

RIGHTING THE WRONGS OF THE PAST:
CORRIDORS OF FREEDOM AS A PATHWAY TO
INCLUSIVE DEVELOPMENT



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To God be the glory

Table of Contents

| | |
|--|----|
| GLOSSARY | 6 |
| 1. INTRODUCTION | 8 |
| 2. BACKGROUND | 10 |
| 2.1. Corridors of Freedom..... | 11 |
| 3. LITERATURE REVIEW | 15 |
| 3.1. What is an inclusive city?..... | 15 |
| 3.2. The right to the city | 18 |
| 4. OBJECTIVES AND METHODS OF THE STUDY | 21 |
| 4.1. Research problem..... | 21 |
| 4.2. <i>Research question</i> | 21 |
| 4.3. Research Design..... | 22 |
| 4.4. <i>Method of analysis</i> | 24 |
| 4.5. <i>The criteria for choosing participants</i> | 24 |
| 4.6. <i>Ethical considerations and limitations</i> | 26 |
| 5. UNDERSTANDING THE SPATIAL MISMATCH | 28 |
| 5.1. Introduction | 28 |
| 5.2. The Spatial Order of Johannesburg | 28 |
| 5.3. The changing nature of employment in Johannesburg | 31 |
| 5.4. Spatial mismatch | 33 |
| 6. THE OVERVIEW OF HOUSING POLICY FROM 1994 - 2007 | 35 |
| 6.1. Introduction | 35 |
| 6.2. <i>The 1994 White Paper on housing.</i> | 36 |
| 6.3. <i>Breaking New Ground (BNG) housing policy 2004</i> | 37 |
| 6.4. <i>Inclusionary Housing Policy 2007</i> | 38 |
| 7. RESULTS | 43 |
| 7.1. Introduction | 43 |
| 7.2. Profile of Kagiso respondents..... | 43 |
| 7.3. The displacement of the township of Kagiso..... | 44 |
| 7.4. Kagiso participants | 47 |
| 7.5. Soweto Participants | 55 |
| 8. DISCUSSION | 67 |
| 8.1. Introduction | 67 |
| 8.2. South Africa’s public transport system: The minibus taxi industry | 68 |
| 8.3. What is the Rea Vaya Bus Rapid Transit system? | 70 |
| 8.4. The importance of the Rea Vaya BRT System | 71 |
| 8.5. The potential impact of the BRT on Kagiso residents. | 73 |
| 9. CONCLUSION | 76 |
| 10. REFERENCES | 80 |

| | |
|---|-----------|
| 11. APPENDIX..... | 85 |
| Appendix A: Joshco’s affordable housing rental unit rates | 85 |
| Appendix B: Informed Consent Form..... | 87 |

GLOSSARY

| | |
|---------|---|
| ANC: | African National Congress |
| BNG: | Breaking New Ground (Housing policy) |
| BRT: | Bus Rapid Transit (System) |
| CBD: | Central Business District |
| COJ: | City of Johannesburg |
| DOH: | Department of Housing |
| GEAR: | Growth, Employment and Redistribution Programme |
| IDP: | Integrated Development Plan |
| JMPD: | Johannesburg Metro Police Department |
| JOSHCO: | Johannesburg Social Housing Company |
| NIMBY: | Not-In-My-Back-Yard |
| PUTCO: | Public Utility Company (bus company) |
| RDP: | Reconstruction and Development Programme |
| SACN: | South African Cities Network |
| SERI: | Socio-Economic Rights Institution |
| SPLUMA: | Spatial Planning and Land Use Management Act |
| TOD: | Transit Oriented Development |

ABSTRACT

South African cities are still largely unequal where the urban poor's right to the city is not adequately addressed. As a result of the legacy of apartheid and the various housing policies that have been adopted to address housing segregation, Johannesburg remains spatially fragmented with the urban poor remaining isolated in the periphery of the city far from places of employment and opportunity. With the decentralization and deindustrialization of employment, commuting for the urban poor has become more time consuming and costly with an average monthly commute costing R1 500.00. The City of Johannesburg has committed to tackling these structural and spatial inequalities that exist in Johannesburg through its flagship programme called Corridors of Freedom. Corridors of Freedom aims to transform the spatial inequalities in Johannesburg through the creation of geographies of inclusion using transit oriented development (TOD). This is through investing in public transport with the development of the Rea Vaya Bus Rapid Transit System (BRT) and inclusionary housing as the backbone to eradicate spatial. Corridors of Freedom aims to address housing segregation through the extension of the Rea Vaya BRT system in peripheral townships and through inclusionary housing provision to promote inclusive development in Johannesburg. This study will evaluate whether Corridors of Freedom and its associated developments have the potential to improve the lives of potential beneficiaries of two townships, Kagiso in the West Rand and Soweto. The study seeks to understand how the presence of the Rea Vaya BRT system can assist the urban poor's access to the city and places of employment and opportunity. A comparison is made between Soweto residents who directly benefit from using the Rea Vaya buses and the Kagiso residents who do not have access to the Rea Vaya buses. Several stakeholders were interviewed including both the residents of Kagiso and Soweto. It was concluded that the Rea Vaya BRT system is a poverty-reduction strategy for the urban poor and an attempt from the City of Johannesburg to correct the existing spatial inequalities. The Rea Vaya Bus Rapid Transit system along with well-located social housing is an important step towards addressing inclusivity and bringing people close to places of employment and opportunity.

Keywords: Inclusive development, Housing Segregation, Rea Vaya, Bus Rapid Transit System, Spatial Mismatch.

1. INTRODUCTION

In the context where cities are highly unequal, governments are in search of appropriate ways that would correct these existing inequalities. Correcting spatial inequalities that exist in cities has been on the agenda of urban development policy in South Africa. Urban planning has been recognized as one of the important ways to transform inequalities that are present not only in cities of the South, but in the so-called global cities. Thus, the attempt to reverse this is important for securing inclusive urban futures. After the end of apartheid, the City of Johannesburg had the opportunity to redevelop the city through reforming development policies, through planning and reconfiguring its social and political institutions (Beall, Crankshaw, & Parnell, 2014). South Africa in the post-1994 period was burdened with the responsibility of balancing the trade-offs between adhering to the globalizing economic environment, and the need to develop the country's economy and improve social services to historically disadvantaged populations. This continues to be a struggle for the government as social and economic inequalities are present and persistent in a politically fragmented space. Urban restructuring policies such as the Reconstruction and Development Programme (RDP) of 1994 along with the Growth, Employment and Redistribution Framework (GEAR) were an attempt by the government to stabilize the economy, address socioeconomic problems and promote inclusive economic development (Gumede, 2015). In as much as there were efforts done post-1994 to address the social inequalities that entrenched Johannesburg, these efforts have not been sufficient as there is still a backlog in service provision in low-income areas due to rapid urbanization (Beall, Crankshaw, & Parnell, 2014).

The urban poor living in Johannesburg are burdened with complex socioeconomic problems. Aside from the crippling backlog in basic services, there is an existing spatial mismatch between where the urban poor live and their places of work and opportunity. As a result of apartheid segregation laws, the current spatial structure of Johannesburg has resulted in the location of places of work and opportunity in the inner city, and in suburban areas far from the periphery where most of Johannesburg's urban poor live (Naude, 2008, Martin 2001 and Crankshaw, 2008). The consequence of this is that most of Johannesburg's urban poor remain isolated and excluded in the peripheral informal settlements with limited access to places of opportunity in the northern suburbs of Johannesburg (Naude, 2008 Crankshaw, 2008 and Todes & Turok, 2018).

Spatial inequality is a difficult issue to address, hence numerous efforts have been made by the government to address this urban problem. The government has made attempts to bring low-income communities closer to employment opportunities. However, these attempts have often been slow, not inclusive enough and continue to exacerbate spatial inequality (South African Cities Network, 2016). The major ways in which the government has attempted to change the spatial form of Johannesburg is through investing in low-income housing projects, public transport infrastructure, and bulk infrastructure for basic services provision. The two important investments that the government has attempted to promote inclusive development with is the provision for low-income housing and a cohesive public transport system (Socio Economic Rights Institute, 2016). Through housing policy, several housing projects have targeted large scale housing provision in peripheral areas as a way to redress spatial inequalities.

However, this has not been effective in addressing spatial inequality adequately but in other ways, continues to perpetuate inequalities. It is not until recently that the government has been developing affordable housing projects and inclusive housing projects closer to places of work so the urban poor can have more access to places of opportunities. The second important investment in the attempt to create inclusive development has been through public transport. This has been through the construction of a Bus Rapid Transit (BRT) system in both Cape Town and Johannesburg. In the context of Johannesburg, the Rea Vaya Bus Rapid Transit system has served as an important bridge towards inclusivity in Johannesburg and bringing people closer to places employment and places of opportunity. Although there are two main focal developments that City of Johannesburg have made over the years, this research engages with only one of these developments in the results section and that is the Rea Vaya BRT system. The importance of well-located social housing is discussed, however it does not appear as a significant factor in the interviews conducted with the participants. Public transport is important in making cities inclusive, because it provides a gateway for the urban poor to access employment opportunities that are far from reach. Furthermore, good quality public transport alongside non-exclusionary and non-peripheral well-located housing development provides equitable access to the city especially for low-income communities.

2. BACKGROUND

The de facto geography of Johannesburg is still entrenched with spatial and housing inequalities as well as basic service provision inequalities. In the attempt to address and transform the divided geography of Johannesburg, the City of Johannesburg Council embarked on an agenda to spatially transform the city. This spatial transformation has been proposed to be achieved through the adoption and the implementation of principles of transit-oriented development. Transit-oriented development is understood to be a planning and community development approach that is centred on the increased usage of public transport (bus and rail), to promote walkable and liveable communities and promote limited use of private transport. In addition, transit-oriented development focuses on mixed-use high-density development that includes housing, office parks, retail hubs and recreational facilities that are integrated in neighbourhoods that surround high quality transport nodes. The City of Johannesburg has embarked on the journey to create an inclusive 'World Class African City' (IDP, 2015) through its flagship project known as Corridors of Freedom. This flagship project aims to utilize transit-oriented development to radically transform the city and gradually erode apartheid spatial structure. Corridors of Freedom will serve as an important spatial project and a critical turning point in the eradication of apartheid's divided geography in Johannesburg.

City of Johannesburg, Mpho Parks Tau in 2013 as part of the Growth and Development strategy – an urban policy introduced by the City of Johannesburg Council. The project envisages to 're-stitch the city' by giving the previously marginalised populations of Johannesburg the spatial freedom through:

1. Well-planned transport arteries and transport nodes
2. Mixed land use development (See mixed used development)
3. Reduce racial inequalities
4. High density accommodation
5. Mobility from the peripheries of the city to the core
6. Promote sustainable development through residential densification and public transport usage

Due to the legacy of apartheid, previously marginalized populations living on the fringes of Johannesburg have struggled with commuting from home to their places of work, often spending a large portion of their income on transport. There is a spatial mismatch that exists between where previously marginalized populations live and where places of employment and opportunity are located. Corridors of Freedom aims to reverse this problem, mainly through the provision of low-cost rental housing, social infrastructure and the construction of more public transport options, mainly the Bus Rapid Transit (BRT) Rea Vaya systems. All these proposed developments are claimed to provide access by bringing more economic opportunities closer to people, to promote social cohesion and inclusivity. According to the City of Johannesburg, Corridors of Freedom is a people-centred project that aims to create a 'World Class African City'.

The City of Johannesburg in its development strategy has three priority areas that it plans to develop. These corridors are namely, the Louis Botha Avenue corridor (which links Alexandra, Sandton and the CBD), Perth-Empire road corridor that connects Soweto and the CBD and the Turffontein corridor (South-West of Johannesburg) that connects Turffontein and Rosettenville to the CBD. The primary focus of this research will be on the recent developments on the Louis Botha Avenue corridor.

The vision to 're-stitch the city' (City of Johannesburg, 2014) stems from the need to correct the spatially fragmented city while providing upward social mobility to the previously disadvantaged populations living in the fringes of the city. The City of Johannesburg envisages to do this through adopting the main principles of transit-oriented development known as the four Ms: mixed-income neighbourhoods, mixed land use, mass public transport ridership and mobility

Mixed-income neighbourhoods

In a context where class is linked to race, Corridors of Freedom project plans to promote mixed-income neighbourhoods where residents of different social classes would be living in the same residential area. In the context of Johannesburg, there is a need for mixed-income neighbourhoods in order to diversify and promote integration in residential areas.

Mixed land use development

Corridors of Freedom aims to provide mixed land use development areas through bus and railway station area precincts, corridor development that will include the construction of high density housing such as residential precincts. Old property will be rezoned for different uses such as office space and light commercial spaces around transit nodes. There are intentions of constructing recreational spaces and social amenities in the attempt to make the corridors more liveable.

Mass public transport ridership

As a result of the legacy of apartheid urban planning, there is an observed spatial mismatch that exists between where the urban poor live and where places of opportunity and commercial hubs are located (Borel-Saladin & Crankshaw, 2009). This has resulted in a spatial injustice where the urban poor spend more of their income and time on public transport. Therefore, the vision to maximize public transport routes through promoting affordable public transport aims to bridge this existing gap and would be delivered through increasing the established Rea Vaya BRT systems along corridors.

Mobility

Corridors of Freedom is a plan to provide the citizens of Johannesburg, especially historically disadvantaged citizens with access to the city and with the freedom of movement that has long

been hindered by the apartheid spatial planning (Beavon, 2005). Johannesburg has the presence of highly segregated neighbourhoods with income disparities. The urban poor continue to have restricted access to employment opportunities. Currently, Johannesburg has a presence of a growing black middle class that is shifting from the less affluent parts of the periphery of the city, towards the more affluent suburban areas closer to the inner city (Parry & Van Eeden, 2015). This means that there is also a need to accommodate this growing black middle class and this would be addressed through the provision of affordable rental housing to provide more access to the city and bring employment opportunities closer to the people. Corridors of freedom speaks to the greater issue of justice and equality, correcting the existing spatial mismatch that exists through urban planning.

3. LITERATURE REVIEW

3.1. What is an inclusive city?

Cities of the South remain concentrated with the presence of urban poverty and socio-economic inequalities. Rapid urbanisation has resulted in the increase in population of cities, accompanied with socio-economic problems such as the lack of urban service delivery and declining employment opportunities. Furthermore, this rapid urbanisation has put pressure on the scarce resources in the city, lack of infrastructural development, and increased levels of inequality, not only in the cities of South but also in the so-called global cities (Hambleton, 2014). This has resulted in the further division of cities of the South, such as with the increasing disparities between the formal and the informal economies. In addition, there are divisions in geographic locations where, in the context of Johannesburg, the urban poor continue to live in the periphery where land is cheap, unused and unsafe (close to mining dumps and industrial areas) and where those that can afford to live closer to places of employment opportunity in suburban areas.

Johannesburg has not experienced much residential integration, and where residential integration has happened, it has comprised of the emerging black middle class moving into formally white suburban areas (Crankshaw, 2008; Parry & Van Eeden, 2015). In the struggle to develop cities of the South, The South African Cities Network (South African Cities Network, 2008) argues that the processes of social exclusion that exist in cities can be reversed and that is through the notion of inclusive cities. South African Cities Network¹ (South African Cities Network, 2008) have also proposed the adoption of inclusive growth in policy and practise in order to counter the impacts of the legacy of apartheid that still echo in the de facto South African cities. The South Africa Cities Network defines an inclusive city as:

“One that provides all its citizens with decent public services, protects citizens’ rights and freedom, and fosters the economic, social and environmental wellbeing of its citizens. It strives to produce a beneficial framework for inclusive economic growth and improves the quality of urban living. Environmental protection and integrated built environments help

¹ South African Cities Network is an established think-tank network of South African cities and partners that encourages the exchange of information, experience and best practices on urban development and city management.

to achieve a cohesive urban space that functions effectively. An inclusive city aids the social cohesion of its communities and celebrates their diversity.” – (South African Cities Network, 2008: 7).

In creating inclusive cities, Hambleton (2014) through Sen’s lens, argues that efforts should be directed at ensuring that the poor receive “a better, and fairer deal, with less disparities of economic, social and political opportunities” (Hambleton, 2014: 5). Creating inclusive cities is also about creating just cities where all residents can benefit and have access to equal employment opportunities. Governments are tasked with adopting a holistic approach in tackling with socio-economic exclusion. This means finding solutions in different aspects of development and not only focusing on urban planning. For example, different urban development organisations have a tendency of focusing on a unidimensional aspect of inclusive growth in cities.

Different perspectives on inclusive cities have focused on:

- Spatial dimension of the inclusive city – focusing on addressing the spatial inequalities that exist in the context of urban areas. This perspective is supported by the Corridors of Freedom flagship programme.
- Recognizing the rights and the voices of informal workers in the city
- Recognizing informal settlements – upgrading informal settlements instead of demolition, evictions and forceful relocations and recognizing the rights of shack dwellers.
- Holistic approach to inclusivity in cities – inclusivity in terms of sexual orientation, gender, race, age and ability (dis)ableism). This also includes adopting principles of transit-oriented development, public participation, investing in people and social and cultural infrastructure.

The dialogue on inclusive cities should engage with diverse stakeholders including the marginalised, and the inclusion of immigrants in the concept of city belonging while getting rid of xenophobic laws that promote xenophobia. The following indicators from the table were identified as resonating with the aims of the City of Johannesburg’s Corridors of Freedom flagship project. In making the city more inclusive, Corridors of Freedom aims to provide:

1. Public service access

- Social Services and facilities

- Housing (Social housing)
 - Public transportation (BRT Buses)
2. *Human and economic development*
- Employment opportunities
3. *Spatial Cohesion*
- Land use patterns and densifying
 - Commuting time and cost disparities
 - Porousness/permeability of public and semi-private spaces
 - Polarization vs connectivity (between different land use types and densities)

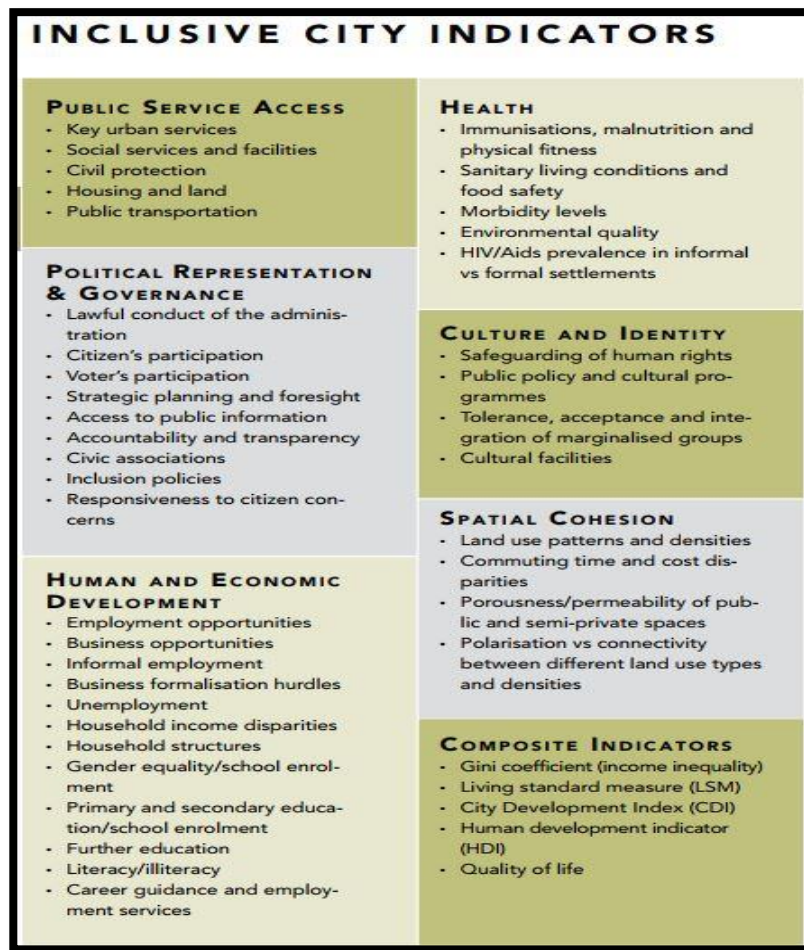


Figure 2: Inclusive development indicators source: South African Cities Network (Inclusive cities).

