Managing Urbanisation to Achieve Inclusive Growth

A review of trends in South African urbanisation and suggestions for improved management of urbanisation

July 2018

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This overall (`chapeau') report is derived from nine background papers and extensive consultations with stakeholders in South Africa over the past three years.

The team was led by Somik Lall, and included Olivia D'Aoust, Peter Ellis, Thomas Farole, Forhad Shilpi, Roland White and Yan Zhang, all of the World Bank; Channing Arndt, Rob Davies and James Thurlow from IFPRI; Jamie Boex of Duke University; Johan Joubert of the University of Pretoria; and David Gardner and Philip van Ryneveld, who are South African experts on housing and transport respectively.

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Summary of recommendations

IUDF lever		Underlying issue	Recommendations	
3. Integrated and sustainable human settlements	**Homes**	• Overemphasis on housing megaprojects placed in urban peripheries—trapping the poor and exacerbating sprawl • Supply-side subsidy approaches creating housing dependency and market distortions	• Shift away from megaprojects towards 'massive small' projects, which stimulate infill, densification, conversion and refurbishment • Regularise and upgrade, and seek mechanisms to broaden services to, backyard dwellers and informal settlements • Revamp FLISP to mobilise and convert effectively demand of middle-income households to bridge the gap/affordable housing markets. • Pilot demand-side subsidies to enable mobility and choice of low income households for rental accommodation.	**Coordinate and align incentives across all government levels** **Devolve increased revenue raising authority and policy influence to cities based on demonstrable capability**
2. Integrated transport and mobility	**Connections**	• Legacy of hub and spoke public transport services • Separated supply-side public transport funding streams • Failure to integrate public transport modes into comprehensive city-wide networks • Inappropriate public transport technology choices and lack of support for key modes	• Develop and implement multimodal and polycentric integrated public transport networks for each city • Devolve decisionmaking authority to metros • Investigate new municipality-level revenue sources to accommodate long-term operational subsidies for public transport	(continued)
6. Inclusive economic development	**Jobs and economic growth**	• Trying to use industrialisation to spatially spread economic and job growth • Special Economic Zone (SEZ) locations countering natural agglomeration sources	• Integrate and connect SEZs with adjacent urban areas • Where access to land is a constraint to investment, explore non-contiguous SEZ models or expand Urban Development Zones (UDZs)	(continued)
9. Sustainable finances	**Urban finances**	• Increased capital expenditure risks making recurrent costs unaffordable for cities	• Assess need to expand flexible central government grants to municipalities • Explore ways for municipalities to increase own-source revenues	(continued)

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1. Introduction: South Africa's Urban Development Challenges

South Africa is urbanising, and international experience suggests that this is not something that can be stopped or even slowed. If, as expected, 80 percent of the South African population will be living in urban areas by the year 2050, then prospects for successful national social-economic development for generations to come will be determined by how well the urbanisation process is managed.

At present, management of the urbanisation process in South Africa is producing an inadequate 'urban dividend'. It is falling short due to both legacy effects of the country's spatial form and due to shortcomings in government programmes and policy.

This report suggests ways that South Africa can improve the management of its urbanisation process. It deals especially with issues relating to housing, transport, special economic zones and municipal finances, and makes a number of suggestions for better dealing with the urban challenges the country faces.

The report builds upon South Africa's long urban policy history. The National Development Plan (NDP), which was adopted by Cabinet in 2012 as a long term vision and plan for South Africa, succinctly sets out the core problem in the opening paragraphs of its eighth chapter (entitled `Transforming human settlement and the national space economy'):

> *Where people live and work matters. Apartheid planning consigned the majority of South Africans to places far away from work, where services could not be sustained, and where it was difficult to access the benefits of society and participate in the economy.*
>
> *A great deal of progress has been made since 1994, but South Africa is far from achieving the Reconstruction and Development Programme (RDP) goals of 'breaking down apartheid geography through land reform, more compact cities, decent public transport and the development of industries and services that use local resources and/or meet local needs'. Despite reforms to the planning system, colonial and apartheid legacies still structure space across different scales (National Planning Commission 2013).*

The NDP shows considerable concern with the way cities and towns function. There are references to South Africa's towns and cities being highly fragmented, imposing high costs on households and the economy; the lack of progress in reversing apartheid geography; and the fact that cities and towns are not productive enough and do not generate sufficient jobs.

These are serious challenges, given that a large proportion of new urban residents (migrants to urban areas) are poor, and that the number of unemployed young people of working age in urban areas is growing rapidly.

The NDP suggests that `many of the challenges are not a result of a vacuum in policy, but rather insufficient institutional capacity, a lack of strong instruments for implementation and a lack of coordination' (National Planning Commission 2013, p. 267). This paper is concerned with exactly these themes, evaluates current policies, and suggests ways that South Africa can become more effective at addressing these issues.

Similarly, the Integrated Urban Development Framework (IUDF), published in 2016 by the Department of Co-operative Government and Traditional Affairs (CoGTA), seeks to steer urban growth towards a sustainable growth model of compact, connected and co-ordinated cities and towns. The IUDF was prepared to respond to the urban challenges highlighted and recommendations made in the NDP—and to the Sustainable Development Goals (SDGs), especially Goal 11: `Making cities and human Settlements inclusive, safe, resilient and sustainable'.

The IUDF has a broad vision of ***`Liveable, safe and resource-efficient cities and towns that are socially integrated, economically inclusive and globally competitive,*** *where residents actively participate in urban life'*. To achieve this, it sets four strategic goals (spatial integration, inclusion and access, inclusive growth and effective governance), which inform the priorities of nine policy levers:

1. Integrated urban planning and management.
2. Integrated transport and mobility.
3. Integrated and sustainable human settlements.
4. Integrated urban infrastructure.
5. Efficient land governance and management.
6. Inclusive economic development.
7. Empowered active communities.
8. Effective urban governance.
9. Sustainable finance.

The IUDF also highlights three cross-cutting issues: rural–urban interdependency, urban resilience and urban safety (CoGTA 2016).

This report has implications for most of these policy levers and makes substantial contributions on four of them: lever 2 (Integrated transport and mobility); lever 3 (Integrated sustainable human settlements); lever 6 (Inclusive economic development); and lever 9 (Sustainable finances). It also addresses aspects of the first cross-cutting issue (rural–urban interdependency).

Rationale

Two observations led to the commissioning of this work. First, South Africa is already highly urbanised (the 2011 census recorded 63 percent of the population as living in urban areas), but this is not generating the expected `urban dividend' (average income growth rates in South Africa are modest compared with other upper-middle income countries with similar levels of urbanisation).

Second, current patterns of development within urban areas appear to be reinforcing the spatial divisions created under apartheid.

It was therefore felt that there might be a need to reconsider the approach to providing infrastructure, housing and public transport services in South African cities, to transform them into engines of economic growth while overcoming apartheid spatial divisions.

This `urbanisation review' was therefore commissioned to:

- Clarify the economic, social and fiscal implications of the evolution of the national urban system and individual metropolitan areas.
- Identify key policies that are most likely to promote inclusive economic growth.
- Highlight policies that need to be recalibrated.
- Provide a framework for prioritising and sequencing policy initiatives and institutional reforms.

