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Corridors of Freedom: Analyzing Johannesburg's Ambitious Inclusionary Transit-Oriented Development

Philip Harrison[1], Margot Rubin[1], Alexandra Appelbaum[1], and Romain Dittgen[1]

Abstract

In 2013, the Mayor of Johannesburg announced the ambitious Corridors of Freedom (CoF) initiative to transform the city's socio-spatial structure. The CoF were constructed to be an inclusionary form of transit-oriented development (TOD). Using a 1,200 respondent survey, over 75 interviews, documentary analysis, and attendance at public participation interventions, the paper questions the possibilities for, and constraints on, the practice of inclusionary TOD. Using six criteria—spatial transformation, mobility, affordable accommodation, jobs and livelihoods, social integration, and participation—we demonstrate the mixed outcomes of inclusionary TOD.

Keywords

inclusion, inclusionary TOD, Corridors of Freedom, transit-oriented development

Introduction

In 2013, the Mayor of Johannesburg, Mpho Parks Tau, used his State of the City Address to announce an ambitious program to transform the socio-spatial structure of Johannesburg:

> Today we are taking transit-oriented development another step forward, with the introduction of a project that will forever change the urban structure of Johannesburg and eradicate the legacy of Apartheid spatial planning. Over the [next] decade we will introduce transport corridors connecting strategic nodes through an affordable and accessible mass public transit that includes both bus and passenger rail. Along these corridors we will locate mixed income housing, schools, offices, community facilities, cultural centres, parks, public squares, clinics and libraries. . . . This will result in significant social and cultural interaction and help to break down the barriers erected by the policies of segregation—creating the opportunities to build a non-racial society. . . . These corridors will be the *Corridors of Freedom* . . . (City of Johannesburg (CoJ) 2013, 5–6)

The Corridors of Freedom (CoF) drew on global concepts of transit-oriented development (TOD), but was cast in a language of inclusion that responded to a particular history of formally sanctioned socio-spatial division and exclusion, and also built on ideas of "corridors" that have circulated in professional and academic circles in South Africa from the 1980s. Since 2013, the CoF has emerged nationally, and even globally, as a vital exemplar of a TOD initiative driven by a politically framed agenda for socio-spatial transformation (see, for example, Griffith 2017; Pieterse 2017). Although the initiative suffered a setback with the surprise defeat of the Mayor Tau in the local government elections of August 2016, the CoF continues in a revised and more limited form.

The initiative, while deeply contextual, is nevertheless an important test case for TOD that is led by an explicitly inclusionary agenda, as opposed to having inclusion as a secondary objective of programs driven either by private interest or by other public interest concerns such as more efficient transportation networks and reduction in the carbon footprint (Newman 2004). TOD is acknowledged for its capacity to synergize various public and private interests but the question arises as to which agendas and interests are the prime-movers and which are the co-benefits (Cervero et al. 2004).

In the case of the CoF, the initiating agency was city government, and the underlying rationality was a political compulsion to show that the elected leadership of the city was responding to societal demands for postapartheid urban

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transformation. Socio-spatial transformation toward greater inclusiveness was clearly at the heart of the CoF with the *co-benefits* including a more financially viable public transport system, greater environmental sustainability, and profit-making opportunities for real estate developers. This makes Johannesburg a potentially important case for exploring the possibilities for, and constraints on, the practice of inclusionary TOD. The challenges in doing so include both conceptual complications and the intricacies of the Johannesburg context. An analysis of the CoF also provides a contribution to an emergent literature on inclusionary TOD (e.g., Belsky and Fauth 2012; Dwight 2016; Griffith 2017; Thurber, Bohmann, and Heflinger 2018) as an initiative which is, at one level, unambiguously framed by an explicit commitment to inclusion but, at another, is fraught with all the ambiguities and complexities reported on elsewhere.

While the focus here is on TOD, the Johannesburg case also speaks more broadly to the inclusionary possibilities of ambitious development programs in complex metropolitan areas that attempt to retrofit an existing urban landscape where communities are already established and physical assets are fixed in place. These programs are invariably implemented over long periods in the context of shifting political, economic, and social climates. Although we can only report on around five years of implementation, there have already been far-reaching contextual shifts. The Johannesburg case, therefore, points to both the longer term challenges of resilience and adaptation in the face of ongoing changes and the short-term impacts of implementation which include, for example, the disruptive effects of construction and initial community responses to the announcement of a possibly major change in the city.

Inclusion

Inclusion is a slippery concept drawing from different philosophical and ideological orientations that range, for example, from privileging individual opportunities and freedoms to addressing deep-rooted structural causes of exclusion (Artiles, Harris-Murri, and Dalia Rostenberg 2006; Rawal 2008).

Complicating the matter is the origin of inclusion within the policy discourses of the global North, and especially in post-welfarist Europe. In many contexts in the global North, the "excluded" are understood to be marginalized minorities that are denied proper recognition by the dominant mainstream. A number of scholars have criticized the assumption that addressing exclusion should necessarily mean inclusion into mainstream society, questioning the ways in which the mainstream is "normalized" (Allman 2012; Edwards, Armstrong, and Miller 2001; Fairclough 2000). In many contexts in the global South, however, exclusion is arguably the condition of the *majority* rendering the debates in the North somewhat moot and requiring responses that allow the majority access to resources and benefits that have historically been held by the few. However, the arguable strength of inclusion as a concept lies in its multidimensionality and so a concept of inclusion that spotlights the challenges of material deprivation and inequality may be brought together with concerns of political and social recognition and inclusion.

Meaning must be contextualized, with definition responding to the requisites of different places. In Johannesburg, where the legacies of colonial and apartheid rule are a persisting reality, dignity, respect, and equal treatment are necessary dimensions of inclusion. This is also a context where the majority of the population live in varying degrees of poverty, often spatially marginalized from public benefits, pointing to the crucial importance of economic and physical access, as well as contextually responsive elements of inclusion.