The case for building inclusive cities and implementing inclusive growth in urban planning policy and practice is a moral one (Hambleton, 2014). This is due to the fact that as cities continue to be

unequal, the quality of life and human rights of the urban poor are also impacted. Furthermore, people's sense of belonging, especially the marginalized is affected. Inclusivity is about producing opportunities for upward mobility, therefore, as the urban poor become further socio-economically excluded, they stand to lose the right to the city.

3.2. The right to the city

Unlike in Brazil where the right to the city is formally recognized in the constitution, the South African context still lags behind in recognizing this right in the constitution and more importantly, in practice. Harvey (2003) defines the right to the city as not only limited to having access to the city's resources and social amenities, but also understanding that the right to the city is about being autonomous, and having a sense of individual agency (Marcuse, 2009 and Todes et al, 2016). It is about active citizenry in the collective reclamation to resist urban social exclusion of the marginalised populations. There are multifaceted perspectives that attempt to operationalize the discourse of the right to the city. However, most of the different perspectives in existing literature conceptualize the right to the city as relating to issues of inequality and issues surrounding social justice. The right to the city has been used in discourses of inclusion, spatial justice, citizenship, city identity (a sense of belonging in the city) and importantly, access to urban resources through service provision (Hambleton, 2014).

According to David Harvey (2012), the right to the city is understood as an anti-capitalistic struggle to challenge capitalistic tendencies and neo-liberalism in the urban space. Harvey (2012) argues that cities play a crucial role in the expansion of capital and in the creation of a surplus labour that fails to be absorbed in the formal economy. It is through this capital accumulation that happens in cities that the urban poor find themselves vulnerable to urban poverty and alienated (Harvey, 2012). Harvey (2012) further argues that the right to the city has been hijacked by private interests and parastatals who capture the city's resources and privatise them in their favour. A typical case of this is the commercialisation of water by a water utility parastatal known as Rand Water in the Gauteng province. The decision to commercialise water in the Gauteng province and South Africa as a whole, weighs heavy on the urban poor who do not have enough income to pay for water (Von Schnitzler, 2016). Water in Johannesburg was commercialised through the installation of prepaid water meters that were designed to cut-off water supply immediately as the purchased water token

finishes (Von Schnitzler, 2016). This meant that if the urban poor failed to purchase water tokens, access to water supply would be immediately shut down. In this context, the right to the city speaks to challenging these subtle forms of neo-liberal tactics used by the government and parastatals. A right-based approach is a call to correct this form of exploitation and to realise the human rights of the urban poor who have to pay more for urban services that would have otherwise been provided to them for free (Parnell & Pieterse, 2010).

In the contemporary context, the right to the city has been adopted by social movements for the advancement of advocacy work and for legitimacy reasons, hence the right to the city in this context was understood as a way the urban poor could claim their rightful space in the city, access the city's resources and challenge social exclusion (Marcuse, 2009). An important lens that this research highlights is the right to the city and the struggle for housing and a decent public transport system in South Africa. Strauss (2017) argues that the right to the city approach has a potential to contribute towards the realization of the housing rights of South Africa's urban poor. Strauss (2017) also argues that although the constitution recognizes the right to adequate housing and the protection to arbitrary evictions (section 26 of the Constitution of the Republic of South Africa, 1996), this right is the most contested and litigated. The fact that this right is the most litigated, shows the extent to which housing is a struggle for the urban poor in South Africa). An example of social movements that have used this perspective and adopted a rights-based approach to their movement is Abahlali baseMjondolo² in South Africa. Abahlali baseMojondolo have used the right to the city to challenge the government to recognize the urban poor's rights to land, public housing and appropriate service delivery.

Within the right to the city discourse, the urban poor successfully play the role of being villains, victims and fixers (Beall, Crankshaw and Parnell, 2000). Beall, Crankshaw and Parnell (2000) argued that the urban poor cannot fully exercise their right to the city without being labelled as villains to the city and to the government's progression towards urban development. However, the urban poor are also portrayed as victims as they are subjected to the injustices and the processes

²Abahlali baseMjondolo – also known as The Shack Dwellers' Movement is a membership-based organisation that campaigns against the evictions of the urban poor and for public housing. Abahlali baseMjondolo also advocates for the rights of the urban poor in South Africa to improve living conditions.

of social exclusion that characterise cities. The urban poor, are also regarded as fixers in that the government has moved towards including the urban poor to participate in community-based engagements and to come up with solutions to urban issues. Assuming a rights-based agenda is an opportunity for the marginalised populations of Johannesburg to remake themselves and for the state to assist in the creation of an inclusive urban space (Harvey, 2003 and Marcuse, 2009). The way in which the urban poor can achieve their right to the city is if the government can incorporate this right into policy and planning in order to protect the interests of the poor (Parnell and Pieterse, 2010).

4. OBJECTIVES AND METHODS OF THE STUDY

4.1. Research problem

One of the explicit claims that City of Johannesburg (CoJ) makes is that the proposed Corridors of Freedom project will promote inclusive development through creating a 'people-centred city' which will place the needs of the community first. The problem with this claim is its ambiguous nature. Firstly, there is an already existing backlog in the provision of public services to the urban poor. In addition, there is a highly unequal distribution of basic services and housing as a result of the wealth disparities that exist in Johannesburg (Harrison & Huchzermeyer, 2003). Housing programmes and policy tailored by the government continues to provide subsidized housing, but away from places of work and employment. This means that the urban poor continue to travel an average of 54 minutes (Cartwright & Marrengane, 2016) to places of work which consumes their time and a significant portion of their income is spent on transport (COJ, 2014). There is a need for an affordable housing market alongside a good and affordable public transport system that will link the urban poor closer to places of work. The purpose is to evaluate whether the Corridors of Freedom flagship programme and its associated developments have the potential to improve the lives of the potential beneficiaries of the project. The two main associated developments of the Corridors of Freedom project have been identified as the Rea Vaya Bus Rapid Transit System and the inclusionary housing projects by the Johannesburg Social Housing Company (JOSHCO). If Corridors of Freedom is to build an inclusive city, efforts need to be directed towards ensuring that the spatial inequalities that are present in Johannesburg are addressed to be able to fit the needs of the urban poor.

4.2. Research question

- 4.2.1. With the urban poor still living in the urban peripheries, away from commercial hubs and places of employment opportunity, what efforts from City of Johannesburg will be made to correct the existing spatial inequalities in the agenda of Corridors of Freedom?

Further questions to be explored:

- 4.2.2. To what extent does the presence of public transport such as the Rea Vaya Bus Rapid Transit System assist the urban poor in accessing the city and places of employment and opportunity?
- 4.2.3. Does the Rea Vaya Bus Rapid Transit system along with well-located social housing, adequately address inclusivity and bringing people close to places of employment and opportunity?
- 4.2.4. What attempts have been made by City of Johannesburg to correct housing segregation in order to address spatial inequalities?

Rationale for research

This research is an important way of evaluating the progress that City of Johannesburg has made towards inclusive development through investigating the effectiveness of transit oriented development as proposed by the Corridors of Freedom project. Furthermore, another component of the research is to investigate whether the developments of the project have any impact for the beneficiaries especially the urban poor. A comparison will be made between two townships where the residents of one township directly benefit from the presence a bus rapid transit system and the residents of another township do not have access to the bus rapid transit system. This can be a reference point to evaluate whether the transit system is beneficial for increased access and mobility of the urban poor.

4.3. Research Design

This research will evaluate the two major developments that have been proposed by the City of Johannesburg in the Corridors of Freedom project. These two major developments are social housing project and the Bus Rapid Transit System (BRT). For the purpose of this research, the intention is to review the literature that exists on spatial inequalities focusing on the spatial mismatch phenomenon and the housing policy from 1994 to 2007 in South Africa. In addition, the research will engage with housing policy documents such as the 1994 White Paper on Housing, The Reconstruction and Development Programme and Breaking New Ground (BNG) to understand the attempts made by the government to address spatial inequalities in tackling housing segregation. Secondly, this research will evaluate public transport specifically, the bus rapid transit

system (BRT) in Johannesburg through the perceptions of residents who use the buses as their means to get to work. In order to find out about the efforts that City of Johannesburg has made in making Corridors of Freedom and the developments more relevant and inclusive to the urban poor, this research is of qualitative nature and will use key informant semi-structured interviews. Semi-structured interviews are an important form of data collection. Hence the decision to conduct semi-structured interviews places value on language as data. In addition, conducting face-to-face interviews allows the interviewer to seek depth of meaning and gaining insight and understanding of the characteristics of the subject explored (Ritchie and Lewis, 2003). Semi-structured interview guides will be provided and are important to provide a sense of structure and can serve as an important direction to guide the interview (Newton, 2010). In addition, they can also allow the participant to prepare for the interview before the interview begins. Semi-structured interviews allow for probing and prompting questions to be asked during the interview for clarification on the subject (Newton, 2010; Ritchie & Lewis, 2003).

Semi-structured interviews are useful because of the importance of context and relevance. All the participants are key informant participants, who were carefully selected on the level of the expertise and knowledge they can provide on the questions on social housing in Johannesburg, ridership and usage of the BRT Rea Vaya buses, insights on understanding inclusive development and knowledge on Corridors of Freedom. The participants for the study were chosen using purposeful sampling and snowball sampling. The two methods were used because some of the participants provided referrals to other participants whom they perceived to have knowledge on the topics and with the same area of expertise. The interviews were conducted with people of several expertise, with some being government officials who are involved in Corridors of Freedom and the other participants were potential beneficiaries of the social housing and the Rea Vaya BRT system provided by the City of Johannesburg. The initial intention was to interview the residents of Johannesburg who are perceived to be potential beneficiaries of the Corridors of Freedom development. This group of participants were required to currently use or have used public transport in the form of either minibus taxis, trains, busses or the Rea Vaya BRT buses to commute to work,. Secondly, interviews were conducted with another group of participants who have no access to Rea Vaya Bus and relied on other forms of public transport to commute to work. Both

groups of potential beneficiary participants were chosen because they fit the criteria discussed in section 4.5 (see below).

4.4. Method of analysis

As a method of analysis, this research adopted thematic analysis to analyse the interview transcripts. In order for thematic analysis to be done, the interviews were firstly transcribed. This was followed by an analysis of the transcribed interviews to find key themes, similarities and differences in order to make well-informed comparisons of the data. Thematic Analysis is essentially a method for identifying and analysing and reporting patterns that exist within qualitative data (Braun and Clarke, 2006). The focus of thematic analysis is paying attention to the language used by participants and in the grey literature and interpreting the data (Riessman, 2008). It is very useful for obtaining richer detail within the data. Thematic analysis is useful for interpreting different forms of data as it allows for flexibility and is not only limited to transcribed interviews (Braun and Clarke, 2006). In addition, because in this research different material will be used, such as policy documents, thematic analysis is the appropriate form for analysing the data.

4.5. The criteria for choosing participants

All the potential beneficiaries of the Corridors of Freedom project were chosen because they live far away from their places of work. They live in displaced areas that make it difficult to travel to work on a daily basis. These participants were also chosen on the basis that they live on the periphery of Johannesburg away from the places of employment opportunity. The interviews were set up in December and January and commenced from February to April 2018. The interviews were done with 9 participants, 4 of the participants were government officials and 5 of the participants are regarded potential beneficiaries of the Corridors of Freedom developments. The respondents from Soweto (prior to the introduction of the Rea Vaya BRT system) spent 50 minutes to more than an hour commuting to work. Cartwright & Marrengane (2016), argue that the average time that Johannesburg residents spend commuting to work is 54 minutes, and this is true for the interviewed respondents. Kagiso participants were chosen on the basis that they have limited public transport options and do not have access to the BRT Rea Vaya buses. Both townships are not well-located, and are at a disadvantage because of limited mobility and limited access to places

of employment and opportunity. The participants were also chosen on the basis that they commute to work using public transport and spend or have spent approximately R1 500 every month on transport fares to commute to work. These participants have or had intentions of relocating from where they currently live, to areas that are closer to work in order to limit the cost and time of commuting to work. The government officials were recruited through communication via email. One of the government officials Thabang Sithole, was the primary participant who was interviewed mainly because of the involvement in Corridors of Freedom as a town planner. Thabang also assisted with referrals to potential participants who work for the City of Johannesburg on the Corridors of Freedom project. Thabang also assisted with the referral to the JOSHCO participants. The researcher from South African Cities Network (SACN) was recruited via email after identifying on the website that she works under the portfolio of inclusive cities. The participants who were identified to be potential participants of the BRT Rea Vaya system were recruited using Facebook on the Rea Vaya official Facebook page. This is because initially permission to interview the participants at the one of the Rea Vaya Bus stations was not allowed by the Rea Vaya bus station security and personally was not safe to do. One of the Soweto residents, Pontsho, was identified to be a participant and also helped with referring other potential participants. All the participants referred by Pontsho all reside in Soweto. Kagiso participants were identified and recruited in a similar way.

The research extensively uses the term 'urban poor' to refer to individuals to whom processes of urbanization have worked to exclude them from places of employment opportunity. The urban poor have a restricted access to places of employment, adequate housing, an efficient public transport system and are more vulnerable to disruptions in the public transport system. The urban poor are considered those individuals who have been structurally marginalized from the opportunities and benefits of living the urban areas. In the context of Johannesburg, they are structurally marginalized with high levels of poverty and no economic opportunities available in the areas they inhabit. Important factors such as spatial location played a crucial role in determining whether the urban poor have access to the city. Due to the legacy of apartheid, and because of the forced removals that came with the Group Areas Act of 1950, the urban poor were pushed towards the periphery in townships with no access to adequate services and infrastructure. This residential segregation made it particularly difficult for Black South Africans to access the city and

employment because of the long distance from the inner city of Johannesburg where employment opportunities were available at the time. It is important to note that not all residents staying in townships are lower class. There are residents who are middle class and affluent residents who stay in townships. In the present context, residential segregation has declined with more black middle class moving into affluent suburbs closer to places of employment (Crankshaw, 2008). Therefore, in the current context, class has become an instrument that plays a role in reinforcing the spatial order of Johannesburg. South African cities are now characterized by class-based segregation where the urban poor are located distant from places of employment opportunities (Seekings, 2010).

4.6. Ethical considerations and limitations

This research involved individual interviews of government officials from different departments and organisations. These individuals were chosen to be interviewed because of the roles they play in the Corridors of Freedom project and positions they hold in government. The interviewees held different roles such as potential beneficiaries, government officials who are responsible for the planning of projects, project managers and researchers. Therefore, this research paid attention to the right to privacy and confidentiality of the participants, where appropriate. The research also paid attention to respect for free and informed consent that will be exercised by the participants in the interviews. It is generally recognized that government officials, by virtue of their position or their work within the government, can be exposed to public scrutiny and criticism. Therefore, the participants hold the right to exercise anonymity. This research did not intend to subject any participant in a situation where they might be at risk of harm as a result of their participation. The limitation of the study was access to the process of having reflective interviews with government officials. By virtue of their position, having access to them has proven to be difficult and time-consuming. In addition, the fact that their availability is limited changed the nature of the interviews from face-to-face interviews to telephonic interviews. The initial intention was to interview the residents of Johannesburg who are living in the new social housing units provided by City of Johannesburg and using the Rea Vaya buses to commute to work. However, this was not possible as most of the participants did not have any knowledge on the provision of social housing in Johannesburg. The analysis was reduced to only participants who have used the Rea Vaya BRT buses versus participants who do not have access to the Rea Vaya BRT buses and use

alternative public transport such as minibus taxis. Another limitation was that some participants had knowledge of the social housing units provided by the Johannesburg Social Housing Company (JOSHCO) while some did not know of the units at all. Those who had knowledge of the social housing units had no knowledge on how to access the units. This shifted the interviews to focus more on the perceptions of the BRT Rea Vaya system and the impacts.

5. UNDERSTANDING THE SPATIAL MISMATCH

5.1.Introduction

The history of the current spatial form of South African cities has been influenced by the legacy of apartheid. In the apartheid period, race informed where people resided in the city, hence most of the Black populations find themselves living in townships located in peripheral land away from the city with the exception of the township of Alexandra (SERI, 2016). Alexandra was not completely wiped out during the forced removals. The population of Alexandra was brought down by relocating some of the residents to Soweto and Tembisa (Bonner and Nieftagodien, 2008). The apartheid housing and spatial policies resulted in the spatial mismatch phenomenon. The spatial mismatch hypothesis, although originated in the United States of America, has been applied in the South African context to understand the differential access of the urban poor to employment opportunities. Spatial segregation still exists in the current context where the most of the urban poor live in the periphery of the city with limited mobility and access to employment opportunities. Much of post-apartheid housing policy has focused on subsidized housing delivery in townships. The consequences of delivering subsidized housing in townships further reinforces peripheral development and does not mitigate it. Therefore, it is important to highlight the importance of the spatial mismatch phenomenon in the discussion of housing location and access to employment opportunities.

5.2. The Spatial Order of Johannesburg

The City of Johannesburg remains spatially fragmented and socially disintegrated where the majority of the city's black urban population remains isolated in peripheral spaces. Johannesburg originated as a large mining town since the discovery of gold in the late 19th century (Todes & Turok, 2018). As a result, Johannesburg developed to become an economic hub that catered for the larger population of the city and the surrounding areas. Gold mining was the primary source of wealth of the South African economy during the late 19th century and early 20th century. As a consequence of a booming gold mining industry, there was an influx of different people in Johannesburg to seek for opportunities (Gotz, Todes & Wray, 2014). Diverse people came to Johannesburg to seek opportunities in the mining belt. Most were the poor black labourers in seek of employment and to earn money in the mines for their families. While others hoped to find jobs

so that they could pay taxes for farm land and left Johannesburg as soon as they had earned enough money. The gold mining belt resulted in the growth of transport networks accompanied by housing that later shaped the spatial order of Johannesburg. The mining belt was used deliberately in the city and the surrounding peripheral areas as a 'buffer zone' separating racially defined settlements (Gotz, Todes & Wray, 2014).

The increase of colonial control in South Africa resulted in the strict influx control of black people in urban areas. Black Africans were evicted from the mining towns and forced to relocate to homesteads in rural South Africa with no employment or land (Tomlinson, 1999). Colonial regimes continued to drive spatial planning that was racially selective and motivated and this continued with the end of colonialism and the rise of the apartheid regime (Todes and Harrison, 2015). The restrictions on mobility during the apartheid regime became harsher. Racially motivated structured spatial controls in South Africa intensified with the residential segregation policies such as the Group Areas Act of 1950 being enforced (Todes & Turok, 2018, Todes & Harrison, 2015). Residential segregation refers to the isolation of poor and/or racial minorities that live in communities and neighbourhoods separated from those of other socioeconomic groups (Li, Campbell & Fernandez, 2013)

Pass laws were introduced as an instrument that perpetuated racially motivated residential segregation in the interest of mining. Black Africans who had been forcefully evicted from their farms were now forced to sell their labour and work in the mines. Due to the implementation of the Group Areas Act, black Africans who were confined to homesteads in rural areas had to migrate to urban areas in search of jobs to feed their families. However, this arrangement could not work progressively for the apartheid economy because labour was still needed to work in the mines and industrial areas. Therefore, as a result of the need for a labour force to work in the gold mines, those who were allowed to dwell in the mining towns were black labourers with special work permits and this resulted in further restrictions passed on the influx on migrants from homelands through the system of pass laws. Pass laws became a method to control the influx of black people in Johannesburg hence black workers were only allowed to carry passes in order to access cities. Strict migration controls applied in the attempt to divert the black African labour away from the metropolitan core (Todes & Harrison, 2015). Black Africans were further pushed

to the outskirts of the city in townships to accommodate the labour working in the mines while the rest of the black populations remained in the homelands (Todes and Harrison, 2015). Townships were developed as dormitory spaces through large public housing projects and initially housed migrant labour. However, in the current context, these townships are largely where the black urban poor reside (Todes and Harrison, 2015). The homesteads were isolated from the main economic centres making it difficult for the poor black Africans to break away from poverty. The growth of industrialization created powerful pressures that undermined black peasantry and reinforced uneven development (Todes and Turok, 2018). Moreover, black Africans were prohibited from participating in any entrepreneurial activities.

