

South Africa: National Urban Policies and City Profiles for Johannesburg and Cape Town

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Executive Summary

Two-thirds of South Africa's population live in urban areas. This is one of the highest proportions in Africa, reflecting the long history of mining and industrialisation. The pace of urban growth has fallen in recent years, which makes it more manageable. Urbanisation has always been highly contentious and posed dilemmas for successive governments. During much of the 20th Century, it resulted in draconian controls on people's movements and forced removals in pursuit of racial domination and segregation (apartheid). A widening economic gap between urban and rural areas was one of the outcomes, creating pent-up migratory pressures. A fragmented urban form was another effect, with damaging psycho-social, economic and environmental consequences. Fractured cities create poverty traps on the periphery, favour road-based private transport, and undermine agglomeration economies. Today, SA cities are among the most unequal and visibly divided in the world, with some of the most affluent and liveable neighbourhoods alongside some of the most squalid, unhealthy and dangerous. Continuing anti-urban sentiment across government and society has also obliged many people to live in informal settlements and backyard shacks, and to retain a foothold in both urban and rural locations, thereby living a double life of circular migration.

The post-1994 democratic government has been committed to universal human rights and redistributive social policies. However, spatial patterns have not received much overt attention because territorial issues are politically sensitive and complicated to address. There has been no support for a national spatial strategy and no pro-active policy to anticipate and prepare for urbanisation. This neutral stance has avoided the serious social damage of the past, but little has been done to help migrants escape poverty and hardship, or to reverse the legacy of racial segregation and dispossession. Most land is in private ownership (except in tribal/traditional areas) and transactions occur predominantly through the market. The spatial planning framework is essentially reactive and exerts limited influence over public and private investment decisions. Land-use planning powers are control-oriented, rather than geared to making things happen through positive action, e.g. through making serviced land available for affordable housing. Parallel planning systems exist for housing, transport, infrastructure, health, education, the environment and industrial development. Additional complications stem from the overlapping mandates for national, provincial and local spheres of government.

Consequently, the inequitable form of urban settlements has been reproduced rather than reshaped. Informal housing continues to grow in inhospitable locations as population growth outpaces formal house-building. A relatively passive policy in relation to the urban land market has meant limited provision of low cost housing in good locations. Much formal housing reproduces the old style dormitory townships. In addition, the government has not promoted economic development in cities and investment in their infrastructure as vigorously as in many other countries. The situation is beginning to change as urban challenges and opportunities move up the national agenda. The cabinet approved an Integrated Urban Development Framework in 2016, although it has had little influence as yet. Meanwhile, a spike in urban land invasions by disgruntled communities in many cities and towns during 2018 has forced the state to review the way it deals with land reform and redistribution. A constitutional amendment to permit expropriation without compensation is currently being considered by the ruling party.

The post-apartheid government inherited extreme inequalities in education as well as in income and wealth. The education system is a shared responsibility of national and provincial (regional) government, with policy mainly determined nationally and implemented by the provinces. National government is also responsible for regulating the private education system. The state invests more in education than in comparable countries and achieves reasonable levels of school enrolment. However, the quality of educational outcomes is generally very poor and inequalities are extremely high. A small group performs well but the vast majority perform very badly. The inequalities are shaped by class, race and location. Put simply, the former white suburbs tend to have good schools and good outcomes, while the townships and rural areas have poor schools and poor outcomes. Many of the provinces struggle with poor administrative capacity and mismanagement of resources. Many of the cities suffer from resource allocation lagging behind population growth.

The health system is also a shared responsibility of national and provincial government, with policy determined in a complex manner at national and provincial levels, opening space for some local sphere activity. Implementation is mainly the responsibility of provinces. In addition, municipalities are responsible for selected non-clinical services, such as environmental health and sanitation. Some of the bigger metros, such as Johannesburg and Cape Town are also responsible for primary healthcare and emergency services. National government is responsible for regulating the sizeable private healthcare system, which mainly serves affluent households and communities. Funding in the public system tends to flow from national to provincial and municipal levels. Many of the cities suffer from resource allocation lagging behind population growth. The public health system is under enormous pressure with the growing burden of disease, including HIV and Aids, TB and non-communicable diseases. Health inequalities are extremely large. The private health system plays a bigger part in the cities than elsewhere but is still only serves a fraction of the population.

Johannesburg is South Africa's largest and fastest-growing city, with high levels of domestic and foreign in-migration. It is marked by extreme social and spatial inequalities. The spatial mismatch between housing and job opportunities is a serious challenge, with the largest and highest density townships located on the urban periphery. The urban form reinforces these inequalities through high levels of securitisation, controlled street patterns, enclosed shopping malls, gated office precincts and business parks, and enclosed townhouse developments and up-market residential estates. Poor connectivity worsens the problem because of traffic congestion and a dysfunctional public transport system. The inner city is under intense social pressure as the most accessible location in the metropolitan area, but suffers from decaying infrastructure, old buildings and low levels of private sector investment, coupled with volatile social attitudes including xenophobia.

Cape Town is South Africa's second most populous city after Johannesburg. It is also marked by extreme social and spatial inequalities, and is probably the least transformed city in the country since 1994. This is partly because of the topography and physical form of the city, with affluent suburbs surrounding Table Mountain and adjoining the coast, while low income communities are generally confined to the low-lying Cape Flats. Areas in and around the central city have benefited from its unique location and proximity to a cluster of diverse service industries and amenities, including financial and business services, tourism and leisure, high order government functions and higher education. The areas of strongest population growth include the coloured and black African townships on the Cape Flats, along with a range of informal settlements dispersed around different parts of the city. These neighbourhoods suffer from inaccessibility to jobs, inadequate infrastructure, high crime,

poor liveability and poor quality education, healthcare and social services. Local authorities in Cape Town and Johannesburg have made many plans to create more compact, sustainable and integrated cities, but they have had little impact on structural problems of chronic poverty and socio-spatial inequality.

1 National Policy Frameworks

1.1 Urbanisation and urban policy in South Africa

South Africa is one of the most urbanised countries in Africa, reflecting its long history of mining and industrialisation. However, the rate of urbanisation is lower than it is in most other African countries, which makes it more manageable. Urbanisation has always been highly contentious in the country and posed dilemmas for successive governments. During much of the 20th Century, it resulted in draconian controls in pursuit of racial domination and segregation. Until 1994, state restrictions on people's movements and forced removals had devastating impacts. A widening economic gap between urban and rural areas was one of the outcomes, creating pent-up migratory pressures. A fragmented urban form was another effect, generating harmful social, economic and environmental consequences. Fractured cities create poverty traps on the periphery, favour road-based private transport, and undermine agglomeration economies. Today, SA cities are among the most unequal and visibly divided in the world. Anti-urban sentiment has also obliged many people to retain a foothold in both urban and rural locations, and to live a double life of circular migration.

The institutionalised iniquities of apartheid were abolished two decades ago when a democratic government committed to universal human rights and redistributive social policies was elected. Spatial patterns have not received much overt attention because of the desire to treat different places even-handedly and because territorial issues are politically sensitive and complicated to address (Todes and Turok 2018). There has been no overarching national strategy to tackle spatial distortions, and no pro-active policy to anticipate and prepare for urbanisation. This neutral stance has avoided the serious social damage of the past, but little has been done to help migrant populations escape poverty or to reverse the legacy of segregation. Most land is in private ownership (except in tribal/traditional areas) and transactions occur predominantly through the market. The spatial planning framework is essentially reactive and exerts limited influence over public and private investment decisions (Turok 2014). Land-use planning powers are control-oriented, rather than geared to making things happen through positive action, e.g. through making serviced land available for development. Parallel planning systems exist for housing, transport, infrastructure, the environment and industrial development.

Consequently, the inequitable form of urban settlements has been reproduced more than reshaped. Informal housing continues to grow in inhospitable locations as population growth outpaces housing production. A relatively passive policy in relation to the urban land market has meant limited provision of affordable housing in good locations. In addition, the government has not promoted economic development in cities and investment in their infrastructure as vigorously as in many other countries. The situation is beginning to change as urban challenges and opportunities move ineluctably up the national agenda. For example, the cabinet approved an Integrated Urban Development Framework in 2016. Meanwhile, a spike in land invasions by disgruntled groups in many cities during 2018 has forced the state to review the way it deals with land reform, redress and redistribution.

The purpose of this section of the report is to review the history and character of urbanisation and urban policy. There is a particular focus on the triangular relationship between urbanisation, economic development and social inequality because this has been an enduring bone of contention in government policy towards cities. There are two parts: The first discusses the controversial history of urban growth and the way it was shaped by state

policy. In short, an extremely pernicious system of racialized and spatialized inequality was created. Recent efforts to undo this system have been half-hearted rather than thoroughgoing, failing to address the deep-seated character of socio-spatial divisions within cities. The second part explores the impact on current patterns of poverty and development and the challenges involved in reversing this legacy to create more equitable and efficient cities.

1.1.1 The history of urbanisation

SA urbanised earlier than other parts of sub-Saharan Africa because of its distinctive economic history of mineral extraction and associated industrialisation. In the late-19th century, it was still a sparsely populated territory with a largely agrarian society, but with a few pockets of enormous industrial dynamism emerging. These localities became powerful drivers of growth with multiplier effects across the whole region. There were far-reaching social consequences as large quantities of labour were suctioned from the wider sub-continent. The urban and the national population both rose rapidly during the 20th century, and the number of urban areas increased more than tenfold. The urban share of the national population increased from under a fifth in 1911 to well over half by 2001 (Baffi et al 2018).

Urbanisation accelerated during the first half of the 20th century and then slowed down until the 1990s. The main explanation is that rapid industrialisation during the first period drove rural residents to migrate towards the cities in search of improved livelihoods. The growing black African urban population created an adverse reaction from the ruling white minority population, which resulted in intensified state action to restrict further urbanisation. Although these controls did not halt the process, they slowed it down, particularly at the height of apartheid, between the late-1950s and early-1980s. The human consequences were devastating, as shown below.

SA's experience of urbanisation is unusual in several respects. Early on there was extensive government action to encourage a particular form of rural–urban migration, described as temporary, circular or oscillatory. This was later reversed, and punitive restrictions were imposed on most people moving to the cities. A wide range of policy instruments, laws and institutions was used to control household mobility, including racially-discriminatory restrictions on:

- people's ability to own land;
- their ability to live where they wished;
- their ability to secure employment; and
- their access to education and training.

The late 19th and early 20th centuries

Urbanisation in the late 19th and early 20th centuries was linked to industrialisation and based on the exploitation of mineral resources. It was stimulated by the discovery of diamonds in the interior of the country in 1867, followed more dramatically by gold in 1884. The resulting 'Mineral Revolution' (Yudelma 1984) stimulated rapid industrialisation and large-scale national and international migration, particularly to the Witwatersrand. Within a decade, this was the largest gold-producing region in the world (Harrison and Zack 2012). The region is now called Gauteng and is centred on the country's largest city, Johannesburg. Accelerated urbanisation was bound up with SA's swift economic progress, catalysed by the gold mining industry.

The mining boom required an extremely large workforce to be assembled very quickly. Mining output grew rapidly but was repeatedly held back by labour shortages (Wilson 1972). Creating a bigger workforce through in-migration had profound ramifications, including transforming SA from a patchwork of agrarian states to a unified industrial nation with a strong political centre in the early 20th century.

Mining stimulated industrialisation and urbanisation in various ways. Excavation of deep deposits required machinery, credit and a large workforce. It led to the growth of major corporations, such as Gold Fields and Anglo-American. It also sparked a wide range of support industries, such as chemical explosives, metal manufacturing, building materials, engineering, electricity production and financial services (Harrison and Zack 2012). Gold mining remained the engine of growth for decades, and was responsible for SA's economy overtaking that of most other colonies and former colonies (Nattrass and Seekings 2010). In 1944, SA produced 40% of the world's total gold output, and, by the peak of production in 1970, it accounted for 78% of global output (Harrison and Zack 2012).

Large-scale population shifts were essential to the mining boom. Early on, most labour came from the native African states and Mozambique on a temporary basis, establishing the tradition of circular migration that became hugely significant later on (Wilson 1972). But this voluntary system was not reliable enough to provide the armies of low-wage workers required. Creating a growing workforce became a major objective of the mining companies, actively supported by the colonial government. There would never have been a successful mining industry otherwise. In other words, urbanisation was not just a consequence of industrialisation, it actually fuelled the process. The mining houses invested in various schemes to attract workers for longer periods and from further afield. They built large residential compounds with hostels built of iron and wood to keep workers on site. These closed complexes offered food and accommodation, but were also notorious for disease, malnutrition and squalor.

Cape Town and Durban experienced different urbanisation dynamics because their economies were distinctive. Durban has always been the largest trans-shipment point for exports and imports to the interior. It lacked the administrative functions of the other cities, so its growth was based on transport, manufacturing and commercial activities. As a major port, Durban was the logical place to establish ship repair facilities and industries that depended on imports, such as chemicals, food and drink, paper, printing and engineering (Freund and Padayachee 2002).

Cape Town thrived as the economic and administrative hub of the Cape Colony, and then as the legislative capital of the country. It had diverse logistics, manufacturing, cultural, media, educational, property, financial and tourism activities (Bickford-Smith et al 1999). Textiles and clothing were particularly important. Cape Town also prospered with the head offices of large companies in retailing, financial services, business services and oil refining.

Mining had a profound influence on social and political dynamics, including the draconian apartheid system of legalised racial discrimination and subjugation. This influenced urbanisation for a century through various forms of socio-spatial engineering. One feature was the 'pass' system, a means of population registration which required blacks to carry permits (Turok 1994). It was designed to discourage workers from breaking their employment contracts and controlled the movement of black Africans to urban areas ('influx control').

The desire of white politicians to restrict the mobility of the black population came into increasing conflict with economic pressures to expand the supply of cheap labour. Allowing transient migrant labour was a compromise, with black workers forced to bear the costs of this dislocation. Mining corporations benefited because workers' families were left in the rural areas to carry on farming, which moderated their wage requirements and the employers' costs of workforce reproduction (Wilson 1972).

Urbanisation after World War II

Efforts to impose racial separation intensified after 1945, when apartheid became official government policy. The consequences were pervasive, including a hostile anti-urban regime. Apartheid emerged partly because the previous laws could not restrict black urbanisation. Leaders were paranoid that white settlements would be inundated by black Africans. The governing National Party was desperate to avoid the black urban population overtaking whites so that they could stay in power with a semblance of legitimacy (Terreblanche 2002). As urbanisation continued, their policies became more convoluted and influx controls more coercive. They asserted that SA did not comprise a single nation, but was made up of four distinct racial groups—black Africans, coloureds, Indians and whites. These were split further into 13 territorial 'nations' or racial federations. New laws and a large state bureaucracy paved the way for 'Grand Apartheid', centred on entrenching racial segregation by compelling people to live in different places defined by race. This covered different regions of SA and different neighbourhoods within urban areas (Terreblanche 2002).

The first pillar of Grand Apartheid was the 1950 Population Registration Act, which formalised racial classification and introduced an identity card for everyone over 18. The second pillar was the 1950 Group Areas Act. This prescribed the racial composition of every residential area and was used to justify forcibly removing people who lived in the 'wrong' area, with little if any compensation. The 1951 Prevention of Illegal Squatting Act allowed the state to demolish people's homes without a court order. Informal settlements had swollen in the previous two decades with accelerating urbanisation. The 1951 Native Building Workers Act and Native Services Levy forced white employers to pay for building houses for essential black workers who were allowed to stay in the cities. The 1953 Reservation of Separate Amenities Act prohibited people of different races from using the same public amenities, such as buses, hospitals, schools and beaches.

These laws were driven by parochial interests and bigoted ideologies, and their human costs and consequences for the economy and society were ignored. As long as businesses could benefit from cheap labour, they did little to oppose these unjust and pernicious arrangements. In due course, there was a heavy price to pay for depriving the bulk of the population of access to decent education, training, health and other facilities. In the cities, black Africans were also denied the opportunity to earn a living by starting their own business. Such restrictions have left a legacy of low rates of formal business formation and high rates of failure (OECD 2011). They also inhibited the entrepreneurial dynamism and accumulation of diverse skill-sets normally associated with dense agglomerations.

The 1951 Bantu Authorities Act created separate government structures for black and white citizens. It supported separate development in rural areas, called 'homelands', or 'Bantustans'. These consolidated the native reserves inherited from the colonial era. The 1958 Promotion of Black Self-Government Act entrenched the policy of nominally independent Bantustans, with some devolved administrative powers and funds to

encourage industrial decentralisation in order to offset migration to the cities. But most of these areas had virtually no economic base or resource endowments of their own and ended up with too few qualified educators, police, health workers and other public servants (Makgetla 2010). Severe underinvestment in infrastructure left them with inadequate transport, communications, power and irrigation for agricultural producers and manufacturers.

The 1967 Industrial Development Act imposed restrictions on industrial development in the 'white' cities and towns so it could be redirected to the Bantustans. Again, the intention was to reduce rural-urban migration. The generous financial inducements had some success, particularly in attracting foreign clothing and textile manufacturers to select towns in KwaZulu-Natal (such as Isithebe) and the Eastern Cape (such as Butterworth and Dimbaza). The 1970 Black Homeland Citizenship Act removed citizenship from black people living in SA so they became citizens of one of the ten Bantustans, according to their ethnic group. The malicious intent was to secure an apparent demographic majority of whites and reinforce the comprehensive exclusion of non-whites. Only black Africans with formal jobs were allowed to reside within the cities, and they had to work as foreign labourers on temporary work permits. The government also tightened the degrading pass laws, compelling blacks to carry identity documents in an effort to prevent unwanted migration. Many people who had never lived in their 'homeland' were still forcibly removed to these territories.

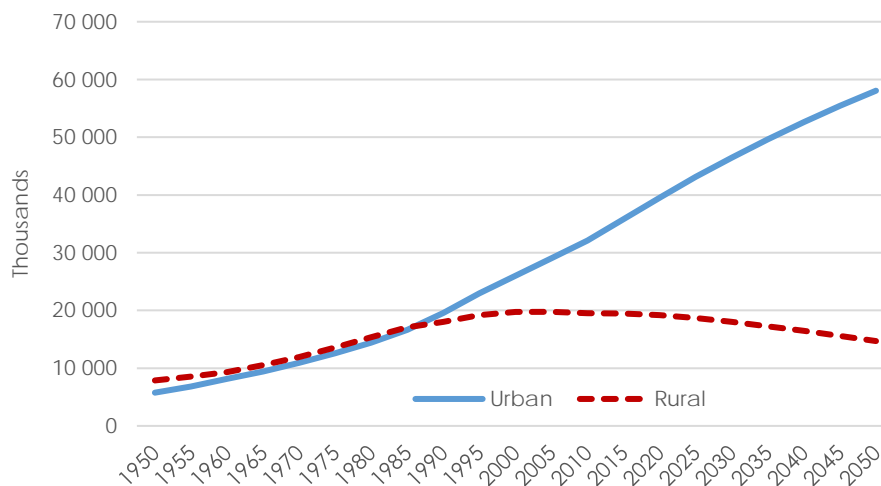
A brutal policy of 'resettlement' forced the expulsion of between two and three million people to their designated urban 'group area' or rural 'homeland' between the 1960s and early 1980s (Turok 1976; Terreblanche 2002). They included people relocated due to slum-clearance programmes, labour tenants on white-owned farms and 'surplus people' (or 'idle blacks') from urban areas. The number of arrests for pass-law offences increased to about 750,000 a year by the mid-1960s, indicating how seriously the system was enforced. The state also redirected its modest housing budget from cities to the homelands in order to 'encourage' people to move (Murray 1987). Put simply, the migrant labour and homeland system provided a cheap, controlled workforce for the economy but the very opposite of a cohesive or contented society.

Estimates suggest that the population of the Bantustans increased from three million in 1946 to 11 million in 1980 (Terreblanche 2002; Murray 1987). Their share of the total black African population of the country also increased from about 40% to 53% over the same period, indicating the scale of forced redistribution. The increase included many farm-workers and labour tenants evicted by white farmers who were developing commercial agriculture with increased mechanisation. The Bantustan economies were only about 20% as productive per person as the main urban economies, so poverty was widespread. By the 1990s, there were few economic assets, poor natural resources, scarred ecosystems, incapable state institutions, deficient infrastructure, a weak skills base and few competitive enterprises. Soil erosion was serious because of over-grazing, and there was little practical support for small-holder farmers.

Figure 1 compares the urban and rural population trajectories between 1950 and 2050. The trends between 2018 and 2050 are projections. Looking back, the pattern shows unusual similarity between the rates of urban and rural population growth between the 1950s and 1980s. The country's rural-urban transition was effectively stalled during this period. (This is even clearer in *Figure 1* below). There has been no substantive research to analyse this phenomenon in detail, but it is presumably linked to government restrictions on urbanisation and forced removals. Urban economies and jobs were growing more

strongly during this period than in the countryside. One outcome was a growing misalignment between the geography of SA's population and its economy. The potent legacy is deep-seated spatial inequality and lingering resentment of the historically privileged 'white' cities.

Figure 1: Total population of urban and rural areas in South Africa, 1950–2050



Source: United Nations 2018.

In addition, there were important changes in the use of foreign labour in the mines. Increasing costs during the 1960s were met by using more foreign workers. They accounted for nearly 80% of the mining workforce in 1973 (Harrison and Zack 2012). However, political transitions in Mozambique and elsewhere prompted large-scale withdrawal. They were replaced by South Africans, rising in number from 87,000 in the mid-1970s to 333,000 in the mid-1980s. Higher wages, trade union recognition and deteriorating conditions in the homelands all played their part.

A spatial disconnection between population and jobs was also created within the cities through the expulsion of black families from well-located neighbourhoods. One of the largest forced removals occurred in Sophiatown, Johannesburg. It was one of the few urban areas where blacks could own land, and accommodated a burgeoning workforce because of its convenient inner-city location and cultural vibrancy. Despite a vigorous protest campaign, it was destroyed by bulldozers in 1955. Heavily armed police forced 60,000 residents out of their homes and took their belongings on trucks to a large tract of land 20km away, which subsequently became Soweto. This pattern was repeated in areas such as South End in Port Elizabeth, Cato Manor in Durban and District Six in Cape Town, where 55,000 coloured and Indian people were forced to move to new townships on the Cape Flats. Altogether nearly 600,000 people were forcibly moved under the Group Areas Act (Turok 1976; Terreblanche 2002).

The resulting spatial mismatch between jobs and homes was worsened by economic restrictions. Black Africans could not run businesses or professional practices in the cities without a special permit. Poor public transport meant long and exhausting journeys to work, which affected labour productivity and wage demands. Black people could not live or work in the cities unless they had employment. This restricted their ability to travel in search of

work, and limited the available labour supply for firms. It also reinforced the process of circular migration. Spouses and children had to live in the Bantustans, which damaged family relationships and responsibilities. People without valid permits were liable to arrest, trial and deportation for being illegal migrants. Companies that employed them were also prosecuted. Police with sticks and guns patrolled the city streets in a highly visible and aggressive manner during the night to round up people without passes, creating a hostile climate of surveillance and intimidation. The degrading and criminalising effects and violence of apartheid have also had an enduring legacy for social norms and behaviour (NPC 2012).

During the 1980s, the oppressive anti-urban regime began to break down for a range of economic and political reasons (Swilling et al 1991; Smith 1992; Turok 1994). Mining companies were looking to mechanise, which meant using a skilled, stable workforce, rather than unskilled migrants. Other employers became sceptical about many of the workforce restrictions, especially with the mounting economic problems and international boycott facing the country. Firms hired workers without registering them because the administrative burden was excessive. Even city councils run by the National Party were caught employing street cleaners illegally because of these complexities. Ordinary people increasingly disregarded the controls on urbanisation, thus accelerating migration and growth of informal settlements on unauthorised land. Hundreds of thousands came to the cities without the right stamps in their passbooks and spent much of their time dodging the police.

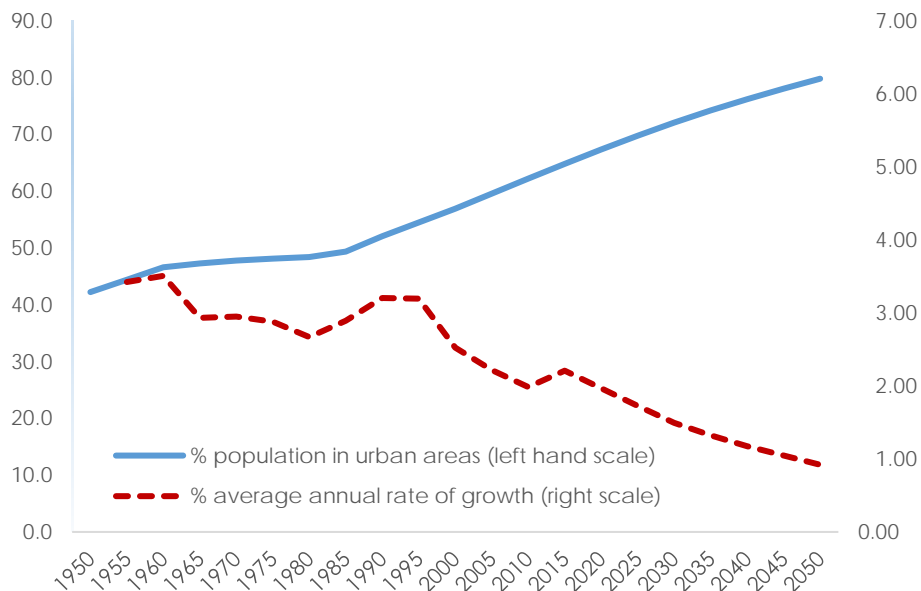
The state responded with a new approach called 'orderly urbanisation' (Murray 1987). It involved partial inclusion of blacks in the functional urban labour market but exclusion from the living environment, i.e., urban employers could benefit from their labour power while keeping them at arm's length from white suburbs. Bantustans were enlarged or created closer to the cities to absorb people forcibly relocated but who were still required as workers. This bizarre 'displaced urbanisation' sometimes coincided with the creation of new industrial estates on the urban fringe. The aim was to facilitate industrial growth whereby firms would not have to relocate to distant Bantustans and would be able to retain a sufficient workforce within daily commuting distance but beyond the physical extent of the city. For example, KwaNdebele was created in 1981 some 50 km north-east of Pretoria, but still accessible to the Roslyn industrial area, as long as bus subsidies made this long-distance commute affordable for low-paid manual workers (Murray 1987). The growth of Botshabelo and Thaba Nchu, linked to the homeland of Bophuthatswana some 50 km east of Bloemfontein, was similar in some respects. In Johannesburg and Cape Town, the state steered African settlement to new townships far from the city, such as Orange Farm and Khayelitsha.

Meanwhile, grassroots opposition was increasing and many townships were becoming militant and ungovernable during the 1980s. Most township residents boycotted their rent and service charges, which created a financial crisis for their municipalities (Turok 1994). Infrastructure began to collapse and living conditions deteriorated. There was growing domestic and international recognition that apartheid was untenable and unviable. The economic contradictions and social distortions of trying to stop urbanisation and promote separate development proved deeply flawed. A general state of emergency was declared in 1986, but this failed to stabilise the situation and conditions became more volatile. After the unbanning of political parties in 1990, and the release of Nelson Mandela and other political prisoners, there was a precarious four-year negotiated transition. This was marked by escalating civil unrest and political violence, often focused on fast-growing urban townships such as Kathorus (Bonner and Nieftagodien 2001). The 1994 democratic elections yielded a new government of national unity led by the African National Congress (ANC) and ushered in a period of unprecedented political stability.

Urbanisation after 1994

The pace of urbanisation accelerated during the 1980s as the official restrictions proved impossible to enforce. Influx controls were abolished in 1986, and the colour bar was lifted in 1988. Figure 2 shows that the average annual rate of urban population growth (the dotted line) increased between the 1970s and the early 1990s. The rural–urban transition resumed and boosted the share of the population living in cities and towns (the solid line). The tipping point when the urban population exceeded the rural population was crossed around 1986–87. Another feature of Figure 2 is the declining rate of urban growth since the mid-1990s. This may be attributable less to a slowdown in rural–urban migration than to an increase in the death rate associated with the problems of HIV/AIDS and tuberculosis. A final point about Figure 2 is the low rate of urban population growth compared with many other African countries, where it is 4–5% per annum. Urbanisation must be more manageable in SA than elsewhere.

Figure 2: South Africa's urban population and its growth rate, 1950–2050



Source: United Nations 2018.

Given SA's troubled political history, it is revealing to compare the changing racial composition of different parts of the country since the end of apartheid. Table 1 shows that the bulk of the national population growth between 2001 and 2016 was among black Africans. They are widely spread across the former Bantustans, commercial farming areas, secondary cities and the metros. Other racial groups are mostly located in the metros. Most growth occurred among black Africans in the metros and secondary cities. The population was more stable elsewhere. Although the cities are often perceived to be privileged and 'white', in reality Africans dominate numerically. This is important for electoral as well as developmental reasons, although the ruling party's attitude towards urbanisation is ambivalent (Huchzermeyer 2011; SACN 2011, 2016; Everatt and Ebrahim 2018). This may be a legacy of colonialism. Politicians interpret migration as an issue of security and safety and are inclined to criminalise and control mobile populations (Landau and Segatti 2013). This harks back to the previous era. It would be more constructive to see migration as providing

routes out of poverty by increasing access to opportunities, improving the supply of labour and skills, and facilitating all-round development and growth.

Table 1: Share of population group by region; 2001, 2011 and 2016

		Gauteng metros	Coastal metros	Secondary cities	Commercial farming	Mostly former Bantustan
African	2001	5 774 457	3 617 932	5 557 904	6 290 233	14 117 962
	2011	8 094 798	4 676 900	7 212 778	6 900 331	14 116 131
	2016	8 955 773	4 853 574	8 742 751	7 225 869	14 303 432
Coloured	2001	315 085	1 715 548	469 865	1 446 092	47 982
	2011	391 750	1 942 357	595 293	1 641 164	44 837
	2016	299 935	2 186 188	704 925	1 681 936	15 844
Indian & White	2001	1 700 512	1 653 172	931 558	992 925	137 460
	2011	2 048 635	1 713 026	1 153 315	1 059 893	179 353
	2016	2 370 677	1 741 945	873 897	819 951	118 369
Total	2001	7 790 054	6 986 652	6 959 327	8 729 250	14 303 404
	2011	10 535 183	8 332 283	8 961 386	9 601 388	14 340 321
	2016	11 626 385	8 781 707	10 321 573	9 727 756	14 437 645
Total (row percent)	2001	17.4%	15.6%	15.5%	19.5%	31.9%
	2011	20.3%	16.1%	17.3%	18.5%	27.7%
	2016	21.2%	16.0%	18.8%	17.7%	26.3%

Source: Census 2011, Census 2011, Community Survey 2016; authors' own estimates

The lack of pro-active planning and provision of land for low-income settlements in the cities often results in the poor occupying marginal, low-lying and environmentally-fragile areas (such as floodplains, waste ground and land vulnerable to subsidence). This endangers lives and local ecosystems. It also leaves an intractable problem to deal with in the future. The large (and chronically poor) African population remaining in the former Bantustans cannot be forgotten either. If migration to the cities was to accelerate, there would be a substantial requirement for additional infrastructure, housing and jobs. This does not justify deliberately neglecting to accommodate the expanding urban population. Better-planned urbanisation could generate the resources to fuel a virtuous process of development and avoid some of the pitfalls of haphazard urban growth (Turok and McGranahan 2013).

Not all urban areas are growing at the same rate. The Gauteng city-region has been growing faster in absolute and relative terms than the other large cities. Gauteng's population

increased by nearly 4 million between 2001 and 2016 (Table 1), at an annual rate roughly double the national rate. The OECD notes: “This rapid urbanisation has reinforced the spatial segregation instituted under apartheid” (OECD 2011: 17). One of the exceptions to this generalisation has been the occupation of some of the inner cities, particularly Johannesburg and, to a lesser extent, Pretoria. Pent-up demand for housing in the townships and pressure to live closer to economic opportunities have resulted in thousands of people occupying abandoned buildings, causing overcrowding and overloading services. Some of these buildings have since been converted to affordable rental accommodation, by both government agencies and the private sector.

1.2 Economic drivers of urbanisation

The main cause of rural–urban migration in SA is the same as elsewhere in the world, namely variations in economic opportunity. The cities have consistently outpaced the rest of the country in terms of employment growth (Turok, 2014). They tend to produce more valuable goods and services, and do so with greater efficiency. This reflects the economic advantages of spatial proximity, including: (i) matching business requirements for labour, property and other resources; (ii) sharing infrastructure, services and information; and (iii) mutual learning among firms and related organisations (Duranton and Puga 2004; Storper 2010). Cities accommodate higher-value functions such as corporate headquarters, financial and business services, high-order public services, national and provincial offices and universities. They have been the destination of most foreign direct investment in recent years, such as car manufacturing and call centres.

The distribution of population and economic activity across the country varies by settlement type. At the top of the hierarchy are four ‘city-regions’: Gauteng, Cape Town, eThekweni and Nelson Mandela Bay. They accommodate 42% of the national population, but 57% of formal economic activity (CSIR 2013). Below this there are seven ‘freestanding cities’, including Bloemfontein (Mangaung), Pietermaritzburg (Msunduzi) and East London (Buffalo City). They have 7.5% of the population and 8.5% of economic activity (CSIR 2013). Regional service centres are smaller. There are 44 of them, including Welkom, Witbank, Klerksdorp and Tzaneen. They have 14% of the population, and 11% of economic activity. Then there are many service towns and small towns scattered across the country. They have 14% of the population, and 10% of economic activity. The remaining rural areas are more significant in terms of demographics than economics. They have 22% of the population, but only 13.5% of economic activity. Their population has grown more slowly than the other areas over the last 15 years, so there has been some improvement in alignment (CSIR 2013; Turok and Borel-Saladin 2014).

Urban economies are stronger than rural, although employment has struggled to keep pace with growth in the working-age population. Employment levels and earnings are much lower in rural areas. Most rural households depend on financial transfers from government or family members elsewhere. Such transfers help to relieve poverty, but are no substitute for the lack of sustainable economic opportunities, given the wide-ranging benefits people derive from work. High levels of rural poverty contribute to food insecurity. Nearly a quarter (24%) of households in the former Bantustans sometimes run out of money to buy food, compared with 15% in the metros (Statistics SA 2010).

Economic growth in large urban areas over the last decade has effectively funded the expansion of social programmes into towns and rural areas. Hence the fortunes of city and rural economies have become more interdependent. Other linkages between urban and rural

areas include the supply of agricultural products, energy, water and other resources to urban markets and the growing demand for rural tourism and recreation originating in the cities. An unproductive discourse pits rural areas against urban and ignores their connections. This diverts attention from the bigger picture of a national territory that is becoming more integrated and in which places perform different functions that complement each other and support overall national development. Rural areas have potential for increased tourism, mining and alternative energy generation, in addition to agriculture and agro-processing.

SA's economic geography has not featured strongly in government policy since 1994, except through piecemeal programmes and projects (Todes and Turok, 2018). Efforts to promote industrialisation have been top-down and spatially-blind. Until recently the National Treasury was barely interested in cities because their municipalities were relatively self-sufficient and competent at spending whatever grants they received. Specific grants have been targeted at particular areas facing poverty and physical decline (such as rural localities, urban townships or run-down inner cities), but with little effort to connect this with economic development to ensure sustainability.

Attitudes towards cities have changed greatly in many other countries. Cities used to be seen as arenas of social disorder or relics of an industrial past of high transport costs and low labour mobility. Many governments now support investment in their major cities because they offer the best prospects for raising productivity and tackling their social and environmental problems (Glaeser 2011; Turok and McGranahan 2013). These ideas have been slower to gain traction in SA.

Here, the received wisdom about spatial inequalities can be summarised in four simple ways. First, the issue is seen as a dualism between prosperous urban areas and deprived rural areas (Walker 2013). Their interdependence and the varied conditions within both categories are neglected. Second, rural development is believed to warrant special support to meet legitimate demands for historic redress and out of respect for cultural traditions (Everatt and Ebrahim 2018). Cities are perceived as privileged historically, and possessing a stronger tax base and municipal institutions, but ignoring the growing urbanisation of poverty. Third, the restitution and redistribution of land is central to the rural agenda for communities to become productive by acquiring farmland. It is assumed that people still want to farm and that rural areas have vast productive potential, despite agricultural decline and the threat of climate change, water scarcity and degraded ecosystems. The importance of urban land reform for creating inclusive and efficient cities is overlooked. Finally, spatial disparities are framed mainly as issues of equity, justice and distribution, with less regard for growth and development. There is little appreciation that place and space matter for economic performance, especially as economies transform from primary to secondary and tertiary industries. Business and jobs are embedded in complex local ecosystems of suppliers and customers, and cannot just locate anywhere.

1.3 The consequences of urbanisation for settlement patterns

The colonial and apartheid policies of racial segregation have left an indelible legacy—a fractured urban form with unequal access to jobs, amenities and public services. This has persisted in the aftermath of apartheid because of the durability of the built form, the power of vested interests, continuing income inequalities between races and a lack of upward mobility (Todes and Turok 2018). The fragmented urban form demands long daily commutes, high carbon emissions, lowers city productivity and undermines municipal financial viability because of high servicing costs. Population densities within each city are

also extraordinarily uneven. Cape Town's average density is 39 persons per hectare, but this varies between 100–150 in the informal settlements and 4–12 in the former white suburbs (City of Cape Town 2009). This imbalance poses serious difficulties for urban management and social integration, especially as different neighbourhoods are often separated by physical barriers and buffer zones. Uneven density is a source of inefficiency because it obstructs the workings of the labour and housing markets and complicates the provision of mass transit systems. It is unjust because it is difficult to distribute public services such as schools, libraries and recreational amenities fairly across the city.

Middle- and high-income households generally live in low-density suburbs that are costly to service with public transport and bulk infrastructure and are geared to car-based commuting. Highway construction over the years has reinforced the separation of work, leisure and home-life. The poor majority of households are largely confined to townships and informal settlements that are overcrowded and much more susceptible to shack fires, flooding, crime and diseases (Turok 2016a). Local schools, clinics and police stations are burdened by the intense demands placed upon them. Land scarcity within many of these areas impedes the installation of storm-water systems, sewers, electricity and other bulk infrastructure, as well as municipal facilities, public spaces and business premises. Pressure on well-located land within the city means that many shack areas are poorly sited on waste ground, unstable land and flood zones. Being isolated from livelihood opportunities compounds people's disadvantage. Workers in the lowest income bracket have to spend on average 35% of their earnings on commuting (Department of Transport 2004). This is exceptional by international standards (OECD 2011).

Informal settlements have expanded in size and number, with the latest government estimates indicating around 2,700 countrywide accommodating about 1.2 million households (SACN 2011). Some serve an important function as gateways for migrant populations, offering cheap entry points from which to search for work and gain a toehold in the urban labour market (Cross 2013; Turok and Borel-Saladin, 2018). A responsive policy would recognise these places as reception areas that enable migrants to acquire relevant skills and contacts, to increase their earnings and, in due course, to move on to better housing elsewhere. Cities that are dynamic and inclusive need such areas to accommodate population growth and social mobility. Incremental upgrading could improve their capacity to serve this role, to strengthen the social fabric of nascent communities and to provide cleaner and safer living conditions. Planning further ahead by preparing the ground in advance with serviced land to accommodate household growth is also important. Instead policies react to urbanisation after the event, which is more costly than getting ahead of the curve.

Municipalities take a tough stance in trying to prevent land invasions and contain the growth of existing settlements. Shacks are often demolished, people evicted from occupied sites and removed to 'temporary relocation areas' pending eventual provision of formal housing (Huchzermeyer 2011). Land grabs are disruptive and can undermine rational planning decisions about the use of particular land parcels. However, they also serve a purpose in releasing unused land for entry-level housing and breaking through the logjam of established administrative procedures. The formal housing market and state policy make it difficult for the poor to move to cities and often result in them occupying 'hidden spaces', such as backyard shacks in the existing townships and derelict buildings in the inner cities, which lack essential services. The unintended consequence of unresponsive policies is to increase overcrowding in existing settlements and make people more vulnerable to the spread of disease, fire and exploitation by unscrupulous 'slumlords' (Turok 2016a).

1.4 Progress in upgrading informal settlements

The pace of urbanisation and the scale of inherited backlogs have made it difficult to provide everyone with a proper house. Protection from the elements, privacy and security are vital for human survival, dignity and community stability. Table 2 shows that almost one in five households in the metros live in informal dwellings, compared with almost half that proportion in the rest of the country. Other evidence shows that residents of such dwellings are more likely to experience overcrowding, poor access to services and vulnerability to hunger (Statistics SA 2010). Shack areas are also more susceptible to flooding, fires, soil instability and water-borne pollution (Turok 2016a).

Over the period 1996–2011, the proportion of households in the metros living in informal dwellings fell from 23% to 18%. This was a big achievement in some respects, reflecting government provision of more than a million low-cost houses over the same period, nearly four times the level of private-sector building (SACN 2011). The absolute number of metro households living in informal housing actually rose slightly because of underlying population growth and a fall in the average household size, so the housing programme has struggled to keep pace with the growing level of need. The biggest increases in informal dwellings were in Cape Town and Johannesburg. The smaller metros with slower population growth were better able to keep pace.

Table 2: Households living in informal dwellings, 2001 and 2011

	1996		2011			
Households in informal dwellings	Living in informal dwelling	%	Living in informal dwelling	%	Absolute difference	Percentage change
Johannesburg	155,467	21	249,823	17	94,356	61
Ekurhuleni	156,415	29	218,259	21	61,844	40
Tshwane	91,373	20	164,014	18	72,641	79
Cape Town	125,204	19	218,780	20	93,576	75
eThekweni	139,807	22	149,289	16	9,482	7
Nelson Mandela Bay	60,670	27	38,861	12	-21,809	36
Buffalo City	42,535	26	49,790	22	7,255	17
Mangaung	34,778	23	32,747	14	-2,031	-6
Total Metros	806,249	23	1,121,563	18	315,314	39
Rest of South Africa	646,766	12	841,533	10	194,767	30
Total South Africa	1,453,015	16	1,963,096	14	510,081	35

Source: Population Censuses 2001 and 2011: Statistics SA 2002, 2012.

The story of progress in providing citizens with access to basic services is similar. There has been a general improvement everywhere, despite household growth in the cities. Basic services influence peoples' living conditions and future life chances. Clean water, sanitation

and electricity make them less vulnerable to social and environmental hazards and more healthy and productive (Turok 2016a). Free basic services also lower the cost of living. Clean water is a critical requirement for personal health and everyday living. Households in the main cities enjoy much better access to piped water on-site than elsewhere. The proportion increased from 50% in 2001 to 64% in 2011 (Turok and Borel-Saladin 2014). All the metros were able to keep pace with population growth and reduce their backlogs. The Gauteng metros achieved the biggest improvements.

Sanitation is another basic need, important for hygiene and public safety as well as human dignity. The standard indicator in the census is the number of households with access to a flush toilet (either within the dwelling unit or a shared public facility in the vicinity). Shared facilities are unpopular because they tend to be poorly maintained and pose risks to people's safety and health. The census measure covers both situations. The metro households have better access to toilet facilities than elsewhere. The proportion increased from 75% in 2001 to 80% in 2011 (Turok and Borel-Saladin 2014). Providing over 1.4 million families in the cities with improved access to a flush toilet was a big achievement. All the metros kept pace with population growth and reduced their backlogs. The Gauteng metros and Cape Town achieved the biggest improvements.

The broad trend in relation to other municipal services is similar. A larger number and higher proportion of residents in the cities have access to electricity and refuse removal services than ever before. Only one in nine families in the cities now have no access to electricity for lighting, compared with one in five in 2001 (Turok and Borel-Saladin 2014). This is important in enabling people to study at night, keep food fresh for longer, recharge cell-phones and power televisions and computers.

In summary, despite large scale urban population growth over the last decade, there has been substantial provision of housing and basic services to communities. As a result, there are fewer families living in extreme squalor than before. Meanwhile, broad spatial patterns of development are largely unchanged since 1994, and cities remain ill-prepared for urbanisation. National, provincial and local governments have not worked well together, and public investment in housing and infrastructure has not met the level of need (Turok 2016a). As a result, the inherited distortions have been reproduced, with new settlements located far from opportunities.

1.5 The responsiveness of city government

Effective management of urbanisation depends on the strategic capabilities of city governments, defined in political, technical and administrative terms. These need to be balanced with local responsiveness and popular support in order to navigate complex trade-offs and make the right choices. In 2000, SA put in place a bold vision for metropolitan government, recognising that cities were crucial to solving many of the country's biggest problems (Turok 2014, 2016b). Disparate administrations originally created to serve separate racial communities were amalgamated to form large, fully democratic municipalities covering wide functional territories. Three compelling reasons were given for the creation of 'developmental local government' (DPLG 1998) to:

- distribute municipal resources more equitably across each city;
- promote spatial integration through careful planning and investment in infrastructure; and
- strengthen the economies of cities in view of their national significance.

The 1996 Constitution recognised municipalities as a distinct sphere of government, with the right to govern on their own initiative. They had a leading role in providing essential household services as the 'hands and feet' of the state. They were expected to be largely self-financing by charging for services and levying property rates. The principle of 'cooperative government' required the three spheres to work together in good faith.

There have been examples of innovation and services being extended to marginalised communities (SACN 2011, 2016). However, it is also clear that local government is struggling to fulfil this developmental mandate. One of the symptoms has been a rising tide of community protests. This direct political action is born out of frustration with the pace and quality of state provision of essential services and free housing. Most protests have been targeted at local government and linked to accusations of incompetence and misconduct (Turok 2014, 2016b). Some demonstrations have ended up in violent confrontations, damaged public facilities and have caused disruption to everyday life.

1.6 Explanations for the lack of urban integration

The creation of large metropolitan authorities in 2000 was intended to undo segregation and put cities onto a new trajectory. They were to transform people's lives as well as the physical and social fabric of cities. Eighteen years on, there is general agreement that far less has been achieved than anticipated (NPC 2012; SACN 2016). Quantitative delivery has been more significant than qualitative improvements. Basic services have been extended to poor communities on a large scale, but progress in creating integrated human settlements and viable communities has been limited.

The full explanation for the continuing polarisation of urban development is complex, and the relative importance of different factors differs between cities. At the risk of oversimplification, there are three basic reasons for the lack of transformation: historical inertia, economic forces and weak spatial management (Turok 2013, 2014).

1.6.1 Inertia

Altering any city's physical structure is a slow process, unless its growth is rapid and there is a step change in approach. Inertia reflects the inherent characteristics of the built environment, including the durability of fixed investment and the high cost of property transactions. It takes decades for infrastructure and buildings to become obsolete and to warrant replacement and redevelopment. Assembling fragmented land parcels and organising property development through market mechanisms are also long, drawn-out processes. This is most evident in societies with strong private-property rights and robust legal mechanisms for landowners to contest development proposals that are going through the formal regulatory procedures (Turok 2013).

A distinctive outcome of SA's negotiated political transition was the constitutional commitment to safeguard private property rights by limiting the state's ability to restrict how landowners can use or develop their land. This has proved controversial because current landownership patterns reflect the history of dispossession and segregation. Land was confiscated from black people, while the value of white-owned land was enhanced over time by the state confirming use and development rights, and investing in valuable supporting infrastructure. This constitutional protection has important urban consequences which tend to reinforce the status quo of spatial inequality (Berrisford 2011). For example, it is difficult for public bodies to develop land for low income housing in valuable, well-located areas

because neighbouring owners object that this limits the use and enjoyment of their own land through reduced amenities, increased crime, etc. Privileged property owners can impede and delay new development by raising repeated objections using environmental, heritage or a host of other arguments. With much of the capital of the banks and insurance companies tied up in suburban homes, there is another layer of vested interests to resist urban transformation behind the scenes.

Until the Spatial Planning and Land-Use Management Act (SPLUMA) was passed in 2013, continuity with the past also stemmed from land-use planning being governed by a range of colonial and apartheid laws designed for social separation rather than integration. Planning legislation reflected a bygone era and was ill-suited to reshaping urban structures. SPLUMA creates an opportunity to promote densification and mixed-income development, although this depends on municipalities having the political will, organisational capacity and resources to chart a different course.

Most of the state housing built since 1994 has been on land originally bought or zoned by the apartheid government for township development or was located adjacent to or beyond existing townships (Harrison et al 2008; Van Donk et al. 2008). The land was available and could be developed more quickly than starting from scratch. The Reconstruction and Development Programme (RDP) housing model is also structured in a similar way to the one-off capital subsidy used previously to provide serviced sites in planned townships (Harrison et al 2003; Khan and Thring 2003). Building individual houses on their own plots requires large amounts of land, which means peripheral locations. The mass housing programme has not afforded the flexibility to establish denser and more liveable settlements in good locations (NPC 2012).

Private property developers and investors have conservative location preferences and building practices. They remain wedded to greenfield sites and struggle with the creative challenges required of infill sites and mixed-income projects (Swilling 2010; Seeliger and Turok 2015). There has been no concerted attempt to shift the dominant paradigm whereby urban designers, architects, engineers, financiers and developers revise their business models to suit integrated development schemes on brownfield sites. Similarly, there have been no incentives or educational campaigns to encourage households to favour more socially-integrated, compact neighbourhoods. Household aspirations for car ownership and off-road parking are additional obstacles to densification.

In summary, cities remain locked into their established spatial trajectories for a variety of reasons. Municipalities lack many of the regulatory powers and responsibilities over land, housing and transport required to break out. Segregation persists in the absence of overarching strategies to change direction.

1.6.2 Economic forces

Spatial change is difficult without wider economic and social change. Ongoing urban divides partly reflect weak employment growth, wide income disparities and skewed private investor preferences, all of which originate in the polarised structure of the SA economy. There has been little economic dynamism over the last two decades. According to the Presidency, “[O]ur growth has been largely pedestrian. The structure of our economy has not changed significantly in a hundred years” (Presidency 2009: 6). Growth has proved fragile, having been driven by consumption and personal debt rather than investment in production (National Treasury 2011b). Consequently, unemployment, poverty and inequality are extremely high by international standards (NPC 2012). Furthermore, SA cities are among the

most unequal in the world, with an average Gini coefficient estimated at 0.76 (UN-HABITAT 2010).