In this paper, we explore the extent to which the rhetorically inclusive CoF has responded *in its practice* to the contextually shaped imperatives of inclusion. Specifically, we discuss the emerging outcomes of the CoF in relation to "economic access," "spatial access" (to housing, mobility, and urban services), "social access," and "participation." The first three dimensions of inclusion were specifically stated in Tau's address and launching documents as objectives of the CoF. We include "participation" as the fourth dimension because of an expectation—both legislative and social—in South Africa's new democracy that developmental initiatives will be participatory and empowering. What inclusion means in practice in Johannesburg is a challenging matter raising questions in relation to each dimension: "inclusion for whom," "inclusion in respect of what," and "inclusion to what degree."

Method

This paper draws on the emergent outcomes of two large studies of the CoF with which the authors have been closely involved. The first is a comparative investigation of large-scale development projects in London, Shanghai, and Johannesburg, conducted collaboratively with University College London, with the CoF as the case study for Johannesburg. An action orientation was added to the research through a partnership with the nongovernmental organization, Planact, which engaged intensely with communities along the Corridors (see Planact 2018). The second was a study focused only on Johannesburg, exploring dynamics of change in four precincts along the Corridors.[1] Collectively, the studies involved, 75 semi-structured interviews with local government officials, community leaders and property developers, initially identified through the researchers' familiarity with the context, and then through a snowballing technique. The second study included an administered survey of 1,078 residents, businesses, and visitors within the four precincts using random sampling techniques, which explored both socioeconomic conditions and trends,

Table 1. Corridors of Freedom, Survey Sample Distribution.

Node	Residents	Businesses	Other users	Total
Westbury/Coronationville/Joe Slovo	207	52	51	310
Park Station	95	75	100	270
Louis Botha (Osborn to Garden Roads)	149	89	50	288
Marlboro South	92	63	55	210
Total	543	279	256	1,078

Source: Outsourced Insight (2017).

as well as perceptions of the CoF.[2] In each precinct, we interviewed 300 respondents, but in each case the configuration was slightly different with greater emphasis placed on the prevailing activities in each node (see Table 1). This paper draws on this corpus of information for its facts, analysis, and insight, although it does not directly use all the material which deals expansively with the multiple dimensions of the politics, planning, governance, and implementation of the CoF. Specifically, the paper uses the economic data from the residents, income, mobility, and transport data, as well as data which address perceptions and social attitudes.

Narrating the Corridors

In 2011, Tau was elected by the ruling African National Congress (ANC) as Executive Mayor of Johannesburg. Tau was a young and ambitious Mayor who had cut his political teeth in oppositional youth politics in Soweto during the turmoil of the 1980s and had served variously in the 2000s as Johannesburg's political head of development planning and of finance. He was now the executive head of a single-tier metropolitan administration governing an agglomeration of around five million people within a wider city region of approximately fourteen million. Johannesburg is the cultural and economic hub of South Africa, attracting migrants from across the continent and beyond, but it also confronts extreme challenges of social inequality (a Gini coefficient of .65), spatial division, and crime (CoJ 2017) (Figure 1).

The Corridors did not form part of the ANC's election campaign but, as mayor, Tau sought a defining strategic agenda. In May 2013, he announced the project that "will forever change the urban structure of Johannesburg and eradicate the legacy of Apartheid spatial planning" (CoJ 2013, 5). The corridors were motivated mainly in terms of spatial reconfiguration, but also made reference to social mixing, affordable housing options, and low carbon futures (CoJ n.d.). The benefit was to emanate from the tenfold increase in densities along the corridors (from the Johannesburg average of around 4,000 persons/km^2 to about 42,000 persons/km^2) that would bring people from the spatial margins of the city into the core and would physically link parts of the city historically divided by race-based planning

In fact, the CoF was not a new concept as ideas of corridor-type development to restructure South Africa's divided cities had circulated since the late 1980s, when the end of apartheid came into sight (Harrison, Todes, and Watson 2008). In the 2000s, this home-grown version of "activity corridors" interacted with internationally circulating ideas of TOD with major investments in public transport infrastructure in the run-up to the 2010 FIFA World Cup providing the transport spine around which TOD could develop (Marrian 2001; Pienaar, Krynauw, and Perold 2005).

In Johannesburg, the major investment in public transport was the 80-km rapid rail network (the Gautrain) linking Johannesburg, Pretoria, and O.R. Tambo International Airport, and a Bus Rapid Transit (BRT) system modeled on Bogota's famed *Transmilenio* (Wood 2015). Real estate developers quickly identified the opportunities for densification around the Gautrain stations but as will be seen, the BRT, with its mainly low-income ridership, held less attraction and would require concerted effort from the city administration to catalyze TOD-type development.

By 2006, there were plans and incentives for densification and mixed-use development along the BRT network, and the overall Spatial Development Framework (SDF) for the city was framed around TOD. What changed in 2013 was that a strategy led by technocrats in the planning department was now championed politically by a charismatic and articulate mayor and had the profile of a defining city agenda. The idea of CoF resonated with the history of Johannesburg and South Africa, with the concept of "freedom" in the CoF meaning "increased freedom of movement as well as economic freedom" (CoJ n.d., 1).

While the political and technical language in city government was now synergized, there was the substantial task of giving flesh to a concept and persuading multiple actors to lend their active support. In the medium term, the CoF was to consist of three segments: Empire-Perth between Soweto and the inner city; Louis Botha between the inner city and Alexandra township; and Turffontein, a working-class suburb south of the Central Business District (CBD) (Figure 2). The first two are structured around BRT operations and physically integrate historically white and black areas. The third was something of an anomaly with its designation reflecting local political considerations. In the longer term, the CoF was planned to link to more distant and marginalized townships in the far north and south of the city.