In the past, legislation such as the introduction of pass laws was a significant barrier in black Africans access to the city. Currently, the existing apartheid rooted spatial structure is a barrier to black Africans mobility and access to the city. This is also exacerbated by social exclusion characterized by exclusionary housing, a fragmented transport system and new edge city development (Tomlinson, 1999; Crankshaw, 2008). Housing has replicated exclusionary apartheid conditions where spatial divisions remain unchanged (Todes and Turok, 2018). The free housing policy that was implemented during the transition period paradoxically increased the existing spatial divisions by confining the poor households to cheap peripheral RDP housing (Todes and Turok, 2018). Hence, black Africans are still suffering from neo-apartheid spatial geographies. Fundamentally, social exclusion in the city of Johannesburg is coupled with the transforming nature of employment in the city, that has given birth to the new edge city development (Crankshaw, 2008; Martin, 2001). Edge city development is the extensive growth and movement of commercial and retail spaces away from the central business district towards suburban areas outside the central city (Tomlinson, 1999, Beavon, 1998 and Crankshaw, 2008). The Johannesburg central business district has been overshadowed by the growth of the northern suburbs such as Rosebank, Sandton, Midrand and Centurion (Beavon, 1998 and Naude, 2008). These northern suburbs not only comprise of residential space but now commercial and retail spaces that now function independently of the old central business district (Beavon, 1998, Martin, 2001 and Crankshaw, 2008). Over the past four decades, there has been a decline in the central city activity with the metropolitan's businesses moving towards the north (Tomlinson, 1999 and Crankshaw,

2008). As a result of this, the city continues to be inaccessible to a larger proportion of the black population who are still restricted in the urban periphery.

5.3. The changing nature of employment in Johannesburg

Over the decades, there has been evidence of movement of central businesses from Johannesburg central business district towards northern suburban areas (Crankshaw 2008 and Naude, 2008). This evidence is characterised by the changing nature of employment in Johannesburg (Naude, 2008). Employment opportunities over the years have transformed from industrial manufacturing to more service sector employment opportunities (Gobillon, Selod & Zenou, 2007 and Stoll & Covington, 2012). The decline in manufacturing meant that those who were employed in the manufacturing sector became unemployed with the changing nature of employment (Beavon, 1998 and Naude, 2008). Not only was employment changing into service sector employment, but it was also moving far from where most of the black African working class people were located. This made it difficult for black African working class located in peripheral townships to access employment opportunities because of the high transport costs of commuting to the northern suburbs. Furthermore, as employment shifts from the manufacturing to more service type of employment, more unskilled/semi-skilled workers become unemployed.

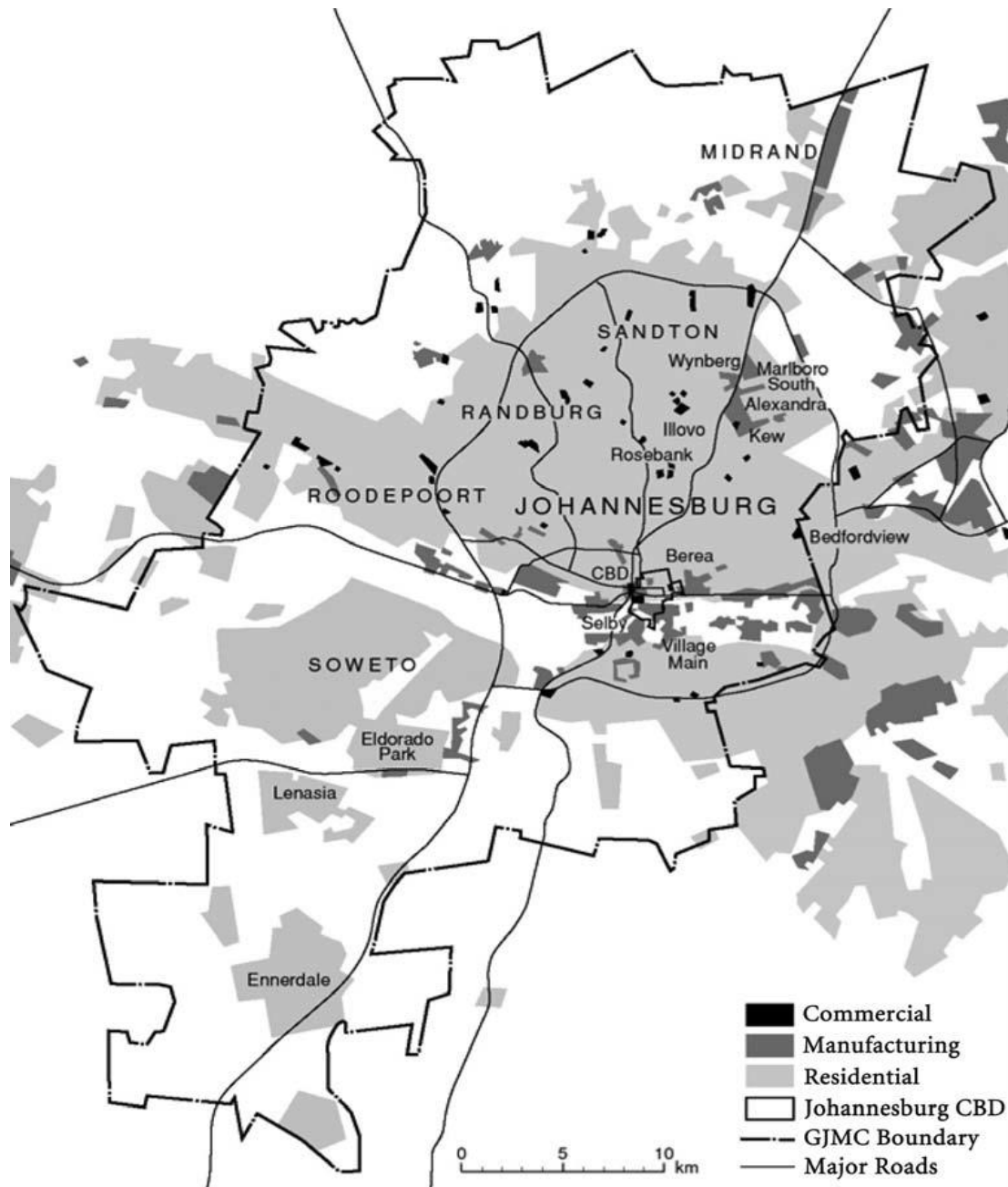


Figure 3: Map of the shifting nature of employment in Johannesburg (Source: Crankshaw, 2008)

It is evident that the decentralisation of employment in Johannesburg mostly affected black African residents living in the periphery of the city. The black working class face more difficulty in accessing employment in the northern suburban areas of Johannesburg. Residential location is an important determinant of access to employment opportunities and certain services that can affect an individual's quality of life and their ability to earn a living (Naude, 2008, Crankshaw, 2008 and

Stoll & Covington, 2012). Housing segregation and a dysfunctional public transport system that act as structural barriers limiting access to places of opportunity and employment (Naude, 2008, Stoll & Covington, 2012 and Martin, 2001). Low-skilled labour remains constrained in townships with no access to private cars and use public transport as their primary transportation to work (Stoll & Covington, 2012). Distance and commute time between townships in Johannesburg and potential employment locations in the northern suburban areas increase. The average time that it takes a commuter from peripheral townships of Johannesburg to commute to work is 54 minutes (Cartwright and Marrengane, 2016). This implies that black working class individuals living in southern townships, who are employed in new edge cities spend more time commuting to work and a large proportion of their income on transport costs. This unequal spatial access to places of opportunity explains the spatial mismatch that exists in South African cities.

5.4. Spatial mismatch

Initially, the spatial mismatch theory was perceived in US cities where low-skilled minorities (mostly black Americans) residing in the inner city were experiencing poor labour market outcomes (Li, Campbell & Fernandez, 2013). This is because they are disconnected from suburban areas where jobs were located (Gobillon, Selod & Zenou, 2007). Inner cities in the US were deindustrializing with retail, commercial main shopping centres decentralizing and moving in affluent suburban areas. This was as a result of the suburbanization of jobs, where the nature of employment was transitioning from goods processing in industrial centres in the inner city to suburban areas, to information processing (Kasarda, 1989 and Li, Campbell & Fernandez, 2013). Furthermore, the labour demand was becoming more highly skilled, creating a decline of the demand of low-skilled labour (Kasarda, 1989 and Li, Campbell & Fernandez, 2013). As jobs continued to suburbanize, so were the people, but only those who were able to move to suburban areas. The black urban poor in the US were the ones disproportionately affected by the effects of living at distant locations from places of work. Gobillon, Selod & Zenou (2007) Li, Campbell & Fernandez, (2013) in their study examine how spatial disconnection affects employment outcomes for working class black Americans. The study further concludes as a result of working class Americans being spatially disconnected from places of work, their unemployment rates are higher than of those individuals from suburban areas. Working class black Americans spend long hours

commuting to work while some are forced to quit their jobs (Gobillon, Selod & Zenou, 2007). Commuting costs are too high in relation to the wages that are offered resulting in the refusal of jobs that are located at distance locations from their homes. Similarly, in the South African context, employment has decentralised as employment opportunities have shifted from the inner city. Working class black Africans cannot afford to move to northern suburban areas in places of employment or opportunity (Tomlinson, 1999, Martin, 2001, and Crankshaw, 2008).

Different conditions apply in the Southern African context as a result of the legacy of apartheid. Unlike in the US context where the black working class are located in the inner city and jobs are located in suburban areas, the Johannesburg case is slightly different in that the black working class is entirely isolated in the periphery of the city. Therefore, as employment decentralized and deindustrialized, the black working class became more disoriented. It became difficult to travel to work with the poor spending two hours commuting to work in the northern suburbs (Naude, 2008). Due to employment shifting to service-oriented, the chances of the poor getting service-oriented jobs becomes limited (Naude, 2008). Although the state has provided housing for the black working-class people of Johannesburg, the housing projects remain in the peripheral land and not integrated close to where people work. Most of the black working class are still restricted to peripheral areas with the exception of Alexandra, Tembisa and Kempton Park (north of Johannesburg) who are closely located to places of employment and opportunity (Bonner and Nieftagodien, 2008). Housing prices remain high, with no social housing precincts available in suburban areas to accommodate low-income earners. The housing market remains only accessible to the black middle class with upward social mobility (Todes and Turok, 2018).

6. THE OVERVIEW OF HOUSING POLICY FROM 1994 - 2007

6.1. Introduction

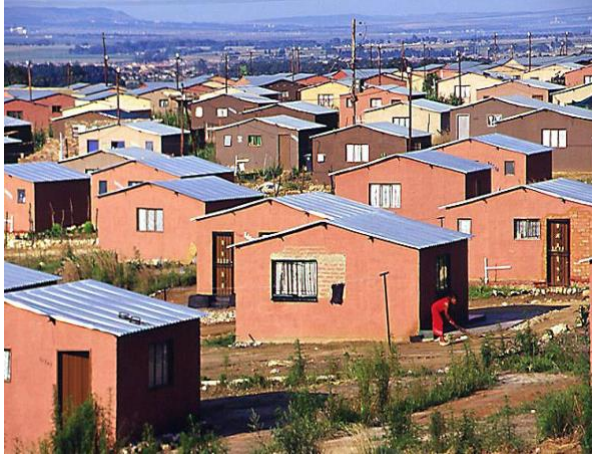
It is difficult to discuss spatial inequality in South Africa without discussing the issue of housing. The majority of the urban poor in Johannesburg live in townships in the outskirts of the city and some live in informal settlements. Over the past decades, there has been various attempts by the ANC government to address the backlog in housing and service provision. This has been made worse by the rapidly increasing rate of urbanisation. Provision of housing was perceived by the government as a way counter against poverty and vulnerability and to promote inclusion in townships (Huchzermeyer, 2006). Initially, housing policy was driven by the intense political pressure that the ANC government was under during the transition period. There was a need to provide the urban poor with adequate shelter, to reduce the housing backlog and to get rid of the hostel housing that served as residential dormitories during the apartheid period. The building of formal housing has been particularly difficult for planners due to the location of informal settlements in unsuitable land, while townships still remain in the periphery where the land is cheap.

Finding well-located land for low-cost housing has been a challenge and a contentious issue that has never been properly addressed by the housing department. Well-located land is land that is suitable for residential development, where proper drainage and storm water intervention can be done with no industrial hazards posed (Huchzermeyer, 2006). The issue of well-located land for housing for the urban poor has not been adequately addressed. Most of the urban poor still live in inhabitable land close to old defunct mines and close to industrial areas, where land is cheap and is often isolated from the city core where most social and economic activities are found. Well-located land is often expensive and inaccessible to the urban poor and is often held by the urban elite (SERI, 2011). This necessitated state-driven large-scale housing projects that will set the stage for housing delivery in South Africa. Over the past two decades, there have been numerous shifts in housing policy in South Africa to accommodate the rapidly increasing rate of urbanisation.

6.2. The 1994 White Paper on housing.

With the end of apartheid, housing for the urban poor was a significant challenge for the ANC government under democratic rule. Amongst other things, there was a housing backlog with the poor having no access to infrastructure and basic services. The white paper on housing was drafted in recognition of this problem. The goal of the policy was to increase housing delivery by prioritising housing provision in the national budget (Socio Economic Rights Institute, 2011). The housing policy aimed to deliver one million houses in five years and to “establish socially and economically integrated communities situated in areas allowing convenient access to economic opportunities as well as health, educational and social amenities” (Khan & Thurman, 2001). This would be done through the implementation of the Reconstruction and Development Programme (RDP).

The Reconstruction and Development Programme (RDP) was a policy framework implemented to address the socioeconomic problems that were a consequence brought by the apartheid regime (Socio Economic Rights Institute, 2011). The RDP programme’s focus was not solely on the provision of subsidized housing in impoverished townships, but on the boosting of the economy, the provision basic services such as clean water proper sanitation, electricity, infrastructure, education and health care. Although the goal of the RDP programme was to provide integration among fragmented and isolated communities, this was not entirely achieved. Instead, the RDP perpetuated the marginalisation and the isolation of the poor by providing the subsidized housing in the peripheral township land. The urban poor still remained marginalised in the townships, with limited access to places of employment opportunity. The location of housing is important to the urban poor. This is because the location of housing is linked to transport and employment access. The study by the Socio Economic Rights Institute (2011) shows that over the years, there has been evidence of residents in townships selling and renting their RDP houses, to move back to informal settlements closer to places of work (Socio Economic Rights Institute, 2011). This done both as a strategy for making additional income and for moving to places closer to work.



Left: Old RDP houses.



Right: New RDP houses. Source: Pieterse (2011)

6.3. Breaking New Ground (BNG) housing policy 2004

After the review of the RDP programme, housing policy took a different turn and a different perspective into looking addressing the issue of housing. The Breaking New Ground (BNG) housing policy was aimed at upgrading settlements through the provision of basic services and land tenure (Socio Economic Rights Institute, 2011). This was done as an attempt to integrate new settlements into the urban space to overcome spatial, social and economic exclusion (Socio Economic Rights Institute, 2011). Huchzermeyer (2006) argues that the aim of the BNG is to address poverty alleviation through emphasis on the role of housing delivery and linking this to employment creation. The BNG housing also targeted informal settlements through providing in-situ informal settlement upgrading without the need to relocate people from their homes to promote social cohesion. The BNG housing policy developed quality low-cost housing within a subsidy system for different income groups. The BNG houses were conceptually different from the houses provided by the RDP programme in size quality and in location. The BNG houses are relatively larger than the RDP houses, with tiled roofing, two bedrooms, a separate bathroom with a shower and a hand basin, and kitchen. The BNG houses are 40 square meters in size compared to the RDP houses that range from 20 – 34 square metres. The main focus for the provision of the BNG houses was to provide aesthetically pleasing houses with the emphasis on quality over quantity for sustainable human settlements (HDA, 2004). A new subsidy system was introduced to promote accessibility and availability of affordable housing to medium income households earning R3,500

to R 7,000 per month (HDA, 2004). Breaking New Ground housing policy therefore uses the social housing typology to integrate people of different incomes. This was effective in addressing the missing “lower middle” residents who wanted to acquire RDP housing but did not qualify as they earned more than the R3500 bracket. For people in the missing lower middle, they could not afford housing in affluent areas, while at the same time, they did not qualify for RDP housing. This meant that they were relegated to renting backyard dwellings or shacks in informal areas. Like RDP housing, BNG housing did not do much to transform the spatial inequalities existing in urban areas. Although people had access to low income houses, most of the urban poor were still located in peripheral areas away from the places of opportunity.



Left: Breaking New Ground house. Source: Joburg.co.za



Right: Breaking New Ground cluster social housing: Joburg.co.za

6.4. Inclusionary Housing Policy 2007

The principles of inclusionary housing provision were shaped by the 10-year process and the negotiation of the Spatial Planning and Land Use Management Act 2013 (SPLUMA). The Spatial Planning and Land Use Management Act SPLUMA served as a legal obligation that future spatial planning by the government should address past spatial injustices through improved access of use land by previously disadvantaged individuals (SACN, 2016). The SPLUMA act further states that spatial redevelopment and policies should address the inclusion of the urban poor in areas that they were previously excluded (South African Cities Network, 2016).



