



Growth Through Inclusion in South Africa

Chapter 3: Spatial Exclusion as a Constraint to Growth

A Report by The Growth Lab
at Harvard University

Ricardo Hausmann, Tim O'Brien, Andrés Fortunato, Alexia Lochmann,
Kishan Shah, Lucila Venturi, Sheyla Enciso-Valdivia (LSE), Ekaterina
Vashkinskaya (LSE), Ketan Ahuja, Bailey Klinger, Federico Sturzenegger,
and Marcelo Tokman

November 15, 2023

Acknowledgments

This report is the result of a two-year research journey in South Africa that would not have been possible without the involvement and contributions of many individuals and organizations, who we thank for their time, wisdom, and dedication to their missions. Our research has benefited most from disagreement when supported by evidence, and we hope that this report brings evidence even in cases where collaborators may disagree with conclusions.

First and foremost, we would like to express our sincere gratitude to the teams of the National Treasury, the Presidency of South Africa, the South African Reserve Bank, the Department of Trade, Industry and Competition, the Department of Human Settlements, the Industrial Development Corporation, and other departments of the South African Government for their persistent support in this project, insights, and expertise. We also thank the National Treasury's Data Lab team for their valuable work and assistance. We also extend our appreciation to the various policymakers at sub-national government levels who lent their time and knowledge. We thank the Government of the Western Cape, the City of Cape Town, the municipal management team of the City of George, the City of Polokwane, and the Municipality of Makhado.

We extend our great appreciation to our colleagues at the Centre for Development and Enterprise. Their commitment and support have been indispensable to this endeavor, both in our analytical processes as well as providing invaluable connections with South African society, policymakers, industry, and academia. We thank Ann Bernstein and the CDE Board, Anthony Altbeker, Stefan Schirmer, Peter Delius, William Beinart, Rehan Visser, and Sibongile Nkomana. Furthermore, we are deeply thankful to all stakeholders who have provided rich feedback, questions, and continued engagement on these research topics. We thank our academic colleagues across the globe who contributed to our understanding, including Anthony Black, Lawrence Edwards, Martin Wittenberg, Nicoli Natrass, Jeremy Seekings, Ivan Turok, Justin Barnes, Johann Kirsten, Wandile Sihlobo, Haroon Bhorat, Edward Glaeser, Alain Bertaud, Robert Lawrence, Celestin Monga, and all others who have contributed to this project through their reviews and suggestions.

We further thank the many organizations who we have had the fortune to interact with and learn from over the course of this project including the Centre for Affordable Housing Finance in Africa, Divercity Group, Bulungula Incubator, Mdukatshani Rural Development Programme, Vumelana Advisory Fund, Matsila Community Development Trust, Green Cape, Bushveld Minerals and Bushveld Energy, Chem Energy SA, Anglo American Platinum, Flambard Capital, Arcelor Mittal South Africa, HyPlat, and Sasol.

We thank members of the Growth Lab team who contributed vital research during this project including Patricio Goldstein, Frank Muci, Nidhi Rao, Jonathan Malagón, Iván Ordoñez, and Martin Rossi. Lastly, we thank the Association for Savings and Investment South Africa (ASISA)

and the Banking Association South Africa (BASA), whose generous support for this project enabled us to spend two years conducting independent research to arrive at these findings.

About the Growth Lab

The Growth Lab is a research program at Harvard University. With its multidisciplinary team of roughly 50 staff, fellows, and faculty led by Professor Ricardo Hausmann, the Growth Lab pushes the frontiers of economic growth and development policy research. The Growth Lab advances academic research on the nature of economic growth and conducts place-based engagements that aim to understand context-specific growth processes, help address key constraints, and identify promising growth opportunities. Through its research and teaching activities, the Growth Lab has become a global thought leader offering breakthrough ideas, methods, and tools that help practitioners, policymakers, and scholars understand how to accelerate economic growth and expand opportunity across the world. Consistent with the mission of the Harvard Kennedy School of Government, in which the program is housed, the Growth Lab works to expand capabilities for improved economic policymaking such that more people and societies can enjoy higher levels of wellbeing through stronger, more sustainable, and more inclusive economic growth processes.

Growth Lab applied projects utilize a variety of tools from economics and other disciplines with a focus on understanding place-specific growth challenges and enabling learning-by-doing to address these challenges locally. Key frameworks developed at the Growth Lab and applied within projects include Growth Diagnostics and Economic Complexity. Growth Diagnostics is a methodology that identifies the most binding constraints to better growth outcomes, which informs and allows policymakers to take highly impactful actions. Economic Complexity is a growing field of research that leverages network science and machine learning to understand what economic activities a given country or region could expand into next, based on what it currently does. Growth Lab applied projects aim not only to understand constraints and opportunities in specific places, but also to empower local stakeholders in real time and *in situ* to address constraints and seize economic opportunities through training, capacity building, and the development of practical, place-based tools. All applied Growth Lab projects aim to generate publicly available research of relevance to the local community as well as frameworks, tools, teaching resources and learning experiences that strengthen the HKS community.

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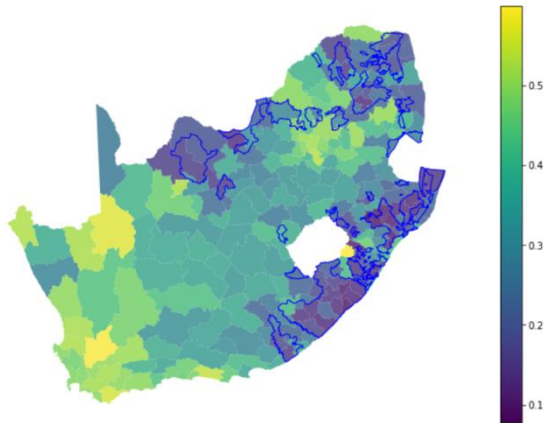
3 Spatial Exclusion as a Constraint to Growth

3.1 Executive Summary

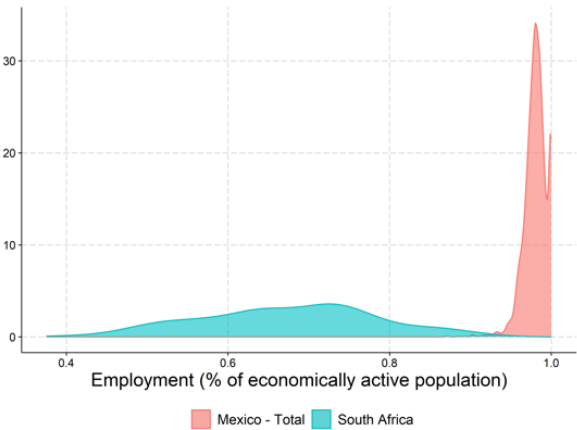
South Africa is exceptional in its spatial patterns of economic inclusion. As discussed in Chapter 1 of this report, South Africa faces some of the world’s highest rates of inequality and unemployment, which vary greatly across geographic space. Municipalities are highly unequal in their employment rates. For example, Witzenberg in the Western Cape had an employment rate of 60 percent in 2011, comparable to an advanced economy, whereas Msinga in KwaZulu-Natal had employment rates as low as 9 percent. Figure 3.1, Panel A shows that low employment rates largely overlap with the former homelands. Despite three decades of explicit efforts to reverse this spatial exclusion, post-apartheid policies have done little to address spatial inequality of job opportunities.¹ Whereas regional divides are not uncommon along the path of economic development (World Bank, 2008), the extent to which South Africa is unequal in space is unique. When compared to Mexico, a country with a similar level of GDP per capita, we observe that South Africa’s employment rates vary enormously (Figure 3.1, Panel B). Furthermore, the highest employment municipalities in South Africa tend to have lower employment rates than the lowest employment municipalities in Mexico.

FIGURE 3.1: EMPLOYMENT PATTERNS IN SOUTH AFRICA AND MEXICO

Panel A: Employment Rates across Municipalities in South Africa, 2011



Panel B: Distribution of Employment Rates across Municipalities in Mexico and South Africa, 2011

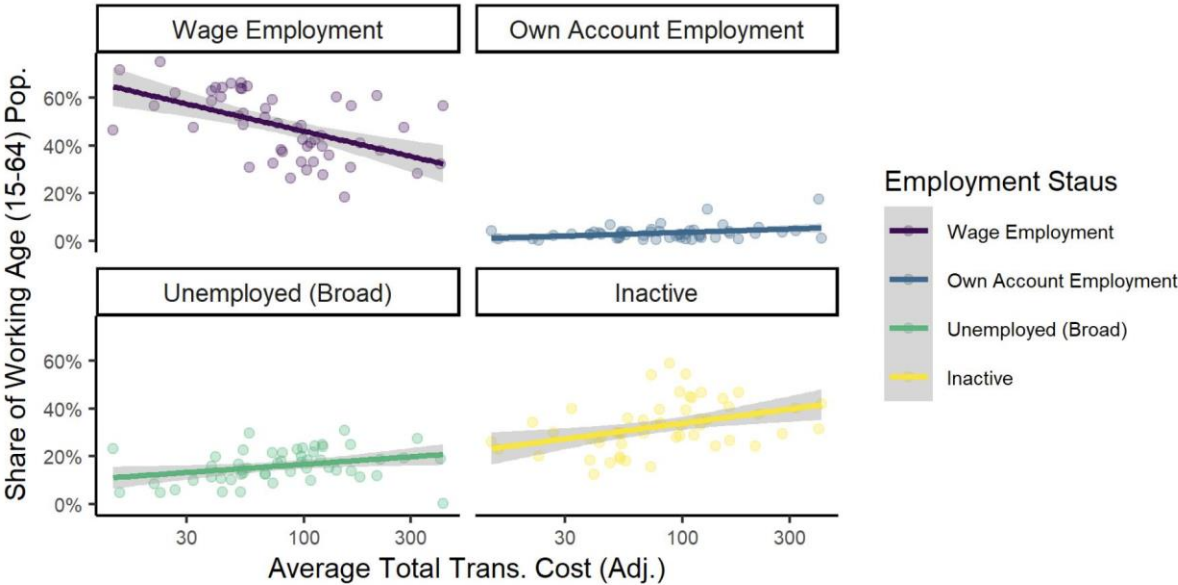


Source: Own elaboration based on the South African National Census, 2011 and Instituto Nacional de Estadística y Geografía.

¹ See, among others, Lochmann (2022), World Bank (2008) and Chatterjee *et al.* (2022).

South Africa’s unique labor market structure can be explained in large part by issues of transportation costs. When we further compare Mexico with South Africa, both countries look relatively similar in their formal employment rates, but there are huge differences in their informal employment rates and consequently in their rates of unemployment (Shah, 2022). Therefore, a key puzzle of South Africa is why people end up unemployed in South Africa rather than in informal employment as they do in other developing countries. Shah (2022) and Shah and Sturzenegger (2022) explore a large variety of barriers to both formal employment and informal employment and find that high transport costs (direct costs and time costs) create a wedge in the South African labor market that reduces employment. This is an especially salient feature for major and secondary cities. Cities are, at their essence, labor markets, but high transport costs undermine efficient cities. Figure 3.2 shows that places with higher total transport costs (including the opportunity cost of time spent in transit) tend to have lower-wage employment and higher rates of inactivity. Own-account employment increases only very slightly with transport costs in comparison.

FIGURE 3.2: LABOR MARKET INDICATORS VS. TOTAL TRANSPORT COSTS BY DISTRICT MUNICIPALITY



Source: Shah and Sturzenegger (2022) using the 2017 National Income Dynamics Study and 2020 National Household Travel Survey.

We find that South Africa’s high unemployment rates and low informality rates are a direct consequence of its exceptional spatial structure. Transport costs are highly regressive and such high costs for lower-income level individuals can effectively wipe away any

take-home pay. For the lowest quintile of incomes, we find that direct transport costs amount to more than a third of wage income for workers on average. The result is even more striking when for total transport costs, which amount to over 80% of income for the lowest income workers and more than 50% of income for all but the highest quintile of incomes. Under these exceptionally high costs of getting to work, the logical decision of workers is therefore to remain out of the workforce. Access to a car makes transport costs a much lesser constraint for higher-income households, but roughly two-thirds of households do not have a car (Stats SA), let alone a reliable car. Meanwhile, the extreme population dispersion across South African urban centers makes it expensive to implement most types of public transport in cities, since public transport systems (like Bus Rapid Transit systems) are designed to connect higher-density areas. It also undermines the effectiveness of bicycles and motorcycles as a means of getting to work. As a consequence, city labor markets are made inefficient by spatially excluding workers from opportunities. This creates significant costs for businesses, which must pay higher wages to attract workers than they would in denser labor markets to compensate for the cost of transport.

Housing in desirable locations is prohibitively expensive while most affordable housing is in the periphery. This chapter explores what drives this extreme spatial organization of urban areas. The root of the problem is with the housing policy and housing markets, which have an overwhelming impact on defining where housing is built and how dense housing can be built. Although South Africa's exclusionary urban structures have a history dating back to apartheid and before, post-apartheid housing policies explain the continuation of spatial exclusion of cities today, including the continuation of spatial exclusion in growing secondary cities. Reasons beyond apartheid itself must explain the fact that South Africa continues to see low housing density in emerging cities both outside of and within former homeland areas. Post-apartheid housing policies have aimed to deliver free or highly subsidized housing combined with tight regulations that prohibit diverse and dense housing. This has naturally pushed housing to the periphery of cities, leading to long travel distances and high total costs of transportation. Many individuals respond to the lack of job opportunities reachable from where they live by choosing to live in informal settlements closer to the city, even though the size of these houses is much smaller, and housing is generally of much lower quality.

Low-density housing settlements also lower the profitability and therefore the scale of potential informal activities. South Africa's very high unemployment is in part a consequence of its very low informality. We find that the spatial structures of cities also go a long way to explain South Africa's unusually low level of informal work – even after accounting for mismeasurement and surveying challenges. The reason for this is that whereas many informal business activities in other countries are centered around the home, low-density and disconnected housing limits the foot traffic around people's homes. This limits the market size for home-based businesses in many areas of the country. In the areas where densities are high, such as in denser townships of Alexandra (in the Johannesburg metro area) or Dunoon (in the Cape Town metro area), an informal sector is much more present. Moreover, when housing is located very far from the city center, where foot traffic is higher, this disincentivizes individuals from commuting to denser areas of the city for informal work. This pattern is common in South African cities but may be less pronounced in cities within former homelands (e.g., Mthatha) where housing is sprawling but where distances between population centers are not as far as in established metro areas (e.g., Johannesburg).

Forces of spatial exclusion extend far beyond cities in South Africa. South Africa faces a particular pattern of low rural opportunity concentrated across former homeland areas.