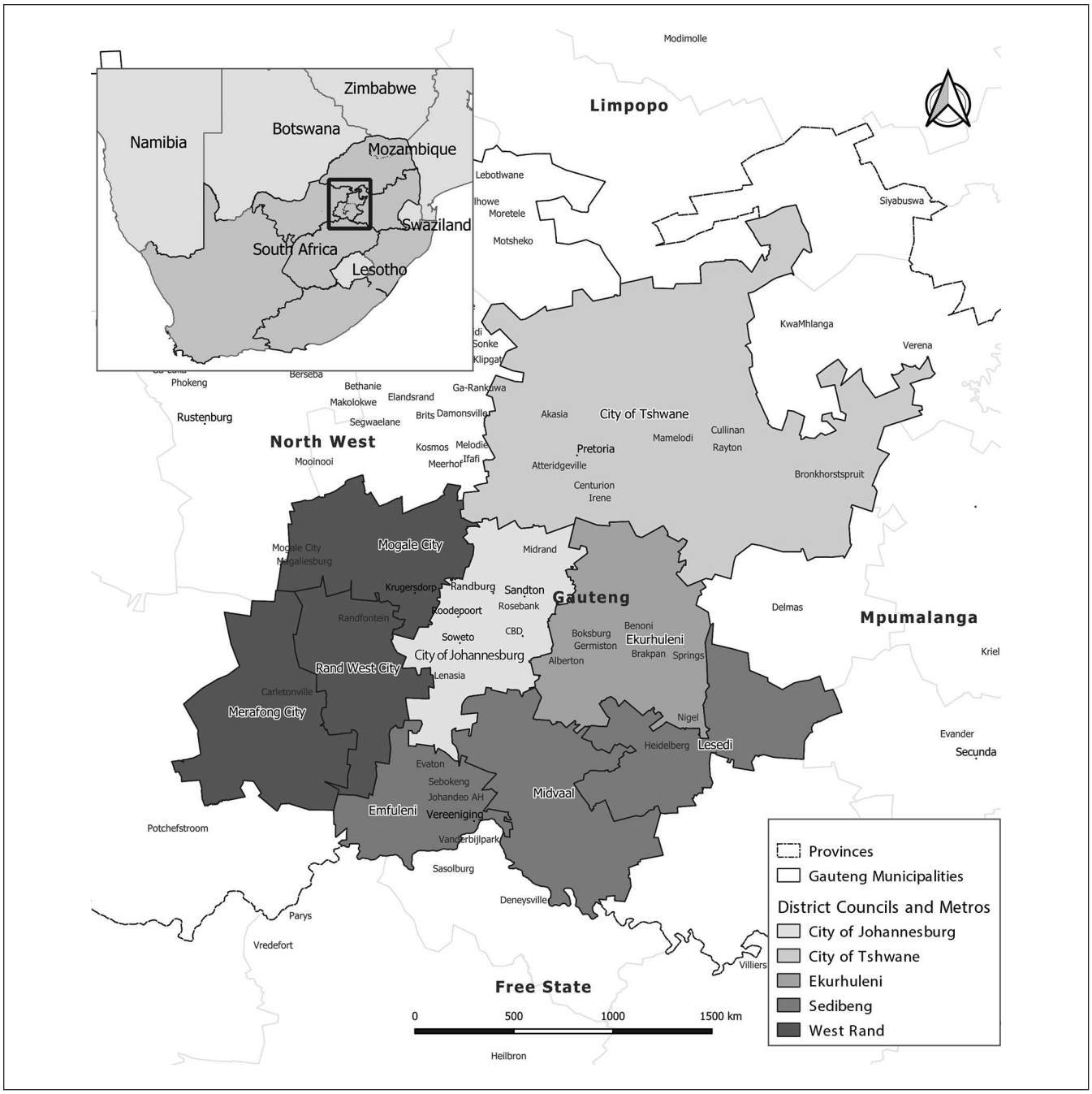


Figure 1. Context map of Johannesburg with South Africa and Gauteng province (Gauteng City-Region Observatory 2010).

The CoF came as an announcement by the Mayor and did not emerge through a participatory process. The announcement met immediate resistance from middle-class communities fearful of change in their low-density suburbs, and pressure on the City to engage led to the commencement of a participatory process in October 2013. Compromises were made, with proposed densities, for example, being reduced.

Detailed frameworks were prepared for the three corridors and the resources of the City were mobilized for implementation. The initiative was led by a handful of officials in the planning department, although the city-owned Johannesburg Development Agency (JDA) was given a key responsibility for implementation, and other departments and entities were required to align their budgets to the program. The City earmarked an annual capital budget of R1,500 million (or US$120 million) to the corridors for a period of ten years, which accounted for around 15 percent of the City's projected total capital budget, or 30 percent of the budget not allocated to maintenance (Senior Official, pers.