Left: affordable housing by the Johannesburg Social Housing Company (JOSHCO). Source: Mahlaka (2015)

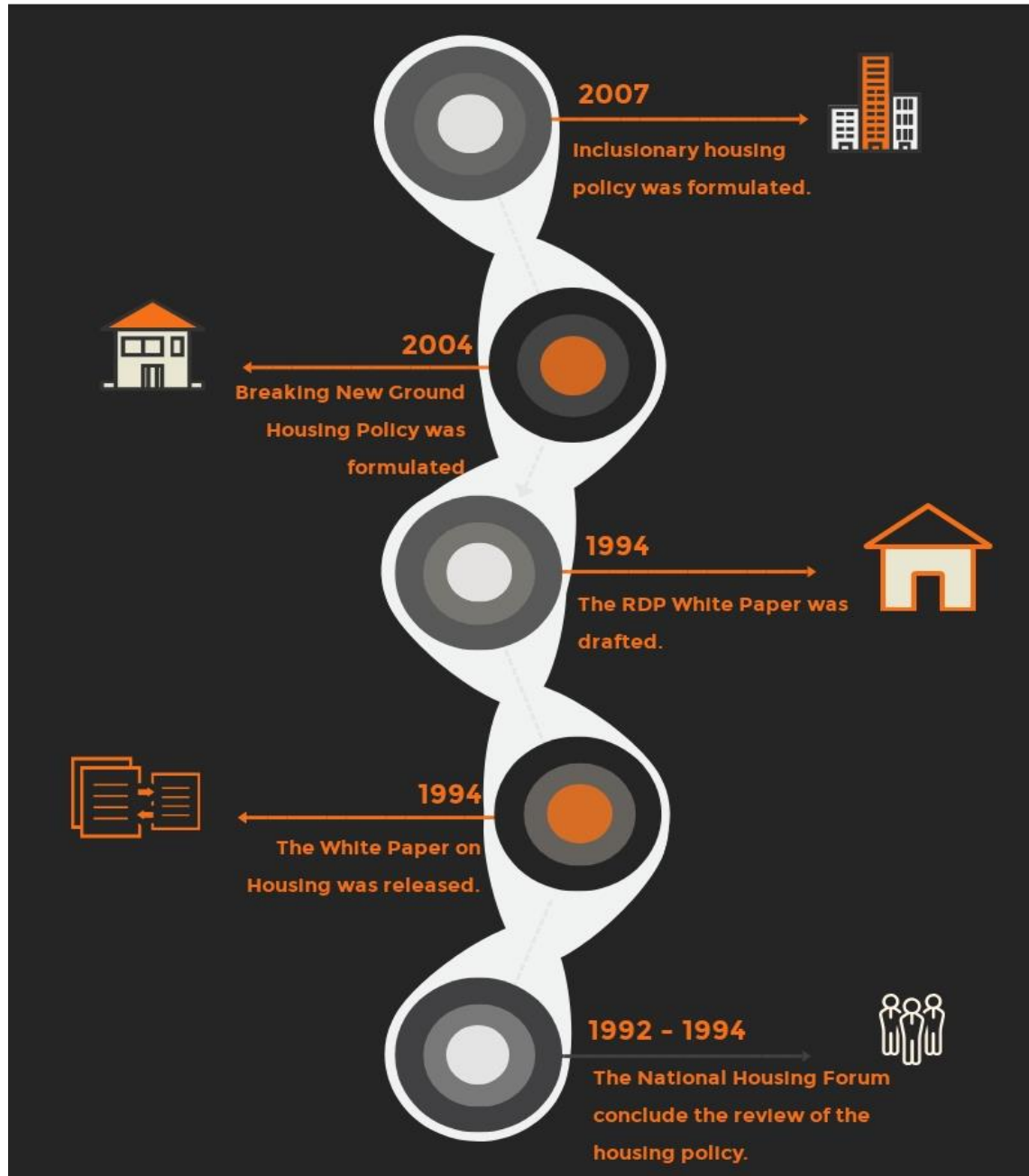
Right: affordable rental housing in Orlando, Soweto

What this translated to in reality is the focus on building social housing in places that were close to city centres and to move away from the RDP peripheral low-cost housing provision. Social housing refers to housing subsidized by the government, and it is authorized and managed by a social housing authority. In the context of the City of Johannesburg Council, the Johannesburg Social Housing Company (JOSHCO) developers are subsidized by the government to provide housing units for those with low income earners. Social housing is used as a strategy to densify cities and to promote social integration through the promotion of a non-racial, integrated society (HDA, 2004). Social housing caters for households earning between R1500- R3500 per month (please see appendix 1 for more information on rates of affordable housing in the inner city).

A different housing typology has been adopted by the government in the attempt to accelerate housing delivery and to reach lower middle-class income earners who failed to qualify for the BNG houses. This typology of housing is known as inclusionary housing. Inclusionary housing is different from social housing in that the goal is compel and in some cases incentivise the private sector to provide low-cost accommodation opportunities for low-income and lower-middle income earners (Verster, 2007).

Housing Policy Development in South Africa

Overview of Housing policy development 1992 - 2007



CREATED BY
Carol Masingi



Figure 4: Time-line of housing policy in South Africa

The incentivisation is done by City of Johannesburg through awarding of land use rights to the developers in exchange of providing a certain portion of the development as affordable housing. The portion housing that is dedicated to affordable housing will be rented or sold at a lower rate to cater for low-income and low-middle income earners (Verster, 2007). According to Tissington (2011) the Minister of Housing and developers in the housing industry signed a Social Contract for Rapid Housing Delivery which stated that “every commercial development including housing developments that are not directed at those earning R1 500 or less, spend a minimum of 20 percent on the construction of homes within human settlements for those who qualify for government subsidies” (Tissington, 2011: 71).

“...when we talk about inclusionary housing... it’s where the city requires private developers to build low-income housing and so that’s... without subsidy from the state. It’s a requirement that the private sector must contribute to that and so yeah...” – Dylan Weakly, City Planner. Interview, (2018)

“So when we give someone rights to build something, we say you can build this tower block, but in order to do that you must build 20% low-income housing. So that’s what we are talking about when we talk about inclusionary housing.” – Dylan Weakly, City Planner. Interview (2018)

The notion of making housing affordable to different classes of society is an important step towards inclusive development. However, inclusionary development comes with challenges especially from the private developer’s perspective. Since the inception of the inclusionary housing policy, some private developers have been reluctant to develop property because of market related reasons (2018). The City of Johannesburg Council has control over land use rights in Johannesburg, therefore they have the power to decide the zoning and the rezoning of the land. For the private developers, the inclusion of affordable housing units means that a certain proportion of profits is lost. Hence, one of the challenges that local government had is bargaining with developers in order to persuade them to build inclusionary housing units (Verster, 2007). Another challenge with inclusionary housing in the context of Johannesburg is the inability by renters to own the affordable housing units (Verster, 2007). The affordable housing units that are rented out to lower middle-class residents, cannot be owned. This implies that the housing units are still owned by the private developers. The transitional nature of inclusionary housing does not allow permanent home

ownership by the residents, therefore the challenge that residents face is often finding themselves out of the units should their financial situation change with a loss of job.

“all inclusionary housing is rental housing and it is owned by the developer. So, its privately-owned housing and then we put in rules about how expensive that housing can be over time” – Dylan (2018)

The Johannesburg Social Housing Company (JOSHCO) has been tasked by the City of Johannesburg as a social housing authority that manages affordable housing units in Johannesburg. Several inclusionary housing projects have been developed in different parts of the city. The Greenfields housing projects by Joshco has built housing units in Kliptown, Soweto, Fleurhof, Roodepoort and as far as Alexandra. Other projects include the inner city in places like Hillbrow, Braamfontein and the Johannesburg CBD. Housing in Johannesburg and the rest of South Africa is in high demand, and supply has not been sufficient. For inclusionary housing to be successful in South Africa, there's a need for more buy in from developers, and more importantly, the elite who occupy places close to economic hubs. High density social housing has been met with not-in-my-backyard (NIMBY) attitude and resistance from the elites (Turok, 2016). This Nimbyism is translated as opposition from well-informed residents in affluent middle-class suburban areas. The resistance is understood as a way in which the elites protect individual interests. This nimbyism is exclusionary and continues to perpetuate spatial divisions in Johannesburg through elite capture, where the interests of the powerful groups are privileged and those with no power are marginalised and that is the urban poor (Turok, 2016). Nimbyism from the elites halts the equal housing opportunities that can be afforded to the excluded urban poor and counter acts against the goal by local government to promote social cohesiveness in Johannesburg.

7. RESULTS

7.1. Introduction

The following results are from the 5 participants who were identified as the potential beneficiaries of the Corridors of Freedom project. All these participants were chosen from two townships south of Johannesburg, namely Kagiso in the West Rand and Soweto. Kagiso participants were chosen as a comparison group to highlight the effectiveness and the importance of having a good public transport system for inclusive development. Although, it falls outside of the jurisdiction of the City of Johannesburg Municipality, the issue is with the absence of a multimodal public transport system and the dependency on minibus taxis as the only available form of public transport. Furthermore, another significant issue is with the displacement of both townships. Both Kagiso and Soweto are in the periphery of the city, some of the residents who use public transport spend more time commuting to work. The Soweto participants come from different areas of the township, Mapetla, Naledi and Orlando West. All these different areas in Soweto experience and access the Rea Vaya BRT service differently. The participants either take a feeder route bus (marked with an F) or a complementary route bus (marked with a C) to link with trunk route bus (marked with a T). The complementary route and feeder route buses were constructed following the end of the 2010 World Cup to link with the trunk routes and reach to commuters from different parts of Soweto. The Rea Vaya BRT system was later adopted by the then mayor of Johannesburg, Parks Tau (mayor administration from 2011 - 2016) as part of the spatial plan to transform the city into a transit oriented city.

7.2. Profile of Kagiso respondents

The Kagiso respondents spent close to R1 600 on transport every month. They also spent 2 hours commuting to work and 2 hours travelling back home from work. The respondents had intentions of moving to areas closer to their workplace. Furthermore, the respondents attempted to find alternative ways to reduce the cost and the time spent commuting to work. Not only was commuting to work undesirable, it impacted on the livelihoods of the participants. Leisure time after work is limited because of the long hours of commuting. This has resulted in a situation where, if the respondents are not commuting to work, they are recovering from the commutes to

work. Although the respondents from Kagiso expressed shared sentiments about their willingness to switch to using the Rea Vaya should the bus system be introduced in Kagiso, they are however, dependent on the minibus taxis as their primary mode of transport to work. The lack of alternative transport that is easily accessible, affordable and efficient pushes the respondents to use minibus taxis on a daily basis. The decision to use minibus taxis is not a choice, but it is due to the circumstances that the respondents have found themselves in. Due to the lack of a reliable public transport system (rail service and bus system), the respondents are forced into using minibus taxis as their primary mode of transport to commute to work. There is insufficient public transport options in the township of Kagiso. Due to lack of available and easily accessible train stations and bus stations and a paucity in the minibus taxi fleet, the residents of Kagiso do not have a reliable public transport system.

The Kagiso respondents have expressed that they would gladly welcome using the Rea Vaya busses as their primary form of transport to commute to work because they believe that they are efficient, cost effective, and consume less time. Furthermore, because the respondents are concerned about issues of safety, the familiarity of other commuters who use minibus taxis is important because this means that the respondents can walk with such people to the taxi rank in the morning. All the respondents complained about the minibus taxi card system as a disadvantage of using minibus taxis. The minibus taxi card system is used by taxi associations of Johannesburg CBD for commuters who commute to Johannesburg daily. Commuters who have minibus taxi cards are given preference over those who do not have cards. This means that respondents who do not have minibus taxi cards have to wait longer in queues and are therefore delayed on their way to work.

7.3. The displacement of the township of Kagiso

To understand the present situation of the township of Kagiso, it is important to provide a retrospective account of how the black township of Kagiso came to be. Kagiso is a township located in the West Rand Municipality, in the mining town of Krugersdorp. The township is located in the old mining town of Krugersdorp along the historic Main Reef Road that links it to the City of Johannesburg (Khumalo, 2010 and Seekings, 1990). The West Rand supersedes the

Witwatersrand basin which is known for gold-bearing ore, hence there is a presence of old closed mines and new mines that are operating along the Main Reef Road. Although Kagiso does not form part of the Johannesburg Metropolitan District, its location on the outskirts of the Johannesburg Metropolitan District Municipality is a disadvantage. This is because Johannesburg serves as an important economic hub that Kagiso feeds into and is dependent on for employment opportunities and consumer needs. Furthermore, Johannesburg is an important economic hub for the township and this is due to the limited commercial development in Krugersdorp that may be insufficient to accommodate the needs of the residents of Kagiso.

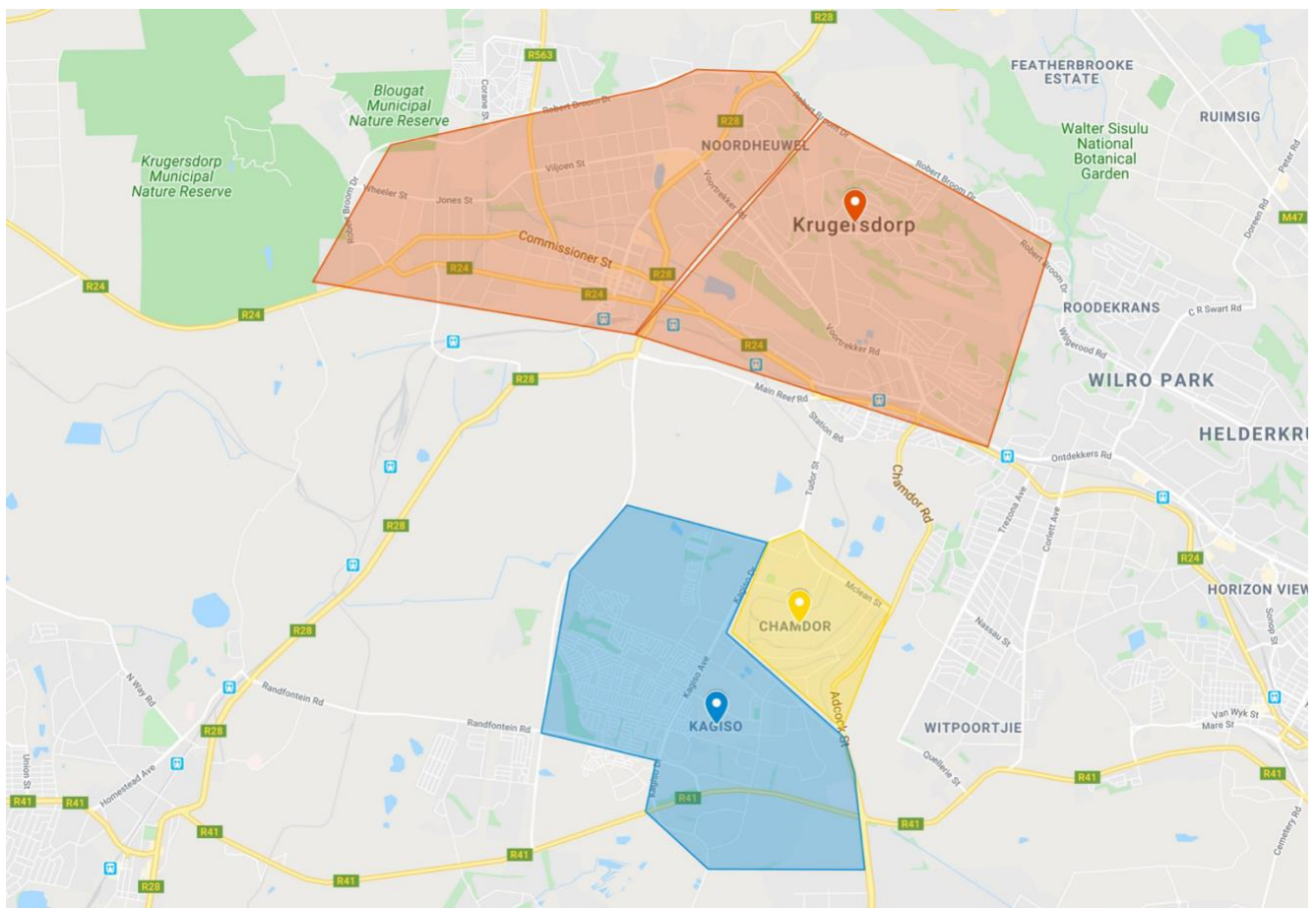


Figure 5: This map shows three places, Kagiso, the Chamdor Industrial area and Krugersdorp. As seen on the map, the Chamdor industrial area is relatively close to Kagiso.

Kagiso was an important labour reserve for the Krugersdorp area, the Chamdor industrial area and other nearby mines in Krugersdorp and Roodepoort along the Main Reef Road (Proctor, 1986 and Khumalo, 2010). However, in order to prevent an influx of black people from staying in white

Group Areas such as Krugersdorp, black people were not allowed in Krugersdorp without a pass (Proctor, 1986 and Seekings, 1990 and Khumalo, 2010). The only blacks that were allowed in white residential areas were mostly semi-skilled workers working in factories and mines in Krugersdorp, as well as domestic workers working in the homes of white employers. Therefore, the industrial area of Chamdor, became an important source of employment opportunity for the residents of Kagiso (Proctor, 1986). Furthermore, the Chamdor industrial area was important for working class residents who could not afford transport fares to go to other places of opportunity such as Johannesburg and industrial areas along the Main Reef Road.

Since the Chamdor industrial area was relatively close to the township of Kagiso, this meant that Kagiso residents were able to walk to Chamdor to look for work, as there were no available buses to transport people to places as far as Johannesburg CBD and the surrounding industrial areas such as Langlaagte. Transport was deliberately made inaccessible in the township of Kagiso in order to restrict black people's mobility to previously white-only areas. There was no available transport infrastructure such as railway and bus stations in the township. The only available railway transport and bus stations were located in Krugersdorp and inaccessible to the residents of Kagiso. This historically shaped the transport system of Kagiso where only minibus taxis are the primary form of transport to places of work in both Krugersdorp and Johannesburg and nearby mines in Roodepoort along the Main Reef Road (Khumalo, 2007). Over the years, there has been a shift in the concentration of economic activities, from economic activities being located in the inner city of Johannesburg, to the activities increasingly shifting towards the northern suburbs of Johannesburg (Rogerson & Rogerson, 1995 and Naude, 2008).

Places such as Sandton, Midrand and Centurion have been new hubs of employment opportunities (Rogerson & Rogerson, 1995 and Naude, 2008). This has meant that the demand for labour has also shifted northwards from the inner city of Johannesburg to Sandton, Midrand to as far as Centurion. Most residents of Kagiso form part of the consumer population of Johannesburg and use it as central place that connects them to other places of work. The township of Kagiso has no public multimodal transportation in comparison to the township of Soweto where busses, trains, and minibus taxis are available and easily accessible. There is no public transport infrastructure present in the entire township. Public transport in this context refers to the railway service

(Metrorail) and the government subsidized bus services such as the Metrobus and PUTCO and excludes the Gaibus. It has limited to no access to busses (Metro busses, PUTCO busses, Rea Vaya busses), no access to trains (Metrorail), it has a limited access to minibus taxis that go to Johannesburg CBD. Therefore, the township of Kagiso is highly disadvantaged in relation to public transport. It has no transport infrastructure that connects it to important economic hubs, nor does it have public transport accessible to places located near the residential areas, in fact, it remains isolated and neglected by the Mogale City Municipality.

7.4. Kagiso participants

Palesa

Palesa is a resident of Kagiso and works in Isando (East of Johannesburg). Isando is 51 km from her residential area in Kagiso. It takes her approximately 2 hours to commute to work every morning. She uses minibus taxis as her primary means to commute to work as other forms of transport are not viable to use. This is because, there are no accessible train stations or bus stations in Kagiso that are nearby her residence. The only alternative transport to minibus taxis in her residential area are PUTCO buses that are relatively close to where she stays. She also has no access to trains (the MetroRail) from her residential area in Kagiso, and from End Street, Johannesburg CBD where the minibus taxi from Kagiso drops her off. Taxi ranks to her place of work are located at a distance from the central train station of Johannesburg Park Station.

Johannesburg Park Station is a central multimodal station where one can find trains (MetroRail trains and the Gautrain) a variety of buses (the Gaibus, Metrobus, Rea Vaya Bus and PUTCO bus) and minibus taxis that connect commuters to different surrounding destinations. However, even with the different available modes of transport, there are only limited transport modes that go to Isando. Minibus taxis have proven to be easier to use for the respondent than all other transport modes, mainly because they are easily accessible on her route to work. The respondent also expressed that using minibus taxis as the primary form of transport to work is influenced by the fact that minibus taxis are readily available close to her residence and place of work. In addition, the respondent expressed that there are people that she knows that she can commute with to work and that she is familiar with the minibus taxi system and how it operates. Minibus taxis are

convenient for the respondent to use, but not reliable to use to commute to work. Due to lack of access to other forms of transport, minibus taxis are the primary form of transport that the respondent uses to commute to work.

