### Derailed commuting: A qualitative exploration of the travel burden on low-income women in Cape Town

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#### **Abstract**

South African cities are characterized by income segregation. Quantitative indicators of transport disadvantage show that, in Cape Town, lower income households spend a disproportionate amount of time and money on travel relative to higher income households. Further, women, due to their roles as carers and household administrators, experience higher travel cost burdens relative to men. These quantitative indicators raise questions about the lived experience of transport disadvantage, and the sacrifices and trade-offs commuters are forced to make. In this study, a qualitative approach was employed to investigate the commute experiences of women who are low-income earners, as a means of supplementing existing quantitative data. The findings suggest that while trains present the most affordable mode of travel for respondents, the service is subject to disruptions, cancellations and sabotage which result in substantial, unexpected travel cost and travel time. This unexpected expenditure adversely impacts household money and time budgets, and respondents are forced to adjust these budgets to the detriment of their household consumption and activity participation. Furthermore, while commuting, the respondents all reported a fear of crime, witnessing criminal activity or being the victim of crime. It is concluded that the respondents' transport disadvantage, together with their social disadvantage as women with low wages and low skills levels, interact to render them at risk of social exclusion. Given the observed impact of declining rail service on entrenching transport disadvantage, the most appropriate policy response to transport-related social exclusion in the city would be to improve the rail service as a matter of priority.

 $\textbf{Keywords:} \ Travel\ costs,\ Public\ transport,\ Low-income\ commuters,\ Transport\ disadvantage,\ Social\ exclusion$ 

#### 1. Introduction

South African cities are characterized by income segregation resulting from Apartheid spatial planning. Poor communities living on the city periphery experience considerable transport costs. Democratic era national transport policies, legislation and frameworks, as guided by the 1996 White Paper on National Transport Policy, have committed to providing a public transport system that enables citizens to access the goods, services and opportunities they need. However, over two

decades after the introduction of the White Paper, low density sprawl, coupled with inadequate public transport service provision, continue.

In the context of rapid urbanization and rising levels of income inequality, it is important for planners and policy-makers to create environments that make it possible for all citizens to equitably access the goods and services required for their well-being. For this reason, it is important to constantly evaluate how easily and affordably citizens, particularly poor citizens, can travel to the places they need to be for economic and social advancement.

To date, most investigations into the transport costs of South African commuters have focused on quantifying monetary and travel time costs (e.g. Aivinhenyo & Zuidgeest, 2019; Behrens & Venter 2006; Venter, 2011). While these quantitative data provide important policy and planning information, the understanding they generate of how these travel costs impact commuters' daily lives can be superficial and would be improved by supplementary qualitative insight.

This paper will present the findings of a qualitative study undertaken in Cape Town to explore the impacts of travel costs on the lives of low-income commuters, particularly women. The paper is divided into eight sections. The following section introduces the concepts of transport disadvantage and social exclusion. Section 3 describes Cape Town's public transport context. Section 4 reviews existing quantitative indicators of transport costs in the city. Sections 5 and 6 present the methods and findings of the qualitative study. Section 7 discusses the findings; highlighting the failure of the passenger rail service as a key contributor to the travel burden the respondents experience. Section 8 concludes with reflection on the insights into transport disadvantage and social exclusion in the city that the qualitative research provides.

## 2. Literature review: transport disadvantage and social exclusion

While various definitions and measures of transport disadvantage have been developed, at the most basic level, transportation disadvantage refers to a compromised ability to access the places to which one wishes to travel (Lucas, 2012). This ability may be compromised by various factors, such as not having access to a private vehicle, not living within walking distance of reliable public transport services, not having enough money to make use of available public transport services, not using available transport services because of security fears, or not having credible information about transport service availability (Litman, 2003; Lucas, 2012; SEU, 2003).

Transport disadvantage is an important policy concern because of the role it plays in inducing social exclusion. The concepts of social exclusion and social inclusion are contested, yet most sources agree that it concerns the extent to which individuals are able to participate in various societal activities (Kamruzzaman et al; 2016). One of the more widely

accepted definitions of social exclusion is by Levitas et al. (2007):

...the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole... (Levitas et al., 2007: 9).

As a derived demand, travel allows us to fulfil the obligations that are required for our well-being and the well-being of our families. When the ability to participate in activities, or to fulfil obligations, is inhibited by an inability to move between spatiallysegregated activities, it can be argued that the experience of transport disadvantage has culminated into socially-exclusionary impacts. Figure 1 illustrates Lucas' (2012) interpretation of the relationship between transport disadvantage, social disadvantage and social exclusion. Friman et al., (2017) note further that commute satisfaction, in terms of travel mode and travel time, is related to emotional wellbeing, which in turn impacts on life satisfaction. The links between transport disadvantage, social exclusion and subjective well-being have been well documented in the literature (see Church, Frost, & Sullivan, 2000; Currie & Stanley, 2007; Currie et al., 2009; Delbosc & Currie, 2011; Lucas, 2011; Lucas, 2012; Porter, 2014; Stanley, et al., 2011; Uteng, 2009).

In bringing together the concepts of transport disadvantage and social exclusion, the concept of transport-related social exclusion (TRSE) has emerged in the literature to identify:

...the process whereby 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 part to insufficient mobility in a society and environment built around the assumption of high mobility (Kenyon et al., 2002: 210).