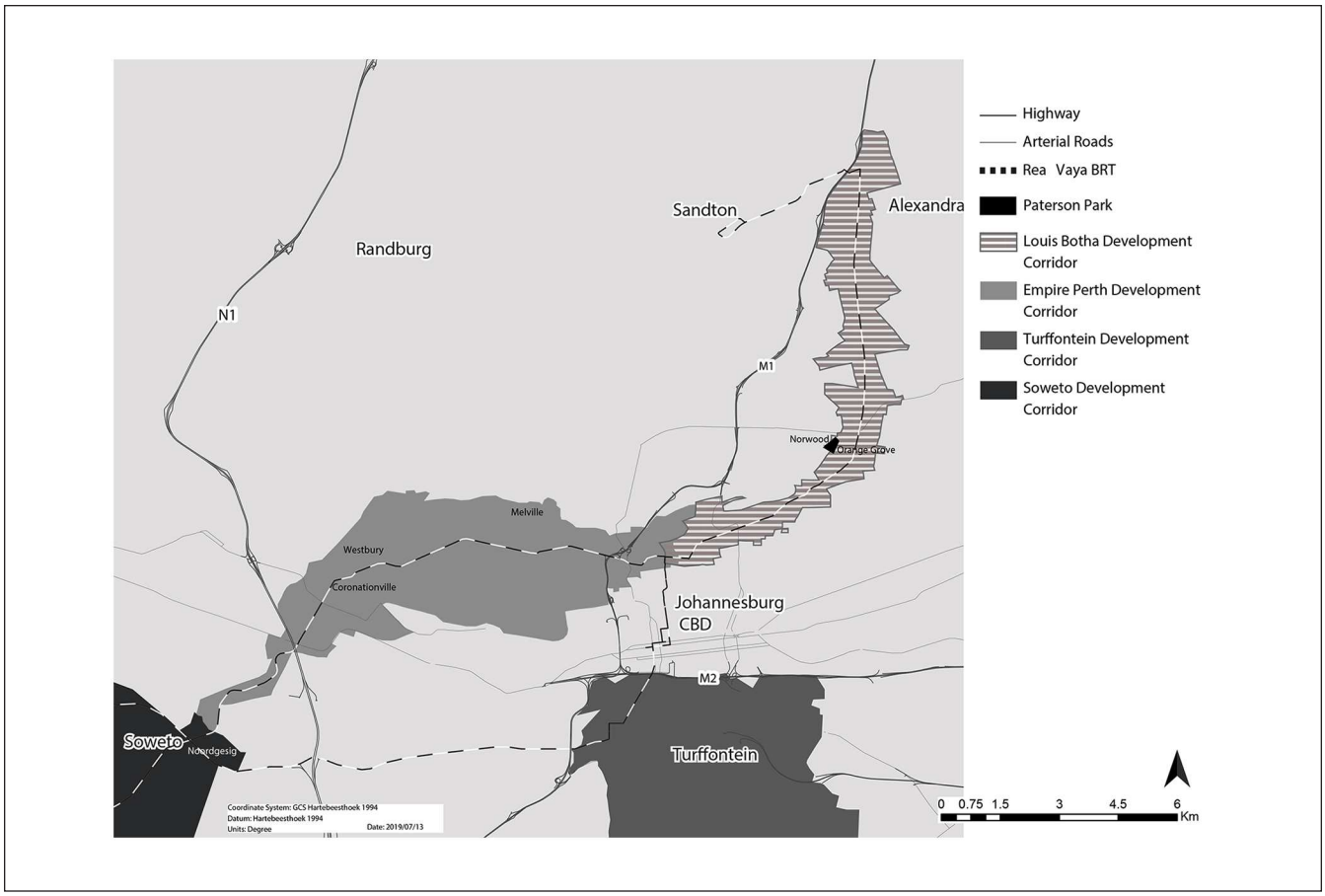


Figure 2. Johannesburg's Corridors of Freedom.

comm. 2016). Since 2014, the City has been installing and upgrading physical infrastructure to provide the capacity for increased densities and upgrading social facilities along the corridors.

While infrastructure was provided by city government, the success of the CoF depended on inducing the private real estate sector into the Corridors and into affordable housing and mixed-use developments. A package of incentives was provided[3] and the JDA engaged closely with developers. Although the overall pattern of private sector investment in the wealthy areas in the north of the city, including within the nodes around the Gautrain stations, was not significantly altered, there was some success in attracting investors in niche markets such as student housing (Todes 2017).

The CoF was intended as a long-term project of incremental change with a fifteen- to twenty-year time horizon and this meant that it was to be implemented across a number of electoral cycles. The August 2016 local government elections came as a major shock to the ANC when it lost control of the Johannesburg Metropolitan Council to a coalition led by the center-right Democratic Alliance (DA).[4] A self-confessed libertarian, Herman Mashaba, was elected as Executive Mayor. The politics are complex as the Mayor depended for political survival on a coalition with left-wing populist party, the Economic Freedom Fighters (EFF).

The future of the CoF was in immediate doubt with Mayor Mashaba failing to mention the initiative in his 2017 State of the City address, and the EFF demanding that the City's capital investment go directly into black African townships and the inner city rather than into corridors which partly traversed historically white suburbs. An EFF councilor declared that the CoF amount to "lipstick on a pig," doing little for the poorest of the poor (cited in Planact 2018, 45). However, the CoF was an internationally recognized program and its closure was politically risky. The CoF remained on the city's books, although the term "Corridors of Freedom" was quietly dropped and replaced by the rather banal "Transit-Oriented Corridors." The Mayor focused on the regeneration of the inner city, rather than on the TOD corridors radiating outward from the inner city, but he has nonetheless indicated some interest to his officials in the potential of the Corridors for packaging real estate investments (Senior Official, pers. comm. 2018). Some form of corridor-type development may therefore continue, although at a rate and scale far less than anticipated, and possibly also with less emphasis on inclusionary aspects.

Nevertheless, the four years of enthusiastic implementation inclusive of 2013 and 2016 does provide indications of emergent outcomes and offers a significant period of insight into the conceptualizations, mechanisms, and challenges of an inclusionary TOD project. We turn now to the extent to which these outcomes point toward inclusionary practice in the implementation of the Corridors.

A Case of Inclusionary TOD in Practice?

The initial inclusionary objectives of the CoF are clear. However, the effect of implementation on patterns of exclusion and inclusion in the city is far less obvious, although there are sufficient data and qualitative information to give some indication of broad trends.

Inclusion is a multidimensional concept and the CoF itself was launched as a spatial intervention intended to also have economic and social impacts. While recognizing that all dimensions are closely interrelated, we start with outlining the impacts on levels of economic inclusion/exclusion, arguably, the dimension that is of greatest significance for a city where the official unemployment rate is nearly 30 percent. We then turn to spatial inclusion, focusing specifically on access to mobility, housing, and public services, before moving to the less tangible dimensions of social inclusion and participation.

