exposed to risks just as the passengers of the motorcycles. Women, children walking to and from school are very vulnerable to the risky nature of driving on the roads in Kampala. Although this culture is similar to motorists with higher capacity of passengers, the motorcycles exacerbate the situation.

Tugende

Tugende is a community-based initiative for financing private transport entrepreneurs with lease-to-own motorcycle packages for unemployed/self-employed youth. It was started as company to lease the motorcycles to the drivers with a contract to drive and repay the loan. This did not reduce the thefts and murders, so Tugende introduced GPS tracking with the support of the Swedish Embassy in Uganda which granted Tugende an innovation award in 2012. This award was used to capitalize the business which expanded beyond the city to the entire country. The innovativeness of the initiative rotates around motorcycle loaning to individuals without access to traditional/conventional financial institutional access. These individuals mainly youths have no collateral for commercial loans and they are thus deemed too risky by mainstream financial institutions such as commercial banks.

Tugende Company was established after realizing that the motorcycle riders were insecure at their job when owners of the motorcycles can change their mind any time. Likewise, the interest on commercial bank loans was unaffordable to many given the volatility of their business when City Authorities outlawed the transport services for years. Tugende company trains the drivers on road usage, traffic rules and safety.

Tugende[17] company also installs a GPS tracker in case the driver is hijacked, or the motorcycle disappears. To date Tugende has financed over 7,000 motorcycles for its clients and has already created more than 3,250 new owners who have repaid the loans.

The value of the investment is estimated at $7 million since its inception and has invested significantly more into the Ugandan economy along with the new owners created. The new owners' incomes have also increased by over 200% and this doubles after drivers complete their lease payments with Tugende compared to private owners. This is a positive for the riders especially when they eventually have to own the motorcycles. There are issues of organization by the owners, uncertainty in regard to the KCCA management which has on several occasions tried to restrict the motorcycles in particular areas. These challenges have created political conflicts some of which have involved the President and KCAA often changing decisions against or in favor of the drivers.

[17]Tugende https://www.gotugende.com

CASE STUDY 3: DRAFT NON-MOTORIZED TRANSPORT POLICY LAGOS, NIGERIA

City vision

Lagos will be a city with a general sense of well-being through the development of quality and dignified environment where people are free to walk and cycle; equitable allocation of public space and infrastructure; and access to opportunities and mobility for all residents.

NMT aims

Under its new Non-Motorised Transport Policy (2018)[18], the Lagos State Government aims to increase the use of walk-ing, cycling, and public transport by creating a safe and pleasant network of footpaths, cycle tracks, greenways, and other facilities to serve all citizens in the metropolitan area. It will strive to meet the outcomes listed in by designing streets consistent with principles of complete streets. LSG also urges other concerned agencies to take complementary actions to realise these goals.

NMT Goals

- **Enable equitable access for all** by improving access and mobility for all residents; promoting social and economic empowerment through the provision of improved low-cost mobility; facilitating safe access for children; enabling gender equity through the provision of non-motorised transport (NMT) and public transport facilities that are safe for women to use; enabling inclusion of persons with disabilities by creating NMT facilities that follow principles of universal design; and by creating a changed culture that accepts the use of walking, cycling, and public transport as acceptable and aspirational means to move around in the city.

- **Optimise the use of resources such as space, funds, time, and energy** by investing in NMT and public transport modes that consume fewer resources per person-trip compared to personal motor vehicles (PMV) and by encouraging dense, compact, and mixed -use development that contributes to shorter trips and allows more people live and work close to PT facilities.

[18]Lagos NMT Strategy can be accessed at:
https://wedocs.unep.org/bitstream/handle/20.500.11822/25415/Lagos_NMTPolicy.pdf?sequence=3

- **Improve road safety and personal security** by improving management of traffic conflicts; reducing road crashes, and deaths; and creating public spaces that are safe at all times of the day for all users.

- **Reduce local and global environmental impactsof Lagos's transport system by expanding the use of zero-pollution NMT modes and low-pollution motorised modes, helping to improve the city's air quality.**