The World Bank has carried out urbanisation reviews in over 30 countries, including Brazil, China, India and Kenya. Their purpose is to generate diagnostic analyses to support city and national leaders to identify the key impediments to efficient and equitable growth. The analytical framework is set out in the World Development Report subtitled `Reshaping Economic Geography', which was launched in South Africa in 2009 at the DBSA. Urbanisation reviews generally consider the urban system (connectivity, coordination and resource sharing); land (including property and housing, including issues of densification, fluidity and prices); labour (mobility, disparities in access and opportunity, and skills); and capital (creditworthiness, transparency, access and coordination).

They do not consider all factors which might influence urban development. For example, they do not consider issues such as infrastructure bottlenecks, labour relations and commodity prices. Education and the development of skills is clearly key to successful urban development, but it has not been focussed upon in this report.

For the South African case, specific terms of reference were developed, focussing on the evolution of the urban system and urban form, the magnitude and nature of linkages between rural and urban areas and their implications; human capital development; transport, housing and industrial development strategies; and suggested reforms to policy and practice to improve economic efficiency and equity in living standards across the country.

Although this urbanisation review does not address issues relating to governance, the recommendations made here do have governance-related implications. The recent report of the Auditor-General on the 2016/17 financial year is therefore of concern. Financial governance standards are generally higher in the eight metros, which accounted for almost 55 percent of total municipal expenditure in 2016/17, than in the local government sector as a whole. However, in general metros are not currently improving these standards. The Auditor-General recorded an overall deterioration in compliance and in irregular expenditure in the metros, while the findings in respect of financial statements and performance reports were generally unchanged. In metros as in other municipalities, there have often been slow responses to the need to improve internal controls and address risk areas; there have been inadequate consequences for poor performance and for transgressions; and there has sometimes been instability or vacancies in key positions. The recommendations made in this report should therefore be accompanied by a further general recommendation, that metros should ensure that they put themselves onto a path whereby they improve their overall financial governance performance.

Process

Once clarity had been achieved on the terms of reference, a mix of local and international experts was appointed to undertake technical studies. The intention was to maximise the benefit to South Africa, by ensuring that the full depth of South Africa's extensive urban policy research was combined with international expertise and experience.

Thereafter the researchers engaged extensively with local institutions and local research products, identified information constraints and policy tensions, and generated draft papers. Multiple video conferences and other engagements were held during this process.

One of the major information constraints that was identified is that because of the relative size and sophistication of its economy, and decisions made to prioritise demographic rather than economic information, South Africa does not have good data on `where people work'. Work is currently under way to address this constraint, but for the moment this has limited the ability to conduct spatial analyses of individual South African cities.

In November 2017 a series of detailed consultative engagements were conducted in four cities:

- Cape Town, hosted by the African Centre for Cities (ACC).
- eThekwini, hosted by the Municipal Institute of Learning (MILE).
- Johannesburg, hosted by the Gauteng City Region Observatory (GCRO).
- Tshwane, hosted by the National Treasury (NT).

In each case, the draft papers were commented upon by pre-identified respondents, after which there was discussion in plenary. These discussions were generally extremely constructive. The written result was 36 pages of detailed comments for the authors to consider.

The draft papers were then revised to take account of the comments, and the overall `chapeau' paper (this report) was compiled. The chapeau paper went through several further iterations and quality control procedures before being finalised in this form.

Report structure

This is a `chapeau' (hat) report: that is to say, it is an overall report which draws especially upon the nine background papers prepared during the urbanisation review process (these are listed at the end of this report).

This chapeau report goes beyond merely summarising the findings and conclusions of the background papers. Instead, it seeks to be integrative, and to draw the findings and conclusions into an overall narrative and set of recommendations.

The report is structured as follows:

- Section 2 presents a review of urbanisation and migration in South Africa, stresses the importance of cities in national development, and shows that South African cities are not performing as well as they should.
- Section 3 reviews land use, housing programmes and economic density, including current housing programmes, and addresses the question of taking `jobs to people or people to jobs'.
- Section 4 turns attention to public transport, its role in reducing economic distance and increasing economic efficiencies, and the effectiveness of current government programmes.
- Section 5 then looks at the way the specific industrial policy intervention of special economic zones has interacted with city economies and suggests improvements.
- Section 6 reviews the prospects for long-term municipal financial sustainability (given our current urban development programmes in these various fields) and suggests improvements.
- Section 7 draws out the conclusions and suggests approaches likely to increase the impact of our urban development programmes while remaining fiscally sustainable.

2. Agglomeration and the importance of urban development

In South Africa as elsewhere, cities drive national economic growth. The numbers are striking. The eight metropolitan municipalities contribute 57 percent to the national economy, account for 50 percent of all formal and informal employment, and are home to 46 percent of the labour force and 40 percent of the overall population. Economic growth from 1993 to 2016 in Gauteng and Cape Town—South Africa's two largest metropolitan cities—averaged 3.5 percent, much higher than the 2.7 percent seen nationally.

The reasons for this dominance are now well understood. They are due to agglomeration effects: the advantages that spatial proximity conveys on workers, employers, suppliers, purchasers, innovators, creativity and even cultural life (see box 1).cultural life (see box 1 over page).

Box 1. The importance of agglomeration effects

The density and connectivity of people and firms and people in cities creates opportunities for scale, specialisation, and knowledge spill-overs that drive virtuous cycles of economic growth – dynamics collectively termed 'agglomeration economies'. The size and density of urban spaces allows infrastructure, public spaces, and services to be provided more efficiently at scale. Dense and varied input markets – from business services to parts to skilled labour – enable firms to specialise and pursue higher value-added activities; the same density also entails larger markets for firms' outputs, facilitating production at scale. Workers benefit too, from improved worker-firm matching, access to a broader range of goods and services, and opportunities to deepen human capital through urban knowledge spill-overs.

These agglomeration economies mean that workers and firms benefit from being close to one another. Thus, the more workers and firms are added to an urban space, the higher the productivity of each becomes. Unlike in standard economic models, where diminishing returns are observed, agglomeration economies therefore offer increasing returns – an avenue to virtuous cycles of growth. International evidence finds that on average, a one percentage point increase in a country's urban population results in a 3 to 8 percent increase in national per capita income.

But the agglomeration economies that drive growth can all too easily be undermined by congestion effects: inadequate housing, lagging transport infrastructure, overstretched systems for public service delivery (health, education, sanitation and so on). Infrastructure gaps create inefficiencies and thereby reduce worker productivity, for example through longer commutes. And a worker's lack of access to, say, water and sanitation services, will not just harm the worker but also increase the number of sick days that he or she takes off work. Public policy and investment are central to ensuring that cities maintain their productive edge and manage the costs of congestion.

Urban economic growth is already having an inclusive impact. With urban economic growth comes higher employment, a larger share of manufacturing jobs and lower poverty rates:

- South Africa's cities are adding jobs at a disproportionate pace. Between the first quarters of 2015 and 2017, metropolitan areas accounted for 59.5 percent of all formal and informal jobs created nationally.
- Metropolitan areas produce 2.5 time more manufacturing jobs per resident than elsewhere.
- Urban poverty in South Africa declined steadily from 2006 to 2011. The reversal over the succeeding four years, from 2011 to 2015, still left it far below its 2006 level. In 2015, urban poverty stood at half the rural poverty rate. Moreover, as many as 385,000 people were lifted from poverty over 2008–2014 after moving from rural to urban areas: their poverty levels were halved, while unemployment fell.