Analyzing the lived experiences of affected population groups facilitates a recognition of the social consequences of transport disadvantage (Lucas, 2012). Exploring how affected individuals experience social exclusion and transport disadvantage, and the links between the two, can

assist transport planners and policymakers in designing transport policy and public transport

provision that supports social development.

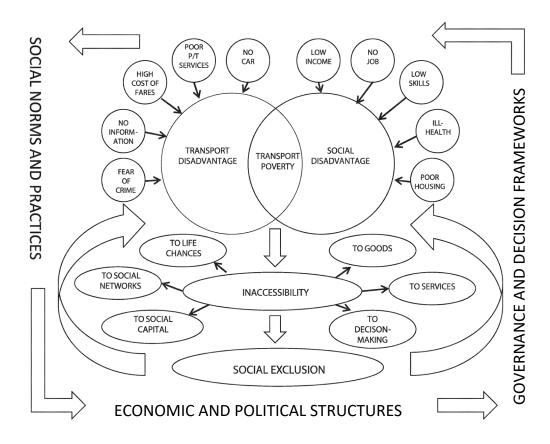


Figure 1. The relationship between transport disadvantage and social exclusion (Source: Lucas, 2012:107)

Effective and affordable public transport services can enable participation in the activities that are important for subjective well-being, such as employment, healthcare and social activities (Ettema et al, 2010; Lucas, 2012; Lucas et al., 2016; Xia et al., 2016). To this end, the United Kingdom has led the way in terms of transport-related social exclusion research within the context of developed world cities (Social Exclusion Unit, 2003). While some studies have investigated the links between transport, social inclusion and their impacts in a developing world context (Bryceson and Howe, 1993; Bryceson, 2009; Mahapa and Mashiri, 2001; McCray, 2004; Porter 2002; Porter et al., 2013; Potgieter et al., 2006; Thaddeus and Maine, 1994; Venter et al., 2007), they focus mainly on transport disadvantage and its impacts within rural areas. Most of these studies concentrate on the transport disadvantage experienced by women, given their position as the more time- and income-constrained gender.

The above studies conclude that the spatial segregation of activities that are important for

subjective well-being, coupled with restricted transport access to these activities, can result in socially-exclusionary impacts. To address the risk of transport-related social exclusion, it is thus important to address the transport disadvantage and social disadvantage that underpin it. Quantitative monetary and time indicators of transport cost, while providing valuable tools for monitoring levels of transport disadvantage, are unable to provide an authentic understanding of how transport disadvantage manifests in the lives of commuters.

# 3. Contextual background: public transport in Cape Town

The city of Cape Town, like other South African cities, is unique in its urban form in that it was historically designed to support racial segregation and to exclude the 'non-white' population from many economic and social opportunities and services (Behrens and Wilkinson, 2003). This resulted in poor levels of transport access for most of the population.

While democratic era spatial and transport policy and planning have sought to better integrate land-use and transport for improved access, as noted earlier, low-density urban sprawl has persisted alongside poor public transport service provision.

Public transport services in Cape Town consist of passenger rail, bus rapid transit, conventional bus and minibus-taxis. The rail and bus services offer scheduled, subsidized services, while the minibus-taxis offer an unscheduled, unsubsidized and weakly regulated service. Due to their weak regulation and demand-responsive nature, minibus-taxis can service new passenger demand quicker than the other public transport modes, albeit typically at a higher (unsubsidized) fare. Due to its market structure, the minibus-taxi industry is subject to violent competition and poor safety standards, which often renders the quality of service poor. According to the 2013 National Household Travel Survey (NHTS), 12%

of Cape Town households reported reckless driving by minibus-taxi drivers as their most important transport-related problem, followed by crime (11%) and congestion (8%) (Statistics South Africa, 2014a).

The same NHTS of 2013 also showed that, despite their high fare relative to other public transport modes, minibus-taxis were the most prevalent mode of public transport (45%), followed by trains (32%) and buses (24%) (Statistics South Africa, 2014a). In terms of fares, passenger rail provides the most affordable public transport service. Figure 2 illustrates that amongst the low-income group (≤ ZAR3,200 [USD325]/month), walking (33%) and public transport (44%) mode use is considerably higher than in higher income bands. In comparison, high-income group [USD5,176]/month) walking accounts for 7% of modal share, and public transport 8%.

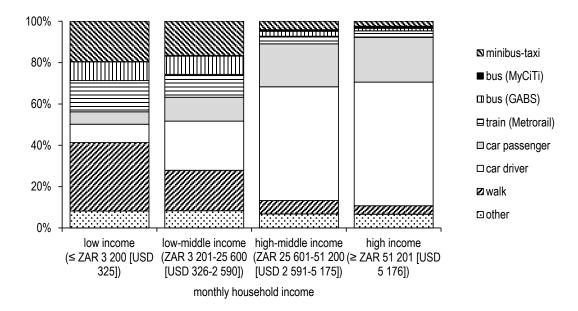
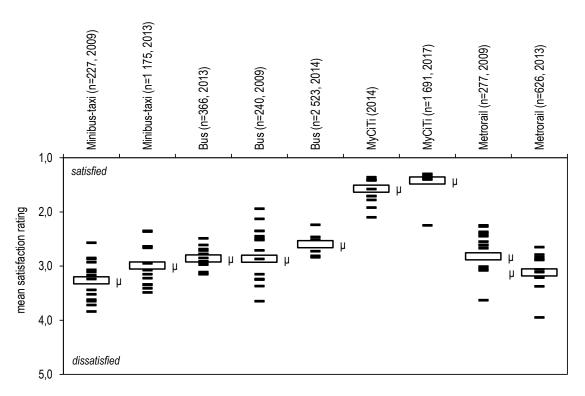


Figure 2. Main mode share for work and education trips, by household income (Data source: Cape Town Household Travel Survey, 2013, n=22,332 households)

Phase 1 of Cape Town's bus rapid transit service, MyCiTi, was launched in 2010 to advance plans for an integrated public transport network in the city. Since its inception, the service has faced many challenges and the roll out of subsequent phases face significant barriers and delays. Figure 2 indicates that, at least in the initial years, the service has catered mainly to middle-income passengers.