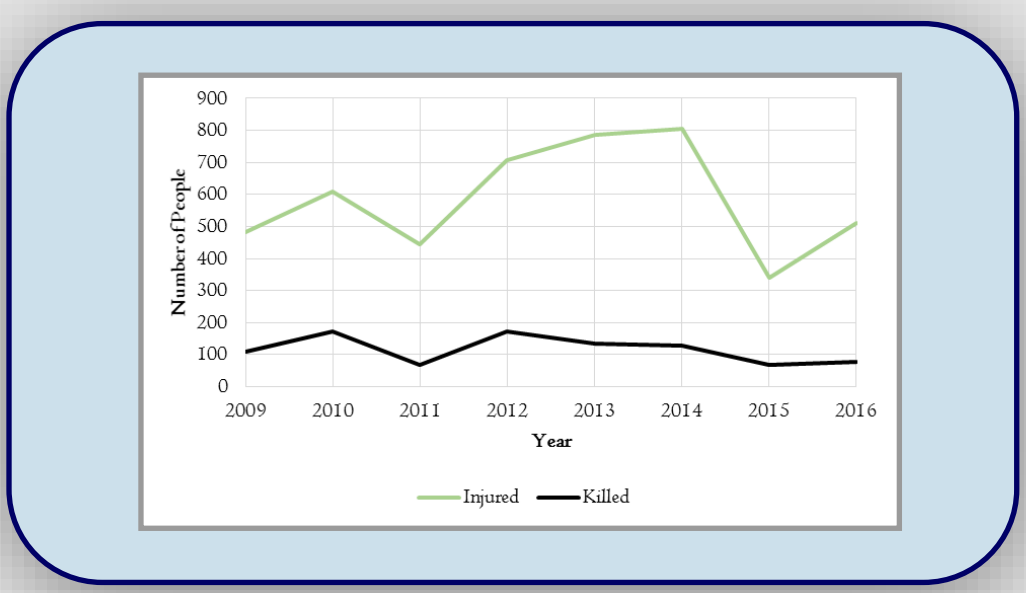
- **Enable community participation by involving local residents, businesses, and other stakeholders** in the preparation of designs to foster the community's active use and sense of ownership of these spaces.

According to the draft NMT Policy, (2017) the absence of effective land use management and housing policy, has seen the city of Lagos, experiencing rapid outward expansion and the proliferation of slums, estimated to house 75 percent of the city's population. This has put untold pressure on the available transport facilities of which pedestrians are the most vulnerable.

The transport system in Lagos is predominantly road-based, and the available road infrastructure is greatly overstretched. Lagos residents rely heavily on informal paratransit modes and the level of motorisation has increased, which has in turn further increased the vulnerability of pedestrians.

Pedestrians are a highly diverse group, including children, older people, teenagers, joggers, the disabled, mobility impaired, and people using wheeled toys or recreational devices such as skateboards, rollerblades, and foot scooters. To stem the rate of pedestrian fatalities in the state, the Lagos State Government has embarked on the massive reconstruction of pedestrian bridges and the construction of new ones, this move has been variously elected to have reduced pedestrian accidents in the State. In fact, pedestrian accidents have significantly reduced over the years, as identified in figure 2 below.

Fig. 2: Pedestrian Accidents in Lagos 2009-2016 Source: NMT Policy, 2017



Nevertheless, there are regular pedestrian incur-sions on main highways as large numbers of the population walk to work, school and other destinations risking high exposures to collision with vehicles and noise and air pollution. It is clear to see from figure 4 that the levels of in-frastructure provision for pedestrian road-users is extremely inadequate given their numbers and also badly constructed in terms of its design quality.

This re-allocation of road situation is particularly counter-intuitive given that this section of the high ways has been redesigned as a new bus-rapid transit ser-vices, where it is inevitable that high numbers of pedestrians will gather to use the services. It is noticeable that almost not provision for passengers' walking ac-cess and egress to and from these services has been provided for within the road redesign. The re-cently constructed overhead pedestrian crossing bridges that the State has invested in are also not popular and this cause further problems of pedestrian incursion onto the road as walker prefer to cross amongst the traffic than to use the bridges, which are often not located in the right place for people to easily access.

CASE STUDY 4: WOMEN, POVERTY AND TRANSPORT IN NAIROBI, KENYA

Most of Nairobi's low-income residents have been pushed to the City's peripheral informal settlement (Mutiga, 2014), which are primarily located between 12 and 18kms from sources of employment such as the CBD and industrial areas, forcing their residents to travel long distances to access services (Howe and Bryceson, 2000). Trip rates in Nairobi city especially along Jogoo and Mombasa roads have been increasing steadily and currently stand at 2.27 trips per person per day. This is due to casual laborers that walk to and from industrial area every day in the morning and the evening with the trip rate of male being higher than that of females.

Salon and Gulyani (2010) in their study focusing on mobility, poverty and gender in Nairobi noted that people living within informal settlements do not have travel `choices', rather they walk because they cannot afford motorized transport. Furthermore, this burden is borne disproportionately by women and children. Within any given urban setting women have inferior access to both private and public means of transport while at the same time assuming a higher share of their households' travel burden and making more trips associated with reproductive and care taking responsibilities.

Women with their multiple roles in society have been noted to face unequal burden in transport which warrant a gendered analysis. Their unique situation is informed by their new roles in urban areas which combine work, taking care of household chores and being tied to children and the sick whom they not only have to take care of but also take to school and hospital. In the low-income areas health services and schools are not easily accessible, and women often have to travel to other neighbouring locations for such services. This situation is often more complex when women are expectant and have to attend clinic and later take infants to antenatal clinics located out of their low-income settlements.