Income inequality translates into spatial segregation through the 'sorting' process of the housing market. This has replaced the political and administrative processes of racial separation under apartheid. People now tend to live in places according to their ability to pay (i.e., their effective demand) for the quality of the location and its amenities, resulting in a highly-segmented housing market. Low income households cannot afford to buy or rent property in well-located areas, except perhaps through some informal arrangement. The situation is different in several inner city areas, particularly in Johannesburg, where there has been large-scale reoccupation of older, derelict buildings at the cost of overcrowding and poor services. Otherwise, most poor people are forced to the outer areas of the city as a result of their weak labour market status that restricts their purchasing power in the land market.

Inequality is also reflected in the behaviour of property developers and lending institutions, who favour households with steady jobs and higher incomes because this is more secure and profitable. More affluent areas of the city with higher levels of demand are favoured for investment, whereas low-income areas struggle to attract resources. This affects the quantity and quality of the housing stock in poorer communities. There is a persistent shortage for the one in five households who earn too much to access a RDP housing subsidy but too little to afford the cheapest new house (CAHF 2012). Neither the public nor the private sector have shown the creativity required to provide 'affordable' housing for this market gap, including rental or shared ownership. The places that would benefit most are in and around older inner city neighbourhoods and transport corridors where people would have access to jobs.

The segmentation of the city by income is also reflected in the location decisions of industrial and commercial property developers. New business parks, retail and office developments tend to locate in and around high-income suburbs, reflecting risk considerations and herd behaviour (SACN 2011, 2016; Sinclair-Smith and Turok 2012). Another explanation offered by developers for this pattern is the need of employers to locate their property in proximity to their professional, technical and managerial workers, who are in the strongest position to dictate the firm's location decisions (Sinclair-Smith and Turok 2012). Meanwhile, many other areas face a private investment strike, reinforcing a spiral of decline and decay. Some blame poor urban management and the uncertain operating environment for business, especially concerns about crime and grime.

The townships have attracted little private-sector investment, even industrial firms that would benefit from proximity to a manual workforce. On average, residents have low disposable incomes and modest qualifications. Perceptions of insecurity reinforce doubts about these places as locations for commercial development. The potential contributions of informal enterprises and township economic development have not received much government attention (NPC 2012). A Neighbourhood Development Partnership Grant was introduced in 2006 to support community infrastructure and services in the townships, in partnership with the private sector. However, take-up has been slow, with substantial under-spending (National Treasury 2011a). Unless private perceptions are changed through a deliberate strategy, there is a danger of townships being trapped in a kind of low-level equilibrium with little dynamism.

It can be argued that the negative township reputation is exaggerated and their underlying economic potential is significant. It might be possible to counteract the adverse image and fear factor through state leadership and concerted investment. Steady population growth means rising consumer spending power (the 'black Rand'), a growing labour supply and

capacity to pay municipal taxes. Although township residents cannot afford as much as suburban residents, in aggregate they can pay enough to sustain better public and private services. Better housing and more liveable environments would help to retain the skills and purchasing power of upwardly mobile households. Supporting the informal economy could also spur dynamic indigenous enterprises and small business growth.

To sum up, deep-seated inequalities and constraints on upward mobility inhibit spatial changes in SA cities. Poor households cannot afford to live in better-located areas, and private investment tends to follow affluence. Institutions are locked into exclusionary practices by their engrained social attitudes and inability to develop new approaches.

1.6.3 Shortcomings in spatial management

It was argued above that the national housing programme reinforces the splintering of SA cities. Most transport policies also counteract the objective of residential densification. The leadership of most cities has proved unstable and incapable of pursuing a long-term transformative vision by taking on vested interests (Turok 2016b). Government bodies that own well-located vacant and unused land have not made it available for housing. Political factionalism and nepotism have compounded friction between government spheres and destabilised many municipalities (CoGTA 2009, 2010). Turnover of senior politicians has undermined continuity and institutional memory. The resulting instability lessens appetites for structural change and deep engagement with the development industry in favour of short-term initiatives. It has hampered the building of trusting relationships with external stakeholders and a shared agenda for spatial restructuring. Political volatility has also diverted municipal efforts from engaging communities in settlement upgrading and channelling their energies in constructive directions (SACN 2011, 2016).

City governments have also suffered from constrained administrative capacity and shortages of skilled professionals (CoGTA 2009, 2010). Organisational amalgamations and affirmative action have resulted in the loss of expertise in engineering, finance, planning and management. Political changes have often been followed by the replacement of senior officials and have raised concerns about nepotism and excessive interference in technical decisions (Turok 2016b). The resulting operational problems have distracted attention from the structural challenges. Almost all the cities experience severe shortages of the skills required for positive planning to make things happen on the ground. Conventional ways of providing public services (top-down and in silos) have proved inadequate for urban regeneration and transformation (SACN 2011, 2016).

Municipal financial constraints are another problem, given the competing spending demands to: (i) maintain and upgrade services to existing household ratepayers; (ii) provide and sustain infrastructure to business ratepayers and inward investors; and (iii) extend services to the townships and informal settlements, where there are major backlogs but tax payments are lower. The first two categories are expected to be self-financing by charging for services and levying property taxes (National Treasury 2011b). Understandable pressures to extend services to address backlogs can crowd out support for economic growth and threaten municipal viability (National Treasury 2011a). The tight financial environment has meant few discretionary resources available to launch bold experiments in urban restructuring (SACN 2011, 2013, 2016).

There are connections among these reasons for the failure to disrupt historic patterns of development. Inertia partly reflects the lack of government focus and coordination at the city level, and government weakness is partly a function of powerful economic forces. Economic

inequality has been compounded by under-resourced city authorities that lack the political will and strategic capabilities to intervene in the built environment. Cities have been caught in something of a vicious cycle which it has been difficult to break out of.

1.7 Devolving built-environment functions to the metros

Within the last few years there have been several policy initiatives that could assist city governments to manage urban growth better in the future. The main idea has been to focus built environment responsibilities on metros instead of having split functions. Devolving additional powers to metros should make it easier to start reshaping the urban landscape through strategic interventions in transport, housing and land. According to the National Treasury (2011a: 229):

As housing and transport play such a vital role in land use patterns, the consolidation of these functions at the local level will provide both the leverage to change spatial patterns as well as improve accountability at the level of delivery.

In the housing field, it would be possible to accredit metros to plan and manage housing projects without needing provincial approval. This would give them greater control over the location of new projects and help to embed housing within broader spatial planning and urban design processes. These tend to pay more attention to the viability and sustainability of new settlements. The metros would also have flexibility to support more diverse forms of housing, such as rental, in order to meet different household needs and to respond more appropriately to the varied opportunities presented by different land parcels.

An Urban Settlements Development Grant (USDG) was created in 2012 to help metros acquire, service and release land for low-income housing. It sought encourage a shift in focus from providing houses in peripheral areas towards upgrading informal settlements in locations closer to economic opportunities. Many metros need improved skills to work hand-in-hand with communities and non-governmental organizations to agree to priorities and implement incremental schemes to improve the infrastructure and living conditions in these areas. The National Upgrading Support Programme, established in the late 2000s is a parallel initiative specifically designed to achieve this (Turok 2016a).

There is also a desire to gradually devolve the management of public transport services to the metros through the 2009 National Land Transport Act. This would mean greater local control over the level and quality of bus and taxi services and passenger fares. In due course metros should be responsible for operating commuter rail services currently run by the Passenger Rail Agency of SA. A public transport authority under metro control is being set up in each city to negotiate the progressive transfer of responsibilities from existing transport agencies. Devolution should help to coordinate and integrate different modes of public transport and to resolve conflicts between the sectors. It should also enable transport decisions to be better connected to housing investment and land-use decisions, thereby promoting more coherent spatial patterns through more intense development along public transport routes.

In spatial planning, there have been long-running disputes between municipalities and provinces over who determines the use and development of land. A Constitutional Court judgement in 2010 established that municipalities have principal responsibility for land-use planning and management. This clarification should help to reduce the duplication and confusion between the two spheres. The SPLUMA reinforces this judgement by

strengthening the role of municipal spatial planning. This enhances the prospect of aligning land-use planning with housing and transport in pursuit of more integrated urban development.

A Cities Support Programme (CSP) involving several government departments was initiated in 2012 to strengthen the metros' capacity to manage the built environment more efficiently and equitably. It incorporates elements of evidence gathering, peer review, coaching and learning from international good practice. The CSP is also linked to a Integrated City Development Grant that seeks to change the way resources are transferred to municipalities to reward positive performance (National Treasury 2011a).

Many uncertainties surround the financial implications of devolution. The metros are concerned that an excessive burden for upgrading and maintaining public transport and housing will fall onto local ratepayers. Their fiscal capacity is already severely strained (SACN 2013, 2016). Treasury documents suggest that, although substantial government support will continue, the local burden is expected to increase substantially: "Most funding for infrastructure investment must ultimately come from within city administrations" (National Treasury 2011a: 228). Metro officials harbour doubts given their investment backlogs, popular resistance to higher local taxes and the fact that in other countries the central government incurs a larger share of the cost of local services. Stronger national economic growth should alleviate the tensions by generating additional funds all-round.

1.8 An assessment of the prospects for devolution

With the honeymoon of the political transition from apartheid now over, there is greater understanding that socio-economic transformation is difficult to achieve. Mounting social pressures reflect the slow pace of change in urban poverty and inequality. Formulating laudable national policies, approving progressive laws and creating city-wide municipalities have not done much by themselves to spur more prosperous and compact settlements. A new agenda is emerging focused on devolving built environment responsibilities to city authorities. A core objective is to align different sectoral policies and planning functions in order to strengthen the levers available to reconfigure cities so they become more functional and liveable.

There are several reasons why devolution should help. Closer coordination of infrastructure planning, revenue collection and building regulation should streamline procedures and encourage decisions that take into account the broader costs and consequences of alternative urban trajectories. Balancing complex economic, social and environmental considerations is more manageable at the local level than at national level. Coordination of different functions should be simpler in a municipality than in a large provincial or national institution. Decentralisation makes collaboration with civil society and private developers more meaningful, which should improve the chances of shifting attitudes and investment patterns. Finally, greater proximity to communities and firms should make policies more relevant and responsive to local needs and circumstances.

There are several benefits that one might anticipate in the short term. Municipalities could stop building low cost housing in marginal locations. They could shift funding towards informal-settlement upgrading, working hand-in-hand with communities to channel their energies into constructive activities. Local control over public transport systems should permit improvements in reliability, passenger safety and cross-ticketing between trains, buses and taxis. Having more control over the policy levers of transport, housing and bulk

infrastructure should strengthen metro negotiations with investors. It should be easier to prevent piecemeal development and start orchestrating a shift towards mixed property schemes around transport hubs, corridors and other strategic locations.

Devolution is only a first step in a complicated process of developing strategies that start reshaping cities. It is no panacea and there are risks involved in transferring responsibilities downwards. Some municipalities may not develop the necessary vision, political will-power and technical capabilities. Progress is bound to be uneven, giving rise to criticisms of inconsistency and unfairness from civil society and investors. Metros may make mistakes and fail to spend their budgets. They may succumb to pressure from powerful vested interests. They may be inward-looking, operate in silos themselves and ignore local communities and the private sector.

Improvements in municipal leadership and institutional capabilities are essential. The metros need a long-term vision of their cities and a way of managing their growth that is realistic as well as bold. Leaders need to drive the policy and procedural reforms required to implement this strategy. The metros need stronger professional skill-sets and better understanding of built-environment dynamics. They need teams of skilled planners, engineers, architects, designers, economists, surveyors, environmentalists and project managers who can work together creatively. Partnerships with landowners, investors and developers will be required to bring forward imaginative demonstration projects that can help connect the urban fabric, improve accessibility and create viable and valued places where people want to live and work.

Support from the national government is vital because of its unique policy-making, financing and regulatory powers. Government utilities need to align their investment plans with the infrastructure required for more sustainable settlements. Unlocking the unused land holdings of state agencies would accelerate infill development and densification. Legislation may be needed to strengthen the powers of metros to acquire and swap land parcels and to capture the uplift in land values from public investment in order to generate funds for reinvestment. Above all, the national government needs to work closely with cities to encourage experimentation, to learn the lessons from that experience, and to find novel ways of funding the investment required to accelerate urban transformation.

There were positive signs of this support when the cabinet approved an Integrated Urban Development Framework (IUDF) in 2016, after three years of preparatory work. This signified a higher level of government backing for urban policy than hitherto, because three previous attempts had failed to get such approval (Turok and Parnell 2009). The IUDF has four strategic goals: (i) to improve **access** to social services and economic opportunities; (ii) to promote **inclusive economic growth**; (iii) to enhance **governance capacity**, and (iv) to accelerate **spatial transformation**. It also identifies nine levers to achieve these goals: (i) integrated spatial planning, (ii) transport and mobility, (iii) human settlements, (iv) urban infrastructure, (v) land governance, (vi) economic development, (vii) empowered communities, (viii) urban governance and (ix) sustainable finances. Work is currently in progress to institutionalise actions to implement the IUDF. Precisely what impact these efforts have on the ground remains to be seen. Some observers have raised doubts about whether the IUDF can get sufficient traction over the different parts of government and other stakeholders to make a real difference, given the continuing priority attached to rural issues (Everatt and Ebrahim 2018).

1.9 Conclusion

South Africa has a troubled history of extreme socio-spatial engineering—first to accelerate a peculiar form of urbanisation and then to resist and reverse it. This was a traumatic experience for the majority of the population and continues to burden the current generation, both in the urban townships and rural areas. It has created a sensitive environment in which it is difficult to address urban issues overtly. Until 2016, there was no explicit urban policy or programme to address urbanisation. Cities are the dominant centres of economic activity, but they are not performing to their potential or reaping the full benefits of agglomeration because of infrastructure constraints, bureaucratic obstacles and shortfalls in skills.

Nevertheless, the relative economic success of the cities and the fragility of rural economies have further widened spatial inequalities and reinforced the mismatch between jobs and population. People continue to migrate towards the cities on their own accord in search of better livelihoods. This is a risky process because of the costs of travel, the challenge of finding somewhere to live and the stiff competition for jobs. The government has done little to facilitate rural–urban migration, partly because it is ambivalent about the process and wary of the costs of accommodating more people in cities.

Consequently, many migrants have ended up in informal settlements, which are typically overcrowded and lack essential services. Many are exposed to flooding, subsidence, fire and health hazards. They are often squalid, unhygienic and dangerous places to live. Without proper sanitation systems they pollute watercourses and damage local ecosystems. Illegal electricity connections make regional infrastructure networks more vulnerable to failure, especially as many of them are ageing and struggling to cope with population growth.

The physical exclusion of people moving to the cities has restricted social mobility. People confined to outlying areas have also battled to generate their own livelihoods. The costs of public services and transport subsidies are relatively high in sprawling cities, adding to the burden on taxpayers. Over-stretched municipalities struggle with the competing demands of different communities to reduce backlogs, maintain existing services in the suburbs, accommodate new population growth and support economic activity and inward investment.

The government recognises the problems of a distorted urban form, but its policies have been too short-term and siloed to spur restructuring. Its approach to urbanisation has been reactive, reflecting doubts about migration. Surprisingly little support has been offered to informal settlements and backyard shacks. Municipalities battle to contain land invasions and limit the growth of existing informal settlements. People are periodically evicted from land earmarked for other uses, although the courts sometimes intervene to protect them. Controlling informal settlement expansion has driven internal population densities higher. Overcrowding has inflamed social tensions and increased competition for scarce resources. People migrate to the cities in search of better lives but are frustrated by the dire conditions and shortage of opportunities.

Municipalities have disaster-management units to help communities cope with emergencies. Many have invested in rudimentary services to improve living conditions. A government grant supports settlement upgrading. Renewed investment in the built environment could constitute the foundation for a new and more integrated urban agenda, in line with international thinking. Going beyond just accommodating unplanned urbanisation is

important to anticipate and prepare more carefully for building more productive and liveable cities of the future

1.10 Education and cities in South Africa

1.10.1 Introduction

It is well known that education in every sense is one of the fundamental factors of development. No country can achieve sustainable development without substantial investment in education. However, the converse is not always true – not every country that has invested in education has achieved sustained patterns of development, with South Africa a prominent example in this category.

The impact of education has not been the same in every country. There are at least two reasons why the impact of education has varied and has so often fallen short of what was hoped. First, it is likely that educational quality has been so low that “years of schooling” have created no “human capital”. Schooling has in some countries been enormously effective in transmitting knowledge and skills while in other countries it has been essentially worthless and created no skills. Again, this is true to a large extent in South Africa where the emphasis has been placed disproportionately on the quantitative dimensions of education such as enrolments and pass rates to the exclusion of ‘quality’ and outcomes (as opposed to outputs).

Second, the returns to investment in education by individuals could have fallen rapidly as supply expanded while demand for educated labour was stagnant. The rate of growth of demand for educated labour has varied widely across countries mainly because of structural changes or the absence thereof in economies across both industrialised and developing countries. Depending on the nature of the change, the returns to education could have fallen dramatically, stayed constant, or risen. This is true of many African countries where there is the growing policy challenge of ‘educated unemployment and under-employment’. In other words, the economy and labour market have not made the necessary adjustments for absorbing educated and skilled labour.

None of these arguments suggest however, that governments should invest less in basic schooling, for many reasons. First, most, if not all societies believe that at least “basic” education is a merit good so that its provision is not, and need not be justified on economic grounds at all. To deny a child an education because the expected economic growth impact is small would quite plainly be wrong. Second, schooling has a large number of direct beneficial effects beyond raising economic output, such as lower child mortality. Third, the evidence is clear that education (especially if done well) does raise cognitive skills. The implication of a poor payoff from increasing cognitive skills in a poor policy environment is not “don’t educate” but rather reform the education and economic systems now so that investments (past and present) in cognitive skills must pay off.

This paper analyses the following aspects of Education in South Africa. Section 2 describes developments in education since the advent of democracy in 1994 emphasising the continuing inequalities in education outputs (e.g. pass rates) and outcomes (e.g. knowledge and skills). At the present time these inequalities manifest themselves increasingly along class (and geographical – urban vs. rural) lines rather than race. Given the decentralised political framework derived from the Constitution of 1996, education is a “concurrent” function shared between the national government (all policy making as well as responsibility

for higher education) and provincial governments (implementing basic education – i.e. primary and secondary). Section 3 describes the intergovernmental system as it relates to education including an analysis of the budgeting framework.

Section 4 describes some features of education (e.g. the distribution of schools by household income level; school-leaving pass rates; and educational attainment by districts) in two provinces in which two of the project's delineated cities (Johannesburg and Cape Town) feature, namely Gauteng and Western Cape. Section 5 analyses the state of education in the City of Johannesburg.

1.10.2 Education in South Africa – a history of inequality

It is well-known that education under apartheid, which lasted until 1994, was characterised inter alia, by racial, class and regional inequalities. Substantially more funding for instance, was provided to educate Whites which resulted in better schools and other educational institutions and more highly qualified and trained teachers for this group. Education for the black African population, on the other hand, was characterised by limited financial and human resources and poor quality of tuition and outputs.

Post-apartheid, serious inequalities persist along racial, class and geographical lines. The quality of schooling and post-schooling is substantially differentiated between urban and rural areas, between poor and rich, and within the majority African population.

Affluent areas within the country are characterised by good schools, with effective school governing bodies, while the urban “townships” and rural areas have poor schools often with ineffective or non-existent governing bodies. The public funding system has not adequately addressed the racial and geographical inequalities in funding.

Moreover, the persistence of high income and wealth inequality, which is clearly inhibiting economic growth and poverty reduction, cannot meaningfully dissociate from the limited and unequal access to human capital; they are inextricably linked. Therefore, efforts to foster education accumulation, and particularly education equality, should pay off handsomely. However, this process is occurring painfully slowly resulting in the continued loss of generations of young people leaving the schooling system with inadequate knowledge and skills or the post-schooling system with qualifications that often do not adequately equip them for the labour market.

Table 3: Comparing GDP per capita and expenditure on education

Country	GDP per capita (PPP\$) 2011	Expenditure on Education (% GDP), 2010-2014
South Africa	12 390	6.1
Costa Rica	14 472	7.0
Serbia	12 863	4.4
Sri Lanka	11 048	1.6
Peru	11 672	3.7
China	13 400	4.2

Colombia	12 988	4.7
Tunisia	10 726	6.2

Source: UNDP, Human Development Report 2016. Note: GDP – gross domestic product; PPP-purchasing power parity. Expenditure figures are averages for the period 2010-2014.

Table 3 shows a sample of countries with similar GDP per capita to South Africa. All of them with the exception of Costa Rica and Tunisia spend much less on education as a percentage of Gross Domestic Product. However, all of them performed much better than South Africa in TIMSS 2015.

1.10.3 Learning outcomes

Improving macroeconomic management and the implementation of policies can only take South Africa so far. Raising the overall quantity of education means little if quality improvements do not go hand in hand. By all accounts the quality of education and general skills development is low. This common observation is confirmed by empirical evidence from national tests (e.g. the Annual National Assessments – ANAs – of the Department of Basic Education) and international comparisons of student learning (such as SACMEQ, TIMSS, PIRLS¹).

In the most recent Trends in International Mathematics and Science Study (2015), the five poorest performers were Jordan, Saudi Arabia, Morocco, South Africa and Kuwait. The five best performers were all in East Asia – Singapore; Hong Kong, South Korea, Taiwan and Japan (TIMSS, 2015).

Furthermore, South African achievements are highly unequal. Only one quarter of children at public no-fee schools (Quintiles 1, 2 and 3) received mathematics score above the minimum competency levels.

In Grade 9, 1.3 percent of South African mathematics pupils scored at the advanced level. Globally, 6% of pupils were at this level.

Socio-economic indicators such as parents' education and the number of books in a child's home were positively related to achievement at school (TIMSS, 2015).

These poor education outcomes have little to do with low public expenditures per se. Education for instance, is at the very minimum a R500 billion² industry in South Africa inclusive of the private sector. The efficiency of that expenditure, however, leaves a lot to be desired. There are also some serious questions relating to the equity of education expenditure, particularly the distribution of financial resources between urban and rural areas, and between school catering to the poor and those for the rich.

As a consequence of these persistent inequalities, South Africa exhibits a poorly distributed and low quality human capital. While providing quality and extensive education to all socio-economic groups in society is a matter of social justice, the issue of education distribution is also one of crucial economic implications. While gains have been made in increasing average education levels, they have not been accompanied by a better distribution of education.

¹ SACMEQ – Southern and eastern Africa Consortium for Monitoring Educational Quality; TIMSS – Trends in Mathematical and Science Study; PIRLS – Progress in International Reading and Literacy Study

² Author's estimate.

South Africa's poor educational distribution is not attributable to the lack of initial access to schools, but partly to high and more rapid drop-out rates among the poor. The result is that school systems remain highly stratified (even within relatively wealthy cities such as Cape Town and Johannesburg) and are not a mechanism of social mobility. Rather, they act to perpetuate current socioeconomic structures and reinforce inequality.

While the role of education in development is generally acknowledged by policymakers, there is at best a lack of clarity about the role of post-secondary education (PSE) in particular in enhancing development.

PSE raises some important challenges for policy makers. Access and equity are at the top of these challenges. Second, there is a trade-off between quantity and quality. Third, there is the challenge of reaching a graduate mix that is compatible with labour market needs and national development.

Moreover, the challenge of changing the composition of outputs from the PSE system entails mobilising additional resources to PSE especially but not only in the science and technology disciplines. Finally, there is another important challenge that calls for a balance between transmitting the information and skills needed for the labour market, fostering innovative and creative talents, and developing broad intellectual capacities among higher education students and graduates.

One possible channel through which PSE can enhance economic development is through technological catch-up. In a knowledge economy, post-secondary schooling can help economies gain ground on more technologically advanced societies as graduates are more likely to be more aware of and better able to use new technologies.

What all of this suggests therefore is a renewed emphasis on investing in post-secondary education which has to be at the heart of the country's sustainable development processes. Only post-secondary institutions can provide the human capital necessary to ensure good governance which lies at the core of the solution to the country's greatest challenges in virtually all sectors.

The role of technical and vocational education and training is particularly crucial to the development of the country's manufacturing sector which at this point is seriously underdeveloped given the country's level of development. Moreover, one of the major constraints to the development of a manufacturing sector and a productive export strategy is the lack of middle level skills in terms of technicians of various kinds, such as welders and plumbers.

There is a view that private higher education could play a role in increasing access and improving quality. At the present time, the private higher education system is relatively small with no indication of growing substantially in the near future. In the technical education and training field, there are a number of small private colleges but there is not much data on their performance. There are no private "universities" in terms of the country's legislation. Instead, there are "private higher education institutions" such as a branch of Australia's Monash University. The limited data here also suggests that enrolments are relatively small compared to the public sector.

1.10.4 Intergovernmental relations and education

Education and the constitution

According to the South African Constitution, ‘Basic Education’ or ‘Schooling’ is a “concurrent” function shared between national and provincial government. The local government sphere does not have a direct role in education. However, as every school is located in a municipality, local government is responsible, *inter alia*, for the provision of basic services such as electricity, water, sewerage, and refuse removal. In addition, municipalities may undertake building of schools on behalf of the Department of Public Works.

How is concurrency defined in the education sector? Essentially, national government formulates policy and provinces implement policy. For the first two decades of democracy, national government formulated education policy in all of the following areas: early childhood education, primary and secondary education, adult basic education and training, further education and training, and universities. With the exception of universities, all education policy was implemented by the provincial governments.

From an efficiency perspective, the idea of concurrency made a lot of sense for the simple reason that national government located in Pretoria cannot implement education policy across the country without some form of decentralization in place. In the case of education (and health), the form of decentralization adopted in South Africa has brought with it a set of challenges that has undoubtedly affected issues of access, equity, and quality in particular, in the provision of Early Childhood Development (ECD), schooling, and vocational education and training.

Budgeting in a decentralized political framework

It is argued here that the constitutional autonomy of the provincial governments who are charged with implementing education policy may be a serious impediment to ensuring effective outcomes in education. There are at least two important issues. The first relates to the budgeting process. In terms of the constitution, each province is entitled to an “equitable share of nationally collected revenue” (Constitution of South Africa, 1996). The formula to distribute these financial resources is unashamedly redistributive and is based, *inter alia*, on criteria such as population and poverty. Provinces such as the Eastern Cape, KwaZulu-Natal and Limpopo benefit because they are relatively poor with populations that are relatively young. On the other hand, the richer provinces, such as Gauteng and Western Cape “lose” in the formula.

The equitable share comes to the province as a block or unconditional grant in terms of the Division of Revenue Act which is promulgated when the Minister of Finance presents his budget. This equitable share thus confirms a province’s “autonomy” in terms of the Constitution. This means that the province is free to allocate this block grant as it sees fit, in terms of the policies and priorities of the provincial government.

While cognisance is taken of national education policies in the provincial education budget, the provincial budgeting process is not linked to the Ministry of Basic Education in any way. The MEC³ for Education in the province is accountable to the Premier of the province and

³ MEC – Member of the Executive Council in the province

takes part in a budgeting process that is convened by the provincial MEC for Finance and the provincial Treasury.

The redistributive nature of the provincial Revenue Sharing Formula may actually have some unintended consequences for schooling in that it may unduly reward less populated rural areas rather than growing cities such as Johannesburg and Cape Town.

Table 4: Provincial equitable shares 2018/19

Province	Equitable Share (R, bn)	Percentage Share
Eastern Cape	65.5 (4.7)	13.9
Free State	26.1 (1.9)	6.0
Gauteng	93.4 (6.7)	19.9
KwaZulu-Natal	99.3 (7.1)	21.1
Limpopo	55.2 (3.9)	11.7
Mpumalanga	38.5 (2.8)	8.2
Northern Cape	12.5 (0.9)	2.7
North West	32.4 (2.3)	6.9
Western Cape	47.4 (3.4)	10.1
Total	470.3 (33.7)	

Source: Budget Review, 2018. Figures in parenthesis are equivalent US\$ amounts (1\$ =14 South African Rand)

The total amount of revenue available for distribution to the three spheres after the “top-slice” to pay interest on debt was R1 512 billion in 2018. Of this amount R979 billion was allocated to national government; R470 billion went to the provinces; and local government received R63 billion (National Treasury, 2018)

Table 1.4. shows how the R470 billion equitable share was divided between the provinces using the formula designed by the Financial and Fiscal Commission (FFC). The Eastern Cape province, for example, will then divide its R65.5 billion equitable share (or block/unconditional) grant between its departments through a budgeting process overseen by the Provincial Treasury.

There are several institutional mechanisms in place to ensure effective coordination between policy makers (national government) and policy implementers (provinces), for example, the Committee comprising the Minister of Basic Education and MECs for Education (Education MinMEC). However, the effectiveness of such institutions in ensuring that all national education policies are implemented is questionable.

In fact there is considerable evidence to the contrary. The Eastern Cape, for example, has consistently run into serious problems with its Education Budget, specifically its inability to pay all its teachers, clearly a situation arising from the merger of two large Bantustan bureaucracies, Ciskei and the Transkei with ‘white’ South Africa in 1994. The Eastern Cape Education Department has often responded to the teacher salary crisis by diverting financial resources from other sub-sectors of education such as ECD and Further Education and

Training (FET). What this effectively means is that national policy in key areas such as ECD and FET does not get implemented.

The national government (specifically the Ministry of Basic Education (MBE) and the Ministry of Higher Education and Training) has responded in two ways. First, the MBE provides “conditional” grants, in sub-sectors such as Early Childhood Development, to ensure that national minimum standards are implemented in this sub-sector. In a sense, the national government provides a conditional grant to “reward failure” on the part of the provincial government to implement ECD policy as part of its provincial education mandate. Moreover, until recently, there was little monitoring on the part of national departments to ensure that conditional grants are actually used for the purpose for which they were designed.

Second, given the consistent neglect of sectors such as Adult Education and Training and Vocational Education and Training by provincial governments, the national government decided that the solution would be to “take back” these functions to the national level, which it has done by locating both AET and VET in the Department of Higher Education and Training. However, it is a moot point whether efficiency and effectiveness in these sectors have been enhanced by their “nationalisation”.

In addition to the R470 billion equitable share, the provinces received conditional grants worth more than R100 billion from 10 national departments: Agriculture, Forests and Fisheries; Arts and Culture; Basic Education; COGTA; Health; Human Settlements; Public Works; Social Development; Sport and Recreation; Transport (National Treasury, 2018). Table 5 shows the conditional grants provided by the Department of Basic Education to the provinces.

Table 5: Conditional grants from DBE to all provinces, 2018

Conditional Grant	Amount (R, bn)
School Infrastructure Backlogs	2.18
Education Infrastructure	10.05
HIV and AIDS education	0.245
Nutritional School Programme	6.43
Mathematics, Science, Technology	0.365

Source: Budget Review, 2018

Local government budgeting

Even though local government is not allocated a specific role in education, cities and towns can still play an important role in enhancing the quality of and promoting equity in educational provision and equity. For example, UNESCO (2016) has shown how the concept of a “learning city” can enhance quality and promote excellence in education.

The local government sphere also receives an equitable share, based largely on population and poverty. The main purpose of the LG equitable share is to assist the municipalities in the provision of basic services. In 2018, the local government equitable share is valued at R62.7 billion. Gauteng’s municipalities received R11.984 billion with the City of Johannesburg getting R4.229 billion (National Treasury, 2018) . The equitable share constitutes a very

small proportion of the revenue of metropolitan cities such as Johannesburg and Cape Town as they have considerable ‘own revenue sources’. However, they make up a significant share of the revenue of smaller municipalities, and in the case of deep rural municipalities, they are often the only source of revenue.

In addition, municipalities receive conditional grants (valued at R62.7 billion in 2018) for inter alia, capacity building, infrastructure skills development, and developing municipal systems (National Treasury, 2018). The fuel levy (R12.5 billion in 2018) is distributed amongst the eight metros. The metros also receive a Transport Network Grant (for the development and maintenance of public transport networks) from the Department of Transport. In 2018, Johannesburg receives R1.112 billion and Cape Town R1.046 billion (National Treasury, 2018).

In summary, the structure of the intergovernmental system, in particular the resource allocation process and associated provincial autonomy, does throw up some important challenges for ensuring that (i) national education policies in fact do get effectively implemented in the provinces; and (ii) urban areas do in fact get their fair share of financial resources in line with their rapidly growing school populations.

1.10.5 Education in Gauteng and the Western Cape

The outputs and outcomes in South African education relative to the high levels of investment are quite appalling. South Africa spends approximately 6.4 percent of GDP and one-fifth of its budget on education (National Treasury, 2018). These figures are extremely high by international standards (compared against both industrialised and developing countries).

In this context of high spending and poor outcomes, the two provinces which fare the best are Gauteng and the Western Cape. These are also the two provinces whose economies are the most developed, and in which poverty levels are the lowest. In terms of the matric (or school-leaving) pass rate (unfortunately not a very good indicator of qualitative achievements in schooling), Gauteng and WC are among the top three provincial performers. For example, in 2017, the national matric pass rate was 75.1% while that for Gauteng was 85.1% and WC’s was 82.8%. In terms of “Bachelors” passes (eligible for university entrance), the respective figures were 28.7, 36.0 and 39.0 (DBE, 2018).

One indicator of the relatively low poverty in Gauteng and WC (compared to other provinces) can be derived from the relatively small number of Quintiles 1-3 schools (the schools in the three poorest income categories) in these provinces compared to the country as a whole. Table 6 shows the distribution of schools writing the matric exam in 2017. Forty three percent of Gauteng schools were in the poorest quintiles (i.e. 1-3) (271 out of 635), and 31% of WC schools (122/397) while the national figure was 79% (4929/6246).

Table 6: Distribution of schools writing the matric exam by quintile

Type of School	Gauteng	Western Cape	Total in SA
Quintiles 1-3 (no fees)	271	122	4 929
Quintile 4	150	89	595
Quintile 5	214	186	722
Total	635	397	6 246

One of the big question marks about the matric pass rate relates to whether it is a good indicator of quality and efficiency in the South African schooling system. An associated challenge here is the extremely high number of drop-outs in secondary schooling particularly in grades 11 and 12. There is a strong and widely-held belief that large numbers of (weaker) students are “culled” in these years as part of a strategy to allow only those students considered to have the potential to pass the matric examination years later to progress. This strategy inflates the matric pass rate relative to what it might have been if weaker students were allowed to progress.

Table 7 compares the official pass rate with the pass rate that might have ensued (the so-called “true” pass rate) if these students had been allowed to proceed from Grade 10 to Grade 12. The ‘true’ pass rate is somewhat exaggerated as it assumes all students would have progressed from grade 10 to 12 (i.e. no drop-out at all) and that none of them would have passed.

Table 7: Official matric pass rate vs “true” (no drop-out) pass rate, 2016

Province	Grade 10 (2014)	Grade 12 (2016)	Drop-out rate (%)	Grade 12 pass	Pass rate (%) 2016	“True” pass rate (%)
EC	154 220	82 902	46.2	49 768	60.0	32.2
Free State	55 293	26 786	51.6	23 629	88.2	42.7
Gauteng	174 471	103 829	40.5	88 381	85.1	50.7
KZN	264 816	147 648	44.2	98 032	66.4	37.0
Limpopo	189 710	101 807	46.2	63 545	62.5	33.6
Mpumalanga	94 528	54 251	42.6	41 801	77.1	44.2
North West	67 734	32 045	52.7	26 448	82.5	39.0
NC	22 034	10 041	54.4	7 902	78.7	35.9
WC	75 791	50 869	32.9	43 716	86.0	57.7
South Africa	1 100 877	610 178	44.6	442 672	72.5	40.2

Source: www.news24.com

When a situation of “no-drop-out” is assumed, the “true” pass rate drops dramatically in comparison to the official figures. Obviously the truth is somewhere between the official and computed rates in Table 8. Notwithstanding the quality of the data, WC and Gauteng come out as the two top provinces in terms of having the lowest-drop rate and hence the highest “true” pass rates.

The populations of Gauteng and Western Cape also have the highest educational attainment relative to the rest of the country. Table 8 shows that the proportion of 25-64 year olds with both secondary and post-secondary education is much higher than the national average and

that of the poorest province (Eastern Cape). In terms of provincial shares in post-secondary education, Gauteng ranked highest (38.0%) followed by the Western Cape.

Table 8: Education attainment of 25-64 year olds by province

Province	No Schooling	Primary	Secondary	Post-secondary
Gauteng	3.6	9.4	70.7	16.3
Western Cape	2.2	13.9	70.7	13.0
Eastern Cape	6.5	18.9	64.9	9.5
South Africa	6.0	13.6	68.2	12.1

Source: Statistics SA, 2016

Table 9 and Table 10 show, respectively, the matric pass rate by district for Gauteng and Western Cape. There is little variation in the matric pass rate by district in Gauteng (Table 9) with the exception of Gauteng North, although this appears to be somewhat of an outlier as data for other years show little difference between all the districts (DBE, 2016, 2017). The Johannesburg districts do not perform significantly better in terms of the matric pass rate than the other districts in general.

Table 9: Matric pass rates, Gauteng by education district, 2017

Education District	Pass Rate (%)	Education District	Pass Rate (%)
Tshwane North	88.9	Johannesburg West	88.6
Tshwane West	83.3	Johannesburg Central	80.0
Gauteng North	75.4	Ekurhuleni North	89.0
Gauteng East	82.9	Ekurhuleni South	89.0
Gauteng West	88.6	Sedibeng West	81.9
Johannesburg North	84.0	Sedibeng East	87.8
Johannesburg East	87.8		

Source: Statistics SA, 2016

Similarly, there is little difference in the pass rates amongst the WC districts. In fact, one of the Cape Town districts, Metropole East (which comprises Khayalitsha and Kuils River) performed the worst but still had a 'respectable' pass rate (Table 10).

Table 10: Matric pass rates, Western Cape, by education district, 2017

Education District	Pass Rate (%)	Education District	Pass Rate (%)
Metropole Central	84.1	West Coast	85.7
Metropole East	77.7	Cape Winelands	82.4
Metropole North	85.8	Eden & Central Karoo	81.7
Metropole South	82.9	Overberg	87.7

Source: Statistics SA, 2016

Table 11 shows the metros and districts in South Africa with the highest educational attainment. With the exception of Tshwane, which has a relatively high proportion of individuals with post-secondary education (PSE) (probably because of the high number of civil servants residing there), there is little difference amongst the top metros and districts with the possible exceptions of eThekweni, Nelson Mandela Bay, Sedibeng and West Rand in terms of PSE qualifications.

Table 11: Metro and districts with the highest educational attainment

Metro/District	None	Primary	Secondary	Post-secondary
Buffalo City	3.2	11.8	69.2	15.7
Cape Town	1.9	10.9	71.7	15.5
Johannesburg	3.2	8.8	71.8	16.2
Tshwane	4.0	8.0	65.9	22.1
Ekurhuleni	3.6	9.8	73.3	13.2
eThekweni	4.0	9.6	74.3	12.1
Manguang	4.7	14.0	66.1	15.1
Nelson Mandela Bay	2.2	10.4	75.3	12.1
Sedibeng	3.7	11.0	72.0	13.3
West Rand	3.5	14.0	71.0	11.0

Source: Statistics SA, 2016

Table 12 on the other hand, shows the upper secondary completion rate for individuals 25 years old or younger in the metro. All the metros have a figure that is much higher than the South African average, with eThekweni, Ekurhuleni, and Johannesburg constituting the top three metros in this regard.

Similarly, as Table 13 shows, there is little difference in terms of the average years of schooling by metro with the mean at 9.3 years.

Table 12: Upper secondary completion rate among 25 year olds or younger by Metro

Metro	% completed Upper Secondary
Buffalo City	66.3
Cape Town	67.9
Johannesburg	73.5
Tshwane	71.0
Ekurhuleni	73.3
eThekweni	76.6
Manguang	65.7

Nelson Mandela Bay	68.7
South Africa	64.8

Source: Statistics SA, 2016

In terms of literacy levels by province, Western Cape comes out highest at 85.9% followed by Gauteng at 87.5%, while the lowest is Limpopo at 71.3%. The South African average is 79.3%.

Table 13: Mean years of schooling by Metro

Metro	Mean Years of Schooling
Buffalo City	9.0
Cape Town	9.5
Johannesburg	9.7
Tshwane	9.8
Ekurhuleni	9.6
eThekweni	9.3
Manguang	8.9
Nelson Mandela Bay	9.1

Source: Statistics SA, 2016

1.10.6 Education in Johannesburg

Although Gauteng as a province, and Johannesburg as a city, normally feature at the top of their respective rankings in educational attainment, and matric pass rates, the education system is no by no means of uniform quality. It would be accurate to say that the quality of education provision in Johannesburg mirrors the spatial geography of the city. The best public schools are located in the inner periphery, the former white suburbs. Access to these schools is determined largely by residence so that the middle class composition of the student population remains largely unchanged, with the exception of a small proportion of children of domestic workers in these suburbs. Inequalities are further entrenched by the high costs of “busing” school children in from the “townships” particularly to schools in areas such as Eldorado Park and Lenasia, where the schools may of a better quality than in Soweto but not as good as in the former white suburbs.

It would be fair to conclude that education in Johannesburg during the democratic era has been transformed from one based purely on racial criteria to one that is now overtly defined by class.

Beyond schooling, a major challenge is thrown up by the two Technical and Vocational Education and Training (TVET) Colleges, Central and South West Gauteng, located in Parktown and Soweto respectively. As with the TVET sector in general, these colleges face enormous challenges with regard to quality of teaching and outputs.

As stated earlier, education is not a constitutionally designated function of local government, and specifically here of the City of Johannesburg (CoJ) government. Going beyond the class

and racial inequalities in education provision, many other education and work-related challenges remain in the CoJ, notwithstanding the relatively high qualifications referred to earlier.

Functional illiteracy refers to those individuals who have not completed their primary education (Grade 7). In the City of Johannesburg, for example, Region D (Soweto) had the highest number of persons who could not read or write between 1996 and 2010. There was a 50.7% increase in persons who could not read or write in Region G, which includes Deep South, Ennerdale, and Orange Farm, from 1996 – 2011 (HSRC, 2013).

The City of Johannesburg's Integrated Development Plan 2017/2018 notes that unemployment in the city stands at 28.2% (City of Johannesburg, 2017). Moreover, only slightly more than 3% of citizens have an undergraduate and Master's degree. At the same time, the same document refers to the development of a "Smart City" by 2021, key components of which will be E-learning, Smart Safety, and Smart Services. The only assurance given about education in the IDP is the provision of "100% access to ECD facilities by 2021". Despite "constitutional constraints" regarding the role of local government in education, there is much that CoJ can do to address the education and associated economic challenges. The notion of a "Learning City" as espoused by UNESCO may provide some important pointers for CoJ in this regard.

UNESCO (2016) has shown that several initiatives have been taken in recent years to translate the concept of a "learning society" into reality. One significant example is the growth of "learning communities", "learning cities" and "learning regions". Although the idea of a 'learning city' has been conceptualized mainly in industrialised countries, it is occurring with increasing frequency in developing countries'.

UNESCO has defined a learning city as follows:

"A learning city is one which effectively mobilizes its resources in every sector to:

- Promote inclusive learning from basic to higher education;
- Revitalize learning in families and communities;
- Facilitate learning for and in the workplace;
- Extend the use of modern learning technologies;
- Enhance quality and excellence in learning; and
- Foster a culture of learning throughout life." (UNESCO, 2016)

Monitoring the progress of a learning city is important for at least three reasons:

- To transform political and theoretical discourses into concrete strategies and approaches;
- To measure progress over time; and
- To evaluate the benefits of strategies it has put in place.

UNESCO's framework of the key features of learning cities comprises the following:

First, three areas of focus reflect the wider benefits of building a modern learning city, namely:

- Individual empowerment and social cohesion;
- Economic development and cultural prosperity; and

- Sustainable development.

The major building blocks of a learning city are the following:

- Inclusive learning in the education system;
- Revitalised learning in families and communities;
- Effective learning for and in the workplace;
- Extended use of modern learning technologies;
- Enhanced quality in learning; and
- A vibrant culture of learning throughout life.

The fundamental conditions for building a learning city have been identified as follows:

- Strong political will and commitment;
- Governance and participation of all stakeholders; and
- Mobilization and utilisation of resources.

CoJ would do well to use the UNESCO model of a “learning city” to work with the provincial government to address the multitude of education and associated economic challenges including the following:

- Improving the quality of primary education especially Reading and Mathematics proficiency;
- Universalising the provision of ECD;
- Ensuring adequate basic services in all schools;
- Addressing the challenges of teaching and outputs from TVET colleges;
- Preparing secondary pupils in Mathematics and Science education; and
- Ensuring effective implementation of skills development programmes for unemployed youth

1.11 Health and healthcare in South Africa: a national, provincial and cities perspective

This report provides an overview of the South African health system at three levels. The first level provides a national perspective covering the institutional framework, which includes the system of intergovernmental relationships; aspects of the public/private context; the important drivers of health need; and the main features of the burden of disease. The second examines the provincial context in more detail, focusing specifically on the Western Cape and Gauteng. The third looks specifically at Johannesburg, its imperatives, needs and likely future requirements. Due to the nature of the thematic issues reviewed, the three levels will be addressed holistically as far as possible.

1.11.1 Organisation of the health system

Overview

The South African health system can be divided broadly into four parts governed through three spheres of Government in accordance with the Constitution of South Africa (Constitution) (Republic of South Africa, 1996).

Three of these parts relate to the public health service and include: the national sphere which oversees national policy and implementation; the provincial sphere which has the constitutional mandate for health services held concurrently with the national sphere;⁴ and local government, which has the mandate for health functions that do not involve clinical healthcare services (such as environmental health and sanitation).

Local governments are however responsible for the provision of health services assigned to it by a provincial Member of the Executive Council (MEC)⁵ in terms of section 32 of the National Health Act (National Department of Health, 2003) and therefore lack the authority to determine alone what they make available. Municipal health services are non-clinical in nature and focus on environmental health functions such as sanitation and aspects of population health.

The fourth part of the health system is through private health service providers and funded by private health insurance (referred to as medical schemes). The private health system is mainly regulated through national legislation⁶ falling under the jurisdiction of the Minister of Health. A regulator, the Council for Medical Schemes, which reports to the Minister of Health, supervises medical schemes. Private hospital licensing however occurs at a provincial level. (Figure 1).

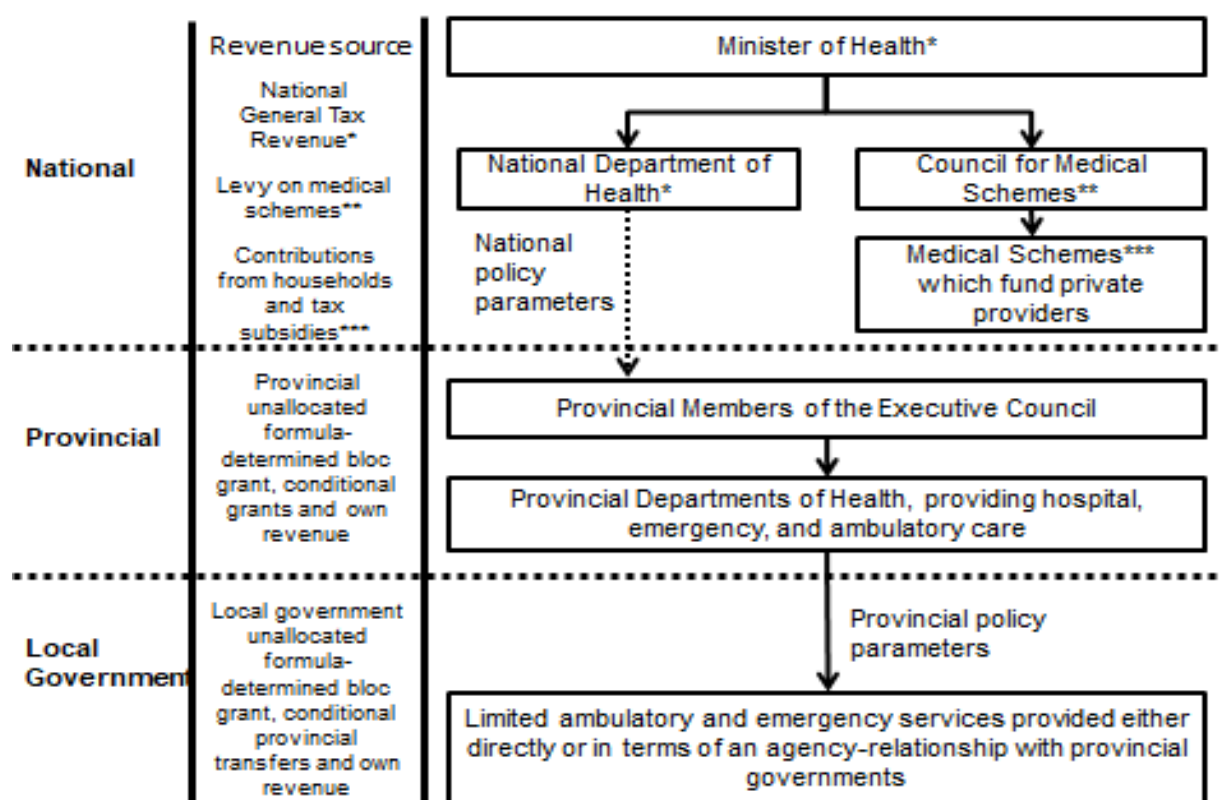
The emergence of provincial governments and medical schemes as the predominant vehicles for the delivery of health services in South Africa is an outcome of the incremental interplay between the changing needs of the population and policy over a period of 200 years. The institutional context that presents itself in 2018 is consequently quite entrenched. The historical context therefore offers insight into the institutional features of the current health system.

⁴ This can be found in schedule 4, Part A of the Constitution which lists the functions that are to be held concurrently by both national and provincial governments (Republic of South Africa, 1996).

⁵ An MEC is equivalent to a national minister except that they represent an executive function at the provincial level.

⁶ This includes the regulation of all health professionals, medicines, medical products, medical devices, pharmacies, and medical schemes. See Annex A for a list of all national health legislation.

Figure 3: Key features of the national health system in South Africa



Source: (van den Heever, 2016)

Historical context

The first pieces of health legislation enacted in what is now South Africa occurred in the Cape Colony.⁷ These dealt largely with the containment of infectious diseases, especially smallpox, which were included in the Public Health Act of 1933. This made vaccinations (against smallpox in particular) and infectious disease notifications compulsory. There was also the Contagious Disease Act, No. 1 of 1856 with further legislation passed in 1867 after a particularly severe outbreak of smallpox (Ginwala, 1981).