Figure 3 compares available secondary data (from the past decade) on network-wide public transport

passenger satisfaction in Cape Town. The chart reveals that, except for MyCiTi bus services, mean passenger satisfaction ratings cluster around the mid-point of a Likert scale. Conventional bus services have performed better than train and minibus-taxi services, with train and minibus-taxi services recording the greatest number of negative service attribute ratings (i.e. Likert values of >3 on a 5-point scale).



Notes: 1) The service attributes presented in the chart are only those common to the various satisfaction surveys. When a service attribute is missing, this is because that attribute was not included in the survey. The unweighted means ( $\mu$ ) are calculated from all service attributes in the source data, not from the attributes included in the chart. 2) Service attributes included: route availability; trip time; station/stop/rank security; vehicle cleanliness; comfort; vehicle security; vehicle overloading; crash safety; peak waiting time; off-peak waiting time; service punctuality; fare affordability; payment medium; station/stop/rank cleanliness; rank facilities/toilets; vehicle reliability; passenger information; driver customer relations; and driver compliance. 3) Likert scale: from 'strongly agree', 'neutral/uncertain', 'disagree' to 'strongly disagree' with service attribute statements.

Figure 3. Comparative passenger satisfaction rating data, by public transport mode (2009-2017) (Data source: Behrens et al, 2018)

# 4. Quantitative indicators of transport disadvantage in Cape Town

Various studies in Cape Town have measured or estimated the extent of transport disadvantage through an analysis of transport-related costs across income groups. Most attention in this quantitative analysis has been given to monetary cost and time spent travelling.

With respect to monetary costs, empirically measured travel expenditure in the 2013 Cape Town Household Travel Survey found that low-income households spend 27% of monthly income on commuting by public transport (see figure 4), compared to 6% and 1% for the low-middle and high-middle income groups respectively (Aivinhenyo & Zuidgeest, 2019). The accepted desired maximum household expenditure on transport in both South

African and international policy is 10% (Department of Transport, 1996).

Noting that much of the low-income population group (≤ ZAR3,200 [USD325]/month) resides in areas located between 45-70 km from work opportunities, the City of Cape Town's Transport Development Index (TDI) imputes, given a notional household activity schedule based on full participation in the economy, that the mean direct transport cost for this group would account for 45% of monthly household income (City of Cape Town, 2015a). Other notable results of the TDI include: 95% of the public transport users fall into the low- and low-medium income groups (≤ ZAR25,600 [USD2,590]/month); and the highest priority cost for low-income households is the direct cost of public transport. (City of Cape Town, 2015a).

With respect to time spent travelling (including walking access and egress times), the 2013 Cape Town Household Travel Survey found that low-income households spend 60 minutes/day commuting to work on average (see figure 4), compared to 52 minutes and 47 minutes for the low-middle and high-middle income groups respectively (Aivinhenyo & Zuidgeest, 2019). The poorest income

group in the city spends 29% more time commuting than the wealthiest income group, on average. Higher relative expenditure on transport, and longer travel times, inevitably result in less trip-making amongst low-income households: 59% of low-income persons recorded not making a trip on the survey day, compared to 32% of high-income persons (see figure 4).

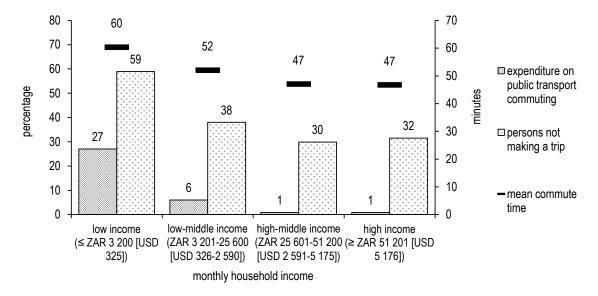


Figure 4. Monthly public transport expenditure, trip-making and commute time, by household income (Data sources: Cape Town Household Travel Survey, 2013, n=22,332 households; Aivinhenyo & Zuidgeest, 2019)

The 2015 review of Cape Town's statutory Integrated Transport Plan (ITP) confirms the challenges faced by the city's urban poor:

The poorest households – predominantly Black African – live on the outskirts of the city, located furthest away from potential employment and income-earning opportunities. They are the least able to afford the costs of urban sprawl, but have to commute long distances and at times use public transport modes that are currently not optimally integrated. Black African and Coloured commuters commonly travel between 50 minutes to 75 minutes to get from their homes to places of employment. *In contrast, White commuters – who mostly* travel by private car - are most likely to travel for less than 15 minutes up to a maximum of 30 minutes (City of Cape Town, 2015b: 116).

The 2013 NHTS also provides data on vehicle ownership and driving licenses. Fifty-four percent of households in the city reported owning a vehicle, with 0.27 cars/household in the low-income group compared to 0.84 cars/household for the population as a whole. In the high-income group, 94% of households had at least one driver's licence, whereas in low-income households this value was 31%. The 2013 NHTS data indicated that in Cape Town only 41% of females have been issued a driver licence (Statistics South Africa, 2014b).