All these facts suggest that faster urban economic growth should set South Africa on its quickest, most promising path to greater economic integration and poverty reduction. Such economic growth also supports spatial integration, as new job opportunities and value addition can change the spatial footprint of economic activity and fuel planned densification (while without growth, zoning and regulations can achieve little). Furthermore, by driving local land values up, urban economic growth should encourage private residential development across the city, accommodating more households.

South Africa experienced massive movement of people immediately following the demise of Apartheid, as more than a quarter of population reported to have moved within the five-year period from 1996. The overall migration rate was 26.4 percent in 1996, dipped to 13.8 percent in 2001 and then rose to 16.4 percent in 2011. The migration flow out of the Homelands has been contributing to reducing the spatial mismatch and to urbanization by augmenting skill formation in urban areas, and by improving social inclusion. At the same time, there has been major improvement in services and the expansion of formal housing, access to services such as water and electricity in the last 25 years (DBSA 2012). Much of this expansion happened in Black majority areas including the former homelands established under apartheid.

However, realizing inclusive growth through urban economic growth is not a foregone conclusion. The main challenge is the increase in migration from rural to urban areas within South Africa. This is both a result of urban economic growth and at the same time a critical challenge to inclusive growth (box 2).

Box 2. South Africa's cities are migration magnets—and will be for the foreseeable future

Census data show that since 2000, South Africa's internal migrants have begun a mass movement away from the rural homelands established under apartheid and into urban areas. In 2011, the overall migration rate (16.4 percent) was comparable to inter-county migration rates in the United States—whose population is considered one of the most mobile in the world.

While this increasing concentration of people in cities is typical of developing economies, it is fairly new in South Africa, which was slow to conform to the worldwide pattern. After all, many of today's integration challenges still reflect apartheid-era barriers to labour mobility, which inflicted long-lasting damage to residence and migration patterns. But now that South Africa's migration patterns have started to approximate global norms, workers are certain to keep converging on the cities.

Jobs are not the only factor pulling migrants in. Other urban advantages also matter. While we found income opportunities and lower unemployment rates to be among the top factors in a migrant's destination choice, additional determinants include urban amenities, such as housing and electricity. (Family reunification, historically the most important reason for migrating within South Africa, may also spur more movement into cities: workers settled in an urban area often bring their families after them.)

Because so many of South Africa's poor look to urban economies for social and material opportunity, internal migration is expected to continue and accelerate no matter what policies are in place: the only uncertainty is just how fast migration will rise. Productively absorbing migrants into cities is itself a large part of South Africa's integration challenge—and will not be possible without rapid urban economic growth.

Source: Background paper by Shilpi and others (2018; see annex).

The ability of urban economic growth to achieve integration objectives depends on how urban growth and spatial organization are managed. Metropolitan municipalities struggle today to serve existing residents while accommodating new migrants. Municipalities are under constant pressure to expand network infrastructure. They must supply services to indigent and lower-income households for free or at a reduced charge (although equitable share grants cover these costs). In principle, economic growth should enable cities to make needed capital investments while funding public programmes—but in practice, South Africa has not ensured that growth brings municipalities the revenue they need.

Although municipalities are tasked with meeting the needs of a growing population—for housing, transport and amenities, as well as further job growth—these are too often under-funded or unfunded mandates. Local political leaders may add to the burden with redistributional policies or mandates for equitable service delivery (local decisions may lead to higher-than-minimum standards for housing projects, for example).

Unless public investment in South Africa's cities can rapidly increase, inclusive growth will fail to materialize—and not only because of cities' unfunded mandates. Urban revenues also need to rise to finance that public investment, to hasten urban economic growth and to harness that growth to spatial and economic integration. Residents who climb the income ladder ought at the same time to climb the fiscal ladder, becoming contributors to the cost of public expenditure. Linking job and productivity growth to municipal revenues will be essential to making urban economic growth as inclusive as possible.

3. Housing and land use programmes should increase economic density

South Africa's efforts to formally house poor urban residents have relied primarily on two types of programme. The dominant type requires scale, mandating the construction of large subsidised housing projects, typically in undeveloped 'greenfield' areas at the city's edge. For example, a 5,000 unit development with an average property size of 200 square meters requires a site of 100 hectares for residential stands alone, or closer to 140 hectares including roads and non-residential uses. The need for such large parcels of land, to be affordable, creates a strong incentive to build megaprojects far from the centres of economic activity, hence far from access to jobs.

A second set of policies, much less extensively employed, provides incentives and subsidies for redeveloping neighbourhoods within the city: for example, to improve on existing informal housing, or to promote density aligned with new capital investments through transit-oriented development (ToD).

Both of these programmes have fallen short as vehicles for urban spatial and economic integration, although for different reasons:

- Large peripheral subsidised housing developments are not keeping pace with demand and cannot be funded at the required scale (especially given migration trends). Even if all poor residents were to be housed in these projects, they would be spatially isolated, far from the urban centres and sub-centres. This spatial distance from work opportunities—combined with the lack of efficient commuting options—perpetuates economic inequity.
- Incentives and subsidies for smaller-scale private residential development, whether as infill or along transport corridors, are currently too few, too new and too small to make much of a difference (yet). The scale and pace of these investments would need to increase rapidly to have a significant impact. More generally, urban land markets are not yet structured to enable demand-driven expansion in housing supply through integrated titling systems and formal transfer mechanisms. [1]

Large residential developments are not keeping up with demand

South Africa's present housing policy approach, dominated by large subsidised greenfield developments, has not met today's demand for homes. Nor is it likely to meet future demand, because the needed expansion in fully subsidised

[1] *Back-yarding remains informal and untitled; yet increasing in urban areas*

housing would be fiscally unsustainable. A clear sign of trouble is that both subsidised housing and serviced site delivery have fallen over the past decade (box 3).

As the supply of subsidised homes continues to lag, more households resort to the unsubsidised market—mostly in urban backyards and informal settlements. In 2016, 2.2 million households, or 13 percent, were still living in such informal residences (Community Survey 2016), with lower access to basic services such as water, sanitation and electricity. In South African metropolitan areas, the number of households in informal dwellings rose from about 970,000 to 1.25 million between 2001 and 2016, while migration resulted in 210,000 new urban households each year.