Commuting to work

Palesa wakes up at 4:00am early in the morning and leaves her house at 5:00 am to walk to the taxi rank in Kagiso. She has to wait in a queue with other commuters before she can begin her journey to Johannesburg CBD. She departs at around 5:30am from Kagiso to End Street in Johannesburg CBD and arrives there at around 6:20am. From End Street (Johannesburg CBD) the minibus taxi proceeds to Ellis Park and she drops off at 6:35am to catch another minibus taxi and arrives in Isando at 7:30am. She uses three minibus taxis to commute to work in the morning and two minibus taxis from work to home in the evening. This is because from her workplace, the minibus taxi takes a different route as she has access to minibus taxis that travel directly to Johannesburg Park Station where she has access to taxis that go directly to Kagiso where she stays. The minibus taxi industry requires every area to have its own unique taxi association that is responsible for regulating the use of specific routes by minibus taxi drivers. Therefore, different areas will have different routes to destinations across Johannesburg. Hence, it is possible for the respondent to have two completely different routes to commute to work and to travel back home. Thus, Kagiso has its own minibus taxi association with defined routes, the same applies to Isando. This complexity arises from the fact that Johannesburg receives a significant number of commuters from different origins places, hence the location of minibus taxis to destinations are placed in different areas. The Johannesburg CBD has four major taxi ranks, the Noord Street taxi rank, the Bree Street taxi rank, which is a cluster of minibus taxis that stretch the whole of Bree Street, the Wanderers Street taxi rank and the Faraday market taxi rank.

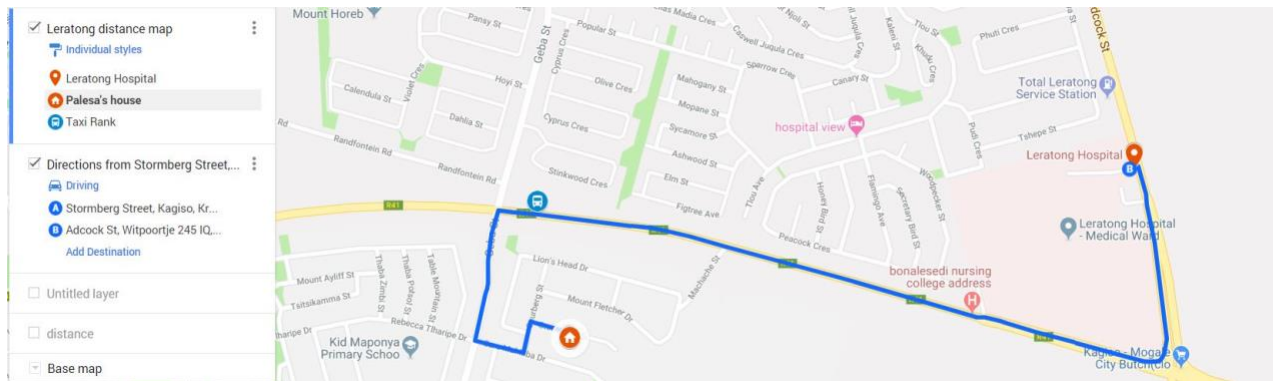


Figure 6a: Map showing the distance of Palesa's home to Leratong Hospital where the PUTCO buses are found in the morning.

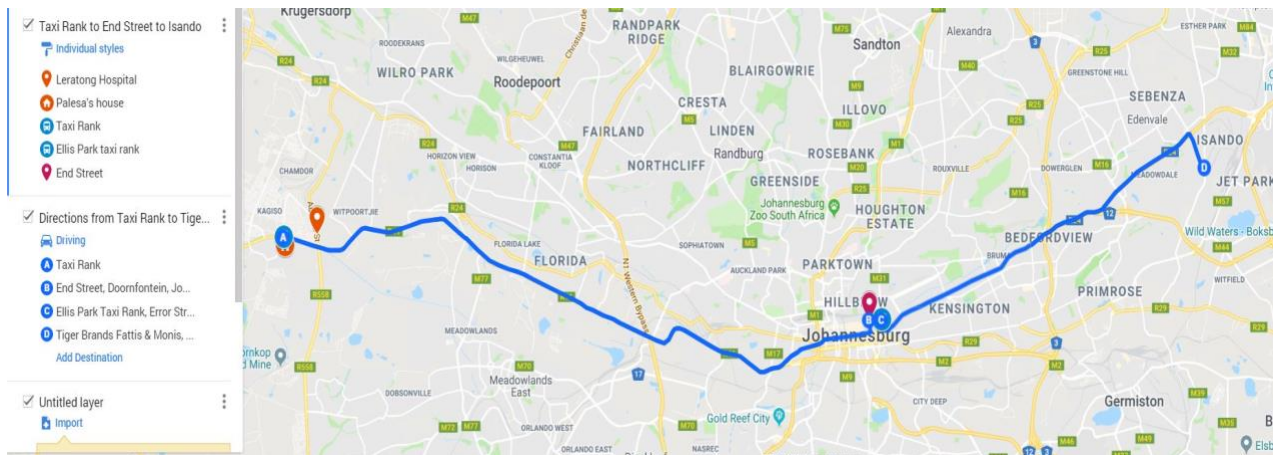


Figure 6b: Map showing the taxi route from Kagiso to Isando where Palesa works.

Reasons for not using other forms of transport

The respondent mentioned that she has the option of using other transport modes such as the PUTCO bus to travel to work, however, she does not use the PUTCO bus because the bus route does not serve her neighbourhood. PUTCO busses do not operate in Kagiso, they are only accessible at a distance at a taxi rank at Leratong Hospital. However, the respondent cannot walk to Leratong hospital taxi rank as it is 2.9 km away from where she resides. There are minibus taxis in the morning that specifically go Leratong Hospital Taxi rank that cost R7.00. If the respondent had to take this specific minibus taxi, she would have to pay R7.00 extra on her fare including the PUTCO bus fare of R14,00 to travel to Johannesburg CBD. The viable option is therefore to walk to the nearest taxi rank and catch a taxi that costs R14,00 and goes directly to Johannesburg CBD.

Train

Kagiso has no railway transport that serves the residential area. The closest train station that is available is the Luipaardsvlei train station that goes as far as Carletonville to and Roodepoort and as far as Johannesburg. In order to use a train, the respondent would have to take a minibus taxi to Roodepoort train station and take a train to Johannesburg Park Station. Therefore, using a train to commute to work would be both time consuming and costly for the respondent.



Figure 6c: This map shows the closest train stations to the township Kagiso.

Private car (carpooling)

It is not uncommon for residents who live far away from their places of work to start carpooling together. This is because most people have to wake up early and leave their houses in the early hours. Due to concerns about safety, and job security, a few people who reside in the same area and work in the same area decide to carpool to their places of work. The option of carpooling is helpful. However, it is not viable for the respondent due to the lack of available carpooling residents that commute to Isando where she works. Due to the distant location of buses and trains, the respondent mentioned that she prefers to use minibus taxis over any other modes of transport. However, it is important to understand that this preference to use minibus taxis is motivated by the fact that minibus taxis are the easily accessible primary form of transport for the respondent to use.

The respondent mentioned that she would welcome using the Rea Vaya buses because of the perception of safety, less time consumed by using the Rea Vaya and affordability. Therefore, her ‘preference’ to use minibus taxis is motivated by the fact there are no easily accessible forms of transport that she can use to commute to work, therefore she is forced to use minibus taxis.

Minibus Taxi Fare breakdown

| Route | Price per day | Price per month (22 Days) |
|--|----------------------|----------------------------------|
| Kagiso to Johannesburg, End Street | R16.00 | R352.00 |
| Johannesburg, End Street to Ellis Park (transfer taxi) | R0.00 | - |
| Ellis park to Isando | R20.00 | R440.00 |
| Isando to Johannesburg (CBD) | R20.00 | R352.00 |
| Johannesburg to Kagiso | R16.00 | R352.00 |
| Total: | R72.00 | R1 584.00 |

Tshepiso

Tshepiso is a potential beneficiary of the Corridors of Freedom project and a resident of Kagiso. The respondent’s uses minibus taxis as the primary transport to commute to work in Midrand. The respondent’s workplace is 66.8km from where she stays and spends approximately 2 hours commuting to work every morning. Because of the location of Kagiso where she stays, she has no access to other forms of transport. There are no PUTCO buses that feed in her neighbourhood hence she has no access to the PUTCO bus service. Similarly, with trains, there are no train stations close by that are easily accessible for her to use to commute to work. The respondent showed interest in using other forms of alternative transport such as the Rea Vaya bus service that would make it easier for her to commute to work. However, this is not possible because the Rea Vaya Bus only serves in the Johannesburg Metropolitan Municipality and Kagiso falls under a different municipality, the Mogale City Municipality. The respondent spends approximately R2 000 per month on minibus taxi fares because of the distance of where she stays relative to where he workplace is.

Commuting to work

Tshepiso wakes up early in the morning at 4:00am and gets ready to leave the house at 5:00am. She then walks a short 5-minute distance from her house to the nearest minibus taxi stop (located at the Madiba High School bus stop) where she can be able to ride a minibus taxi to Johannesburg CBD. Depending on the availability of minibus taxis and the length of the queues, she leaves Kagiso for Johannesburg CBD at 5:10am to commute to work. With less traffic congestion in the early hours of the morning, the respondent arrives at the Johannesburg MTN Taxi Rank at 6:00am where she takes another minibus taxi to Midrand. The minibus taxi leaves Johannesburg CBD for Midrand at 6:15am and arrives in Midrand at around 7:30. Tshepiso walks 10 minutes to her workplace to start work just before 8:00am. She uses two minibus taxis to commute to work in the morning and two minibus taxis in the evening to travel back home. Because the respondent lives 66.8 km from her workplace, her early arrival at work is dependent on whether she wakes up on time to catch the minibus taxi early, on whether there are short or no queues at the minibus taxi stop and on the absence of traffic along the way to work.

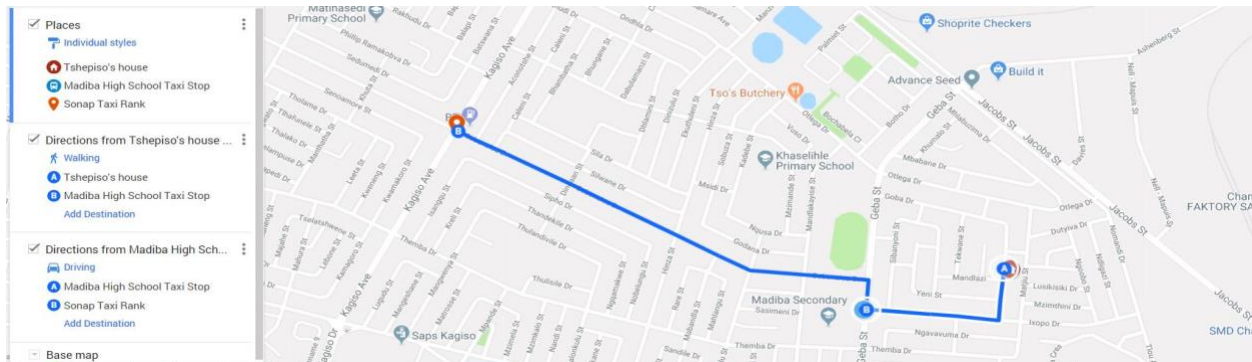


Figure 7: Map showing the distance from Tshepiso's home to the nearest taxi rank.

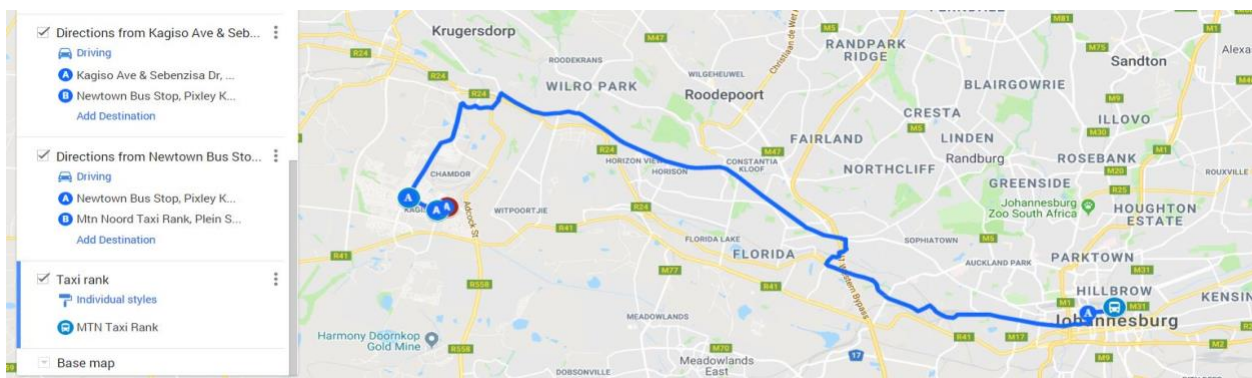


Figure 8: Map showing the route from Kagiso to MTN Rank in Johannesburg CBD.

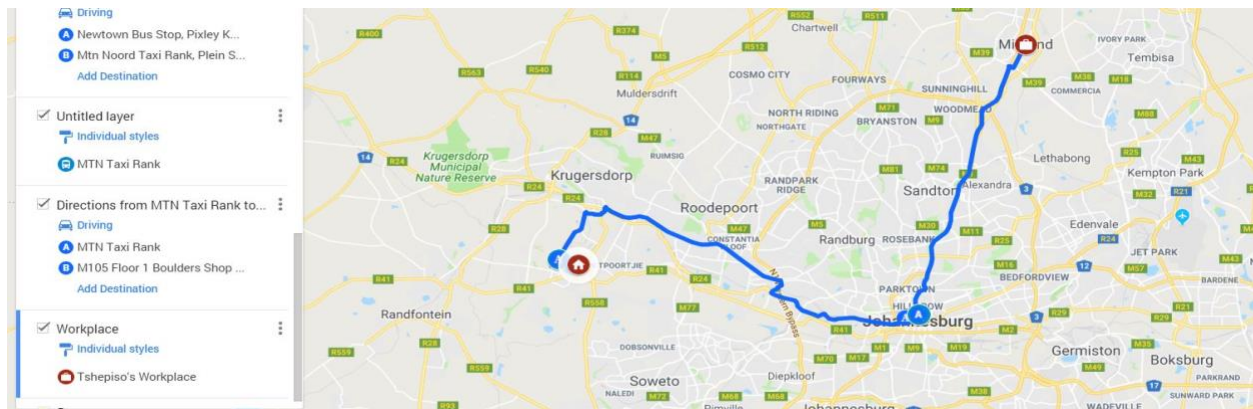


Figure 9: Map showing the route from Kagiso to MTN Rank in Johannesburg CBD.

Difficulties with using minibus taxis and different transport modes

Reasons for using minibus taxis

Tshepiso is familiar with the minibus taxi system and how it works hence she chose to use minibus taxis as her primary mode of transport to commute to work. Moreover, she is also familiar with the routes that the minibus taxis use, and with her neighbours who use the minibus taxi that she can commute with for safety. As a consequence of living far away from her workplace, the respondent has to wake up very early in the morning and walk in an unsafe neighbourhood. Therefore, using minibus taxis allows the respondent to walk with other residents in the morning who also commute to Johannesburg. Another reason why the participant has chosen to use the minibus taxi is that there is no access to other forms of public transport available in Kagiso. Kagiso is disadvantaged in that it is located in an area where there is no transport infrastructure such as a railway service or a bus service. Both railway and bus services are located at a distance from the neighbourhood, making the residents solely dependent on minibus taxis as the main form of public transport to work. As much as the taxi journey to work is expensive and time consuming, Tshepiso prefers using minibus taxis to commute to work. However, this preference again comes as a result of lack of access to alternative modes of public transport where she stays.

Her choice of transport is very limited. In the case of minibus taxi strikes, commuting to work becomes very difficult as minibus taxis are the primary form of public transport available to use in the case of the township of Kagiso. This implies that she would have to make alternative arrangements to commute to work, such as carpooling with other residents. The failure to make

any arrangements could result in the respondent not going to work until the strike is over. The unreliability of public transport in Kagiso puts a strain on commuters, financially, physically and psychologically. In addition, it also threatens her job security. Tshepiso has expressed that she would appreciate a switch in transport modes from minibus taxis to using the Rea Vaya bus service if it were to be introduced in Kagiso. She believes that it would make her commuting less costly less time consuming, and more convenient because of the dedicated bus lanes that the Rea Vaya Bus uses.

Minibus Taxi Fare breakdown:

| Route | Price per day | Price per month (22 Days) |
|---|----------------------|----------------------------------|
| Local taxi to Sonap taxi rank (Kagiso) | R8.00 | R172.00 |
| Sonap Taxi rank to Johannesburg MTN Taxi Rank | R18.00 | R396.00 |
| MTN Taxi Rank to Midrand | R22.00 | R484.00 |
| Midrand to Johannesburg MTN Rank | R22.00 | R484.00 |
| Johannesburg to Kagiso | R18.00 | R396.00 |
| Total: | R88.00 | R1932.00 |

7.5. Soweto Participants

Pontsho

Pontsho is a resident of Mapetla, Soweto and works at the Harambee Youth Accelerator in Fox Street, Johannesburg CBD. His workplace is 24.2 km from his residential area in Mapetla, Soweto. It takes the respondent approximately 50 minutes to commute to work every morning.

Pontsho has tried using other available and accessible modes of transport to commute to work such as minibus taxis, trains (metrorail) and private car (his own vehicle). The primary form of transport he uses to commute to work is the Rea Vaya service? He has access to all other types of public transport such as minibus taxis, the MetroRail train, the PUTCO bus and the Metro bus, but he prefers using the Rea Vaya bus service. This is because of the convenience and reliability of the Rea Vaya buses compared to other modes of transport that he has access to. He lives closer to the Rea Vaya complementary routes where he can connect to the major trunk routes.

Rea Vaya Bus routes

The Rea Vaya is a bus rapid transit (BRT) system that operates in Johannesburg. The BRT system served as an alternative mode of transport aimed to link Soweto in the periphery of the city to the inner city of Johannesburg, and until recently Sandton, Rosebank and Midrand in the north of Johannesburg. The Rea Vaya bus system has dedicated bus lanes that are only used by the Rea Vaya buses to reduce traffic congestion and to make the service quicker. The bus system has proven to be an essential alternative mode of public transport for commuters in Soweto. The bus system uses major roads in Johannesburg such as Perth and Empire Road in the inner city of Johannesburg, Louis Botha Avenue that stretches northwards of Johannesburg, Soweto.

In Soweto, the Pat Mbatha Busway that connects from the Soweto Highway, was built as a designated bus route for Rea Vaya buses from Soweto as most of the users of the bus system are residents of Soweto. The Rea Vaya routes are divided into three classifications: trunk routes (marked with a T) on the main highways and between major destinations. Complementary routes (marked with a C) running on circular routes that connect to trunk routes. Feeder routes (marked with an F) are routes from outer suburbs that join the trunk route at a key station.

Journey to work

The participant wakes up at 5:30am and leaves the house at 6:00am. He walks to the nearest bus stop at the corner of Koma and Masiane Roads to catch a complementary route bus (C2) at 6:05am. The bus C2 bus drops him off at the Thokoza Park bus station in Dlamini, Soweto at 6:15am to connect to the trunk route bus service. There are three trunk service buses that travel to the inner city of Johannesburg (T1, T2 and T3). From the Thokoza Park bus station, the respondent takes the T1 bus via Soweto Highway and Pat Mbatha Busway and will arrive at Library Gardens in the Johannesburg CBD promptly at 6:49am and walks 5 minutes to work. He begins work at Harambee at 8:00am an hour later.