These quantitative indicators highlight the transport disadvantage of the poor and the peripheral 'non-white' population, and can provide invaluable inputs when formulating policies. What is less clear from these indicators, however, is how transport disadvantage manifests in the daily lives of individuals and how it impacts upon their well-being and economic and social prospects (i.e. their social exclusion). It is to this matter that the paper now turns (through an explanation of research method in

section 5, and a presentation of research findings in section 6).

5. Method

Quantitative indicators of transport disadvantage show that, in Cape Town, low-income households are captive to public transport services, and spend a disproportionate amount of time and money on travel relative to wealthier households. Due to their roles as carers and household administrators, it is posited that women experience higher travel cost burdens relative to men. These quantitative indicators raise questions about the sacrifices and trade-offs low-income female commuters are forced to make, and how they manage their travel times and travel costs.

To develop insight into the impacts of transport disadvantage on social exclusion, and into the lived experiences of poor women captive to public transport services in Cape Town, a qualitative study was undertaken. Respondent selection criteria were formulated from literature review findings, and the Lucas (2012) model of the factors contributing to social and transport disadvantage in particular (see Figure 1). Thus, to be selected, respondents needed to: be women; be part of a low-income household; and reside far from employment opportunities. As a proxy for household income, employment type was used to determine eligibility. Subject recruitment focused on lower-paying occupations including cleaning staff, security staff, and messengers. Since the respondent may belong to a household in which there reside other higher income earners, respondent selection was restricted to respondents from non-vehicle-owning households, as a further proxy for household income. To meet the residential location criterion, subject recruitment focused on workers in the central business district of Cape Town with long daily commutes.

Through a process of quota sampling, coupled with the snowballing technique, seven women, who are low-income earners and reside relatively far from their place of employment, were interviewed, to gain an authentic understanding of the lived experience of their commute. Using open-ended, face-to-face interviews, respondents were asked about their commute experiences, their commute costs in terms of time and money, and how these commute costs had been met. Using an extensive thematic analysis of verbatim transcripts, key themes were identified. The key themes came across strongly in all

interviews, and saturation was attained quickly with a small sample.

#### 6. Findings

The key thematic findings are summarised below and supported by a selection of illustrative quotes that aim to provide authentic and persuasive insight into the struggles faced by the respondents.

### 6.1. Unexpected expenditure and household cutbacks

Unexpected expenditure is a theme that came across overwhelmingly in all respondent interviews. All respondents reported that disruptions to passenger rail services resulted in them experiencing additional, unexpected and unplanned-for monetary travel expenditure. Train cancellations were reported as a concern by all respondents. When a train is cancelled, commuters are notified that they must make use of alternative transportation. Respondents reported that in these instances, either a bus or minibus-taxi must be used, both of which are more expensive than passenger rail. While the cost of a passenger rail trip may average ZAR5.00 per trip, the bus or minibus-taxi trip can cost up to five times this amount.

"...when the trains are a mix up then you have to have extra money, you see? Because if I take a taxi out of Cape Town, I have to take a taxi to Bellville, from Bellville to Eerste River, from Eerste River station to my house. Its R10 to Bellville, R10 to Eerste River and R8 home..." (Respondent 1, Travels 40km to work)

Importantly, respondents noted that the additional cost of finding alternative transport was not budgeted for. This was reported as very difficult for the respondents to manage because they had budgeted for and paid for a monthly passenger rail ticket that they were unable to use. Because of such unexpected expenditure, most respondents reported having to borrow money to commute to work. One respondent added that while she does borrow money from her neighbour for her commuting costs, sometimes she would rather call in sick and forfeit her income for the day than borrow more money because of what people would say about her.

Having to find alternative transportation when passenger rail services are disrupted is difficult for

the respondents. Most respondents suggested that the monthly rail ticket is easily budgeted for, but the unexpected expenditure, as outlined above, requires them to make economic trade-offs.

"I feel bad because it's out of my budget and I don't save. Because I keep money so that I can have money till the end of the month but I can't keep it because I'm going to have to take it for transport." (Respondent 2, Mother of 3, works 12 hours per day)

"...you have to give out money that's not included in your budget, and then you have to go borrow money. That's not in your budget but you have no choice, you must go borrow. You can't walk to work. And you can't just ask anyone for money or a lift." (Respondent 1, 41-year old mother of 3)

Many respondents reported that the unexpected expenditure on alternative transport makes household cutbacks necessary. Other respondents reported having to cut back on other essential household items.

"...A woman normally keeps money for the month for bread and milk and stuff like that, then I have to take from that money." (Respondent 1, 41-year old mother of 3)

One respondent added that since encountering increased instances of unexpected expenditure on alternative transport, she has been unable to manage her budget as efficiently as she used to. She previously tried to save money by purchasing products in bulk at a lower cost, but she is now forced to purchase smaller quantities at convenience store prices. When asked how respondents make decisions about household cutbacks, most noted that they first ensure that their children are taken care of (i.e. cut back on things they need before cutting back on things their children need).