In a study prepared for the Global Report on Human Settlements, Peters (2013) provides a good summary of the complex situation of women.

- Patriarchy has followed women in urban areas with their multiple roles and complex travel patterns. Historically, the City of Nairobi was not planned for women and children, but for male workers sharing one roomed units with planned single travel pattern to work in specific locations.
- Women's division of labour has changed dramatically since these times. They have to make more complex trips to work full time, take children and the sick to school and health facilities respectively, shop and also accompany children, the sick and elderly for recreation and places of worship. This pattern of travel is very different from that of men which is often single and more direct.

- Women In Nairobi not only face the challenge of multiple and complex travel patterns, their travel is also encumbered by high-levels of exposure to traffic when walking, and congested public transport services, both of which are difficult for anyone to navigate, but the problems of traffic exposure and over-crowding are greatly exacerbated when taking care of extra persons whilst travelling, such as children, the sick and the elderly.

- Female harassment adds further to the travel burdens of women. There have been many cases of harassment in Nairobi, but one 2014 Landmark Case is worth noting. In this case, three men stripped, robbed and violently assaulted a female commuter on a public transport and bragged about the crime by posting videos in social media. This case became a turning point for women and transport not only in Nairobi but Kenya and the entire African continent through the campaign of `My Dress My Choice'[19].

New transport infrastructure projects within the City are also beginning to accommodate the needs and address the concerns of women. For example, the Outer Ring Road Improvement Project funded by the African Development Bank (AfDB), Environment and Social Impact Assessment provided specific *Gender Plan of Action* which include provision of toilet and washroom facilities, adequate and secure accommodation for women, as well as code of conduct to prevent abusive language from male colleagues among others.

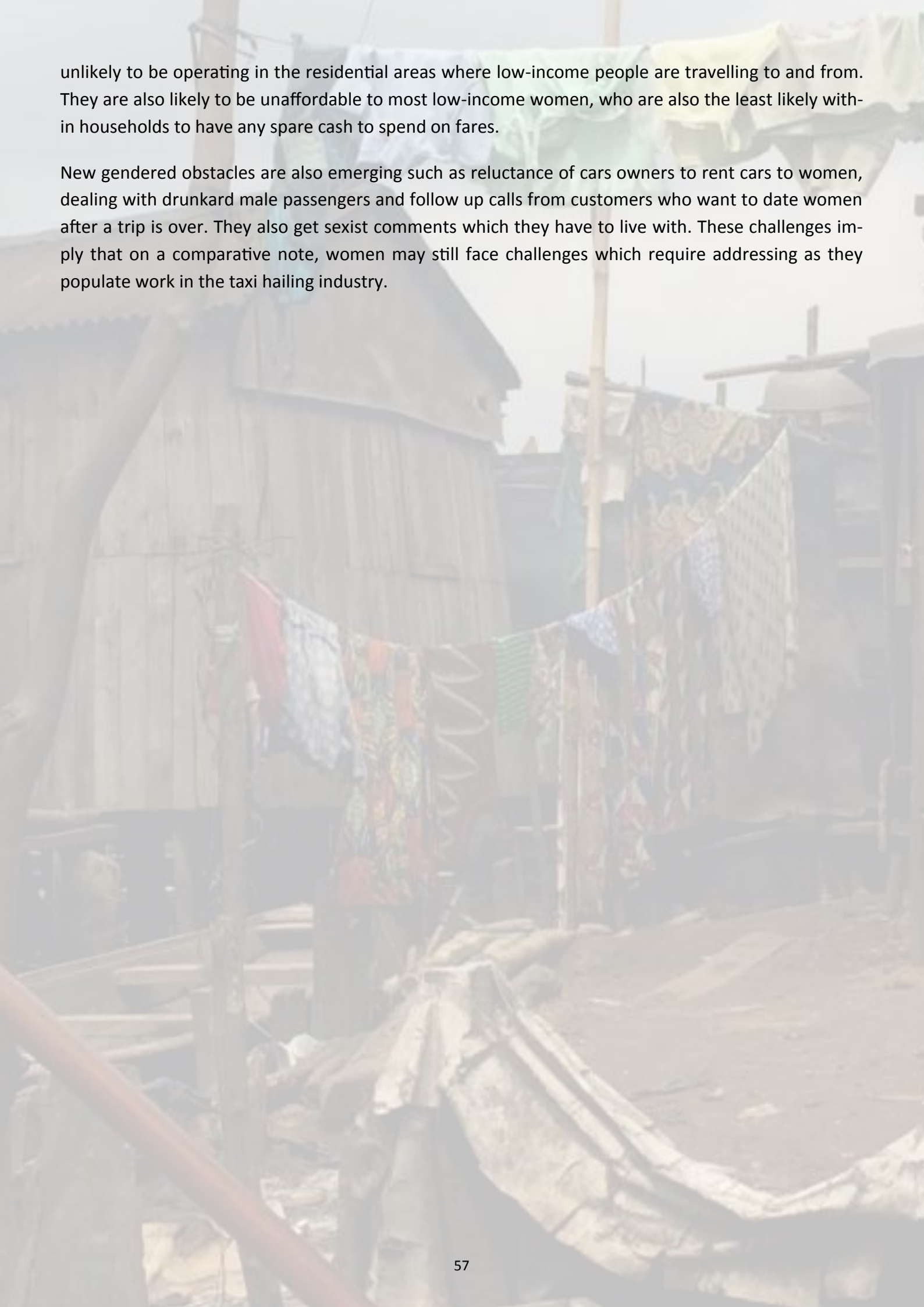
The advent of *online hail and ride taxis* also seems to have provide women in Nairobi with new conducive travel options and women are also beginning to enter the travel market as the drivers of these services. One of the services, Little Cabs, operated by Safari Com is the only app offering riders choice of male or female driver. The firm has witnessed increase in number of women drivers. In June 2016, there were only 27 female registered drivers. The number has increased to 381 and the firm hopes to have 1000 women drivers by end of 2018 (Business Daily, 7/5/18). The last three years has witnessed development of electronic transport apps opening doors to women. These new technologies, in particular taxi-hailing applications is enhancing women's entry and probably reducing exposure to ridicule, which women who work in the industry in particular as conductors face from male colleagues. The availability of tracking via GPS and an alert/SOS button on their apps for support if they need help is an additional safety measure.