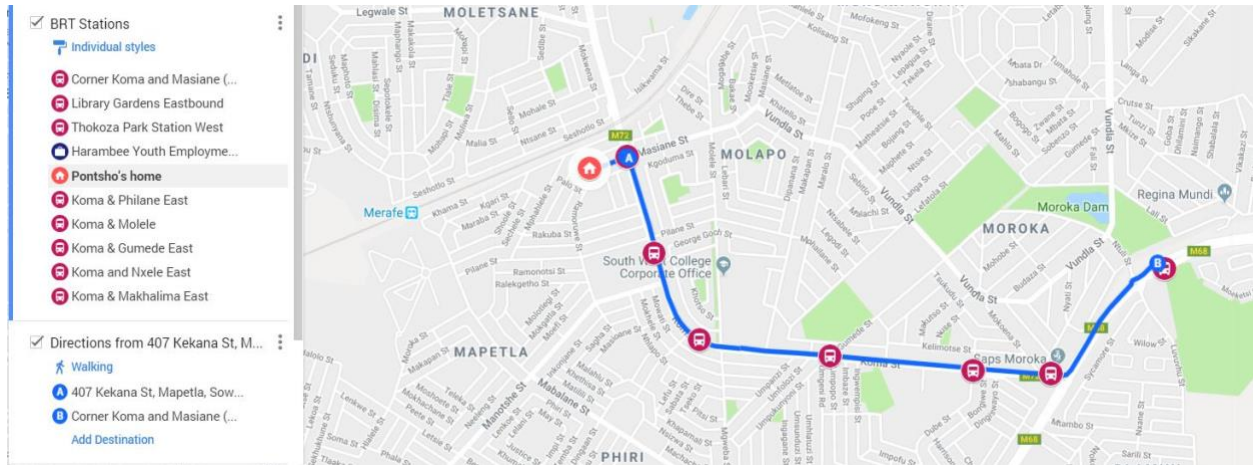


Figure 10: Rea Vaya Bus C2 Route map from Pontsho’s home to Thokoza Park

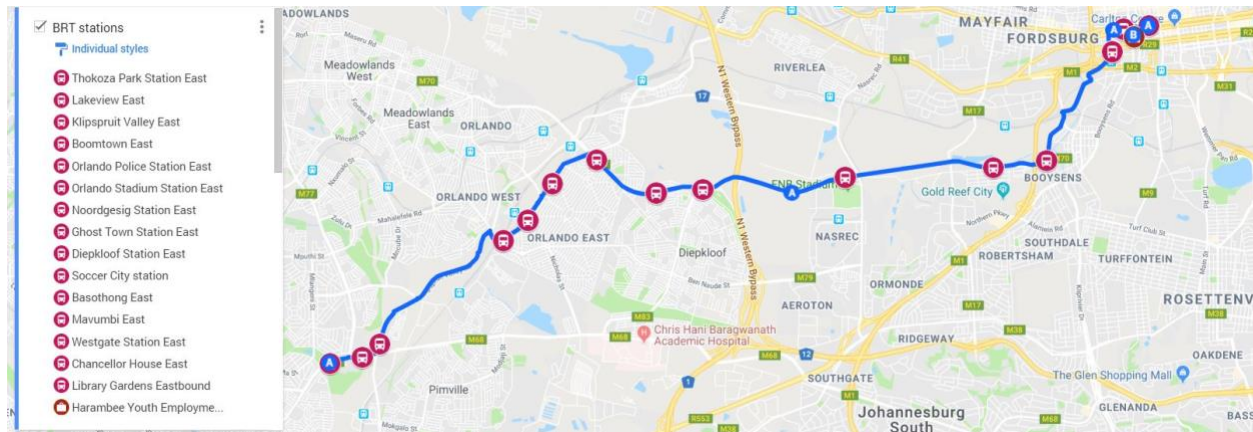


Figure 11: Rea Vaya bus T1 route map from Thokoza Park to Library Gardens, Johannesburg

Motivation to use the Rea Vaya bus system

The respondent expressed that the Rea Vaya bus is reliable and less time consuming compared to using other modes of transport to commute to work. Moreover, the respondent takes approximately 30 minutes to commute to work with the Rea Vaya bus. What makes the Rea Vaya bus system convenient is the fact that there is less traffic congestion due to the dedicated bus lanes. Although the Rea Vaya Bus fares are slightly cheaper than the minibus taxi fares, the respondent prefers the Rea Vaya bus due to its good quality and accessibility as it is available close by. The decision by the respondent to use the Rea Vaya bus is motivated by the importance of arriving to work early. Punctuality at work is key to job security, therefore avoiding long queues for minibus taxis and traffic delays means that the respondent can arrive to work early. The respondent mentioned that he would not switch to other modes of transport and that the Rea Vaya has had positive effects on his lifestyle. Using the Rea Vaya bus allows the respondent to arrive to work early, and also arrive early in the evening after work to spend more time with his family and on leisure.

Problems encountered with other modes of transport

The respondent expressed using different types of transport before the commencement of the Rea Vaya buses. He has experienced commuting with minibus taxis, the Metro bus, and the MetroRail train. Although traffic congestion was the prominent mentioned problem with using other modes of transport, each transport mode brought different problems that the respondent expressed in the interviews.

Trains

Trains are unreliable due to the fact that they are prone to the loss of the signal resulting in the trains being stuck and unable to move to avoid any collision. Trains are also known to get very full to a point where commuters are forced to train surf (the act of riding outside of a moving train) to get to work or to get home. This act can be extremely dangerous for commuters as they can fall on the tracks in the path of a moving train.

Minibus Taxis

In the Johannesburg taxi associations, the implementation of a card system has made using minibus taxis unbearable for non-card holders. This is because preference for riding a minibus taxi in

Johannesburg CBD is given to card holders and non-card holders are left to ride the minibus taxi in the absence of card holders. There are separate queues for commuters with cards and non-card holders. The card system was introduced for commuters who commute daily to and through Johannesburg CBD. The cards are optional for all commuters and are renewed annually. In the case of bus strikes, non-cardholders who use the bus as their main form of transport to work are forced to stand in long and separate queues, and arrive home late in the evening. The second problem with using minibus taxis to travel back home after work is the geographic makeup of Johannesburg CBD. Johannesburg is a central transport hub to major townships that stretch outwards on the periphery of the city, therefore there are different people coming from different places who use Johannesburg CBD as their transport hub. This means that there are a lot of minibus taxi ranks located in different places across the city, which can make it difficult for commuters to navigate. For instance, the respondents nearest taxi rank to his home in Mapetla, Soweto is located in Bree Street, which is at a distance from his workplace, making it difficult for him to walk to the taxi rank.

Private car

Prior to the introduction of the Rea Vaya buses, the respondent used to drive to work with his private car. Traffic delays along with the costly price of petrol were the one factor that led to the respondent opting to use the Rea Vaya bus.

Minibus Taxi and Rea Vaya bus Fare breakdown

| Route | Price per day | Price per month (22 Days) |
|--|------------------------|----------------------------------|
| F9 (Mapetla to Thokoza Park) and T1 (Thokoza Park to Ellis Park East) | R13.50 x 2 = R27.00 | R594.00 |
| Total: | R27.00 | R594.00 |

Taxi single trip = R14.00

Rea Vaya Super saver bus³ = R7.00

³ The Rea Vaya Super Saver bus is only available on promotional days.

Rea Vaya Bus fares are determined by the length of the journey travelled. This means that passengers can transfer buses without being charged on the Rea Vaya SmartCards. Therefore, the fare for both F9 and T1 is combined and not charged as separate trips. However, this is dependent on how long it takes you to reach your next transfer busses. To make sure that the passengers are not charged for a new trip when they transfer buses, Rea Vaya uses a system of automatic transfers at selected high-traffic stations. Transferring at these selected stations within 15 minutes of your first tap-out ensures that your second tap-in will be recognized as a continuation of your journey (Rea Vaya, 2016).

Siyanda

Siyanda is a resident of Soweto and works at Harambee Youth Accelerator (Fox Street, Johannesburg CBD). Her workplace is 16.4 km from her residential area in Orlando West, Soweto. It takes the respondent approximately 45 minutes to commute to work every morning. She uses the Rea Vaya to commute to work and uses minibus taxis to commute to work when the Rea Vaya bus workers are on strike. She has access to all other types of public transport such as minibus taxis, the MetroRail train, PUTCO buses and Metro buses, but she prefers using the Rea Vaya bus. She lives closer to the Rea Vaya bus stop where she can connect to the major trunk routes.

Journey to work

Siyanda wakes up at 6:00am and she leaves her house at 7:00am. She walks 5 minutes to the nearest bus stop at the corner of Vilakazi and Moema Streets for a feeder bus (F4) which drops her off at the Boomtown station (Soweto). At 7:15am she takes a connecting bus (T1) to Johannesburg CBD, which drops her off at Chancellor house at 7:45am. She walks 5 minutes from Chancellor house in Fox Street, Johannesburg CBD and arrives at her workplace just before 8:00am.

Siyanda stays at a distance of 20 minutes from the trunk route station, therefore she has to take the feeder route bus that takes her to the nearest connecting trunk route station. She takes the F4 (Mofolo to Boomtown) at the corner of Vilakazi Street and Moema Streets and she will connect at the Boomtown station. From the Boomtown station, she takes the closest and fastest route to work and that is the T1 route (Thokoza Park to Ellis Park East), which drops her off at Chancellor house in Fox Street in the Johannesburg, CBD.

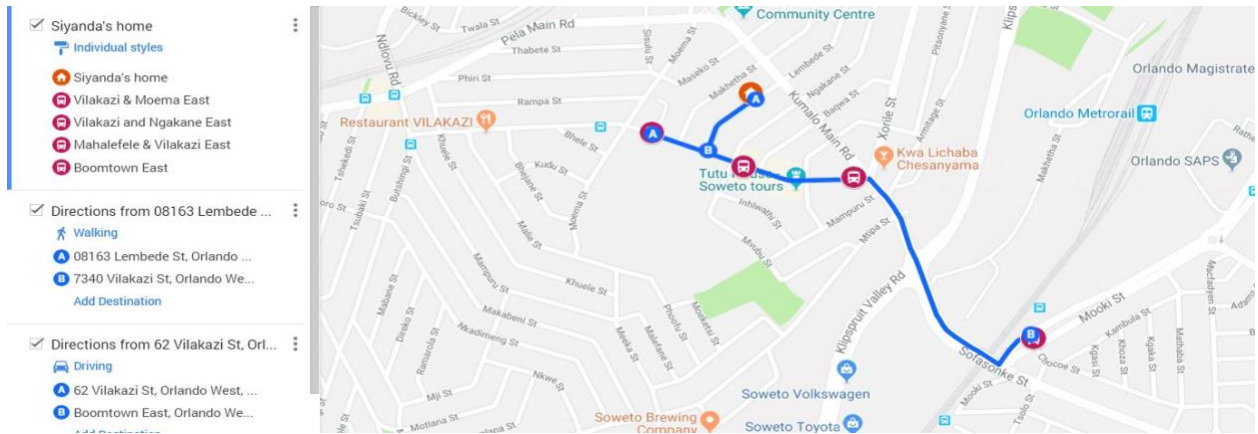


Figure 12: Rea Vaya bus F9 Route from Siyanda’s home to Boomtown East station

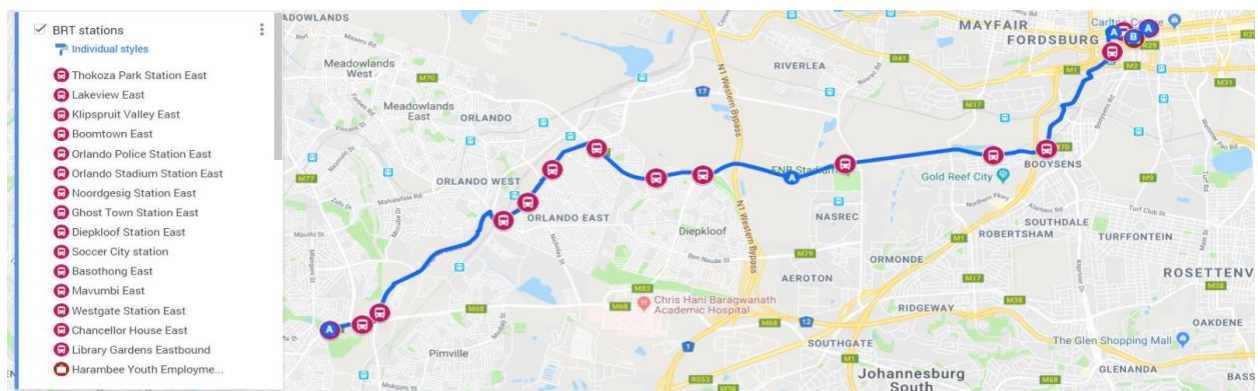


Figure 13: Rea Vaya bus T1 Route from Thokoza Station to Library Gardens Johannesburg.

Rea Vaya Bus fare breakdown

The bus fare of the Rea Vaya bus is dependent on the distance travelled by the passenger.

Because Siyanda takes the F4 route and the T1 Route she spends:

| Route | Price per day | Price per month (22 Days) |
|---|------------------------|---------------------------|
| F4 (Mofolo to Boomtown) and T1 (Thokoza Park to Ellis Park East) | R14.00 x 2 = R28.00 | R616.00 |
| Total: | R28.00 | R616.00 |

Important key points to consider

As a resident of Orlando West, Soweto, Siyanda commutes to work using solely the Rea Vaya bus except in the case of bus strikes then she would use minibus taxis. She acknowledges the fact that since the feeder routes of the Rea Vaya have been introduced closer to where she stays, commuting

to work has been convenient and faster for her. This is because of the fact that the feeder route buses can link her to the key trunk station routes, where she can connect to a bus that takes her to work. For this reason, she prefers using the Rea Vaya bus over any other mode of transport.

Limitations

Siya's responses to the interview were mostly positive. She did not have any negative comments about using the Rea Vaya bus. This might be due to the fact that she thought that I was working for the City of Johannesburg. At the end of the interview I asked her if she had anything else to add and she mentioned that "what you guys and the city are doing is great". This statement leads me to think that perhaps she did not understand why I was interviewing her and my role. I am not sure that she understood that I am a student who is researching on the Corridors of Freedom project and not that I am working in the Corridors of Freedom with City of Johannesburg. Before the interview started, I had explained to her what my work is about, perhaps there was a misunderstanding.

7.6. Takatso on the effectiveness and usefulness of the Rea Vaya bus

Takatso was interviewed as neither a potential beneficiary of the Corridors of Freedom, nor a City of Johannesburg worker. He was interviewed because he is knowledgeable on transportation in Johannesburg. He runs the Rea Vaya Facebook page. He is also studying towards obtaining a degree in transport studies at the University of Johannesburg. Takatso is a resident of Naledi, Soweto and commutes to work in Braamfontein everyday using the Rea Vaya bus. The primary form of transport he uses to commute to work is the Rea Vaya bus. He has access to all other types of public transport such as minibus taxis, the MetroRail train, PUTCO buses and metro buses, but he prefers using the Rea Vaya bus. This is because the respondent has expressed the convenience and the efficiency of the Rea Vaya buses compared to other modes of transport that he has access to. Furthermore, the respondent lives closer to the Rea Vaya feeder and complementary routes where he can connect to the major trunk routes.

Commuting to work

The participant leaves his house at 6:00am. He walks to the nearest bus stop at Corner Legwale and Ntshwe bus stop in Naledi to ride a feeder route bus (F1) at 6:05am. The F1 Rea Vaya bus will end its route at the Thokoza Park Station at 6:20am where the respondent has three bus route options which all go to Johannesburg CBD. The respondent has the option to choose between the T1 bus (Thokoza Park to Ellis Park East), the T2 bus (Thokoza Park to Braamfontein via Soweto Highway) and the T3 bus (Thokoza Park to Park Town and Library Gardens). The T2 bus takes the respondent directly to Braamfontein with no need to change to the C3 bus in Johannesburg CBD. When the respondent takes the T1 bus (Thokoza Park to Ellis Park East), he drops off at Chancellor house station in Johannesburg (CBD) and connects to the C3 bus (circular route through the inner city) and drops off at the Joburg theatre in Braamfontein and walks to Jorissen Street (Braamfontein) where he works. The T1 bus arrives at the Chancellor House at 7:20am where the respondent connects to a C3 bus and arrives at Joburg Theatre at 7:45am where he takes a 5-minute walk to work.

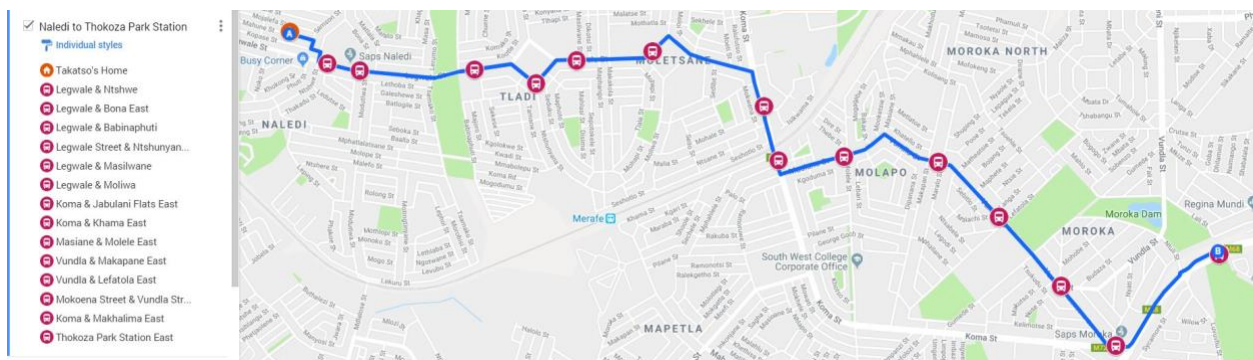


Figure 14: Rea Vaya bus F1 Route from Naledi, Soweto to Thokoza Park, Soweto

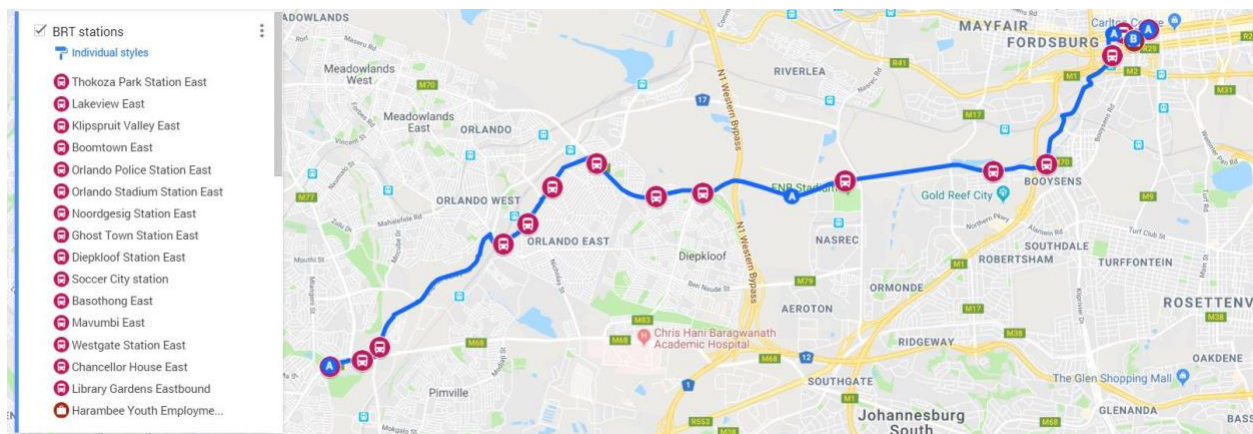


Figure 15: Rea Vaya bus T1 Route from Thokoza Park Station, Soweto to Chancellor house, Johannesburg

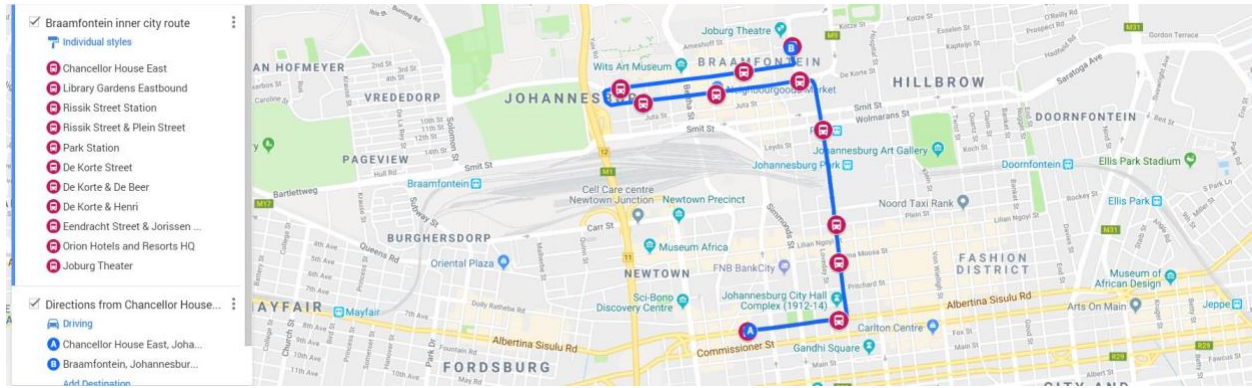


Figure 16: Rea Vaya C3 Chancellor house, Johannesburg to Joburg Theatre.