Economic Inclusion

Economic inclusion through TOD is hardly addressed in the international literature. There is some recognition that successful TOD may improve job accessibility (Kawabata and Shen 2006; Papa and Bertolini 2015; Tilahun and Fan 2014) and entrepreneurial opportunity through reduction in the cost of logistics, for example (Dwight 2016). However, there are also concerns that TOD may have exclusionary outcomes by displacing existing jobs and bringing in new jobs that are poorly matched to local skills (LeRoy 2013).

Johannesburg has an official unemployment rate of 29.2 percent and an expanded unemployment rate of 31.5 percent[5] (Statistics South Africa 2018), with exclusion from the labor market the consequence of historical processes that have produced a severe mismatch between the demand and supply of skills in different occupational categories (Crankshaw 2017). However, while the CoF was launched with ambitions around economic transformation, the reality is that the leverage the city government has over the metropolitan economy is weak. It even lacks control over education, a function critical to improving access to the labor market.

The question is whether more limited objectives could be achieved through the spatial interventions of the CoF. The city administration did attempt to translate broad objectives for economic inclusion into a more detailed program referred to as a "commercialization strategy" but the process faltered (Consultant, pers. comm. 2017). The economic component of the CoF program thus remains limited to broad references to higher densities and more foot traffic stimulating formal and informal trade and the job opportunities provided during the construction phase of infrastructure and mixed-use development (CoJ n.d., 8).

The economic performance of the corridors may evolve over time as residential densification creates local agglomeration economies, but the experience to date is mixed. The firms along the corridors are mainly an assortment of small formal and informal enterprises, although there are large, formal businesses in places. Using economic data from the areas we surveyed, the stated average monthly profit was only R15,000 (US$1,220) and, on average, firms had fewer than four employees. In total, 43.6 percent of owners reported that their business had done better over the past year than before, with 56.4 percent reporting worse performance. Worryingly, for inclusion, the worst performing were the smallest. However, tantalizingly, it was in neighborhoods where the BRT was in operation where there was some improvement. In Westbury, for example, only 11.5 percent of firms reported deterioration, with new small enterprise clustering around improved social facilities such as clinics.

The prolonged construction phase seems to have had a negative effect on business. In some cases, businesses have been almost completely cut off from their customers, and a few informal hawkers have been relocated to places with less foot traffic. Along the Louis Botha segment of the corridor, the construction of a narrow concrete island—along which a fence was erected for a short time, and configuring certain roads as one-ways—has severely compromised the movement of traffic across the road, with a local business manager lamenting that "it kills our business" (Business Manager, pers. comm. 2017). Again, however, there are exceptions with respondents in the Yeoville Market reporting the positive effect of city investment along the corridors in broadband and signage.

Spatial Inclusion

The CoF was framed primarily to "transform entrenched settlement patterns which have shunted the majority of residents to the outskirts of the City" (CoJ 2013), with spatial inclusion, arguably, its most likely tangible benefit. However, even in relation to "the spatial," there are questions to ask around the intentions and outcomes of programs to achieve inclusion and transformation. TOD is itself a spatial compromise, an alternative to directing state investment only to historically black townships or to radically reconfiguring historically white suburbs to bring the marginalized majority into the heart of the city. By directing investment to the corridors that link historically divided areas, TOD mediates the tension in city government between addressing the needs of its majority low-income black electoral constituency and retaining the cooperation of the still white-dominated middle

Table 2. Transport Modes by Residents of Case Areas.

	Westbury	Park Station	Louis Botha	Marlboro South	Total
Mode of transport used (% of trips)					
Walking	45	64.7	56.2	31.5	49.3
Minibus taxi	28.6	21.6	28.3	50.6	32.3
Private car	5.0	2.4	12.8	9.3	7.4
Rea Vaya (BRT)	8.5	0.6	0.5	4.9	3.6
Train	6.9	0.6	0.5	0.0	2.0
Uber/metered taxi	1.3	7.8	0.9	0.6	2.6
Other bus	3.5	2.4	0.5	1.9	2.0
Delivery truck	1.3	0.0	0.0	1.2	0.6
Cycling	0.0	0.0	0.5	0.0	0.1
Total					100

Note: BRT = Bus Rapid Transit.

class which provides the city with its tax base, but the compromise remains politically uneasy.

Assessing the spatial impacts of an ambitious program for urban spatial transformation after only four years seems premature. Spatial transformation in Johannesburg is immensely complex and constrained. Almost all property in the city is in private hands, the economy is subdued, established communities resist change, there are strong political imperatives to spend the bulk of public money in the townships rather than in the corridors, and private developers are geared to investing in the wealthy northern nodes and edges of the city.

The CoJ's own assessments of spatial change (reported by Pieterse 2017) indicate that private investment remains overwhelmingly focused on the wealthier northern segments of the city, with the corridors attracting only limited niche investment. Spatial transformation is indeed happening in Johannesburg but largely through informal processes, such as backyard and inner-city densification, rather than through the seemingly much slower process of formal corridor-type development. However, the question—which may never be answered given the political upheaval—is whether sustained political and bureaucratic effort over fifteen to twenty years would make a meaningful difference to overall spatial patterns.

While the grand spatial ambitions of the CoF may, at best, be realized in a very partial form, inclusionary intentions may be translated more understandably into the scale of a neighborhood including, for example, improved mobility, better access to public services, and affordable housing.

Improved access to transport is the most obvious benefit of a TOD-linked program, with an international literature emphasizing the extent to which transport systems open access to the city for excluded groups (e.g., Delbosc and Currie 2011; Litman 2015), although some literature suggests that the scheduling of transport services along transit corridors discriminates against low-income workers who rely on piece jobs, working off-peak hours (Cytron 2010).