South Africa's rural areas are not universally poor by any stretch of the imagination. Many rural areas of the country support employment rates at or above that found in cities. But there are highly notable geographic exceptions to this pattern. Employment rates in rural areas of former homelands, on average, are roughly half of what they are in all other parts of the country, including in urban areas of former homelands. This is not explained by any observable features of the populations who live there (Lochmann, 2022), and low wage levels are not well explained based on income levels of surrounding areas as they are for the rest of the country (Mudiriza and Lawrence, 2021). Since individuals who leave former homelands fare equally well in the labor market as anyone else (Lochmann, 2022), this reflects a place-based problem affecting these areas where roughly 30% of the population continues to live.

This section explores why South Africa faces such striking patterns of spatial exclusion, both across the country and within cities, and identifies solutions. We find distinct drivers of these two types of exclusion. Within cities, housing, zoning, and urban development policies are at the root of spatial exclusion and cause a repeated pattern of low-density housing being

built in disconnected areas rather than high-density housing in the core of cities. Therefore, we recommend changes in housing market policies – especially zoning and regulations – and in the structure of budgetary spending on city infrastructure – especially through budget mechanisms on human settlements. Ultimately, South Africa could reverse the pattern of spatial exclusion of cities and enable organic growth of higher-density cities by relaxing restrictions on denser housing, channeling more fiscal resources toward demand-side housing instruments that enable households to choose where to live and ensuring that infrastructure spending does not *de facto* incentivize the building out of cities at the expense of building up. This shift would be strengthened by a coordinated national policy shift, but there are also substantial opportunities for local governments to lead and jumpstart changes in their urban structure through strategic uses of urban land.

Extreme spatial exclusion of rural former homelands comes less from active policies (unlike urban spatial exclusion) and more from a lack of physical connectivity and connections in knowhow. We find that although many infrastructure gaps have narrowed between homeland areas and the rest of the country, there remain critical shortfalls in basic connecting infrastructure, especially paved roads. This is the binding constraint for some of South Africa’s most rural and disconnected communities. The underlying causes of these gaps were discussed in the previous chapter, along with recommendations for strengthening state capacity in relevant ways. However, we also find that connecting via physical infrastructure is not enough to fully close the gap in employment outcomes between homeland areas and non-homeland areas. Once connected physically, economies of rural former homelands do not automatically connect to surrounding productive ecosystems and discover new comparative advantages, even if these are established in very nearby communities.

We find that one approach that has been successful and which can be built upon is partnerships between established commercial entities and communities within the rural former homelands. We find that there are examples of success in agriculture through diverse organizational structures and broad similarities to South Africa’s successful franchising sector (Klinger, 2022; Klinger *et al.*, 2023). Success cases are limited, however, and face large challenges in building trust, overcoming information asymmetries, achieving technology transfer, and managing risk – especially climate risk. At the same time, limited success shows that committed and well-structured partnerships can work to bridge knowhow, even in

situations of communal land ownership and traditional governance. For more of these partnerships to take place, there needs to be a thicker market for businesses and communities to find one another and a scale-up of tools for structuring partnerships based on success cases – like what exists in the franchising sector. We find that South Africa has several “agents of change” that currently support the matching and building of such partnerships, including partnership advisors and local NGOs. We also find that, in the best cases, communities themselves can seek out such opportunities through their local trusts or enterprises. There should be an important role for the government to play in supplying public resources and initiatives that help to create a larger market for such partnerships, including through leveraging the public university network.

This chapter argues that addressing the collapse of state capacity discussed in the previous chapter is only one necessary step toward growth through inclusion. For a recovery of growth to be enhanced by the inclusion of more people, actions to reverse historic drivers of exclusion must also take place. The path to spatial inclusion in South Africa must include housing policy change and urban planning and spending changes that would “bring people to jobs”. This would increase the ability of cities, including secondary cities, to absorb more job seekers and, to some extent, lower the pressure on rural unemployment. Meanwhile, there is also a need for a focus on connecting infrastructure and bridging knowhow to “bring jobs to people” in the country’s most struggling areas. The next section discusses the challenge of inclusive cities, and the following section discusses the challenge of bridging knowhow.

3.2 Building Inclusive Cities: Bringing people to jobs

The core function of a city is that of a market – a market for products, labor, ideas, innovation entrepreneurship, partnerships, and more. Cities are places where people choose to live to be near other people. Urban economics focuses on the role of “agglomeration economies”, where firms, people, and economic activities cluster together in a particular geographical area. Through agglomeration, cities can support highly diversified, productive, and high-income economies as businesses have access to a large pool of differentiated workers, access to suppliers, and access to markets. But to achieve agglomeration economies, cities must be physically connected through transportation infrastructure that allows people to interact, especially for workers to get to work. Efficient cities tend to have high density in the

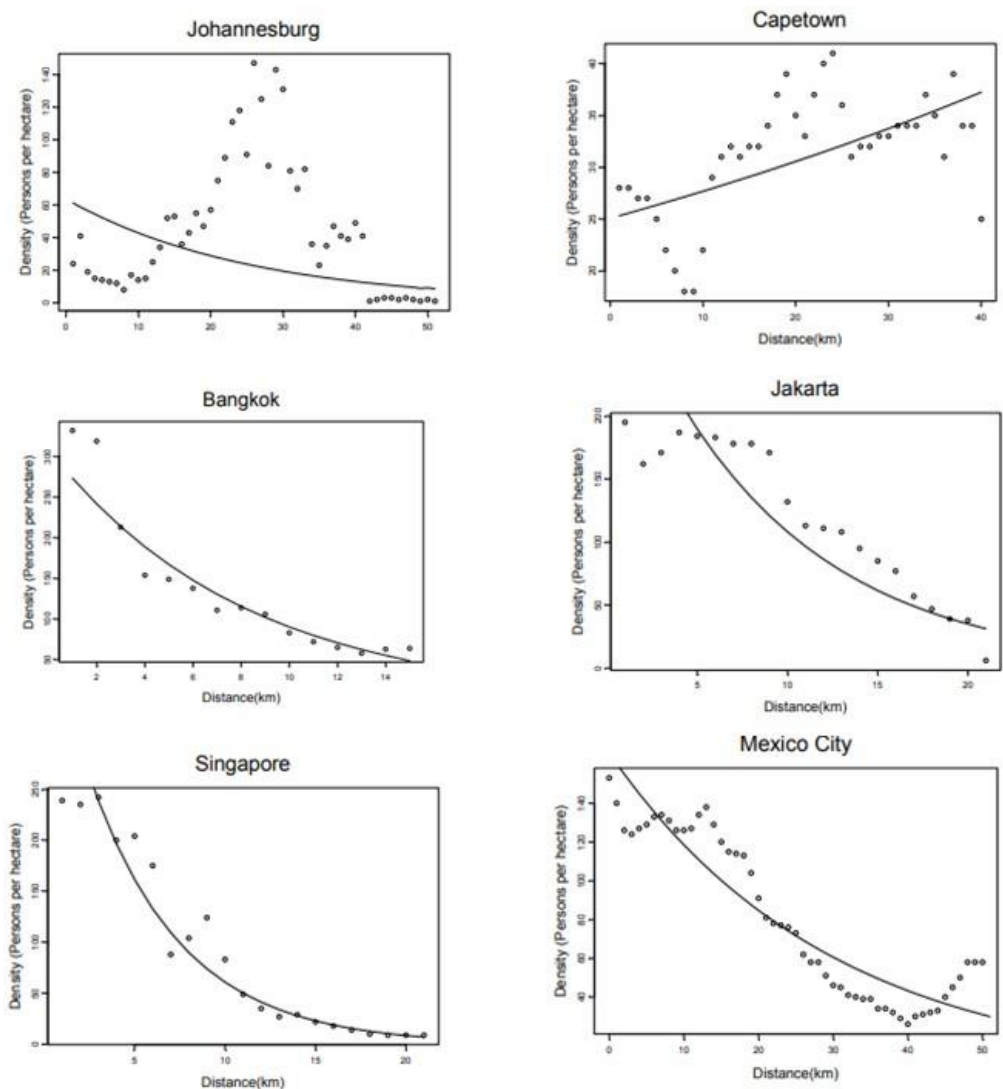
city core or multiple city cores, with high land prices, and lower density with lower land prices as one moves outward from the city core (Bertaud, 2018). This is the natural outcome of businesses and firms bidding up land prices for the greatest connectivity, which then supports the construction of dense build-up and housing in small units. As cities expand outward, individuals and businesses trade-off space for connectivity. For cities to continue to benefit from agglomeration as they grow outward, urban infrastructure must allow people to travel efficiently across the city.

South Africa's largest metros diverge from spatial patterns of efficient cities. As shown in Figure 3.3, Johannesburg and Cape Town are distinctively different from most global cities in the distribution of their population across space. Each city lacks a traditional city core and declining population density as one moves away from that core. This pattern has been attributed to apartheid planning. However, this explanation must be critically assessed by looking at more recent indications of urban density and spatial patterns of emerging cities that have not been as subject to apartheid-era planning. More recent data tends to show a recurring pattern for South African metro areas. Figure 3.4 shows the relationship between population density and distance from the city center for eThekweni and Buffalo City – in both 1-dimensional and 2-dimensional space. These two urban areas reflect a common pattern across South African cities, which tend to lack a dense urban core and instead have largely disconnected and dispersed populations. Later in this chapter, we will explore additional examples.

South African cities are growing horizontally, but people continue to be attracted to more connected areas. In growing cities, market pressure for housing densification is expressed either vertically (by building up) or horizontally (by building out). If densification is expressed vertically, we would observe a *decreasing* built-up density gradient with increasing distance from the central business district (CBD) in the graphs above. Expressing densification vertically means enabling developers to build higher-rise mixed-use buildings. Meanwhile, expressing it horizontally, as we tend to see in South Africa, implies urban sprawl. However, this does not mean that people choose to live far from the city center by choice. Instead, South African cities have significant infill squatting and growing informal areas as people choose to live in more connected areas. Furthermore, if given the choice, many South Africans express to prefer better location and shared amenities over single-family homes, and rental over ownership. Backyarding is a signal that many people who are given single-family homes on

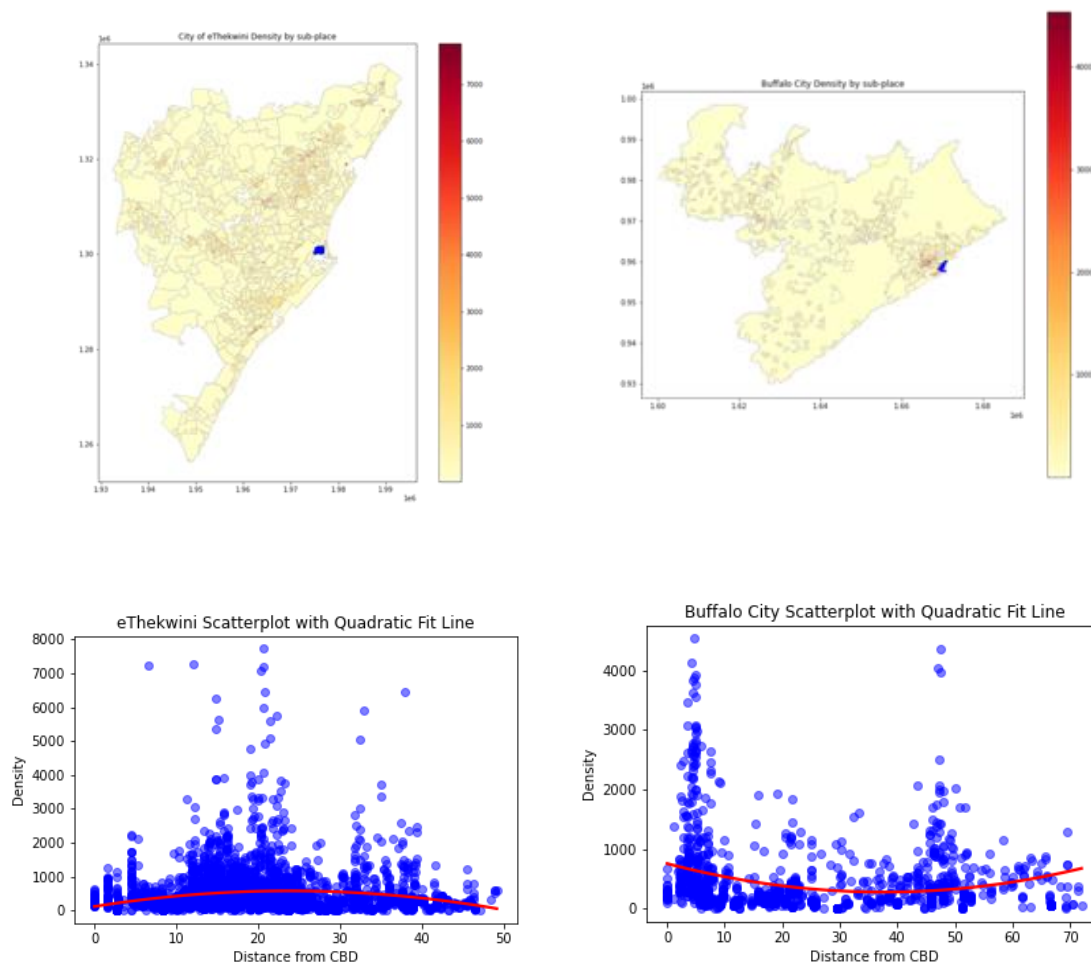
little land plots will informally build up the area, which implies that they prefer additional income over space. Other strong signals come from Maboneng, Johannesburg. Jewel City is an affordable housing complex that provides ample shared amenities and proximity to economic opportunity. The success of the housing complex, which provides affordable rental units for over 1,000 units and is currently over-subscribed, further showcases that, if given the choice, many South Africans would choose location and shared amenities over single-family homes in the disconnected periphery.

FIGURE 3.3: RELATIONSHIP BETWEEN DENSITY AND DISTANCE FROM CENTER FOR SELECT CITIES



Source: Bertaud and Malpezzi, 2003.