"The kids are more important, but for my things, the things that are going to help me, I can cancel...No, I don't let my children suffer or get hungry." (Respondent 3)

#### 6.2. Unexpected time and personal obligations

All respondents reported that rail service disruption increases their journey times significantly. This additional travel time is also unplanned for. While national policy suggests commute times should not exceed one hour in each direction, the mean

commute time for respondents was reported as 1 hour and 40 minutes in each direction, totalling over 3 hours of travelling per day. Strikingly, the average waking time for respondents was reported at 03h30. Respondents stated that it is important that they reach the rail station as early as possible to board the first train of the morning, which is deemed the most reliable.

One respondent reported that while she had previously enjoyed travelling to work on the train, recent incidences of delays and cancellations have made the experience an unpleasant and unsafe one. She describes waiting over an hour for a train only for the train to arrive over-crowded and she was unable to get in. She stated that she would not consider boarding an over-crowded train because her friend had previously been injured after trying to board an over-crowded train in her desperation to get to work on time.

Another common issue noted was that when trains depart from the station on time, service disruptions may result in the train stopping for long periods, sometimes hours, between stations. These unexpected time delays increased the cost of time away from families.

"I'm feeling bad... I'm always angry, angry, angry... [about getting home that time] ...and I know that I still have lots of work to do at home." (29-year-old mother of 2)

"... it's very hurting because I'm not gonna see my children and I have to do all that work, so I'm gonna sleep past ten and I have to wake up at three o'clock again, you see. So, it's really hurt...sometimes I miss cooking because it's too late to cook and my kids have to eat instant porridge or corn flakes, or they have to sleep with bread." (Respondent 7, 26-year-old single mother)

One respondent reported feeling bad when arriving home to a sleeping child. Respondents reported often not getting home in time to assist their children with homework.

"...then I have to ask them, please do your own [homework], I'm tired and late. And they don't understand this...it's sad because you think to yourself, 'Did the child do the right job?' Then you don't know as a parent." (Respondent 1, Mother of 3)

One 26-year old mother noted that she is only able to assist her daughter with homework on the days that she is off from work. Another respondent reported not being able to attend her child's school meeting because of disruptions to service. She recalled that her child felt upset and concerned about the impression that this would leave on the teacher.

> "... there [were] two times that the train was standing between the lines and I [missed] the kids' school meetings...the kids [were] upset because they were thinking that the teacher would say 'your parents don't even take an interest in your school work." (Respondent 1, 41 year old mother of 3)

One respondent relayed an instance in which she was unable to get to her family in a medical emergency due to the passenger rail disruptions. She had been at work when she received an urgent phone call from a relative.

> "...so, I had to cancel that, and she's younger than me, so she wanted me to go to help but I didn't because its off, the transport...I was feeling bad man, bad, bad, because maybe I was the only person she could call." (Respondent 3)

Respondents typically report having to ask others for assistance due to the times that they leave for work and return home from work. One mother reported having to take her children to the neighbour's house at 04h30 while the children are still asleep.

> "the first thing is to bath myself and then I must prepare the lunches for the kids and I must take them to the neighbour so that she can take them to school, you see, because I'm leaving the house half past 4 and that time they still need to sleep." (Respondent 3, 29-year old mother of 2)

#### 6.3. Employment and earnings

Respondents, particularly those employed on a contract basis, stated that disruptions to passenger rail services impact on their earnings by causing them to arrive late for work or by causing them to forfeit income.

> "...it affects me badly my dear, because I don't like to be late at work, because when I'm coming to work, I'm coming to relieve the night shift, those people expect to go

home so they can get rest, you see?" (Respondent 2, Mother of 3, Philippi)

One respondent noted her frustration at having to offer the same excuse every day to her supervisor and added that continually arriving late for work puts her in danger of receiving a written warning from her employer.

> "It's a notice, a signed notice, because I can't be late every day. The excuse is late, late, and late, it's the train, it's the train, and it's the train. I can't." (Respondent 4, travels 35 km to work)

To avoid receiving a written warning, she would rather call in sick and forfeit her income for that day. She reported feeling anxious at home when having to call in sick due to the forfeited income.

> "I'm lie to job if I don't have the money, example, if there's no train and I don't have the money to go back, I'm lie, I say I'm sick. My supervisor call someone relieve me... I'm not feel okay because if I stay at home...I'm stress about that day short money because they deduct that money from me...I'm not pay, my darling." (Respondent 4)

The contract nature of the work that some respondents engage in is offered on a first-comefirst-served basis

#### 6.4. Exposure to criminal activity

All respondents reported experiencing fear of crime on their commute to or from work, or being the victim of, or witness to, criminal activity. This highlights a serious issue in terms of the safety of women in society. Safety concerns were reported as most prominent in the early morning when respondents must leave their homes while it is still dark and walk to their connecting mode of travel. Respondents reported feeling exposed vulnerable to criminal activity as pedestrians. One respondent who resides in a neighbourhood plagued by gangsterism reported having to plan her pedestrian route carefully to avoid dangerous locations.

Respondents told their stories of being robbed and verbally assaulted while commuting to work. One respondent reported being particularly traumatized after being robbed by a man on her commute. She added that the thought of it still made her angry. Her train ticket was stolen in the process and she could not afford to purchase another one. Another respondent reported being robbed by a man yielding a knife. She stated that it took her a very long time to deal with what had happened. She described the experience as the worst she had ever had.

"That was the baddest feeling I ever had...he came straight to me with a knife and he said, 'give me your bag and your phone,' I didn't think twice, I just gave it...that was the baddest feeling, I never was afraid like that...I was so scared. It took time to get over that..." (Mother of 3, travels 40km to work)

Another respondent reported even having her shoes and work name tag stolen on her commute. She relayed having to walk home barefoot and then having to report the incident at the police station. Not only did she forfeit her income that day, she had to pay to replace her work name tag and her cell phone.