However, these flexible taxi services, by their nature, choose when and where to work and which clients to work with. They are noted to choose riders with higher-ratings (i.e. the high-end commuters who use them the most and can approve their quality standards) and also opt for populated, central locations rather than isolated peripheral areas. As such, they are

[19]My Dress My Choice Campaign
http://blogs.worldbank.org/developmenttalk/mydressmychoice-tackling-gender-discrimination-and-violence-kenya-one-tweet-time

unlikely to be operating in the residential areas where low-income people are travelling to and from. They are also likely to be unaffordable to most low-income women, who are also the least likely within households to have any spare cash to spend on fares.

New gendered obstacles are also emerging such as reluctance of cars owners to rent cars to women, dealing with drunkard male passengers and follow up calls from customers who want to date women after a trip is over. They also get sexist comments which they have to live with. These challenges imply that on a comparative note, women may still face challenges which require addressing as they populate work in the taxi hailing industry.



CASE STUDY 5: CHANGING SOCIO-SPATIAL INEQUALITIES: POPULATION CHANGE AND THE LIVED EXPERIENCE OF INEQUALITY IN URBAN SOUTH AFRICA [20]

This case study presents early findings from an ongoing research project, which aims to measure changing inequalities over time, and to produce improved measures of spatial inequality and improved measures of attitudes to inequality related to transport justice and social exclusion from the perspective of participants living in the Cape Town metropolitan area of South Africa.

The research project is a collaboration between the University of Liverpool, Southern African Social Policy Research Insights (SASPRI) and the Human Sciences Research Council (HSRC), funded by the ESRC, the Newton Fund, and the South African National Research Foundation.

The qualitative study forms part of a larger ongoing research project focusing on changing socio-spatial inequalities, funded by the Economic and Social Research Council (ESRC). The qualitative strand of the project aimed to tackle two separate but related broad research questions:

1. What are the factors and processes that shape people's lived experience of inequality?

2. Does people's lived experience of inequality affect how they negotiate their day-to-day lives, and/or their attachment to place/sense of belonging?

Fifteen focus group discussions were undertaken in 2017 to explore people's personal experiences of inequality as they go about their daily lives across different areas in Cape Town. Areas were chosen on the basis of their exposure to poverty and inequality. Thus we ended up with areas that were high poverty and high exposure (high poverty areas located directly opposite to high income areas), high poverty and low exposure (high poverty areas but geographically far from high income areas), low poverty and high exposure (low poverty but located near high poverty areas), and low poverty and low exposure to inequality (areas that are low poverty and far removed from high poverty areas). Groups were differentiated from each other by key demographic indicators such as employment status, age, type of work, and population group. The group sizes ranged from 5 to 8 members.