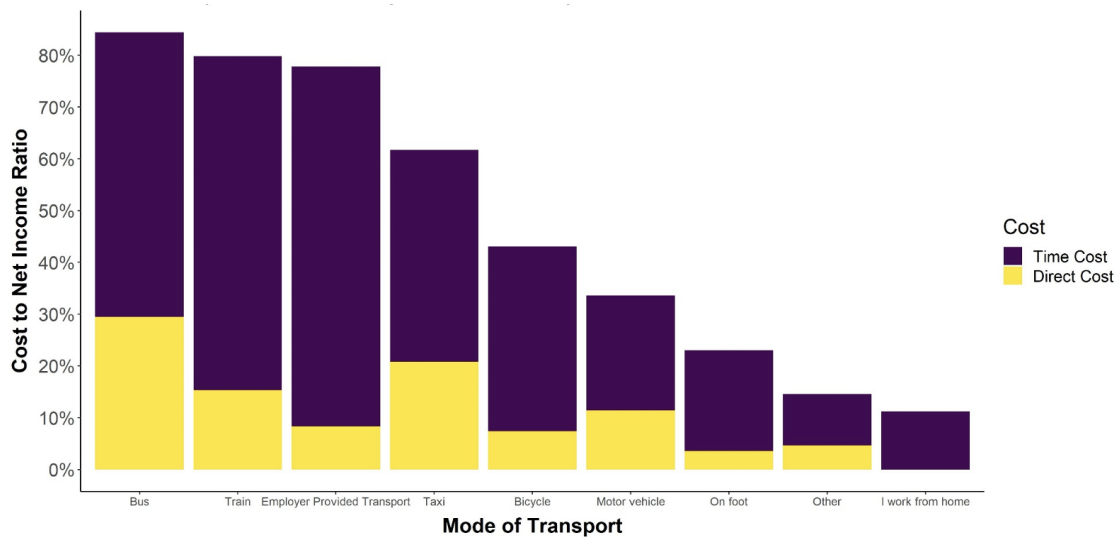
FIGURE 3.4: POPULATION DENSITY PROFILES OF ETHEKWINI AND BUFFALO CITY



Note: Blue colored part in the map is the central business district (CBD).
 Source: Own elaboration based on South African National Census 2011.

As a result of their spatial structure, South African cities suffer from problematically long commute times. An efficient city is good at locating people and jobs close to each other. One “golden rule” is that efficient cities keep maximum commuting times under one hour (each way), regardless of the mode of transport (Bertaud, 2018). In South Africa, we see that commuting is very expensive and it takes a long time. Taking national averages, the total cost of commuting (including time cost) is close to 80% of net income for those who commute by bus, train, and even employer-provided transportation (Figure 3.5). This cost is primarily driven by the cost of the time spent commuting (based on hourly wages). In other words, workers spend a very large portion of their workday commuting.

FIGURE 3.5: RATIO OF COMMUTING COST TO INCOME BY MODE OF TRANSPORT



Source: Shah and Sturzenegger, 2022.

These costs tend to be regressive in a variety of ways. As reflected in Figure 3.5, the cost as a share of income is relatively lower for those with access to a car, but access to a car remains out of reach for most South African at their income levels. Given the large distances in South African cities, network coverage of buses and trains is impossible without very large public subsidies, which South African municipalities cannot afford. This urban structure makes minibuses or taxis the cheapest and most efficient mode of transport. When other forms of public transportation have been built, such as Gautrain in Johannesburg or MyCiTi in Cape Town, ridership is very low, and access is limited to higher-income commuters rather than addressing the very large transport needs of the population. The differences are striking in comparison to other global cities. For example, Cape Town’s BRT system runs a similar length to that of Bogotá, but Cape Town has only about one rider for every 50 in Bogotá (see Box 3.1).

Patterns of spatial exclusion repeat themselves in growing cities. During apartheid, spatial policies generated sprawling and disconnected cities, excluded certain population groups, and prevented cities from densifying naturally through price mechanisms and the build-up of city centers. However, three decades after apartheid, we continue to see these problems repeat themselves in growing secondary cities. Secondary cities are important destinations for internal migrants and drivers of inclusive growth. According to a report from the South African Cities Network (SACN), secondary cities contribute approximately 15% of the national GDP. These cities tend to have a more diverse economic base than rural areas. Between 2008 and

2018, secondary cities in South Africa contributed to around 23% of national employment growth (South African Cities Network, 2021a). These cities have different growth drivers (Figure 3.6), but they share one thing in common. They tend to recreate patterns of spatial exclusion.

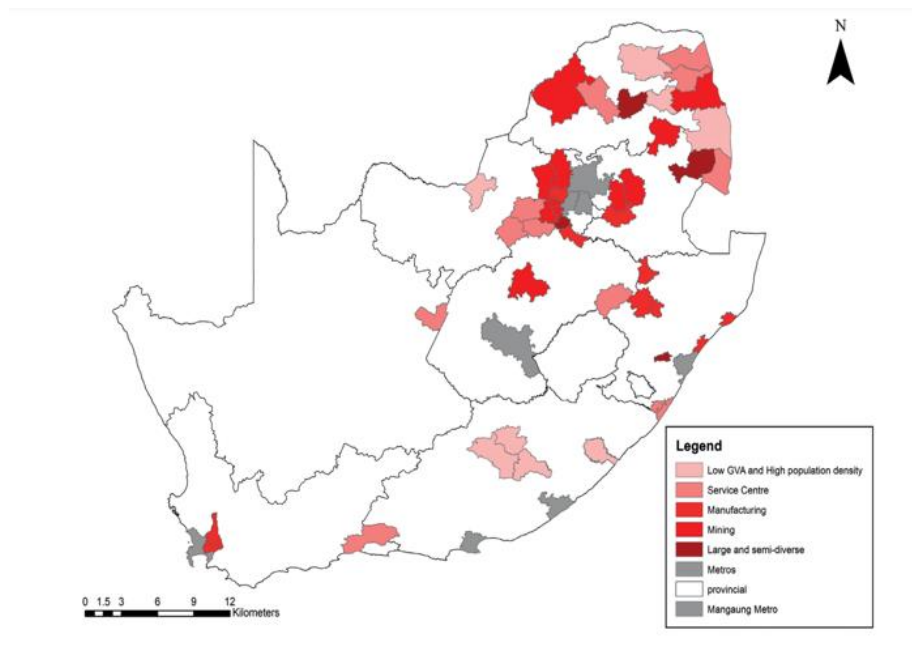
Box 3.1: BRT in Bogotá vs. Cape Town

Bogotá's BRT system, known as TransMilenio, began operations in 2000 and has grown to become one of the largest and most extensive BRT systems in the world. As of 2021, it had over 12 lines covering approximately 114 km of dedicated busways. Cape Town's BRT system, known as MyCiTi, started operations in 2010. As of 2021, it consisted of 42 stations along eight main routes, covering about 80 km of dedicated busways. In 2021, TransMilenio's ridership was around 2.4 million passengers per day, whereas MyCiTi had a daily ridership of around 50,000. MyCiTi is a bit smaller than TransMilenio but has only one-fiftieth of the ridership.

Bogotá is a dense city with a large population, which makes it ideal for a high-capacity mass transit system like the BRT. The demand for public transportation is high, and the BRT system offers an affordable and relatively fast solution for many commuters. Cape Town has a more sprawling urban layout, with lower population density and a more extensive car-centric transportation infrastructure. This makes it more challenging to create a successful BRT system, as the demand for public transportation is not as high and the existing infrastructure favors private car use.

Sources: www.transmilenio.gov.co; www.myciti.org.za

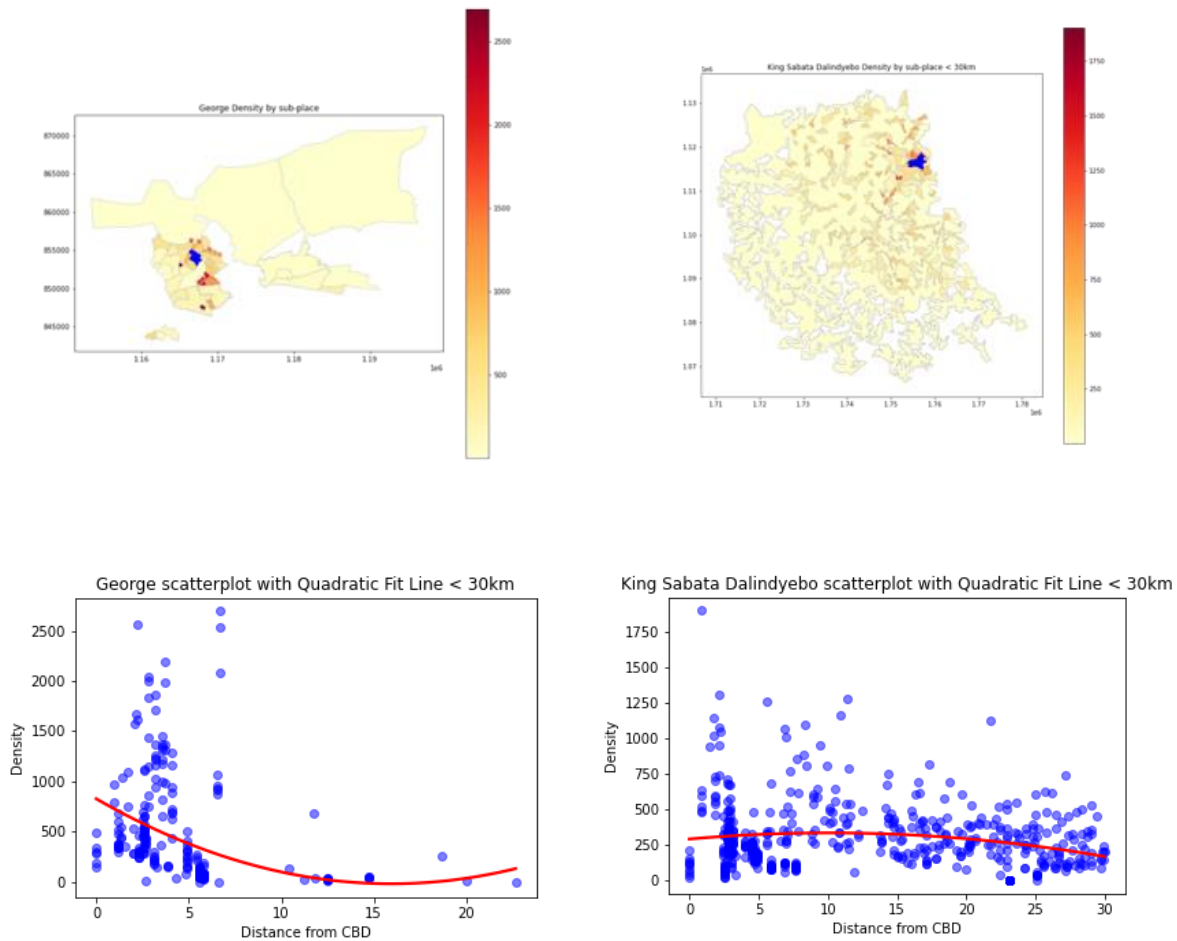
FIGURE 3.6: ECONOMIC CLASSIFICATION OF INTERMEDIATE CITIES



Source: South African Cities Network (2021b.)

Recurring spatial exclusion can be seen in very different cities. Figure 3.7 shows the population density of two growing secondary cities, George and King Sabata Dalindyebo (which contains the city of Mthatha), and Box 3.2 profiles each of these cases. George lacks a dense city center but is more compact than larger cities discussed earlier, with an estimated population of around 160,000. However, as it grows, it appears to be recreating disconnected spaces at a larger scale despite a desire to grow more inclusively. Mthatha has become a sprawling population center with a rapidly growing periphery where housing is being built on communal lands surrounding the formal boundary of the city. There appear to be common drivers that result in spatial exclusion in very different circumstances across South Africa.

FIGURE 3.7: POPULATION DENSITY PROFILES OF GEORGE AND KING SABATA DALINDYEBO



Note: Blue colored part in the map is the central business district (CBD).
 Source: Own elaboration based on the South African National Census 2011.

Box 3.2: Deeper dive into two secondary cities: George and Mthatha

George: A growing but disconnected city with advantages in tourism and agriculture

George is known for its tourism, agriculture, and forestry industries. It is the sixth oldest town in South Africa. Located on the popular Garden Route, George attracts many domestic and international tourists each year. Agricultural output is concentrated in dairy, fruits, and vegetables. Population inflows provide increased growth in these tradable sectors, but also jobs in non-tradable services. Informal activity is encouraged and supported, with stands in strategically important areas, as well as the development of smaller business centers in denser areas like Thembalethu, a township in the model of larger cities. George has experienced significant growth in population, which accelerated during and after the pandemic. According to interviews and city strategies, absorbing people in an inclusive way is high up on the agenda of the policymakers. Yet, George still faces non-inclusive outcomes. Although Thembalethu is only 5km away from the CBD (close by South African standards), it is still difficult for residents to commute to work outside of the township. They need to cross a major highway with one bridge that is highly congested during peak hours. The commute is, hence, either a long walk, or a very slow drive. George has recently introduced GoGeorge, a bus transport system that has yet to be extended to Thembalethu. Densifying the CBD with focus on affordable and mixed-use housing is high on the priority list of the policymakers, yet progress is proving difficult. Zoning restrictions, historic (no longer active) parking regulations, red tape, and building costs make those kinds of developments unprofitable.

Mthatha: A growing and sprawling but more connected city in a former homeland

Mthatha was the capital of Transkei. As South Africa transitioned to a democratic system, this led to a re-orientation of the city. Like many other cities in South Africa, Mthatha has experienced significant urbanization over the past thirty years. The surrounding rural population continues to migrate to the city in search of better economic opportunities, education, and services. This has led to a rapid increase in the city's population, putting pressure on its infrastructure, housing, and services. The economy of Mthatha has shifted from being predominantly government-driven to a more diverse mix of sectors, and Mthatha plays a notable role as a services hub for the surrounding area. Mthatha has an active informal economy, especially in the city core, in contrast to many other cities in South Africa. Nonetheless, even Mthatha faces spatial sprawl - not from apartheid planning, but from a combination of a low-density city core and the pull from the periphery where communal land is cheap home building is easy. Unlike more disconnected cities, Mthatha has a relatively constant density with distance. This time lapse shows new developments in Mthatha in terms of where new settlements are arising in the time span 2016-2023: <https://www.planet.com/stories/mthatha-and-surrounding-hU48KHf4g>

We see that these three requirements of efficient, inclusive cities are missing across South Africa: people and economic opportunities are disconnected, formal housing is exclusive, and mobility is expensive. Post-apartheid policies are not reversing these outcomes. In fact, we find that they are exacerbating them. In the next section, we describe how post-apartheid housing policy is at the center of these recurring outcomes. A push to provide high-quality housing for all South Africans through public supply led to housing on the

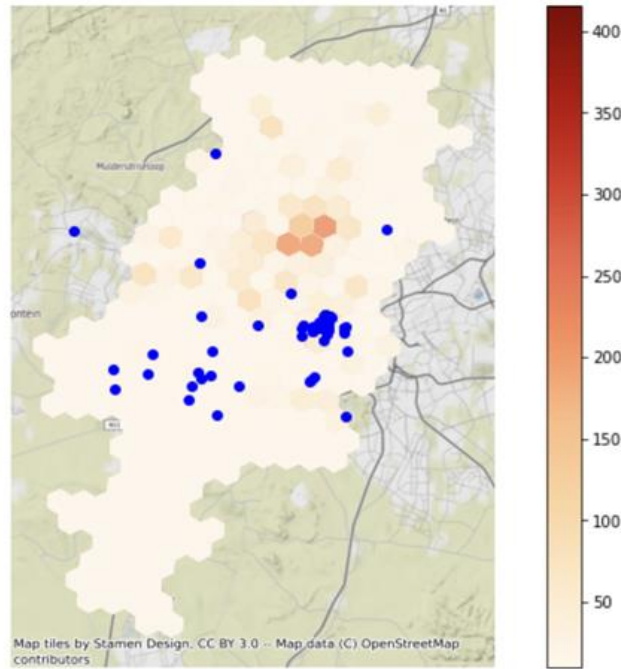
periphery of cities, where land prices are lower, which has worsened spatial exclusion. Affordable housing is rare in city cores, which leaves people with the choice to live in the periphery or informal settlements. Commutes are expensive, especially on the lower end of the income distribution, disincentivizing formal and informal work, and creating poverty traps. Public transport options are costly and inefficient due to lacking density.