Governments at that time did not intervene in the provision of healthcare for the benefit of society as a whole – where services (such as they were) were available largely on an ability-to-pay basis. However, infectious diseases, as a matter of general concern, nevertheless required some form of organised government intervention to address the risks posed to all income groups.⁸

The authorities at the time focused exclusively on the problem of infectious diseases and did not regard it as important to develop a fair system of access to health services. In 1868, an outbreak of smallpox in Kimberley resulted in the passage of the Medical Tax Act which sought to levy an earmarked tax on "native workers" on the diamond diggings to fund the local hospital. However, opposition to the tax (from mine owners who were required to pay

⁷ The Cape Colony encompassed what is now effectively three provinces under South Africa's present Constitution. These are the Western Cape, the Northern Cape and the Eastern Cape.

⁸ In Public Economics infectious diseases are referred to as a merit good – where access on an ability-to-pay basis results in increased health risks for the population in general (especially the high-income groups).

the tax) resulted in an implementation delay until 1882 when mining companies agreed to pay the tax directly to the Cape government. (Ginwala, 1981)

The first private medical scheme in South Africa was the De Beers Consolidated Mines Ltd. Benefit Society, established in 1889 (by 1910 seven such schemes were in existence) (National Department of Health, 2002). Mining activity in Kimberley therefore drove the original development of both the public and private health systems in South Africa.

The Public Health Act of 1833 also granted emergency powers to local authorities to enter premises and to draw up and enforce quarantine regulations. Local authorities were also empowered to establish health departments and hospitals with half the costs subsidised by the government of the Cape Colony. (Ginwala, 1981)

The consolidation of the four independent states of the Cape of Good Hope, Natal, the Orange River Colony and the Transvaal into the union of South Africa occurred on 31 May 1910, following the National Convention of 1909, through the South Africa Act. This Act referenced health laws that had emerged in the separate states (colonies from 1902) and transferred the (inherited) responsibilities for environmental hygiene and infectious disease control to provinces (the former colonies) and local authorities (Ginwala, 1981).

However, the various overlapping pieces of legislation and confusion of responsibilities regarding public health were exposed by the influenza epidemic of 1919 and resulted in the passage of the Public Health Act No. 36 of 1919 (Ginwala, 1981).

In terms of this Act the new provinces retained responsibility for the administration of local government and the establishment, maintenance and management of general hospitals. The Act also established the Department of Health with executive responsibility for the function health in the country. The Act sought to decentralise the operations of the health system. In realising this goal the Department of Health was provided with powers to advise, assist and, where appropriate, coerce provincial administrations and local authorities to fulfil their public health responsibilities. (Ginwala, 1981)

In terms of the Public Health Act private hospitals were divided into those operated for profit, philanthropic hospitals (mission hospitals)⁹ and those required to fulfil statutory requirements (mine hospitals).¹⁰

The origins of the segregated health service pre-dated the National Party victory of 1948 with the proposed formation in 1936 of a "native medical service". This included the expansion of training of "native medical aids" at Fort Hare. (Van Rensburg & Harrison, 1995)

Amendments to the Public Health Act in 1946 however sought to demarcate more clearly the functional responsibilities of the national and provincial governments. In particular, it clarified that provinces were responsible for hospital and outpatient services. The national government was therefore tasked with the development and implementation of a system of

⁹ These hospitals were permitted in rural areas where no local authorities existed to finance services (Ginwala, 1981).

¹⁰ Hospitals with statutory requirements included the Mine and Indian Immigration Bureau Hospitals required providing coverage for labour supply from India. The Natal colony previously levied a special tax on employers (of Indians) which were paid into a fund administered by the Indian Immigration Bureau to finance hospitals under its control. (Ginwala, 1981)

health centres (primary health care centres). It further allowed public services to recover user fees to supplement tax funding. (Ginwala, 1981)

National government was therefore taking responsibility for the development and implementation of the primary care system while provinces focused on hospitals. This followed the recommendations of Gluckman, the then Minister of Health, following the commission of inquiry he chaired. He also advocated the implementation of a national health service¹¹ – where the national government would assume all the functional responsibilities for health services with the system entirely funded through an earmarked tax. However, the government at the time did not support this radical reshaping of public health services and focused instead on having Gluckman implement the primary care centre-based system.

In 1948 the National Party took power in South Africa and aggressively redefined health services along racial lines. Prior commissions of inquiry were replaced with new commissions, with the Tomlinson Commission report of 1954 recommending the establishment of a separate "Bantu Health Service" – essentially bringing to a halt the national Department of Health's focus on the implementation of a "unitary" health system (i.e. Gluckman's vision of a single health service falling under the jurisdiction of the national government). The development of the "homeland system" further fragmented the health system – with multiple national-level structures operating in parallel with national and provincial structures. (Van Rensburg & Harrison, 1995)

A significant development occurred in 1977 when the Health Act further clarified the health functions of provinces. The national Department of Health now more specifically had responsibility for coordinating health services rendered by provincial administrations and local authorities. Importantly, it also had the responsibility for the development of additional services required for a comprehensive health service for the entire population of South Africa. (Ginwala, 1981)

This framework ultimately led to the evolution of a largely province-driven health system, which provided all services, including hospital-based services, primary care, specialised hospitals for infectious diseases, mental health services and emergency medical care. Local authorities, in the form of the large metropolitan local governments, also developed health services, but largely primary care and environmental health services. These were co-funded with subsidies from the national government. The large local governments also ran emergency medical services – also co-funded through subsidies from provinces. The mix of services emerging between provinces and local government never formed part of an over-riding national or regional policy framework and emerged largely from the "bottom-up". Smaller and rural local authorities however lacked the tax base to fund health services and depended entirely on provincial administrations for primary healthcare services.

Despite the purposes of the Act no real effect on the fragmentation of health governance was achieved (Van Rensburg & Harrison, 1995). Ultimately, the general trajectory led to the establishment of 17 different (national-level) departments of health with the possibility of coherent national coordination only over the territory of the Republic of South Africa (i.e. excluding the independent and self-governing homelands). To address fragmentation two additional bodies were established: the Health Matters Advisory Committee and the National

¹¹ At a time when this did not yet exist in the United Kingdom. The close equivalence in nomenclature between the Gluckman proposals and those ultimately implemented in 1948 in the United Kingdom is quite probably due to the close relationship between the prime ministers of both countries during the war years.

Health Policy Council. However, by 1980 the Brown Commission reported significant levels of fragmentation over the control of health services and a general lack of policy direction, resulting in the misallocation of resources, the duplication of services and poor communication between the tiers of government (National Department of Health, 2002).

Flowing from these recommendations a National Policy for Health Act of 1990 repealed sections of the Health Act that related to policy-making structures and made provision for the Minister of National Health and Population Development to determine policy. The Act sought to diminish the role of provincial authorities in controlling health services as well as to improve the coordination of health services. (Van Rensburg & Harrison, 1995)

During 1989 to 1994 the public health system was officially desegregated in anticipation of the democratic transition. At this point, the overall shape of the health system took the form of a broadly provincialized public health system, offering hospital-based services and primary care, and a private health system offering comprehensive coverage, through medical schemes, from a doctor-driven system of primary care and hospitals. Due to a combination of budget cuts to the health system beginning in 1985 and (plausibly) due to the desegregation of public health facilities, the number of private hospitals and hospital beds expanded dramatically into the 1990s (see for instance Table 1.13). By way of contrast, public hospital beds have been in decline since 1986. (National Department of Health, 2002; van den Heever, 2012)

Prior to this expansion, many medical scheme beneficiaries obtained their professional services from private practices and their hospital-based care from public facilities. Flowing from the early developments of the public hospital system, access was subject to a means test with higher income groups and medical scheme members required to pay the full cost of their care. Thus, the predominantly "white" medical scheme members had to pay for their public hospital services, while the predominantly low-income "black" population accessed these services without payment – although segregated until 1989/90. From 1989 onward medical scheme beneficiaries, incorporating a rapidly expanding "black" component, accessed their hospital services exclusively in the private sector (van den Heever, 2012)

Prior to April 1994 the Department of National Health and Population Development and Welfare¹², took direct responsibility for the delivery of certain primary care services delivered by local authorities¹³ through regional offices located in the four provinces – but not subject to their authority. (van den Heever, 2004)

The regional offices were principally responsible for facilitating the transfer of subsidies to local governments responsible for the delivery of primary health care (PHC) services, which included clinics and environmental health. The subsidies, which were in practice conditional grants, did not involve any structured system of contracts, agreements or conditions. In 1996 the regional structures were fully devolved to the new nine provinces together with their functional responsibilities, budgets and staff. This occurred before any clear policy direction had occurred regarding the future vision for governance of PHC in South Africa. The poorly defined subsidy framework then continued operation as a provincial function without any significant adjustment thereafter. (van den Heever, 2004)

¹² This department was ultimately split into the present National Department of Health and the Department of Social Development (i.e. the former "Welfare" component).

¹³ Note that in this report a distinction is made between primary care (PC) services, which are ambulatory in nature, and primary health care services (PHC), which include both population-based health care and ambulatory care.

Following the change in Government from April 1994, a cornerstone of the new policy framework for the health system involved the implementation of a coherent third tier of the health system – referred to as the District Health System (DHS).

The idea of a strong autonomous third tier of the health system was strongly argued for in the Health Plan of the African National Congress in 1994 (African National Congress, 1994) and a committee of inquiry established to examine the future of the health system in 1995 (National Department of Health, 1995). Within the latter committee the idea of a DHS based on autonomous District Health Authorities (DHAs) was proposed that would act as a “purchasers” of health care.

While frequently debated in the mid-1990s a formal position, at least in terms of options, emerged in the Department of Health's White Paper of 1997 where the development of a decentralised DHS with community involvement was seen as a provincial responsibility (National Department of Health, 1997). However, the White Paper did not pronounce on the institutional design and avoided referring to the DHA as a purchaser of healthcare. Instead three possible approaches were advanced that would require further investigation (National Department of Health, 1997, p. 17): a provincial option; a statutory district health authority option; and a local government option.

Ultimately none of these options was ever formally implemented. Instead a mixed bag of approaches had emerged by 2003, with the National Health Act of that year merely outlining a rather weak (advisory) oversight framework, District Health Councils (DHC), to be implemented by provinces and no community involvement (van den Heever, 2004).

The highly centralised framework for the DHCs is outlined in section 31 of the National Health Act and places responsibility for the DHS on the relevant health MEC. The approach involves mixed participation by provincial representatives and local government representatives for the DHCs on the assumption that they will be able to effectively steer the affairs of a health district.

The budgets for the DHS would continue to be set by the MEC in the same way in which all the other budgets are determined and had been determined in the past. In this respect the National Health Act of 2003 made no difference to historical practice and continues to this day. The requirement for the annual preparation of district health plans in terms of section 38 of the National Health Act made very little difference to the coherence of district-level services.

As municipal health services are not defined in the Constitution, the mix of delivery and financing options for local authorities are largely at the discretion of a health MEC. Local authorities are however in a position to finance services at their own discretion, but are unlikely to do so where the mandate is unclear and where the province may be antagonistic.

Overall therefore, the DHS that emerges in 2003 deviates materially from the policy proposals of the ANC Health Plan of 1994 (African National Congress, 1994), the NHI Committee of 1995 (National Department of Health, 1995), and even the official DOH policy positions of 1997 (National Department of Health, 1997). The design retains a high degree of centralisation at a provincial level, involves a political accountability model¹⁴ (which is also

¹⁴ This may be regarded as an ambiguous assessment as government structures are designed with political accountability in mind. However, where political appointments permit conflicts of interest to emerge between political actors and the imperative to run operations with focused public interest objectives, service delivery is no longer accountable to the population served, or the public in general.

only advisory in nature), involves no community participation, lacks the authority to determine local priorities and to allocate resources, lacks a dedicated funding model (apart from the conventional budget process), and leaves the lines of responsibility between provinces and local authorities to the discretion of each province. (van den Heever, 2004)

Reforms under consideration in Gauteng province – a possible model for the country?

While the Western Cape provincial health system has continued with a centralised approach to the organisation of the province, with deconcentrated regional structures, the Gauteng provincial government is beginning to examine a more decentralised approach. It is possible that this approach will ultimately be pursued by the Western Cape and other provinces.

However, the picture is to a degree confused by an initiative led by national government that seeks to centralise the purchasing of health care services through a national agency – or National Health Insurance Fund (NHIF) (National Department of Health, 2017). This agency would (in theory) implement and oversee a DHS approach as initially envisaged in the 1995 NHI Committee report. However, while returning to the “purchaser” model of the DHA, the proposal to implement the strategy from the national level (reminiscent of Gluckman’s original idea discussed briefly above) has had little success to date and is unlikely to make any progress, even if legislation is introduced, as it represents too big a change from the pre-existing institutional pathway.

While retaining the purchaser concept of a DHA envisaged in the NHIF, the Gauteng Department of Health is nevertheless considering the long-term development of the envisaged DHS as a decentralised tier within the provincial health system rather than as part of a national agency.¹⁵

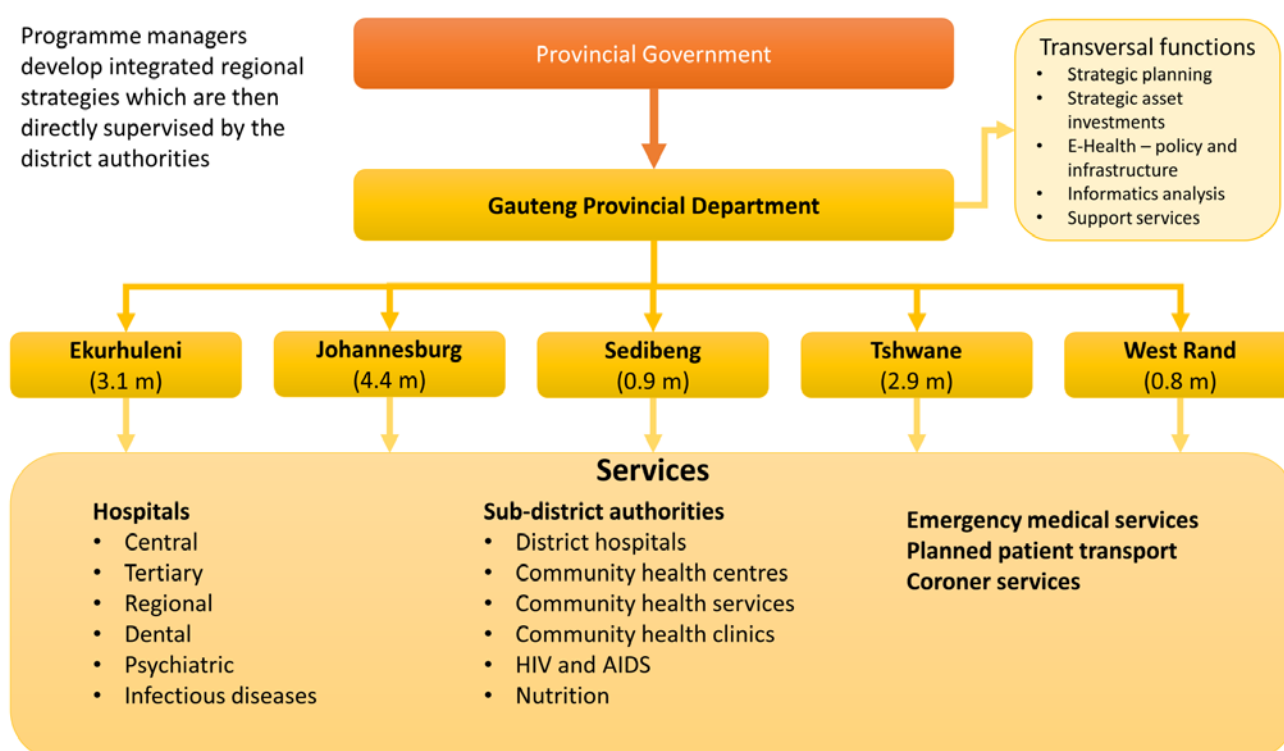
The GDOH can be divided broadly into a head office, regional administrations and services. The approach for the central and regional (or district) structures is distinct from the services. Head office (PHO) and regional structures need to be converted principally into purchasers/regulators of the services while services need to operate as autonomous resilient organisations responsive to users.

Figure 4 provides an indication of a possible strategic direction. The current dominant programme focus would be replaced by regional (district) health authorities (DHAs) which would oversee all services operating in their region and sub-district authorities (SDHAs) for primary care services. The provincial head office would directly oversee transversal functions only, including strategic policy development and implementation.

The text here refers to instances where political actors are structurally able to conflate their political mandate with their personal interests.

¹⁵ These proposals form part of current discussions within the Gauteng province and the information has been made available by the relevant process. This is only a broad concept and has not been approved as yet. The final framework may include a slightly different mix of responsibilities for a DHA. However, it is worth noting that such a process is underway and will have implications for the relationship between the province and the metros.

Figure 4: Possible reformed governance framework for the Gauteng Department of Health



Source: interpretation by the author of a possible future designs based on consultations with the GDOH.

With respect to services, the PHO would develop a strategy for each DHA together with a reporting framework. Each DHA would then develop agreements with each major service provider in their region and SDHAs. It would then proceed to closely supervise the agreements on an ongoing basis. The findings of the supervision process would be fed back to the PHO on a regular basis in standardised reports. Budget allocations and controls would then be subject to a supervision process managed by the DHAs and reported back to the PHO.

In order to tighten the process of close oversight, independent boards would be considered for each DHA and all major institutions. Each DHA would consequently report to a board. The boards for hospitals, sub-districts and support services would all report to their relevant DHA. The boards would have strong powers of supervision and be responsible for the appointment of the strategic executive team (chief executives (or equivalent), the chief financial officer (or equivalent), the chief operating officer (or equivalent), and the chief information officer (or equivalent)).

For the boards to be independent and accountable an open and fair process for governing board nominations, appointments (including independent vetting), term structures and removal is required. A balance between community representation, stakeholder representation and professional skills is furthermore needed to ensure effective governance and decision-making. The particulars of this final design will require substantive public consultation to ensure compatibility with the local context.

The overall framework deepens the original narrow “purchaser” conception of a DHA, combining regulatory functions and quasi contracting in relation to a substantially autonomous DHA. With respect to the major metros coterminous with the DHAs the

opportunity exists to develop a strong province-metro platform for integrated financing and delivery under a strong accountability model.

1.12 Financing the health system

1.12.1 Overview

The public health system can be divided five elements: general government (national and provincial); local authorities; the health system of the national defence force; social insurance arrangements (compensation for occupational injuries and diseases,¹⁶ compensation for occupational diseases affecting mineworkers,¹⁷ and the Road Accident Fund¹⁸); and subsidies to medical scheme members. The focus of this section is on the main elements: the financing of publicly delivered services through national, provincial and local government structures; and the private health system funded by medical schemes.

1.12.2 Organisation of health financing

The Constitution broadly establishes a multi-level general government system, with significant autonomy allocated to the three spheres of Government. While the system is subject to continuous legislative development, which influences the distribution of functions and the relative degrees of autonomy, broadly speaking the financial architecture of the South African public system corresponds to what is termed “fiscal federalism” (Ajam, 2015).

The bulk of government revenue is raised through national taxes and allocated to national, provincial and local government through the Division of Revenue Act (DORA). The allocations to national departments by the National Legislature take the form of voted budget allocations. The voted allocations to both provinces and local governments however become revenue for these structures. Their legislative structures subsequently vote on final allocations taking account of both their own revenue sources and that derived from national government. (See Figure 5 for an illustration of the flows).

Transfers from national government take two basic forms: a formula-based unallocated bloc grant, which provides general revenue to both provinces and local authorities; and conditional allocations which, where required, seek to achieve convergence between national, provincial and local governments. These allocations and the relevant conditions are specified in the DORA each year. Provincial governments, in particular the health function, provide subsidies to local authorities to render services falling within the functional responsibilities of the province.

In this system each sphere of government is able to receive funds as revenue from their own taxes, user fees and inter-governmental transfers.¹⁹ While revenue transfers can technically go in any direction, to date they tend to flow from the higher sphere to lower spheres.

The distribution of national government expenditure is heavily weighted to national government and the provinces at 47.7% and 43.3% respectively in 2018. Local government only received around 9% in 2018 with most of their budgets financed through their own

¹⁶ Overseen by the Department of Labour in terms of the Compensation for Occupational Injuries and Diseases Act.

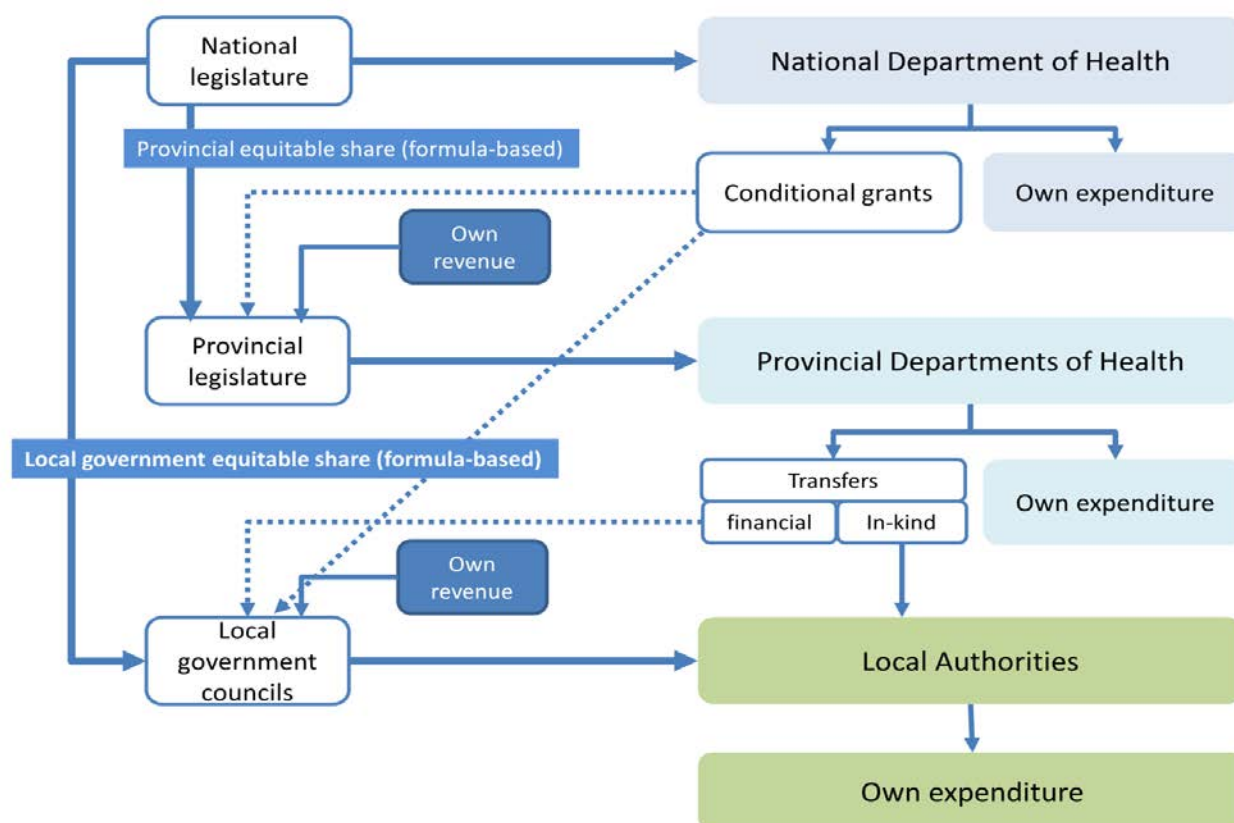
¹⁷ Overseen by the National Department of Health in terms of the Occupational Diseases in Mines and Works Act.

¹⁸ Overseen by the Department of Transport in terms of the Road Accident Fund Act.

¹⁹ Not covered here is loan financing which is an option for all three spheres.

taxes, utility fees and transfers from provincial governments. (See Annex D, Table D1 for a breakdown of the allocations).

Figure 5: Organisation of public health financial flows – revenue and expenditure



For provinces the formula-allocated unconditional provincial equitable share grant (PES) accounts for the bulk of their revenue, at 82.4% of the national allocation in 2018. Conditional grants, the largest share of which are for health functions, stands at 17.6% of their nationally sourced revenue in 2018. Overall the national allocation to provinces comes to R571 billion in 2018.

National revenue flowing to local government is made up of three transfers: the unallocated local government equitable share grant (53.0% in 2018); conditional grants (much of which is for the health function) (36.5% in 2018); and a distribution of the revenue raised from the fuel levy (10.5% in 2018). In 2018 the overall allocation to local governments from national government amounts to R118.5 billion.

The largest conditional grants relating to the health function for current expenditure in 2018 are the Comprehensive HIV, AIDS and tuberculosis Grant at R19.9 billion; the National Tertiary Services Grant (NTSG) at R12.4 billion; and the Health Professions Training and Development Grant (HPTDG) at R2.8 billion. Capital transfers in 2018 for the Health Facilities Revitalisation Grant involve an additional R5.8 billion. In total health conditional grants in 2018 came to R35.3 billion. (See Annex B, Table B1)

Two conditional grants are of particular importance for the provinces of Gauteng and the Western Cape. These are: the NTSG, which theoretically funds cross-boundary flows from

other provinces for the use of highly specialised services concentrated in these provinces; and the HPTDG, which theoretically funds the additional costs to the health service for the teaching and research functions carried out by academic complexes concentrated in these provinces. In the absence of these grants both these provinces would be unable to sustain their more complex services and educational functions.

The relationship between these grants and the services they are supposed to fund has never been built into the funding model and both the provincial and national departments appear to lack the capacity to properly negotiate the values and specificity of the grants. Despite numerous reviews by the Financial and Fiscal Commission, culminating in a published report in 2006 (van den Heever, Nthite, & Khumalo, 2006) no changes have been made to the grant designs.

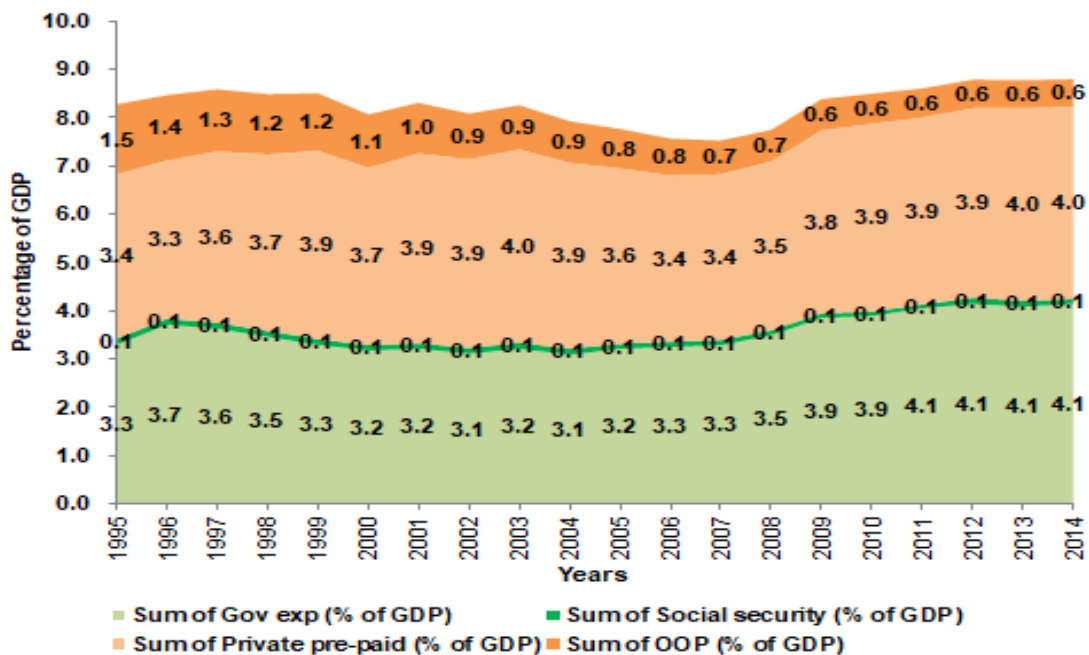
Due to the failure to adjust these grants, or provinces to properly negotiate their value, both the Western Cape and Gauteng are likely to face growing financial constraints in maintaining their highly specialised services over the next ten years.

1.12.3 Public-private mix

When expressed as a percentage of Gross Domestic Product (GDP) expenditure levels in the public and private health systems have remained a relatively stable over a very long period. However, both the public health systems and medical schemes have seen a structural increase: from 3.3% and 3.4% respectively in 1994 to 4.1% and 4.0% respectively in 2014. Out-of-pocket expenditure, at least as reflected by the World Health Organisation, has shown a significant decline over the same period, from 1.5% to 0.6% of GDP (Figure 6).

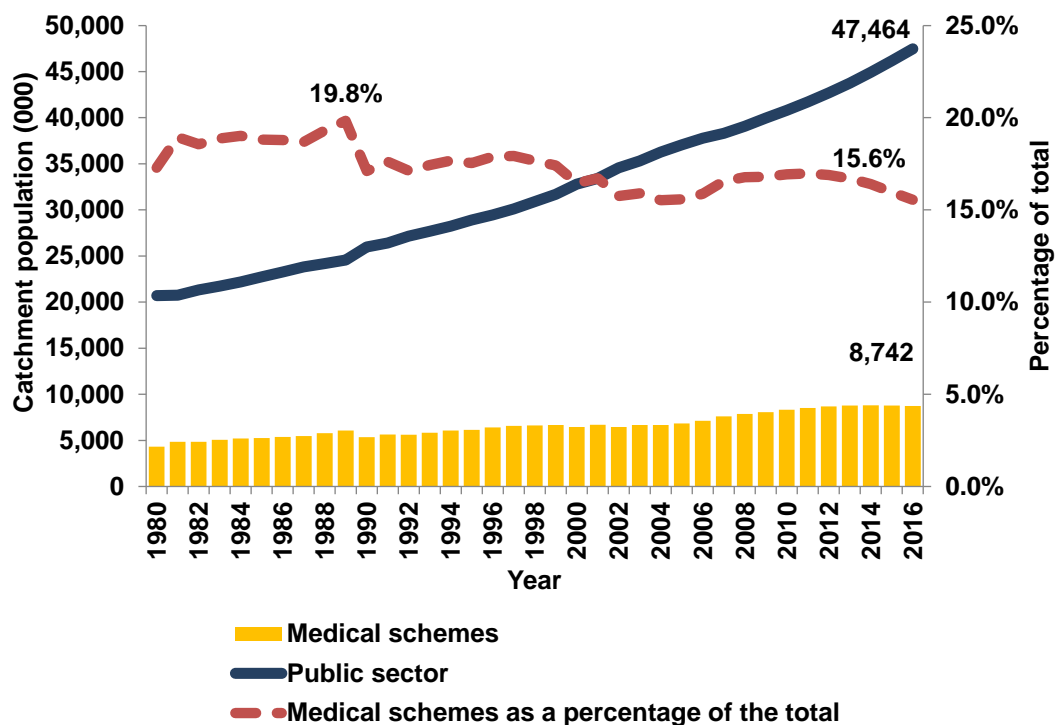
While the expenditure trends have remained stable and rising, the populations served by the two systems have not. Dramatic cost increases in the medical schemes system appear to have constrained increases to below overall population increase (a drop from 19.8% of the total population in the late 1990s to around 16% at present), with the public sector catchment population increasing slightly faster. By 2016 the public sector needed to protect 47.5 million while medical schemes offered coverage to 8.7 million. (Figure 7)

Figure 6: Health expenditure in South Africa expressed as a percentage of Gross Domestic Product 1995 to 2014



Source: (World Health Organisation, 1995 to 2014)

Figure 7: Catchment populations served by the public sector and the system of medical scheme (1980 to 2016)



Sources: Medical schemes beneficiaries (Council for Medical Schemes, 1980 to 2016); national population (Statistics South Africa, 1980 to 2017)

Despite increased and excessive resourcing of the private sector it has not been able to take on an equivalent burden of patient care. This trend is likely to be most pronounced in the Western Cape and Gauteng which face faster overall population growth (both as rates and in absolute terms) and also have the greatest concentration of the private health services.

While the amount spent on the private sector via medical schemes has remained fairly constant (as a percentage of GDP) over time, there has been a dramatic shift in hospital services away from the public sector. Until 1986 most people covered by medical schemes purchased their hospital services from the public sector as higher-income groups and medical scheme members need to pay for public hospital services. From 1986 to 2010 the number of private acute hospital beds in the private sector increased from 6,125 to 31,067, while the public sector declined from 117,842 to 88,920 (Table 14). In the period after 2000 the public sector explicitly de-prioritised hospital-based services in favour of primary care – or district health services (see for instance Figure 8 below). Within the public health budget, there has also been a substantial diversion of resources to HIV and AIDS funding, the bulk of which is financed through a national conditional grant noted in Section 4.3.

Table 14: Private and public hospitals and bed estimates from 1976 to 2010

Year	Private		Public	
	Hospitals	Beds	Hospitals	Beds
1976	25	2,346		
1986	65	6,125 (est)		117,842 (est)
1989	101	10,936		
1998	162	20,908	343	107,634
2010	216	31,067	410	88,920

Source: (van den Heever, 2012)

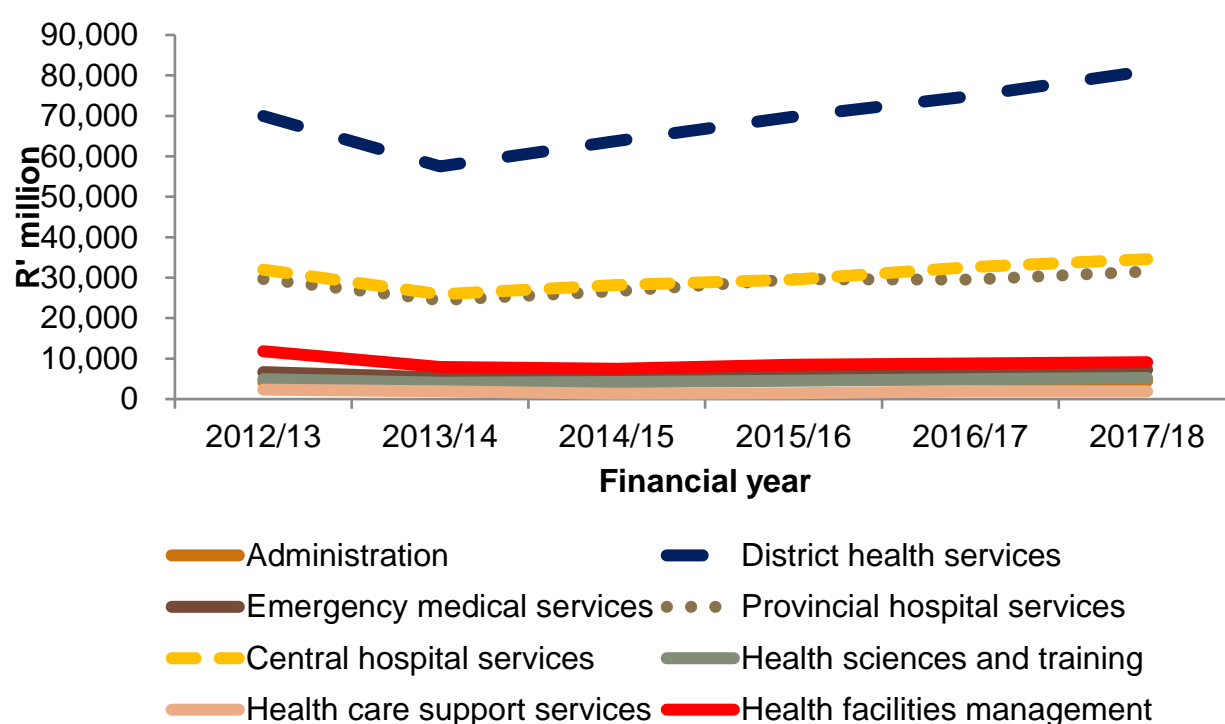
1.12.4 Expenditure trends

Consistent with this picture is a fundamental reconfiguration of the structure of spending within the provinces, away from hospitals and toward district health services (i.e. those services that would be administered by a DHS – if one were fully implemented). See Figure 8 for the aggregate provincial health department spending changes from 2012/13 to 2017/18.

When the composition of provincial health spending is examined a disturbing trend is evident. Dramatic increases in the unit cost of staff is absorbing a substantial portion of the budget increases over time. Over the period 2005/6 to 2015/16 there has been a 110.0% increase in provincial health expenditure. This would be sufficient to compensate for the 24.6% increase in the population covered by the public health system. However, unit cost increases (i.e. changes in the average cost per filled post) have absorbed 74.8% of the overall increase, with only a 35.2% enhancement in the number of posts.²⁰

²⁰ This is based on the data underlying Figure 1.11.

Figure 8: Real changes in provincial expenditure by programme 2012/13 – 2017/18



Sources: (National Treasury, Accessed 2018)²¹

Although there was a net improvement of 10.6% in posts (after accounting for population change). This has however also been offset by the increased financial liability for HIV and AIDS coverage.²² This was an expense that did not exist in the 1990s.

Figure 11 illustrates the periods when a significant divergence has occurred in staff unit costs relative to post improvements and population change. While the filled posts index shows improvements over time, unit costs diverge over the periods 2008/9 to 2010/11 and again dramatically from 2012/13. The latter period appears to be affecting post improvements (through crowding them out). As service improvements will only be possible in healthcare with improved staff to population ratios, these trends suggest that budget increases are not translating into increased coverage over time.

²¹ The nominal data was adjusted using the Consumer Price Index produced by Statistics South Africa for all areas by financial year.

²² See for instance Figure 1.9 for the trend change in TB morbidity due to HIV and AIDS, which shows an impact from 2001).

Table 15: Filled posts in provincial Departments of Health as at March each year

Occupational classification	As at March of the given year				10 year change (%)	% of total (2016)	
	2006	per 1,000	2016	per 1,000			
Professional nurses	44 245	1.2	66 024	1.4	49.2%	33.6%	85.7%
Nursing Assistants	31 923	0.8	32 843	0.7	2.9%	16.7%	
Staff and pupil nurses	20 866	0.6	30 774	0.6	47.5%	15.7%	
Student nurses	8 944	0.2	6 911	0.1	-22.7%	3.5%	
Medical practitioners	9 603	0.3	14 454	0.3	50.5%	7.4%	
Ambulance workers	7 672	0.2	12 361	0.3	61.1%	6.3%	
Medical specialists	3 711	0.1	4 990	0.1	34.5%	2.5%	
Rest	13 206	0.3	28 067	0.6	112.5%	14.3%	14.3%
Total	140 170	3.7	196 424	4.1	40.1%	100.0%	100.0%
Nurses per 1,000	105 978	2.8	136 552	2.9	28.8%	69.5%	79.4%
Medical doctors per 1,000	13 314	0.4	19 444	0.4	46.0%	9.9%	

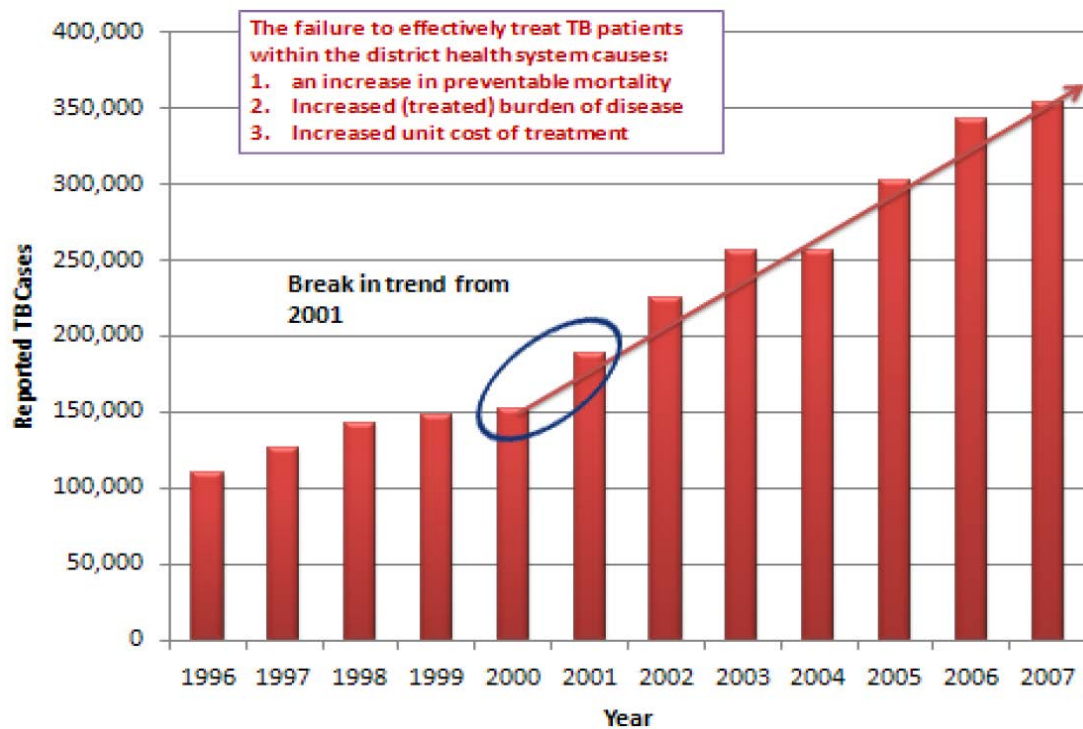
Source: The original data is from (Blecher et al., 2017) and is sourced ultimately from Vulindlela.

When seen across the long time period of 1995/96 to 2019/20 per capita spending has plateaued due to economic growth constraints impacting from 2012/13 (Figure 11). However the unit cost increases have not been affected. Unless moderated in future it staff ratios will decline in the public health system, resulting in service levels lower than in the late 1990s when considering population growth. An important consideration here, however, is the dramatically altered burden of disease that began to impact from around 2004 due to HIV and AIDS and the closely related incidence change in tuberculosis (see Figure 9). (Development Bank of South Africa, 2008)

In partial mitigation of this trend, some of the unit cost change may be the result of significant increases in the posts of certain high unit cost categories of staff. For instance, over the period 2006 to 2016 there has been a 33.6% increase in the number of professional nurses (Table 15). However, this is not significantly in excess of population growth, and all other essential staff categories increased by less than population over the period. Given this, increased compensation levels are the most likely contributor to unit cost increases and are likely to constrain service improvements at a provincial level over the foreseeable future.

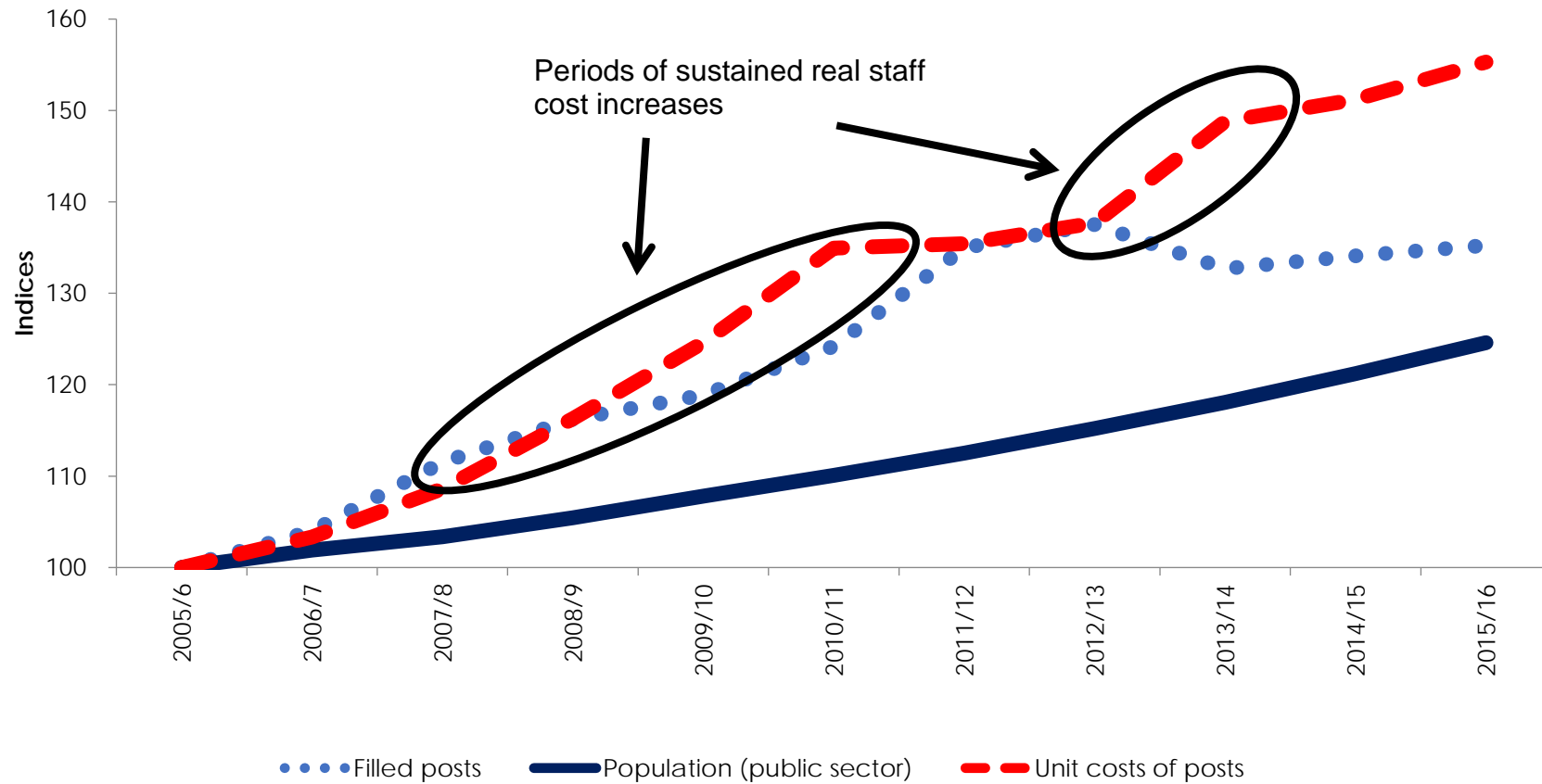
These trends suggest a need to reconfigure scopes of practice for specialists, medical practitioners and professional nurses to bring down the unit cost structures to manageable levels. However each new wave of central bargaining agreements, if not effectively managed at a national level, will (and has already) generated a moving target against which provinces will have to continuously adjust with increasingly complicated responses.

Figure 9: Trend in the number of tuberculosis patients tracked from 1996 to 2007 as identified by the Development Bank of South Africa in 2008



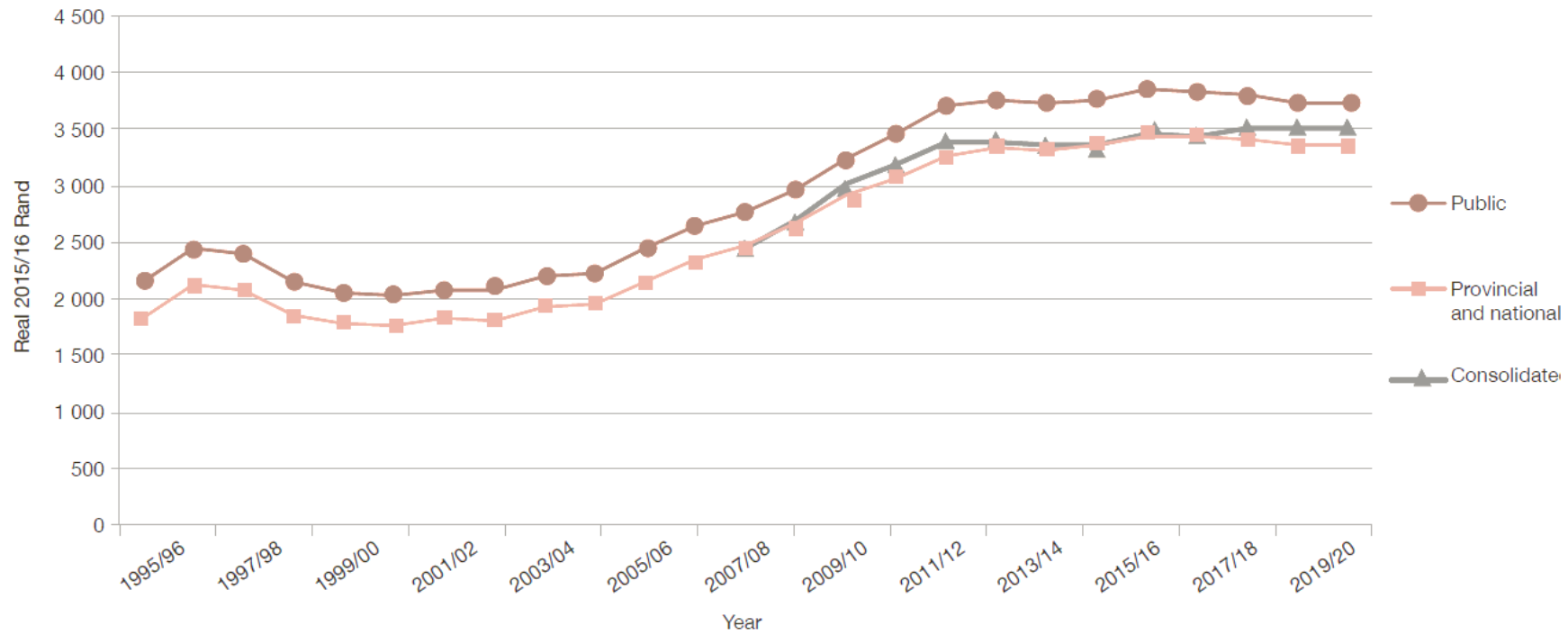
Source: (Development Bank of South Africa, 2008, p. 11)

Figure 10: Index changes filled posts, population (public) and the real unit cost of posts (2005/6 to 2015/17)



Sources: Based on the data reported in Annex F, Table F1.