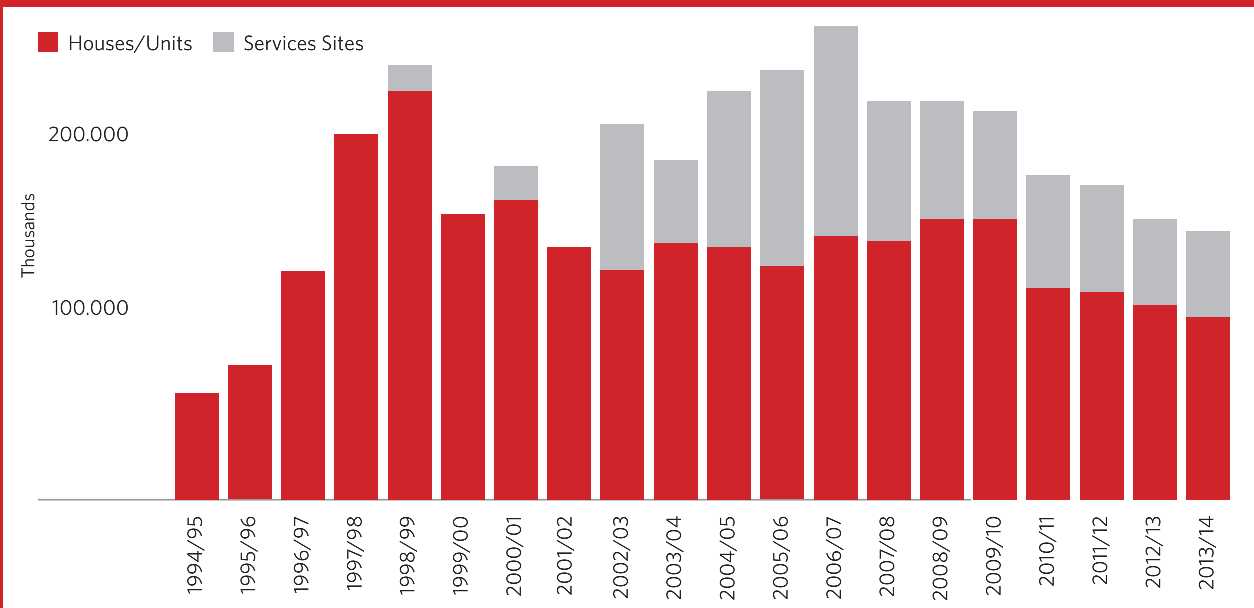
Could subsidised housing delivery simply be scaled up to meet demand? Not under current policies. Our analysis indicates that providing every needy household with a fully subsidised home—developed to existing standards—would cost R641 billion.

This amount does not include complementary investments in nearby economic development. Without such investments, large subsidised housing projects are likely to perpetuate spatial and economic segregation rather than combat it.

Box 3. An unsustainable approach to residential housing for the poor: South Africa's decade of decline in subsidised housing delivery

South Africa's delivery of subsidised accommodations has declined steadily and at times sharply over the past decade—from a peak of 235,000 houses and serviced sites in 2006/07, to fewer than 175,000 houses, sites, and subsidised rentals in 2016/17. Between 2014/15 and 2016/17, delivery of Community Residential Units alone (subsidised municipal rentals) fell from nearly 9,000 units to fewer than 1,000 units.

The figure below breaks down subsidised housing and serviced site delivery totals as claimed in national statistics. The steep decline since 2006/2007 appears in the falling bars at the right of the chart.



Source: NDHS 2017; AfricaCheck 2015

Why the sharp declines in these official figures for subsidised housing provision? A central factor is the low (and apparently declining) institutional capacity of municipalities, provincial departments and state entities involved in housing delivery and finance. Then there are project planning and implementation delays resulting from a shift towards megaprojects ('catalytic' projects). Finally, subsidies have not been increased for inflation since 2013/14—so they fall short of the actual costs of subsidised housing. This shortfall especially constrains Social Housing, where subsidies were only recently updated for the first time in many years.

Programmes also may not be carried out as intended. For example, projects in the Upgrading Informal Settlements Programme (UISP) are meant to regularise tenure and bring on-site services to informal residents. Although the scale of tenure and service delivery has received welcome attention through UISP, many settlements end up experiencing rollover development: households are removed, a greenfield development is built and the former residents are rehoused in the new formal units. By requiring relocation and house delivery, this displacement approach increases costs—and thus limits the number of people who can benefit from the programme.

Source: Gardner and Graham 2018 (see annex).

As policymakers heed the fiscal warning signs, they should consider that the challenge of housing the urban poor is not fundamentally a fiscal one. Today's housing shortfalls arise in part from South Africa's traditional approach to housing policy. Economically, the main objection to large greenfield residential projects is not their cost, but that they will reduce accessibility and economic density rather than promote it. A better understanding of the economics of urban land use should help to address this issue.

Urban planning generally should aim to achieve the agglomeration effects that make firms and workers more efficient and productive. People living in greenfield developments are located far from opportunities—and the lack of flexible transport options makes this distance even more challenging. Long commutes waste time that could be used productively, while the resulting traffic contributes to congestion effects and further limits the efficiency of urban markets.

A different approach to housing programmes, already fully accommodated within existing policy, could see all urban residents formally housed at a far lower public expense. for example, the state could cut its estimated cost by two-thirds (to R224 billion) by redefining the standard subsidised product as a serviced site alone, with suppliers and households taking on a greater private role in financing and delivering housing stock.

Even more striking than these fiscal considerations are the economic reasons for a shift to a demand-driven housing policy: part of a new approach aimed squarely at inclusive economic growth. Not only are large-scale developments failing to keep up with demand, they are also aggravating South Africa's inherited spatial form by failing to integrate residents spatially or economically.

Incentives and subsidies for smaller-scale residential developments

To increase economic and housing density and match more workers with jobs, South Africa's cities would need to re-orient housing development programmes away from large greenfield projects and more towards a massive increase in smaller development around sub-centres. Such demand side development is more likely to provide opportunities for greater choice of location, size of properties, levels of service and size and nature of accommodations that can be produced. A broader subsidy approach is required that facilitates access to land, tenure and services, and supports housing development over time. Demographic indicators clearly show that the major part of South Africa's housing backlog is for smaller households - one, two and three-person households, calling for differentiation in housing delivery.

Of course, this does not mean that all large greenfield projects should be abruptly terminated. The housing challenge will not be solved by any `one size fits all' formula. A differentiated approach based on strong partnerships between government, households and private sector, is likely to yield the best results. `Massive-small' projects are only one approach among many. Nevertheless, it remains true that green-fields megaprojects are currently over-emphasised and are yielding adverse long-term results. There are too few smaller and better-located developments, and they are limited by institutional constraints and market rigidities. It is therefore important to take definite steps to adjust the current policy and operational emphasis.

Unfortunately, municipalities have little power to put their land and housing markets on this new path. Spatial Development Frameworks (SDFs) currently have little influence on urban land markets. Much has been made of transit-oriented development (ToD), which involves mixed-use development along transport corridors and around stations. But ToD involves long-term investments. Cost-recovery depends on future ridership over many years. To be successful, such long-term investments entail precise coordination, which is usually challenging and has so far proved elusive. An examination of broader housing policies reveals few incentives and subsidies for urban restructuring and densification, none of them especially effective (box 4). Such efforts will only really matter if they are scaled up.

What instrument could cities use to encourage investment in infill development, which increases density and accelerates urban economic growth? In a word, markets. Household demand would need to rise, and that increase would need to be able to drive increased housing supply. Such demand is constrained today by low housing affordability, and further, by high indebtedness—meaning low creditworthiness—among low-income and middle-income households. In fact, half of South African adults are borrowing from multiple sources often to repay other debts. Reportedly, fewer than one out of four adult South Africans have ever used credit for 'developmental purposes' such as housing and education (FinMark Trust 2017), while nearly two-thirds of housing application loans are rejected (BusinessTech 2017).

Assuming that these demand-side constraints could be addressed, urban land markets would also need to become more efficient. Various institutional rules that shape cities by constraining or enabling shifts in land use—such as plot size regulations and subdivision procedures—could become candidates for reform.
In one example, a partnership between the City of Johannesburg, the Johannesburg Development Agency and TUHF (an inner city financial institution) is developing various projects under the City's Inner-City Housing Implementation Plan (ICHIP) though multiple small-scale interventions. These include Sectional Title rehabilitation, the release of buildings for conversion or redevelopment and the showcasing of development opportunities for small-scale developers in targeted areas (Gardner and Graham 2018).