The founding documents of the CoF emphasized the "freedom of movement" to be achieved through the initiative (CoJ n.d., 10). The reality is more complex in Johannesburg where 85 percent of public transport trips are in minibus taxis, a form of nonsubsidized, privately owned paratransit that extends over one thousand routes (Wray and Gotz 2014). The CoF has been implemented along the few fixed trunk lines of the heavily subsidized BRT system, in a city where spatial complexity seems to require high levels of routing flexibility.

Our 2016 survey of four precincts along the Corridors confirms that walking and minibus taxis are the predominant modes of movement, with the BRT around which the TOD is structured lagging significantly (Table 2).

The low ridership rates is partly because the BRT network was not yet operational in Marlboro South or Louis Botha, but even in the case of Westbury where the BRT has been in place since 2010, minibus taxis remain a far more significant mode of transport. The survey indicated that the minority segment of the population that had shifted from minibus taxis to the BRT were, on average, younger, more male, and of slightly higher income than users of minibus taxis. The BRT seemingly provides advantages for a relatively privileged group within an overall low-income population. When respondents were asked why they did not travel on the BRT, 35 percent indicated that they were unemployed and had nowhere to go each day, while a further 21.6 percent indicated that the BRT was too expensive for them. The transport infrastructure around which the CoF is built arguably makes a very limited contribution to inclusionary mobility in the city, although the contribution should be reassessed once the BRT network is further developed.

Improved access to public services comes, ostensibly, from both better access to mobility for the previously excluded and the provision of new services along the densifying transit corridors. International literature remains empirically thin in relation to this form of access. An exception is a paper by Kaplan, Popoksa, Pratoa, and Cederb

(2014) which explores improvements to access and equity along the axes of Copenhagen's famous Finger Plan structure, concluding that benefits are highly uneven and oriented toward the most densely populated axes which are able to support diverse and high-order services. The extent to which the CoF is improving access to public services requires further empirical investigation. Given the still low usage of the BRT, the presence of the transportation infrastructure may not be making a significant difference but the CoF has included spending on new and upgraded facilities such as clinics, community centers, and public parks, and this may be having an impact in some neighborhoods.

Access to affordable housing is arguably the most commonly discussed spatial dimension of inclusion, with the literature raising a degree of complexity (Kahn 2007; Rayle 2015). There is general recognition in policy of the need to wed transit to affordable housing and there are various mechanisms to extend the stock of affordable housing in TOD, ranging from the use of tax credits to Community Land Trusts (see, for example, Hickey 2013; Salkin and Lavine 2008; Soursourian 2010). However, there is also a literature that warns of the *exclusionary* effects of TOD in the housing market. Jones and Ley (2016, 10), for example, use the case of Vancouver, Canada, to argue that TOD may end up "aggravating class and racial inequalities through its impacts on the housing market." In the global South, Curitiba in Brazil has become famously successful for its corridors of high-rise development along BRT routes, but where low-income housing has remained on the urban periphery, with the corridors attracting high-end development (Klink and Denaldi 2012).

There was a stated intention within the CoF to increase the stock of affordable housing, providing opportunities for residents on the peripheries of the city to come closer to the urban core (COJ 2013). However, the City remained vague on the proposed mix of income group and on the mechanisms to ensure that private sector-led developments would be inclusionary (Charlton 2017).

The main approach to producing affordable housing saw a limited set of direct interventions by City agencies, aimed at leveraging larger scale public investment, as well as the use of incentives to induce real estate developers to enter the affordable market. The most significant direct investment by the City was in a mixed-income development called Paterson Park. However, this development was within middle-income neighborhoods and strenuous resistance from local residents forced the City to decrease the allocated number of low-income units and increase the income bands for the project (Appelbaum 2016).

A further strategy of the City was to instruct the Johannesburg Property Company to purchase strategically placed properties along the Corridors, and then to parcel land for social housing projects, to be implemented by the city, private sector, or through partnerships. Officials in the City administration acknowledge that this intervention has been ad hoc and limited (interviews with officials, 2017). Around 80 residential properties along Louis Botha thoroughfare were purchased but were poorly managed under city administration, with a number being informally occupied and allegations that corrupt officials were illegally collecting rent. Local residents also alleged that a number of residents were "foreign nationals" who were benefiting ahead of South Africans, and in May 2018, there were violent protests along Louis Botha Avenue, with informal occupiers displaced by vigilante groups (*The Star*, 19 March, 2018; Senior Official, pers. comm. 2018).

Nevertheless, the City was able to induce a number of developers into the affordable housing market along the Corridors. By 2017, there were 60 applications for developments approved or pending along the Louis Botha segment of the CoF, with an estimated 4,500 to 5,000 units mainly in the affordable housing segment (JDA Official, pers. comm. 2017). The private sector was also responding with the construction of student accommodation between two large universities along the portion of the Empire-Perth segment of the CoF that has been designated as a knowledge precinct (Harrison 2016).

The CoF seemed to have some effect on the supply of affordable housing, and the prospects for a fifteen- to twenty-year rollout were positive. However, the impact of the CoF was largely on a higher stratum of the urban poor. Social housing in Johannesburg is generally rented out to households earning between R3,500 and R7,500 per month (US$284–US$610) but, with one-half of the city's households earning less than R3,500 (US$284) in total, this range is far beyond the reach of the majority. The new units along the Empire-Perth segment of the CoF are being rented for between R1,500 and R6,000 (US$122–US$488) per month, thus requiring an income of between R4,500 and R18,000 (US$366–US$1,463) per month, putting them well out of reach of Johannesburg's poorest (Charlton 2017; Senior Official, pers. comm. 2017). Rentals of less than R1,000 (US$80) per month are required to make accommodation along the CoF inclusionary for the majority of the population and there are still very few developers who have found business models that would enable them to charge such low rentals.