Figure 11: Real per capita health expenditure from 1995/96 to 2019/20

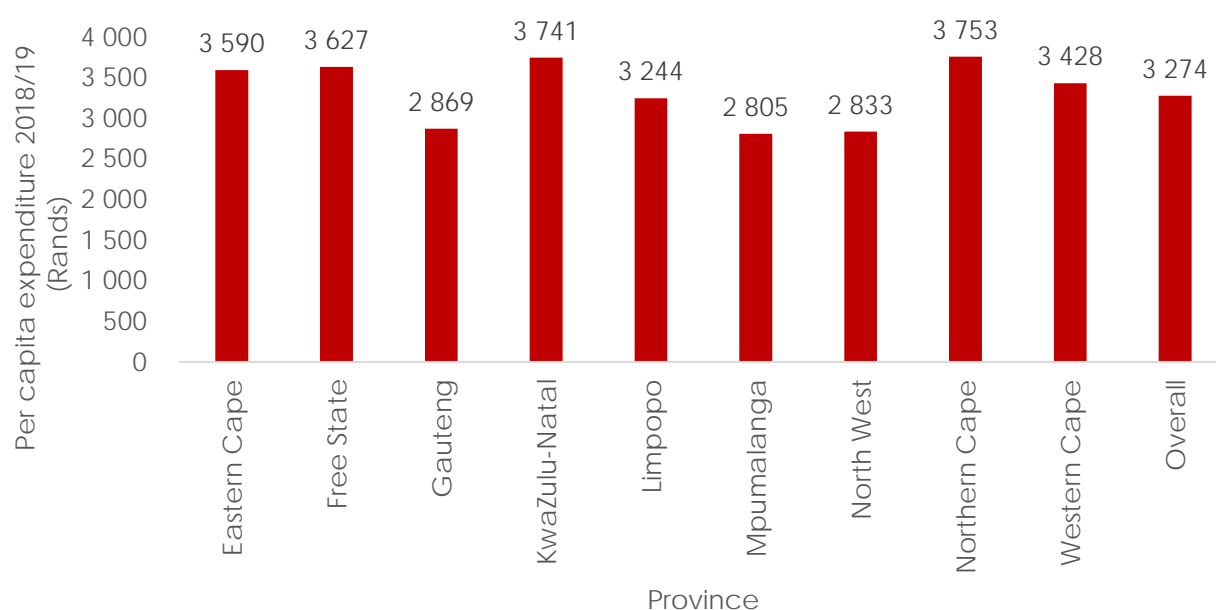


Source: (Blecher et al., 2017) with annotations added.

1.12.5 Inter-provincial expenditure

Provincial per capita health expenditure demonstrates the increased pressure placed on the faster growing provinces. While in the late 1990s both Gauteng and Western Cape had the highest per capita expenditure of all provinces due to the conditional grants for teaching and tertiary services, Gauteng is below the national average and Western Cape only the 5th highest (see Figure 12).²³ This implies that the provinces are technically not funded for cross-boundary referrals of tertiary patients or for the additional costs of teaching and research. In both instances other provinces are transferring costs onto Gauteng and Western Cape for services they either cannot, will not and need not provide.

Figure 12: Real per capita expenditure 2018/19 (2018 prices)



Source: Annex D

²³ Note that this analysis is based on National Treasury data which excludes the latest allocations. Both the adjustment budget for 2017/18 and the new budgets for 2018/19 adjust the real position of Gauteng back to the 2016/17 position. However, the province remains under significant financial pressure.

1.12.6 Gauteng and Western Cape context and trends

Population change

Gauteng and Western Cape face a number of unique challenges that set them apart from the rest of the country. First, they have the largest populations that exclusively make use of private services funded through medical schemes, with Johannesburg at 25% and Cape Town at 23.9%. Over half the medical scheme population is in only five metros, with less than 50% distributed through all the remaining local authority regions. The average medical scheme percentage of the total population in these remaining authorities is only 11%.

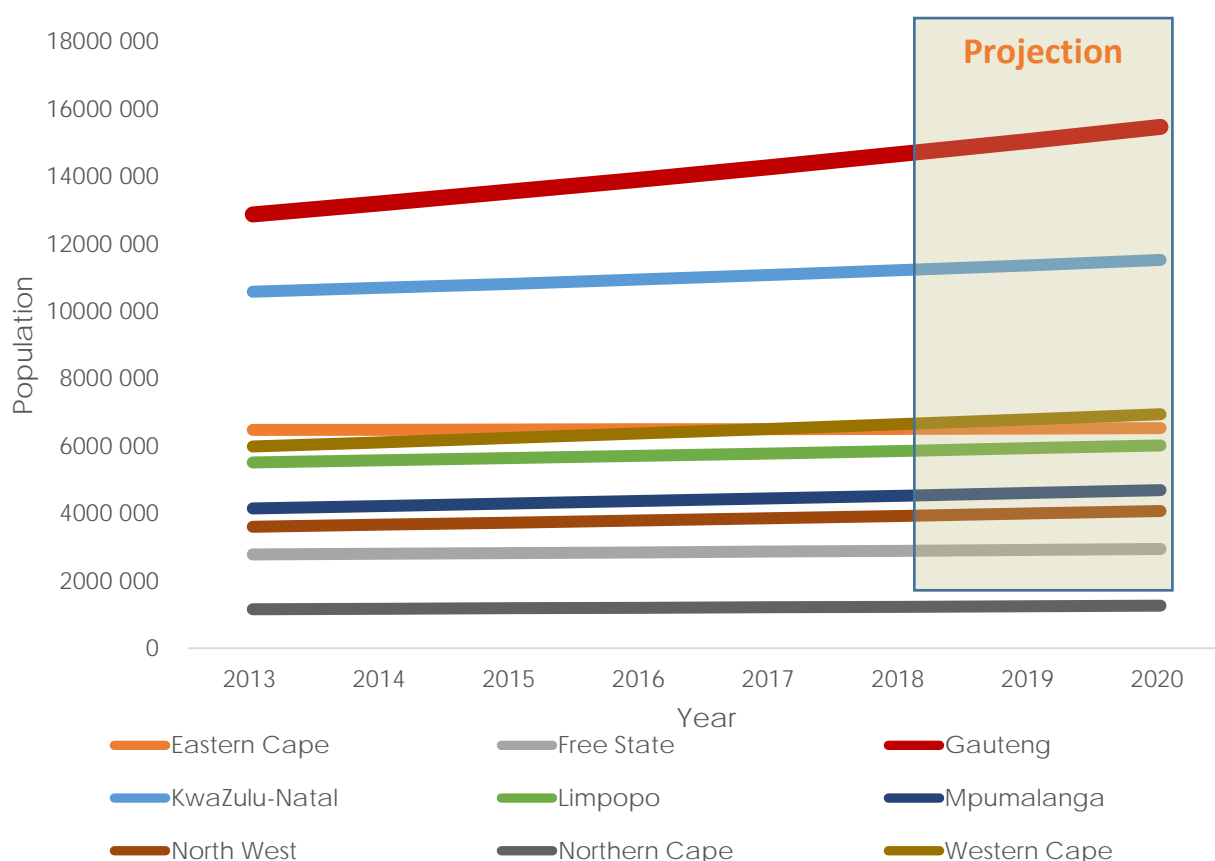
Table 16: Medical scheme population compared to the population dependent on the public sector by metro and all other local authorities (summed)

Local authority	Total	Public sector	Medical scheme (MS)	MS as % of total
Johannesburg	5 006 517	3 755 890	1 250 627	25.0%
Cape Town	4 067 774	3 095 586	972 188	23.9%
EThekweni	3 548 516	2 885 513	663 003	18.7%
Ekurhuleni	3 393 561	2 552 722	840 840	24.8%
Tshwane	3 323 240	2 310 268	1 012 973	30.5%
Rest	35 836 417	31 792 655	4 043 762	11.3%
Total	55 176 026	46 392 634	8 783 392	15.9%

Source: Based on (Health Systems Trust, 2017) [analysis is that of the author]

Second, rapid population growth due to migration patterns is unique to Gauteng and the Western Cape. Their annual population growth rate relative to the rest of the country is at 2.7% and 2.2% respectively (Figure 13 and Annex E, Table E1). This is above the national growth rate of around 1.7%. This level of growth requires a constant adjustment of services to the increased population – which requires continuous asset investments together with staffing adjustments. It is however not clear that the provincial equitable share formula together the conditional grants effectively compensate for this dramatic level of change.

Figure 13: Population changes by province from 2013 projected to 2020



Source: (Statistics South Africa, Accessed 2018)

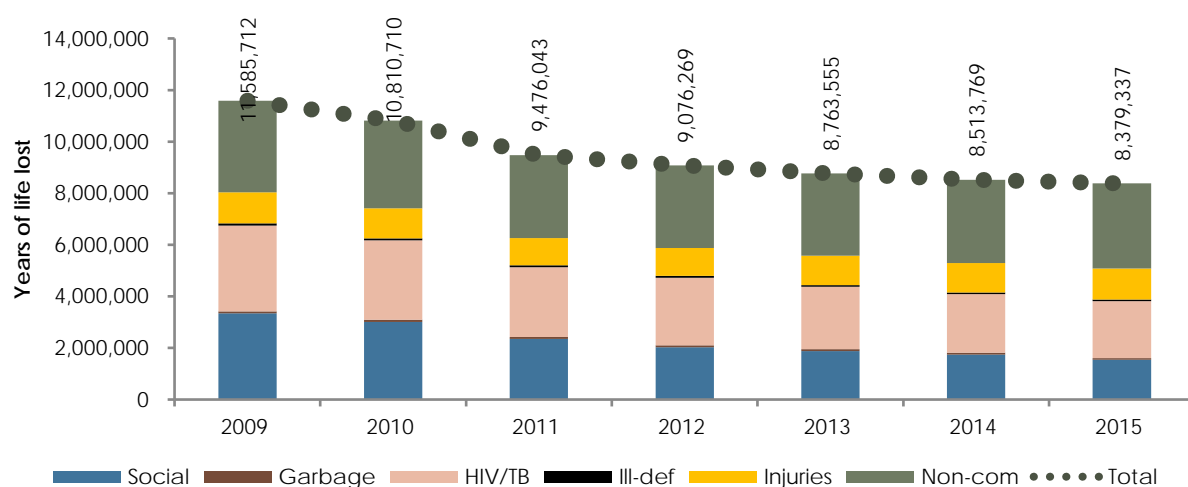
Burden of disease

Both Gauteng and the Western Cape demonstrate similar burden of disease trends. Whereas deaths due to communicable diseases, maternity-related causes, perinatal causes, nutrition-related causes, HIV and tuberculosis, and ill-defined deaths (often HIV-related) are in decline, deaths due to injuries and non-communicable disease (hypertension, cancers, diabetes, etc.) are on the rise. Johannesburg and Cape Town also have the largest number of life years lost due to these causes in their respective provinces (Figure 15 and Figure 16; and Annex G24, Tables G1 and G2). Life years lost from these causes are also the largest contributor to overall life years lost in both provinces and both cities.

Life years lost from non-communicable diseases can be expected to rise with population growth from both these causes unless more effective prevention strategies are implemented. Both are a consequence of urban living and the resulting lifestyle choices adopted by the populations at large. While all other causes are in decline, even relative to population growth, they are only in decline due to health service related interventions. Continued improvements will depend on the quality of the health service and the degree to which there is coordination between the provincial and local authority health services.

²⁴ These tables provide the full Gauteng and Western Cape picture by health district. The health districts are equivalent to the main metropolitan governments in each province.

Figure 14: Burden of disease for South Africa from 2009 to 2015

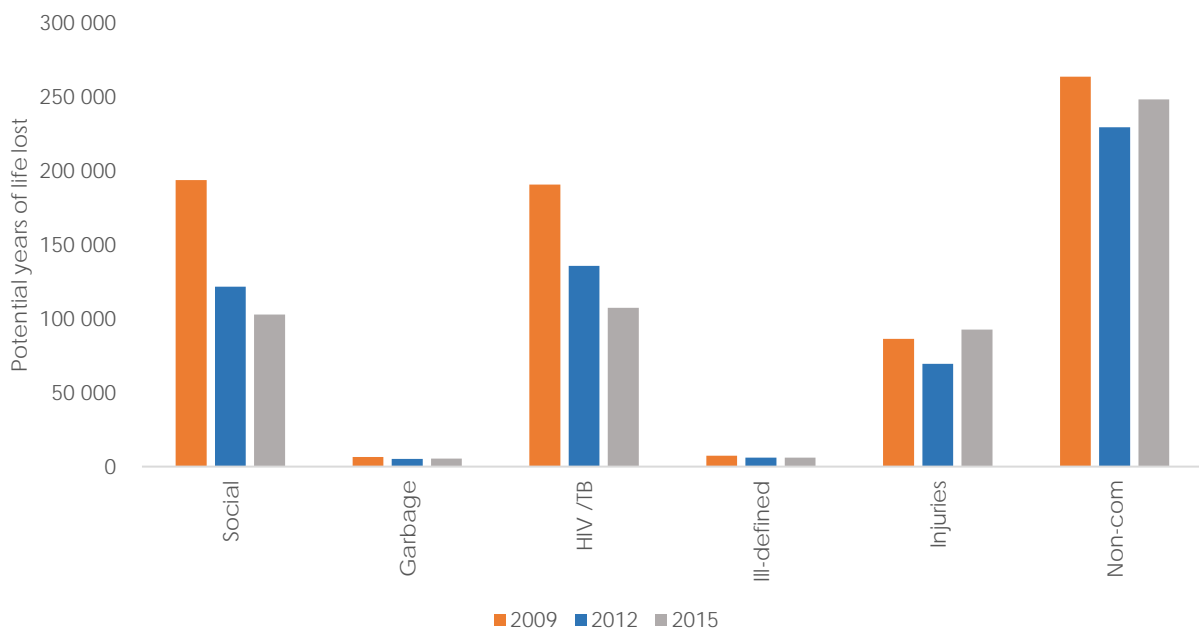


Social	YLLs due to communicable, maternal, perinatal, nutrition causes
Garbage	YLLs due to garbage code deaths
HIV/TB	YLLs due to HIV and TB
Ill-defined	YLLs due to ill-defined deaths
Injuries	YLLs due to injuries
Non-com	YLLs due to non-communicable diseases ²⁵

Source: Analysis used data from (Health Systems Trust, 2017)

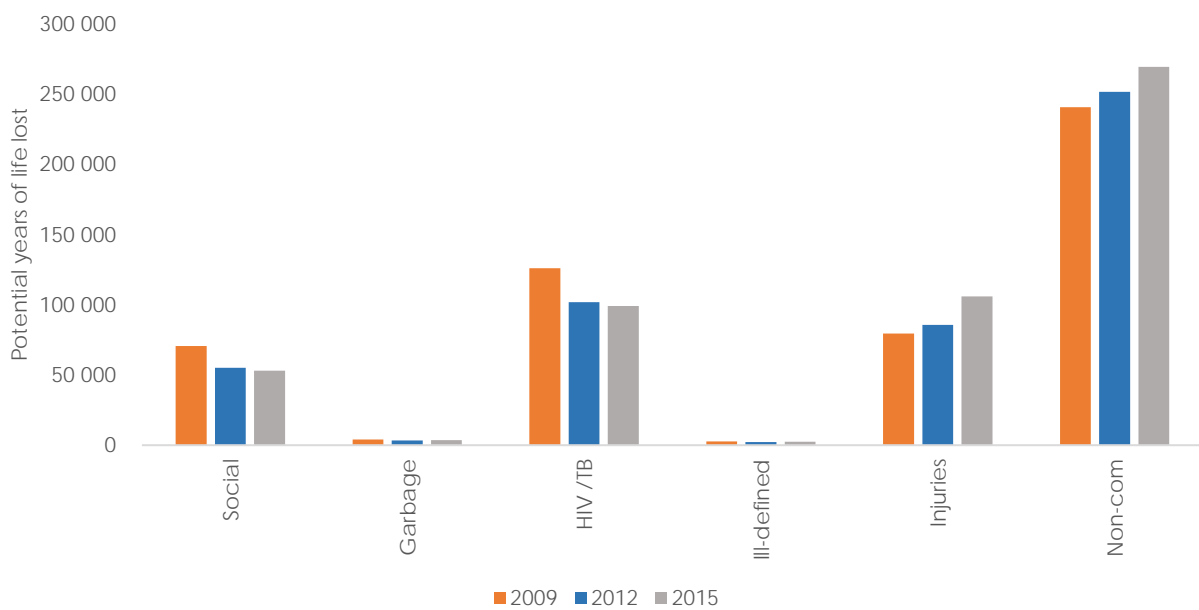
²⁵ Note that this includes all the diseases of lifestyle, e.g. diabetes and hypertension which result from poor eating habits.

Figure 15: Burden of disease trend for Johannesburg from 2009 to 2015



Source: (Health Systems Trust, 2017)

Figure 16: Burden of disease trend for Cape Town from 2009 to 2015



Source: (Health Systems Trust, 2017)

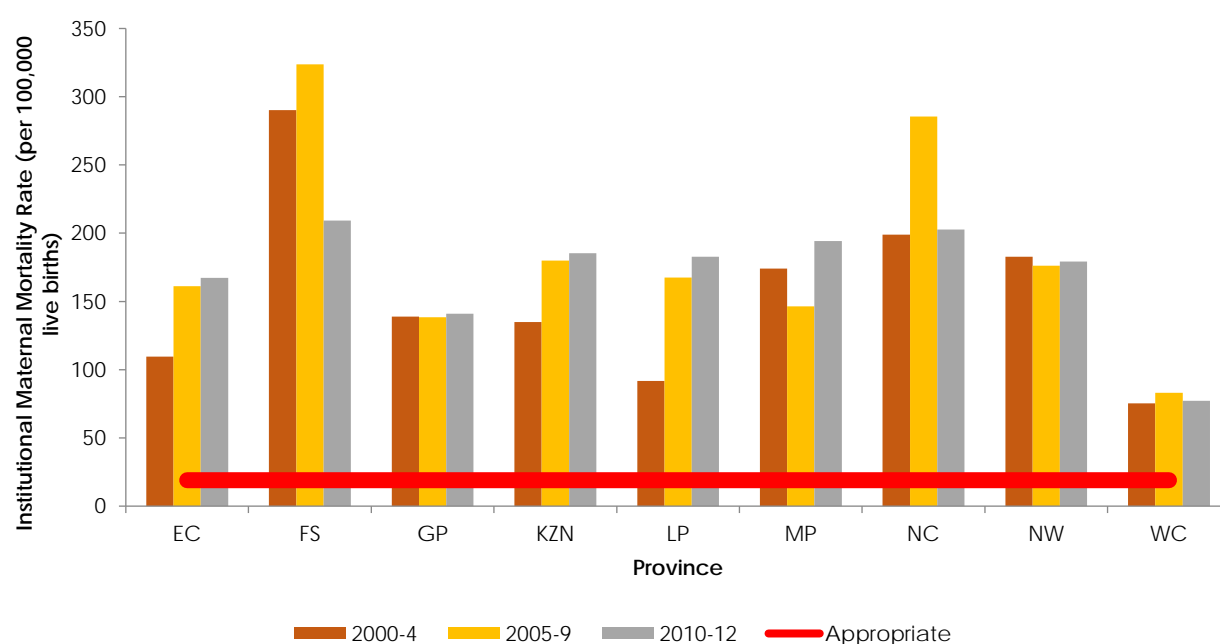
Service quality

A proxy for the quality of public health hospital services is the maternal mortality ratio (MMR), which is the number of women who die as a result of childbearing, during the pregnancy or within 42 days of delivery or termination of pregnancy in one year, per 100 000 live births during that year. Overall, the South African public service performs poorly against international benchmarks, although the Western Cape outperforms the rest of the country.

The provincial facility-based ratios (deaths recorded at facilities – which excludes people who die elsewhere) range between around 77 for the Western Cape to over 200 in the Free State (which suggests a severe collapse of governance). Gauteng performs poorly at around 141 in the period 2010-12. An appropriate international benchmark would be below 20 for a country at South Africa's level of development. (Figure 17)

These outcomes indicate a general problem with governance in the South African public health system, including that of the Western Cape. At least in the case of the Western Cape the evidence suggests continuous improvement not reflected by the other provinces.

Figure 17: Facility-based maternal mortality ratios (MMRs) by province compared to international benchmarks for countries at an equivalent level of development to South Africa



Source: Based on Health Systems Trust indicators. [<http://www.hst.org.za/healthindicators>]

1.13 Potential opportunities – high level

Historically the Cape Town and Johannesburg metros have been involved in the delivery of primary health care services and emergency medical services. It will make a lot of sense for both cities to deepen their involvement in health service provision – particular as these are also the fastest growing regions in the country. There is value in a coordinated diversification of public players in the public health system, especially as the metros are closer to the served population than the provincial governments.

However, the Constitutional and legislative framework requires that provincial governments sign off on delegations to local government in the case of primary care services and emergency medical services. Rather than waiting for provincial governments to show initiative, the metros are in a position to establish partnerships that can help to generate more coherence in the provision of district-level services and critical care. Partnerships in public hospital development and management are also possible.

The burden of disease in both Cape Town and Johannesburg are consistent for that of rapidly growing and concentrating populations. It appear that in both instances the disease burden is worsening in the case of injuries and non-communicable disease. A combination of improved prevention strategies and better managed health services is also required. Included in this mix is the problem of aging populations combined with the breakdown of extended families. Care for the aged is a major gap in both the health and social services and requires a combined local government and provincial initiative to properly support families of all income groups.

Within the Gauteng province a major opportunity exists for the Johannesburg metro to become involved directly in the development and deepening of the DHS as it emerges. It will take a number of years to implement fully and will benefit from engagement with the province on role clarification and the opportunities for partnership. As the new DHS will involve a revised provincial legislative framework, it will be important for Johannesburg to play a role defining the final design such that incentives are created for a strong partnership model that can be more than the sum of the parts.

2 City of Johannesburg Profile

City of Johannesburg Summary

This paper provides the Johannesburg city profile and seeks to answer the main questions of this project regarding the status and determinants of urbanisation as seen through different lenses – migration, health, education, urban planning and socio-economic factors. The study begins with a broad background and overview of key features of the city. It then considers demographic and urban dynamics. The third section considers the economic development, economic problems and urban livelihoods. The fourth section considers the planning and urban development approaches in the city, including how this plays out in policy, spatially and in the shape of neighbourhoods. The Fifth section considers approaches to planning for health provision in the city and at neighbourhood level, and the final section looks at education.

2.1 Introduction: key features of Johannesburg

Johannesburg has been called ‘A World Class African City’, the City of Gold, or a City of Millions of Lights. Yet it also has the odious title of being the most unequal city in South Africa, and the world, according to various reports (State of the South African Cities Report, 2016). The city report that follows presents an overview of the main features of Johannesburg, with a particular perspective on the historical antecedents of its formation, the consequent governance frameworks and socio-economic landscape that produce the kinds of spatial outcomes we see today.

Table 17: Key Statistics of the City of Johannesburg

Name	City of Johannesburg	
Location	Gauteng Province, South Africa 26.1704° S, 27.9718° E	
Size	1 645 km ²	
	2016a	2011b
Population	4 949 347	4 434 827
Households	1 853 371	1 434 785
Average household size	2.7	3.1
Density	3 009/km ²	2 696/km ²
Average population growth over four years (2011 ^b – 2016 ^a)	11.60%	
Average annual population growth rate (2011 ^b – 2016 ^a)	2.78%	
Percentages of males and females (2016 ^a)	Females: 49.9% Males: 50.1%	

Population groups (2016 ^a)	Black African: 80,5% Coloured: 5.3% Asian: 4.4% White: 9.8%
Poverty rate (2014 ^c)	16.2%
Gini coefficient (2014 ^c)	0.66
Housing (2016 ^a)	Formal: 81.3% Informal/other housing: 18.3%
Unemployment rate (2011 ^d)	24.7% (official definition)
Informal employment (South Africa)	10% of total workforce (estimation)
Total GDP (2015 ^c)	R445 billion
GDP per capita (2014 ^c)	R84,463
Adult literacy among individuals aged 35–64 (2016 ^e)	88.9%
Age-specific Enrolment Ratio (ASER) expressed as a percentage (2017 ^f)	96.2%
Total revenue (excluding capital transfers and contributions) ^g	2013/2014: R 36.0 billion 2014/15: R 38.4 billion 2015/16: R 41.4 billion 2016/17: R 42.9 billion 2017/2018: R 45.3 billion

Above is a snapshot of the city's key statistics (sources below²⁶).

²⁶ a, b City data, Community Survey 2016a, Census 2011b as found in: Provincial Profile: Gauteng Community Survey 2016. (2018) Statistics South Africa. (http://cs2016.statssa.gov.za/?portfolio_page=community-survey-2016-provincial-profile-gauteng-2016)

^c Socio-Economic, Review and Outlook (2016) Gauteng Provincial Government

<http://www.treasury.gov.za/documents/provincial%20budget/2016/3.%20Provincial%20Appropriation%20Acts/5.%20Guide%20to%20the%20Budget/GT/Gauteng%20-%20Social-Economic%20Review%20and%20Outlook.pdf>

^d Census 2011 Municipal report Gauteng (2012) Statistics South Africa.

(http://www.statssa.gov.za/census/census_2011/census_products/GP_Municipal_Report.pdf)

^e Education Series Volume III: Educational Enrolment and Achievement, 2016 (2017) Statistics South Africa.

(http://www.statssa.gov.za/?page_id=1854&PPN=Report%2092-01-03)

^f General Household Survey, Selected development indicators, Metros (2017) Statistics South Africa.

(http://www.statssa.gov.za/?page_id=1854&PPN=Report%2003-18-20)

^g Municipalities of South Africa <https://municipalities.co.za/financial/2/city-of-johannesburg-metropolitan-municipality>

2.1.1 Overview of the history, location and geography

History

Present day Johannesburg owes its existence to the discovery of gold on the Witwatersrand (Shorten, 1966). At the time, the Witwatersrand was within the borders of the Boer Republic of the Transvaal (Shorten, 1966; Tomlinson et al, 2003; Mäki, 2010). The main reef, discovered on Langlaagte Farm in February of 1886 turned out to be the largest and richest goldfield ever discovered in the world (Mandy, 1984; Robertson 1986). This event occupies a central place in modern southern African history and has led to the creation of a vast metropolitan city sustained by forces of nature, history, economics and society (Kallaway and Pearson, 1935; Mandy, 1984). It set in motion one of the most rapid urban expansions recorded within the last century (Chipkin, 1993). Officially, the city was born by a proclamation that appeared in a Government Gazette on the 8th of September 1886 and was read to a gathering of gold diggers on the spot of the discovery, with such pomp and ceremony (Symonds, 1953). By then, the city-to-be was only a collection of ox-wagons and tents known as Ferreira's Camp (Symonds, 1953). In 1897, Johannesburg acquired a republican-style municipal system (Maki, 2010). Today, the man-made mountains of mine dumps, narrow streets, and high rise buildings of modern and diverse architecture are constant reminders of the city's turbulent origins as a mining town and serve as birthmarks from which Johannesburg cannot escape (Mandy, 1984). Due to rapid population growth, water, health and sanitary conditions soon became challenges that the newly born city had to confront (Make 2010).

Growth and expansion

The growth and expansion of Johannesburg was phenomenal from the onset. As the news of gold discovery spread across the Transvaal – from the diamond fields of Kimberly in the west, to the gold mines of Barberton in the East – steady trickles of diggers and prospectors soon combined to create a flood the “poured with a swirling rush” into what is now Johannesburg (Symonds, 1953; Mandy, 1984). Within a short space of time, the news of the discovery acted as a magnet not only to prospectors already scattered throughout the Transvaal, but also to those from across the world who were drawn by the prospect of riches (Robertson, 1986). Within a decade of its establishment, Johannesburg had become a dominant economic force and the largest city in South Africa and within 60 years, it became a metropolis of unprecedented modernity (Knox and Gutsche, 1947; Mandy, 1984; SACN/SALGA, 2017).

In 1889, Johannesburg had only 15 000 inhabitants and by the time the first census was held in 1895, the population had risen to over 80 000, of which more than half was white. In just 9 years of its establishment, Johannesburg had become the largest city in South Africa, far surpassing Cape Town, which was already in existence for more than 200 years. By 1936, it was recognised as the largest and most densely populated “European City in Africa” (Tomlinson, 2003; Murray, 2011). Today, Johannesburg is the largest city in Southern Africa, and is the region's leading industrial and commercial centre (CoJ, 2015).

Such phenomenal growth soon transformed the economic life of the entire subcontinent and brought about a political and social revolution that was central in shaping 20th century society in southern Africa (Kallaway and Pearson, 1935). As will be demonstrated, present day Johannesburg continues to attract people who are constantly searching for better life, a place to settle, live, learn and work (CoJ, 2013). On a daily basis, the city draws in new arrivals (both short and long term) from across the continent and beyond, setting in motion

a process of urbanisation that is driven largely by economic opportunities that the city offers (Holland and Roberts, 2002; Oosthuizen and Naidoo, 2004; Cross 2006; Turok 2012; Stats SA, 2015). As a result, Johannesburg is uniquely a dynamic city that provides a valuable case study of the process of urbanisation in modern day Africa (Mandy, 1984; CoJ, 2013).

After the establishment of democratic rule in 1994, Johannesburg again asserted itself as a globally linked economic powerhouse with a trade and investment reach spanning across Africa and beyond (Murray, 2011; Quantec, 2017). Currently, Johannesburg has the most advanced economy in Africa endowed with power supplies and a well-knitted infrastructure network developed during last 25 to 30 years (CoJ, 2013; Parilla and Trujillo, 2015; Oxford Economics, 2016). The current size of Johannesburg's economy ranks in the same group as many of the cities of the Middle East whose growth rates are significantly high (Oxford Economics, 2016). On a global scale, Johannesburg ranked as the most competitive city in Africa in 2013 and was ranked 66th in world (The Economist, 2013).

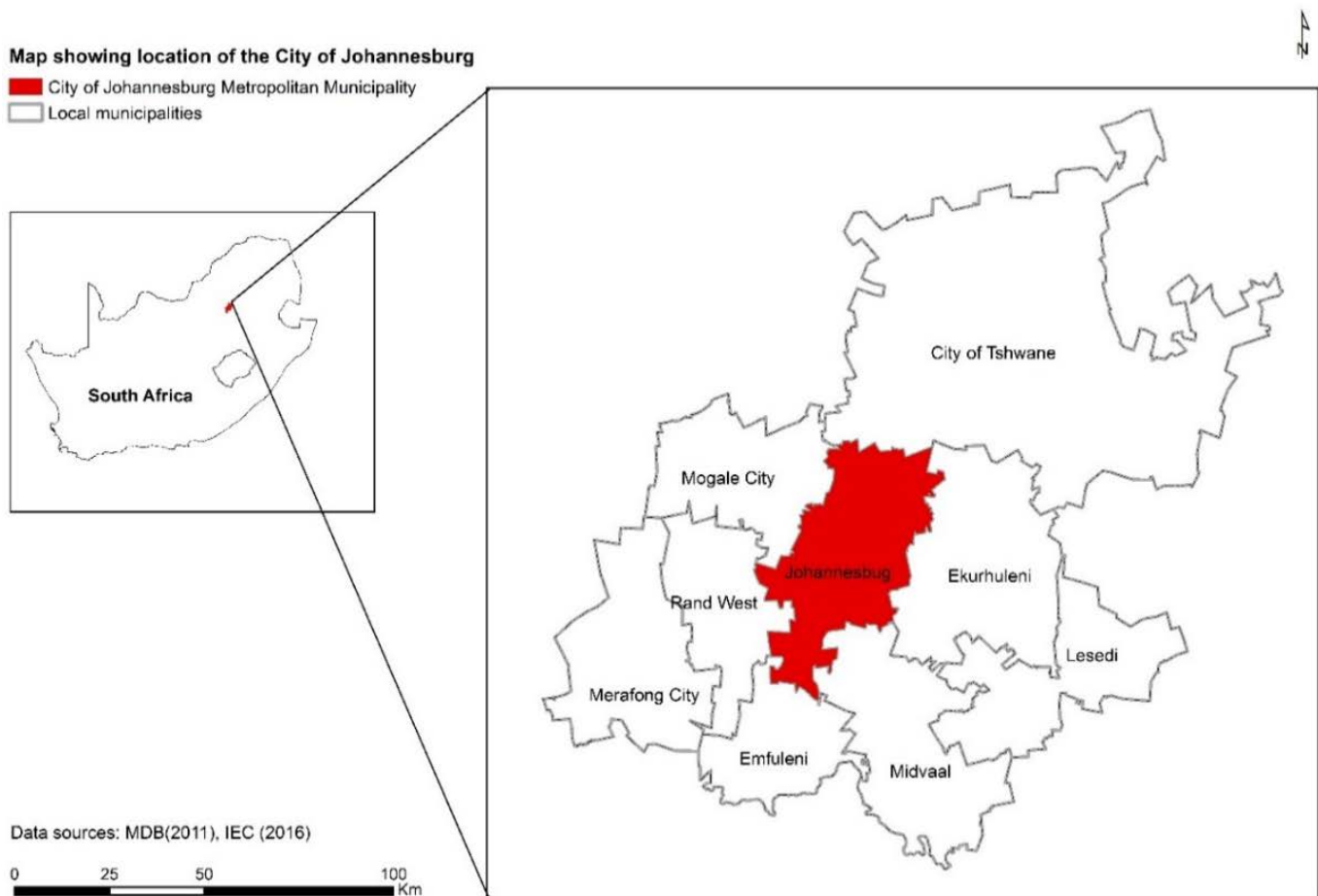
While the extractive industry was prominent in the early stages, this shifted towards the secondary sector in the 20th century, combining to form a conglomerate of economic activity (SACN/SALGA, 2017). As will be shown, the current economic fabric of Johannesburg is dominated by tertiary and secondary economic activities such as trade, investment, finance, tourism, accommodation, telecommunication, manufacturing and educational services. It is therefore not very surprising that the headquarters of major corporates both local and foreign are located in Johannesburg and that many migrant job seekers and economic immigrants choose Johannesburg as their priority destination.

Location and physical geography

Johannesburg is centrally located within Gauteng province. Together with City of Tshwane (formerly Pretoria), Ekurhuleni Metropolitan Municipality and the West Rand, Johannesburg forms part of a large polycentric city-region called Gauteng. The city-region, which has Johannesburg as its centre and key socio-economic driver, reflects the challenges and opportunities of South Africa's extraordinary economic, demographic, social, and political transformation (Parilla and Trujillo, 2015). Urbanisation remains a key feature of Johannesburg today given its robust economy and competitiveness in terms of prices and earnings (Mushongera, 2013).

It stretches for approximately 80km in length and 50 kilometres in width along a north-east/south-west bearing (Storie, 2014), as shown in the figure below. It is situated in the interior Highveld grassland plateau of South Africa, and stands at an altitude of 1 740 m above sea level (Fatti and Vogel, 2011). The city of is one of the 10 local municipalities that make up Gauteng province. Because of its centrality, Johannesburg is a major transportation hub linking major ports and trade partners in the region such as Zimbabwe, Mozambique, Botswana, Malawi and Zambia.

Figure 18: Map of Johannesburg in relation to Gauteng Province



Johannesburg is one of the few cities in the world that is not located on a major water source. The city is heavily deepened on the Vaal River which in turn is augmented by water from Lesotho. As a result, the city is prone to problems of water scarcity as well as rising costs of accessing the water (HSRC, 2014). Yet, pockets of original indigenous Bankenveld vegetation are still in existence in the eastern part of the city (SACN, 2008; CoJ, 2012; CoJ/JCP, 2012; Schaffler et al, 2013). With more than a century of residential suburban development, Johannesburg has developed a unique ecological profile and has the world's largest urban forest with an estimated 10 million trees (CoJ, 2008; Schaffler et al. 2013). This urban forest consists of a variety of flora and fauna species and has a subtropical climate. The average midday temperatures range between 19°C to 7°C (CoJ, 2004; CoJ, 2008; SACN, 2008; Schaffler et al, 2013).

However, the city's environment is under severe threat from a number of factors associated with a rising population, densification, and urban sprawl (SANC, 2018). 302 hectares of freshwater wetlands in Johannesburg have been classified as vulnerable due to rapid changes in land cover caused by residential and industrial expansion (CoJ, 2011). Levels of air pollution are high due to greenhouse gas emissions from industry, traffic, and the use of fossil fuels in cooking, lighting and heating particularly in township areas and informal settlements. PM₁₀²⁷ concentrations across the city frequently exceed national air quality standards of 50 µ/m³, reaching highs of over 400 µ/m³ (CoJ, 2008; GPG, 2009; OECD,

²⁷ Particle Matter

2011; Mushongera, 2015). Respiratory problems associated with poor air quality have resulted in the city spending an annual average of R280 million (CoJ, 2008).

2.1.2 Administrative and political context

Administrative boundaries: The City of Johannesburg

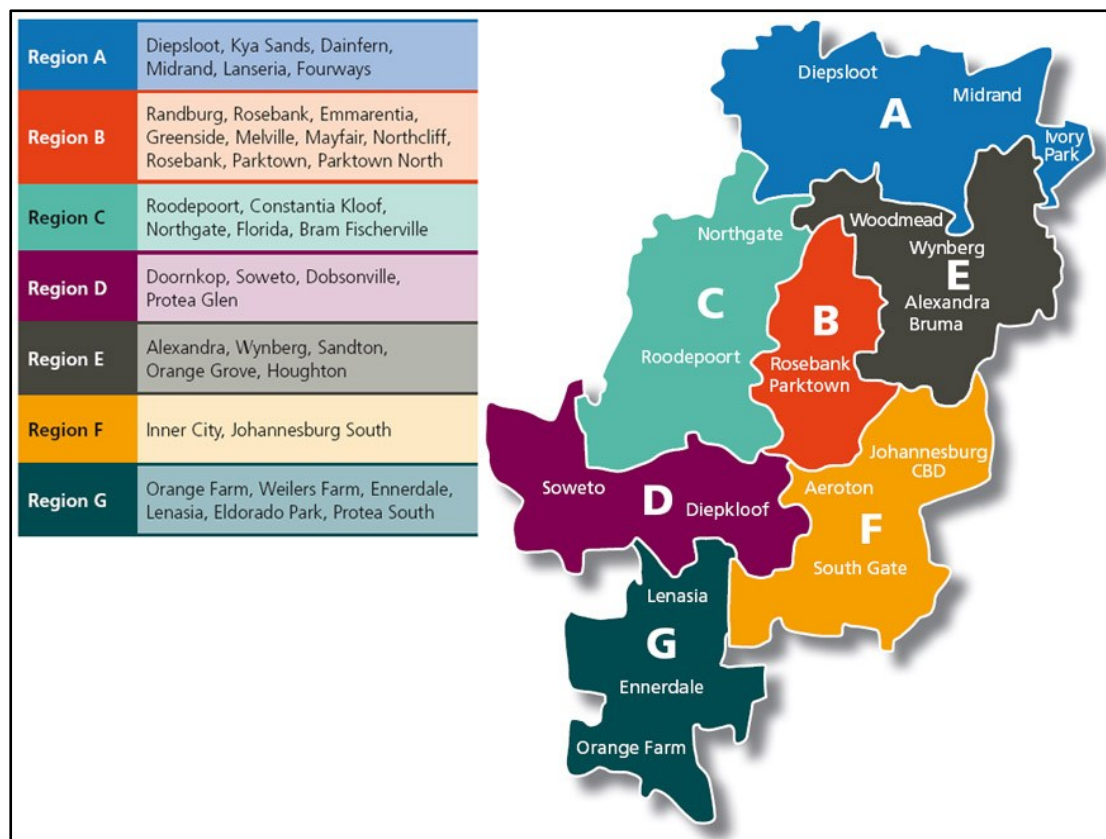
The city of Johannesburg as it is known today, was established on the 5th of December 2000 following the first democratic local government elections (Salga, 2015). Its creation was part of a countrywide process of establishment new municipalities. This process resulted in a dramatic reduction in the number of municipalities from 843 to only 284 municipalities, 6 of which we given metropolitan status²⁸ (Salga, 2015) – with the City of Johannesburg being one.

Within the first ten years after democracy, the city was divided into seven administrative regions (A-G), to ease the administration of the city and to allow residents easy access to the city to pay their bills or lodge complaints. Figure 19 below show the various regions of the city of Johannesburg. Each region is manned by a regional director who reports directly to the city manager and has the mandate to ensure that service delivery happens at local level.

“Regional Managers are at the coalface of service delivery in the city. They report to the Joint Operations Committee every Wednesday on progress made in their respective regions. They manage city-customer relations department and have offices right across the city where residents can walk in to pay bills or lodge complains.” (TM and ZE, CoJ officials.)

²⁸ The six metro created in the 5th of December 2000 were City Johannesburg, Tshwane, Ekurhuleni, eThekweni, Cape Town and Buffalo City (East London).

Figure 19: Administrative regions of Johannesburg



Source, CoJ, GIS

The City of Johannesburg has an executive mayor who works with the assistance of a City Manager, Members of the Mayoral Committee (MMCs) and Executive Directors (ED). The existence of an executive mayor is significant because the mayor can decide on what areas the City should focus on during his/her term of office.

"Annually there is a Mayoral Lekgotla where the Mayor decides, to say ok, based on what's in the Growth and Development Strategy, I want you to focus on these priority areas. He dictates that during my term of office these are things that you will focus on." (AM, ex-CoJ official)

For example, former Parks Tau (2011-2016, African National Congress administration) was more concerned about transit oriented and nodal development (locally) and in projecting the City's image internationally. The current mayor, Herman Mashaba (2016-present, Democratic Alliance administration), has decided that rooting out corruption is key. Tau saw urbanisation as an opportunity where the city could tap into migrant skills in order to enhance development, but Mashaba has more conservative economic views that play out against immigrants (Cox, 2017).

Johannesburg is divided into wards and during the 2016 elections the city had 135 wards. (Wards are re-demarcated before elections, to control for population growth.) These wards vary significantly in what they offer, some are affluent and some comprise of very poor communities, some are low-density while others are densely populated. Even more extreme, some wards are largely made up of informal settlements, e.g. Diepsloot. There have been notable variations in development or service delivery in the different wards and this can be

traced to the competency of the councillors which represent communities. However, councillors in township wards and informal settlements face major challenges due to difficulties in delivering services in these areas.

A three tier system of government was created and the local sphere was mandated through the constitution to provide (many but not all) services to local communities (RSA, 1996). Local government was also given executive authority and rights to administer local government matters as specified and or as assigned to it by national or provincial government (RSA, 1996). In August 2016, the ANC government which had run the city since 1994 was replaced by its arch-rival, the Democratic Alliance (DA). The new city government, critical of the former, agreed in principle with the GDS but reformulated the outcomes anew.

2.1.3 Unique socio-economic issues

There are three distinctive features of the city, which are worth mentioning – its economic ‘prowess’ or its standing as a major economic hub in South Africa and Southern Africa; its social eclecticism, which will be further considered in Part 2; and its informality.

Economic prowess

The gold rush of 1886 set the tone for economic development in Johannesburg, (CoJ, 2016). Following its growth and establishment as a city, Johannesburg soon positioned itself as a financial and commercial hub in Southern Africa. In just over year on from the discovery of gold and the subsequent rush, the Johannesburg Stock Exchange (JSE) was founded by Benjamin Wollan on 8 November 1887 (JSE, 2018). Figure 3 below shows population and Gross Domestic Product (GDP) rankings and projections up to 2030 for the top 15 cities in Africa. Johannesburg is expected to rank first in terms of GDP and fifth in terms of per capita implying a much high population by 2030.

Figure 20: Cities’ GDP ranking

Africa's top 15 cities in 2030 (2012 ranks in brackets)						
Rank	Population 2030 (000s)		GDP 2030 (US\$bn 2012 prices)		GDP per capita 2030 (US\$ 2012 prices)	
1	Lagos (2)	25,145	Johannesburg (1)	196	Libreville (2)	29,749
2	Kinshasa (3)	16,707	Cairo (2)	168	Gaborone (3)	26,836
3	Cairo (1)	14,105	Luanda (4)	138	Malabo (1)	24,854
4	Luanda (5)	9,768	Lagos (8)	76	Johannesburg (5)	20,830
5	Dar Es Salaam (9)	9,449	Cape Town (3)	73	Port Louis (6)	20,769
6	Johannesburg (4)	9,426	Pretoria (5)	67	Pretoria (4)	20,438
7	Abidjan (8)	7,712	Durban (6)	62	Cape Town (7)	16,013
8	Khartoum (6)	7,306	Alexandria (7)	56	Windhoek (8)	14,818
9	Nairobi (13)	6,593	Dar Es Salaam (13)	49	Tunis (12)	14,504
10	Alexandria (7)	6,332	Tunis (11)	47	Luanda (14)	14,126
11	Abuja (27)	6,029	Algiers (10)	46	Bloemfontein (10)	13,823
12	Kano (14)	5,672	Casablanca (9)	39	Constantine (19)	13,668
13	Douala (20)	5,013	Khartoum (14)	35	Durban (9)	13,435
14	Ibadan (17)	5,011	Libreville (12)	30	Port Elizabeth (11)	13,128
15	Dakar (16)	5,011	Nairobi (17)	27	Oran (18)	12,989

(Source: Oxford Economics)

Currently, there exists in Johannesburg a closely knit and rich network of large mining houses, banks and other financial institutions, wholesale and retail trade, hotels and all forms of advanced services such as information and communications technology (ICT), transportation and logistics, that together form a vibrant and extensive economic fabric. As a result, 14 of the Global 2000 corporates have their headquarters in Johannesburg, far surpassing some world cities such as Mexico City, Istanbul, Santiago, Rio de Janeiro as shown in Figure 4 below (Parilla and Trujillo, 2015). Similarly, Johannesburg competes favourably in terms of the Logistics Performance Index where it ranks among the top 38 cities in the world (*ibid*).

Figure 21: Location of headquarters of major international corporates

City	Country	Number of headquarters	Revenue (USD billion)	Profits (USD billion)	Assets (USD billion)
Johannesburg	South Africa	14	116	18	410
Shenzhen	China	12	129	14	1,051
Mexico City	Mexico	12	106	15	168
Santiago	Chile	9	66	5	153
Istanbul	Turkey	7	89	8	411
Rio de Janeiro	Brazil	7	246	43	598
Cape Town	South Africa	6	32	4	114
Warsaw	Poland	4	27	4	99
Tshwane	South Africa	1	2	1	5

Source: Brookings analysis of GaWC data.

(Source, Parilla and Trujillo, 2015)

These statistics show that Johannesburg stands as one of the most advanced commercial cities in Africa, alongside Nairobi, Lagos and Cairo (Angelopulo, 2015; Oxford Economics, 2016). The city's GDP contribution far surpasses that of other metropolitan cities in Gauteng at nearly 38% in 2011 and approximately 40% in 2016 (OECD, 2011; Quantec, 2018).

Eclecticism: the two faces of Johannesburg

South Africa has the odious honour of being one of the most unequal societies in the world, and Johannesburg is a microcosm of this picture. Johannesburg has generated and maintained diversity in various aspects such as the economy, race, and culture. It is a city of contrasts, a home to the wealthy, the poor, migrants, immigrants and refugees, global corporations and emerging enterprises (CoJ, 2013). By the 1920s, the city was already an "endroid of great obscurity and uncertainty", a "modern wonder", a "tourist curiosity", an "edgy and energetic" city (Cohen, 1926; Knox and Gutsche, 1947; Holland and Roberts, 2002). This tradition has been maintained and currently, Johannesburg displays both what one has called "first world glamour and excess third world impoverishment and degradation" (Murray, 2011). While the city boasts a strong and vibrant economy, the income so generated is not equally distributed hence making Johannesburg one of the most unequal cities globally with a Gini coefficient of above 0.70 (UN-HABITAT 2008; GCRO, 2016).

Based on its origin, rapid growth, financial positioning and the diverse characteristics, Johannesburg has many faces and titles, such as a "city of contrasts", (Knox and Gutsche, 1947), "the golden city" (Symonds, 1953), "a divided city" (Mandy, 1984), "an elusive

metropolis" (Nuttall and Mbembe, 2008), and "a city of extremes", Murray, (2011). These are the city's indelible features which are hard to escape (Mandy, 1984). Others also view it differently:

"It's a capitalist city". (ZE, CoJ official)

It must be noted, however, that present day Johannesburg is different from the previous in terms of the spatial extent and configuration. Previously, it was a "heterogeneous assemblage of mini-cities incongruously linked to form an artificial illusory whole" (Murray, 2011). Tomlinson et al (2003), described Johannesburg as the "two Johannesburgs", alluding to the deep polarisation that characterised the city at the time. In spite of its wealth and the creation of a unicity administration in 2000, the city is still divided along racial lines and the spatial scars of white minority rule that existed during apartheid are still visible (Tomlinson et al., 2003; Murray, 2011).

Although Johannesburg has very strong economic roots, it has strong socio-cultural elements associated with it as well. These elements have been instrumental in shaping not just the social makeup of the city but also the architecture. Johannesburg was a locality "fathered by gold and mothered by money" from inception (van Onselen, 1982), but there soon emerged relations between different classes of people.

Johannesburg's population is exceptionally diverse. An official from the City remarked that

"People will sort of simplify and sort of use tourist language and sort of say 'Joburg is a world in one city', but in many ways it is cosmopolitan it's got quite a lot, it's not the only city of that kind in the world but I would say, in South Africa, it is the most diverse city and that's across the board and in terms of African diversity as well. (El, CoJ Arts, Heritage and Culture)

Informality

According to urban scholars (Huchzermeyer et al., 2014), informal settlements are an indelible part of Johannesburg's urban landscape. They show an extremely varied picture of the growth and expansion of informal settlements which "follows the trends of formal upmarket residential expansion with its domestic employment demands" (p155) but are mainly concerned with the concentration of informal settlements which become a physical site in the urban landscape symbolising the city's urban planning and investment priorities. Because informal settlements characterise the urban space in Johannesburg – where there are over 200 settlements across the city – the urban challenge is very concentrated. Informal settlements are sites of struggle due to the large population, competition for resources and inadequate provision of services. Service delivery protests are a common occurrence. In informal areas, the city can only provide very basic services such as stand pipes for water enough for the households in a particular radius to share.

"It is difficult to provide service to informal settlements because settlements are not permanent". "Sometime people create informal settlements in order to enjoy free municipal services". (LB and OT, CoJ officials)

Informal settlements in Johannesburg and indeed the rest of South Africa are constant reminders of rising urbanisation arising from the influx of poor people from neighbouring provinces and countries whose economies have slowed, e.g. Zimbabwe, Malawi, and

Mozambique. Failure to enter the formal job market causes these people to earn a living in the informal sector. Incomes earned in the informal sector are not sufficient to afford decent accommodation and hence these people opt to live in informal settlements where rentals are affordable. Hence, informal settlements are an indication that urbanisation in Johannesburg has not occurred in tandem in inclusive economic growth.

2.2 Main urban determinants: urban population, migration, and urban form

2.2.1 Population growth, migration trends and demographic changes

Johannesburg is the most populous city in South Africa with an estimated population of 5.4 million inhabitants in 2017 (Quantec, 2018). Table 18 below shows the municipal share of provincial population for selected years between 2000 and 2017. Of the four years shown (2000, 2005, 2011, 2017), Johannesburg has claimed more than a third of the provincial population, (36% in 2017).