Emerging Findings

The focus group material provides a rich insight into people's different lived experiences of inequality in Cape Town. As part of the ongoing analysis phase, several prominent themes around transport and social exclusion have emerged. The findings suggest that the lived experience of inequality for low-income people in Cape Town is closely linked to transport (in) justice and social exclusion, impacting on people's day-to-day negotiation of their lives, limiting where they go, where and how they work and seek work, and how they spend their leisure time. The analysis is ongoing, but some of the emerging themes related to transport and social exclusion are as follows:

[20] Case study summary provided by *Wanga Zembe, Southern African Social Policy Research Institute, Cape Town.*

1. **Lack of provision of transport as structural exclusion - Some participants talked about how their areas do not have accessible safe transport hubs within walking distance, even though surrounding neighbouring areas do.**

EXAMPLE - "There is a [transport] place near Heideveld that is close to schools near the Junction, there is one in Langa, there is one in Section 2, but we don't have one in Gugulethu. A child from Gugulethu has to take a taxi to Langa. They have to take a taxi and go far to the Junction. I am talking about things like that"

(Elderly Group, Gugulethu)

2. **Safety concerns as structural exclusion - In some areas transport was described as being accessible but unsafe, leading to some participants opting for expensive alternatives, and limiting their movements.**

EXAMPLE - ".....well I don't have a car so I rely heavily on public transport....and even that, I'd rather Uber than take a taxi anywhere and I live 10 minutes away from work....but I'll still Uber instead of taking a taxi. ....., so when it comes to travelling in Cape Town I've never been to anywhere else besides the nicer parts of Cape Town..... The taxi is cheaper than Uber, its waay cheaper! But because it's safer for me to Uber instead (sigh) and I don't live far from taxis, I live out in Main Road so I walk out my door and the taxis are right there. But....because it's safer for me to travel by Uber then I'd rather pay for that cost.... I don't go to other parts because then if I Uber everywhere then that's expensive to travel to other parts..."

(Office Workers Group, Claremont)

3. **Costliness as structural exclusion - access to transport was constrained by affordability resulting in limited movements.**

EXAMPLE - "It comes back to this thing of...showing that you don't really have the means. That's another touchy topic because I have meals three times a day sure, I can attend classes...because someone is paying for me. But now when I have to go to town, I have to take out money and get a taxi and go somewhere and do...I don't have that money.... so more than often...I will stay within my lane, this space I can move around and manoeuvre in because that's...as much as I was able to afford, even though there's someone else, I've gone out here and there to go see Khayelitsha...Mzoli's, Table Mountain, no not Table Mountain, Lions Head, places like that just for extra mural activities and stuff like that.....but other than that there hasn't really been much [travel] outside this space that I was afforded."

(Students Group, Rondebosch)

4. **Unreliability as structural exclusion - Cheaper forms of transport (trains) can be unreliable forcing low-paid workers to spend a large proportion of their low earnings on expensive alternatives.**

EXAMPLE - "Starting from January this year the trains have been running badly all the time.... You find that even though you are sitting with her [the employer]- explaining to her that now it's not the same as when I used to buy a monthly [train] ticket, now I use R50 a day, it's not the same as when I was using the ticket for the train and using that all the time. ....It's the taxi because I want to make your time. Can't you increase the money and she will say that no, she cannot do that. But you left your house at 7 [am] to be on time at work at 8 [am] but you know you will leave at 4 [pm]. Even when you tell them that there is a traffic jam or that the taxi you are in has been stopped by traffic [officers], she won't understand that. She doesn't even want you to be five minutes late. You have to make her time because she is rushing to her own important places.....I mean the issue of transport affects us a lot, anything to do with transport..."

(Domestic Workers Group, Masiphumelele)

5. **Transport as a vehicle of exposure to inequality – and to opportunities - Some participants described their direct exposure to inequality as they moved from area to area using transport –going from better off areas to more deprived areas (or vice versa) as they moved along transport network.**

EXAMPLE – "Like when you get to certain parts of Woodstock, especially on the Main Road, you'll see that it changes to something else (inaudible). Even Mowbray certain parts of Mowbray on Main Road, you go there and just past Rosebank its nice studenty and then all of the sudden you start getting a bit shady like Mowbray side Woodstock and then all of the sudden it starts looking nice again ..."

(Office Workers Group, Claremont).