Box 4. Spatial matching through economic densification: a necessity for urban economic growth, still neglected or ineffectively targeted by most housing policies

Increasing economic density and spatial matching—giving residents and workers closer access to job opportunities and services—is a key aim of urban restructuring for inclusive growth and integration. Although some programmes have targeted economic densification, they remain too small and tentative to have had much of an impact on South Africa's cities.

The Built Environment Performance Plans (BEPPs) have moved in a promising direction, though not on the desired scale. Their main strategies are to densify city cores and specific secondary nodes, to invest in higher-intensity transport-oriented development corridors and to support infill development. The BEPPs have managed to incrementally improve coordination among housing developments, transport and infrastructure plans and funding mechanisms. Still, these investments remain too small to yet make a significant difference.

Only one residential subsidy programme has restructuring as an explicit goal, and it has remained small and ineffective. For various financial and institutional reasons, the Social Housing Restructuring Capital Grant accounts for just 1 percent or so of all subsidised units delivered since 1994 (RebelGroup Advisory Southern Africa, 2015). Because the grant comprises small projects spread across many Restructuring Zones in metropolitan areas and secondary towns, its subsidised units do not afford concentration benefits comparable to those of urban infill development.

Given that urban densification and spatial matching are not systematically promoted, what more can be done to target these objectives? Most helpful would be to reduce institutional constraints on urban land markets. Recently, middle- and upper-income market housing has begun to show signs of densification in townhouse-type 'walkup' apartments. If demand were allowed to drive a much larger share of urban residential development, economic density and spatial matching could increase far more rapidly.

To enable more demand-driven infill development and stimulate urban densification and restructuring, there should be more emphasis on a 'massive small' human settlements development paradigm, including:

- Subsidies to attract medium and small-scale infill development.
- Demand-side subsidies to assist accommodation purchase by working class households - revamp FLISP to mobilise and convert effectively demand of middle-income households to bridge the gap/affordable housing markets. [2]
- Programmes to expand and improve low-income rental housing developed by household landlords.
- Pilot demand-side subsidies to enable mobility and choice of low income households for rental accommodation.
- Inclusionary zoning to spatially integrate poor residents in economically dense neighbourhoods.
- Strategies to support private inner-city and affordable transit-oriented development (ToD).

Increased housing investment is envisaged in this strategy, but not necessarily on a 'per household' level. The nature of instruments required here provide initial access through a level of equity to serviced land or to completed units, but augmented with non-public funding sources (own investments, bank financing). Also, massive small envisages rental developments, implying developers and landlords undertaking developments aimed at those unable or unwilling to purchase accommodation. The intent of facilitating many small developments and developers is to also enable development within the existing urban fabric, closer to transport, economic hubs and other urban amenities.

Realizing this 'massive small' paradigm would require urban investment flows to become larger, more sustained and better coordinated. A first step would be to grant municipalities greater fiscal authority. More control of funding would allow cities to augment spending on transport infrastructure, accounting for the fact that ToD relies on long-term and recurrent public investments to spur private investment. The return on investment and cost recovery needs to be considered in a number of forms: of the transport infrastructure capital investment and running cost; in the household investments and household running costs (of housing costs and transport costs to and from employment) and amenities and in the form of capital appreciation of the housing assets due to location. Expanded subsidies, especially at the municipal level, could also attract ToD and other pro-poor development near sub-centres by helping developers invest in denser, higher-built structures. Finally, city-specific subsidy mechanisms could promote the development of city-subsidised rentals for households earning less than R1,500 per month. Planning, zoning and other controls can be used to manage the risks of gentrification.

A key feature of all these considerations is that they entail bringing workers and jobs into closer spatial and economic proximity. This principle should apply not just to small-scale residential development incentives but also to large-scale subsidised housing provision. Even a massive greenfield project can promote integration

[2] *The current FLISP can be enhanced by better facilitation of access to private finance (end-user and development / construction finance). Certain banks are starting to develop products with this in mind. Rental finance also becomes a key driver of this type of development.*

if accompanied by complementary investments and incentives, coordinated across sectors and designed to combine neighbourhood amenities with new employment sub-centres. Like other urban economic sub-centres (discussed below), these could generate agglomeration effects while reducing commuting times and fares. The initial costs of such coordination would be repaid over the long term. And information on relevant processes would need to be reported transparently and clearly, with improved cooperation among levels of government.

Redistributing functional assignments among government levels would be a critical part of these policy shifts. Metros currently have Level 2 accreditation for public housing delivery, which means that they can carry out housing programme management and administration including developing human settlements building plans, subsidy registration in respect of national housing programmes such as Upgrading of Informal Settlements, and Social Housing projects. However, at Level 2, all funding is still conveyed through provincial governments.

Full assignment involves carrying out Level 1 and level 2 functions and then transferring the funding directly to municipalities. Several metro municipalities are clearly capacitated and ready to accept these responsibilities. The national Department of Human Settlements is currently considering an approach which would assign such responsibilities on a programme-by-programme basis, for instance starting with Upgrading of Informal Settlements.

Table 1: Human settlements functional assignment levels

Levels	Responsibilities
Level 1	Subsidy budget planning and allocation, including housing subsidy budgetary planning across programmes and projects; planning of subsidy/fund allocations, and project identification
Level 2	Level 1 functions plus programme management and administration, including project evaluation and approval, contract administration, subsidy registration, programme management including cash flow projection and management and technical (construction) quality assurance.
Assignment	Level 1 and Level 2 functions plus financial administration, including subsidy payment disbursements, and financial reporting

Granting metropolitan cities control over basic municipal functions would ensure that a given housing policy's costs and benefits—social, economic and financial—are weighed and aligned within one sphere of government. Given the necessary human settlements competences, and after a devolution of housing functions and budgets, cities could tailor local financial solutions and direct their expenditures towards urban development objectives. They could also attract more private investment.

In short, municipalities should be enabled and encouraged to rethink their approach to urban land markets and development subsidies, to generate demand-driven infill development. A more robust system to identify and release publicly held land needs to be considered. Many cities have undeveloped or underdeveloped public land holdings from the level of deceased estates ceded to municipal or provincial entities, through to large state landholdings and non-core land on the balance sheets of state owned entities that cannot be disposed of due to MFMA and PFMA requirements of 'fair value'. Significant work has been done regarding a shift in Public release of land for housing using a 'best use' approach, rather than a maximum price approach. A more robust land identification and release approach, including strategic use of expropriation should be considered.

This undoubtedly requires different skills and capacities from those which currently exist in many municipalities, or indeed in the public sector as a whole. But it is possible to develop such skills and capacities while also avoiding the obvious risks (corruption and `state capture'). Importantly, the need for municipalities to develop different skills and capacities is something that will only be addressed once they are allocated the relevant authority, and this should thus not dissuade us from pursuing an approach which will improve development outcomes.