Table 18: Municipal share of provincial population, 2000, 2005, 2011, and 2017

Municipality	2000	% of province	2005	% of province	2011	% of province	2017	% of province
Midvaal	69,632	1%	76,883	1%	89,340	1%	104,675	1%
Lesedi	74,508	1%	82,248	1%	95,736	1%	112,888	1%
Westonaria	104,262	1%	109,147	1%	125,171	1%	142,405	1%
Randfontein	128,437	1%	138,354	1%	155,679	1%	177,057	1%
Merafong City	198,066	2%	203,277	2%	225,759	2%	250,307	2%
Mogale City	298,334	3%	327,013	3%	372,212	3%	428,923	3%
Emfuleni	629,285	7%	675,417	6%	743,064	6%	826,106	6%
Tshwane	2,213,678	23%	2,449,545	23%	2,848,097	23%	3,322,644	23%
Ekurhuleni	2,509,968	26%	2,762,960	26%	3,178,046	26%	3,663,474	26%
Johannesburg	3,345,571	35%	3,738,009	35%	4,392,669	36%	5,163,522	36%
Gauteng	9,571,742	100%	10,562,852	100%	12,225,772	100%	14,192,002	100%

According to 2011 Census, Johannesburg had a total population of 4,4 million of which 76,4% are Black/African, 12,3% were White, 5,6% were Coloured people, and 4,9% were Indian/Asian. Recent data from Statistics Africa and the GCRO Quality of Life Survey show that Gauteng is a province of migrants with Johannesburg as the core attraction (Peberdy,

2013). The post-1994 period saw new opportunities emerging for immigrants as South Africa reconnected with the global economy (Crush et al, 2005). The result was an increase in the flow of people from other countries in the region and the world beyond (Stats SA, 2015). Compared to the pre-1994 period, the pattern of international migration shifted as highly skilled and low-skilled immigrants, refugees, asylum seekers, and illegal immigrants became more prominent (Stats, SA, 2015). The major pull factors include the availability of social infrastructure, educational opportunities and medical infrastructure; contrasted with political unrest and economic decline in neighbouring countries (Cohen, 2008). In 2013, CoJ had the highest proportion of migrants in the 20-24 to 30-34 age cohorts, totalling of 45 percent (Parilla and Trujillo, 2015).

Migrants continue to play an important role by providing labour (skilled and unskilled) and others contribute to the economy through cross-border trading (Oosthuizen and Naidoo; 2004; Peberdy, 2013). During Census 2011, nearly half the residents counted in the province were born outside Gauteng (Stats SA, 2012). The province experienced the highest rate of growth in population between 2001 and 2011 at 30%; half (52%) of that was a result of immigration (Stats SA, 2013; Peberdy, 2013). Census 2011 also reported that there were over 2,1 million international migrants in 2011, making up 4,2% of the total population. The majority (75.3%) came from Africa and of these, 68% were from the SADC region. Close of half (45,2%) were from Zimbabwe, the greatest contributor of foreign migrants to South Africa (Stats SA, 2015).

The inflow of people from different parts of world was accompanied by the importation of diverse cultures into the city.

"From the outset Johannesburg attracted a culturally diverse mix of people from across Southern Africa and internationally, even Europe, China, India. The material make-up of the city reflects some of that mix, different architectural styles, and different districts associated with different cultural groups. Those are some of the kind of features of Johannesburg and its development, the very explosive early growth, it was one of the fastest developing centres in the world, powered off course by gold mining in the early period. It's kept on as sort of a reception place for immigrants. From the state it had this character as the city of immigrants. In many ways that is still true today." El, CoJ, official.

The diversity was crosscutting such that by the 1950s, a racially diverse and fluid culture emerged in Johannesburg (Mbembe and Nuttall, 2004). This was reflected in a number of ways which are still visible today. The City is responsible for preserving remnants of the heritage.

"There are still large expressions of European cultures in Johannesburg. You can look at many minorities, you know, we have probably the biggest Jewish community of any city in South Africa. In the south of Joburg there are places like La Rochelle which were associated with the Portuguese Community, the Italians particularly around Orange Groove, Louis Botha corridor. Each of those communities would have left some kind of imprint in many ways, in architecture, in food culture." El, CoJ official.

Population change over time

Table 19: Gauteng population relative to other provinces, 2017

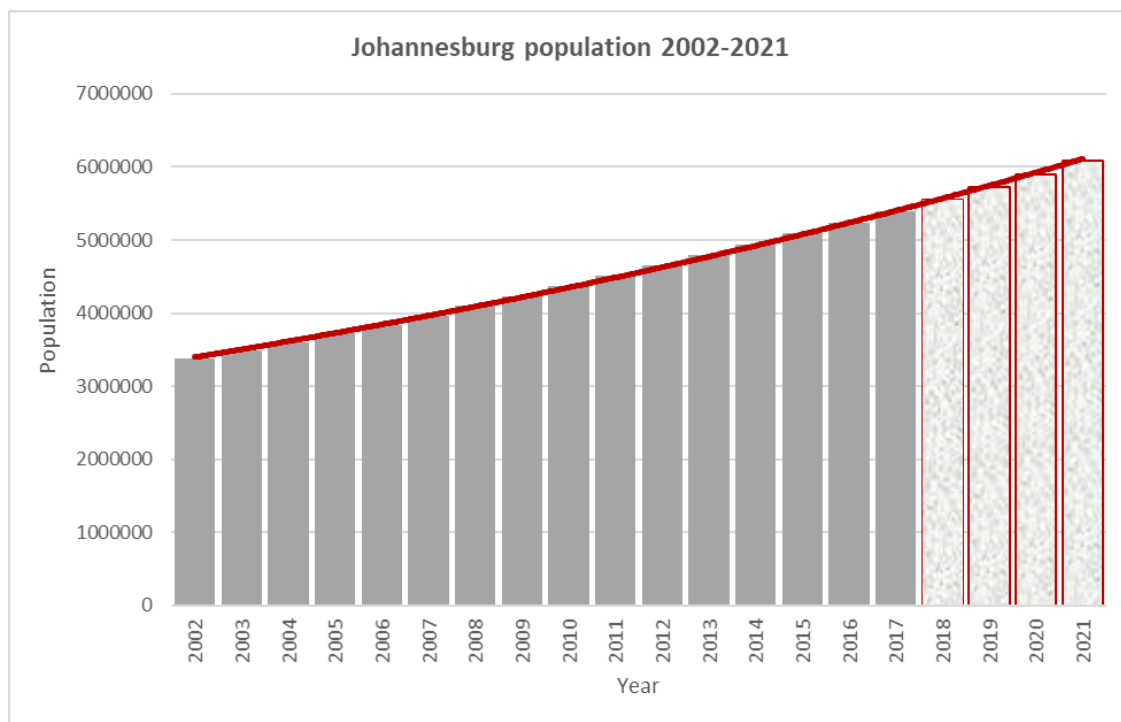
Province	Population estimate	Proportion of national
Eastern Cape	6,498,700	11.5%
Free State	2,866,700	5.1%
Gauteng	14,278,700	25.3%
KwaZulu-Natal	11,074,800	19.6%
Limpopo	5,778,400	10.2%
Mpumalanga	4,444,200	7.9%
Northern Cape	1,214,000	2.1%
North West	3,856,200	6.8%
Western Cape	6,510,300	11.5%
Total	56 521 900	100%

(Source, Quantec)

Population estimates for 2017 show that Gauteng province is the most populous province in the country as show in the Table above (Stats SA, 2017).

Figure 22 below shows the trajectory of population growth from 2002 to 2017. Each subsequent year the city registered an increase in population. Based on this data, the average annualised growth rate of the population in Johannesburg for the period 2002 to 2017 was 2.5%. Projections to 2021 show the average annual growth rate for the period between 2002 and 2021 is 3.1%. This suggests that population size for the city of Johannesburg will rise much faster in the coming three years. Figure 22 below shows the pattern of population increase from 2002.

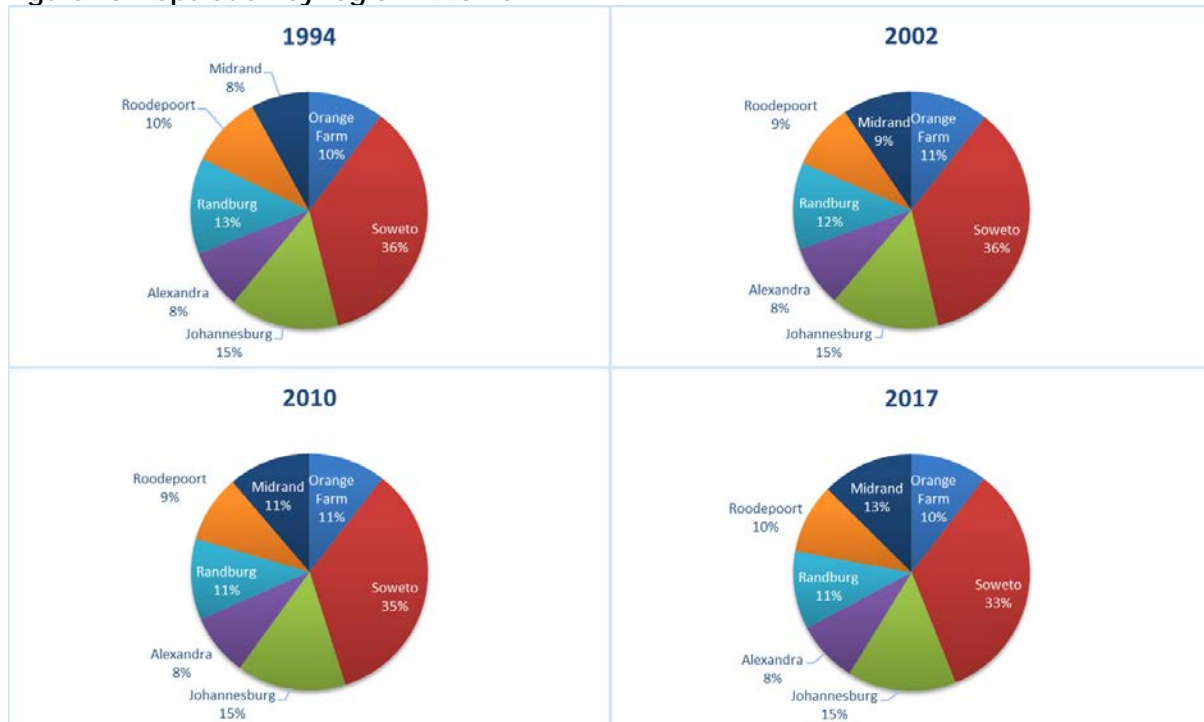
Figure 22: Johannesburg population with projections to 2021



Population by region

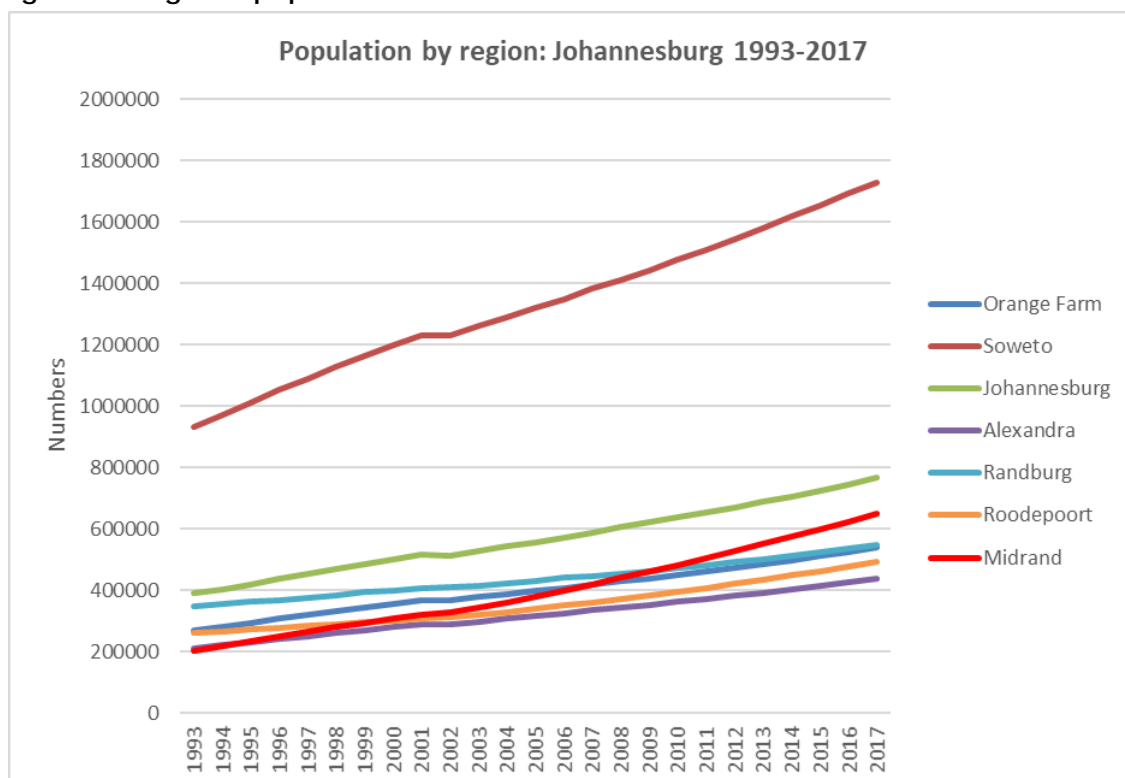
Johannesburg is divided into seven administrative regions (Regions A to G). Available data shows that population is not equally distributed across these various regions. The most populous region is Region D, comprising the suburbs of Soweto, Diepkloof, Dobsonville, Protea Glen and Doornkop. The figures below show that Region D has the highest proportion of the total population (36% in 1994 and 33% in 2017). There has been a 3-percentage-points decline in the regional size of the population in Region D. Prior to democracy in 1994 many blacks were forced to live in these areas (townships) which were run by a separate municipality. However, after the 1994 democratic elections and the adoption of a non-racial constitution, some wealthier and often younger cohorts opted to move out but the majority remained (interview with Rognald Musondwa, JW). Randburg, inner-city Johannesburg (shown as Johannesburg in chart) and Orange Farm also have relatively larger proportions of Johannesburg's population. Many low-income earners choose to locate in these areas due to the availability of low-cost housing and prospects of sharing accommodation particularly in the inner-city. Johannesburg central also has a very large student population due to the presence of two very large universities, the University of the Witwatersrand and University of Johannesburg. Inner city redevelopment in places like Braamfontein has seen many buildings remoulded to provide student accommodation through private property developers such as South Point, Pvt Ltd.

Figure 23: Population by region 1993-2017



(Source: Quantec)

Figure 24: Regional population 1993-2017



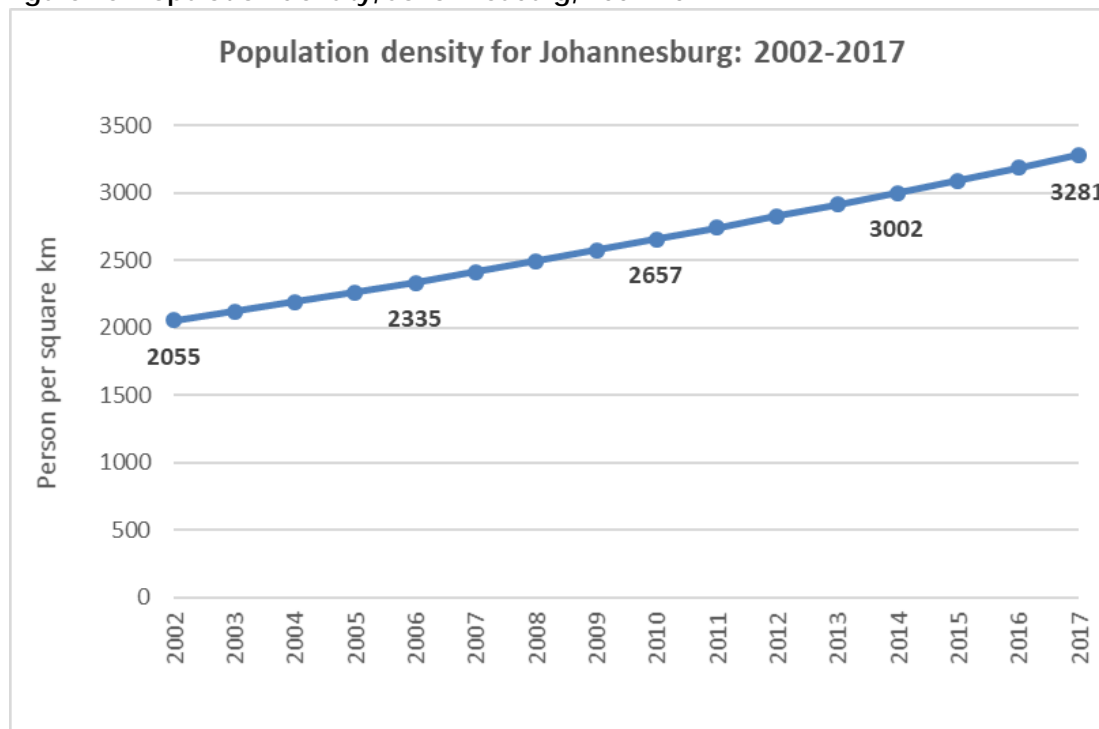
(Source: Quantec)

Figure 25 below shows that the population of Soweto is way above that of the other six regions and is increasing at a much faster pace. This trend gives an indication of the amount of government effort required to intervene and provide residents with decent accommodation, water, sanitation, electricity and refuse collection services.

Population density

Given the large population, Johannesburg has recorded very high population densities over the years which far surpasses other cities in South Africa and elsewhere. Figure below shows that in 2002, the population density for Johannesburg was 2055 persons per square kilometre. It has since risen to 3281 in 2017.

Figure 25: Population density, Johannesburg, 2002-2017



(Source: Quantec)

2.2.2 The spatial expansion and configuration of the city

Johannesburg, together with Tshwane and Ekurhuleni, is largely urban with a small portion (less than 1%) being classified as rural. The three metropolitan municipalities are so connected that they form an extensive and amorphous urban agglomeration. The legacy of apartheid is largely responsible for the current spatial configuration of the city of Johannesburg along racial lines. This explains why Johannesburg has a complex multi-nodal structure (OECD, 2011). Black townships were deliberately built in far-flung areas disconnected from economic opportunities. As a result, commuting is a daily experience for most residents in the city. It is the legacy of apartheid that the spatial design of the city produced inefficient cities that suffer from sprawl and spatially entrenched segregation resulting in poorer communities living on the margins far away from socio-economic opportunities (SACN, 2016).

The divided spatial pattern is one of the reasons why the City of Johannesburg under its former Mayor, Park Tau, embarked on the Corridors of Freedom programme using the concept of transit-oriented property development. The focus of the programme was on integrating the city in the face of urban complexity by carefully managing land use in the city (CoJ, 2011). The city's plan is to embark on an expansive public transport network development that will link peripheral areas (townships) to the inner city (CoJ, 2017). Its emphasis is on transforming movement, social and economic activities in order to improve liveability, urban efficiencies, social cohesion, attain economic inclusivity and sustainability

(SACN, 2016). The corridors are expected to act as catalysts for economic development in the city (CoJ, 2014). Although the term ‘Corridors’ is not longer used, since the city is under a different administration, the transport-oriented zones remain a central feature of the space.

Inner-city Johannesburg is densely populated with densities of up to 2270 people per km². With such a large population the city of Johannesburg is under pressure to provide more affordable housing. Many high-rise building in the inner-city have been transformed into residential accommodation to cater for increasing demand, although some of these buildings are illegally reclaimed. Both the city and private sector agencies have been active in transforming inner-city Johannesburg (CoJ, 2012), but urban management often means that there are large scale and often inhumane evictions, and recently, torching of hijacked buildings in an effort to prevent people from occupying these spaces.

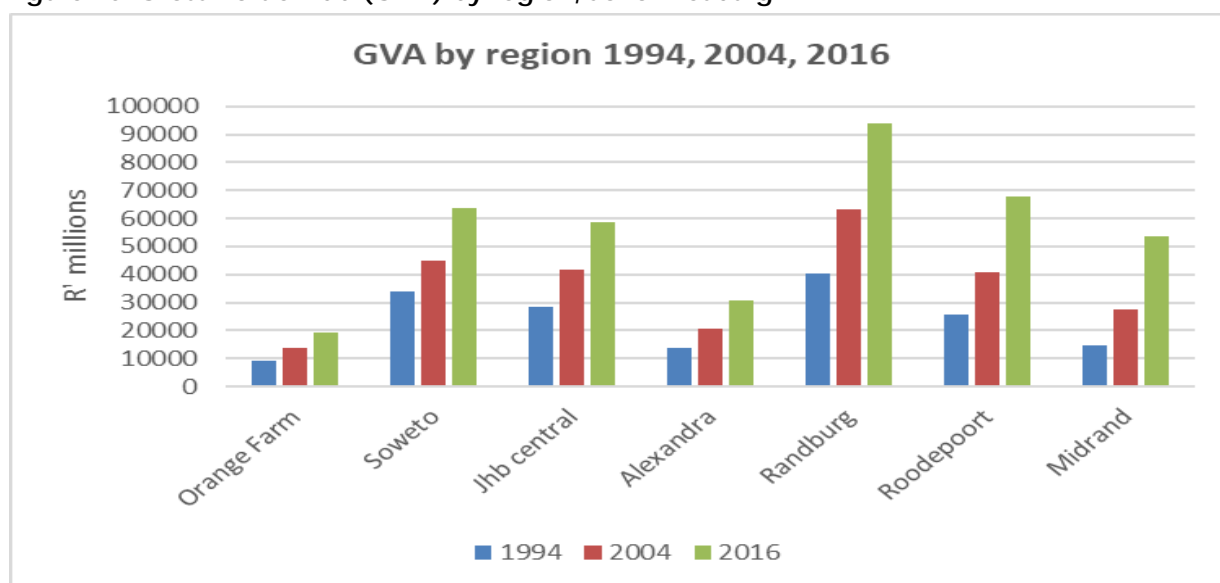
2.3 Economic development, economic problems and urban livelihoods.

The economy of Johannesburg has its roots in the extractive industry, predominantly gold mining on the Witwatersrand. Today, Johannesburg still claims this status as more and more industries and investors are choosing the city as an investment destination. This section will look at the structure and growth trajectory of the economy of Johannesburg in more detail.

2.3.1 Industrial output

Figure 26 below shows the Gross Value Add (GVA) for each of the seven regions of Johannesburg for selected years, 1994, 2004 and 2016, measured in constant 2010 prices. Randburg (Region B), Roodeport (Region C), Soweto (Region D) and Johannesburg Central (Region F), have the greatest output. Over time, output has increased in all regions but greatest in Region B, C, and A (Midrand). This scenario is consistent with changing space economy in these areas where massive expansion and construction has occurred over the last decade. Region A in particular has experienced an increase in hi-tech industrial development in areas such as communications, automotive and glass manufacturing.

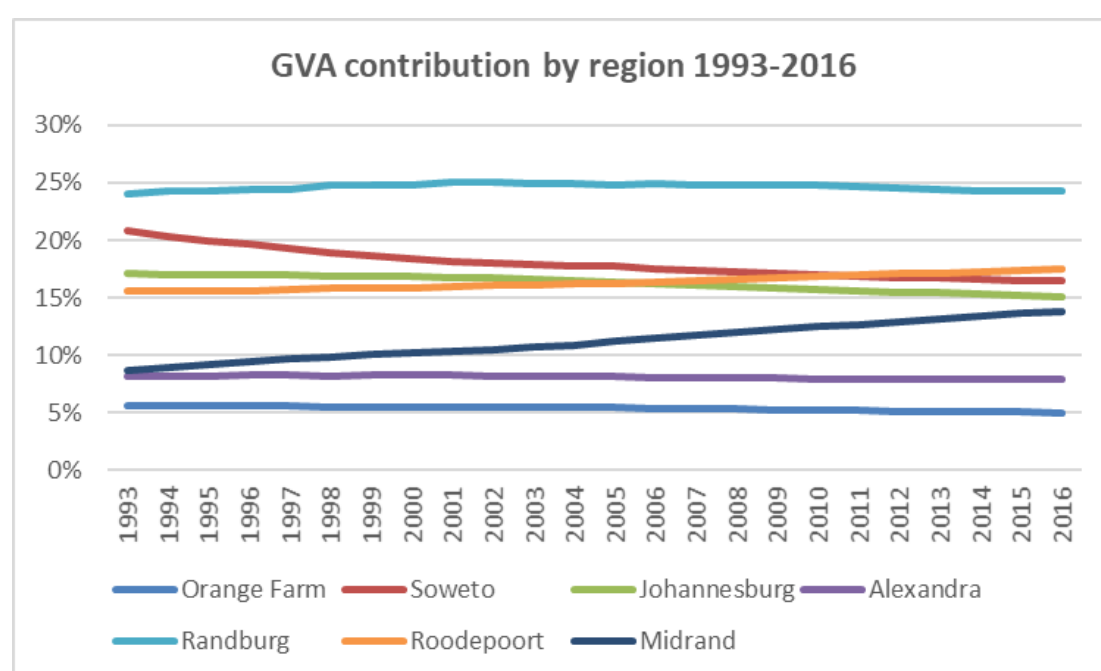
Figure 26: Gross Value Add (GVA) by region, Johannesburg



Source: Mushongera, 2013

In Figure 2.9 below, we compare the percentage contribution of each region to overall Johannesburg output. Randburg (Region B) has maintained its position as the major contributor to GVA. However, the 2016 projection shows a slight decline. Region D (Soweto) and Region A (Midrand) show a contrasting pattern with the former declining and the latter increasing in terms of contribution towards overall output. This implies that the growth in output experienced since 1994 was due to developments and expansion happening in the northern part of Johannesburg. The Midrand area comprises of hi-tech industries and clusters of many smart service industries, business parks and one-stop residential complexes such as Waterfall, and the largest shopping mall in Africa, The Mall of Africa, recently completed. These developments in Midrand and neighbouring Centurion resemble much of what has occurred globally, where rapid growth has spurred new forms of industrialisation, employment opportunities, increasing exports and expansion of wealth (Hodge, 1998).

Figure 27: Percentage contribution to GVA of regions

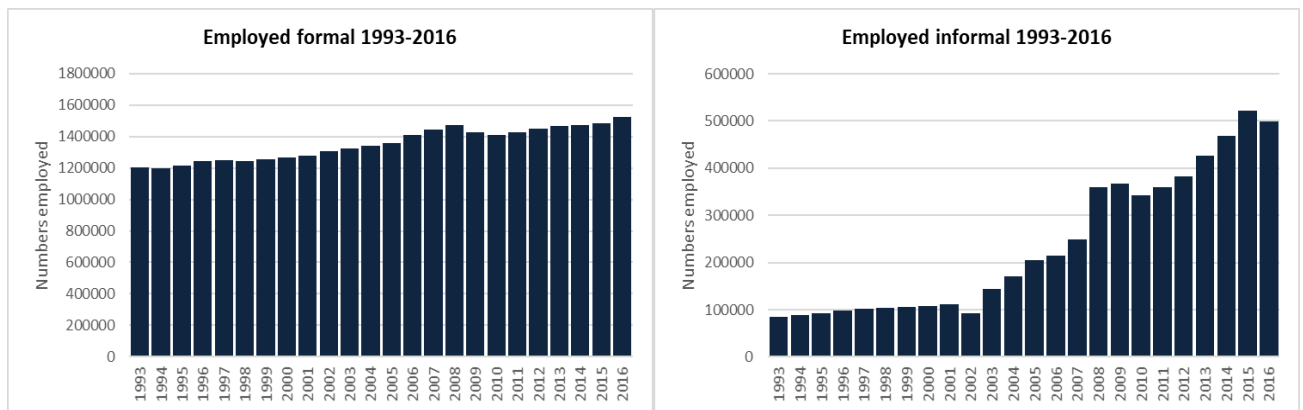


Source: Mushongera, 2013

2.3.2 Employment

In South Africa, the working-age population is 15 to 65, therefore employment is defined as that proportion of the population (in this case population of Johannesburg) of working age who, during the reference week, did any work for at least an hour, or had a job or business but were not at work (StatsSA, 2017). In South Africa, the informal sector is very important and distinguishing between formal and informal sectors is necessary. Figure 28 below shows the numbers employed in both sectors from 1993 to 2016.

Figure 28: Formal and informal employment, Johannesburg

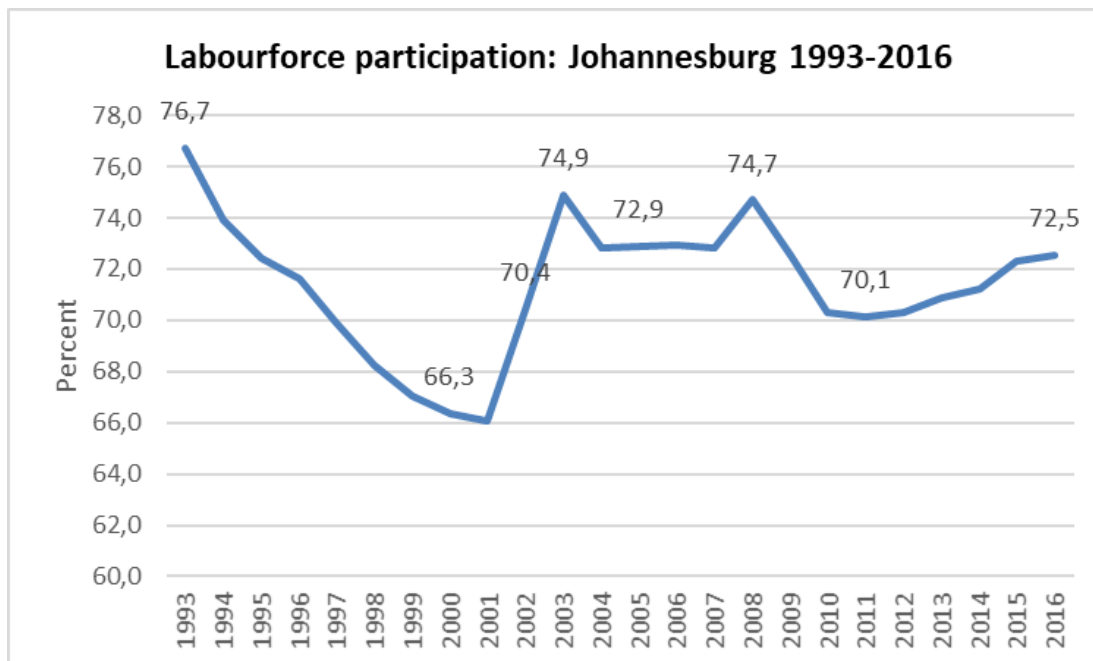


The impact of the global financial crisis felt in 2009 shown by the decline in the number of employed from 2008, shows the interconnectedness and sensitivity of the city's economy to national and global markets trends.

2.3.3 Labour force participation

Labour force participation rate is defined in South Africa as the proportion of the working-age population that is either employed or unemployed. This indicator measures the confidence that potential workers have in the economy. When the economy is low, many potential workers may get discouraged and opt out of the labour market (i.e. they cease looking for work). Figure 29 below shows the participation rate for Johannesburg between 1993 and 2016.

Figure 29: Labour force participation

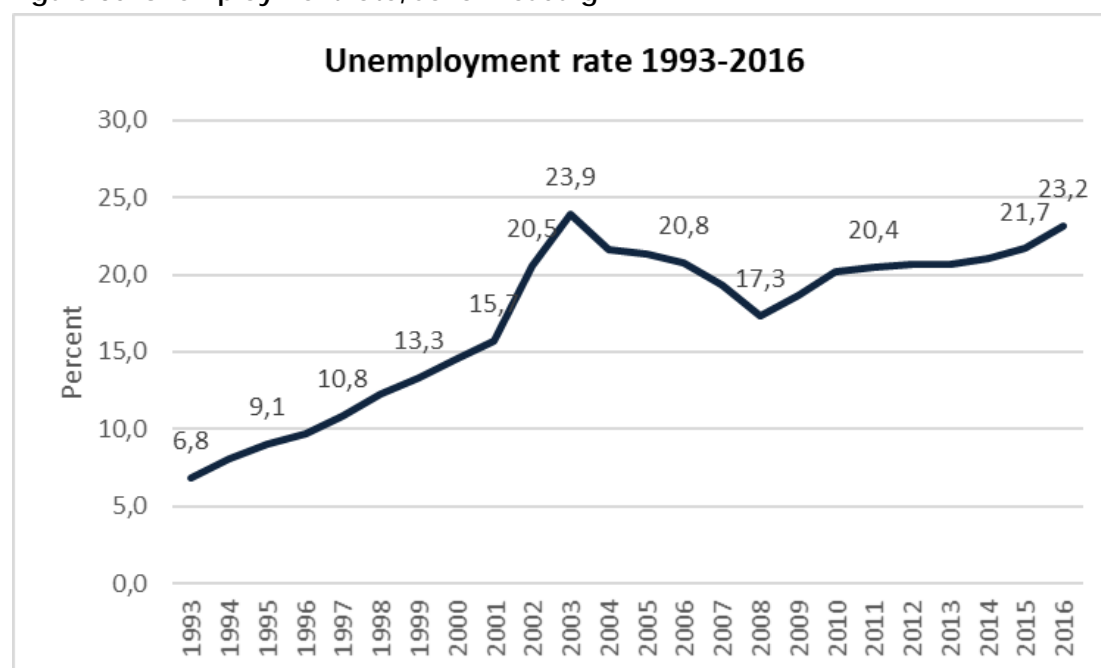


Over the last 20 years, labour force participation rates in Johannesburg were not consistent but fluctuated and declined significantly in certain periods. During the transition period (1993-2001) the rate declined significantly as shown in Figure 29 above. The impact of the global financial crisis was felt in 2009 when the rate dropped by 4.6 percentage points before rising steadily again. Projections beyond 2016 indicate a rise and confidence in the economy that is bringing people back into the labour market. Most migrants come to Johannesburg with hope of getting a job but after actively looking in vain, the majority get discouraged and exit the labour force.

2.3.4 Unemployment rate

The unemployment trend for Johannesburg is not a promising one. From a very low rate of 6.8% in 1993, unemployment has risen to over 23%. The official definition of the unemployed is that they are people within the economically active population (aged 15- 64) who: (i) did not have a job or business during the seven days prior to the interview; (ii) want to work and were available to work within two weeks of the interview; and (iii) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview (Stats, SA, 2017).

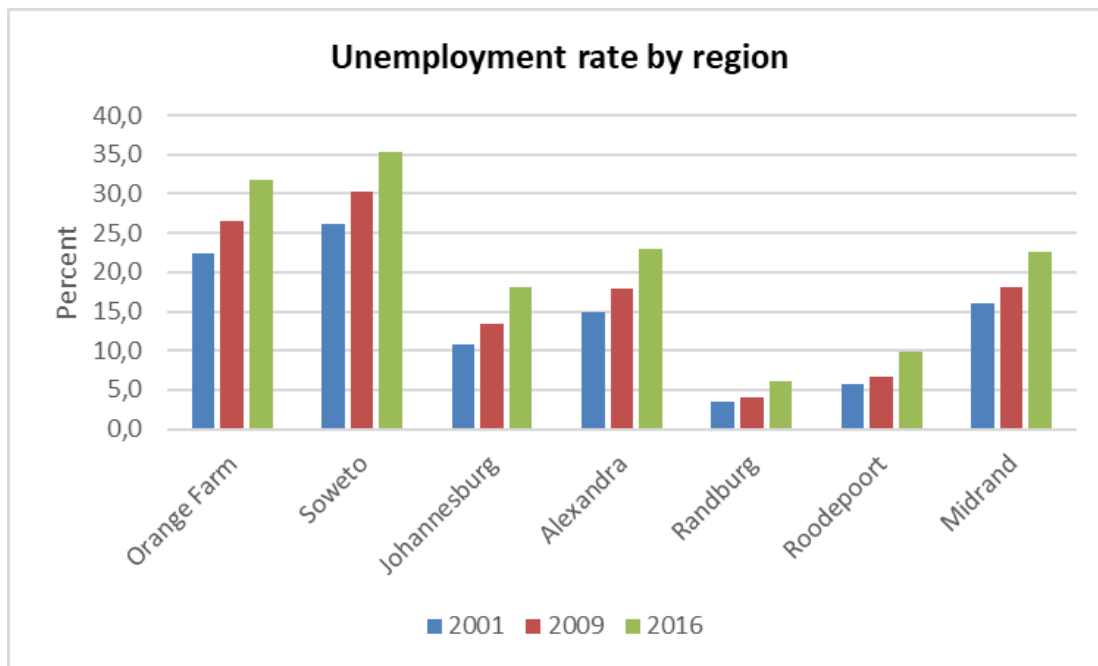
Figure 30: Unemployment rate, Johannesburg



Source: GCRO, 2016

Figure 30 shows that unemployment was highest in 2003 (23.9%) after which it dropped to 17.3% in 2008 only to rise again after the impact of the global crisis in 2009. From the estimates shown above it is likely to increase after 2016. It is clear from Figure 31 below that unemployment is highest in regions G, D and E, which are Orange Farm, Soweto, and Alexandra respectively where most poor and previously disadvantaged people are located. Region A (Midrand), also has relatively high unemployment in spite of its significant contribution to city's GVA.

Figure 31: Unemployment rate by region, Johannesburg



Source: GCRO, 2016

Rising unemployment is major problem connected to and driven by urbanisation, and it is reality that the city government has to face. This is critical for Johannesburg given that it receives over 3000 migrants/immigrants each month. There is evidence to show that failure to secure employment is linked to high of rates of crime that may not be conducive for local and foreign investment, deter tourism and stifle long-term economic development (Mushongera, 2015).

Inequalities in income have implications for how households access services, and the type of urban livelihoods possible. Intuitively, low income households are less able to access better services such as housing, electricity and running water compared to the wealthy. As such many poor residents in Johannesburg find themselves living in informal settlements that are mushrooming next to wealthy suburbs where they are likely to find employment. It is therefore very common in South Africa generally that affluence is juxtaposed with abject poverty in spite of all the efforts of government to reverse the trend (Woolard 2002; Seekings, 2007).

In sum we can see that Johannesburg is the product of urban historical migration, and continued internal and external migration. Many of the migrants are of working age, and while possibilities for urban jobs in the formal and informal sector are promising in a big city like Johannesburg, particularly given the concentration of economic capital in the city, migration and a burgeoning urban population leave many destitute. The urban form is spatially divided and these fall along class and racial axes. The inner city becomes a place that attracts migrant populations and means that the governance challenges are varied – ranging from upgrading informal settlements, to transport corridors meant to integrate the city, and from managing huge backlogs in service provision to managing massive urban unemployment – the next section focuses precisely on these urban planning challenges in more detail.

2.4 Planning and urban development approaches in the city

2.4.1 Approach and scope of urban planning

After the democratic elections in 1994, South Africa went through a period of rapid political and social transformation. The country adopted a non-racial and human rights based constitution and the new government immediately embarked on a nationwide programme aimed at eliminating or at least reducing inequalities created by the former apartheid government. Local authorities such as the City of Johannesburg have obligations that flow from the constitution to guide their actions (interview with Gilbert Marcus). Therefore, in dealing with issues of urbanisation, local authorities work within the confines of the Constitution.

"It seems to me that one of the critical factors which has got to really inform everything that the Province or Local Authorities do, is their obligations which flow from the Constitution and from legislation which is designed to give effect to the Constitution. So, the Constitution carefully delineates a whole range of powers which are within the competence of the Province and which are within the competence of the Local Authorities, and legislation around those competencies has been enacted." (GM, ex City Advocate)

Prior to the creation of the unicity in 2000, the then Greater Johannesburg Metropolitan Council (GJMC) experienced a severe financial crisis due lack of careful planning of the amalgamation process (Smith, 2006; Savage et al. 2003). In January 1999, Khetso Gordan²⁹ was appointed City manager to deal specifically with the financial and organizational challenges that the City was facing. His strategy, the iGoli 2002 Plan, was to shape the course of Johannesburg's history from then on. The iGoli Plan focused on five major problem areas namely: financial stability; service delivery; frameworks of accountability; administrative efficiency; and political leadership (Allan et al, 2001; Smith, 2006).

On the service delivery front, corporatisation was adopted as the ideal model and the result was the creation of several municipal owned entities and utilities (Allan et al, 2001; Seedat, 2001; Smith, 2006; interview with Antonino, Manus, CoJ - the corporatist model also accounts for the form of the health and education sectors described later). This move was significant. A capable and well run local authority was needed to meet constitutional demands of a non-racial and equitable society. Therefore, the creation of unicity from a collection of separate racial based municipalities was a necessary step towards achieving this ideal society (interview with Rashid Seedat, ex-CoJ).

Upon the creation of the city of Johannesburg in 2000, the city found itself with a much larger population to service. However, the new city soon found itself with a two pronged problem - to simultaneously achieve efficiency and equity in service delivery. On the one hand the city had to maintain service delivery standards in areas that were already privileged

²⁹ The transition of Johannesburg cannot be complete with the mention of Ketso Gordhan – the chief architect of the iGoli Plan. According to the City of Johannesburg Annual Report (2001/2002), iGoli 2002 was a three-year strategic plan aimed at structurally transforming the City, through cost-effective service delivery, reducing fragmentation, eliminating duplication, improving accountability, focusing on human development and providing performance incentives. The hope was that the City would work better through a combination of new political governance structures, a core administration, regional administrations, and utilities, agencies and corporatized entities (CoJ, 2003: p.18).

while raising standards in previously disadvantaged communities (Tomlinson et al, 2003; Allan et al, 2001). On the other, the new Johannesburg took off with rapid urbanisation in which it had to serve a population of approximately 3 million overnight. In areas that were underserved, there were backlogs in provision, the infrastructure was of poor quality such that huge investments were needed to raise service levels to acceptable standards (Allan et al, 2001; Interview with Rognald Musondwa, JW).

In order to improve the service delivery, the City of Johannesburg created municipal owned entities which were mandated to provide water and sanitation, electricity and refuse removal. These services were considered non-core functions of the City (Interview with Antonino Manus, CoJ). The three main entities for delivering services were Johannesburg Water, for water services, Pikitup for waste and City Power for electricity supply. In the face of rising urbanisation, this contradiction is felt so strongly in cities like Johannesburg. Bonner et al (1993: 35) state it more succinctly in their prediction of a post-apartheid state.

"The post-apartheid state will inherit most of these dilemmas, and will be required to struggle in its turn with the same deep-seated contradictions of industrialisation, urbanisation and in all probability, popular struggle." (Bonner et al, 1993:35.)

It was therefore not surprising that the right of access to basic service was a contested issue in the City of Johannesburg in the mid to late 2000s, and remains so now.

In 2012, the city of Johannesburg formulated and adopted the Growth and Development Strategy (Joburg 2040 GDS) in which four long term outcomes were identified and agreed upon (See Appendix A) Each city department was tasked to formulate plan and programmes that contribute towards achieving these outcomes (Interview with Jabu Dlamini, CoJ; Interview with Antonino Manus, ex-CoJ). In drawing up the GDS, the city claimed consciousness to future uncertainties that are driven by migration, globalisation, climate change, natural resource scarcity, technological innovation, poverty and inequality:

"Amidst the growing future uncertainty, the City must continue to focus on the important 2006 GDS principles that seek to transform the unjust Apartheid City of the past into a just, equitable, multi-cultural, multi-racial city of the future. The City cannot allow current challenges to derail the tremendous progress made in tackling poverty and overcoming the legacy of Apartheid." (CoJ, 2012 p.8 Joburg 2040 GDS)

The GDS identifies four outcomes which were listed in its 2017/18 Integrated Development Plan as follows: (1) Grow the economy and create jobs; (2) Improved quality of life; (3) providing services and taking care of the environment; and (4) creating a responsive government (CoJ, 2017).

This scenario demonstrates one problem of local government in South Africa – it exists in a system of uncertainty. Given the 5-year local government electoral cycle, which results in policy shifts and lack of continuity of programmes, government programmes must have greater impact in the short-term since communities are not patient enough to wait for longer periods before receiving the benefits of development (Mushongera, 2015).

Flagship projects

During the 2011 to 2016 electoral term, the City of Johannesburg worked towards achieving the outcomes of the Joburg GDS 2040. A number of programmes were launched to deal with

urban challenges in general and challenges unique to Johannesburg as a city. The ANC led city government at the time drew what it termed “*flagship*” projects and programmes. The most famous was the Corridors of Freedom programme (as above). In 2014, the City of Johannesburg also launched the Jozi@Work Programme which aimed at bringing in communities to work with government in providing services in their local areas. The programme was designed to create jobs, reduce poverty while cutting down the service delivery deficit (CoJ, 2015).

A closer look at the DA’s 2017/2018 Integrated Plan shows that these programmes still exist but have been rebranded. However, the new government has aligned capital budget planning with its development strategy and priorities referred to the Joburg GDS 2040, the Integrated Development Plan (IDP) and the Spatial Development Framework (SDF) (CoJ, 2017). The objective is to properly maintain infrastructure in ways that meet the pressures that come with urbanisation. The city’s medium term expenditure framework states that:

“The focus for capital investment in the 2017/18 MTEF is balanced between firstly, ensuring that the current infrastructure and facilities are properly maintained and functional, and secondly, to ensure adequate investment to respond to urbanisation and growth needs.” (CoJ, 2017, Built Environment Performance Plan 2017/18)

Hence, the plan is directed at investing in what the city calls Spatially Targeted Investment Areas, (STIAs) which include inner city revitalization, development along transport nodes, revitalisation of informal settlements and growing secondary economic nodes.

2.4.2 Use of sustainability in urban policy and planning discourse

Sustainability forms part of the urban discourse in the city of Johannesburg. Aspects of economic, environmental and social sustainability are addressed. While a large amount of discourse deals with these aspects separately, the links between environmental and economic sustainability and social and economic sustainability are stressed. To a lesser extent, the link between environmental and social sustainability is also addressed. The importance of planning for all three sectors of sustainability is addressed from a spatial perspective.

The Integrated Development Plan 2018/2019¹ has placed emphasis on the modernisation of the economy, by targeting new markets and technologies, for the development of the city to enhance growth prospects and economic resilience and environmental sustainability in a rapidly changing world. By strategically focussing on enhanced, quality services and sustainable environmental practices, the city has three-fold strategic aims: to create a culture of enhanced service delivery, to enhance financial sustainability, and to preserve resources for future generations by incorporating environmental sustainability and climate change in the City’s planning. Some themes that are mentioned with regards to environmental sustainability in particular is reducing Johannesburg’s carbon footprint, increasing water supply security, minimising all types of pollution, mitigating the impacts of extreme weather events, protecting the natural environment and city-wide environmental monitoring of air quality, wind and humidity. The City is also focusing investment in transformation areas and nodes in order to promote and receive positive social, economic and environmental sustainability returns on investment. Appendix C gives a broad overview of sustainability indicators as compiled by the South African Cities Institute (2016).

The Smart City Strategy mentioned in the Integrated Development Plan 2018/2019 is aimed at using technology to enable a fully-fledged smart city that is efficient, open, transparent and responsive in providing services that ensure financial, environmental and quality service delivery sustainability. The Human and Social Development Strategy (HSDS), which is currently being reviewed, drives the objectives of the current IDP term by promoting proper development that addresses inequality and poverty and that responds to the needs of citizens while working towards sustainability and the protection of the environment. The Spatial Development Framework (SDF) for Johannesburg 2040 is a city-wide spatial policy document with the core objective of creating spatially just city premised on principles of equity, justice, resilience, sustainability and urban efficiency.

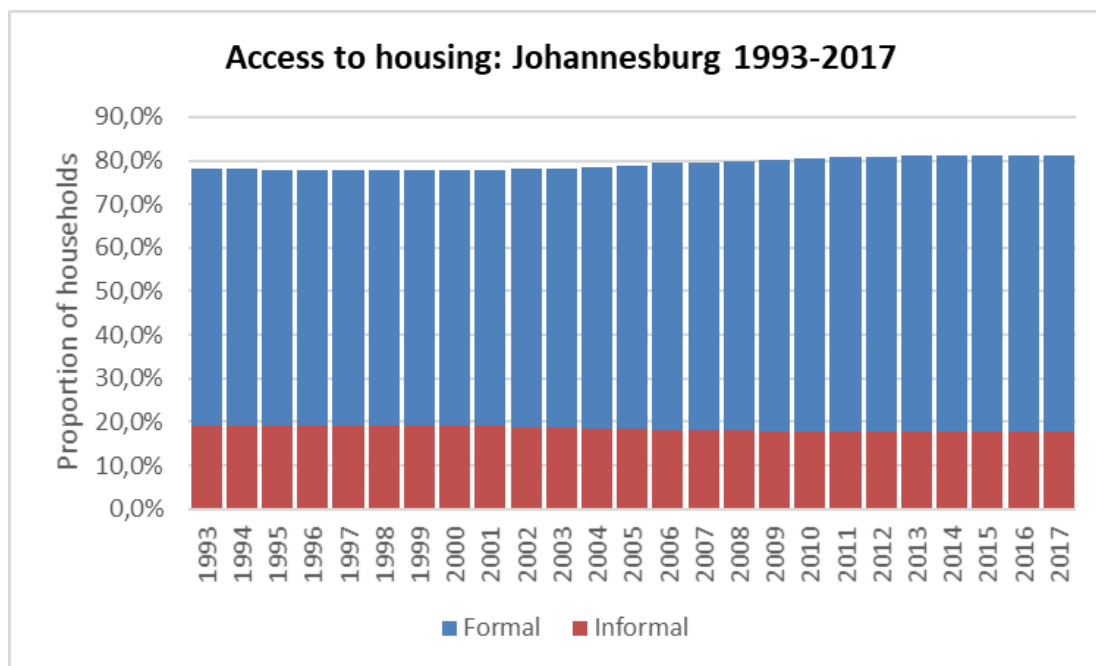
According to the Integrated Environmental Management Policy, the city acknowledged that economic development has to be underpinned by sustainable practices. The environmental policy is aimed at achieving this. This policy envisions the result of effective environmental management to have micro and macro level effects. At the micro level this should lead to socio-economic development, and to increase investment at a macro level. The CoJ intends incorporating environmental management practices into its own day to day workings as well as the operations of the city. Finally, the stated goal of the city in terms of environmental management is to reduce the ecological footprint of the City through compact, integrated spatial development patterns supporting resource efficiency and sustainable development practices. The Integrated Environmental Management Policy of the CoJ identifies a number of areas that environmental impacts could be measured (see Appendix B), but this data is unavailable.