More positively, there is little evidence of displacement related to gentrification along the CoF, although this may simply be because the Corridors are not (yet) sufficiently attractive to Johannesburg's middle class. However, more subtle forms of displacement may be happening as a result of strengthened urban management in corridor precincts. There have, for example, been evictions of homeless people from parks in the vicinity of the Paterson Park development (Appelbaum 2016). Non-South Africans are especially vulnerable. While Mayor Tau used his 2013 State of the City Address to celebrate Johannesburg's capacity to attract people from all over the world, Mayor Mashaba has taken a hard-line against international immigrants, warning that new accommodation would only be available to South African citizens (Mabaso 2017).

Social Inclusion

What is meant by social inclusion is subject to philosophical and ideological interpretation, with the divide, for example, between the solidarity paradigm of French republicanism, concerned with assimilation, integration, and the construction of shared values. In Anglo-Saxon liberalism, exclusion involves any form of discrimination or restriction denying voluntary association and exchange, but which emphasizes the acceptance of diversity (Rawal 2008). Conceptions of inclusion in postapartheid South Africa vacillate ambiguously around these positions. While there is a discourse around nation-building and social solidarity, there has been no serious attempt to bring about greater degrees of social integration through, for example, implementing an effective inclusionary housing policy.

Internationally, the literature on potential of TOD to bring about meaningful social integration is mixed. There are active attempts in places to design for integration (Thurber, Bohmann, and Heflinger 2018) and reported cases where the quality of interaction between people of different backgrounds has improved because of a shift to public transit and residential densification (Kamruzzaman et al. 2014). Some TOD projects by private developers in the United States do report high levels of success in terms of mixing income, race, and tenure (McCormackbaron.com 2018). But, there are also more cautious accounts referring to the continued resistance of developers to enter the mixed-income market (Waintrub, Greene, and de DiosOrtúzar 2016) and questions over the extent to which social proximity leads to social mixing (Bricocoli and Cucca 2016; Thurber, Bohmann, and Heflinger 2018).

The CoF was launched with the apparent hope that intensification along the corridors would bring together different races and classes into a new social mix: "Rich and poor, black and white living side by side" was listed in the CoF's concept document as one of the "key features" of the initiative (CoJ n.d., 6). However, this aspiration was not matched with a particular instrument to achieve the mix. The City's planning department did attempt to produce an inclusionary housing policy to ensure that a proportion of privately provided units were set aside for poorer households, but the lack of an enabling legal framework at national level made this difficult, as did the resistance from private developers. Finally, in early 2019, an inclusionary housing policy was produced, although watered down following engagements with the real estate and financial sectors.

This initiative, notwithstanding the underlying assumption, was that greater residential density and use of public transport by all races and classes would lead "organically" to a social mixing. In the context of Johannesburg's extreme divisions, and of persistently high levels of interracial mistrust (Wray and Gotz 2014), this remains a questionable assumption. With only 4 percent of Johannesburg's white population using public transport (Wray and Gotz 2014), it is very unlikely that meaningful interracial association will happen on transit systems. In terms of residential mix, greater spatial proximity between races is evolving unevenly across the city. While areas previously reserved for black Africans remain exclusively black, there is greater interracial spatial proximity in previously white middle-class suburbs as middle-class black Africans move into these areas from the townships (Crankshaw 2017). The Corridors may be bringing new residents of different race and class positions into spatial proximity with mainly white middle-class communities, but it is doubtful whether this proximity is leading proportionately to conviviality relations across social lines.[6]

There is also little evidence that the city administration is willing to confront white middle-class interests to achieve greater social mix. In the case of the mixed-income Paterson Park development, city officials backpedaled after middle-class objections (Appelbaum 2016). In one case, at least, the construction of the BRT may have further divided communities. On the northern edge of Soweto, the black African community of Orlando East and the mixed race ("colored") community of Noordgesig have gradually established forms of social interaction, but the newly constructed transit corridor has made physical interaction difficult.

To the extent that social integration has been pursued as an objective, it has referred to race and class only, although many surveyed referenced xenophobia as a major concern in their neighborhoods. Official attitudes toward those of non-South African origin have hardened since the 2016 local government election. Policy has been silent on other dimensions of social inclusion such as gender and sexuality, although attention is being given to programs that incorporate youth.

Participation

Exclusion is arguably best countered through "citizenship and the extension of equal membership and full participation in the community" (Rawal 2008, 168). Yet, most of the literature on TOD remains limited with regard to forms of invited participation in planning processes. In the context of the United States, Rast (2006) points out that much of this participation has a white suburban bias with engagement largely failing to reach inner-city African Americans, Latinos, and other minority groups.

Participation was not one of the stated objectives of the CoF, although Tau in his State of the City Address, 2013, did refer to "a city that listens to its people, and works not just for you but also with you!" (CoJ 2013, 1). There was indeed a view, expressed to us by a senior official, that subjecting the CoF to a full participatory process in the contexts of Johannesburg's highly unequal distribution of power and resources would be counterproductive to the inclusionary and redistributional goals of the initiative. There was also an acknowledgment from officials that this was a flagship project for the City with much at stake politically, and the overriding concern was to produce quick

and tangible results without the uncertainty and delays of negotiated arrangements.

However, once the CoF met opposition from middle-class communities, a participatory process was constructed. From the latter part of 2013, and through 2014, powerful residents associations in middle-class areas engaged with city government around the level and extent of densification and were able to moderate some of the initial proposals (Peens 2015). As the focus shifted to project implementation around 2015, poorer communities became more closely engaged, focusing mainly on employment opportunities during the construction phase and potential benefit from public services. In some cases, these communities were able to significantly delay the implementation of projects that were not promising direct benefit. Along the Louis Botha Corridor, the construction of BRT stations and a clinic was temporarily stopped by protests from a community faction (Planact 2018).