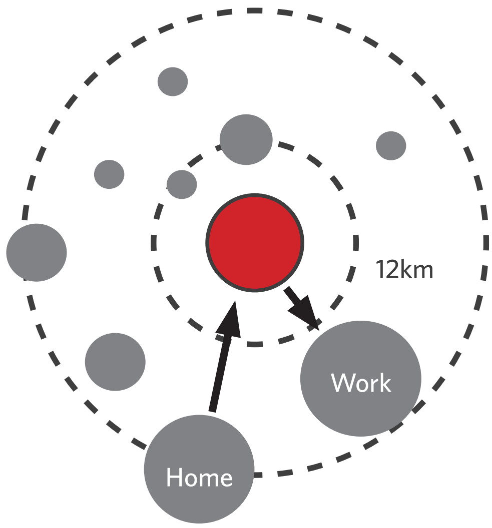
4. Public transport should reduce economic distance

Transport connections drive urban economic growth, helping firms produce and trade goods and services more efficiently. By linking workers to jobs, urban transportation systems directly drive inclusive growth—or at least they should.

But in South Africa's cities, the legacy public transport systems (rail and provincial bus contracts), still very much in use, were designed when they were essentially monocentric, and transport routes were based on a `hub and spoke' approach. The problem is that South Africa's urban forms are no longer monocentric. Instead they are polycentric, with multiple economically important sub-centres dispersed across the metropolitan areas. The central business district no longer uniquely dominates the city's economic growth, much less its inclusive growth. The economic life of various sub-centres (neighbourhoods where jobs, structures and services are most densely concentrated) depend on connections to each other and to the many places where workers reside, including township areas that are a legacy of apartheid, rather than their connections to a central business district.

The commutes of many poor South African urban workers take them between sub-centres spread across the city, or between one of these sub-centres and a subsidised home on the periphery. Moving between home and work can mean making two trips: one inbound to downtown, then another outbound with a transfer (figure 1). If the transfer requires changing from one mode to another, the worker loses more time—because transport planning is not coordinated across modes, and stops and stations are rarely located with bimodal transfers in mind.

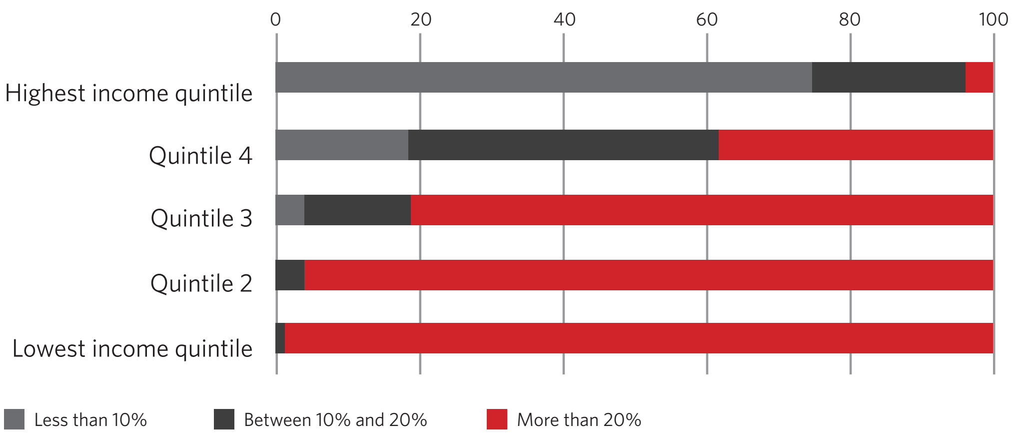
Figure 1: In polycentric cities, hub-and-spoke transport systems make commuting by public transport unfeasible



Source: Salat 2016.

Along with these lengthy, inconvenient journeys come steep costs for public transport users, which increases economic distance. In 2013, the cost of public transport between home and work took a sizable bite out of income for the typical South African urban commuter. For almost all commuters in the lowest and second-lowest income quintiles, this cost was more than 20 percent of monthly income (figure 2).

Figure 2: Share of per capita monthly household income spent on public transport to work, by income quintile (2013)

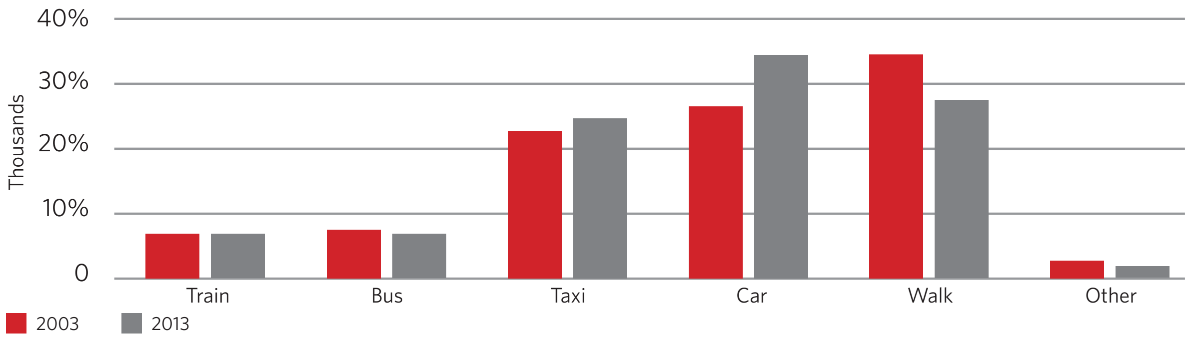


Source: Background paper by van Ryneveld (2018; see annex).

Public transport, even as it fails to meet most commuters' needs, also puts considerable pressure on the fiscus. Public transport investment is heavily skewed towards rail, with about 60 percent annually directed to PRASA capital and operating subsidies. In contrast, the public transport mode share for commuter rail in metropolitan cities is just 16.5 percent.

Rather than pay high transport fares only to endure long commutes with inefficient connection points, workers turn to more flexible options such as minibus-taxis and private or semi-private cars. In 2003, the proportional use of rail and bus transport was low, but by 2013 it had declined still further (figure 3). In contrast, the proportional use of taxis rose slightly, that of cars strikingly.

Figure 3: Shares of people using various transport modes in 2003 and 2013



Source: Background paper by van Ryneveld (2017; see annex).

In Tshwane—the metropolitan municipality with the steepest rise in car use—the share of households with car access climbed from 33.7 percent in 2003 to 48.2 percent in 2013. Over the same decade, the share of people over age 18 with a driver's license in Tshwane rose from 30 percent to 42.7 percent. These increases partly reflect rising incomes; however, poorer people are also buying cars and opting out of public transport. More lower- and middle-income earners are being affected by higher fuel costs, and these are the car users most affected by road tolls. All the while, traffic gets worse: the average time spent commuting in South Africa's five largest metropolitan areas rose from around 45–50 minutes in 2003 to around 50–55 minutes in 2013 (background paper by van Ryneveld 2017; see annex).

The legacy hub-and-spoke public transport systems thus do not serve the poor well. They may even have contributed to relative declines in rail and bus use. They cannot achieve network effects at the present scale and pace of investment—nor can they be expanded more rapidly, for which the costs would be unsustainable.

Box 5. Bus Rapid Transit systems are a poor fit for low density areas

South Africa's cities have seen a wave of investments in bus rapid transit (BRT). Some of these investments now appear to have been misplaced. For example, in Gauteng the combined modal share of the Gautrain and BRT systems is less than 2 percent of public transport trips.

An important reason is that BRT is suited to higher density cities with heavy concentration around transport corridors, while Gauteng fits the wider South African pattern of lower density settlement

(Bubeck, Tomaschek and Fahl 2014).