The Johannesburg Metropolitan Open Space Policy document also attaches a great deal of importance to sustainability. This document aims to address the loss of open spaces that had occurred within the city. One of its key criteria in terms of its approach and recommendations is that the city's spatial planning should ensure sustainability of the urban form. This document further details the criteria that determine sustainable usage of a natural resource; including elements of intensively of use, equitability, preservation of important heritage sites.

2.4.3 Socio spatial divisions in the city

The policy of racial segregation resulted in spatially fragmented residential areas, some leafy suburbs, some dusty townships, massive capitalist developments and massive informal settlements – and a whole range of settlement types in-between these extremes. In spite of huge investments in housing through the Reconstruction and Development Programme (RDP), a significant proportion still lives in informal housing. As urbanisation rises and more people are attracted to economic centres such as Johannesburg, the demand for housing also increases but there is no corresponding increase in supply – simply because of the pace of urbanisation vs. the pace of housing development. This means that housing remains a priority area for intervention by government in the face of urbanisation. The City of Johannesburg has prioritised housing in the GDS 2040 as well as the 2017/2018 spatial development framework (CoJ, 2011; SDF, 2018). The City has identified what it calls 'strategic growth nodes' and transformation zones in which adequate investment capacity is to be channelled to ensure that there is adequate infrastructure to accommodate urbanisation and economic growth needs (CoJ, 2018).

Figure 32: Access to housing (in/formal)



Spatial fragmentation also results in unequal provision of basic services such as, electricity, refuse collection, water and sanitation (Interview with Rashid Seedat). There are still challenges in areas such as informal settlements where providing access is difficult because residents do not have access to proper housing (Interview with Ondela Tywakadi, CoJ).

“For example, in informal settlements, there is not permanency, contractors hired to provide services have a tendency to supply substandard material for supply of water and sanitation. As a result, there are constant blockages and bursts that residents are always complaining about.” (OT and LB, CoJ officials)

Although progress has been made in ensuring access, particularly to previously disadvantaged communities, there is considerable dissatisfaction with government in general, something that is a paradox. Discussions with City officials have revealed that people are now expecting much more than services from the municipality. Issues such as employment creation, poverty reduction, if not addressed, cause communities to mistrust government.

“Service delivery is ‘fish in the water’. That the job of the municipality so people will not hail you for doing what you are supposed to do anyway. People expect much, for example, jobs, and economic opportunities.” (PT, ex-Mayor of CoJ)

2.4.4 Migration

Under apartheid, Johannesburg was designed as a cosmopolitan, European city in Africa, but only for a small segment of its population (Maliq Simone, 2004). However, from the 1980s onwards and as the end of apartheid became imminent, whites moved out of the inner city and went north. For Johannesburg, we have already noted that a large proportion of this growth is driven by immigration. The legacy of the city as the city of gold and the magnetic effect it created seem to haunt the city into the future by continuously attracting people from all over the world drawn by prospects of wealth and better lives.

However, there is no consensus from the perspective of the administration, regarding migrants (immigrants in particular). There are divergent views not just at local level but at national as well. Former mayor of the Johannesburg, Park Tau had a positive view of migration.

"In Johannesburg, we believe that urbanisation comes with opportunities, and it is all about harnessing these opportunities. Johannesburg has an influx of 10 000 people every month, these people need to be integrated into the city as they bring entrepreneurship and a large pool of human resources into the city." (Parks Tau, former of the City of Johannesburg, cited in Bernardo, 2015)

The new mayor, Herman Mashaba has a different view. Tau saw urbanisation as an opportunity where migrant skills can be tapped into, and enhance city development, but Mashaba has rather different view of immigrants (Cox, 2017).

"I will do everything possible to provide accommodation. But the City of Johannesburg will only provide accommodation to South Africans. Foreigners, whether legal or illegal, are not the responsibility of the City. I run the municipality. I don't run national government." (EWN, 2017).

The influx of immigrants, particularly those coming from countries such as Zimbabwe, Lesotho and Mozambique, is a national challenge. Regularising illegal immigrants to allow them to work, study or conduct business in South Africa was a realisation that foreigners contribute to the local economy and that migration is a reality that cannot be eliminated but can be managed. It is estimated that 2 to 3 million Zimbabweans are living in South Africa.

What this also signifies is that, although Johannesburg is cosmopolitan, levels of social cohesion are still very low and has even reached extremes of xenophobia. This happens at almost every level, albeit race, nationality, ethnicity and so on, as noted by some city officials.

"Johannesburg is a city for everyone." (Jabu Dlamini, official at CoJ)

"I think that the wheels of history don't stop turning, and there are new waves of immigration in Johannesburg, there are significant communities from a whole number of countries, from the Indian subcontinent you will find people from Ethiopia, Sudan, Zimbabwe, Mozambique, some of these people have settled in their own enclaves, their own neighbourhoods, so will find that in a number of areas. And off course xenophobia has been an unfortunate reality not across the board but especially in poor areas where people are struggling for resources. So it sort of becomes a question of resources. In a sense racism and bigotry have been in existence for over a long period and this is just a recent manifestations of that." (El, CoJ official.)

2.4.5 Development of neighbourhoods

Although Johannesburg is cosmopolitan in character, there is evidence of a divided, fractured and highly fragmented city which also dates back from its inception. This was echoed by one of the current CoJ official:

"The whole history of segregation is not from apartheid, it was, even before that. The city was built on segregation, the dividing of the city based on race and economy

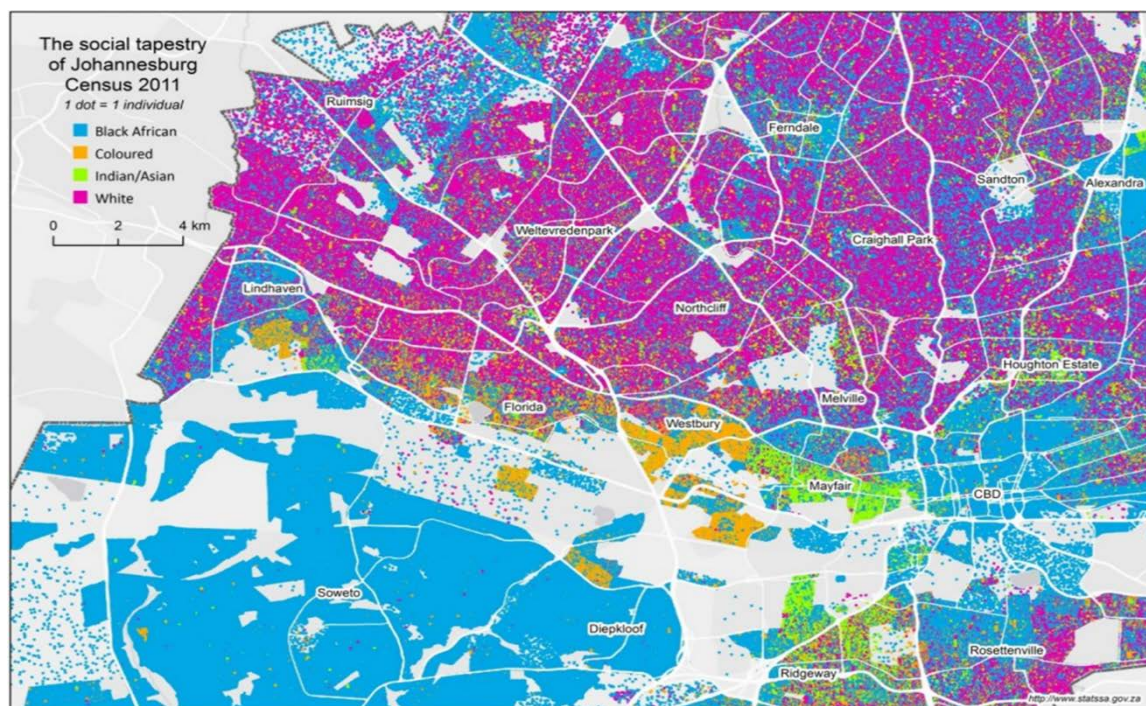
has always been there. The inequalities were persistent from those days." (ZE, CoJ official)

The city developed its own brand of cosmopolitan culture through built spaces, styles of architecture, social and cultural spaces such as cinemas, stores, parks, squares, music, religion, and even literature (Mbembe and Nuttall, 2004).

"Over the past quarter century, its boundaries have become so geographically and socially permeable and stretched that the city seems to have no fixed parts, no completeness, and almost no discrete centre. Like the continent itself, it is an amalgam of often disjointed circulatory processes." (Mbembe and Nuttall, 2004)

Johannesburg remains a divided city, mainly by race and the current geography of the city reflects that (see Figure below). It clear from the map that there was no dramatic mixing of races. Although it is slowly happening, there are areas such as Soweto that remain predominantly black. However, the move by government transformed Soweto into a tourist township where a number of historical sites were preserved and are visited regularly by foreigners.

Figure 33: The social tapestry of Johannesburg Census, 2011



"Johannesburg is a city divided by wealth ... the city is still segregated by race, that's White, that's Coloured, that's Indian, that's Black (pointing on a map). You find your own people in a sort of your own space where you have many things in common, like, me, I am Indian and live in Lenasia because historically that were Indians were placed." (ZE, CoJ official)

Johannesburg has gone through several phases of spatial social transformation that have configured and reconfigured the city in unique ways.

“But it’s kept up some of that sense of energy, some of it destructive but also creative so it’s been able to renew itself from time to time, shift its identity, power new growth.” (EI, CoJ official)

The urban landscape is changing, but it tends to change along the existing social and spatial fractures – predominantly class. For example, Mbembe (2004) gives a graphic picture of how Melrose Arch has been designed as a public space for the rich and famous and the upper middle class. It thus tends to be predominantly white. The other side of the coin is what happens in the inner city where the economic and social informalities commonly associated with urban Africa exist (Maliq Simone, 2004). The inner city is thus accessible to vulnerable populations, which are mainly black and African immigrant nationals, particularly as wealth made it possible for white inner city residents. A city official who once lived in Berea during apartheid remarks:

“I was staying in Berea. At the time there were quite a lot of Jews in the flats. Even then in the flat where I was staying, I think it was three or four of us black people at Preston Place. And then slowly, in flat opposite to us they started having foreigners. I saw Hillbrow, Yeoville, especially Hillbrow, Berea, Yeoville, I saw them change drastically with more foreign nationals coming to city. Where I used to live, at Preston Place, there is not a single white person living there now.” (Interview with JD, CoJ official Community Development)

2.4.6 Conclusion: the development of the city and its neighbourhoods

In sum, the spatial fragmentation of the city has profoundly affected the form of its neighbourhoods. The urban spatial form has resulted in diverse settlement types – ranging from rental stock to eco-estates – and different neighbourhoods from informal settlements to lush suburbs. The urban planning challenge as it relates to neighbourhoods will inevitably be retrospective in that it seeks to address historical spatial fractures, while managing the burden on urban infrastructure because of burgeoning urban populations.

This plays out in an overly corporatist manner, where investment led development is seen to be the panacea to urban development. Megaproject urban development is part of this formula, as is township development. The political mandates of the opposition party, and its coalitions means that urban planning is almost always a patchwork process, with amazing policies, indicators and data, but also militaristic-style management of urban populations. The challenge ahead is to balance growing mistrust of local government and growing social fractures – along class lines – with the cleaning up local government and efficiently managing service delivery.

2.5 Organisation of the health system

“Communities and neighbourhoods that ensure access to basic goods, that are socially cohesive, that are designed to promote good physical and psychological wellbeing, and that are protective of the natural environment are essential for health equity. Therefore, health and health equity need to be at the heart of urban governance and planning.” (Marmot et al, 2008: 1664).

2.5.1 Overview

The South African health system can be divided broadly into four parts governed through three spheres of Government in accordance with the Constitution of South Africa (Constitution) (Republic of South Africa, 1996).

Three of these parts relate to the public health service and include: the national sphere which oversees national policy and implementation; the provincial sphere which has the constitutional mandate for health services held concurrently with the national sphere;³⁰ and local government, which has the mandate for health functions that do not involve clinical healthcare services (such as environmental health and sanitation). Much of the Johannesburg discussion, then is framed within the Gauteng Province's governance structure.

Local governments are however responsible for the provision of health services assigned to it by a provincial Member of the Executive Council (MEC) in terms of section 32 of the National Health Act (National Department of Health, 2003) and therefore lack the authority to determine alone what they make available. Municipal health services are non-clinical in nature and focus on environmental health functions such as sanitation and aspects of population health.

The fourth part of the health system is through private health service providers and funded by private health insurance (referred to as medical schemes). The private health system is mainly regulated through national legislation falling under the jurisdiction of the Minister of Health. A regulator, the Council for Medical Schemes, which reports to the Minister of Health, supervises medical schemes. Private hospital licensing however occurs at a provincial level.

The emergence of provincial governments and medical schemes as the predominant vehicles for the delivery of health services in South Africa is an outcome of the incremental interplay between the changing needs of the population and policy over a period of 200 years. The institutional context that presents itself in 2018 is consequently quite entrenched. The historical context therefore offers insight into the institutional features of the current health system.

2.5.2 Reforms under consideration in Gauteng province – a possible model for the country?

While the Western Cape provincial health system has continued with a centralised approach to the organisation of the province, with deconcentrated regional structures, the Gauteng provincial government is beginning to examine a more decentralised approach. It is possible that this approach will ultimately be pursued by the Western Cape and other provinces. This suggests that the Cape Town report will have different findings regarding local health controls than the Johannesburg report.

However, the picture is to a degree confused by an initiative led by national government that seeks to centralise the purchasing of health care services through a national agency – or National Health Insurance Fund (NHIF) (National Department of Health, 2017). This agency would (in theory) implement and oversee a DHS approach as initially envisaged in the 1995

³⁰ This can be found in **schedule 4, Part A** of the **Constitution** which lists the functions that are to be held concurrently by both national and provincial governments (Republic of South Africa, 1996).

NHI Committee report. However, while returning to the “purchaser” model of the post-1994 DHA, the proposal to implement the strategy from the national level has had little success to date and is unlikely to make any progress, even if legislation is introduced, as it represents too big a change from the pre-existing institutional pathway.

While retaining the purchaser concept of a DHA envisaged in the NHIF, the Gauteng Department of Health (GDOH) is nevertheless considering the long-term development of the envisaged DHS as a decentralised tier within the provincial health system rather than as part of a national agency.

The GDOH can be divided broadly into a head office, regional administrations and services. The approach for the central and regional (or district) structures is distinct from the services. Head office (PHO) and regional structures need to be converted principally into purchasers/regulators of the services while services need to operate as autonomous resilient organisations responsive to users. The Johannesburg Metropolitan Health District comprises thirteen community medical facilities: Rabie Ridge Clinic, Orange Farm Clinic, Diepsloot Clinic, Westbury Clinic, Discoverers CHC, Mofolo CHC, Mandela Sisulu Clinic, Zola CHC, Alexandra CHC, East Bank Clinic, Lenasia Clinic, Lenasia South CHC and Stretford CHC.

The overall framework deepens the original narrow “purchaser” conception of a DHA, combining regulatory functions and quasi contracting in relation to a substantially autonomous DHA. *With respect to the major metros coterminous with the DHAs the opportunity exists to develop a strong province-metro platform for integrated financing and delivery under a strong accountability model.*

2.5.3 Public-private mix

When expressed as a percentage of Gross Domestic Product (GDP) expenditure levels in the public and private health systems have remained a relatively stable over a long period. However, both the public health systems and medical schemes have seen a structural increase: from 3.3% and 3.4% respectively in 1994 to 4.1% and 4.0% respectively in 2014. Out-of-pocket expenditure, at least as reflected by the World Health Organisation, has shown a significant decline over the same period, from 1.5% to 0.6% of GDP.

While the expenditure trends have remained stable and rising, the populations served by the two systems have not. Dramatic cost increases in the medical schemes system appear to have constrained increases to below overall population increase (a drop from 19.8% of the total population in the late 1990s to around 16% at present), with the public sector catchment population increasing slightly faster. By 2016 the public sector needed to protect 47.5 million while medical schemes offered coverage to 8.7 million.

Despite increased and excessive resourcing of the private sector it has not been able to take on an equivalent burden of patient care. This trend is likely to be most pronounced in the Western Cape and Gauteng which face faster overall population growth (both as rates and in absolute terms) and also have the greatest concentration of the private health services.

While the amount spent on the private sector via medical schemes has remained fairly constant (as a percentage of GDP) over time, there has been a dramatic shift in hospital services away from the public sector. Until 1986 most people covered by medical schemes purchased their hospital services from the public sector as higher-income groups and medical scheme members need to pay for public hospital services. From 1986 to 2010 the

number of private acute hospital beds in the private sector increased from 6,125 to 31,067, while the public sector declined from 117,842 to 88,920 (Table 20). In the period after 2000 the public sector explicitly de-prioritised hospital-based services in favour of primary care – or district health services. Within the public health budget, there has also been a substantial diversion of resources to HIV and AIDS funding, the bulk of which is financed through a national conditional grant.

Table 20: Private and public hospitals and bed estimates from 1976 to 2010

Year	Private		Public	
	Hospitals	Beds	Hospitals	Beds
1976	25	2,346		
1986	65	6,125 (est.)		117,842 (est.)
1989	101	10,936		
1998	162	20,908	343	107,634
2010	216	31,067	410	88,920

Source: (van den Heever, 2012)

2.5.4 Population change

Gauteng and Western Cape face a number of unique challenges that set them apart from the rest of the country. First, they have the largest populations that exclusively make use of private services funded through medical schemes, with Johannesburg at 25% and Cape Town at 23.9%. Over half the medical scheme population is in only five metros, with less than 50% distributed through all the remaining local authority regions. The average medical scheme percentage of the total population in these remaining authorities is only 11%.

Table 21: Medical scheme population compared to the population dependent on the public sector by metro and all other local authorities (summed)

Local authority	Total	Public sector	Medical scheme (MS)	MS as % of total
Johannesburg	5 006 517	3 755 890	1 250 627	25.0%
Cape Town	4 067 774	3 095 586	972 188	23.9%
EThekweni	3 548 516	2 885 513	663 003	18.7%
Ekurhuleni	3 393 561	2 552 722	840 840	24.8%
Tshwane	3 323 240	2 310 268	1 012 973	30.5%
Rest	35 836 417	31 792 655	4 043 762	11.3%
Total	55 176 026	46 392 634	8 783 392	15.9%

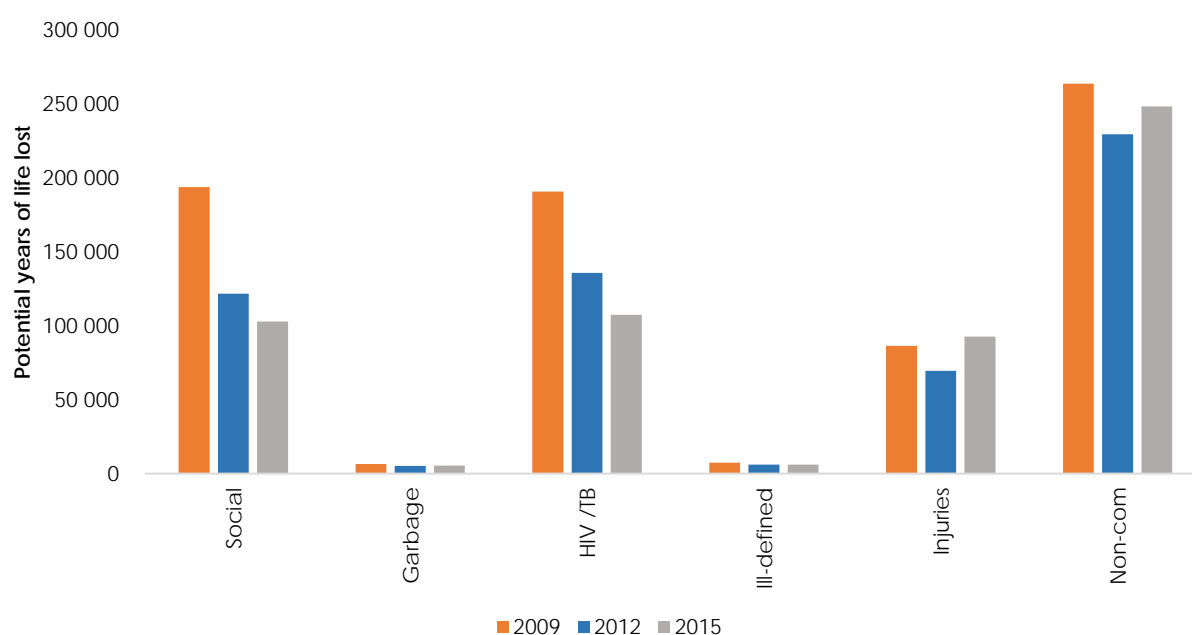
Source: Based on (Health Systems Trust, 2017)

2.5.5 Burden of disease

Both Gauteng and the Western Cape demonstrate similar burden of disease trends. Whereas deaths due to communicable diseases, maternity-related causes, perinatal causes, nutrition-related causes, HIV and tuberculosis, and ill-defined deaths (often HIV-related) are in decline, deaths due to injuries and non-communicable disease (hypertension, cancers, diabetes, etc.) are on the rise. Johannesburg and Cape Town also have the largest number of life years lost due to these causes in their respective provinces. Life years lost from these causes are also the largest contributor to overall life years lost in both provinces and both cities.

Life years lost from non-communicable diseases can be expected to rise with population growth from both these causes unless more effective prevention strategies are implemented. Both are a consequence of urban living and the resulting lifestyle choices adopted by the populations at large. While all other causes are in decline, even relative to population growth, they are only in decline due to health service related interventions. Continued improvements will depend on the quality of the health service and the degree to which there is coordination between the provincial and local authority health services.

Figure 34: Burden of disease trend for Johannesburg from 2009 to 2015



Source: (Health Systems Trust, 2017)

Health security

According to a recent Safe Cities report, the City of Johannesburg ranks 50 out of 60 in terms of its capacity to provide a safe healthcare environment for its residents (Safe Cities, Economist Report, 2017³¹).

2.5.6 Potential opportunities – high level

Historically the Cape Town and Johannesburg metros have been involved in the delivery of primary health care services and emergency medical services. It will make a lot of sense for both cities to deepen their involvement in health service provision – particular as these are also the fastest growing regions in the country. There is value in a coordinated diversification of public players in the public health system, especially as the metros are closer to the served population than the provincial governments.

However, the Constitutional and legislative framework requires that provincial governments sign off on delegations to local government in the case of primary care services and emergency medical services. Rather than waiting for provincial governments to show initiative, the metros are in a position to establish partnerships that can help to generate more coherence in the provision of district-level services and critical care. Partnerships in public hospital development and management are also possible.

The burden of disease in both Cape Town and Johannesburg are consistent for that of rapidly growing and concentrating populations. It appears that in both instances the disease burden is worsening in the case of injuries and non-communicable disease. A combination of improved prevention strategies and better-managed health services is also required. Included in this mix is the problem of aging populations combined with the breakdown of

³¹ <http://safecities.economist.com/safe-cities-index-2017-interactive-tool>

extended families. Care for the aged is a major gap in both the health and social services and requires a combined local government and provincial initiative to properly support families of all income groups.

Within the Gauteng province a major opportunity exists for the Johannesburg metro to become involved directly in the development and deepening of the DHS as it emerges. It will take a number of years to implement fully and will benefit from engagement with the province on role clarification and the opportunities for partnership. As the new DHS will involve a revised provincial legislative framework, it will be important for Johannesburg to play a role defining the final design such that incentives are created for a strong partnership model that can be more than the sum of the parts.

2.6 The City's Education and Learning framework

Improving macroeconomic management and the implementation of policies can only take South Africa so far. Raising the overall quantity of education means little if quality improvements do not go hand in hand. By all accounts the quality of education and general skills development is low. This common observation is confirmed by empirical evidence from national tests (e.g. the Annual National Assessments – ANAs – of the Department of Basic Education) and international comparisons of student learning (such as SACMEQ, TIMSS, PIRLS³²).

In the most recent Trends in International Mathematics and Science Study (2015), the five poorest performers were Jordan, Saudi Arabia, Morocco, South Africa and Kuwait. The five best performers were all in East Asia – Singapore; Hong Kong, South Korea, Taiwan and Japan (TIMSS, 2015).

Furthermore, South African achievements are highly unequal. Only one quarter of children at public no-fee schools (Quintiles 1, 2 and 3) received mathematics score above the minimum competency levels.

Socio-economic indicators such as parents' education and the number of books in a child's home were positively related to achievement at school (TIMSS, 2015).

These poor education outcomes have little to do with low public expenditures per se. Education, for instance, is at the very minimum a R500 billion industry in South Africa inclusive of the private sector. The efficiency of that expenditure, however, leaves a lot to be desired. There are also some serious questions relating to the equity of education expenditure, particularly the distribution of financial resources between urban and rural areas, and between school catering to the poor and those for the rich.

As a consequence of these persistent inequalities, South Africa exhibits a poorly distributed and low quality human capital. While providing quality and extensive education to all socio-economic groups in society is a matter of social justice, the issue of education distribution is also one of crucial economic implications. While gains have been made in increasing average education levels, they have not been accompanied by a better distribution of education. South Africa's poor educational distribution is not attributable to the lack of initial access to

³² SACMEQ – Southern and eastern Africa Consortium for Monitoring Educational Quality; TIMSS – Trends in Mathematical and Science Study; PIRLS – Progress in International Reading and Literacy Study

schools, but partly to high and more rapid drop-out rates among the poor. The result is that school systems remain highly stratified (even within relatively wealthy cities such as Cape Town and Johannesburg) and are not a mechanism of social mobility. Rather, they act to perpetuate current socioeconomic structures and reinforce inequality.

The outputs and outcomes in South African education relative to the high levels of investment are quite appalling. South Africa spends approximately 6.4 percent of GDP and one-fifth of its budget on education (National Treasury, 2018). These figures are extremely high by international standards (compared against both industrialised and developing countries).

In this context of high spending and poor outcomes, the two provinces which fare the best are Gauteng and the Western Cape – again, much of this data is available as Provincial data. These are also the two provinces whose economies are the most developed, and in which poverty levels are the lowest. In terms of the matric (or school-leaving) pass rate (unfortunately not a very good indicator of qualitative achievements in schooling), Gauteng and WC are among the top three provincial performers. For example, in 2017, the national matric pass rate was 75.1% while that for Gauteng was 85.1% and WC's was 82.8%. In terms of "Bachelors" passes (eligible for university entrance), the respective figures were 28.7, 36.0 and 39.0 (DBE, 2018).

One indicator of the relatively low poverty in Gauteng and WC (compared to other provinces) can be derived from the relatively small number of Quintiles 1-3 schools (the schools in the three poorest income categories) in these provinces compared to the country as a whole. Table 22 shows the distribution of schools writing the matric exam in 2017. Forty three percent of Gauteng schools were in the poorest quintiles (i.e. 1-3) (271 out of 635), and 31% of WC schools (122/397) while the national figure was 79% (4929/6246).

Table 22: Distribution of schools writing the matric exam by quintile

Type of School	Gauteng	Western Cape	Total in SA
Quintiles 1-3 (no fees)	271	122	4 929
Quintile 4	150	89	595
Quintile 5	214	186	722
<i>Total</i>	<i>635</i>	<i>397</i>	<i>6 246</i>

Source: DBE, 2018

One of the big question marks about the matric pass rate relates to whether it is a good indicator of quality and efficiency in the South African schooling system. An associated challenge here is the extremely high number of drop-outs in secondary schooling particularly in grades 11 and 12. There is a strong and widely-held belief that large numbers of (weaker) students are "culled" in these years as part of a strategy to allow only those students considered to have the potential to pass the matric examination years later to progress. This strategy inflates the matric pass rate relative to what it might have been if weaker students were allowed to progress.

The populations of Gauteng and Western Cape also have the highest educational attainment relative to the rest of the country. Table 23 shows that the proportion of 25-64 year olds with both secondary and post-secondary education is much higher than the national average and

that of the poorest province (Eastern Cape). In terms of provincial shares in post-secondary education, Gauteng ranked highest (38.0%) followed by the Western Cape.

Table 23: Education attainment of 25-64 year olds by Province

Province	No Schooling	Primary	Secondary	Post-secondary
Gauteng	3.6	9.4	70.7	16.3
Western Cape	2.2	13.9	70.7	13.0
Eastern Cape	6.5	18.9	64.9	9.5
South Africa	6.0	13.6	68.2	12.1

Source: Statistics SA, 2016

Table 23 shows the metros and districts in South Africa with the highest educational attainment. With the exception of Tshwane, which has a relatively high proportion of individuals with post-secondary education (PSE) (probably because of the high number of civil servants residing there), there is little difference amongst the top metros and districts with the possible exceptions of eThekweni, Nelson Mandela Bay, Sedibeng and West Rand in terms of PSE qualifications.

Table 24: Metro and Districts with the highest educational attainment

Metro/District	None	Primary	Secondary	Post-secondary
Buffalo City	3.2	11.8	69.2	15.7
Cape Town	1.9	10.9	71.7	15.5
Johannesburg	3.2	8.8	71.8	16.2
Tshwane	4.0	8.0	65.9	22.1
Ekurhuleni	3.6	9.8	73.3	13.2
eThekweni	4.0	9.6	74.3	12.1
Manguang	4.7	14.0	66.1	15.1
Nelson Mandela Bay	2.2	10.4	75.3	12.1
Sedibeng	3.7	11.0	72.0	13.3
West Rand	3.5	14.0	71.0	11.0

Source: Statistics SA, 2016: Education in Johannesburg

Although Gauteng as a province, and Johannesburg as a city, normally feature at the top of their respective rankings in educational attainment, and matric pass rates, the education system is no by no means of uniform quality. It would be accurate to say that the quality of education provision in Johannesburg mirrors the spatial geography of the city. The best public schools are located in the inner periphery, the former white suburbs. Access to these schools is determined largely by residence so that the middle class composition of the student population remains largely unchanged, with the exception of a small proportion of children of domestic workers in these suburbs.

Inequalities are further entrenched by the high costs of “bussing” school children in from the “townships” particularly to schools in areas such as Eldorado Park and Lenasia, where the schools may of a better quality than in Soweto but not as good as in the former white suburbs.

It would be fair to conclude that education in Johannesburg during the democratic era has been transformed from one based purely on racial criteria to one that is now overtly defined by class.

Beyond schooling, a major challenge is thrown up by the two Technical and Vocational Education and Training (TVET) Colleges, Central and South West Gauteng, located in Parktown and Soweto respectively. As with the TVET sector in general, these colleges face enormous challenges with regard to quality of teaching and outputs.

As stated earlier, education is not a constitutionally designated function of local government, and specifically here of the City of Johannesburg (CoJ) government. Going beyond the class and racial inequalities in education provision, many other education and work-related challenges remain in the CoJ, notwithstanding the relatively high qualifications referred to earlier.

Functional illiteracy refers to those individuals who have not completed their primary education (Grade 7). In the City of Johannesburg, for example, Region D (Soweto) had the highest number of persons who could not read or write between 1996 and 2010. There was a 50.7% increase in persons who could not read or write in Region G, which includes Deep South, Ennerdale, and Orange Farm, from 1996 – 2011 (HSRC, 2013).

The City of Johannesburg’s Integrated Development Plan 2017/2018 notes that unemployment in the city stands at 28.2% (City of Johannesburg, 2017) Moreover, only slightly more than 3% of citizens have an undergraduate and Master’s degree. At the same time, the same document refers to the development of a “Smart City” by 2021, key components of which will be E-learning, Smart Safety, and Smart Services. The only assurance given about education in the IDP is the provision of “100% access to ECD facilities by 2021”.

- Despite “constitutional constraints” regarding the role of local government in education, there is much that CoJ can do to address the education and associated economic challenges. The notion of a “Learning City” as espoused by UNESCO may provide some important pointers for CoJ in this regard.
- CoJ would do well to use the UNESCO model of a “learning city” to work with the provincial government to address the multitude of education and associated economic challenges including the following:
- Improving the quality of primary education especially Reading and Mathematics proficiency;
- Universalising the provision of ECD;
- Ensuring adequate basic services in all schools;
- Addressing the challenges of teaching and outputs from TVET colleges;
- Preparing secondary pupils in Mathematics and Science education; and
- Ensuring effective implementation of skills development programmes for unemployed youth.

While both health and education are provincial competencies, the challenge lies really is at the level of neighbourhood and local facilities. While the outcomes may not be ‘local’, they

play out locally in terms of the state of our neighbourhoods, the people who live in them and the lives they live. The life of the city is, then, profoundly related to its educational and health outcomes. The challenge that lies ahead is the equitable provision of services focusing on redressing class imbalances with an intention to demonstrating its said commitments to social justice, inclusion and care.

2.6.1 Conclusion

The wide range of distribution patterns and associated land use patterns of the City of Johannesburg has been influenced by a variety of factors over time (City of Johannesburg, 2016).

Spatial inequality remains a defining characteristic of the settlement pattern of Johannesburg with extreme job-housing mismatch where, in general, highest densities of people are found in the most deprived areas which are far from areas of economic opportunity (City of Johannesburg, 2016). The high level of spatial inequality is further reflected in the urban spatial form and in high levels of securitisation, controlled street patterns and increases in strip malls, gated office parks and townhouse developments (City of Johannesburg, 2016). Low levels of walkability in the city reflect this spatial inequality (City of Johannesburg, 2016).

Community Development Strategies (CDSs) prior to CDS Joburg 2040 were developed as technical documents served the needs of the municipal institution over citizens (Ebrahim, 2017). However, the CDS Joburg 2040 attempts to change this by emphasising the imperative of urban transformation (Ebrahim, 2017). The sharp concentration of jobs needs to be taken as an asset for Johannesburg as it can feed economic growth if it is supported with an efficient transportation network in the short term and then by the long term increase in close-proximity housing opportunities instead of distant developments on cheap and available land (City of Johannesburg, 2016; Ebrahim, 2017).

Furthermore, the Inner City needs to be the focus of further development. As an area of the greatest inclusivity, especially for receiving urban migrants, it is essential that the Inner City provides essential services to urban newcomers, that includes affordable housing, access to work and access to public transit (City of Johannesburg, 2016). As a major housing location for the urban poor, the range of economic, social and housing interventions in the Inner City must reflect an understanding of the underlying socio-economic dynamics of the vulnerable and create an enabling environment (City of Johannesburg, 2016), and offer innovative solutions to housing than megaprojects.

As the economic engine of sub-Saharan Africa, the Gauteng City-Region is rich on promise and potential, and should be defined and understood by what is possible (and what has been achieved since 1994), rather than its challenges or tropes of 'crime and grime'. However, local and national political imperatives will impact this: if, for example, immigrants continue to be seen as a problem and not a resource, the city is unlikely to reap any dividend from their arrival. The future Johannesburg, as outlined in *inter alia* the 2040 strategy, or earlier iterations of how Johannesburg can grow and develop, needs to remain the focus.

Democracy is still young, and there is a lot of hard work to be done.

3 City of Cape Town Profile

City of Cape Town summary

This city profile aims to present the main characteristics of urbanisation in the City of Cape Town and to examine the impacts of policy on urban change and neighbourhood dynamics, focusing particularly on the post-apartheid era since 1994. The first section begins with a snapshot of the most important characteristics of the city and follows with a discussion of the key historical, political, environmental and economic moments that have shaped the contemporary metropole. Section two and three analyse the major demographic and socio-economic drivers that have underpinned recent spatial and physical transformations. Section four examines the key urban development policies and their impacts on spatial form, neighbourhood dynamics and living conditions. Section five and six look at access to and provision of health and education services across the metro and in different neighbourhoods. The paper ends with conclusions in the final section.

The paper argues that the historical legacy of colonialism and apartheid continues to shape the urban form and living conditions in Cape Town, but political-economic, demographic and policy developments over the past 20+ years have resulted in important changes across the metro and in specific neighbourhoods. The city council has pursued a market-orientated 'global city' agenda driven by a strong service-sector economy, which has contributed to urban renewal in centrally-located neighbourhoods and the development of large private residential and commercial estates underpinned by a prosperous property market. While these developments cross-financed the provision of basic services in poorer neighbourhoods, large parts of the population remain excluded from the benefits of economic growth and lack adequate provision of infrastructure, transport, health, education and safety. More than twenty years of policy efforts aimed at creating a more compact, sustainable and integrated city have not succeeded in reversing key processes of urban sprawl, social fragmentation, socio-economic inequality and high levels of poverty. Unmet expectations have resulted in growing discontent among citizens and socio-economic instability, which have put the urgent demand for spatial transformation on top of local government agenda.

3.1 Introduction

3.1.1 *The key features of Cape Town*

The City of Cape Town is South Africa's second most populous city after the City of Johannesburg, comprising an estimated population of 4 million in 2017. Located at the most southern tip of the African continent – in the Cape Peninsula – it is the capital and economic heartland of the Western Cape Province, constituting 64% of its population and approximately 70% of its total economic output.

The city's economy generates a GDP of approximately R300 billion (US\$21 billion)³³, which is almost 10% of the country's total economic output. In addition to its economic significance, Cape Town is also the legislative capital of South Africa.

³³ Equivalent USD are provided based on the exchange rate of 1 USD = 14 ZAR.

Furthermore, its stunning natural beauty, mild climate and cultural attractions have made it a top global tourist and business destination. The following table provides a snapshot of the key characteristics of Cape Town, which the sections below will discuss in more details.

Table 25: Snapshot of Cape Town

Name	City of Cape Town
Location	Western Cape Province, South Africa 34°0'S 18°30'E
Size	2,461 km ²
Population	Community Survey 2016: 4,004,793
Households	Community Survey 2016: 1,264,849
Average households size	3.17
Average population density	1,500/km ²
Average annual population growth (2000 – 2010)	3.3%
Percentages of males and females	Males: 1,963,487 (48.9 %) Females: 2,051,278 (51.1 %)
Population groups (2011) ³⁴	Black African: 41.6% Coloured: 33.6% White: 21.8% Indian/Asian: 1.3% Other: 1.7%
Poverty (income of less than R3,500/US\$250)	34% in 2011
Gini coefficient	0.62 in 2016
Housing	Formal: 80.4% Informal/No housing: 19.6%
Unemployment rate (4 th quarter 2017)	26.7% (narrow definition)

³⁴ In this paper, we use the basic racial terminology common in South Africa: Black African (African-language speakers from South Africa and African countries, Coloured (South African mixed race, Khoisan, South and Southeast Asian ancestry), Indian/Asian, White and Other (non-classifiable). The term black is used to refer to everyone excluded from the white group privileged under apartheid. Readers are reminded that these terms, just like any racial classifications, are highly problematic social constructs that have been created by people during historical moments but they continue to be used widely in the country (Besteman 2008).

Informal employment	10% of total workforce (estimation)
Total GDP	R300 billion (US\$ 21 billion)
Real GDP per capita	R100,402 (2016 at current prices) (US\$7,172)
Average annual GDP growth 1997 – 2014	2.3%
Under 5 mortality	40.5 per 1000 live births in 2015
Adult literacy	91.48% (2014)
Matric-Pass rate	83.6% (2015)
School attendance – Western Cape	98.3%
Total revenue (excluding capital transfers and contributions)	2014/15: R 29.5 billion (US\$2.1 billion) 2015/16: R 33 billion (US\$2.4 billion) 2016/17: R 36.4 billion (US\$2.6 billion)

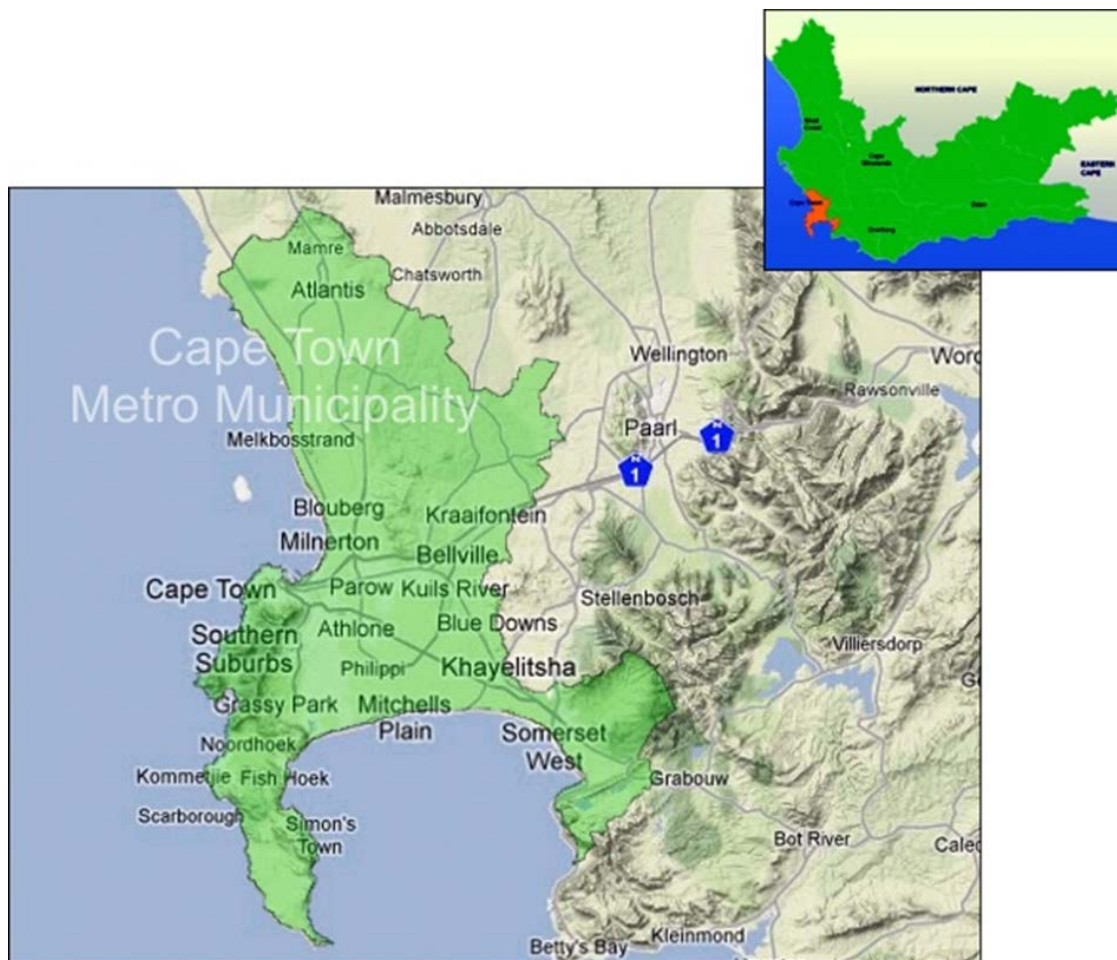
Source: City data, Community Survey 2016, Census 2011, IHS Markit 2018

Figure 35: Map of South Africa



Source: Africaguide (www.africaguide.com)

Figure 36: Map of Cape Town



Source: Western Cape Government (2017a)

3.1.2 Key historical moments

As the history of Cape Town has been well-documented in the literature (SA History 2011; Wilkinson 2000; Mabin and Smit 1997; Bickford-Smith 1995; Maylam 1990), only the most relevant moments will be summarised below.

The establishment of Cape Town dates back to the arrival of the Dutch East India Company in 1652, which built a refreshment station for ships on their route from Europe to India. Cape Town is South Africa's oldest European settlement, thus colloquially referred to as the "Mother City". At the time of European settlement, the indigenous Khoikoi pastoralists and San hunter-gatherers had lived in the Cape region for millennia. Not long after European arrival, conflicts with indigenous people over fertile grazing pastures emerged, resulting in wars and ultimately to their subjugation as labourers or expulsion from the coast further inland. The Dutch and then the British Empire ruled the Cape for more than 250 years, in the process bringing Muslim slaves from as far as India, Sri Lanka, Malaysia and Indonesia as labourers into the settlement. As different population groups mixed with each other, a new ethnic group 'coloureds' emerged, which still dominate certain neighbourhoods today. Although population groups had always been treated unequally, even after the abolishment of slavery in 1834, they lived relatively concentrated together for many years at the foot of Table Mountain.

The beginning of the deep spatial segregation characterising contemporary Cape Town dates back to 1901, when an outbreak of bubonic plague led the city council to decide “that a location should be built so that Africans could be housed under controlled and sanitary conditions” (Maylam, 1990, p. 61). This resulted in the establishment of the first segregated settlement beyond the then urban edge. Under the new Union of South Africa, which was formed from four colonies in 1910, new parliamentary laws were enacted that prohibited Black Africans from owning land in the city and restricted their movements through an internal passport migration system. The Pass Laws reserved jobs for whites and coloureds, excluding the Black African population from employment opportunities. In 1923, the government enacted the Native Urban Areas Act, which allowed the designation of specific African locations and led to the resettlement of thousands of Black Africans into so-called townships.

While these developments only moderately altered the spatial configuration of Cape Town, they marked the beginning of a draconian state-led system of socio-spatial segregation, which accelerated under the height of apartheid between 1948 and 1970s. Subsequent legislation such as the Group Areas Act of 1950 were explicit urban policies that served to forcibly remove black residents from central city areas and displace them into segregated residential townships. During the 1950s and 1960s, the townships of Gugulethu and Nyanga were built for expanding Black African population. Additional townships, including Mitchell’s Plain, were built in the 1970s and 1980s for the expanding coloured population. The apartheid government used buffer zones, railway lines and natural barriers to separate townships from the affluent, white residential areas. As townships were designed as impoverished ‘dormitory’ settlements where economic, industrial and commercial activities were prohibited, black residents were forced to commute large distances every day into the central areas for work and shopping.

From the 1970s, continuous urbanization under a weakened apartheid state contributed to the growth of informal settlements in defiance of influx control systems. After growing civic unrest, economic difficulties and international pressures, the government abolished the pass laws in 1986. In-migration of Black Africans from other areas in the country accelerated, which the state responded to by establishing Khayelitsha – the biggest township in the city (see Figure 35). By the time the township establishment programme wound down in 1982, at least 200,000 people had been forcibly removed from central areas and resettled into the low-lying ‘Cape Flats’. The centrally located, multi-cultural neighbourhood of District Six alone witnessed the displacement of 60,000 people, causing a hole in the city centre that has yet to be filled.

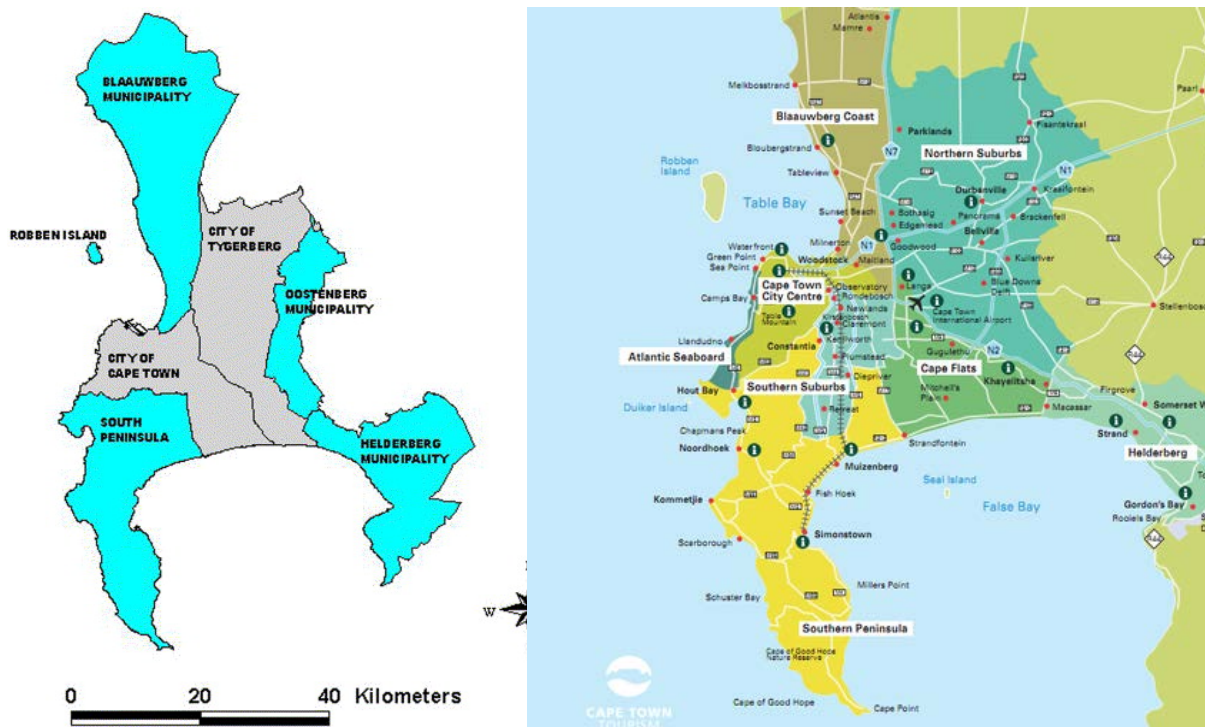
3.1.3 *Post-apartheid administrations*

At the beginning of the post-apartheid era, Cape Town consisted of six municipalities, which were coordinated by the Cape Metropolitan Council (see Figure 36). With the dawn of democracy, came a suite of national legal, institutional and legislative reforms, which aimed at fundamentally restructuring municipalities into a developmental local government. In the year 2000, the six municipalities amalgamated into one large “unicity” called the City of Cape Town. Through the unification of the diverse municipalities into one developmental local government, different administrative, political and socio-economic structures were merged. This was a complex and time-consuming process. A senior civil servant noted:

“The period was dominated by administrative transformation issues. Representative transformation issues as well as unification of different cities [...] Large parts of the work

being done was administrative and systems transformation.” (10, Senior official in National Treasury)

Figure 37: Cape Town municipalities prior and after unification in 2000



Source: Smith (2004); CapeTourism (2018)

At present, the City of Cape Town governs an area of 2,461 km² that stretches from Cape Point to the City Bowl and further to Atlantis in the North and to Gordon's Bay in the Southeast (Figure 37). As shown in Figure 3, the metropolitan area comprises eight suburbs: the City Centre, the Atlantic Seaboard, Blaauwberg, Northern Suburbs, Southern Suburbs, South Peninsula, Cape Flats and Helderberg. The suburbs are administratively divided into 4 areas, 24 subcouncils and 116 wards, which together are governed by a 231-member city council (116 elected ward councillors and 115 'party list' councillors).