There is a strong community-based critique of the participation process with a widely held view that all the major decisions on the CoF were made by city officials before engaging in participation processes and that there was a clear bias in engagements toward well-resourced communities (Planact 2018). Communities expressed frustration that the lack of authentic engagement meant that city investment was sometimes poorly aligned with what communities actually required. As one respondent at a community meeting put it, "they [the CoJ] put in beach volleyball courts where no one in the community either played or wanted to play the sport but where there was a desperate shortage of soccer fields."

However, despite a fractious, uneven, and inadequate participatory process, engagements involving communities and the city were generative of some positive outcomes. These included dialogue between previously divided communities living along the Corridors[7]; projects that were, in the end, better tailored to community needs; and a reevaluation of participatory approaches and methods within the city administration, with JDA officials using some later CoF community engagement to experiment with a move from consultation to coproduction.

Conclusion

The ambition for the CoF was clearly articulated around creating a more inclusionary city through TOD. However, the extent to which the CoF is inclusionary in practice is infused with ambiguity and uncertainty.

Part of the problem may indeed have come from the initial ambitions of the project. The evocative language of Mayor Tau's announcement in 2013 had a mobilizing effect but it set up expectations that were immensely difficult, perhaps impossible, to realize. A spatial intervention—densification and mixed-use development along a transit corridor—was to achieve both spatial objectives and far-reaching economic and social transformations. In the urgency to offer a compelling response to the persisting inequities of a postapartheid city, the possibilities and limitations of spatial intervention were glossed over.

The other challenge was the politics of the city. Like any long-term program, the CoF must be implemented over multiple political cycles and is subject to the risk of political change. The ultimate fate of the CoF is of course not known as politics remains fluid, but the Johannesburg case does point to a need to ensure program resilience.

The third risk is that the ambitious inclusionary intentions of the program will devolve into a routine form of TOD as it is translated from an ideal into material reality through the arcane workings of a bureaucracy and the self-interested actions of real estate developers and other actors in the urban space. Sustaining the inclusionary focus of a large-scale, long-term development requires both constant vigilance and programmatic attention, including the development of specific instruments for inclusionary development.

There is no clear-cut answer to whether, after five years, the CoF is an inclusionary program. Thus far, it is not fulfilling the ambition to transform the city at scale but it was always intended as a long-term incremental process, and it is impossible to know what the long-term outcome will be if the program were implemented with sustained political and bureaucratic will for two or so decades. We have, however, tried to explore what is tangible at the more limited scale of local neighborhoods. The economic impacts of the CoF may come as densification produces agglomeration economies, but at present it is limited mainly to construction jobs and logistical improvements for small entrepreneurs, contradicted in places by the disruptions of the construction phase. In terms of social inclusion, the CoF may be gradually bringing residents of different race and class backgrounds into a greater physical proximity, but there is little to suggest that this is (yet) translating meaningfully into social interaction. The CoF was not intended as a participatory program but community resistance did compel the city administration to engage in various ways with communities along the Corridors. The deficiencies of the participation process are many, but the act of engagement has produced unexpected outcomes, some of which are clearly positive.

As a spatial intervention, we may anticipate that the dominant outcomes for inclusion are likely to be greater spatial access for the previously excluded. However, here too there is complexity. The CoF is mainly built around a BRT system which remains a very limited mode of transport relative to the minibus taxi which is well suited to the spatial fragmentation and complexity of Johannesburg. Improved access to public services may be happening incrementally for some communities as CoF intervention includes improvements in facilities. The most significant intended and actual contribution of the CoF is, however, affordable housing and the success of the CoF. Here, there are indications that the CoF was able to attract significant planned investments in affordable housing, with the prospect of a snowballing effect if efforts to induce developers could be sustained. The challenge,

however, is that private real estate development does not reach the affordability levels of the majority of the urban poor in Johannesburg, with benefits accruing to an *upper lower* segment of the market.

The CoF is clearly not the panacea to the ills of Johannesburg. It is "not everything but it may be something," that is, if it is sustained for a period long enough for it to gain adequate momentum. We could dismiss the Corridors as "lipstick on a pig" or we could accept that the complex and multifaceted challenges of the CoJ require multiple interventions across a range of dimensions over an extended period and that the sustained implementation of CoF has the potential to make a valuable, albeit partial, contribution. The problem of the CoF may be that too much rested on it.

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Notes

1. The precincts are as follows: Park Station, a high-density precinct with a large migrant population in the inner city; Westbury, with a historically working-class mixed-race community but also with a large informal settlement; Orange Grove, a highly diverse area ranging from low-income transient immigrant populations to mainly white, middle-class areas; and Marlboro South, where old industrial buildings have been informally appropriated by a very poor community.
2. The authors, together with our research partners, the City of Johannesburg and the French Development Agency designed, commissioned, monitored, and quality-controlled the survey, which was then undertaken by a professional survey company. The authors analyzed the raw data and produced a set of reports that, together with a full discussion of the method, can be found at: http://issuu.com/sacpwits/docs/9_economic_analysis?e=30630457/51773186
3. Incentives included property tax rebates, faster approval times, additional bulk and density rights, and, most recently, proactive rezoning, given preapproved rights to potential developers.
4. The loss of the Johannesburg was a reflection of the widespread dissatisfaction with the ANC at the national level and most probably had little to do with the performance of the Mayor. It should also be noted that Mayors in South Africa are not elected directly.
5. Official unemployment measures those who are unemployed and actively seeking worked, while the expanded definition includes discouraged work seekers.
6. Detailed ethnographic work is required to confirm patterns of social interaction.
7. This was facilitated by Planact and formed the action-oriented component of the internationally comparative research process undertaken by UCL and Wits.

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