3.2.1 Housing Policies at the Heart of Exclusive Cities

Due to South Africa’s RDP-style housing programs, housing is disproportionately built in economically disconnected areas. South Africa’s Constitution states that “everyone has the right to have access to adequate housing”. Although South Africa still suffers from a shortfall of adequate housing, this has been the motivating goal of housing policy. In the immediate post-apartheid period, housing policy was highly supply-driven: RDP and, later, Breaking New Ground (BNG) housing programs built single-family unit homes on a massive scale. This provided many poor households with a relatively high-quality home. However, by taking away the agency of people to choose where they want to live, these programs exaggerated spatial exclusion in cities, locating RDP and BNG housing in areas where land is cheap. This resulted in the pattern seen in Figure 3.8, where housing for the poor (blue dots) was systematically located away from concentrations of businesses and economic activity (color scale).

This orientation of housing policy has had long-lasting consequences and created substantial inertia. Although the focus of housing policy – at least on paper – has partially shifted from supply-side policies towards demand-side approaches over the past decades (under programs like the Finance Linked Individual Subsidy Programme (FLISP) that provide individuals money to choose their own housing), these programs remain very small within the budget structure of the Department of Human Settlements. In practice, the approach has had immense staying power as well as implications for local infrastructure spending and the functioning of private housing markets. Because of the need for infrastructure buildout to connect low-cost land, a large share of Department of Human Settlements grants to municipalities are earmarked for arterial infrastructure. Given the large presence of RDP-influenced home building, similar construction is provided by the private market due to established supply chains and business models of housing developers. Moreover, free or highly subsidized housing has become an expectation of many South Africans, even if beneficiaries are often dissatisfied with housing quality and location.

FIGURE 3.8: LOCATION OF SOCIAL HOUSING VS. BUSINESS PRESENCE IN JOHANNESBURG AREA



Note: Blue dots on the map indicate social housing complexes as of 2018.

Source: Own elaboration based on economic data from Nell, A. Visagie, J. Spatial Tax Panel 2013-2018, Version 1. National Treasury - Cities Support Programme and Human Sciences Research Council, 2021 and Housing data from Scheba *et al* (2021).

Small-scale demand-side instruments have faced numerous problems. The uptake of FLISP has been very low (at less than 16,000 households and half the target for 2012 to 2020), and there are widespread explanations for the low uptake (Department of Human Settlements, 2021; Hoek-Smit and Cirolia, 2019).² These point to the following causes, among others: the type of subsidy that is granted, which is on the down payment rather than a subsidy on mortgage interest rates; the rigidity of the financial system, which is inaccessible to many people; the titling backlog, which constrains people in the access of financial resources; and low marketing and limited public knowledge. However, a simpler but important explanation is that the program is very small in comparison to other uses of the Human Settlements budget. A scale-up of the transition from supply-side policies, which dictate where housing is built, what kind of housing, and how dense, to demand-side instruments that allow demand to dictate each of these dimensions would be a step in the right direction. At the same time, it is important to explore why denser housing is not already built on a larger scale on the private market.

² See also several studies by the Center for Affordable Housing Finance (CAHF) - <https://housingfinanceafrica.org/>

Significant supply-side restrictions affect housing construction today and would not be resolved by a larger shift to demand-side subsidies. National and local zoning and building regulations make it expensive, and in parts illegal, for developers to build high-rise buildings at affordable rates in desirable locations. The regulatory framework disincentivizes building up in the core and implicitly subsidizes building out in the disconnected periphery. For a demand-side subsidy to have its desired effects, supply must be responsive in desirable locations. This requires making it more attractive for developers to build in the city core (Hoek-Smit and Cirolia, 2019). Regulations make it practically impossible – and illegal – for developers to build housing supply that would reflect a better spatial equilibrium in cities. Below are some of the most binding regulations and distortions to inclusive housing developments in desirable locations, which are necessary to revisit. The optimal level of building regulations is not zero, but these areas are noteworthy because they do not appear to be necessary public safeguards, yet they have large unintended consequences.

- **National Building Regulations:** The National Building Regulations and Building Standards Act 103 of 1977, last amended in 2008,³ provides a framework for the establishment of uniform building standards and regulations across the country. The act covers a range of aspects of building construction and management: building standards, building regulations, building plans, and approvals and penalties. Some specific regulations stand out as rather unique in South Africa when compared to other countries in their restrictiveness, for example, single-point access staircase regulations, as well as building material requirements. The use of traditional materials like wood and glass is more restricted in South Africa, as is the construction of prefabricated homes – a form of construction that has advanced significantly globally. Such restrictions not only increase the building cost significantly but make it more difficult to build units of different sizes and diversity – leading to more expensive and less versatile housing units that cannot accommodate different price ranges. We, therefore, recommend relaxing overly restrictive materials and accessibility regulations at the national level.

³ Besides SANS 10400-XA: Energy Usage in Buildings, which has been amended in 2020.

- **Local Building Regulations:** An increasing body of research has studied the role of restrictive land use policies on increasing racial segregation and income segregation.⁴ Restrictive floor area ratios (FAR) and building coverage ratios (BCR) are two measures. With limited space for development, land values in areas with low FARs and BCRs tend to be higher, which can make it difficult for developers to build affordable housing and for people to afford housing in those areas. Certain types of developments, like higher-rise, mixed-use buildings with a variety of different apartment sizes become infeasible with low FARs and BCRs. These measures in South Africa differ across cities and zones but tend to be low. In several municipalities' housing codes, FARs of 1, oftentimes in combination with low BCRs, appear to be constraining in zones that could lend themselves to densification. As an indication of how binding FARs can be, Paris doubled its number of housing units built per annum from 40,000 to 80,000 between 2009 and 2019, partly explained by a national law that eliminated floor-area-limits in local plans (Denoon-Stevens and Nel, 2020). Finally, parking minimum regulations which have been eliminated in many places, can also significantly increase building costs and skew the type of buildings that can be viably built. The same is true for elevator requirements and other local regulations. We recommend that municipal governments relax FAR, BCR, parking and elevator requirements, and other restrictive local building regulations to allow for higher density.
- **Zoning Regulations:** Extensive empirical research has demonstrated a strong connection between exclusionary zoning and increased housing costs, diminished housing construction, and reduced overall welfare.⁵ Zoning restrictions inflate building costs, limit housing variety, and discourage diverse, affordable housing. Single-family home zoning especially limits the development of apartments, multi-family, or mixed-use homes, thus artificially reducing housing supply and increasing prices. Furthermore, these regulations frequently result in housing types being concentrated in specific areas, which can contribute to economic segregation and reinforce existing inequalities in the housing market. Like South Africa, the United States is often noted for its extensive single-family zoning. In the U.S., this type of zoning was historically used to segregate neighborhoods by class and race, and it continues to shape American cities today. However, in recent years,

⁴ See, among others, Rothwell, and Massey (2009); Sahn (2021); Trounstone (2020); Lens and Monkkonen (2016); and Rothwell and Massey (2010).

⁵ See, among others, Glaeser and Gyourko (2018); Glaeser *et al.* (2005), and Hsieh and Moretti (2019).

there has been a growing push in some U.S. cities to reform single-family zoning to allow for more diverse types of housing and promote greater affordability and inclusivity. In Europe, on the contrary, single-family homes are common in suburban and rural areas, but multi-family buildings predominate in urban centers. We recommend a local shift to less single-family zoning, prioritizing mix use in city cores.

Based on international experience, a few additional policy dimensions could be important in enabling more inclusive housing. First, denser and more inclusive housing is often blocked at the project level by narrow non-in-my-backyard (NIMBY) interests at the expense of wider benefits to society. Countries that have struggled with this have discovered some solutions. Second, it is important to leverage development charges or impact fees equally across space so as not to *de facto* incentivize building on the city periphery. Third, since housing development is a dynamic challenge, policy changes should not be limited to one-off regulatory changes. Rather, the government can utilize active problem-solving approaches in coordination with the private sector to understand emerging challenges and partner to find solutions. Each of these policy dimensions is discussed below.

- **Addressing NIMBYism proactively:** In the United States and other countries (like France and New Zealand – see Box 3.3), land use and housing policy control is increasingly being moved to higher administrative levels, for example, the state rather than cities and towns.⁶ When decision-making power is shifted from local municipalities to higher levels of government, very narrow local opposition to development can have less direct influence. Higher-level authorities can reflect the needs of broader society. For instance, if a state mandates that all towns must allow multi-family housing in residential areas, local opposition can do little to prevent it. Additionally, systems that pre-approve projects based on a pre-determined spatial development plan and simple criteria can also limit opportunities for NIMBYism. Under such arrangements, community approval is front-loaded in the form of strategic plans and neighbors must pre-approve projects that are in the common good even if they happen to develop in their backyard.
- **Ensure impact fees are equally applied:** Impact fees, also known as development charges, are fees charged by local governments on new developments to help pay for the

⁶ See Denoon-Stevens and Nel (2020) for the case of Paris.

costs of providing services and infrastructure to support growth. Development charges are typically charged on new residential, commercial, or industrial developments and are calculated based on the type, size, and location of the development. The fees are intended to facilitate necessary improvements in water and sewer systems, roads and transportation infrastructure, parks and community facilities, and other municipal services that are needed to accommodate the growth of the community. The purpose of development charges is to ensure that the costs of new development are borne by the developers and new property owners, rather than being passed on to existing taxpayers. By doing so, development charges help to ensure that growth and development are sustainable. It is important to ensure that municipalities do not waive or reimburse development charges on peripheral development in ways that undermine the natural functioning of housing markets and inadvertently incentivize building out rather than filling in and building up.

- **Establish continuous public-private problem-solving:** Public-private problem-solving task forces can be effective ways to continuously address constraints in particular sectors or around specific constraints. By regularly meeting and incrementally addressing issues, such task forces can develop trust, reveal information, and develop innovative solutions. Such task forces could be nationally focused but may be more effective at the city level to uncover and address city-specific constraints. Understanding the key constraints of the relevant stakeholders in the housing market, notably, developers, helps shift the focus from a system that operates entirely on fiscal incentives towards addressing the real costs and hurdles that undermine diverse and spatially inclusive housing construction. Such initiatives are effectively free to the public sector and can lead to a much more effective use of resources.

Taken together, a relaxation of supply-side restrictions and an increase in demand-side instruments would have a profound impact on housing development and spatial inclusion in South African cities. Shifts in the spatial structure of cities would occur gradually, but this is the path to fundamentally changing the exclusive spatial structure of cities. Inclusive cities would be stronger economically and eventually reduce demand for informal settlements. In the shorter term, this shift would enable growth in housing construction, creating jobs and demand in the supply chain of housing construction materials. Growth in the private housing market would also allow municipalities opportunities to grow their tax base through property

tax revenues and opportunities to put underutilized land to use for urban development goals. In either the long- or shorter-term the shift would be expected to have a positive impact on crime by increasing inclusion and job opportunities. Other countries have taken similar measures at a large scale, for example, New Zealand in addressing restrictive supply-side regulations and Colombia in leveraging demand-side instruments (see Box 3.3).

Box 3.3: New Zealand and Colombia Approaches: Liberalize Supply and Support Demand

New Zealand: Relaxing Supply Side Restrictions

New Zealand has experienced a significant rise in housing costs over the past decade, with the median house price increasing by around 130% between 2011 and 2021. This increase in housing costs is partly due to an undersupply of housing. In response, the New Zealand government has introduced several housing reforms aimed at increasing housing supply and affordability. One of these reforms is the Medium Density Residential Standard, which requires the most populous cities in the country to allow medium-density housing on all existing residential parcels of land. This reform is a reversal of previous land use policies, which encouraged low-density housing in residential areas. The zoning reform is expected to stimulate housing construction through redevelopment, with the Auckland Unitary Plan providing a blueprint for the policy's success. The Auckland Unitary Plan, introduced in 2016, led to a construction boom in the city, with a significant increase in new housing units permitted and a shift towards attached multifamily housing.

Another policy introduced by the New Zealand government is the National Policy Statement on Urban Development, which requires large cities to zone for residential structures of up to six stories within walking distance of rapid transit stations. This policy aims to promote more compact cities and lower energy consumption through shorter commutes and increased use of public transit. These reforms have increased housing construction in New Zealand, but it remains to be seen whether they will significantly improve housing affordability.

Colombia: Demand-Side Policy Focus

In 2021, the UN named Colombia a standout in social and affordable housing. Several Latin American nations have subsequently taken cues from Colombia's "Mi Casa Ya" program in developing their own housing strategies. Colombia's housing policy is multifaceted and has seen some notable progress, such as a 17% annual increase in the housing sector's GDP, a 40% increase in sector employment in four years, and a 70% growth in the mortgage portfolio over three years. It also improved social housing quality, decreased urban segregation by moving less affluent people closer to city centers, and ensured that most subsidies reach the poor.

Box 3.3: New Zealand’s and Colombia’s Approaches: Liberalize Supply and Support Demand (cont.)

Colombia’s approach to housing policy is based on three pillars:

1. *The flagship of the housing policy is “Mi Casa Ya”, the demand-driven program.* The demand-side subsidy is provided to the poor by default. Each mortgage is supported by a Guarantee Fund. Down payment is provided by the government and poor people are intended to pay less for the mortgage than they previously paid for the rent. Meanwhile, supply-driven programs remain in place but are mainly associated to reallocations, risk management, catastrophes, or victims of violence.
2. *Each subsidy for a new house has been accompanied by four subsidies for house and neighborhood improvement.* Responding to the qualitative deficit has been prioritized. This has included legalization of informal neighborhoods and providing public goods including schools, libraries, police stations and hospitals, and improving dwellings.
3. *A new housing law and many regulatory innovations facilitated by sub-national governments.* The central government financed studies for the expansion plans of some municipalities, included instruments to effectively capture the value of the land in time (Tax Incremental Financing) and manage to simplify the process to provide construction licenses.