"...They did robbed me last month. They even take my shoes, my uniform shoes...They didn't hurt me because I give them my stuff. They hurt you if you don't wanna give them your stuff. I give them my stuff and I have to go back home with my feet because there's no transport by that time. I went from the station until past five o clock when it's earlier, I went back home and to the police station to open a case... I was hurt because they took my shoes and my phone; they even took my work name tag. I had to get a new one and this one costs R75.00...I had to pay for it...its very painful, my dear..." (Respondent 7, single mother)

Because of their previous experiences and the environments through which they travel, all respondents reported feeling scared at some point on their commute.

"Just every day you have that fear, you can get robbed, you can get raped, you can get killed, you don't know...people they take chances if you are a lady." (Respondent 7, 26-year-old single mother)

Unexpected travel time delays impose a safety cost in that when respondents arrive in their home neighbourhood too late, they are exposed to security risks because there are no longer minibus-taxi distributor services operating at that time. One respondent reported having to walk through a dangerous area late at night and mitigating risk by walking in a group.

#### 7. Discussion

Most of the difficulties experienced by respondents on their commute to and from work stemmed from disruptions to passenger rail services, and thus telling the story of the respondents' commute experience is, in essence, telling the story of the failure of the passenger rail service. The causes of the decline in the public monopoly passenger rail system in recent years are complex, ranging from: a prolonged period of underinvestment by the national government; multiple arson attacks on rolling stock; theft of cabling and other equipment; and allegations of mismanagement and corruption.

Despite a growing urban population, the rail operator (Metrorail) has been losing patronage at an alarming rate. Ridership has roughly halved in five years: daily passenger boardings declined from 675,706 in 2000 to an estimated 360,000 in 2017 (see figure 5). This decline is clearly linked to decreased operating capacity. The fleet of running train sets has decreased from 82 in 2016 to ~42 in 2018, with a minimum of 88 trainsets required to operate the city network. As a result, daily service cancellations are high, and on-time arrival rates are low (reported as 11% and 43% at the end of 2017 respectively) (City of Cape Town, 2018).

All respondents reported being captive to passenger rail because it offered the most affordable means of travelling to work. As such, the state of the passenger rail service is critical to the lives of many low-income commuters. Most respondents noted deterioration in the rail service and recalled a time when commuting on the train was not as bad as it is now.

A cross-cutting theme that emerged strongly is experience of train cancellations and (departure and mid-journey) delays. While these incidences have become a norm for news and traffic reporters, the frustration and stress that it places on commuters is rarely reported. One respondent noted the anger that she and fellow commuters feel when informed that their transport home has been cancelled and that they are left to find their own way home. Half of the respondents noted that in previous years, train cancellations were not as devastating since Metrorail

arranged alternative transportation. Customers could use their valid rail ticket to access Golden Arrow buses at no additional cost. Another respondent noted the poor timing of communication

received from Metrorail when notifying commuters of disruptions to service. She added that if she is informed well ahead of time it would be easier for her to make alternative arrangements.

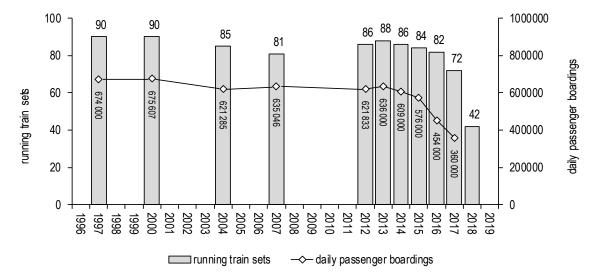


Figure 5. Daily passenger boardings and running trains sets, by year (Data sources: Comprehensive Integrated Transport Plan 2018-2023)

Respondents also reported experiencing severe overcrowding on trains. Some brave the crowded trains and the related safety hazards for fear of arriving late for work, but it was reported to be an unpleasant transit experience.

Other themes that emerged related to the impact of the additional time and cost burdens; particularly when they were not planned or budgeted for. These findings appeared be consistent with the literature social exclusion induced by transport disadvantage. Higher travel costs were reported to be associated with trade-offs for essential household items and higher travel times were reported to be associated with trade-offs in time allocated to family, social, or recreational time. These trade-offs were reported to be highly frustrating for the respondents; adversely impacting their subjective well-being. Fear of being a victim criminal activity on the commute, or having previously being a victim of criminal activity, also appeared to be linked to the literature on subjective well-being and commuter satisfaction.

The findings thus show a link to the literature discussed in Section 4 and should offer a signal to policy-makers on the risk of the social-exclusionary impacts of transport disadvantage in Cape Town.

#### 8. Conclusion

This paper set out to explore the impacts of travel costs and time on the lived experiences of lowincome female commuters in Cape Town. With respect to travel cost, all respondents reported commuting by train because it offers the most affordable fare. However, the study found that the true financial burden is felt when the rail service is disrupted, and unbudgeted additional funds must be sought to pay for alternative transport. This is where the need to trade off essential household goods takes place. With respect to time spent travelling, most respondents reported that if the rail service operated according to its published schedules, they would be able to structure their days accordingly. However, the rail service was reported to be subject to constant delays and cancellations that make planning impossible. Being poor and captive to this unreliable service meant, for most respondents, waking up at 03h00 to be able to make the first, most reliable, train of the morning. Furthermore, the service disruptions and the tendency of trains to stop between stations, sometimes for hours, make the probability of arriving late for work high. In these instances, respondents may either be warned by their supervisors or may forfeit their daily wage.