CASE STUDY 6: POVERTY IMPACTS OF BUS RAPID TRANSIT (BRT) IN JOHANNESBURG, SOUTH AFRICA

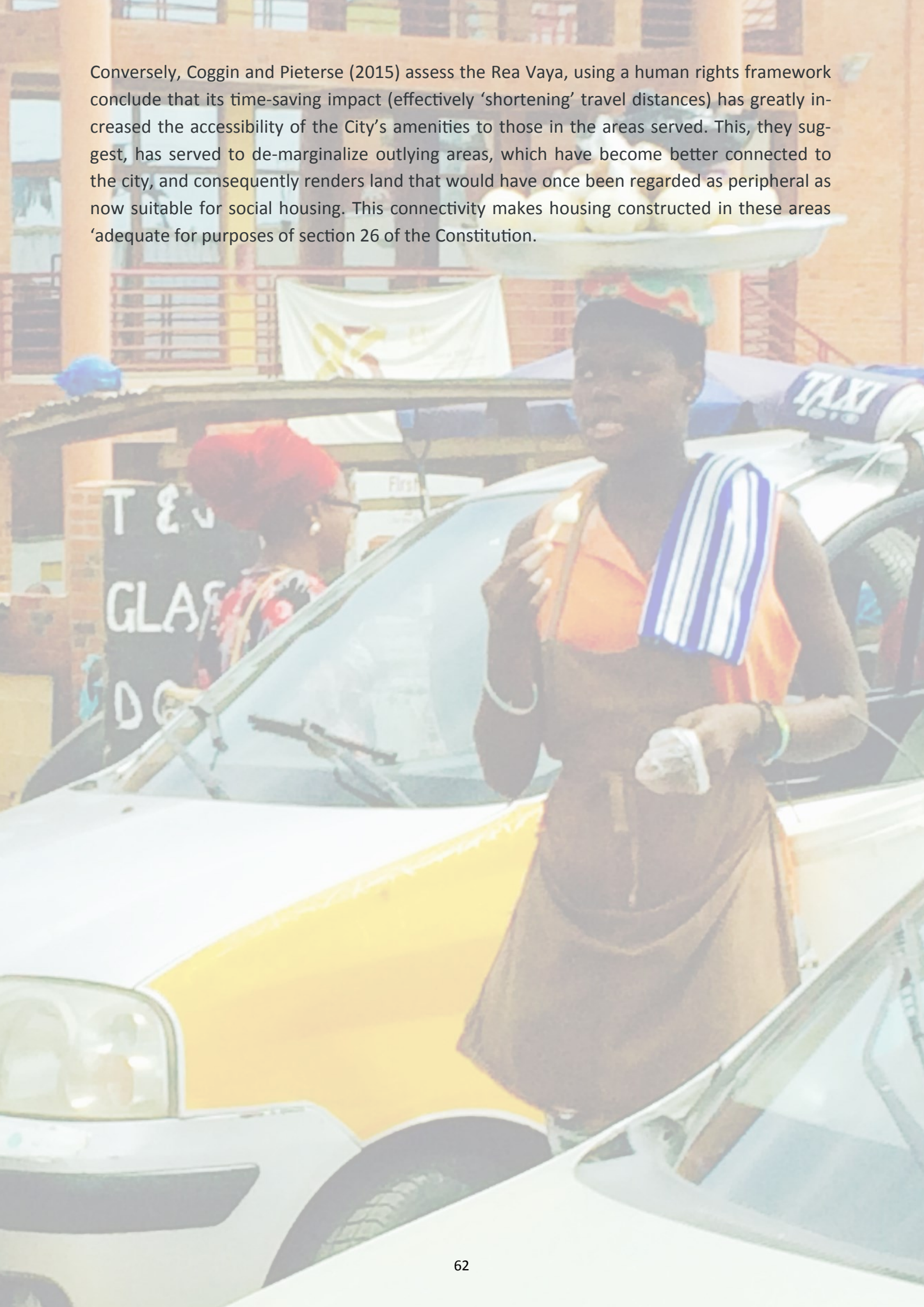
Bus Rapid Transit (BRT) services integrated Public Transport Network (IPTN) interventions are the preferred approach to improving public transport for many African cities. This reflects a particular reading of their urban mobility problem, which is essentially defined in terms of congestion and the associated urgent need to curb the growth of private vehicle use within cities, combined with the counter-veiling need for people to cover long travel distances using inefficient, inconvenient and chaotic informal transport modes. However, research shows that the resultant interventions, which have been largely based on the model of high-quality Bus Rapid Transit (BRT) deployment, has had less impact in terms of serving marginalized populations than what was intended.

For example, Venter and Vaz (2012) considered the poverty impacts of the first phase of Rea Vaya using data from a small-sample household survey conducted in Soweto. They ask whether Rea Vaya improves travel conditions (including access to transport, travel times, and travel costs) for all users, and whether these benefits accrue specifically to lower-income or poor users. Key findings suggest that while the service does enhance access to a variety of services, it does not directly expand such access. Time and cost savings are substantive, as much as 10 to 20% compared to previous levels, but these are felt by medium-income households rather than by the poorest commuters in the area. 'Inasmuch as passengers can spend time and fare savings on other goods, Rea Vaya contributes to poverty reduction, although Rea Vaya costs more than commuter rail, which remains the mode of choice for the poorest commuters' (Venter and Vaz, 2012).

Compared with various BRT systems internationally, 'Johannesburg's Rea Vaya has failed to improve the livelihoods of the poor due to its pricing scheme and focus on middle-income markets.' The BRT's fare structures are distance-based (an increasing fare based on the length of the trip taken) rather a single flat fee regardless of the distance travelled. This places a higher burden on long-distance commuters and disproportionately affects marginalized groups that have limited residential and economic options (Culwick, 2015).