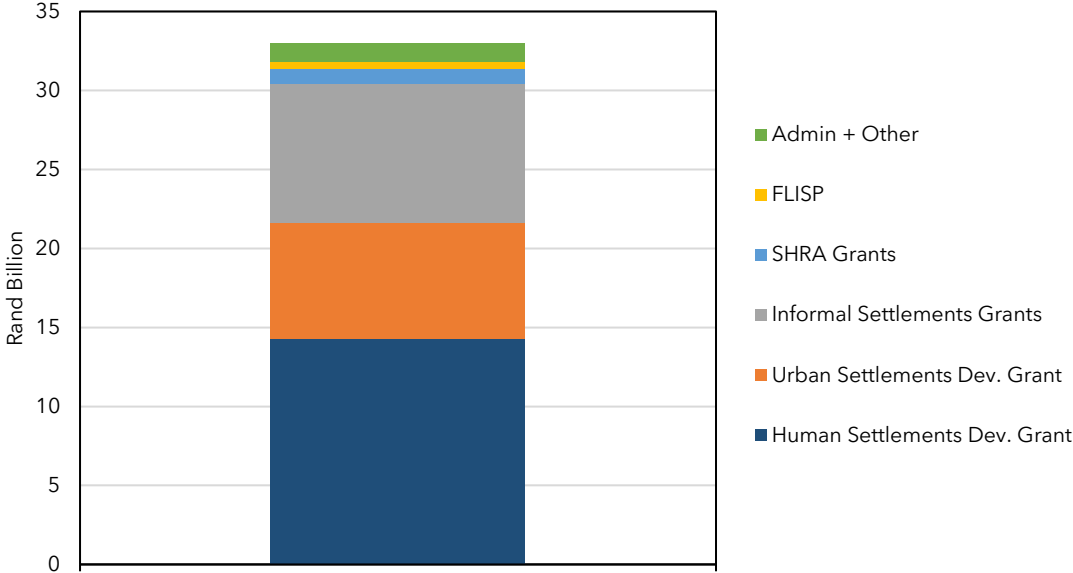
Source: Greenaway-McGrevy (2022) for New Zealand’s case and Jonathan Malagón, former Ministry of Housing of Colombia for Colombia’s case.

3.2.2 Better Utilizing the Human Settlements Budget

To capitalize on the relaxation of supply-side restrictions, we recommend a substantial shift in the Human Settlements budget to demand-side instruments. Human Settlements spending is a concurrent function between the national and provincial departments. The largest share of the budget occurs through block grants to provinces and metros, largely for subsidized housing and settlement upgrades. Close to two-thirds of this spending (more than ZAR 20 billion in 2022/23) flows through two grant programs – the Human Settlements Development Grant (HSDG) and Urban Settlements Development Grant (USDG) – and another 8.8B Rand flow through the Informal Settlements Grants (Figure 3.9). The HSDG is administered by provinces to finance housing-related infrastructure in local municipalities, whereas the USDG is administered by the metros. The end uses of these two grants are not fully transparent (especially, USDG), with spending choices made at these local levels of

government. Historically, these programs have *de facto* favored housing construction on the periphery of cities, serviced sites, and public infrastructure investment that implicitly subsidize urban sprawl. The National Department of Human Settlements directly controls budget spending on less than 10% of the budget, through the remaining programs including SHRA grants, FLISP, and Admin and other (a total of only ZAR 3 billion out of ZAR 33 billion).

FIGURE 3.9: HUMAN SETTLEMENTS BUDGET 2022/2023 (TOTAL: 33B RAND)



Source: Own elaboration based on 2022 Estimates of National Expenditure, National Treasury.

We recommend three steps for restructuring the Human Settlements budget:

1. Shift of the budget towards demand-side subsidies spending.
2. Review and restructure the USDG grant with the possibility to transform it from a “schedule 4” to a “schedule 5” grant.
3. Provide mechanisms to tie USDG and HSDG spending to where demand-side subsidies follow peoples’ housing choices, instead of *de facto* promoting supply-driven sprawl.

First, we recommend a shift in this spending toward demand-side subsidies. The main advantage of demand-side subsidies is that they provide greater consumer choice at the lowest cost to the government. However, they perform best in markets where they can trigger a supply response. If supply is tight, demand-side subsidies can exacerbate affordability problems for non-subsidized low-income households as rents or prices increase. This is why,

South Africa needs to unlock the housing supply constraints as a pre-condition for demand-side subsidies to unlock the affordable housing market.

The design of demand-side instruments is not a trivial matter. A combination of rental subsidies, up-front subsidies/down payment support for home buyers, and subsidized mortgage payments can benefit different population groups more flexibly than one type of subsidy. The instruments should enable a large segment of society to access housing options that meet their needs, but at the same time, the instruments must not create fiscal guarantees that undermine fiscal policy goals. Some considerations of different demand-side supports are discussed below.

- **Up-front Subsidy / Down Payment Support:** Subsidies applied on the down payment are the current mechanism used within FLISP. Other options of up-front subsidies could apply to closing costs or the mortgage insurance premium. These tools are useful for many households who lack significant savings, and the fiscal implications are straightforward because payments are one-time. Yet, this form of subsidy is not effective in targeting households in the lowest income tiers and can exclude low-income households with low credit scores. This is a challenge in South Africa since many households do not have a savings history or a prior property title deed as collateral.
- **Subsidized Mortgage Payment / Interest Payment:** These subsidies lower the monthly cost of housing payments. These subsidies are more useful for households who can cover larger down payments (through savings or Stokvels in the case of South Africa), but who struggle to afford mortgage payments over time. This pool of beneficiaries may be narrow, so these could be combined with down payment support. If not designed and managed carefully, these subsidies can create fiscal risks as they are recurring payments. If subsidies are fixed in value, this planning is straightforward, but if these payments are variable, fiscal management can become a challenge.
- **Rental Subsidies:** Rental subsidies target renters rather than home buyers and homeowners. In the case of Colombia, these rental subsidies allowed individuals without credit history to build a credit history that then allowed them easier access to mortgage markets. The development of the rental sector comes with real advantages to the economy. It enhances labor mobility and is an option for households who don't have the means to

buy a home or wish not to, including young adults and new migrants. A thriving rental sector further provides a choice for asset investment and a source of complementary income. Demand for rentals in the affordable segment is clearly present, as shown by the rapid increase in “backyard” rentals, as well as by the high demand for rental units in the city core. Rental subsidies are typically paid out continuously and do not directly impact home ownership and home construction.

Regardless of the combination of demand-side subsidies, certain administrative improvements will be needed in South Africa. Hoek-Smit and Cirolia (2019) raise several administrative issues. These include a need to better delineate responsibilities between provincial governments, the entity with the budget, and the National Housing Finance Corporation (NHFC), which is the national overseer. Municipalities need to play a larger role in disseminating information about housing programs and managing these programs. Municipalities often serve as the initial contact for residents seeking housing, manage waiting lists, gain insight into local housing markets for both new and existing homes, and develop relationships with the key participants in the real estate market. Municipalities also maintain connections with local employers and other groups that can contribute to the successful operation of demand-side subsidy programs.

Second, we recommend reviewing and restructuring the USDG grant. USDG grant is currently a “schedule 4b” grant, which implies allocations to metros to supplement the funding of programs or functions funded from metro budgets. This limits the margin of action of the Department of Human Settlements, which has no impact on how and if the budget is spent. According to the Department of Human Settlements (2015), large chunks of the budget are not spent on housing-related programs and infrastructure, and allocated money is often not allocated until a rush at the end of the calendar year. The HSDG, meanwhile, is a schedule 5 grant, entailing specific purpose allocations. Aligning HSDG and USDG by restructuring USDG to schedule 5 would help to provide greater oversight of how the budget is spent and allow for more direction to projects that enable more compact urban housing. Another possibility is to transfer the infrastructure parts of USDG to the Department of Cooperative Governance and Traditional Affairs CoGTA (and align it with MIG grants to local municipalities) while structuring the remaining budget tied to housing infrastructure via schedule 5 grants.

Finally, it is possible and desirable to link demand-side spending instruments with the relaxation of supply-side restrictions discussed previously. This can involve tying a certain amount of grant funding to municipalities that have implemented a set of reforms. For example, supplemental grant funding could be available for local governments that have relaxed counterproductive zoning and regulatory barriers to density. Or, alternatively, grant funding for urban infrastructure could be tied to the actual mobilization of demand-side subsidies, such that the communities that are seeing more uptake automatically gain additional resources for infrastructure upgrades to support more housing. In addition to the human settlements budget, transport budgets could, in principle, also be used to incentivize local regulatory change. For example, new public transport projects could be nationally funded conditionally on a municipality densifying its housing (through relaxation of overly restrictive building regulations and actively working to reform zoning regulations). Developing an easy-to-implement set of local regulatory and zoning reforms could be a task for the Department of Human Settlements together with the City Support Programme of the National Treasury and the larger research community.

3.2.3 Other Urban Policy Priorities for Inclusion

Local governments can further enable inclusion by incorporating underutilized urban land for development purposes. Publicly owned land, particularly in key urban centers or near transport nodes, has a high potential for developing inclusive housing. As the government already owns this land, the cost of acquiring land (which can be a substantial part of total development costs) is eliminated. This significantly reduces the overall cost of developing affordable housing units, making it more financially feasible for the government or private developers to build such housing. An example of this is the Air Force Base Ysterplaat in Cape Town, which is a large and strategically located area that no longer serves its original public purpose. This creates an enormous opportunity to change the urban fabric. Innovative housing development in the area can also serve as a model for other areas and the process can also deliver significant revenues to the city to be reinvested.

Given the spatial sprawl of South African cities, which undermines cost-effective public transport options, there is likely scope for improvements through the existing minibus system and reviving once-functioning passenger rail systems. Large-scale public transport solutions that assume a certain urban density will become efficient in a new spatial equilibrium,

but more immediate improvements in the quality and efficiency of urban transport may come through collaborative solutions with the minibus network. The Department of Public Works and Infrastructure Africa has detailed a wide-ranging strategy to reform and restructure the nation's public transport system in its National Infrastructure Plan 2050. The department plans to create a more integrated transport system by 2050, focusing on new technologies such as electric vehicles and green hydrogen. Major goals include linking transport and housing policies, transforming and formalizing the minibus taxi industry, encouraging private-sector involvement, accelerating dedicated road space for public transport, reviving rail networks, ensuring daily frequency of bus or minibus taxi services in rural areas, and promoting green hydrogen and other alternative energy sources. Among these priorities, actions to formalize the minibus taxi industry and reviving existing passenger rail lines especially through devolvement to metros are likely to have the highest potential for short-term improvements in transport times and connectivity of cities.

Many work opportunities could be enabled by bringing down barriers to informality in cities. Hostility against informal work poses significant barriers to informal activity. Across cities in South Africa, there are still restrictions on informal activities such as street vending, even within township areas. These regulations include zoning limitations and strict enforcement of space usage. For instance, restrictive zoning in busy city areas, close to or intersecting with townships, reserves them exclusively for residential purposes, preventing microenterprises from operating in potentially more successful locations (Shah, 2022). In the context of the South African labor market where formal jobs are limited, this has a direct result in increasing unemployment. After the problem of spatial exclusion in urban structures, direct restrictions on informal work are likely the second biggest cause of low employment in South African cities. Ongoing research is exploring priority policy responses to address this problem in ways that would be complementary to the actions discussed in this report.

Finally, it is important that urbanization, which allows for economic agglomeration in cities, be treated as a national priority. Overall, we find that the binding issues to spatial inclusion in South Africa's urban labor market differ from what is commonly assumed in many ways. Figure 3.10 summarizes some common beliefs and compares these with findings from this research.

FIGURE 3.10: BINDING ISSUES IN SOUTH AFRICA

<u>Common Understanding</u>	<u>Issue Based on This Research</u>
1 <i>South Africa is unique because of its sky-high unemployment rate</i>	▶ South Africa’s labor market is a unique combination of high unemployment, average wage employment, and low informality
2 <i>Labor market challenges are due to skills gaps or social grants or labor regulations, etc. that can be solved through “active labor market policies”</i>	▶ We think spatial issues, sprawl, transport costs and inefficient urbanization play a much larger role than the current debate gives credit to
3 <i>Public transport options like BRTs can be copied from other countries for South Africa</i>	▶ South Africa’s low densities and unique spatial structure mean that many public transport options designed for other places will not work well
4 <i>The low densities and inefficient urbanization are solely a legacy of apartheid</i>	▶ Apartheid history is very important but well-intentioned housing policy and current regulations have further entrenched apartheid structures
5 <i>The constraint on better density and well-placed affordable housing is a lack of interest from private developers in this segment</i>	▶ National building codes, local land use policies, and housing regulations all but assure that dense, mixed use, affordable housing is not possible nor profitable in South Africa
6 <i>In any scenario, only the richest of households will be able to live in well-located housing because land in such areas is expensive</i>	▶ In the absence of restrictive regulations, “The poor can outbid the rich in well-located areas by consuming less space”
7 <i>Lower income HH in ZAF universally prefer having more space and certain amenities to having better location</i>	▶ ZAF HH are currently not given the choice and if they were, more people would choose a different trade-off between location (and job access) and space/amenities
8 <i>Current policy movement towards serviced sites and towards demand side policies like FLISP can unlock more affordable better located housing</i>	▶ Unless the restrictions and regulations on the supply of denser, affordable units are removed, these policies will replicate existing housing patterns instead of changing them

Source: Authors’ elaboration.

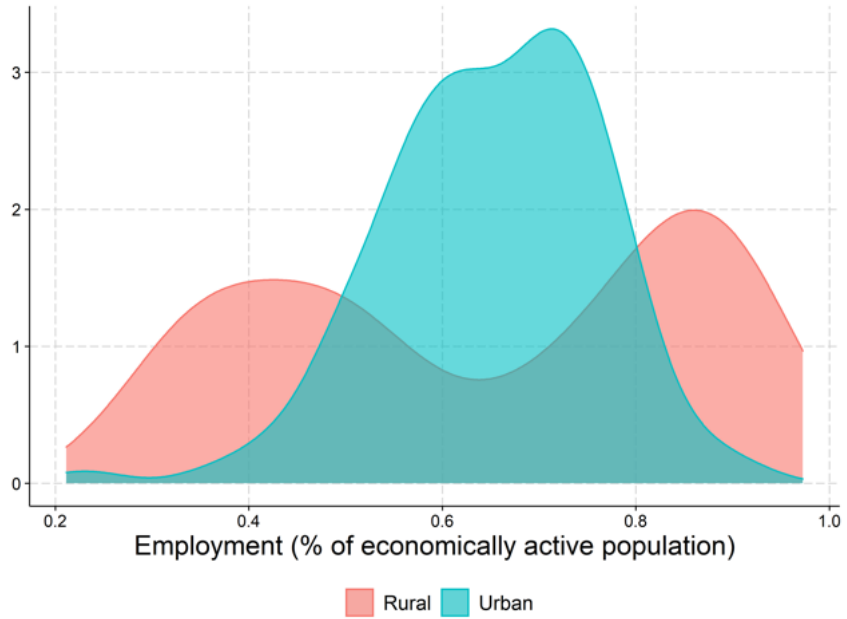
3.3 Bridging Knowhow: Bringing jobs to people.