Using the Rea Vaya Bus

The Negatives

The fleet of the available buses is not enough to accommodate all the current passengers using the bus especially during the peak hours. The ticketing system always faces technical problems, and this causes unnecessary delays during peak hours when people are trying to load money in their cards. The money that has been invested in the Bus Rapid Transit system is lost due to the fact that the busses operate with few people during off-peak times typically from 8:31am to around 14:59pm (Rea Vaya, 2016). The Rea Vaya bus system always experiences a high number of passengers using the buses during peak hours from 6:00am to 8:30am. It is not safe to use the bus during peak hours as there is a risk of a stampede as the station in Thokoza Park is always full during peak hours.

The Positives

The respondent mentioned that the benefits of using the Rea Vaya bus compared to using taxis has been arriving home in the early evening and having time for leisure activities. The busses are always maintained and therefore are roadworthy. Furthermore, the busses have a dedicated busway, meaning that the commute to work and back home is less time consuming as a result of less traffic on the route. The respondent manages to arrive to work early and is able to save time commuting to work every day. The busses are safe to use late evening because at they are escorted by the Johannesburg Metro Police Department (JMPD). The difference in fares of the Rea Vaya bus and the minibus taxis is not significant. However, the efficiency and convenience of the bus is

the reason why the respondent chooses to use the bus. The minibus taxi fare from Naledi, Soweto to Johannesburg CBD is R15.00 and a bus fare from Naledi, Soweto to Johannesburg CBD is R14.00.

Spatial fragmentation in Johannesburg affects the time that the urban poor in peripheral townships take to travel from their homes to places of work. With the location of townships in the periphery of the city, most of the commutes to work take an average of 54 minutes. According to a survey done by the Gauteng City-Region Observatory (Culwick et al., 2015), the commute duration to work is influenced by different factors. For example, the residents may live closer to their work place however, traffic congestion can affect the duration of their commute. Alternatively, some residents may have limited access to public transport meaning that their commute duration may be affected by the routes that the public transport takes (Culwick et al., 2015). Importantly, some residents may be live far from their work places and may have limited public transport to commute to work as in the case of Kagiso residents. It is important to take these points in to consideration when thinking about the duration of commutes. The interviewed Soweto residents have access to a different public transport options such as the PUTCO bus, the Metrobus, the Rea Vaya bus, minibus taxis and the MetroRail train service. The following maps show the times spent by commuters from both Kagiso and Soweto to commute to work. Kagiso residents spend an average of about 46 – 112 minutes to travel to work.

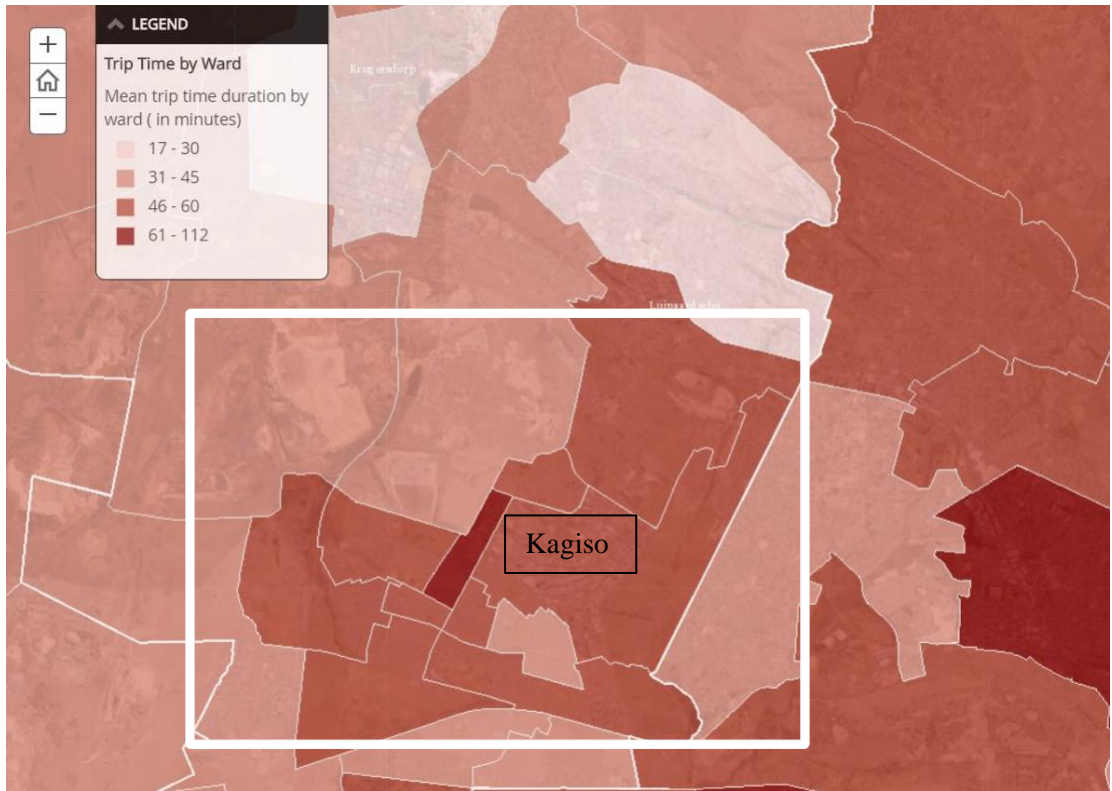


Figure 16a: This map shows the average duration spent by Kagiso residents to commute to work (Culwick et al., 2015).

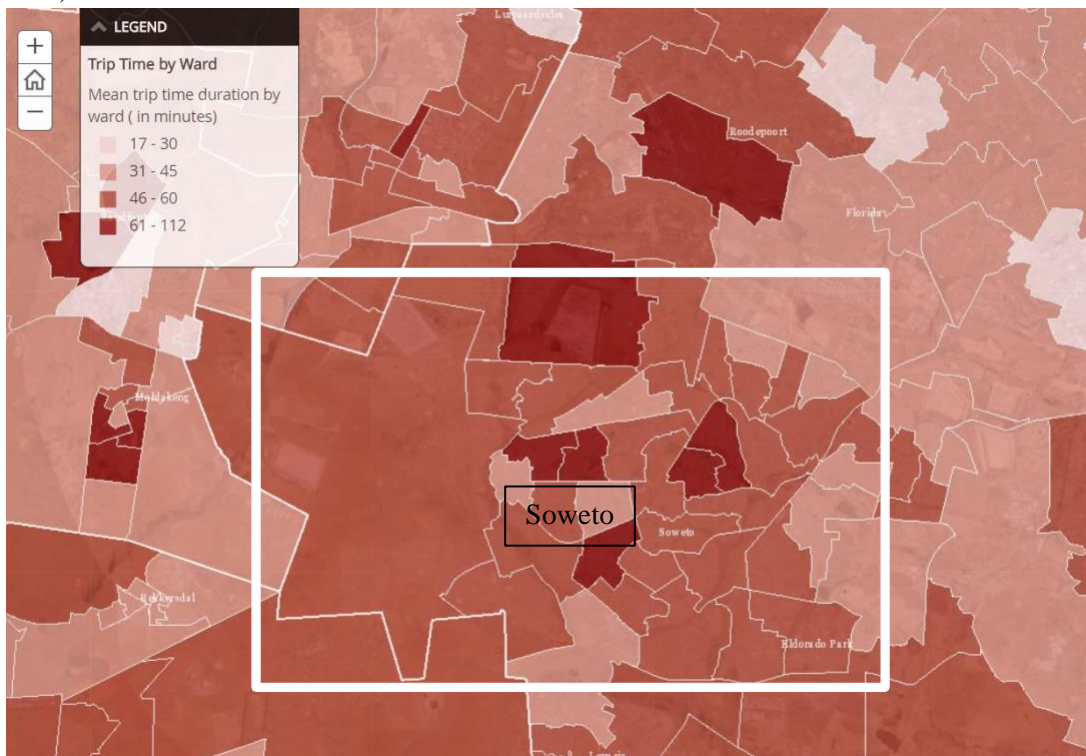


Figure 16b: This map shows the average duration spent by Soweto residents to commute to work (Culwick et al., 2015).

The time that Soweto residents spend commuting to work on average ranges from 46 – 112 minutes. Again the duration of the commutes to work can be affected by where the residents stay in relation to where they work, the type of transport that they use to commute to work. The following data does not include private transport. It is important to note that Soweto covers a large area and some neighbourhoods in Soweto only have access to minibus taxis and do not have access to different transport modes. This also plays an important role in the duration of the commutes to work.

8. DISCUSSION

8.1. Introduction

The purpose of this chapter is not to state what is wrong about the public transport system in Johannesburg. Instead, it is to show how the Rea Vaya BRT system has improved the lives of the residents who currently use it and how it could potentially improve the lives of the residents who do not have access to it. In this context, a highlight or contrast is made from the experiences of both Kagiso residents who do not have access to the BRT system and have very limited public transport options, and Soweto residents who have access to the BRT system and a multimodal public transport system. It is evident how a good quality public transport system is important particularly for social inclusion of the urban poor. In Johannesburg, the urban poor living in peripheral locations, spend more than an hour commuting to work over a distance of more than 20km. Commuters also spend a large proportion of their monthly income on transport. The transport system in South Africa is complicated due to the lack of integration of all the modes of public transport. This section suggests that the Rea Vaya BRT system served as an important and much needed transition in public transport sector. This section also suggests that the Rea Vaya BRT system in Johannesburg has the potential to improve travel conditions for the residents of Soweto. Vaz and Venter (2012) argue that by reducing commuters' travel times and travel costs, their livelihoods may be enhanced effectively through retaining the amount of money spent on transport and the time spent commuting to work. In the context of Johannesburg, all different forms of public transport systems run independently and this poses challenges for the public transport system. With the launch of the Rea Vaya BRT system in Johannesburg, the transport department had hopes that the minibus taxi industry would gradually dissolve as efforts were made to persuade minibus taxi owners and drivers to join the Rea Vaya BRT system. However, a compromise was reached in a sense that the minibus taxi system in Johannesburg would run alongside the BRT system and minibus taxi owners would have shares in the Rea Vaya BRT project (Allen, 2013). However, this was met with resistance by the minibus taxi industry as they felt under threat by the Rea Vaya.

8.2. South Africa's public transport system: The minibus taxi industry

The public transport system in the city of Johannesburg consist of three modes and that is road which consists of formal bus services and minibus taxis and railway transportation consisting of commuter trains (Metrorail) and high-speed trains (Gautrain) (Maunganidze, 2011). The urban poor in Johannesburg have relied on both the minibus taxi system and the bus system as this mode of transport was accessible and affordable to use for commuting to work from townships (Shange, 2017). The minibus taxi industry over the years has grown and continues to grow to become one of the largest public transport system in South Africa (Shange, 2017). The minibus taxi industry in South Africa is responsible for 15 million commuters each day, which is about 68% of all commuters according to (Payne & Ngalo, 2018). The minibus taxi system in South Africa has a long standing history in operation, dating back to the apartheid period where it was mostly unregulated by the government (Shange, 2017). It has been running alongside the bus system and grown significantly over the decades as a primary form of transportation for the urban poor from townships. Minibus taxis operated at a time where bus fares became too high that commuters decided to boycott (Shange, 2017).

Minibus taxis have a monopoly over the transport system in that, most people depend on them for commuting to work on a daily basis. Because the industry started as an alternative form of transport from buses, the minibus taxi industry has become territorial and highly competitive in nature leading to the so-called taxi wars. In the context of Johannesburg, the competition has been exacerbated by the introduction of the Rea Vaya BRT system which provides cheaper, efficient and quality public transport (Shange, 2017). The introduction of the Rea Vaya BRT system was challenged by the major minibus taxi associations in Johannesburg as taxi owners felt threatened that their income and livelihoods were being compromised. The local government attempted to negotiate the giving up of certain minibus taxi routes in exchange for compensation. Taxi owners agreed to give up particular taxi routes to make way for the Rea Vaya BRT system to operate alongside the taxi industry. Over 585 minibus taxis were withdrawn from operating to make way for the Rea Vaya BRT system to operate (Allen, 2013). Negotiation of the integration of the two major public transport systems in Johannesburg has been particularly difficult. The failure to integrate the public transport system in Johannesburg has been made worse by the competitive

nature of the minibus taxi industry. The minibus taxi industry has been running independently alongside other major public transport systems in Johannesburg prior to the introduction of the Rea Vaya and prior to being subsidised by the government. The MetroBus, PUTCO buses and the Metrorail all received subsidies from national government to make them affordable and accessible to the urban poor. This has resulted in the lack of public transportation integration in Johannesburg. Instead, the minibus taxi industry has been in competition with other public transport modes for passengers (Maunganidze, 2011). This has further fragmented the public transport system in South Africa making it a challenge to integrate the transport system into one formal multimodal system. South Africa's public transport system is of a unique essence. This is due to the multimodal nature of the transport system in major cities across the country. Minibus taxis and railway transport have played a significant role in the making up of the South African transport system. Minibus taxis and trains have shaped the public transport system of the country since the apartheid period. More people in South African cities depend on minibus taxis and trains on a daily basis as a means to commute to work. It is worth noting that South African cities have drawn inspirations from Latin American countries and European countries that have implemented BRT transportation system in their countries. In as much as the contexts of European and Latin American cities are different from those of cities in the south, lessons have been drawn in the cities of the south who have replicated the BRT model. Curitiba in Brazil has served as an important influence for South Africa's influence in improving public transport systems. Curitiba's BRT transport system has been perceived as a pioneer in sustainable and effective public transport systems and this has set the stage for transformation of the public transport system in other countries in the South.

A good reliable and efficient public transport system is important to the urban poor because it is a way in which the urban poor can access employment and contributes positively in their lifestyle and livelihoods (Maunganidze, 2011). Three elements are important for a quality public transport system that promotes social inclusivity and these elements are: accessibility, affordability sustainability and safety and security. Transport accessibility is crucial especially for the urban poor located at far distances away from the city. For the urban poor to search for jobs (SACN, 2016) and secure their existing jobs, they need a reliable public transport system that is available nearby their residences, to make commuting to work less time consuming. Accessibility in this context, means that commuters do not struggle to find public transport within a 100m radius of

their residence. Accessibility is also linked to affordability. Public transport is not considered to be affordable if commuters spend most of their income on transport costs. Public transport is considered to be affordable when commuters spend only 10% of their income (Shange, 2017). In Johannesburg, people living in low-income areas in the outskirts of the city spend more than an hour on a one-way commute to work and one fifth or more of their income (Cartwright & Marrengane, 2016). The BRT system has been as way to transform the transport system to being more just and sustainable in accordance with the climate change policies around the globe. The BRT system was perceived as a way to reduce carbon emissions through the promotion of public transport usage over private vehicle usage which would reduce traffic congestion. This has not been effective in the context of Johannesburg as the Rea Vaya BRT system operates along with minibus taxis and other buses such as the Metrobus and PUTCO buses. A good transport system should be just and work towards ensuring that all people have access to it. The Rea Vaya BRT system has exemplified a just transport system that promotes inclusivity. It was also promoted as an effective and improved public transport system to socially excluded communities (Vaz & Venter, 2012). The Rea Vaya BRT system was also perceived as a poverty-reduction strategy for the urban poor who spend a fraction of their income on commuting to work.

8.3. What is the Rea Vaya Bus Rapid Transit system?

The planning of the construction of the BRT system in South Africa was aligned with the announcement that South Africa will host the 2010 FIFA World Cup (Maunganidze, 2011 and Shange, 2017). It was necessary for the major host cities to have a reliable public transport system to fit the perpetuated discourse of a 'World Class City' (Allen, 2013). Furthermore, the 2010 FIFA World Cup was perceived by local governments as a bargaining tool to influence government budget towards investment in the new and improved transport infrastructure (Wood, 2017). The Rea Vaya BRT system in Johannesburg was initially constructed and implemented for soccer enthusiasts and tourists to use during the World Cup. The first phases connected people from the Inner city to the stadiums and surrounding tourist attractions. Phase 1A of the Rea Vaya BRT system was a truck route that connected Thokoza Park in Soweto and Orlando Stadium to Ellis Park Stadium and the inner city (Rea Vaya, 2016). R13.6bn had been set aside for investment in transport across different host cities (Wood, 2017). Following the end of the World Cup, there was

need to make use of the transport infrastructure that was built specifically for the World Cup hence there was integration of more routes across the city. More stations and routes were constructed following the end of the World Cup. Phase 1b of the Rea Vaya BRT system opened new routes that included complementary routes and feeder routes (Rea Vaya, 2016). These new routes that operated were extended into neighbourhoods and connected commuters in remote neighbourhoods that were not within the catchment area of the trunk route stations (Vaz & Venter, 2012). The new routes stretched further to Dobsonville and Naledi in Soweto, to Braamfontein and Parktown in Johannesburg. In order for the BRT system to work for the urban poor, it had to be subsidized by the government to becoming affordable, accessible and attractive to the commuters. Vaz & Venter (2012) argue that the Rea Vaya BRT system carries a high share of trips to places of work in Soweto compared to those of the minibus taxis. This makes the Rea Vaya BRT system the second most used public transport mode after the minibus taxi in Soweto making it competitive (Vaz & Venter, 2012). The Rea Vaya was meant to replace minibus taxis in Johannesburg. However, this was not possible as it was met with resistance from the minibus taxi industry. What was agreed upon instead was that taxi owners would have a stake in the Rea Vaya business in exchange of the minibus taxi drivers giving up some routes to make way for the Rea Vaya. This allowed the replacement of about 580 minibus taxis along the Soweto to Johannesburg CBD corridor (Vaz & Venter, 2012).

8.4. The importance of the Rea Vaya BRT System

Although there is no sufficient evidence that the usage of the Rea Vaya leads to an increase in employment of the urban poor. However, there is evidence that the availability and the affordability of the Rea Vaya bus play a crucial role in promoting access to places of opportunity. The changing nature of employment in Johannesburg has resulted in the shifting of places of employment and opportunity have towards the northern suburban areas such as Rosebank, Sandton, Midrand and Centurion. Commuters from Soweto used the Rea Vaya bus to connect to further destinations such as Sandton and Midrand, while using Johannesburg CBD as a transport interchange. Soweto commuters working in Sandton for example would take the Rea Vaya bus from Soweto to Johannesburg CBD and change to a different mode of transport (a minibus taxi or a different bus). Up until recently, City of Johannesburg has extended the routes to Sandton and

Alexandra (Rea Vaya, 2017). The new trunk route will operate between Johannesburg CBD, Sandton CBD and Alexandra using Louis Botha Avenue and Katherine Street in Sandton (Rea Vaya, 2017). The extension of a new BRT route means that commuters who live in Soweto and work in Sandton can directly commute to Sandton without the need to change modes of transport in Johannesburg CBD. This is an important connectivity to the fact that commuting time will be shortened and accessibility to places of work is much easier.