A qualitative study looking at BRT impacts at neighbourhood level in the lower-income Johannesburg suburbs of Soweto and Diepkloof, Gauteng (Tsotetsi and Niclesse, 2016), showed that, although users of the system were positive about its benefits, the anticipated housing or commercial development in the vicinity of the bus stations had not materialized. Local minibus-taxi operators indicated business had been reduced; and respondents saw the development of a large shopping complex in the area as a more significant local event than the upgraded public transport system.

Conversely, Coggin and Pieterse (2015) assess the Rea Vaya, using a human rights framework conclude that its time-saving impact (effectively 'shortening' travel distances) has greatly increased the accessibility of the City's amenities to those in the areas served. This, they suggest, has served to de-marginalize outlying areas, which have become better connected to the city, and consequently renders land that would have once been regarded as peripheral as now suitable for social housing. This connectivity makes housing constructed in these areas 'adequate for purposes of section 26 of the Constitution.



6. Data needs and recommendations for future research

This final section of the report, focuses on what might be needed for researcher to improve the understanding of policymakers concerning the issues raised and how they might find ways to address them through the comparative evaluation of projects that have directly sought to improve the transport inclusion of low income and vulnerable populations both within African cities and elsewhere, internationally.

6.1 Improving relevant data availability

Suitable data (both quantitative and qualitative) is critical for the development of evidence-informed policies in the African cities context. Often the survey datasets that are available are inadequate for understanding the specific needs of different population groups and many of these surveys do not include the needs and concerns of the poorest people in them because they are considered to be outside the formal population of the city dues to both their physical and economic peripheralilty. This data is essential to produce the baseline evidence to establish the mobility and accessibility needs of all low-income groups, and to ensure that particularly marginalized sub-groups can be identified.

Researchers and policymakers should exploit the use of mobile phone and other new crowd-sourcing media for data collection and monitoring. Research funders and city planners should seeks to strengthen, streamline, standardise and empower the tools for locally produced data for planning and monitoring purposes this should include:

- Local consultations with low-income people at the micro-scale (i.e. within neighbourhoods) concerning their needs, preferences, and proposed accessibility solutions
- At the meso-scale (city) (i.e. through dialogues with different interest groups e.g. boda-boda drivers, taxi associations etc.)
- Creation of spaces for the co-production of a definition of modernity and expectations of planning with communities

An improved evidence base of the specific needs of different population groups and communities within the city would help policymakers to re-define the benchmarks for multi-modal mobility: e.g. the appropriate walking and NMT versus other motorized transport, formal versus informal transit; public versus private transport mix in terms of space allocations and the penetration of different modes into the city. They will be thus enabled to better integrate

Improved data and analysis will also help to empower and enable local communities themselves to appropriate transport infrastructures and services to better suit their accessibility needs within the city. In turn, this will build the local capacity of urban and transport planning to lever international, national and local resources and work collaboratively with other stakeholders and policy sectors to make evident the contribution of transport to the delivery of SDGs.

6.2 Recommendations for future research into action

This is a complex area of research that requires multi-disciplinary perspectives to come together to identify the social role of transport and its potential contribution in the delivery of SDGs within cities. Particularly, social science perspectives can enhance policymakers' awareness of under-served poor and vulnerable populations, which are currently overlooked in mainstream planning and project delivery.

More research is needed to disentangle the multiple and complex layers that underpin the political economy of informal communities within cities. This will help to make evident their economic contributions and social interconnections, which are currently being overlooked when considering slum clearances in the chase towards the Smart City and New Urban Agendas.

For researchers and research funders

Through their research, academics should seek to directly gather the evidence that will enable policymakers to draw better conclusions about the mobility and accessibility challenges faced by poor urban communities in order to facilitate changes on the ground. This can be achieved by:

i. Investigating existing available datasets such as travel surveys and road accident data to identify evidence gaps in terms of missing population groups, settlement types, mode use, trip types, origins and destinations, etc.

ii. Improving our understanding of the needs of people in specific local contexts to produce practical, bespoke solutions. Locally-based case studies and audits of the travel behaviours should be conducted with different population segments in different locations within the city.

iii. Undertaking more participatory research with low-income populations, especially those living informally within cities, and with vulnerable population groups such as women,

children, young and disabled people, so as to better understand their self-determined mobility and accessibility concerns. They should also try to work more alongside NGOs to coproduce research with low-income communities and vulnerable population groups.

iv. Making use of comparative international case studies and parallel analysis from other places to identify potential policy solutions and good practice examples. Examples of successful process are needed, as well as outcomes, and project failures can also provide useful lessons.

v. Engaging in more knowledge exchange activities that can allow greater public dissemination of their research results. This will to increase their policy impact. There is not a tradition of this coproduced 'research into action' in most African cities, which will need cultivation and resources to succeed.

vi. Developing co-produced education programmes and materials with local communities and actors to build the capacity of local actors and stakeholders to appropriate transport infrastructures and services to better meet their needs and strengthening the role of universities in promoting planning education grounded in local knowledge and experience

For policymakers and planners

The transport, mobility and accessibility needs and concerns of low-income communities and vulnerable populations should be raised as part of the planning and development process. Many communities are underserved, and people cannot easily access markets and other important destinations in the city. There is concern that these situations may worsen with planned removal of informal services and introduction of major new infrastructure project.