Inclusive cities alone would not address South Africa’s most extreme form of spatial exclusion – that of the rural former homelands. Inclusive cities would be able to absorb more people into their labor markets. All things equal, this would be expected to reduce unemployment in rural areas by some degree. However, the presence of more jobs in urban

areas would do little to nothing to improve employment outcomes among those who remain in rural former homelands. There is already a strong pull for individuals from struggling areas to migrate, at least temporarily, to cities and other places where work can be found, including seasonal jobs in agriculture and work in mining. This results in flows of remittances back to homeland areas. However, Lochmann (2022) and others find that these remittances do not alter the productive opportunities of the areas that workers left. Rather, money tends to be invested in rural houses and used to increase living standards. As cities hopefully absorb more people in the future and offer more permanent employment opportunities and housing options, pressure on rural areas will decrease, which could free up more areas of land productive uses. This makes it more important to strengthen place-based pathways to growth that would provide more residents of rural former homelands the opportunity to stay and participate in productive work.

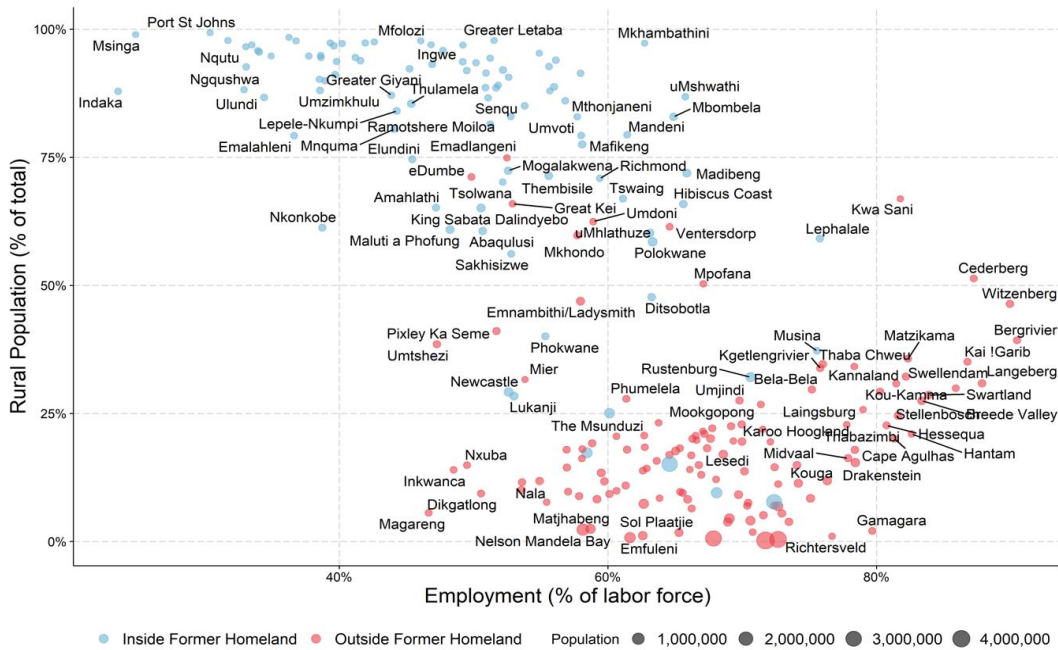
Employment patterns underscore that it is possible to generate economic opportunity in rural South Africa. South Africa's rural areas offer a dual picture of employment outcomes (Figure 3.11). Among municipalities that are classified as "rural," there is a dramatic divergence of employment rates – calculated here as the share of the active labor force that is employed (i.e., 1 minus the unemployment rate). One group of rural municipalities achieves employment rates that tend to exceed most urban areas. While employment rates in this group are still low by international standards (note that the group centers on an unemployment rate of close to 15%), employment is several times higher than the other group of rural municipalities, which tend to have employment rates that tend to be lower than most urban areas. Figure 3.12 shows this same duality but with more information. In this case, the colors represent municipalities that are within the borders of former homeland areas and those that are not. The horizontal axis is the same as the previous figure, but the vertical axis captures the share of the population in the municipality that is classified as rural, as opposed to the municipality overall. This shows that nearly all the rural municipalities in the lower employment group are within former homelands and almost all the rural municipalities that have higher employment are not within the former homelands.

FIGURE 3.11: EMPLOYMENT RATES ACROSS SOUTH AFRICAN MUNICIPALITIES, URBAN & RURAL



Source: Own elaboration based on the South African National Census of 2011.

FIGURE 3.12: EMPLOYMENT RATES & RURAL POPULATION BY MUNICIPALITY



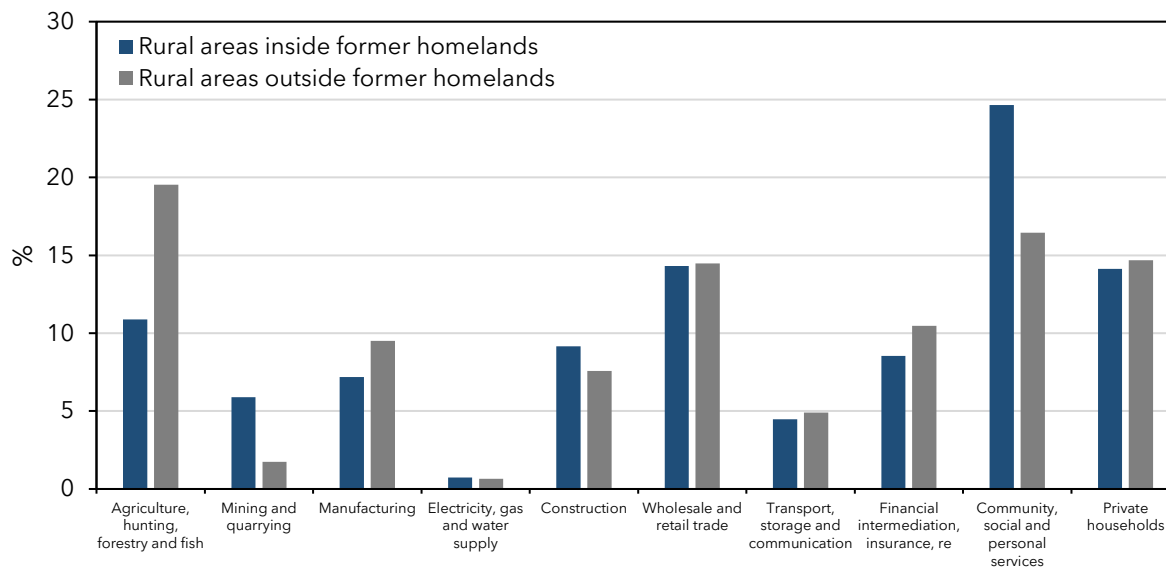
Source: Own elaboration based on the South African National Census of 2011.

South Africa's rural employment challenge is distinctly faced by former homeland areas, which have effectively been left excluded from the modern economy. This glaring divide between economic outcomes in former homelands and the world outside is well known and has been studied (Lochmann, 2022; Mudiriza & Edwards, 2021), but the particular divide between rural former homelands and rural areas beyond is especially important. There are growing divides globally between urban agglomerations and rural areas, but this type of rural-urban divide does not explain South Africa's particular problem. The employment rate in rural former homelands is, on average, half of the employment rate of rural areas outside. South Africa faces a rural-rural divide, where the rural areas that are excluded from job opportunities share a common history as former homelands that were set apart from the functioning of the rest of the South African economy for many decades prior to the end of apartheid. However, this does not explain why three decades after the end of apartheid this large difference continues to persist. A relevant policy framing is asking what it would take communities in the top-left of Figure 3.12 to move to employment levels more like communities on the right side of the graph.

There are clear differences between the two extremes of rural employment, which begin to explain the mechanisms behind exclusion. First, there is a clear pattern in Figure 3.12 that the excluded areas tend to be significantly more rural (i.e., a higher share of the population in the municipality that is rural) than rural, non-homeland areas with the highest employment rates in the country. The rural areas of former homelands can be understood to be more remote and less likely to have population agglomerations within rural municipalities. Interestingly, this does not mean that the rural former homelands are more concentrated in agriculture than rural areas elsewhere in South Africa. Figure 3.13 shows the share of employment based on South Africa's latest population census. In rural areas outside of the former homelands, upwards of 1 in 5 jobs is in agriculture, forestry, and fishing, roughly double that of rural areas within former homeland areas. Rural areas outside homelands are also slightly more concentrated in both manufacturing and financial intermediation but these differences may be statistical noise. Rural former homelands, meanwhile, have a higher concentration of jobs in community, social, and personal services (1 in 4 jobs), as well as in mining, though this is a smaller source of jobs (1 in 20 jobs), and a slightly higher concentration of jobs in construction, which may again be statistical noise. Rural areas do not look different

in other large sectors of employment including wholesale and retail trade and household-based work.

FIGURE 3.13: SHARE OF EMPLOYMENT BY INDUSTRY IN RURAL AREAS



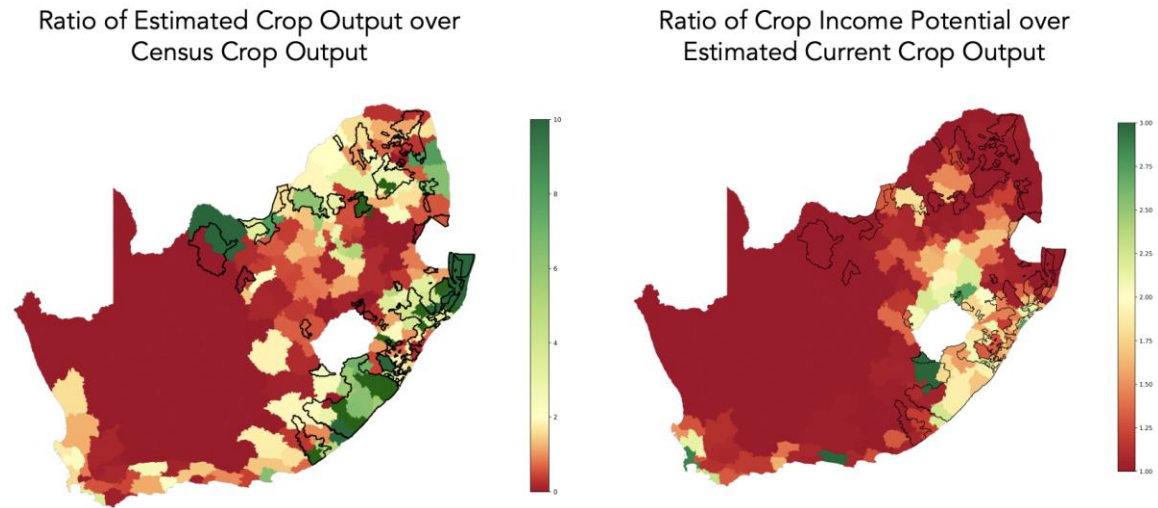
Source: Own calculation based on the South African National Census of 2011.

The difference in agriculture does not come from differences in the natural endowment of land for crop production. Given the stark differences in agriculture employment and even starker differences in commercial agriculture output, Klinger *et al.* (2023) use satellite imagery together with estimates of potential yields by the Food and Agriculture Organization (FAO) of the United Nations to better understand the potential for crop production across the country. They confirm a well-known issue that actual crop production is underestimated by South Africa’s Census of Commercial Agriculture, which captures only commercial agriculture (Figure 3.14, Left Panel). But they also find that some areas – particularly across former homeland areas in the Eastern Cape and KwaZulu-Natal, as well as Free State Province – have crop production potential well above their best estimates of current production (Figure 3.14, Right Panel). Explaining this pattern, therefore, can help to explain why employment opportunities are low for some areas within the former homelands, but not others.

Yet, the employment gap in former homelands cannot be explained by gaps in agriculture alone. Figure 3.15 maps the overall employment rate (i.e., the number of individuals employed over the working age population) by municipality. The problem is more

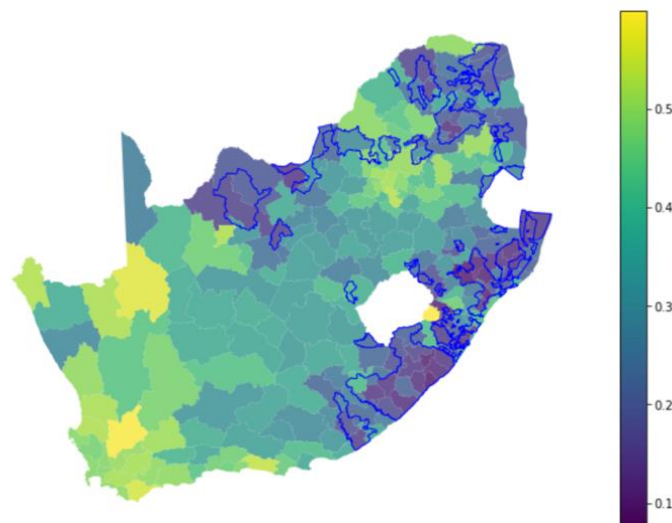
widely faced than gaps in agricultural production and employment can explain. Approximately 30% of South Africa’s population – upwards of 20 million people – live in rural former homelands. Thus, it is essential to better understand the drivers of this type of spatial exclusion and what policymakers can do to better include people and latent capabilities of these places in the productive economy.

FIGURE 3.14: GEOGRAPHIC PATTERNS IN UNDERREPORTED CROP PRODUCTION AND POTENTIAL



Note: Former homeland areas are outlined in black.
 Source: Sturzenegger *et al.* (2023).

FIGURE 3.15: EMPLOYMENT RATE (# EMPLOYED/WORKING AGE POP.) BY MUNICIPALITY



Note: Former homeland areas are outlined in blue.
 Source: Own elaboration based on the South African National Census of 2011.