Reflecting on the link between 'transport disadvantage' and 'social exclusion' discussed in the earlier literature review, respondents reported experiencing all the criteria for transport disadvantage identified in figure 1: fear of crime; no information; high cost of fares; poor public transport services; and no car. These experiences of transport disadvantage, together with their disadvantage' as women with low wages and low skills levels, interact to render them 'transport poor'. Given their reported constrained access to, and constrained participation in, activities, it is suggested that the respondents are at risk of social exclusion.

Transport policy thus has a place in social policy and the findings of this study suggest that the most appropriate policy response to transport-related social exclusion in the city would be to address the breakdown in the passenger rail service as a matter of urgency.

#### References

- Aivinhenyo, I., & Zuidgeest, M. (2019). Transport equity in low income societies: Affordability impact on destination accessibility measures. In Lucas, K., Martens, K., Di Ciommo, F. & Dupont-Kieffer, A. (eds), Measuring Transport Equity, Elsevier, New York. https://doi.org/10.1016/b978-0-12-814818-1.00007-x
- Behrens, R., Dodgen, S., Fusire, T. & Mukhuba, T. (2018).

  Passenger satisfaction with minibus-taxi feeder services at the Mitchells Plain public transport interchange in Cape Town, Proceedings of the 37th Southern African Transport Conference, Pretoria, South Africa. http://hdl.handle.net/2263/69566 (Accessed February 2019).
- Behrens, R. & Venter, C. (2006). Unravelling travel costs:

  Towards improved data collection and transport
  expenditure policy indicators, Proceedings of the
  25th Southern African Transport Conference,
  Pretoria, South Africa.
  http://hdl.handle.net/2263/6105 (Accessed
  February 2019).
- Behrens, R., & Wilkinson, P. (2003). Housing and public passenger transport policy and planning in South African cities: a problematic relationship. In: Harrison, P., Huchzemeyer, M., & Mayekiso, M. (eds.), Confronting Fragmentation: Housing and Urban Development in a Democratising Society Cape Town, University of Cape Town Press, Cape Town. ISBN: 978-1919713731
- Bryceson, D. (2009). Roadmapping Development and Poverty Alleviation: Transport and the Millennium Development Goals in Africa. In Grieco, G., Ndulo, M., Bryceson, D., Porter, G., & McCray, T. Africa, Transport and the Millennium Development Goals: Achieving an Internationally Set Agenda. Cambridge Scholar Publishing, Newcastle upon

- Tyne, 1-24. ISBN: 978-1443813006. https://www.academia.edu/9337420/Roadmappin g\_Development\_and\_Poverty\_Alleviation\_Transport\_and\_the\_Millennium\_Development\_Goals\_in\_A frica (Accessed February 2019)
- Bryceson, D.F., & Howe, J. (1993). Rural household transport in Africa: reducing the burden on women? World Development, 21 (11), 1715 1728. https://doi.org/10.1016/0305-750x(93)90079-o
- Church, A., Frost, M., & Sullivan, K. (2000). Transport and social exclusion in London. Transport Policy, 7 (3), 195 205. https://doi.org/10.1016/s0967-070x(00)00024-x
- City of Cape Town. (2015a). Transport Development Index:

  A baseline understanding of the state of transport in Cape Town.

  https://www.tda.gov.za/docs/categories/1396/UIT
  P\_TDI\_%20Presentation.pdf (accessed 26 February 2019).
- City of Cape Town. (2015b). Comprehensive Integrated Transport Plan (CITP): 2015 Review. Cape Town. https://tdacontenthubfunctions.azurewebsites.net /Document/57 (Accessed February 2019).
- City of Cape Town. (2018). Comprehensive Integrated Transport Plan (CITP): 2018 Review. Cape Town. http://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Comprehensive%20Integrated%20Transport%20Plan.pdf (Accessed 26 February 2019).
- Currie, G., & Stanley, J. (2007). No way to go: Transport and social disadvantage in Australian communities, Monash University ePress, Melbourne, Australia. ISBN: 978-1925495980
- Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R., & Stanley, J. (2009). Investigating links between transport disadvantage, social exclusion and wellbeing in Melbourne Preliminary results. Transport Policy, 16(3), 97 105. https://doi.org/10.1016/j.tranpol.2009.02.002
- Delbosc, A., & Currie, G. (2011). The spatial context of transport disadvantage, social exclusion and wellbeing. Journal of Transport Geography, 19(6), 1130 1137. https://doi.org/10.1016/j.jtrangeo.2011.04.005
- Department of Transport. (1996). White Paper on National Transport Policy. Pretoria. https://www.gov.za/documents/national-transport-policy-white-paper (Accessed 27 February 2019).
- Ettema, D., Gärling, T., Olsson, L. E., & Friman, M. (2010).

  Out-of-home activities, daily travel, and subjective well-being. Transportation Research Part A: Policy and Practice, 44(9), 723–732. https://doi.org/10.1016/j.tra.2010.07.005
- Friman, M., Gärling, T., Ettema, D., & Olsson, L.E. (2017).