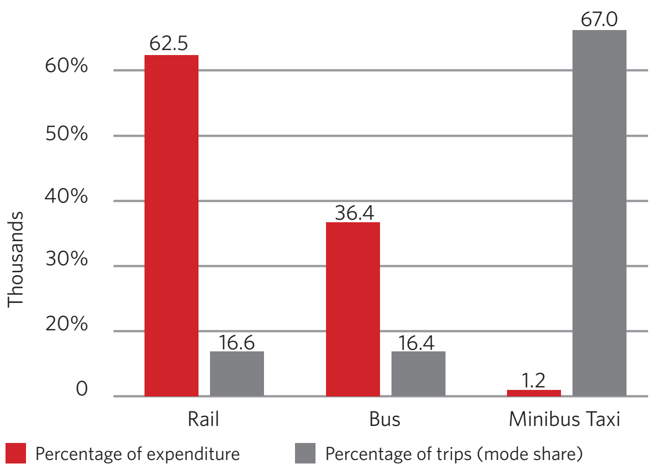
Many BRT systems are also facing a crisis in fare revenue, which is supposed to cover operating costs.

It should be said that not all BRT projects are equally challenged: Cape Town's serves 66,000 people daily, albeit at high operating costs. Still, BRT systems have often proved a poor fit—in some cases impeding local capacity building.

Source: Background paper by van Ryneveld (2018; see annex).

Despite these clear symptoms of past misallocations, most spending on public transport in South Africa is concentrated on modes which account for a minority of public transport trips. For example, even though minibus-taxis handle most trips across metropolitan municipalities, this mode receives only a tiny share of national resource allocation (figure 4). [3]

Figure 4: Spending on urban public transport continues to neglect the needs of most workers



Source: Background paper by van Ryneveld (2018; see annex).

[3] *Minibus taxis are sometimes the most expensive public transport options available to passengers, where the flexibility and time gained is likely to compensate for higher prices.*

Public transport programmes can be redesigned to increase the options for subsidised commuting, reflecting demand for flexible solutions serving all city sub-centres. Such programmes would affect all public transport modes, employ demand-side subsidies and coordinate systems for greater efficiency.

Several of the metros are making progress on developing coherent integrated public transport network (IPTN) plans, which certainly include many complementary routes cutting across trunk routes, and directly connecting outer urban nodes to each other. These plans and services are certainly polycentric in conception; and they are also beginning to be multi-modal in scope. Public transport infrastructure investment decisions by all agencies should be based on the IPTN plans established by the city. This should allow for much better matching of public transport services to demand, but needs to be rapidly scaled up.

The separate allocation of public transport funding streams for rail, provincially contracted bus services, municipal bus services, all operating on the supply side, does not under current circumstances generate sufficient incentive for collaboration and integration within each city. Comprehensive coordination of urban networks would become more institutionally feasible if government were to consolidate municipal public transport functions at the metropolitan level (Gauteng is a special case: as an extended city-region governed by three metropolitan municipalities, it may be appropriate to consider consolidating at the provincial level instead). Consolidating public transport functions at municipal level would allow for integrated ticketing, better decisionmaking on the funding of different public transport modes and would also be likely to trigger improvements in the overall service to users of public transport.

At the same time, new local revenue sources should be sought to help provide for long-term operational subsidies to public transport. Like housing policy, transport policy poses a fiscal challenge: according to estimates, expanding the public transport network by 6 percent annually would impose R21.5 billion per year in added costs by year 10. In the shorter term, the National Department of Transport could work now to align incentives among the Passenger Rail Agency of South Africa (PRASA), buses and minibus-taxis. In particular, the Department could implement the transfer of functional responsibility for public transport to municipal governments (as mandated by the National Land Transport Act of 2009).

In summary, the key issues facing urban public transport in South Africa are:

- The legacy of hub-and-spoke public transport services.
- Separate public transport funding streams for rail, provincially contracted bus services and municipal bus services, all operating on the supply side, with minimal incentive for collaboration and integration.
- A failure to integrate the various modes into comprehensive city-wide public transport networks.
- A crisis in fare revenue emerging from commuters increasingly turning to cars.
- Inappropriate choices of public transport technologies, on the one hand, and the lack of support for key public transport modes on the other.

The recommendations are therefore:

- Plan and implement multimodal and polycentric integrated public transport networks for each city.
- Devolve public transport decisionmaking and revenue raising authority to metros based on demonstrable capability.
- Investigate new municipal-level revenue sources to accommodate long-term operational subsidies for public transport.

5. Special economic zones should integrate with city economies

Matching jobs with people is a key challenge, both for economic integration and ultimately for spatial integration. Efficient urban transport can reduce economic distance between people and employers. Yet South Africa's legacy of segregation has created wider barriers between people and job opportunities. With so many poor people living in peripheral and rural areas, far from the jobs concentrated in cities, how should policy respond? By moving jobs to people? Or by moving people to jobs?

In recent years the government has championed the former approach: bringing jobs to people. Central to this approach are the Special Economic Zones (SEZs). A 'place-based' policy, the SEZ programme focuses on creating jobs, skills and market linkages in underdeveloped parts of the country by using tax incentives and subsidies for investment. It aims specifically at industrial decentralization, 'establishing new industrial hubs' in mostly rural areas rather than fast-growing cities (IPAP 2012/2013).

With the SEZ programme now a decade old, concerns have been voiced about this use of industrial policy for spatial equity. While ostensibly promoting industrial development and growth, SEZs are often placed far from the urban areas where they could gain from agglomeration effects. The SEZs' economic purpose as industrial incubators thus takes second place to their spatial mandate as integration vehicles.

Is integration efficiently promoted by setting up industrial facilities far from markets and urban infrastructure? Or would it be less costly, and more effective, to advance integration through faster economic growth achieved in cities? Might SEZs themselves be more likely to fulfil their dual mandate in urban areas—stimulating competitiveness alongside inclusive economic growth—rather than in rural ones, where they are essentially a spatial equity instrument?

The high and rising internal migration rate brings these questions into sharp relief (see box 2 above). Migration to urban areas undermines the rationale for rural SEZs. While lower-income people and households in South Africa are generally less mobile than others, they comprise the larger share of internal migrants.

Considering how South Africa's poor are bringing themselves to urban jobs—may raise doubts about whether SEZs are the best way to bring jobs and people together. A look at global experience with SEZs tends to confirm these doubts. Internationally, the main lesson of SEZs is the exceptional difficulty of establishing effective new settlements on remote greenfield sites without inherent economic advantages. Despite some successes, failure has been far more common (box 6).

Box 6. How Peru's SEZ programme targeted the nation's lagging areas—and failed six times out of seven

Peru's use of SEZs to stimulate economic growth in lagging areas has mostly failed. Of seven zones only four are operational, and only one can claim mild success in its economic development aims.
Why did six out of seven SEZs fail? Because they targeted less economically dynamic areas without careful concern for local conditions and attributes. Notably, no effort was made to identify more promising areas with greater potential for positive development impacts.
Source: Rodriguez-Pose and Wilkie 2017.

Source: Rodriguez-Pose and Wilkie 2017.

Coordination failures and incentive misalignments in South Africa's SEZ programme raise further concerns. Most important, while SEZ regulations and investment promotion strategies depend largely on national or provincial authorities, the provision of water, energy and roads infrastructure is the responsibility of the municipality.