3.3.1 Understanding the Drivers of Exclusion

The exclusion of former homelands has obvious roots in apartheid and before, but history cannot explain the post-apartheid failure to include these places. A long legacy of spatial exclusion, from the early colonizers through the institutionalization of spatial exclusion in the form of the Bantuastans (“homelands”), has distorted the spatial equilibrium of South Africa. The total effect was to keep these areas separated from the emerging modern economy of South Africa for decades⁷. This history is foundational, but the current degree of exclusion is surprising three decades after the end of apartheid. Moreover, there are no indications that opportunity gaps are on pace to close within the foreseeable future. There is no reason why South Africa cannot overcome its past, yet it is clear that the current approach is not working to include these historically excluded places.

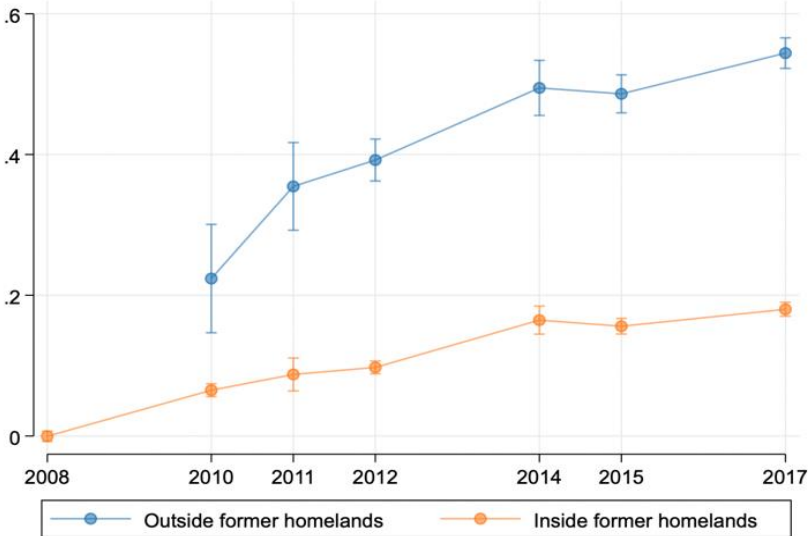
The problem is much more driven by the productivity and opportunity of places than by the characteristics of people. Lochmann (2022) investigates what drives the differences in employment outcomes and finds that various policies that have worked on the individual level – for example, improvements in education and health – have not counteracted what is a place-based problem. One strong indication of this is captured by Figure 3.16, which shows what happens if you take an unemployed individual from within the former homelands and move them to another place in the country. The employment probability of those that move immediately doubles and grows over time to reach an employment probability three times higher than those who remain. The fact that these individuals were unemployed at the start of the period accounts for some of the “selection effect” of those who choose to leave former homeland areas in search of work. Not shown here but important for reference is that the overall employment probability of working-age people in areas outside the former homelands is only 30-35% over this period (Lochmann, 2022). In other words, individuals from former homelands who leave for opportunity tend to have more success than the rest of the population.

Equalization grants and other monetary transfers have been unable to include rural former homeland areas and overcome the place-based challenge. The former homeland areas are today characterized by small local economies that are largely consumption-based

⁷ See, among others, Butler *et al.* (1977), Christopher (1994), and Beinart (2001).

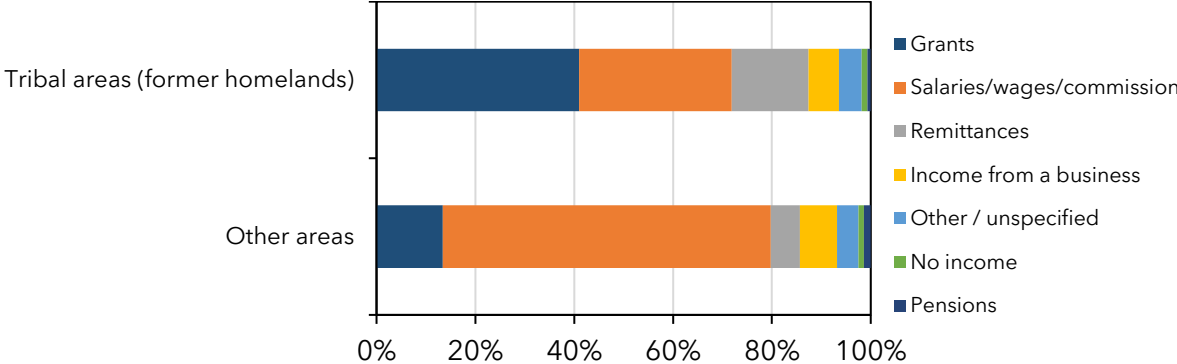
and lacking business investment and production. And yet, these places are not lacking in terms of several important production factors: there is underutilized arable land, unused labor force, and there are significant monetary inflows to these areas in the form of government grants and transfers as well as in the form of remittances from internal migrants who leave these areas to work in more productive places in the country (in agriculture, mining, and urban labor markets). Figure 3.17 captures how grants and remittances make up a large share of household income, while Figure 3.18 shows the share of municipality revenues that come from equalization grants.

FIGURE 3.16: EMPLOYMENT PROBABILITY AMONG INDIVIDUALS WHO WERE UNEMPLOYED AND LIVING IN FORMER HOMELANDS IN 2008



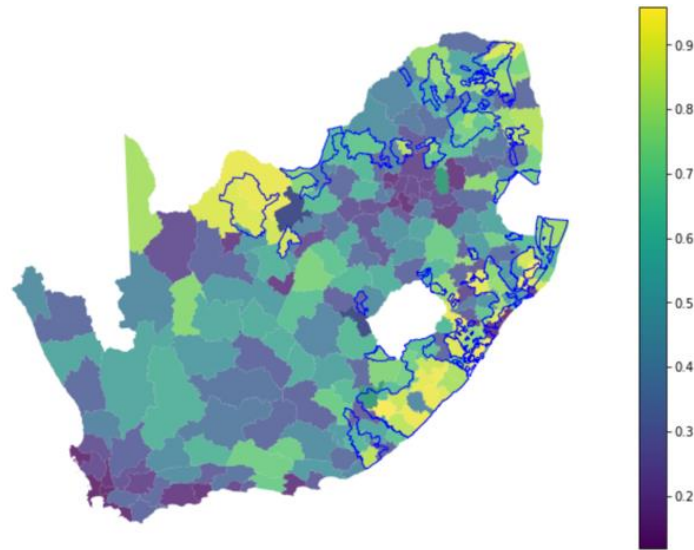
Source: Lochmann (2022) using the National Income Dynamics Study (NIDS) panel.

FIGURE 3.17: HOUSEHOLD INCOME COMPOSITION BY AREA, 2014



Source: Lochmann (2022) using the General Household Survey, 2014.

FIGURE 3.18: SHARE OF MUNICIPAL REVENUES FROM EQUALIZATION GRANTS, 2014



Note: Former homeland areas are outlined in blue.

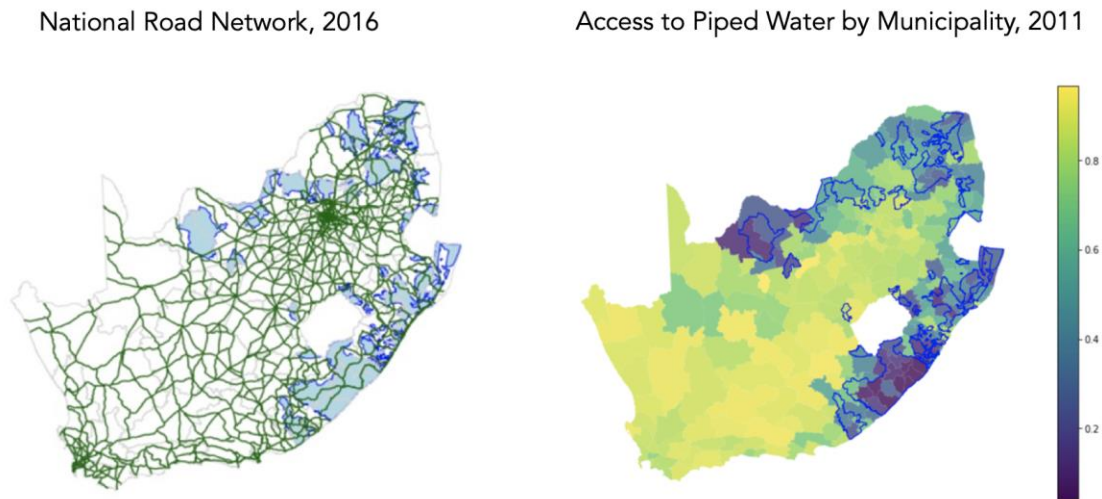
Source: Lochmann (2022) using the South African National Census, 2011.

Physical Connectivity

One critical input that remains missing is connecting infrastructure – many rural former homelands remain surprisingly disconnected from markets and surrounding economies.

Over the last few decades, access to many types of infrastructure and services has increased for former homeland areas. According to General Household Surveys, electricity access increased from 60% to nearly 100% in former homeland areas over the years 2002 to 2014, though some of the most rural areas of the country are continuing to be connected to the electricity grid. As of 2014, there was almost no gap in electricity or cell phone access within and outside former homelands, and access to nearby health facilities and secondary schools and above had likewise expanded, though smaller gaps with the rest of the country remained. However, former homelands remained much more disconnected than the rest of the country in road connectivity as well as access to piped water. Road connectivity is especially important for connectivity to markets, inputs, and the mobility of people. Figure 3.19 shows how stark the gap in the national road remained for former homeland areas in 2016. Large gaps in the network exist across several areas, despite these regions supporting larger populations than large parts of the country with better road connectivity.

FIGURE 3.19: INFRASTRUCTURE GAPS IN ROAD CONNECTIVITY AND PIPED WATER ACCESS



Source: International Steering Committee for Global Mapping and own elaboration based on South African National Census, 2011.

This lack of connectivity reduces the comparative advantages of rural former homelands.

Anyone who has traveled for multiple hours on unpaved roads, especially after heavy rain, knows how this impacts a place's competitiveness. The absence of paved roads not only adds hours to travel times to get inputs in and products out but also dramatically increases damage to sensitive products and the potential for disruptions in supply chains. In the context of South Africa's competitive commercial agriculture, the disadvantage of road connectivity has large implications. For regions with underexploited crop potential, for example in the Eastern Cape (Figure 3.14), any potential to produce high-value fruits and vegetables that match the demand for quality of domestic supermarkets and international markets is constrained. Time, damage, and uncertainty all act as a form of tax on potential production. Outside of agriculture, these costs also help to explain the lower prevalence of manufacturing in rural former homelands versus other rural areas of South Africa. As captured by Figure 3.19, infrastructure shortfalls appear most prevalent in the former Transkei region of the Eastern Cape, parts of the former Bophuthatswana region of the North West Province, and regions of KwaZulu-Natal. The infrastructure gaps for these areas are compounded by their large size and disconnected geography. Although road connectivity is poor within former homeland areas within Limpopo, these areas are less disconnected from surrounding areas with denser infrastructure networks and are located on high-traffic international corridors.

The underlying reasons for these infrastructure shortfalls and the resulting lack of connectivity to the rest of the South African economy were discussed in the previous chapter. Premature load bearing within the country's decentralization framework together with collapsing state capacity can help to explain why these types of infrastructure shortfalls persist. In the case of former homelands and the presence of communal land ownership and traditional governance, there is an additional layer of challenge in land use and permitting. This adds some complexity to the situation, but it is municipality governments that have had authority and responsibility for local roads and water planning. As discussed in Chapter 2, preferential procurement frameworks can create intensive challenges in areas such as the rural former homelands because a limited pool of building contractors leads to poor quality construction and state resources channeled to "tenderpreneurs" at the expense of effective infrastructure development.

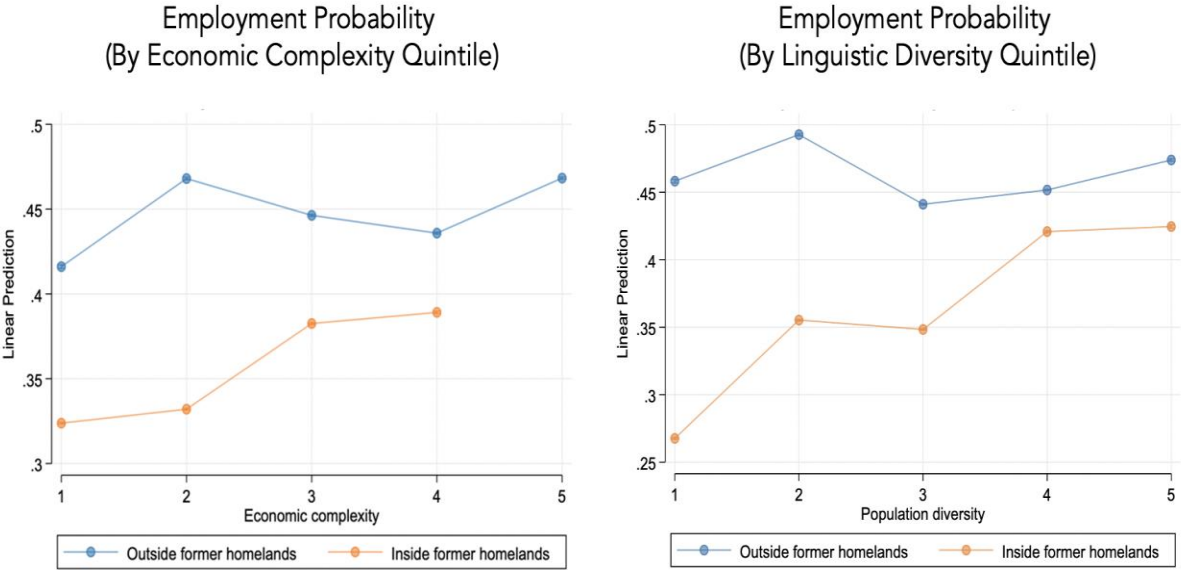
Knowhow Connectivity

Beyond physical infrastructure connectivity, bridging knowhow between rural former homelands and the rest of the South African economy is critical. Even for areas of rural former homelands that are relatively more connected, employment rates remain extremely low. This indicates that physical connection is not enough; what is missing from the system is the knowhow to employ factors of production in the rural former homelands. Knowhow – or tacit knowledge – reflects the aspect of technology use that cannot be transferred simply access to the tools themselves (i.e., machines or software) or the written knowledge of how to use them (i.e., owner's manuals). Putting technology to use requires expertise that is gained through experience. This is true for any technology, and it is also true for the production of goods and services. Competitive production of goods and services requires not only the use of a range of technologies but also knowledge of markets, suppliers, and a large range of built-up expertise. Given the sophistication of the South African economy – including its commercial agriculture sector – it makes sense that knowhow would be the limiting factor that prevents former homeland areas from integrating with the rest of the economy even after infrastructure connectivity improves. Physical connectivity makes bridging knowhow easier, but this process is not automatic.