After an initial ANC-led government, the administration experienced a lot of floor crossing, which then resulted in a take-over by the opposition party Democratic Alliance (DA) in 2006. The Democratic Alliance is currently the party that controls local government, after winning 66.7% of seats in the last election in 2016, followed by the African National Congress (ANC) with 24.7% and Economic Freedom Fighters (EFF) with 3% (IEC 2016). While the ANC holds majority power in parliament and controls the national government, the Democratic Alliance runs the City of Cape Town and the Western Cape Provincial Government. This situation creates political tensions and at times hinders intergovernmental collaboration.

A major new phase in the governance structure of the city began on 24 August 2016, when the city council adopted an Organisational Development and Transformation Plan (ODTP), which set out to restructure city administration to improve service delivery, become more customer centric and modernise government. Central to the ODTP is the adoption of transversal management approach that shall break down silos and enhance collaboration between departments. An Area-based Service Delivery Directorate has been established to ensure improved efficiency and coordination of departmental services. The Transport and

Urban Development Authority (TDA) was established and merged crucial functions of transport, urban development and elements of human settlements into one directorate to fasten spatial transformation. TDA will be the leading directorate responsible for implementing the transit-oriented development strategic framework (City of Cape Town 2017).

3.1.4 Environmental sustainability

Cape Town has a worldwide reputation for its stunning natural beauty, Mediterranean climate and unique location. Situated at the foot of the famous Table Mountain, the city residents have access to an extensive mountain range, 294 kilometres long coastline with numerous beautiful beaches, inland valleys and large terrain of coastal plains.

The city is bounded by the Atlantic Ocean to the west and south, and falls within the Cape Floristic Region, one of the world's six plant kingdoms and recognised UNESCO World Heritage Site. The unique natural environment of the Cape Peninsula influences the form and growth of the city, restricting built environment expansion to areas outside the Table Mountain National Park and 30 smaller nature reserves.

More than 50,000 hectares have been put under protection, accounting for approximately 60% of the city's designated biodiversity network (City of Cape Town 2016) (see Figure 38). Most of this land falls within the Table Mountain National Park, leaving lowland vegetation types to the east of the city more affected by urban sprawl and agricultural expansion. While protecting natural resources is critical for the future resilience of the city, there are frequent tensions with other development priorities, specifically housing (Goodness and Anderson 2013).

Figure 38: Nature reserves and protected areas



Source: City of Cape Town (2014)

Cape Town has recently been affected by a serious drought and below-average rainfalls, which has led local government to implement severe water restrictions to prevent the city

from running dry completely. Population growth coupled with drastic increase in consumption rates, insufficient investments in water infrastructure, inadequate management and climate variability have been major factors behind the current water crisis.

3.2 Urban economy and livelihoods

3.2.1 Overview of the economy

Cape Town's economy is the second largest in the country, behind Johannesburg. Since the dawn of democracy, Cape Town has increasingly pursued a 'global city' outlook directed at attracting foreign direct investments and strengthening its tertiary sector industries such as finance, real estate, business processing outsourcing, information communication technologies, media and tourism. A former planner and now academic at the University of Cape Town states:

"Cape Town became a global city. It got onto the global map. At the higher end of the scale, there are a couple of quite key economic sectors that are connected to the global value chain [...] If you want to understand changes in some suburbs, you have to look at it from a global perspective to understand what is going on there." (13, Former planner and now academic)

The tertiary sectors contributes slightly less than 80% to the city's total output, followed by approximately 20% by the secondary sector and 1% primary sector. The most significant industries are i) Finance, insurance, real estate and business services; ii) Manufacturing; and iii) Wholesale and retail trade, catering and accommodation. Finance and insurance industries were responsible for 30% of the city's economic growth between 2005 and 2014 (City of Cape Town 2016). While the national economy has been seriously impacted by the downturn in the mineral sector, Cape Town's economy has been more resilient due to its service-driven economy, which grew by 40.5% between 2004 and 2014, compared to 33% nationally in the same period. Between 1997 and 2014, Cape Town's average annual GDP growth rate was 2.3% compared to 1.8% of the national economy. Real GDP per capita increased from R65,477 (US\$4,677) in 2011 to R100,402 (US\$7171) in 2016 (at current prices). At the same time, the unemployment rate increased from 19.2% in 2008 to 22.1% in 2015 (City of Cape Town 2016).

Despite above average growth rates, the city's economic performance is insufficient to absorb the growing numbers of workers, especially the many unskilled labourers who do not find enough opportunities in the growing service industries. Service industries in South Africa have strong employment growth among high and medium-skilled groups, but weaker employment growth among semi-skilled and low-skilled residents (Crankshaw 2012). Employment in the manufacturing and secondary industries has decreased in absolute and relative terms over the past decades, which suggests a trend of 'deindustrialisation' in Cape Town. Some of the lost jobs have been taken up by the informal economy, which is small compared to other African cities, but it appears to be growing (SLF 2016; Charman and Petersen 2015; Sokanyile 2016).

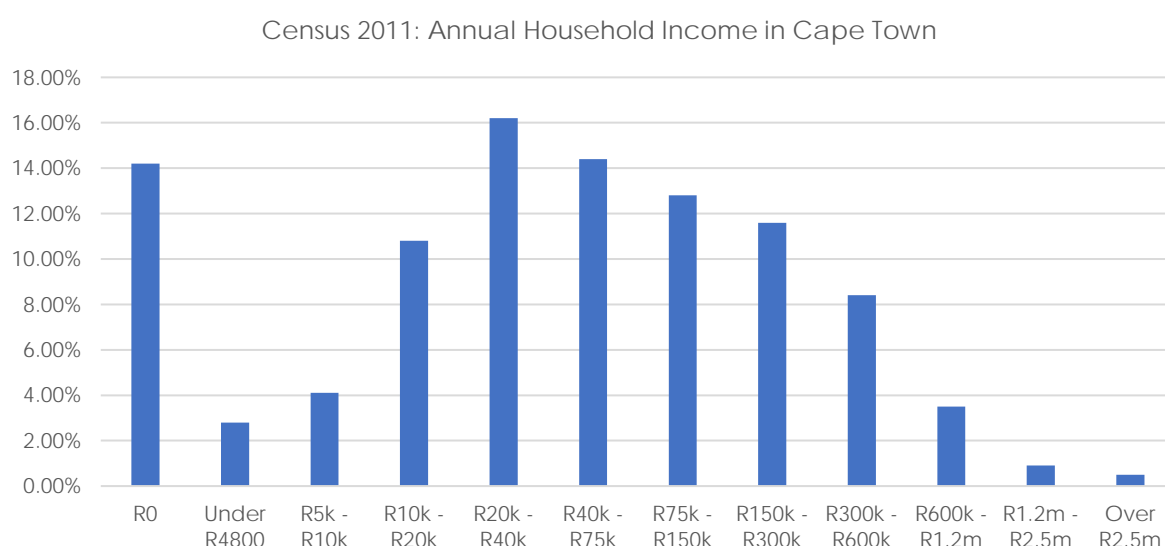
According to the latest Census data in 2011, 9.44% of the total city workforce were employed in the informal sector at the time. Estimations that are more recent put the percentage of informal workers at 12.38%, which is an increase of 3% (Sokanyile 2016). In poorer economic locations, such as townships and informal settlements, the informal economy accounts for approximately 30% of the total non-agricultural workforce (Charman and Petersen 2015). In

the context of mass unemployment, the City of Cape Town recognizes in their informal trading policy the important contribution of the informal sector to poverty alleviation, job creation, food security and dignity. However, informal enterprises still experience many obstacles that hinder their access to the city and growth opportunities (Turok, Scheba, and Visagie 2017; Charman 2012).

3.2.2 Poverty and unemployment

Despite its relatively strong economy, there is widespread poverty in Cape Town. According to census data of 2011, approximately 14% of all households reported to have no formal (i.e. officially registered) income³⁵. More than one third (34%) reported to earn less than R40,000 per year (US\$2,857), which is less than R3,500 per month (US\$250) (see Figure 39). There are 232,027 households registered as indigent (as defined by the City of Cape Town).

Figure 39: Annual household income



Source: Census 2011 data

Although there are important nuances, poverty is still much higher among Black Africans and coloured population groups compared to white residents, reflecting historical inequalities caused by the apartheid regime and colonialism. In 2014, 42.4% of Black African households lived in poverty, compared to 23.5% coloureds and 2.9% whites. One of the most significant dimension of poverty is food insecurity among children, which affected almost 25% of all households in 2014.

Unemployment is a major contributor to poverty in Cape Town. The overall unemployment rate in the city stood at 26.7% in the fourth quarter of 2017. Poorer areas and informal settlements record much higher unemployment rates, which can be as much as double that rate in areas such as Khayelitsha and Mitchell's Plain. Unemployment affects young people more than other groups. Youth unemployment (population aged between 15 and 24) is exceptionally high at 47%. The highest youth unemployment rate by level of education

³⁵ Households who reported no formal income either did not want to divulge their income or they did not have any formal, regular income. It is likely that many of them generate some kind of informal or irregular income to survive.

attainment in Cape Town is recorded for those individuals who have completed only primary education (34.5%).

3.3 Population and household dynamics ³⁶

3.3.1 Population and demographic change

Cape Town has recorded the second-largest population growth in the country between 1996 and 2011, outpaced only by Johannesburg (StatsSA 2012). According to the Municipal Spatial Development Framework (MSDF) of 2018, the population grew from 2.6 million in 1996 to 4 million in 2017, which is a 56.2% increase (City of Cape Town 2018). However, recent years have recorded a slowing down of population growth suggesting that Cape Town has entered a new phase of urbanisation. According to the MSDF, the average compound growth rate will decrease from 3.3% between 2000 and 2010 to 1.4% between 2010 and 2020. A former city planner views this trend as the city entering a new 'consolidation' phase:

"More profoundly, the city is entering into a phase of consolidation. We had the wave of urbanization in the 80s and there was another one after apartheid. Economic and population growth is tapering off. Population growth is not going to grow at the pace it was." (15, Former Planner, CoCT).

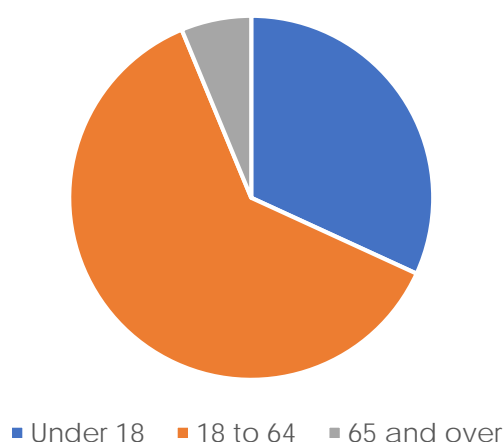
While the rate of population growth is declining, households are growing faster than the population. According to the MSDF, the number of households increased from 653,085 in 1996 to 1.26 million in 2016, representing a 93.7% increase over 20-year period. Over the last 20 years, the average household size decreased from 3.92 people to 3.17. Household sizes are getting smaller, likely reflecting the significance of single working-age migrants, who seek employment in the city.

While most of the residents of Cape Town are predominantly young and of working-age (see Figure 40), the city has an ageing population. This is expected to increase demand for public health care and state pensions. Across the different age groups, the population is relatively evenly split among males (48.9%) and females (51.1%)

³⁶ The data presented in this and the following sections is based on Statistics South Africa's Census 2011, Community Survey 2016 and city's own estimations provided in public documents including Integrated Development Plan, State of Cape Town Report 2016 and Spatial Development Framework.

Figure 40: Population by age

Population by age category



Source: Census 2011 data

The city's racial profile has changed considerably over the past 20 years. The share of Black Africans has increased, relative to coloured and white residents. In 1996, coloured residents made up the majority of Cape Town's population (39.8%), followed by whites (29.9%) and Black Africans (25.7%). In 2011, this has turned around, with Black Africans constituting the largest population group (41.6%), followed by coloureds (33.6%) and whites (21.8%) (see Figure 41).

This shift in population composition is the result of considerable in-migration of Black Africans from rural areas in South Africa, especially Eastern Cape, and from other African countries, especially within the Southern Africa region. According to the 2011 Census, Cape Town was one of the largest receivers of South African and international migrants: close to 40% of the population growth in Cape Town between 2001 and 2011 comprised new arrivals from outside the Western Cape.

Figure 41: Population groups in Cape Town

Population group	1996		2001		2011	
	Number	%	Number	%	Number	%
Black African	168 000	25,7	251 125	32,3	444 781	41,6
Coloured	259 982	39,8	310 465	39,9	358 629	33,6
Asian	8 742	1,3	10 065	1,3	14 267	1,3
White	195 011	29,9	205 734	26,5	232 826	21,8
Other	21 350	3,3	0	0,0	18 069	1,7
Total	653 085	100,0	777 389	100,0	1 068 572	100,0

Source: City of Cape Town DI&GIS Department, using all available Census data.

Source: City of Cape Town (2016)

3.3.2 Household access to basic services

An important feature of poverty is the lack of adequate housing. About 20% of households in Cape Town lived in informal housing (informal settlements or backyard shacks) and 80% in formal housing in 2011. This 80:20 distribution of formal and informal housing/no housing

has not changed significantly between 1996 and 2014. Cape Town is the only city where the number of shacks both in informal settlements and backyards increased in absolute terms between 2001 and 2011 (Turok and Borel-Saladin 2014). In poorer areas of the Cape Flats, informal housing can be as much as 40% of the total housing stock. The lack of affordable housing is one the biggest challenges and major factor behind growing community protests, recently increasingly expressed by informal land invasions. The housing backlog, which is currently estimated at 374,000, is expected to grow to 650,000 by the year 2030, based on current delivery figures (City of Cape Town 2015a).

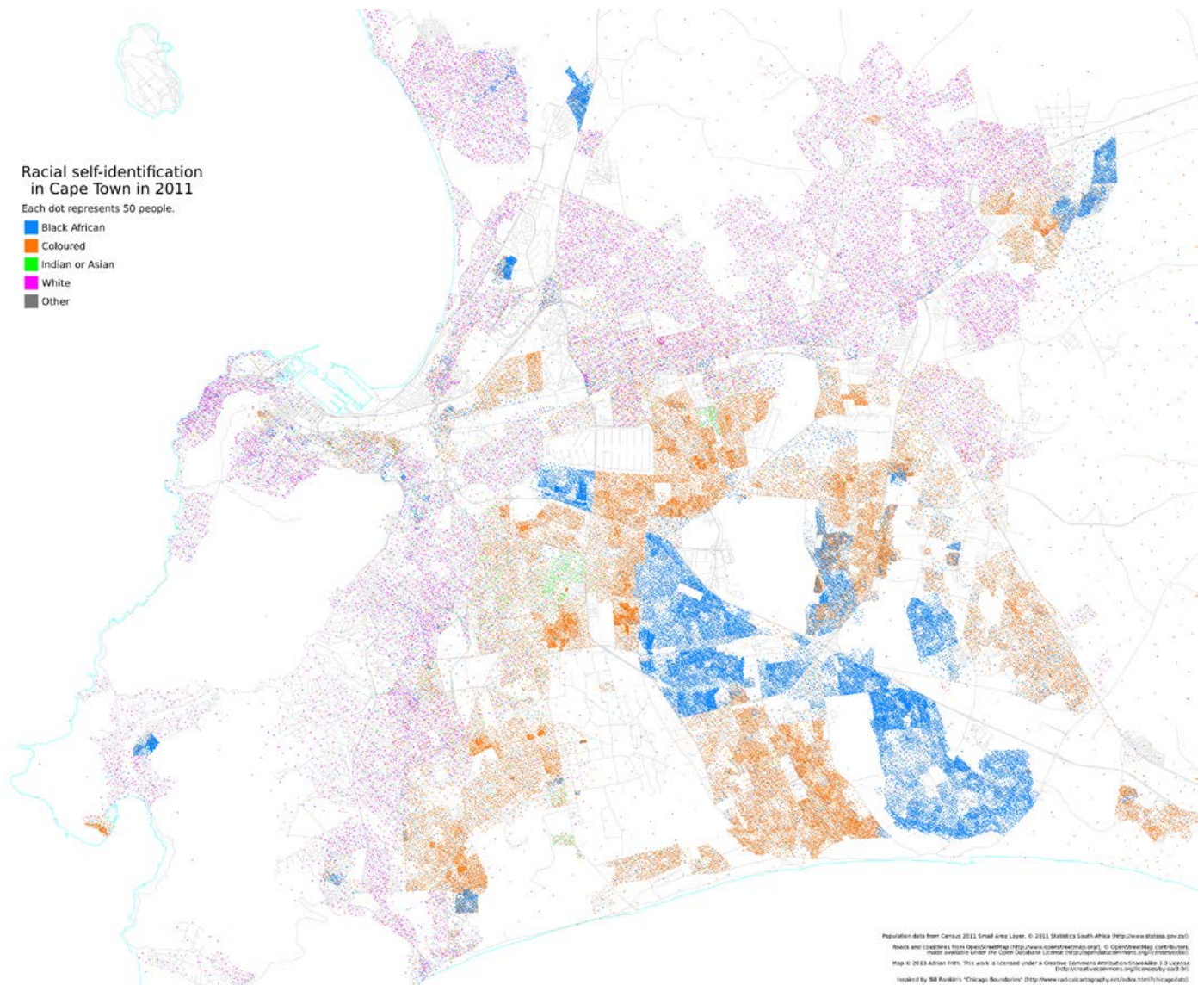
Aside from adequate housing, access to basic services is crucial to maintaining a healthy life. To improve living standards, the City has gradually extended a rudimentary level of service provision across almost all informal settlements. This provides residents with basic access to water (1 tap per 25 families within 200 m), sanitation (1 toilet for 5 families) and refuse removal (weekly) (City of Cape Town 2017). Nevertheless, there are concerns over the quality of access, which is still inadequate for too many poor households and affects their health and living standards.

3.4 Spatial change and neighbourhood dynamics

3.4.1 *Socio-spatial inequality and racial segregation*

Cape Town is one of the most unequal cities in the world, with social inequality deeply inscribed in its physical geography. Although the racially oppressive apartheid regime ended more than 20 years ago, the city's Gini coefficient has remained stubbornly high at 0.6 and the social fabric of neighbourhoods continues to follow historically produced racial and socio-economic lines (City of Cape Town 2016). Although some neighbourhoods are changing slowly, affluent residents continue to live in well-located, low-density and highly serviced central neighbourhoods like the City Bowl, Atlantic Seaboard and leafy Southern Suburbs, separated from overcrowded townships and informal settlements in the distant Cape Flats, where the black majority lives.

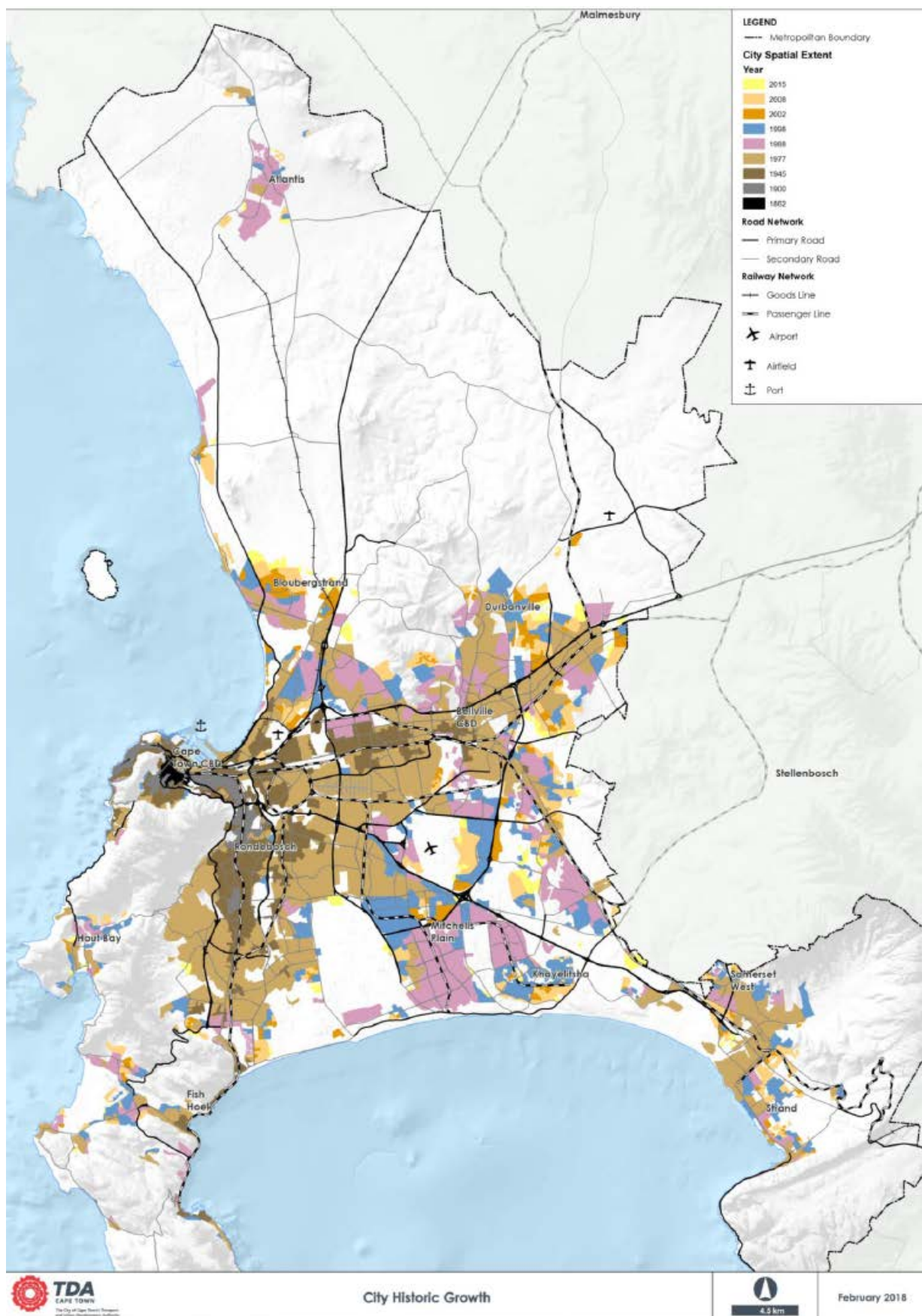
Figure 42: Racial segregation



Source: Frith (2013)

Despite the persistence of stark socio-spatial inequalities, the past 20+ years have seen a number of significant changes to the urban form and neighbourhoods in Cape Town. The historical development of the city is shown in Figure 3.9. Key developments of the past 20 years are summarised below.

Figure 43: Historical growth of Cape Town



Source: City of Cape Town (2018)

3.4.2 Urban renewal and gentrification of CBD

Urban renewal programmes and private-sector led developments have had a massive impact in the centrally located suburbs of the city. The exorbitant rise of the CBD is the result of highly successful regeneration efforts led by a public-private partnership, which started the Central City Improvement District in the year 2000. In the 1990s, the CBD was a place in decline with high crime rates and low commercial and residential activities. Through a series of urban renewal initiatives, especially enhancing security, improving cleanliness and urban management, the Cape Town Partnership could increase investor and public confidence in the CBD, which led to massive investments in public, commercial and residential space (Lemanski 2007; Pirie 2007; Gibb 2007). Today, the CBD is a vibrant space of work, live and leisure. There are more than 3,000 businesses operating in an area of 1.62 km². The office and retail vacancy rates are as low as 9.9% and 7% respectively (4th quarter in 2017). The total value of property in the CBD has increased from R6.1 billion in 2005 to R30.6 billion in 2016/17 (nominal value). Residential property in the CBD has experienced double-digit annual growth rates in recent years, ranging from 8.68% in 2013/14 to 30.86% in 2014/15 (CCID 2018).

Surrounding areas to the north and west of the CBD have also experienced enormous public and private investments, which have been very successful in raising residential property values, boosting commercial activities and improving the quality of the places. These include the development of the Victoria & Alfred Waterfront, Robben Island, the Cape Town International Convention Centre, Greenpoint Stadium and the MyCiti bus routes. Suburbs of the neighbouring Atlantic seaboard have become much sought after and some boast the most expensive properties in the country.

Along with the success of the CBD and surrounding areas came the gentrification of older inner neighbourhoods such as Woodstock, Salt River and Bo Kaap. Increasing residential and commercial investments in these areas are linked with more appealing amenities and improved security. It is having the controversial effect of displacing lower income groups and causing these areas to become less socially-diverse.

3.4.3 Large private-sector residential developments along the Northern corridor

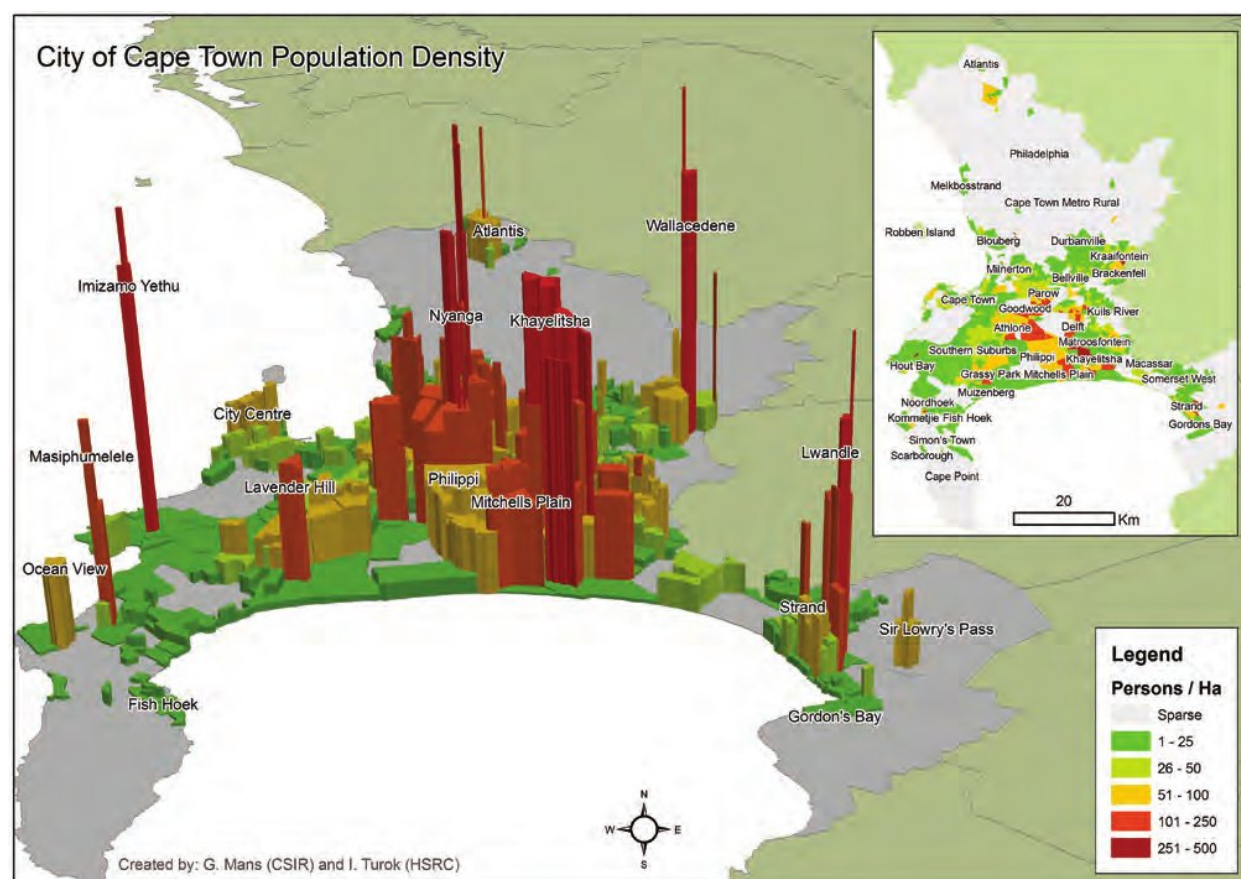
Private-sector led greenfield developments for the upper middle-income class along the West Coast, in the Northern suburbs and along the Peninsula have driven urban sprawl. Large residential developments in the form of gated communities and security estates have taken place on cheap peripheral land, which provided large numbers of accommodation to a growing middle-class population but contributed to segregation between groups of residents in the same place. Some of these gated residential developments have pushed the urban edge further and further out with sizeable infrastructure costs to the municipality. In the Northern suburbs, much of the land is owned by Garden Cities, who tend to sell plots in tranches to maximize income. Some of these developments had been approved and set up by municipalities before they became part of the unicity in 2000.

3.4.4 Population growth in metro south-east

Most of the population growth of the past 20 years has been by low-income groups, especially Black African migrants from the Eastern Cape or abroad, who were forced to settle towards the south-east quadrant of the city, where land and property prices are generally much lower, and access to the city's main employment centres is worse (City of Cape Town

2018; Sinclair-Smith and Turok 2012). Population densities in the townships and informal settlements across the Cape Flats are much higher than elsewhere in the city. Population density in most parts of the Cape Flats is above 7,500 persons per km² compared to 1200 to 2399 person per km² in the central areas (StatsSA 2011) (see Figure 44). This is partly because plot sizes are smaller on average, but also because of the enormous increase in government-funded housing as well as informal shack housing, both within the backyards of formal houses and in freestanding informal settlements. National housing policy has had a significant impact on the concentration of low-income groups in the metro-south east. Because of standardised subsidy amounts and the focus on providing free standing houses to maximum number of beneficiaries, government housing developments took place on cheap peripheral land outside the urban core (Turok and Scheba 2016).

Figure 44: Population density in Cape Town



Source: *State of the Cities Report (2011)*

3.4.5 Changing middle-income neighbourhoods

While spatial segregation appears to be set in stone in Cape Town, several neighbourhoods have undergone considerable socio-economic and racial mixing. Neighbourhoods like Maitland, Parow, Goodwood, Eerste River and so forth are well-located areas with good transport connections. Some interviewees suggested that a growing black middle class is moving into these neighbourhoods to be better located to employment and social amenities. A resident explains:

"I live in a neighbourhood that has completely changed in ethnic groups. People have migrated to Northern direction due to jobs. There is a growing middle-class." (l6, Senior official, CoCT)

Some of these better located middle-income neighbourhoods have experienced growing 'informalisation' through proliferation of backyard shacks. Recent examples of shack settlements expanding within formal neighbourhoods have occurred in places such as DuNoon and Joe Slovo Park. In these instances, the municipality is facing particular challenges with regard to infrastructure capacity, service provision, health and safety, overcrowding and governance.

3.4.6 Spatial inefficiencies

While the growing population is concentrating in the south-east of the city, economic activities and employment opportunities remain concentrated in a few business nodes: Cape Town CBD, Salt River-Woodstock, Tyger Valley and Century City. The CBD remains by far the most significant economic node in the city. Other business and industrial nodes such as Tyger Valley, Century City, Claremont and Blackheath have experienced significant investment and growth over the past decade. Century City was a particularly successful 260-ha mixed-use development, which matches the size of the CBD and includes Africa's largest shopping-leisure complex. These developments suggest the gradual emergence of a more polycentric city.

Economic nodes that are closer to the poorer neighbourhoods including Philippi, Khayelitsha and Delft have continued to be marginalised by investors, despite public development initiatives (Sinclair-Smith and Turok 2012; Turok 2001). Public urban renewal and economic development initiatives targeted former townships, but failed to improve significantly economic activities and livelihoods among residents. Because of inadequate transport and basic infrastructure, limited access to space, weak market linkages and connectivity to other areas in the city, high crime rates and insecurity, enterprises in low income areas struggle to formalise and transform themselves into more productive and job-creating entities (Interview 11; Interview 9; Interview 3).

Due to the concentration of economic activities in the CBD, more than 200,000 people commute to the central city every working day, causing severe road congestion that leads to long commuting times of up to 1.5 to two hours during peak traffic. In order to get to work, poor people rely on the public transport system, specifically the mini bus taxis and dilapidated rail network. Aside from having to bear the long commuting time, they must spend on average 45% of their monthly household income on transport, according to Transport for Cape Town (TCT) (City of Cape Town 2015b). The railway systems suffers from constant break-downs and delays due to vandalism, failing infrastructure and mismanagement. Recent years have seen a number of violent attacks on trains, especially on the central line from the CBD to Khayelitsha, and the destruction of approximately half of the carriage capacity. This has resulted in a situation of near collapse (BusinessTech 2018).

3.5 Urban development policies and impacts

3.5.1 *Post-apartheid urban policies*

Cape Town's democratic local government inherited a city that was economically inefficient, environmentally unsustainable, spatially fragmented and highly unequal in terms of income and living standards across neighbourhoods. Redressing these colonial and apartheid legacies, while managing rapid urbanisation under new political-economic circumstances, has been the biggest challenge that urban policy aimed to tackle ever since.

The central objectives of early policies were to transform the Apartheid city and to extend basic services into the townships. Efforts were strongly influenced by national policies such as the Development Facilitation Act and the Reconstruction and Development Programme (RDP) (I10, I9). A key document was the Metropolitan Spatial Development Framework, which was developed in 1995 and adopted as an interim draft in 2001. The MSDF promoted key concepts such as urban integration, compaction, and densification. It aimed to integrate the divided communities through four key spatial strategies: drawing of a new urban edge, demarcation of a metropolitan open space system, new nodes in less performing areas and a series of corridors that link economic nodes via public transport system (Watson 2002). In the late 1990s, some of the focus shifted slightly towards 'urban competitiveness' and private-sector investments in line with a shift in national policy such as the Growth, Employment and Redistribution Programme (Watson 2002).

The period between 1994 and 2000 was one of political transitions and major restructuring of urban governance, culminating in the unification of the six municipalities in the year 2000. Since then, integrated planning via the Integrated Development Planning process has become the central strategy for urban integration. The very first IDP of the amalgamated City of Cape Town was developed in 2000/1. Since then there have been four more with the latest covering the period 2017-2022. The MSDF and a number of guide plans governed spatial development in Cape Town until 2012, when the council and Province approved the Cape Town Spatial Development Framework (CTSDF) as part of the IDP 2012-2017. In 2012 the city also introduced a new zoning scheme. For the first time, there was one zoning scheme for the entire metro. The City of Cape Town was the first municipality in the country that developed new municipal by laws in line with new national and provincial planning and land use legislation.

In addition to the IDP and SDF, the city developed a range of other urban policies and strategies aimed at guiding urban development in Cape Town. These include the City Development Strategy, Economic Growth Strategy, Social Development Strategy, Integrated Human Settlements Framework, Densification Policy, Bioregional Plan and Integrated Public Transportation Network. Ideas of sustainable development, resilience and the efficient use of natural resources feature prominently in integrated development plans, spatial development frameworks and environmental strategies such as the bioregional plan. The City has further adopted the concept of the green economy and established a green technology cluster in Atlantis, which is in the process of becoming a special economic zone as declared by the national government. To promote sustainable development, the City has adopted the bioregional plan, committed to conserving 60% of the biodiversity network by 2014 and developed an Energy2040 vision to reduce greenhouse gas emissions. In 2016, Cape Town became a member of the 100 Resilient Cities initiative. It is also a member of the C40 Cities Climate Leadership Group (City of Cape Town 2016).

All these high-level plans show that considerable thought and effort have been put into formulating strategies to try and limit further spatial fragmentation and haphazard development on the urban fringe. However, a range of weaknesses in the plans have limited the extent to which they have been effective in directing change on the ground (Watson 2002; Harrison, Todes, and Watson 2007; Odendaal and McCann 2016; Plessis 2014; SACN 2016). Some of the most important factors hindering successful implementation are:

- Insufficient details, guidelines and conflict resolution mechanisms for decision-makers on how to resolve tension between social equity and urban competitiveness objectives. Insufficient clarity also about what 'spatial transformation' actually means, what it entails concretely and how progress can be measured.
- Questionable assumptions, specifically with regard to state capacity to direct private sector and market forces, or inadequate incentives to re-direct the private sector.
- Politics and powerful developer's interests (e.g. push urban edge line). Several interviewees argued that some important planning decisions were over-ruled by politicians, specifically the mayor, apparently in order to please developers. Key examples here are the controversial proposed developments for Wescape and Philippi Horticultural Area.

"Applications were sometimes refused, but the mayor was very pro development. She would approve it on appeal" (I4, Former Senior Planner, CoCT)

- Limited analysis of informality. The municipality has not developed functioning mechanisms to engage or support it.
- Technocratic and managerialistic expert-led process of developing plans and transformation projects, which has not created the necessary ownership among and support by local communities.
- Community resistance to city strategies and officials, NIMBYsm ("Not in my backyard") among middle and higher income groups to transformation, weak participation channels and mechanism to engage with low income communities
- Ownership of urban land, which is often in private hands or owned by other levels/actors of government. No functioning mechanisms have been created to obtain land from private or public entities, unless there is mutual agreement to transfer land.

Aside from weaknesses in the plans and city's governance, a major challenge has been the vertical integration of programmes and actions across spheres of government, especially with regard to the provision of housing and transport. Some public sector investments, specifically housing, transport and bulk infrastructure, have further entrenched the apartheid spatial legacy as opposed to restructure it. The implementation of the national housing programme continues to prioritise the scale of delivery over the location or character of housing provided (Turok and Scheba 2016). Equally difficult has been to develop better transversal management practices within the city. The city's departments too often work in silo-approaches without an integrated and holistic project development process. In addition, there are glaring challenges with regard to the political-administrative interface in general. Several interviewees commented on the lack of good governance in the city, illustrated by the ongoing fights between fractions in the ruling party, court cases and allegations of mismanagement and corruption.

3.5.2 *Recent policy development: transit-oriented development*

The focus of the latest municipal spatial development plan, as approved in 2018, has emphasised the need to incentivise inward growth, especially into the urban inner core, and discourage outward growth resulting in urban sprawl. Through the Organisational Development and Transformation Plan, a new Transport and Development Authority has been established, which is the leading department in charge of spatial transformation and affordable housing. The key strategy is transit-oriented development (TOD) and creating densification along public transport routes. Recognising the importance of spatial transformation, the City has identified 5 catalytic TOD priority projects. In addition, three integration zones and 11 well-located sites in the central city were demarcated for social housing and high-density mixed-use developments. A policy audit has been conducted to streamline planning and development approval processes. Financial and non-financial incentives are being developed to attract private-sector investment into priority precincts (Interview 12).

Various factors have resulted in increased political commitment to spatial transformation, densification along transport routes and affordable housing in well-located areas. Sophisticated internal modelling based on big data and demand studies have highlighted the importance of spatial transformation to improving environmental, economic and social sustainability. Besides internal processes within local government, a key influence has been the National Treasury and their Cities Support Programme, which funded research and built capacity among government officials to act more transversally and spatially. More importantly, it introduced the requirement for municipalities to link grant spending to spatial transformation in Built Environment Performance Plans (BEPP) that have to be developed annually. Another significant influence has come from the civil society sector, especially organisations such as Ndifuna Ukwazi and Reclaim the City, which created public pressure on the city through media campaign, court cases, research and events to create affordable housing in the inner city.

Concerns over the viability of the Bus Rapid Transit System (the MyCiti Bus), which was introduced in preparation of the 2010 World Cup, have been another important factor behind the new TOD strategy. Due to inadequate densities along the created trunk routes and uni-directional passenger flows, the City only recovers between 35% and 40% of its operational costs. One of the key objectives of the TOD strategy is to create an adequate urban form that can sustain the public transport system. However, several interviewees expressed scepticism over the city's increasing focus on transport as the solution to deeply-entrenched spatial inequalities.

"I don't want to get stuck on TOD, because I don't think it is necessarily the answer or the only frame for thinking around spatial transformation and particularly around densification and mixed-use and mixed-income development." (I10, Senior official National Treasury)

3.6 Healthcare in Cape Town

3.6.1 Healthcare provision

The City of Cape Town has eight health subdistricts: Khayelitsha, Klipfontein, Northern, Eastern, Mitchell's Plain, Western, Tygerberg, and Southern subdistricts - see Figure below. As in most aspects of life in the City, affluent neighbourhoods have vastly better outcomes than their poor counterparts. This can largely be traced back to historical racially divisive developmental policies of the apartheid era.

Figure 45: City of Cape Town's health districts



Source: Redfern, Westwood, and Donald (2016)

Since the beginning of democracy in 1994, the governance of healthcare has changed significantly. The contemporary governance structure of the health sector in South Africa, including the specific role of local government, was described in the urban policy report and will not be repeated here. Suffice to say that healthcare is not the primary responsibility of local government, but the National and Western Cape Provincial governments. This is one reason why healthcare provision does not feature prominently in the City's Five-year Integrated Development Plan (IDP) 2017-2022. This notwithstanding, the City has entered service level agreements with the Province's health department to render some primary healthcare services. Health services provided by the City include: women and child health services, including preventive, promotional and curative services like family planning, immunization and treating sick children under 13 years.

Most affluent and higher middle-income households use private medical insurance and hardly rely on public hospitals or doctors. Access to private medical insurance varies widely across neighbourhoods/subdistricts. For instance, while 69% of the City did not have access to private medical insurance in 2006, it was 41% in the Northern subdistrict and 99% in Khayelitsha, one of the poorest subdistricts (Groenewald et al., 2008). More recent data indicate that between 73.7% and 75.8% of the population in the Western Cape Province (of which the City constitutes about 75% of the population) lacked medical aid and health insurance between 2011 and 2016 (personal conversation with official from Department of Health, Western Cape).

The City of Cape Town provides primary healthcare services through a network of clinics and other health facilities. By 2016, the City had 132 primary healthcare facilities comprising 81 fixed primary healthcare (PHC) clinics, 42 community day centres, and 9 community health centres. Also, there were 85 antiretroviral therapy (ART) and 128 tuberculosis (TB) treatment sites as well as 2 regional hospitals in the City. There was a gradual increase in the number of ART treatment sites and non-fixed PHC clinics, and a substantial decline in the number of TB treatment sites between 2014 and 2016 (City of Cape Town, 2017). This decline is possibly partly attributable to a 4.2% decline in the number of TB patients in the City between 2014 and 2016.

As spelled out in the National Health Act (2003), the City's health functions range from disease surveillance and prevention, to monitoring the social and environmental determinants of health such as noise control, air pollution, hygiene inspections, water quality, food and vector control and waste management.

Among the five strategic pillars of the city as outlined in the IDP of 2012 to 2017, the City of Cape Town is designated the caring city, which includes the efficient delivery of services especially in relation to water, solid waste and housing. These have health implications. Moreover, a key component of the City's health policy is the reduction of substance abuse. The Western Cape Province has a legislation, the Prevention and Treatment for Substance Abuse Act, No. 70 of 2008. It emphasizes "the promotion of community-based and early intervention programmes, as well as the registration of therapeutic interventions in respect of substance abuse" (Western Cape Government 2017b, 25). Most of the province's interventions regarding substance abuse in the 2016/17 financial year were targeted at the Cape Town Metro. However, substance abuse and its social vices still plague the City.

3.6.2 Health trends in Cape Town

Life expectancy of residents in the Western Cape increased from 61.7 years in 2001-2006 to 66.6 years in 2011-2016. Residents in the Western Cape have among the highest life

expectancy at birth in the country. Though infant mortality rate, HIV/AIDS prevalence rate and tuberculosis infections have dropped recently, there are stark differences between the more affluent and poorer neighbourhoods. Poor households and neighbourhoods are disproportionately affected by poor health due to their socio-economic conditions, inferior quality of the built environment and limited access to healthcare services (Pam Groenewald et al. 2010; Mumm et al. 2017; Smit et al. 2015). People living in the apartheid-created townships and post-apartheid informal settlements are more vulnerable to HIV/AIDS, tuberculosis, indoor air pollution, disaster risk (e.g. flooding and shack fires), injuries, mental health disorders and crime-related (ibid) injuries.

Mortality

There are substantial variations in mortality across the City's subdistricts. Age-standardized mortality rate (ASDMR) per 100,000 population ranged from 1,352 in Khayelitsha to 699 in the Northern subdistrict in 2001-2004. These respectively declined to 1,093 and 652 in 2010-2013, representing a 19.1% decline in Khayelitsha, and a 6.7% decline in the Northern subdistrict. Overall, the City recorded an 8% decline in ASDMR over the period – see Figure 46 – (P. Groenewald et al. 2017). However, the reasons for these wide spatial differentials in changes in ASDMR are not apparent from available literature.

Figure 46: ASDMRs by district

Subdistrict	ASDMR (95% CI)		
	2001-2004	2010-2013	Change in ASDMR (%)
Khayelitsha	1 352 (1 314 - 1 390)	1 093 (1 064 - 1 123)*	-19.1
Kilipfontein	1 159 (1 139 - 1 178)	993 (976 - 1 010)*	-14.3
Mitchell's Plain	1 053 (1 027 - 1 079)	949 (928 - 969)*	-9.9
Tygerberg	1 002 (986 - 1 018)	934 (920 - 948)*	-6.8
Eastern	867 (850 - 884)	845 (831 - 860)	-2.5
Western	843 (827 - 858)	828 (814 - 842)	-1.7
Southern	738 (726 - 751)	734 (723 - 745)	-0.6
Northern	699 (682 - 715)	652 (639 - 655)*	-6.7
CoCT	938 (932 - 944)	863 (858 - 868)*	-8.0

CoCT = City of Cape Town; CI = Confidence interval

*Significant

¹Age-specific mortality rates per 100,000 population were calculated and then age-standardized using the world standard population

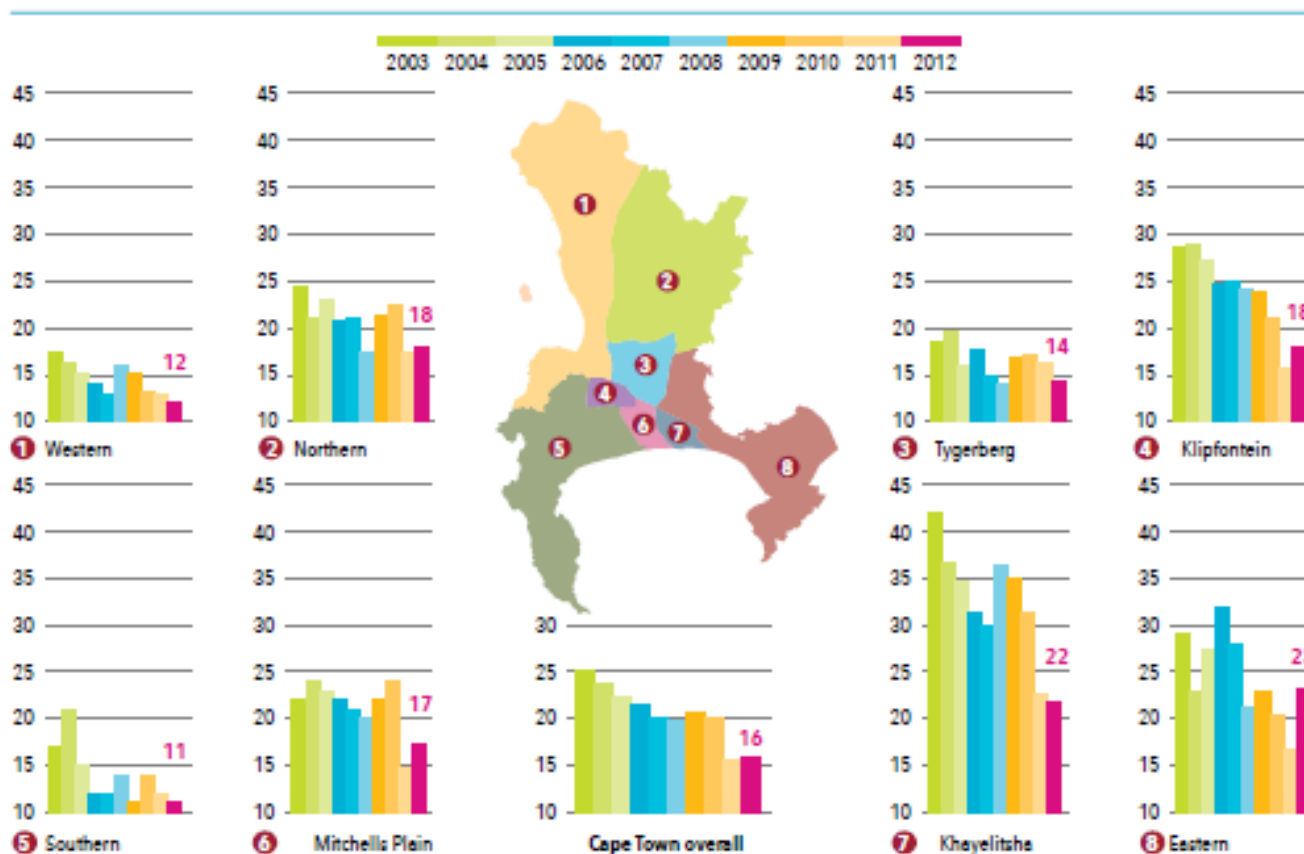
Source: Groenewald et al. (2017: 1093).

Source: CoCT, 2001-2004 and 2010-2013

The infant mortality rate (IMR) in Cape Town declined from 25.2 to 16.4 (per 1,000 live births) between 2003 and 2012. Poorer areas have higher IMR than more affluent areas, which is caused by the inferior living conditions associated with poor sanitation, poor

nutrition, inadequate water supply, poor housing, overcrowding and poverty (City of Cape Town, 2016). These spatial differences in IMR are depicted in Figure 47 below.