From the interviews conducted with the Soweto residents who have access to the Rea Vaya buses, it was evident that the Rea Vaya bus played an important role in getting commuters to work on time. Although there are long queues in the main trunk station in Thokoza Park, Soweto, the buses are on schedule to leave on time and have an exclusive busway that could be used to avoid traffic congestions. This means that even though commuters have to stand in long queues in the morning, they still arrive to work on time and avoid being stuck in traffic. Travelling with different modes of transport consumes time as one commuter moves from one transport interchange to the next. For example, during the interviews one of the Kagiso respondents mentioned that she is required to change minibus taxis twice in the inner city to connect to the minibus taxi that takes her directly to her work place. Commuters who have to take transfer minibus taxis to further destinations do so at a fee. These minibus taxi transfers are not done at a flat fee similar to the Rea Vaya bus. This is both costly and time consuming for the commuter as they have to wait in queues again for different minibus taxis. Hence, the Rea Vaya benefits low-income commuters by offering a more affordable travel option (Vaz & Venter, 2012). An important benefit of using the Rea Vaya to commute to work that was mentioned by all the Soweto respondents in my interviews was the improvement of livelihoods and lifestyle. Rea Vaya commuters no longer prioritise waking up in the early hours of the morning to travel to work. Using the Rea Vaya allows commuters the flexibility to wake up in the morning and arrive to work early. Less time is spent on the road which allows commuters to have time for family and leisure activities after work.

One of the respondents mentioned:

...it [the Rea Vaya bus] actually changed my lifestyle because I knock off at 16:00 and if I was to take a taxi I have to walk to the taxi rank which is on the other side of town, and again, you get there and there is a queue. You get a taxi, there is traffic and I get home at 18:00. But now, if I take a bus, it's just down the street, just when I walk out of the office,

the next street I catch the bus. In 15 minutes I am in Soweto and the next 5 minutes, I am connecting and then I'm at home. So, about 16:45 to 17:00 I'm at home you understand? So meaning I actually spare an extra hour that I can actually utilize to do other things in my life. And also in the morning it's the same thing, I have an extra hour to do other things, which is actually very positive because you don't want to spend your life... almost half your life travelling back and forth from work. – Pontsho, Interview, 2018.

The Rea Vaya in Soweto has improved the lives of residents who commute to work using the bus every day. In addition, improvement is more evident among Rea Vaya commuters who stay in areas further away from the trunk route as they are able to connect to their work places using only one mode of transport. The presence of the Rea Vaya also has positively influenced the perceptions of the users who do not have access to the Rea Vaya routes such as commuters from Kagiso. Kagiso respondents commented that the implementation of a Rea Vaya Trunk route from Kagiso to Johannesburg CBD would be very useful in both cutting the cost of commuting and reducing travel time to places of work. These perceptions have been shaped by the experience with minibus taxi use by residents of Kagiso. Among the respondents, there is a perception that due to the dedicated bus lanes of the Rea Vaya bus, less time is spent commuting to work and this can have positive impacts on their livelihoods. However, it is important to note that this may be influenced by the fact that there are no other available public transport options accessible and available for the residents to use with the exception of minibus taxis. Residents of Kagiso could benefit from the public transport upgrades.

8.5. The potential impact of the BRT on Kagiso residents.

What characterises a good public transport system is the ability to alleviate social exclusion. In the context of Johannesburg, a good public transport system is one that is able to connect the urban poor who have long been isolated in peripheral townships. The Rea Vaya BRT system has been important in connecting the socially and spatially fragmented Johannesburg through providing enhanced accessibility to livelihood opportunities for the urban poor (Vaz & Venter, 2012). This was done through constructing quality public transport closer to where the urban poor stay. The extension of the feeder and complementary routes to neighbourhoods in Soweto such as

Dobsonville, Naledi, Eldorado park has allowed more physical access to public transport. Moreover, the recent extension of the Rea Vaya trunk route to Sandton and Alexandra is important due to the fact that places of work that are based in the northern suburbs of Johannesburg can now be easily reached with only one mode of transport.

The Rea Vaya BRT system has been an important gateway for the urban poor's mobility and access to Johannesburg. The impacts that the Rea Vaya bus has on resident's perception differs with where the commuters reside. For example, the perceptions that Soweto residents have of the Rea Vaya bus differs with that of Kagiso residents. This has to do with differential public transport access that Soweto residents and Kagiso residents have. Soweto residents have long been exposed to different public transport modes. Soweto residents have access and the availability various public transport modes such as the MetroBus, the PUTCO bus, railway transport (MetroRail) and minibus taxis. Whereas, Kagiso residents do not have a variety of public transport modes that Soweto residents have. All public transport modes are physically inaccessible to Kagiso residents with the exception of minibus taxis. Inaccessibility in this context means that the public transport modes are physically inaccessible in that they are not to be found within a 100m radius of where the commuters reside. Accessibility speaks to both the cost of commuting using a particular mode and the physical accessibility of the transport mode.

1. Affordability

This speaks to whether commuters can afford to use the mode of transport. For example, the Gautrain is not affordable to lower-income residents due to the cost. A Gautrain trip from Johannesburg Park Station to Rosebank costs R32.00, whereas a minibus taxi trip from MTN Rank (Johannesburg CBD) to Rosebank costs only R12.00. Lower-income residents may choose to use minibus taxis due to the fact that they are affordable.

2. Physical access to the transport mode

This form of accessibility speaks to the distance that the commuters have to walk to the nearest public transport mode. Ideally, public transport becomes accessible if the commuter walks no more than 10 minutes to the nearest transport.

Kagiso residents felt like an improvement in the public transport system could be beneficial for their commute to work. One respondent from Kagiso specifically mentioned that the accessibility of the Rea Vaya buses would be cost effective for her commutes and less time consuming due to

the dedicated bus lanes. The residents of Kagiso mostly commute to work using minibus taxis that are often caught up in traffic congestion in the morning. To avoid traffic congestions in the morning during peak hours, the residents of Kagiso who work in places as far as Midrand wake up early in the morning at around 4am and catch the next minibus taxi at 5am. Long hours of commuting to work affects employees' ability to perform at work, affects their job security because they often arrive late at work and limits the time the residents have with their family in the evening. Therefore, Kagiso residents believe that the time that is spent on the road commuting to work would be less if they used the Rea Vaya BRT System. Using the Rea Vaya BRT system as a primary public transport to commute to work has the potential to improve the low-income community's productivity at work and improve livelihoods as there is leisure time to rest after work. This perception is not only held by Kagiso residents, but by some residents of the West Rand who use public transport to commute to work on a daily basis. In 2015 a resident of the West Rand, Mitchell McKinnley (Fourie, 2015) challenged the MMC of Transport in Gauteng and City of Johannesburg to extend the routes of the Rea Vaya buses to the West Rand. This was a petition that was signed by 592 residents in support of the extension of Rea Vaya routes. Residents spoke about the positive effects of having feeder routes in the West Rand that would benefit different groups of people, from the working class to the students who have to travel long hours to go to school and work. Kagiso commuters are dependent on minibus taxi service and this makes them vulnerable to any disruptions in public transport coverage and in the shifting of prices (Venter, 2016). Hence the transformation of the public transport sector should be focused towards the socially marginalized urban poor. The call for the extension of the Rea Vaya BRT lines in isolated parts of the West Rand shows the need for good quality affordable public transport especially for the urban poor. Minibus taxis provide the public transport in Kagiso with close to 75% of the commutes are made by the minibus taxis. The Rea Vaya not only provides commuters with mobility but with accessibility to places of employment opportunities. With the extension of a new Rea Vaya trunk route on the Louis Botha Avenue that stretches from Johannesburg inner city to Sandton and Alexandra, low-income communities are linked to places of employment in Sandton.

9. CONCLUSION

The main objective of this research was to evaluate two development projects namely the Rea Vaya BRT system and the inclusionary housing by the City of Johannesburg through the Corridors of Freedom project. Both these development projects i.e. the Rea Vaya BRT system and the inclusionary housing projects were City of Johannesburg's attempt towards inclusive development through transit oriented development in Johannesburg. At the end of the research, the results from the interviews only focused on the Rea Vaya BRT system and the perceived impacts of the bus system on the commuters. Through interviews with potential beneficiaries of the Corridors of Freedom, the research findings concluded that the Rea Vaya BRT system cannot solely 're-stitch' the city but it is an important step towards inclusive development in Johannesburg. The Rea Vaya BRT system and its adoption in Soweto has been important in providing accessibility in places that the urban poor in Soweto did not have physical access to. Furthermore, having well-located inclusionary housing adjacent to a good public transport system provides is important in providing mobility, accessibility and freedom like the Corridors of Freedom suggests. The Rea Vaya BRT system is not only important to the residents of Soweto who directly enjoy the benefits of the presence of this public transport system, but it also has potential impacts on the residents of the township of Kagiso in the West Rand. A contrast was made from the experiences of both Kagiso residents who do not have access to the Rea Vaya BRT system and have very limited public transport options and Soweto residents who have access to the BRT system and several public transport options. The residents of Kagiso who depend on Johannesburg for consumption and employment, remain isolated in the periphery of the city. They are dislocated in the periphery with no proper public transport system, and are at a disadvantage because they fall out of the jurisdiction of the City of Johannesburg municipality. For the residents of Kagiso, the Rea Vaya BRT system has the potential to connect them to places of employment and reduce the time and cost spent commuting to work. In this way, the Rea Vaya BRT system can also be viewed as a poverty-reduction strategy for the urban poor who spend a fraction of their income on commuting to work. There is evidence that the availability and the affordability of the Rea Vaya BRT system plays a crucial role in promoting access to places of opportunity. A good reliable and efficient public transport system is important to the urban poor because it is a way in which they can access employment and contributes positively in their lifestyle and livelihoods.

Transit oriented development (TOD) as an approach to urban transformation and restructuring is an important attempt at addressing the apartheid-made spatial mismatch that resulted in the economic and social exclusion that is faced by the urban poor in South Africa in the current context. Inclusive development is therefore an important step toward tackling the spatial injustices and inequalities that are present in Johannesburg. This has been difficult to translate in practice. Spatial inequalities are linked to broader issues of poverty and unemployment hence it is difficult to draft a solution that works towards addressing these complex issues. Different cities across South Africa have created solutions of addressing spatial inequalities however, these solutions have had unintended consequences. One example of such unintended consequence is the creation of a congested city. With the introduction of the Rea Vaya BRT system alongside an already traffic congested city, has posed problems for the environment. The failure for buy-in from the taxi industry has forced the BRT system to operate along the minibus taxi system, further compacting the city. The idea behind Corridors of Freedom is to provide increased freedom of movement by residents as well as improved economic freedom by bringing the urban poor and marginalised population closer to the city core. The Corridors of Freedom project can be seen as a solution towards correcting the spatial inequalities of Johannesburg.

Although this project has unintended consequences, it is a good attempt at addressing spatial inequalities in a manner that speaks directly to the urban poor. The City of Johannesburg's social development agenda of a people-oriented city has been gradually taking place through the provision of inclusionary housing units in the urban core. However, the growing demand of affordable housing is greater than the supply, implying that there is still a backlog. Within the agenda of the Corridors of Freedom, active citizenry guided by the right to the city agenda is still lagging behind. The marginalised populations in Johannesburg are still not active participants and are still not part of the important decision making that takes place within local government. The urban poor are subjected in top-down bureaucratic processes and are only allowed to participate in the decision making of project in a check-list approach. The City of Johannesburg often consults with the middle-class communities in the case of any development project and there is less engagement with the potential beneficiaries of the intended developments. It is important for future inclusive development projects to should engage with active citizen participation of all citizens. In the case of Corridors of Freedom, inclusivity does not only translate to the provision of low-income

housing in well-located areas, a good public transport service and delivery of basic services in under resourced areas. Inclusivity should take a holistic approach to creating liveable and sustainable urban areas. Cities are considered inclusive when they have the following at the least:

1. Accessibility: to all the residents who inhabit them. This means that all residents should be able to access different parts of the city and different services (SACN, 2016)
2. Safety: safe neighbourhoods that promote mobility for residents, where there is visible police presence and law enforcement takes a people-centred approach. The government should be in the position to provide the minimum acceptable level services.
3. Integration: disrupting the apartheid city, where the majority of the urban poor live in isolated places with limited access to the inner city.
4. Good quality service provision: physical infrastructure interventions such as provision of proper water, sanitation, electricity and social amenities should be available and accessible to the urban poor. This should be done to in order to improve safety and livelihood conditions of people living in urban peripheral areas, especially in informal settlements.

Therefore, providing low-cost housing that is located closer to places of employment opportunity is not solely sufficient for the urban poor. Living in areas that are closer to places of employment and opportunity has not necessarily translated into improved livelihoods. This is evident in the township of Alexandra, north of Johannesburg where its location next to Sandton shows the extent of spatial inequalities in Johannesburg (SACN, 2016). Alexandra, colloquially known as Alex, is an informal settlement that is under serviced and under resourced established in 1912. The location of Alexandra close to an economic hub has not translated into any livelihood changes for its residents (SACN, 2016). Alexandra has access to public transport systems such as the Metrobus, minibus taxis and recently, the Rea Vaya BRT system. However, the residents are still living in poverty and in under-serviced areas. The location of this informal settlement close to places of employment and opportunity has little impact in transforming the lives of the residents of Alexandra. Alexandra still remains systematically and structurally marginalised because of the failure to achieve inclusivity and integration (SACN, 2016). In fact, the location of Sandton close to Alexandra continues to entrench inequalities in Johannesburg. Unemployment, as well as poor infrastructure facilities and services continue to exacerbate inequalities perpetuated by a classist service provision.

Living closer to places of employment and opportunity may be perceived to increase people's chances of finding employment, but well-located, well-resourced areas are unaffordable for the urban poor. In tackling inclusive development, the City of Johannesburg has to think carefully and comprehensively about whether the proposed developments would exacerbate further inequalities or bridge the gap between these inequalities. For inclusive development to be fully achieved, it is not sufficient to transform the space. Transformation of politics and power is also important due to the power imbalances that exists in the Johannesburg (SACN, 2016). Transformation of politics and power involves being cognisant of the classism, and racial inequalities that are present in the cities and addressing these issues in a manner that benefits the disenfranchised. This should include a bottom-up approach that allows the urban poor to fully participate and decide on which development is suitable for them. The urban poor should be able to resist any development that is not in the interests of improving their lives. Institutions need to work for the urban poor and afford them the right to the city through ensuring that they are active participants in the city who are autonomous and have a sense of individual agency.

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11. APPENDIX

Appendix A: Joshco's affordable housing rental unit rates

JOSHCO's affordable housing rental unit prices

All the following projects listed below are located in Johannesburg inner city

Projects details:

| TEXTILE BUILDING (KERK STREET) | | | | |
|---------------------------------------|-----------------|------------------|---------------|-----------------------|
| Typology | No Units | Unit size | Rental | Minimum Salary |
| Bachelor | 2 | 21m2 | 2300 | 9 200 |
| Bachelor | 5 | 24m2 | 2500 | 10 000 |
| Bachelor | 5 | 25m2 | 2550 | 10 200 |
| Bachelor | 12 | 32m2 | 3000 | 12 000 |
| 1 Bedroom | 6 | 32m2 | 3200 | 12 800 |
| 1 bedroom | 6 | 36m2 | 3500 | 14 000 |
| 1 Bedroom | 18 | 39m2 | 4200 | 16 800 |
| 1 bedroom | 40 | 40m2 | 4300 | 17 200 |
| 2 Bedroom | 6 | 47m2 | 4500 | 18 000 |
| Total | 100 | | | |
| AFRICAN DIAMOND (KERK STREET) | | | | |
| Typology | No Units | Unit size | Rental | Minimum Salary |
| Bachelor | 1 | 17m2 | 2000 | 8 000 |
| Bachelor | 5 | 30m2 | 3300 | 13 200 |
| 1 Bedroom | 10 | 36m2 | 3500 | 14 000 |
| 2 Bedroom | 5 | 36m2 | 4000 | 16 000 |
| 2 Bedroom | 20 | 37m2 | 4100 | 16 400 |
| 2 Bedroom | 10 | 39m2 | 4200 | 16 800 |
| 2 Bedroom | 10 | 42m2 | 4500 | 18 000 |
| Total | 61 | | | |
| HOEK STREET | | | | |
| Typology | No Units | Unit size | Rental | Minimum Salary |
| Rooms | 15 | 12m2 | 1020 | 4 080 |

| | | | | |
|--|-----------------|------------------|---------------|-----------------------|
| Rooms | 17 | 13m2 | 1105 | 4 420 |
| Rooms | 37 | 14m2 | 1190 | 4 760 |
| Rooms | 90 | 15m2 | 1275 | 5 100 |
| Rooms | 27 | 16m2 | 1360 | 5 440 |
| Rooms | 13 | 17m2 | 1445 | 5 780 |
| Rooms | 22 | 18m2 | 1530 | 6 120 |
| Rooms | 14 | 19m2 | 1615 | 6 460 |
| Rooms | 2 | 20m2 | 1700 | 6 800 |
| Rooms | 10 | 21m2 | 1785 | 7 140 |
| Rooms | 7 | 23m2 | 1955 | 7 140 |
| Rooms | 2 | 24m2 | 2040 | 8 160 |
| Rooms | 7 | 26m2 | 2132 | 8 528 |
| Rooms | 1 | 29m2 | 2320 | 9 280 |
| Total | 264 | | | |
| PHOENIX HOUSE (3-7 STEPHENSON STREET) | | | | |
| Typology | No Units | Unit size | Rental | Minimum Salary |
| Rooms | 7 | 11 m2 | 720 | 2 880 |
| Rooms | 7 | 14 m2 | 800 | 3 200 |
| Rooms | 7 | 16 m2 | 900 | 3 600 |
| Rooms | 7 | 19 m2 | 1000 | 4 000 |
| Rooms | 14 | 20 m2 | 1020 | 4 080 |
| Rooms | 14 | 21 m2 | 1030 | 4 120 |
| Rooms | 14 | 23 m2 | 1090 | 4 360 |
| Rooms | 8 | 25 m2 | 1100 | 4 400 |
| Rooms | 32 | 26 m2 | 1150 | 4 600 |
| Rooms | 14 | 28 m2 | 1160 | 4 640 |
| Rooms | 6 | 30 m2 | 1200 | 4 800 |
| Rooms | 6 | 31 m2 | 1210 | 4 840 |
| Rooms | 1 | 38m2 | 1400 | 5 600 |
| Total | 137 | | | |

Appendix B: Informed Consent Form

DEPARTMENT OF SOCIOLOGY

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Informed Voluntary Consent to Participate in Research Study

Project Title: The Corridors of Freedom and Inclusionary Development in Johannesburg

Invitation to participate, and benefits: You are invited to participate in a research study conducted with stake holders of Corridors of Freedom. The study aim is to develop an understanding of inclusionary development in the context of Johannesburg. I believe that your experience would be a valuable source of information, and hope that by participating you may gain useful knowledge.

Procedures: During this study, you will be asked to participate in a semi-structured interview with regards to the corridors of freedom project.

Risks: There are no potentially harmful risks related to your participation in this study.

Disclaimer/Withdrawal: Your participation is completely voluntary; you may refuse to participate, and you may withdraw at any time without having to state a reason and without any prejudice or penalty against you. Should you choose to withdraw, the researcher commits not to use any of the information you have provided without your signed consent. Note that the researcher may also withdraw you from the study at any time.

Confidentiality: All information collected in this study will be kept private in that you will not be identified by name or by affiliation to an institution. Confidentiality and anonymity will be maintained as pseudonyms will be used.

What signing this form means:

By signing this consent form, you agree to participate in this research study. The aim, procedures to be used, as well as the potential risks and benefits of your participation have been explained verbally to you in detail, using this form. Refusal to participate in or withdrawal from this study at any time will have no effect on you in any way. You are free to contact me, to ask questions or request further information, at any time during this research.

I agree to participate in this research (tick one box)

Yes No _____ (Initials)

| | | |
|---------------------|--------------------------|-------|
| _____ | _____ | _____ |
| Name of Participant | Signature of Participant | Date |
| _____ | _____ | _____ |
| Name of Researcher | Signature of Researcher | Date |