When areas of former homelands do gain the ability to participate in the same industries as surrounding areas, they begin to catch up, and this seems to require the mixing of

companies and people. A strong indication of this reality comes again from Lochmann (2022), which shows that when municipalities converge in either their economic complexity, which is a measure of economic diversity based on their industry composition, or in linguistic diversity, employment outcomes tend to converge with the rest of the country (Figure 3.20). Thus, in addition to improving physical connectivity of rural former homelands, strategies that actively work to bridge productive knowhow between places are essential. We find that the most direct mechanism of knowhow transfer – investment by companies outside of rural former homelands in expansions within former homelands – is limited. Direct investment is rife with risks and uncertainties, including due to systems of communal land ownership. However, we do find that there are other mechanisms for bridging knowhow that are occurring at a limited scale and in limited cases. These operate through business partnerships between competitive companies outside former homelands and firms, entrepreneurs, and communities within the rural former homelands. Klinger *et al.* (2023) explore how partnerships have emerged in select cases in the space of commercial agriculture in South Africa using a range of organizational designs and how these overcome prevailing constraints. We also find signals that these models could scale significantly and pave a path to fully overcoming constraints to direct business investment with time.

FIGURE 3.20: EMPLOYMENT PROBABILITY BASED ON ECONOMIC AND LINGUISTIC DIVERSITY



Source: Lochmann (2022) using the National Income Dynamics Study (NIDS) panel.

3.3.2 Partnerships as an Opportunity for Bridging Knowhow

Partnership models have emerged to overcome the challenges of investing in the context of communal land. Communal land in South Africa is typically governed by traditional authorities. This does not mean that there is not a land market, but it does mean that land markets operate differently and are disconnected from national systems, including the legal system and the financial system. Properties have locally provided “permission to occupy” (PTO) rights but do not have legally binding land titles and are thus not recognized by the formal banking system. This can be problematic for local startups that may struggle to access capital, which is an important problem, but it is not necessarily a constraint when local entities partner with outside commercial entities. In the long-term, increasing land titling and more effective interaction between communal land governance and national systems should be a strategic priority, but in the shorter-term partnerships have shown an ability to bridge knowhow despite this constraint. Such partnerships could even pave the way for innovations that bridge formal and traditional systems.

Partnerships between commercial agriculture companies and communities in rural former homelands provide examples of what is possible and reveal constraints that must be overcome for models to scale and duplicate. Klinger *et al.* (2023) explore three distinct cases of organizational models where commercial agriculture businesses (Wiphold, Amadlelo, and Zamkulele) have partnered with communities to the sustained benefit of both parties. The commercial entities expand their operations by utilizing the land and latent comparative advantages of the communities, while the community members benefit through income streams, jobs, and the learning-by-doing that occurs as knowhow is transferred. However, these partnerships face numerous challenges, many of which they are still actively working to overcome. Each of these three partnerships has developed iteratively as both parties contributed to developing organizational structures and tools that met their context. This resulted in different approaches to property frameworks, governance structures, risk-sharing approaches, and a range of other dimensions summarized in Figure 3.21. These partnerships are nascent and scattered, but they could become a larger tool for bridging knowhow across space, both within the agriculture sector and in other areas. Scaling successes, however, requires wrestling with the constraints faced by these and other initial examples.

FIGURE 3.21: DIFFERING ORGANIZATIONAL MODELS OF AGRICULTURE PARTNERSHIPS

Summary chart

	 AMADLELO AGRI <small>TOGETHER WE GROW • TOGETHER WE REAP</small>	 WIPHOLD	 ZAMUKELE <small>PART OF THE SCHOEMAN GROUP</small>
Property framework with the community	Shared property between Private Party and community at holding and company level	Shared property of the operating company	No property sharing as it is an out-grower model
Governance	Board of trustees with a majority for the community while Amadlelo's management make everyday operational decisions	Wiphold oversees both strategic and operational decisions	Local farmers in full charge of strategic and operational decision only advised by Zamukele
Plot consolidation	Communal land owned by the community consolidates in a single plot	Communal land owned by the community consolidates in a single plot	There is no plot consolidation, each farmer operates its plot by its own
Compensation to local community	Land lease linked to fixed sum and dividend distribution based on the operation performance	Land lease linked to fixed sum and cash distribution following a performance score	Farmer's individual profits on its operation
Trust building	By making decision process transparent and including the community in it as well as payment of fixed rent	By paying a fixed rent to farmers plus using own money to honor that guarantee	Based on knowledge of Schoeman in the area
Risk sharing between private party and local community	Farmers reduce risk by sharing it with private party and by receiving a fixed compensation for land use	Farmers reduce risk by sharing it with private party and by receiving a fixed compensation for land use	Farmers reduce risk by rolling over with private party their debt obligations
Risk sharing between communities	There is risk sharing between subsidiary companies through Amadlelo shares in subsidiaries, but local communities absorb the impact of the performance of their company in their community	Significant, since all communities are part owners of the single company in charge of CMAI, but cash distributions may have a penalty in individual landowners according to performance of each plot	None, since each farmer is responsible for its own operation
Involvement of community in farming activities	Large share of employees work directly in dairy farms in core chores	Communal landowners perform non-core farming chores	Local farmers oversee production decisions and crop management and hire farm contractors on their own, assisted by Zamukele
Knowhow diffusion	Significant as local communities employed in its different operations climb in the company's organizational chart	Even though Wiphold executes a training program for the local community there is little "learning by doing" of farming chores	Significant as farmers adopt not only a new crop, but also a management approach that relies on data
Technological upgrade	Significant as private partner brings in machinery, know-how and management skills	Relevant as through consolidation allows for mechanized extensive agriculture	Significant in terms of commercialization, financing and the use of digital apps
Profitability	Profitable for both, private party and community	Farms are not profitable after 7 years of operation	Profitable for both, private party and community

Source: Klinger *et al.* (2023).

Klinger *et al.* (2023) identify four key challenges faced by these partnerships. First, building trust is critical yet difficult. Second, there are massive information asymmetries that companies and communities face in finding one another and establishing organizational structures that work. Third, technology transfer is difficult. Fourth, partnerships must manage many risks, and climate risk is a particular challenge for agriculture partnerships. The ways in which the partnerships are tackling these challenges provide important lessons.

- Mechanisms to build trust at scale:** Trust building at scale is pivotal in the execution of such large-scale initiatives. In the beginning, there is natural mistrust, and it tends to take a lot of time and money to build trust naturally. Trust emerges from familiarity and repeated interactions, and can be facilitated by mutually trusted third parties, so mechanisms to build trust at scale focus on reliable intermediaries sharing past experiences (both successes and failures). This could take the form of universities and NGOs studying partnership experiences and sharing them with communities and corporates in conferences and publications, or by the public sector sponsoring study tours for both community leaders and potential corporate partners. Generating trust takes much more than an attractive sales pitch, but rather a credible track record.

- **Creating a market between communities and farms:** The concept of creating a market for partnerships between communities and commercial agriculture provides a promising avenue for bridging knowhow at a greater scale, as today these partnerships are few and far between. The marketplace is an important part of what allows the franchising sector to work, as companies and franchisees can find one another and follow an established roadmap for operations. In a marketplace for partnerships, communities with idle or underutilized land would be presented with a variety of proposals and potential partners, such that they can match their community's goals and constraints with the right partner. Likewise, corporate agriculture seeking to partner with communities would have mechanisms to express this interest to a wide set of potential partners and connect with those that are most interested in their proposition. Both sides of the market would have access to information on the track record of the other party. Without such a market, matching between communities and commercial agriculture is very time-consuming and will fail to reach a relevant scale.
- **Transferring technology to smaller farms:** Transferring technology to smaller farms is an essential part of establishing competitive operations, but it is infamously difficult. Government-led extension has limited scope and impact in helping farmers to compete in a highly competitive landscape. Public extension is likely better suited to improving the productivity and resilience of the smallest farmers and in a narrow range of products. The corporate sector, on the other hand, can enable technology transfer in a broad range of areas through the operations of joint companies. In the partnerships studied, this technology transfer is an integral part of the partnership, as the closer partnership ties allow more focus on transfer than is possible in traditional out-grower models. There is a degree of trial and error in technology transfer in these partnerships, which requires that companies take a long view of the partnership as an investment, which will take years to generate returns.
- **Reducing the risk through parametric climate insurance:** Partnerships are full of risks. As Figure 3.21 shows, the cases studied have developed approaches not only to share risks between communities and outside companies but also to share and manage risks between communities. In agriculture, climate risk is a growing problem. Each of the partnerships studied is facing climate risk but without an adequate response. On this

challenge, there is a tool that has been developed and utilized in other countries in parametric climate insurance. This type of insurance uses predefined weather events to trigger payouts, rather than assessing actual damage. This has benefits for hard-to-reach insurance markets. Given South Africa's highly developed financial sector, this is a tool that could be applied in South Africa.

There are pathways for these types of partnerships to expand in scale by leveraging agents of change. Following the study of these agriculture partnerships, the Growth Lab conducted an exploration to see if similar partnerships could be found in other sectors and what local conditions could explain where partnerships are found. Despite their limited scale and impact today, the partnership approach could significantly impact the economic trajectory of rural former homeland areas where they operate and pave the way for more complete integration into the national economy. Key to the expansion is leveraging “agents of change” – organizations that have already emerged to spur partnerships or that could be leveraged to do so in the future. Several types of agents of change are discussed below.

- **Traditional Authorities and Local Governments:** Both formal and traditional local authorities can play crucial roles in spearheading these changes. By leveraging their influence, resources, and relationships, these authorities can serve as agents of change within their communities, catalyzing efforts toward economic development. Enabling productive access to land and promoting infrastructure development are both essential elements in this approach. Access to land allows for a variety of productive activities, while infrastructure is crucial for supporting these activities and ensuring their sustainability. Traditional governments tend to have more authority over land whereas local governments (municipalities) tend to have control over infrastructure. Traditional governments can be the most effective agents of change when local leadership and governance are aligned toward the goal. An example of a community that develops partnerships is the community of Matsila in Makhado Municipality in Limpopo. Through its Matsila Community Development Trust, the community owns enterprises in agriculture, meat processing, tourism, and energy generation, among others. In the formation of these enterprises, the community partners with outside entities, including commercial agriculture entities located nearby to utilize their supply chain infrastructure and gain expertise. The Trust has proven able to drive change and seek out partners that

are consistent with its vision and business opportunities that it identifies. As it has gained experience, it is considering new ventures ranging from banking to supermarkets.

- **Facilitators:** Given the challenges in communities and companies in finding one another, developing organizational models that work in their context, and building trust, facilitating entities have emerged as important agents of change. Such entities can help with matching, share models and lessons across partnerships, and can serve a role in trust building if they are viewed as trusted and impartial third parties. Two distinct types of facilitators are worth noting based on current practice in South Africa. The first type of facilitator serves the role of partnership advisor. By working across geographies on many partnerships, such entities develop expertise and a proven track record. An example is the Vumelana Advisory Fund,⁸ which is a non-profit organization that assists communities in the structuring of commercial partnerships between investors and local community groups. Vumelana reports have concluded 23 projects in 18 communities. Many of these projects are in high-value agriculture products, but partnerships also include tourism enterprises, other natural resources, and local energy generation. Another type of facilitation occurs through locally based NGOs. These entities are not positioned to serve the same matching and knowledge-sharing roles as partnership advisors, but they can be powerful in establishing trust and helping partnerships solve problems in the places where they are located. One example of this is the Bulungula Incubator, a non-profit located in a remote area of the Eastern Cape. Enabling partnerships is not the central focus of the Bulungula Incubator, but the non-profit itself runs a lodge and has been approached to serve as a trusted third-party intermediary in opportunities ranging from lemongrass production to exploring renewable energy generation opportunities given the wind resources of the area. However, aside from building trust, such entities are not able to provide the full range of support as facilitators that partnership advisors are.
- **Universities:** Universities, especially public universities in former homeland areas, are well positioned to play a larger role in supporting partnerships. As centers of knowledge and research with access to resources and deep local connections, existing programs and new university-based initiatives could play a similar role to partnership advisors. Additionally, universities can leverage their physical space and networks to help create

⁸ See <https://www.vumelana.org.za/>

markets for partnerships. Universities commonly play such a role in supporting entrepreneurship, business incubation, and industry-related research. South African universities could also play a pivotal role in jumpstarting partnerships and serving as a public source of knowledge about what works. Moreover, an impartial analysis of corporate and community track records would go a long way to building trust between the two. Finally, universities could play important roles in enabling technology transfer.

- **National and Provincial Governments:** Higher levels of government can facilitate these partnerships, and possibly play a more active role in creating or partnering with already existing agencies and facilitators. Governments could develop their own partnership advisory services, building on the innovations of the non-profit entities that have emerged. They could also serve the goal indirectly by providing resources to the agents of change listed above. Government resources may be especially useful in helping to establish markets for partnerships, through such approaches as national exchanges and conferences, study tours, and online resources to help communities and companies find one another.

Efforts to expand partnerships would be complementary to improvements in connecting infrastructure. When communities are better connected to surrounding economies and productive ecosystems, their potential opportunities can increase exponentially. In the example of the Matsila Community Development Trust provided above, foundational businesses in fruit and vegetable production and high-end tourism would not be viable in communities much more disconnected from surrounding economies and transportation corridors. By contrast, the community of Bulungula, where the Bulungula Incubator operates has ventured into lemongrass production, a product that can more easily withstand long travel distances without refrigeration and benefits from backpacker tourism as opposed to high-value tourism. But increasing physical connectivity merely increases the opportunity set for partnerships. Most reasonably well-connected former homeland areas have not capitalized on partnerships and continue to have very limited economic opportunities. Thus, there is considerable potential to scale the success of partnerships with very little need for national budgetary resources.

Connecting infrastructure requires not only strengthening state capacity but also sufficient fiscal resources and focus on connecting rural former homelands. Chapter 2

summarizes the path to strengthening state capacity as needing to leverage, unburden, re-centralize and distribute, and protect capacity. In terms of road connectivity, unburdening procurement is especially important as the focus should be on building quality roads with efficient use of fiscal resources. Within a process of re-centralizing responsibilities, where more of the buildout and maintenance of roads may be moved to SANRAL (reflected in South Africa's National Infrastructure Plan 2050), deficiencies in paved road connectivity of rural homelands could be prioritized in how resources are allocated. This would provide a chance for South Africa to reverse a pattern of worsening road quality under the current institutional arrangement that currently depends on national, provincial, and municipal road authorities. By centralizing responsibilities such that technically capable teams can be structured and then allocating spending on high-need areas, South Africa has the potential to better connect and include rural former homelands.

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