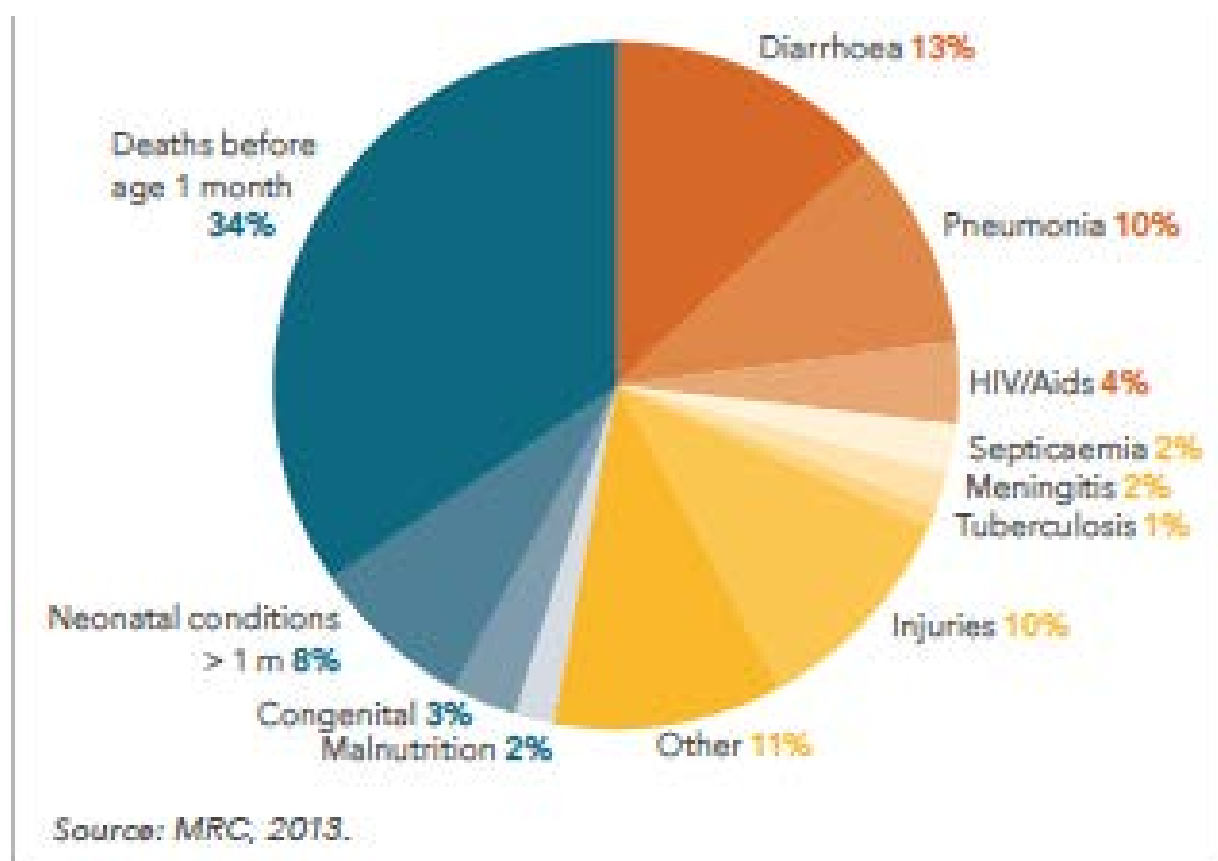
Figure 47: Cape Town infant mortality trends per health district, rate per 1000 live births, 2003–2012



Source: MRC, Public Health Association of South Africa 2013 conference. Data supplied by City Health Directorate

Under-five mortality also declined in Cape Town, which is attributable to programmes for the prevention of mother-to-child transmission of HIV, immunization and vaccination schemes, and vitamin A supplementation. Figure 48 depicts the causes of child death in Cape Town in 2010.

Figure 48: Causes of child death in Cape Town, 2010



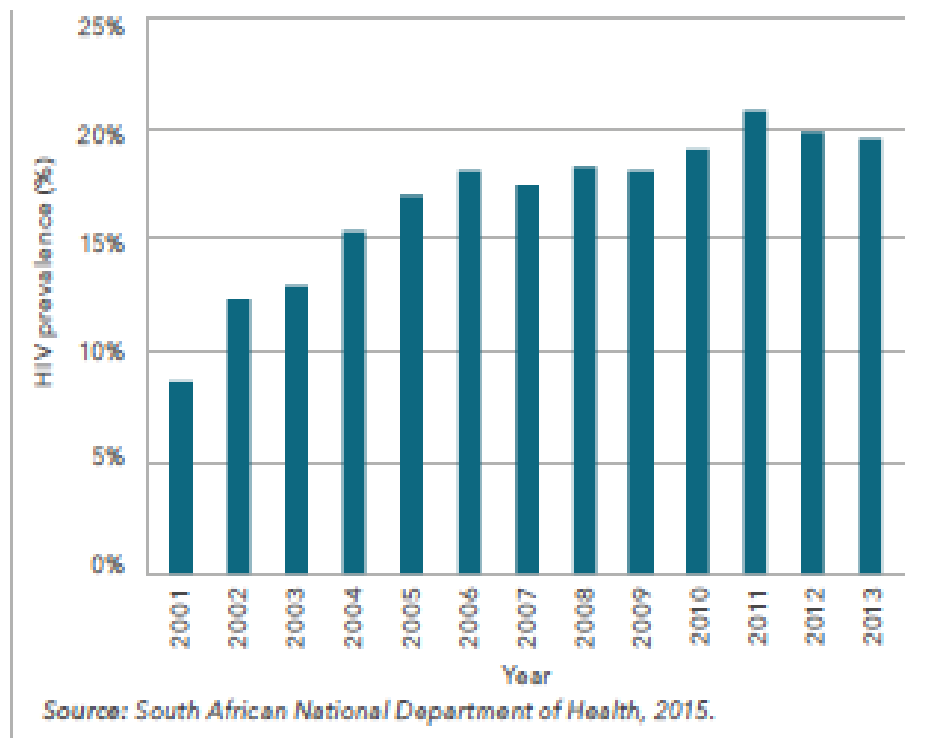
Source: City of Cape Town (2016)

Khayelitsha recorded the highest under-five mortality rate (U5MR) over the 2001-2013 period in the City. The U5MR per 100,000 population for Khayelitsha in the 2001-2004 and 2010-2013 periods were 976.6 and 570.2 respectively (a 41.6% decline), while the respective City's averages were 577.6 and 447.6 (a 22.5% drop) (Groenewald et al., 2017).

HIV/AIDS

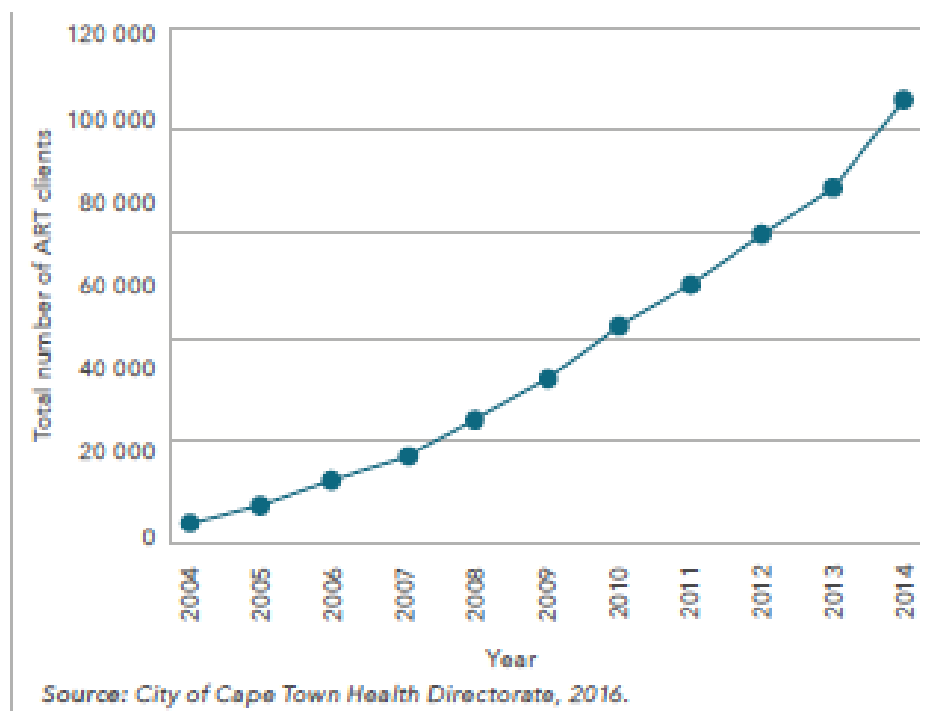
HIV/AIDS remains one of the major health challenges in poorer areas of Cape Town. It is the leading factor of death in the City behind premature mortality. The HIV/AIDS prevalence rate tripled between 2001 and 2011, from 7% to 21% (see Figure 49). Since then, it has plateaued at approximately 20% at the City level but is still much higher in poorer areas of the Metro. The increase between 2001 and 2011 was partly caused by the large number of people receiving ART, which enables them to live longer. As the eligibility criteria for ART commencement have become increasingly inclusive, access to ART has expanded (see Figure 50).

Figure 49: Cape Town HIV prevalence trend, 2001-2013



Source: City of Cape Town (2016)

Figure 50: Number of ART clients registered for treatment in Cape Town

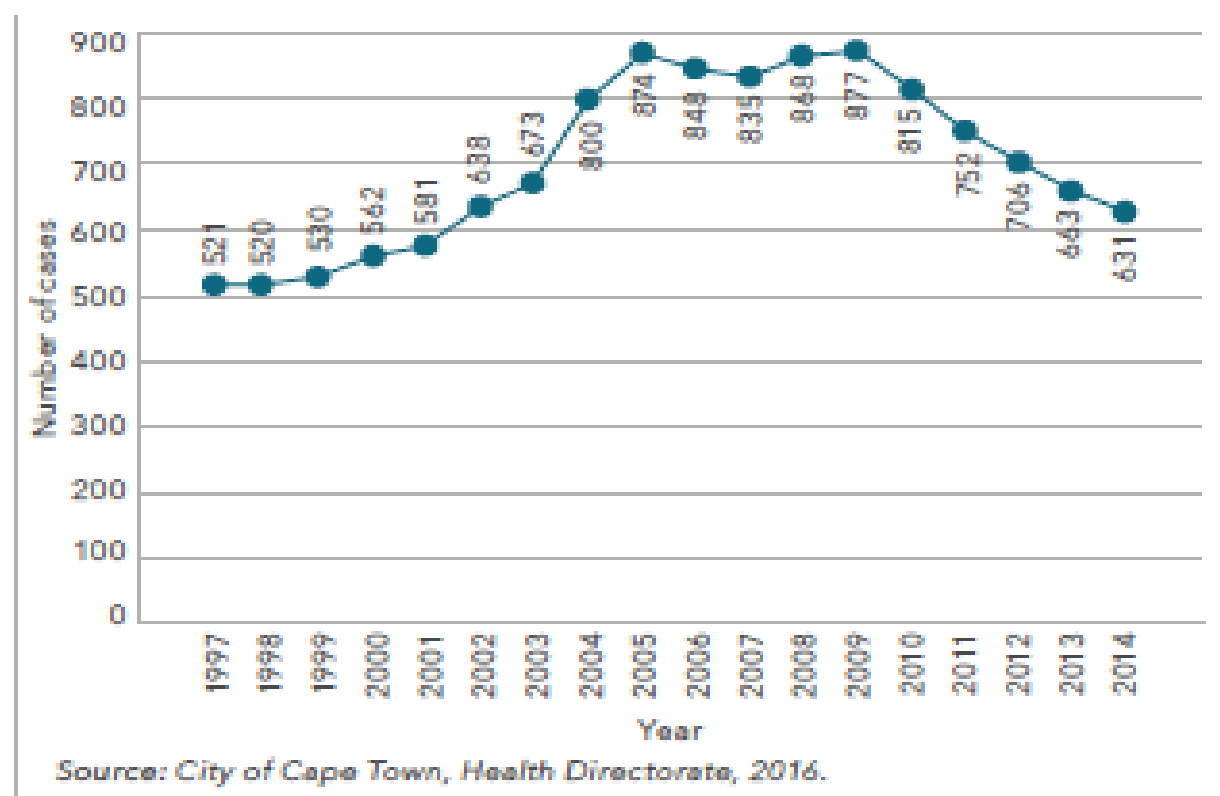


Source: City of Cape Town (2016)

Tuberculosis

Another major health concern in Cape Town is tuberculosis (TB). Between 1997 and 2009, the number of TB cases increased from 521 to 877 per 100,000 population. Since then, a downward trend has emerged, which is consistent with global and national trends (see Figure 51). HIV-positive TB cases also seem to be falling, whereas they increased previously. However, the increased challenge of high dual infection rates is still much more prevalent in poorer subdistricts, especially Khayelitsha and Mitchell's Plain. In Khayelitsha, the TB incidence is a high 1,165 per 100,000. The challenge is exacerbated by the rise in drug-resistant strains of the disease, partly caused by growing informal settlements. The major drivers of the high TB prevalence in the City include: poverty, urbanisation with resultant overcrowding, damp, poorly ventilated houses/shacks, high HIV prevalence, clients presenting or being identified late in the course of the disease, substance abuse and smoking (City of Cape Town, 2016).

Figure 51: All Cape Town TB cases per 100,000 population, 1997-2014



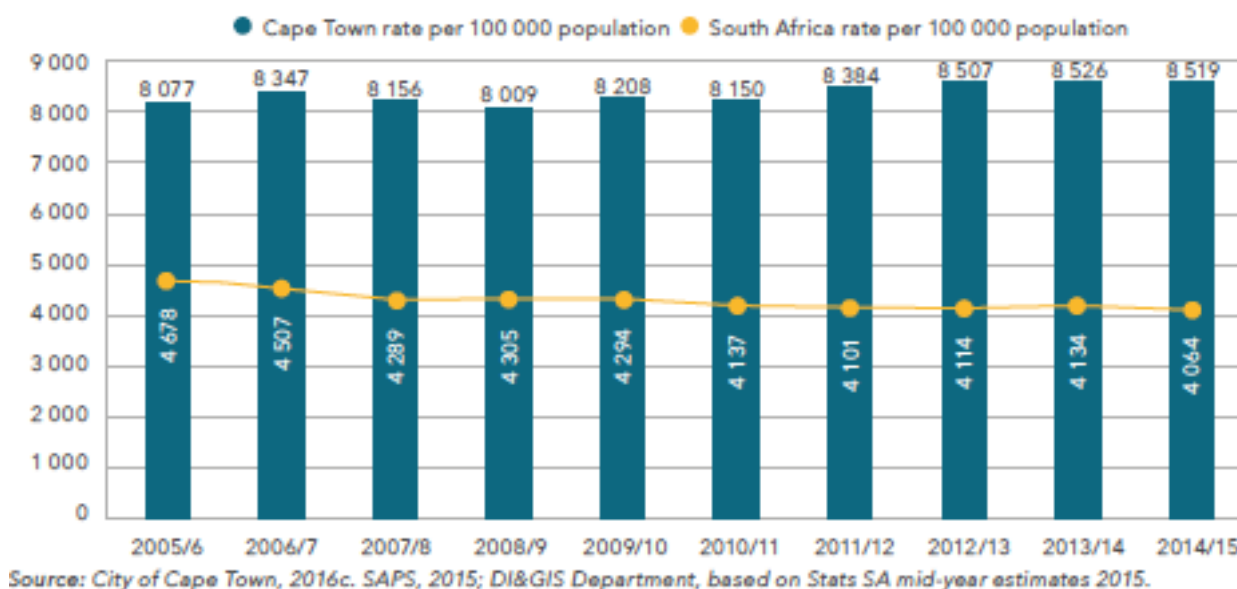
Source: City of Cape Town (2016)

Safety and security

Safety and security are major societal challenges that affect people's health and well-being. Cape Town has the highest crime rate in South Africa, measured at 8,285 per 100,000 population according to South African Police Service data. Crime rate in Cape Town is double the national average. Drug-related crimes (1,551 per 100,000) and property crime rates (3,691 per 100,000) are significant contributors to safety concerns. The Cape Flats are notorious for many drug gangs, taxi wars and rape incidences which terrorise entire neighbourhoods. According to the latest MSDP (2018), 64% of Black African in Cape Town feel "very unsafe" when walking alone in the dark. Crime affects black and coloured residents

more than white residents because of the stark socio-economic differences in the neighbourhoods they live in.

Figure 52: Crime rate – all reported crimes in Cape Town, and trend for South Africa, 2005/6 to 2014/15

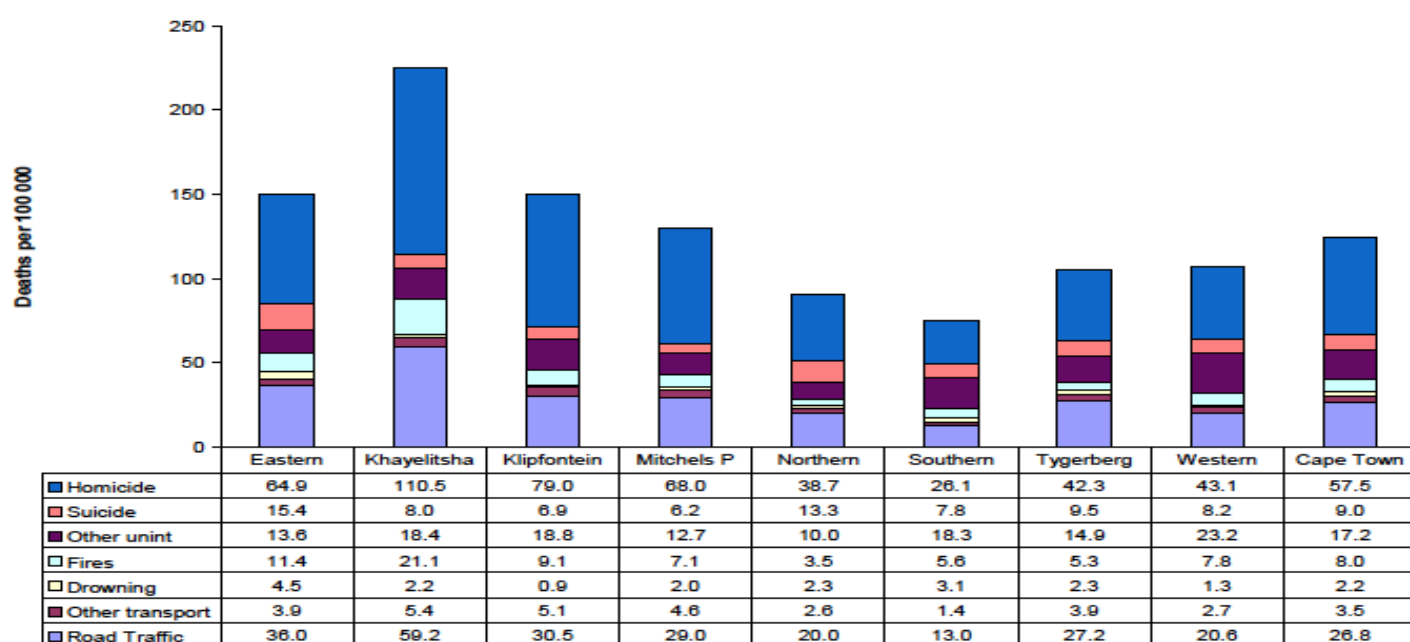


Source: City of Cape Town (2016)

Homicides and road traffic accidents are major causes of injury-related mortality in South Africa. Moreover, substance abuse is closely linked to both homicide and road traffic accidents, and therefore injury-related mortality. Road traffic accidents accounted for 9.3% of all non-natural deaths between 2001 and 2006. In 2005, the road traffic death rate was 23 per 100,000 people. This decreased slightly to 17.8 per 100,000 people in 2012.

A study by the Medical Research Council found that injury-related mortality especially among men was among the highest in the world between 2001 and 2006 (Groenewald et al., 2008). Even at the height of the HIV/AIDS scourge, violence and injuries accounted for more deaths than HIV/AIDS in Cape Town. Figure 19 depicts the spatial distribution of injury-related deaths in Cape Town between 2003 and 2006. While the Southern subdistrict recorded the lowest prevalence (26 deaths per 100,000 population), Khayelitsha recorded the highest prevalence, about four times that of the Southern subdistrict.

Figure 53: Prevalence of injury-related deaths in Cape Town (2003-2006)



Source: Groenewald et al. (2008)

The City's efforts regarding substance abuse, as outlined in the IDP 2017-2022, highlight a four-pronged approach to tackling drugs and substance abuse. These are: prevention (ensuring those at risk are equipped to avoid drugs), treatment (providing needed services to those already hooked), suppression (ensuring the reduction in drug supply and related criminal activities), and coordination (ensuring a harmonized and non-duplicitous approach to fighting substance abuse and its effects). The extent to which these interventions are effective is hardly documented to our best knowledge.

3.7 Education in Cape Town

3.7.1 Education provision

The governance of the education sector in South Africa, including the specific role of local government, is part of the urban policy report and will not be repeated here. Suffice to say that education does not feature strongly in the Integrated Development Plan, although training and skills development is mentioned as objective 1.6, which introduced the apprenticeship programme in important departments of the city (Water and Sanitation, Electricity, Stormwater, Solid Waste, etc.) (City of Cape Town 2017). The objective is to provide development opportunities for young people, who are unemployed and could benefit from practical training. Another strategy by the city is to provide community libraries across the metro. The city also runs 32 early childhood facilities. The schools located in Cape Town are the responsibility of the Western Cape Government or school governing bodies if run privately. The 1996 South African Schools Act attempted to counteract authoritarian apartheid schooling by devolving power to School Governing Bodies (SGBs), who would be comprised of a majority of parents and who would act (supposedly) in the interests of the school community (notwithstanding questions of 'who' that consisted of). While this may have had noble intentions, SGBs allow schools to set fee policies, as well as other policies that maintain the cultural hegemony of elite groups. This has resulted in a semi-privatised schooling system, where former model C (White) schools fees range from a few thousand

Rand to about half the cost of private schools. Former White schools are therefore also very different from one another, with schools in elite suburbs like Rondebosch and Newlands maintaining an elite character, whereas schools in other suburbs, without a 100% pattern, may be almost 100% black/coloured.

3.7.2 Education trends

Apartheid's legacy of racialized and segregated schooling system, created huge inequalities with regard to education facilities and quality of learning between Cape Town's neighbourhoods. The Cape flats and poorer areas were provided with substandard educational infrastructure and teachers. This inequality in education provision has persisted until now with pupils and learners in the Cape Flats still having much inferior access to education than their counterparts in the richer neighbourhoods. However, at the same time there has been significant movement from middle-class black and coloured kids into schools located in other, often white, neighbourhoods in the pursuit of accessing higher quality education. While black township schools remain almost exclusively black, formerly white schools have seen much more racial mixing and diversity, although newcomers predominantly come from middle-class backgrounds (Besteman 2008).

In order to access better quality education, an increasing number of black and coloured pupils have registered at schools in wealthier neighbourhoods. In 2001, 34% of pupils in former white schools were black or coloured. This share has increased further since then to about 40% (Zoch 2017). Pupils take on long commutes from townships to central neighbourhoods on a daily basis to benefit from higher quality education. Parents send their kids to far away schools in the hope that this will increase their life chances and employability in future. Attending formerly white schools is seen as an effective route of advancement for the learner and the entire household. Partly because of better material resources and teaching personnel, but also because of the school's reputation and access to social capital (Lemon and Battersby-Lennard 2011). Evidence seems to suggest the substantial life chance improvements of attending wealthier schools. According to a recent study by Zoch (2017, p. 26) "children attending the richest 20% of schools in grade 6 will be 30% more likely to reach and pass matric in time, in comparison to children from the poorest 20% of schools. By grade 9 the learning gap between the poorest and richest children, going to the best and worst schools of Cape Town, would total to about 1.7 standard deviations or approximately 5 years' worth of learning".

Once enrolled, black and coloured pupils often struggle with the generally untransformed institutional culture in formerly white schools, where an assimilationist approach to diversity has prevailed as opposed to a genuine attempt to incorporate the new different cultural and language backgrounds from students. Staff composition, disciplinary rules, curriculum and teaching methods have often remained unchanged despite the significant influx of children from coloured and Black African communities (Fataar 2009; Besteman 2008). Parents of these children also often find it difficult to participate in school-related activities and management affairs because of the distance, financial implications and cultural differences. Fataar (2009, p. 6) argues that "Whiteness has shifted from crude expressions of race to take on a set of cultural forms in the schools, i.e. habits of being expressed in the predominant sport, cultural and educational forms that pre-existed the post-racial period. The valorisation of either English or Afrikaans as the lingua franca, and the language of acceptance and incorporation at the schools, plays a key role in this cultural hegemony".

However, higher fees, high transport costs, long commuting times and personal circumstances inhibit many poorer children from attending better schools outside their

immediate neighbourhood. Sending pupils to far-away schools comes with substantial financial and human costs, which many are unable to afford. According to Zoch (2017), only 10% of children living in the poorest 60% neighbourhoods can afford and manage to send their kids in the richest school quintile. There is therefore a substantial second movement that happens within townships of the Cape Flats. Parents and pupils seek out slightly better off schools in a landscape generally plagued by very poor quality education. Despite considerably larger funding allocations to township schools after the end of apartheid, the quality of education has remained substandard and failed to provide its pupils with the necessary skills to compete in the world and labour market. These schools remain staffed with poor teachers and management directors. Being almost daily threatened with issues of violence, gangsterism, crime and drugs, much time is spent coping with difficult life circumstances (Maphalala and Mabunda 2014). Teachers and students do not feel safe and intimidated by powerful gangs and criminal networks. Poor security in the under-resourced schools contribute to their vulnerability to violent attacks and assaults. A lot of learners are negatively impacted by the negative neighbourhood dynamics, causing drop outs, absenteeism, low marks and so forth (City of Cape Town 2016).

Aside from failing to equip pupils with hard skills and competencies, township schools struggle to transfer the required cultural and language skills to succeed in the increasingly competitive formal economic spaces.

3.8 Conclusion

Cape Town is famous for its stunning natural beauty and leisure-time possibilities, but the city is also steeped in South Africa's colonial and apartheid history, which has created a highly segregated urban form and enormous socio-economic inequalities. One of the main objectives of post-apartheid urban policies was thus to redress past atrocities and integrate the very diverse neighbourhoods into an inclusive and prosperous 'unicity'. While important achievements have been made under conditions of rapid urbanisation and political-economic change, Cape Town has remained a city of stark contrasts, where an increasingly affluent and cosmopolitan population is pitted against a growing number of poor households, whose living conditions and opportunities continue to be confined due to their income, location and socio-economic characteristics. Most of migrants have settled in the south-east quadrant of the city, resulting in inverse densification and high environmental, economic and social costs.

The Democratic Alliance-led local government has increasingly positioned Cape Town as a global city with an international outlook. This has attracted foreign and local businesses, tourists, real estate investors and an increasingly cosmopolitan population, resulting in a tertiary-sector driven economy, which is the second-strongest in the country. Cape Town has achieved global recognition for its tourism attractions, business services, filming industry, conference facilities and event management capacity (hosting mega events such as Fifa World Cup 2010, Two Oceans Marathon, Cape Argus Cycle Tour). However, the outward looking economy has not been able to absorb large numbers of low- and semi-skilled migrants of the past two decades, who have come from the Eastern Cape or other African countries in search of employment, family and city life. Unemployment, informality and crime have therefore remained major challenges, for which the local government has not yet found adequate policy solutions. The focus on becoming a world city has sometimes intensified as opposed to reduce poverty and socio-economic polarisation, for instance in the case of displacement of informal traders or residents from the inner city due to renewal programmes or sky rocketing housing prices driven by the private property market

respectively. The spatial concentration of formal economic activities creates enormous transport challenges with poor households spending on average more than 40% of their income on transport.

In periods of strong economic growth, substantial amounts of revenues were collected, which were used to cross-finance the extension of basic service delivery into poorer neighbourhoods and informal settlements. Almost everybody has now access to water, electricity, sanitation and waste removal, which has had positive effects on health and well-being. However, the quality to these services in informal settlements and backyard shacks has been criticised as inadequate and reason for major health and safety risks. Despite pro-poor policies, income continues to shape access to quality services and consumption is thus highly unequal across the metro. Increasingly unsustainable levels of resource consumption within a changing biophysical climate, especially growing risks of water scarcity, have resulted in growing policy awareness and initiatives on sustainability. However, policy objectives of creating a more compact, sustainable and integrated city have been unsuccessful in directing actual practices on the ground including government housing projects, private-sector led developments and informal practices from below. Limited planning capacity and powers, lack of political will, development trade-offs, unequal land tenure and property market, financial sustainability mandates, limited intergovernmental collaboration and inflexible national regulations are some of the prominent barriers to more sustainable forms of urban development.

The provision of health and education services is generally outside of the city's responsibilities (except some primary health care and environmental health services) and thus does not feature strongly in development policies. Healthy living and continuous learning are not explicitly mentioned in key policy documents. Both education and health services are unequally distributed in the city and remain considerably shaped by the apartheid-produced environment they are located in, which in the poorer areas is characterised by high levels of unemployment, poverty and crime. Schools in the impoverished areas suffer from inadequate facilities, staff and high levels of violence, which is in stark contrast to the affluent neighbourhoods where some of South Africa's best performing learning institutions are situated.

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Annex 1: National Health Legislation

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Annex 2: National Department of Health Transfers and Subsidies

Table A.1. National Department of Health transfers and subsidies

	Audited outcome			Adjusted appropriation	Ave growth rate (%)	Ave: Exp/ Total (%)	Medium-term expenditure estimate			Ave growth rate (%)	Ave Exp/ Total (%)
	2014/15	2015/16	2016/17				2018/19	2019/20	2020/21		
R thousand											
					2014/15 - 2017/18					2017/18 - 2020/21	
Non-profit institutions											
Current	215 201	154 883	161 020	193 737	-3.4%	0.5%	195 909	206 811	218 187	4.0%	0.5%
South African Medical Research Council	512	471	496	520	0.5%	–	550	581	613	5.6%	–
Non-profit institutions	13 670	–	–	–	-100.0%	–	–	–	–	–	–
Health information systems programme	–	12 103	12 745	13 382	–	–	14 158	14 951	15 773	5.6%	–
Health Systems Trust	12 867	11 367	11 969	15 019	5.3%	–	15 890	16 780	17 703	5.6%	–
Non-governmental organisations: Lifeline	19 023	19 898	20 953	22 000	5.0%	0.1%	23 276	24 579	25 931	5.6%	0.1%
Non-governmental organisations: loveLife	69 843	54 396	57 808	61 200	-4.3%	0.2%	64 750	68 376	72 137	5.6%	0.1%
Non-governmental organisations: Soul City	15 561	16 277	14 465	19 226	7.3%	–	20 270	21 336	22 509	5.4%	–
Non-governmental organisations: HIV and AIDS	79 919	38 131	41 439	51 450	-13.7%	0.2%	54 434	57 482	60 644	5.6%	0.1%
Public Universities South Africa	–	–	–	8 500	–	–	–	–	–	-100.0%	–
South African Federation for Mental Health	320	335	353	371	5.1%	–	393	415	438	5.7%	–
South African National Council for the Blind	718	752	792	832	5.0%	–	880	929	980	5.6%	–
National Council Against Smoking	768	803	–	887	4.9%	–	938	991	1 046	5.6%	–
National Kidney Foundation of South Africa	–	350	–	350	–	–	370	391	413	5.7%	–
Health Systems Global: South Africa	2 000	–	–	–	-100.0%	–	–	–	–	–	–
Households											
Social benefits											
Current	1 495	1 486	2 328	1 324	-4.0%	–	–	–	–	-100.0%	–
Employee social benefits	1 495	1 486	2 328	1 324	-4.0%	–	–	–	–	-100.0%	–
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	1 174 777	1 416 059	1 493 807	1 512 431	8.8%	4.0%	1 694 688	1 789 609	1 888 038	7.7%	3.8%
Health and Welfare Sector Education and Training Authority	1 276	2 439	2 808	2 252	20.8%	–	2 455	2 612	2 756	7.0%	–
South African Medical Research Council	446 331	623 892	660 270	614 961	11.3%	1.7%	624 829	659 819	696 109	4.2%	1.4%

	Audited outcome			Adjusted appropriation	Ave growth rate (%)	Ave: Exp/ Total (%)	Medium-term expenditure estimate			Ave growth rate (%)	Ave Exp/ Total (%)
	2014/15	2015/16	2016/17		2014/15 - 2017/18		2018/19	2019/20	2020/21	2017/18 - 2020/21	
R thousand											
South African National AIDS Council	15 000	19 340	16 711	17 547	5.4%	–	17 108	18 066	19 059	2.8%	–
National Health Laboratory Service	674 052	678 926	711 871	746 464	3.5%	2.0%	789 759	833 986	879 855	5.6%	1.8%
Office of Health Standards Compliance	33 367	88 906	100 535	125 711	55.6%	0.2%	129 678	136 940	144 472	4.7%	0.3%
Council for Medical Schemes	4 751	2 556	1 612	5 496	5.0%	–	5 670	5 987	6 317	4.8%	–
South African Health Product Regulatory Authority	–	–	–	–	–	–	125 189	132 199	139 470	–	0.2%
Provinces and municipalities											
Provincial revenue funds											
Current	24 669 087	26 487 703	28 708 332	31 885 731	8.9%	79.8%	35 306 896	38 376 151	41 832 302	9.5%	82.3%
National health insurance grant	76 956	61 077	94 227	–	-100.0%	0.2%	–	–	–	–	–
Comprehensive HIV and AIDS grant	12 102 108	13 670 730	–	–	-100.0%	18.4%	–	–	–	–	–
Human papillomavirus vaccine grant	–	–	–	–	–	–	200 000	211 200	222 816	–	0.4%
Comprehensive HIV, AIDS and tuberculosis grant	–	–	15 290 603	17 577 737	–	23.5%	19 921 697	22 038 995	24 438 471	11.6%	46.9%
Health professions training and development grant	2 321 788	2 374 722	2 476 724	2 631 849	4.3%	7.0%	2 784 496	2 940 428	3 102 152	5.6%	6.4%
National tertiary services grant	10 168 235	10 381 174	10 846 778	11 676 145	4.7%	30.8%	12 400 703	13 185 528	14 068 863	6.4%	28.7%
Capital	5 501 981	5 417 045	5 272 680	5 684 495	1.1%	15.6%	5 815 694	6 046 973	6 379 557	3.9%	13.4%
Health facility revitalisation grant	5 501 981	5 417 045	5 272 680	5 684 495	1.1%	15.6%	5 815 694	6 046 973	6 379 557	3.9%	13.4%
Foreign governments and international organisations											
Current	2 622	–	16 031	–	-100.0%	–	–	–	–	–	–
International AIDS Society	–	–	14 370	–	–	–	–	–	–	–	–
World Health Organisation	2 622	–	–	–	-100.0%	–	–	–	–	–	–
International Hospital Federation	–	–	1 661	–	–	–	–	–	–	–	–
Departmental agencies and accounts											
Social security funds											
Current	3 215	3 363	3 541	3 718	5.0%	–	3 836	4 050	4 272	4.7%	–
Compensation Commissioner	3 215	3 363	3 541	3 718	5.0%	–	3 836	4 050	4 272	4.7%	–
Total	31 568 378	33 480 539	35 657 739	39 281 436	7.6%	100.0%	43 017 023	46 423 594	50 322 356	8.6%	100.0%

Source: National Treasury, file ENE18 – Vote16_ChapterTables.xlsx [<http://www.treasury.gov.za/documents/national%20budget/2018/excelFormat.aspx>]

Annex 3: Provincial Budgets Compared to Population for the Period 2013/14 To 2019/20

Table A.2. Provincial budgets from 2013 to 2019/20 (nominal prices) (R'000)

Province	2013/14 Outcome	2014/15 Outcome	2015/16 Preliminary outcome	2016/17 Revised estimate	2017/18 Budget	2018/19 MTEF	Sum of 2019/20 MTEF
Eastern Cape	17 048 255	17 549 854	18 943 943	20 543 771	21 707 165	23 364 729	25 091 146
Free State	7 779 386	8 290 459	8 693 972	9 042 105	9 774 916	10 486 793	11 267 855
Gauteng	27 415 801	31 005 212	34 864 555	39 238 323	40 207 046	42 068 422	45 193 153
KwaZulu-Natal	29 531 410	31 245 510	34 110 724	37 391 656	39 548 473	41 959 574	44 992 728
Limpopo	13 137 862	14 526 110	15 432 089	17 693 377	18 042 777	18 990 763	20 235 709
Mpumalanga	8 046 982	8 858 526	10 080 392	10 624 087	12 020 037	12 688 869	13 552 612
Northern Cape	8 393 477	8 372 853	9 042 677	10 334 747	10 461 340	11 121 303	12 011 392
North West	3 401 801	3 713 980	4 168 265	4 663 027	4 433 893	4 614 994	4 933 205
Western Cape	15 916 962	17 305 808	18 737 118	20 142 360	21 679 806	22 798 527	24 030 698
Total	130 671 936	140 868 311	154 073 735	169 673 453	177 875 453	188 093 973	201 308 498

Source: National Treasury [<http://www.treasury.gov.za/documents/national%20budget/2018/excelFormat.aspx>]

Table A.3. Provincial budgets from 2013 to 2019/20 (2018 prices) compared to provincial populations

Province	2013/14 Outcome	2014/15 Outcome	2015/16 Preliminary outcome	2016/17 Revised estimate	2017/18 Budget	2018/19 MTEF	Sum of 2019/20 MTEF
	Provincial budgets (2018 prices) (R'000)						
Eastern Cape	22 514 243	21 902 590	22 383 168	23 080 871	22 943 608	23 364 729	23 733 730
Free State	10 273 602	10 346 668	10 272 340	10 158 780	10 331 697	10 486 793	10 658 270
Gauteng	36 205 817	38 695 162	41 194 126	44 084 149	42 497 246	42 068 422	42 748 229
KwaZulu-Natal	38 999 730	38 995 059	40 303 439	42 009 424	41 801 160	41 959 574	42 558 647
Limpopo	17 350 105	18 128 893	18 233 746	19 878 462	19 070 496	18 990 763	19 140 968
Mpumalanga	10 626 994	11 055 628	11 910 462	11 936 133	12 704 700	12 688 869	12 819 423
North West	11 084 582	10 449 498	10 684 352	11 611 060	11 057 220	11 121 303	11 361 582
Northern Cape	4 492 482	4 635 126	4 925 003	5 238 898	4 686 448	4 614 994	4 666 321
Western Cape	21 020 236	21 598 015	22 138 794	22 629 887	22 914 691	22 798 527	22 730 651
Total	172 567 789	175 806 639	182 045 430	190 627 664	188 007 267	188 093 973	190 417 822
	Provincial budgets as a percentage of the national total						
Province	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Eastern Cape	13.0%	12.5%	12.3%	12.1%	12.2%	12.4%	12.5%
Free State	6.0%	5.9%	5.6%	5.3%	5.5%	5.6%	5.6%

Province	2013/14 Outcome	2014/15 Outcome	2015/16 Preliminary outcome	2016/17 Revised estimate	2017/18 Budget	2018/19 MTEF	Sum of 2019/20 MTEF
Gauteng	21.0%	22.0%	22.6%	23.1%	22.6%	22.4%	22.4%
KwaZulu-Natal	22.6%	22.2%	22.1%	22.0%	22.2%	22.3%	22.4%
Limpopo	10.1%	10.3%	10.0%	10.4%	10.1%	10.1%	10.1%
Mpumalanga	6.2%	6.3%	6.5%	6.3%	6.8%	6.7%	6.7%
North West	6.4%	5.9%	5.9%	6.1%	5.9%	5.9%	6.0%
Northern Cape	2.6%	2.6%	2.7%	2.7%	2.5%	2.5%	2.5%
Western Cape	12.2%	12.3%	12.2%	11.9%	12.2%	12.1%	11.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Provincial populations as a percentage of the total							
Province	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Eastern Cape	12.2%	12.0%	11.8%	11.7%	11.5%	11.3%	11.2%
Free State	5.2%	5.2%	5.2%	5.1%	5.1%	5.0%	5.0%
Gauteng	24.2%	24.5%	24.7%	25.0%	25.3%	25.5%	25.8%
KwaZulu-Natal	19.9%	19.8%	19.7%	19.7%	19.6%	19.5%	19.4%
Limpopo	10.4%	10.3%	10.3%	10.3%	10.2%	10.2%	10.2%
Mpumalanga	7.8%	7.8%	7.8%	7.9%	7.9%	7.9%	7.9%
North West	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%
Northern Cape	2.2%	2.2%	2.2%	2.2%	2.1%	2.1%	2.1%

Province	2013/14 Outcome	2014/15 Outcome	2015/16 Preliminary outcome	2016/17 Revised estimate	2017/18 Budget	2018/19 MTEF	Sum of 2019/20 MTEF
Western Cape	11.3%	11.3%	11.4%	11.5%	11.5%	11.6%	11.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Per capita budgets (based on crude population) (2018 prices)							
Province	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Eastern Cape	3 476	3 380	3 451	3 555	3 530	3 590	3 641
Free State	3 692	3 693	3 640	3 572	3 604	3 627	3 654
Gauteng	2 814	2 931	3 040	3 170	2 976	2 869	2 839
KwaZulu-Natal	3 688	3 648	3 728	3 840	3 775	3 741	3 745
Limpopo	3 148	3 253	3 234	3 483	3 300	3 244	3 226
Mpumalanga	2 563	2 621	2 775	2 733	2 859	2 805	2 784
North West	3 076	2 852	2 868	3 064	2 867	2 833	2 843
Northern Cape	3 886	3 962	4 160	4 370	3 860	3 753	3 745
Western Cape	3 512	3 534	3 547	3 550	3 520	3 428	3 346
Overall	3 250	3 261	3 325	3 427	3 326	3 274	3 259

Sources: National Treasury [<http://www.treasury.gov.za/documents/national%20budget/2018/excelFormat.aspx>] Statistics South Africa provincial population projections

Annex 4: Division of nationally raised revenue

Table A.4. Division of nationally raised revenue

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Average annual MTEF growth
R billion	Outcome			Revised estimate	Medium-term estimates			
Division of available funds								
National departments	490.0	546.1	555.7	599.9	628.6	685.9	736.6	7.1%
<i>of which:</i>								
<i>Indirect transfers to Prov</i>	5.4	3.5	3.6	3.8	3.8	4.4	4.7	7.6%
<i>Indirect transfers to LG</i>	8.1	10.4	8.1	7.8	6.9	7.3	7.7	-0.6%
Provinces	439.5	471.4	500.4	538.2	571.0	611.8	657.5	6.9%
Equitable share	359.9	386.5	410.7	441.3	470.3	505.0	542.4	7.1%
Conditional grants	79.6	84.9	89.7	96.8	100.7	106.7	115.0	5.9%
Local government	87.6	98.3	102.9	110.7	118.5	126.9	137.5	7.5%
Equitable share	41.6	49.4	50.7	55.3	62.7	69.0	75.7	11.0%
Conditional grants	35.8	38.3	40.9	43.6	43.3	44.8	47.8	3.1%
General fuel levy sharing with metros	10.2	10.7	11.2	11.8	12.5	13.2	14.0	6.0%

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Average
R billion	Outcome			Revised estimate	Medium-term estimates			annual MTEF growth
Provisional allocation not assigned to votes	–	–	–	–	6.0	2.3	2.1	
Non-interest allocations	1 017.1	1 115.8	1 159.0	1 248.8	1 324.1	1 426.9	1 533.6	7.1%
<i>Percentage increase</i>	7.5%	9.7%	3.9%	7.7%	6.0%	7.8%	7.5%	
Debt-service costs	114.8	128.8	146.5	163.2	180.1	197.7	213.9	9.4%
Contingency reserve	–	–	–	–	8.0	8.0	10.0	
Main budget expenditure	1 131.9	1 244.6	1 305.5	1 411.9	1 512.2	1 632.6	1 757.5	7.6%
<i>Percentage increase</i>	8.0%	10.0%	4.9%	8.2%	7.1%	8.0%	7.6%	
<i>Percentage shares</i>								
<i>National departments</i>	48.2%	48.9%	48.0%	48.0%	47.7%	48.1%	48.1%	
<i>Provinces</i>	43.2%	42.2%	43.2%	43.1%	43.3%	42.9%	42.9%	
<i>Local government</i>	8.6%	8.8%	8.9%	8.9%	9.0%	8.9%	9.0%	

Source: National Treasury [<http://www.treasury.gov.za/documents/national%20budget/2018/excelFormat.aspx>]

Annex 5: Provincial population changes from 2013 to 2020

Table A.5. Population changes by province from 2013 to 2020

Province	2013	2014	2015	2016	2017	2018	2019	2020
Eastern Cape	6 477 147	6 480 615	6 485 892	6 492 418	6 499 180	6 508 138	6 518 600	6 529 521
Free State	2 782 453	2 801 676	2 822 060	2 843 693	2 866 704	2 891 248	2 917 218	2 944 516
Gauteng	12 867 553	13 203 215	13 548 620	13 906 335	14 278 351	14 660 744	15 055 349	15 465 027
KwaZulu-Natal	10 575 945	10 690 747	10 812 423	10 940 668	11 074 546	11 215 218	11 363 197	11 518 695
Limpopo	5 510 707	5 572 642	5 638 409	5 707 230	5 778 533	5 853 756	5 932 761	6 015 273
Mpumalanga	4 146 717	4 217 873	4 291 313	4 366 765	4 444 073	4 523 433	4 605 177	4 689 445
North West	3 603 117	3 663 481	3 725 620	3 789 697	3 856 169	3 925 218	3 996 595	4 070 306
Northern Cape	1 155 995	1 169 777	1 183 995	1 198 723	1 213 998	1 229 794	1 246 088	1 262 858
Western Cape	5 984 751	6 112 340	6 242 159	6 374 411	6 510 394	6 650 261	6 793 906	6 940 975
Total	53 104 386	53 912 366	54 750 491	55 619 940	56 521 948	57 457 811	58 428 891	59 436 617
Province	Year on year percentage change							
Eastern Cape		0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
Free State		0.7%	0.7%	0.8%	0.8%	0.9%	0.9%	0.9%
Gauteng		2.6%	2.6%	2.6%	2.7%	2.7%	2.7%	2.7%
KwaZulu-Natal		1.1%	1.1%	1.2%	1.2%	1.3%	1.3%	1.4%

Province	2013	2014	2015	2016	2017	2018	2019	2020
Limpopo		1.1%	1.2%	1.2%	1.2%	1.3%	1.3%	1.4%
Mpumalanga		1.7%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%
North West		1.7%	1.7%	1.7%	1.8%	1.8%	1.8%	1.8%
Northern Cape		1.2%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%
Western Cape		2.1%	2.1%	2.1%	2.1%	2.1%	2.2%	2.2%
Total		1.5%	1.6%	1.6%	1.6%	1.7%	1.7%	1.7%

Source: (Statistics South Africa, Accessed 2018)

Annex 6: Changes in the remuneration of staff members in the public health system

Table A.6. Public sector health professionals 2006 and 2016 (headcount)

Cost item	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Filled posts	228 789	237 887	255 091	265 856	271 971	284 191	308 813	314 636	303 631	306 784	309 367
Population (000)	37 063	37 768	38 311	39 084	39 958	40 802	41 707	42 695	43 764	44 922	46 179
Unit cost (Rands per post)	201 286	208 011	218 616	234 082	250 836	271 638	272 602	277 162	299 502	304 361	312 596
Expenditure on compensation (R' m)	46 052	49 483	55 767	62 232	68 220	77 197	84 183	87 205	90 938	93 373	96 707
Change in exp. (%)		7,5%	12,7%	11,6%	9,6%	13,2%	9,0%	3,6%	4,3%	2,7%	3,6%
Change in posts (%)		4,0%	7,2%	4,2%	2,3%	4,5%	8,7%	1,9%	-3,5%	1,0%	0,8%
Change in population (%)		1,9%	1,4%	2,0%	2,2%	2,1%	2,2%	2,4%	2,5%	2,6%	2,8%
Change in unit cost (%)		3,3%	5,1%	7,1%	7,2%	8,3%	0,4%	1,7%	8,1%	1,6%	2,7%
Change in exp. over the full period (%)							110,0%				
Change in pop. Over full period (%)							24,6%				
Portion of overall change due to:											
<i>Increases in posts (%)</i>							35,2%				
<i>Post unit cost increases (%)</i>							74,8%				
Effective net increase in posts							10,6%				

Source: This data is based on (Blecher et al., 2017). The ultimate source for the data is the Vulindlela system which accesses all budget, expenditure and personnel information in the South African public sector.

Annex 7: Burden of disease

Table A.7. Burden of disease for Gauteng by local authority/health district (green indicates an improving trend)

Local authority/ Health district	Year	Social	Garbage	HIV /TB	Ill-defined	Injuries	Non-com
Years of lives lost							
Ekurhuleni	2009	221 214	4 948	171 935	5 854	69 622	183 115
	2012	125 862	4 339	148 492	4 601	58 178	182 502
	2015	106 274	5 174	124 446	4 217	72 536	195 159
Johannesburg	2009	193 955	6 462	190 941	7 345	86 449	264 054
	2012	121 758	5 126	135 878	6 088	69 669	229 645
	2015	102 994	5 379	107 530	6 055	92 805	248 469
Sedibeng	2009	82 685	1 948	42 007	776	21 388	71 304
	2012	58 146	2 004	43 334	784	23 675	71 152
	2015	44 228	2 146	35 906	831	29 573	77 738
Tshwane	2009	130 633	5 478	113 268	1 674	63 551	203 770
	2012	77 767	4 277	91 776	1 312	44 528	167 148
	2015	65 855	4 169	81 265	1 972	41 908	179 915
West Rand	2009	78 443	1 482	50 314	1 861	25 110	53 859
	2012	42 573	1 622	46 156	1 464	26 879	61 106
	2015	36 105	2 005	41 633	1 536	30 532	76 994
Gauteng total	2009	706 929	20 318	568 464	17 510	266 120	776 103
	2012	426 107	17 368	465 635	14 249	222 928	711 552
	2015	355 455	18 873	390 781	14 611	267 354	778 274

Source: (Health Systems Trust, 2017)

Table A.8. Burden of disease for the Western Cape by local authority/health district (green indicates an improving trend)

Local authority/ Health district	Year	Social	Garbage	HIV /TB	Ill-defined	Injuries	Non-com
Years of lives lost							
Cape Town	2009	70 613	4 083	126 056	2 612	79 609	240 724
	2012	55 178	3 399	101 865	2 246	85 796	251 745
	2015	53 116	3 601	99 175	2 401	106 032	269 571
Cape Winelands	2009	14 566	927	27 994	651	19 704	52 560
	2012	11 243	1 008	26 663	642	17 718	56 632
	2015	8 530	865	26 283	497	16 809	57 316
Central Karoo	2009	2 049	118	4 208	90	3 530	6 263
	2012	1 311	82	3 303	45	2 252	6 429
	2015	1 399	100	3 110	35	2 777	7 248
Eden	2009	9 951	667	22 589	406	13 182	41 671
	2012	9 597	594	20 882	293	10 836	43 971
	2015	8 006	619	21 599	244	12 470	48 895
Overberg	2009	3 117	326	5 724	147	6 059	13 595
	2012	3 681	273	6 126	145	6 752	17 508
	2015	3 273	227	5 954	174	6 830	18 753
West Coast	2009	6 605	436	13 231	269	8 006	24 210
	2012	5 654	471	15 825	236	9 192	28 514
	2015	4 498	445	13 531	260	10 198	29 810
Western Cape total	2009	106 901	6 557	199 802	4 175	130 091	379 023
	2012	86 665	5 827	174 664	3 607	132 545	404 798
	2015	78 822	5 857	169 651	3 611	155 117	431 593

Source: (Health Systems Trust, 2017)



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