Better guidance is needed form policymakers to understand the types of data that they already hold, how to make it available for research use and what more is required in terms of data collection. This will enable researchers to target their proposals towards funding opportunities and programme calls that will enhance their impact upon national and local government stated Sustainable Development Goals and sustainable transport policy aims and objectives.

Policymakers need to fully evaluate their existing transport policies to understand how they address the needs of different low-income communities and population groups, such as female workers, young and older people and explore how to expose power relations and vested interests in the provision of transport infrastructure and service provision.

A lack of empirical evidence means that it is difficult to understand the complex social interactions of people living in informal settlements with people's activities in the city, including

work, trade, schooling and healthcare. This evaluation is needed *before* irreversible interventions and resettlement decisions are made.

To identify and provide suitable to pro-poor mobility solutions and inclusive transport systems African Metropolitan Authorities urgently need to:

- (Re)train policymakers and urban planners and city managers/personnel in how effect inclusive transport strategies through their daily practices and wider decision processes
- Establish frameworks for multimodal planning, including the full integration NMT and informal modes

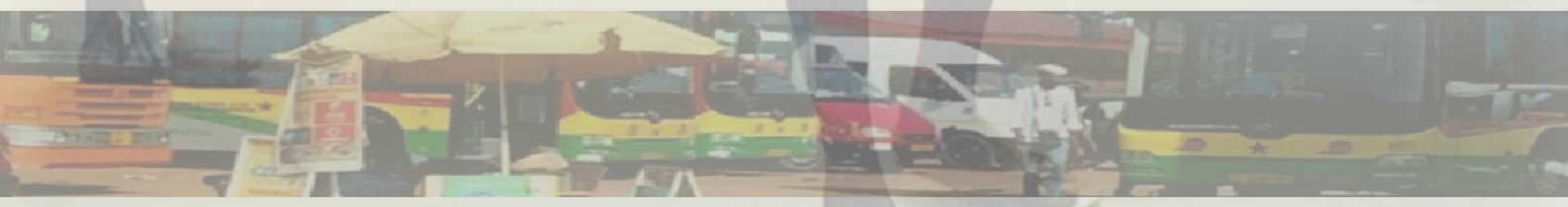
  Institute participatory transport planning processes and undertake participatory planning exercises with different communities in order to understand their needs and to provide wider visibility to successful bottom-up experiences (e.g. evening markets, elevated pavements with in-built space for street vending, halting relocation of slum dwellers etc.)
- Create partnerships between public and private actors for practical solutions at all levels. Donor agencies should work with these processes and not impose their own external aspirations, modal and technologically-driven preferences.

For international and local NGOs

We need to find better ways to share information and maintain connections between researchers, policymakers and NGO stakeholders. This will not automatically happen, and neither is it a cost-free exercise for the stakeholder who need to be involved. As such, continued funding is needed for information exchange and networking events, and the development of collaborative planning and evidence-gathering activities so as to regularly bring NGOs together with academics and cross-sector policy institutions which are working in the poverty reduction space.

There should be much greater involvement of local community representatives and frontline support, including SMEs, in the research design and coproduction of research outputs. The public health sector should also be brought into discussions concerning the lack of access to primary healthcare services within informal settlements, and the education needs to be involved concerning safe access to schools, as well as the need for female respect in the public space.

Researchers should seek to deploy knowledge-exchange and capacity-building funding programmes to empower local stakeholders to drive change and support locally-driven initiatives with international funding wherever possible, rather than repeatedly starting new externally derived (and possibly locally inappropriate) projects.



7. Acknowledgements

The authors would like to thank all the people who gave up their valuable time to participate in the local workshops in the five case study countries and our African partner organisations who did such a good job of setting them up for us. Much of the little we do already know about the travel experiences of low-income and vulnerable citizens in African cities is not recorded within the literature and so much of the knowledge-base that underpin the evidence base for this report came from their discussions of the issues at the workshops and the participative study tours that took place during these workshop visits. We'd also like to thank the different local communities who hosted us as part of our study tour, in particular the people of the Bwasie settlement in Kampala, the people in the Makoko community in Lagos (especially our gondola drivers), the school children who escorted us on their walks home from school and the students who accompanied us on their campus minibus at the university in Cape Coast. You really helped us to see the world through your eyes.

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