  How does travel affect emotional well-being and life satisfaction? Transportation Research Part A:

  Policy and Practice, 106, 170 180. https://doi.org/10.1016/j.tra.2017.09.024
- Kamruzzaman, M., Yigitcanlar, T., Yang, J., & Mohamed, M. (2016). Measures of Transport-Related Social

- Exclusion: A Critical Review of the Literature. Sustainability, 8(7), https://doi.org/10.3390/su8070696
- Kenyon, K., Lyons, G., & Rafferty, J. (2002). Transport and Social Exclusion: Investigating the possibility of promoting social exclusion through virtual mobility. Journal of Transport Geography, 10(3), 207 – 219. https://doi.org/10.1016/s0966-6923(02)00012-1
- Levitas, R., Pantazis, C., Fahmy, E., Gordon, D., Lloyd, E., & Patsios, D. (2007). The Multi-Dimensional Analysis Social Exclusion. https://dera.ioe.ac.uk/6853/1/multidimensional.p df (accessed 26 February 2019).
- Litman, T. (2003). Social Inclusion as A Transport Planning Issue in Canada. http://www.vtpi.org/soc ex.pdf (Accessed 26 February 2019)
- Lucas, K. (2011). Making the connections between transport disadvantage and the social exclusion of lowincome populations in the Tshwane Region of South Africa. Journal of Transport Geography, 19 (6), 1320 - 1334. https://doi.org/10.1016/j.jtrangeo.2011.02.007
- Lucas, K. (2012). Transport and social exclusion: Where are we now? Transport Policy, 20, 105-113. https://doi.org/10.1016/j.tranpol.2012.01.013
- Lucas, K., Mattioli, G., Verlinghieri, E., & Guzman, A. (2016). Transport poverty and its adverse social consequences. Proceedings of the Institution of Civil Engineers - Transport, 169 (6), 353-365. https://doi.org/10.1680/jtran.15.00073
- Mahapa, S.M., & Mashiri, M. (2001). Social exclusion and rural transport: gender aspects of a road improvement project in Tshitwe, Northern Province. Development Southern Africa, 18(3), 365 - 376.
  - https://doi.org/10.1080/03768350120070026
- McCray, T. (2004). An issue of culture: the effects of daily activities on pre-natal care utilization patterns in rural South Africa. Social Science and Medicine, 1843 https://doi.org/10.1016/j.socscimed.2004.02.033
- Porter, G. (2002). Living in a walking world: Rural mobility and social equity issues in Sub-Saharan Africa. Development, 30(2), https://doi.org/10.1016/s0305-750x(01)00106-1
- Porter, G. (2014). Transport Services and Their Impact on Poverty and Growth in Rural Sub-Saharan Africa: A Review of Recent Research and Future Research Needs. Transport Reviews, 34(1), 25 - 45. https://doi.org/10.1080/01441647.2013.865148
- Porter, G., Hampshire, K., Dunn, C., Hall, R., Levesley, M., Burton, K., Robson, S., Abane, A., Blell, M., & Panther, J. (2013). Health impacts of pedestrian head-loading: a review of the evidence with particular reference to women and children in sub-

- Saharan Africa. Social Science & Medicine, 88, 90 -
- https://doi.org/10.1016/j.socscimed.2013.04.010
- Potgieter, C.A., Pillay, R., & Rama, S. (2006). Women, Development and Transport in Rural Eastern Cape, Human Science Research Council Press, South Africa.
  - https://www.hsrcpress.ac.za/books/womendevelopment-and-transport-in-rural-eastern-capesouth-africa (Accessed 26 February 2019).
- Social Exclusion Unit (SEU). (2003). Making the Connections: Final Report on Transport and Social Exclusion.
  - https://www.ilo.org/emppolicy/pubs/WCMS ASIS T 8210/lang--en/index.htm (Accessed 26 February
- Stanley, J., Hensher, D., Stanley, J., Currie, G., Greene, W., & Vella-Brodrick, D. (2011). Social exclusion and the value of mobility. Journal of Transport Economics and Policy, 45(2), 197 - 222. http://www.jstor.org/stable/23072175
- Statistics South Africa. 2014a. National Household Travel Survey: Western Profile Cape http://www.statssa.gov.za/publications/Report-03-20-02/Report-03-20-022014.pdf (Accessed February 2019).
- Statistics South Africa. 2014b. National household travel survey 2013: Statistical Release www.statssa.gov.za/publications/P0320/P0320201 3.pdf (Accessed 26 February 2019).
- Thaddeus, S., & Maine, D. (1994). Too far to walkmaternal mortality in context. Social Science and Medicine. 38(8), 1091-1110. https://doi.org/10.1016/0277-9536(94)90226-7
- Uteng, T. P. (2009). Gender, Ethnicity, and Constrained Mobility: Insights into the Resultant Social Exclusion. Environment and Planning A: Economy and Space, 41(5), 1055-1071. https://doi.org/10.1068/a40254
- Venter, C. (2011). Transport expenditure and affordability: The cost of being mobile. Development Southern 28(1), https://doi.org/10.1080/0376835x.2011.545174
- Venter, C., Vokolkova, V., & Michalek, J. (2007). Gender, residential location and household travel: Empirical findings from low-income urban settlements in Durban, South Africa. Transport Reviews, 27(6), 677. https://doi.org/10.1080/01441640701450627
- Xia, J., Nesbitt, J., Daley, R., Najnin, A., Litman, T. & Tiwari, S. (2016). A multi-dimensional view of transportrelated social exclusion: A comparative study of Greater Perth and Sydney. Transportation Research Part A: Policy and Practice, 94, 205-221. https://doi.org/10.1016/j.tra.2016.09