A key success factor for SEZs in the South African context is intergovernmental alignment: ensuring coherent policy, programmes and investment across all three spheres of government, operating in the local jurisdiction, that provides an overarching frame for private investment. Any substantial imposition on municipal planning and budgeting which is not well co-ordinated with other government programmes (notably SEZs, housing and public transport) is likely to lead to incoherent and sub-optimal results, and also to municipal financial stress (box 7).

Box 7. Municipal government incentives are poorly aligned towards servicing SEZs in remote areas

One reason why today's SEZs may be comparatively inefficient is that their basic services and infrastructure can be costly to supply and challenging to ensure. Although the Department of Trade and Industry (DTI) provides substantial funding for an SEZ's basic infrastructure, it does so only for three to five years and on a declining basis. Provinces are expected to provide for operating costs, and municipalities must provide bulk service connections and sometimes public transport services. Yet the municipalities and the SEZs have no formal relationship: the SEZ Act does not even refer explicitly to 'cities' or 'metropolitan areas'. This disconnect can be challenging for SEZs located just outside areas served by municipal governments.

Generally, SEZs tend to aggravate fiscal risks for the municipalities on which they depend—meaning that incentives are not well aligned to keep rural SEZs connected and serviced. Although the municipalities collect revenue for services provided to the SEZ, the scale and location of some SEZs can reduce this incentive. For example, if the SEZ sits beyond the city's edge, electricity substations and wastewater treatment might cost more than elsewhere: too few rate-paying customers are available to share the costs. Buffalo City thus bears responsibility for R250 million for roads, electricity substations and wastewater infrastructure supplied to a nearby SEZ. Further increasing relative costs is the fact that an SEZ on the urban periphery is unlikely to be efficiently connected to public transport.

SEZs are likely to be more successful (particularly with respect to job creation) in larger urban areas where there are agglomeration economies, given that supply chain linkages tend to be concentrated in larger urban areas. According to a recent analysis of 237 SEZs in 19 countries, the zones were likely to perform better in economically denser settings—and their positive spill overs were significant only within 10km (World Bank 2017). SEZs work better and create more jobs when they are well integrated into city economies.

Locating SEZs in urban areas, with the benefits of economic density, could help make South Africa more globally competitive; create jobs; and drive inclusive growth. What would be needed is a clear alignment between sectoral industrial policy and spatial development—an alignment not apparent in today's SEZ programme, which puts industrial development needs second to a spatial focus on peripheral and rural areas. Rather than bring jobs to remote areas, policy could promote growth in leading municipalities while investing in poor areas to increase mobility through basic services and human development.

The goal of SEZs within metropolitan areas would be to structurally transform a national economy not yet adapted to labour-intensive manufacturing. By contributing more to economic growth and transformational job creation, an urban SEZ might ultimately drive more inclusive growth than a rural SEZ. Even if we assume that the SEZ programme retains spatial equity as an immediate focus, a poor urban neighbourhood might still seem at least as promising a site for an SEZ as a poor rural area (box 8).

Box 8. South Africa's real-estate oriented Urban Development Zones (UDZs) and the potential for urban Special Economic Zones (SEZs)

In 2003, South Africa launched tax incentive packages called Urban Development Zones (UDZs) for 16 inner cities. The UDZs were meant to make unviable investments viable, spurring refurbishments and upgrades and scaling up development by increasing future returns on equity. In 2008, an evaluation concluded that the incentives had already made marginal developments viable. The UDZs are physically large: Johannesburg's contains about 20 square kilometres, almost the entire inner city (including the central business district, Braamfontein, Hillbrow, Newtown, Yeoville and other areas).

By targeting real estate redevelopment rather than business investment or creation, South Africa's UDZ initiative focuses on a narrower goal than many other similar interventions globally. In North America and Western Europe, such zones have explicitly promoted investment and job creation in economically lagging cities or, more commonly, 'economically distressed' urban neighbourhoods.

Could a UDZ programme be tailored to South African cities, with a stronger focus on jobs and industrial development rather than commercial real estate? It might work. Such zones—sometimes termed 'urban enterprise zones' or even 'innovation zones'—would carry risks, as they follow a similar logic and entail some of the same weaknesses as Special Economic Zones (SEZs) in remote areas. Yet lagging urban neighbourhoods also enjoy advantages: located not far away are deep labour pools, suppliers, services, infrastructure and social amenities. Accordingly, urban enterprise zones might stand a better chance of success than SEZs in areas far from cities.

Global evidence on the economic outcomes of urban enterprise zones is mixed. Some have no significant positive outcomes. Others have positive outcomes within the zone, but negative ones outside it—businesses move into the zone and may draw better qualified workers from other neighbourhoods, but no new jobs are created overall, especially for locals (Neumark and Simpson 2014). Why did some zones succeed where others failed? The evidence, though scarce, suggests that policies need a tight focus on real economic constraints. For example, several studies indicate that enterprise zones are unlikely to employ local residents unless they harness social networks or come with parallel skills support and linkage policies. As with SEZs, fiscal incentives alone may not suffice.

Source: Farole, Kilroy and Norman 2014.

What if urban SEZ investments should become challenging because of low access to land and industrial infrastructure? One option would be to look at more extensive and creative uses of industrial infrastructure and at a broader land use policy. Greater flexibility would follow for meeting specific city and neighbourhood needs, as well as for reaching a wider range of locations than under an SEZ programme. For example, networks of smaller-scale urban industrial estates could be linked to an SEZ that is not spatially contiguous—or Urban Development Zones could promote investments by facilitating industrial land access and industrial facility upgrades (see box 8).

Continuing efforts are needed to promote economic activity and jobs in existing remote residential areas—these are established and cannot be moved. In particular, township economic development can be promoted by strengthening the business environment through complementary investments in basic services and human development, and by better connecting townships to the rest of the economy. Further work could explore opportunities to develop local scale and specialisation within metropolitan areas and townships, including:

- Developing a typology as a framework for design and implementation.
- Stocktaking and consolidation of research on township economies.
- Analysing density, clustering and specialisation within townships.
- Strengthening land tenure, land use and registry systems (including extending coverage of formal property titling to low value properties in township and low-income neighbourhoods).
- Targeting support for settlement upgrading, and possibly densification or regeneration.

Further, education and training facilities and programmes are important economic development resources but fall under a national department making it institutionally harder to achieve alignment and collaboration with local business and employers. Municipalities should actively promote business-college linkages, not only through the sectoral SETA frameworks but through local and regional initiatives.

For rural areas, leveraging agricultural processing and agribusiness will be important. To benefit fully from the national investment in SEZs, these industries could be better integrated into adjacent urban areas. The Department of Trade and Industry (DTI) could lead the effort to strengthen coordination among key stakeholders, especially national, provincial and city government.

More generally, any proposals to create new remote residential areas may prompt concern. Such proposals, even without meaning to, are likely to perpetuate the spatial legacy of apartheid (which designed townships specifically to be far from work opportunities). Similarly, employer incentives should not chiefly promote future SEZs in remote areas—or focus on capital-intensive industries anywhere. Instead they might encourage labour-intensive industries to locate near urban sub-centres, where they can gain from agglomeration economies.

6. Municipal finances should be sustainable over the long term

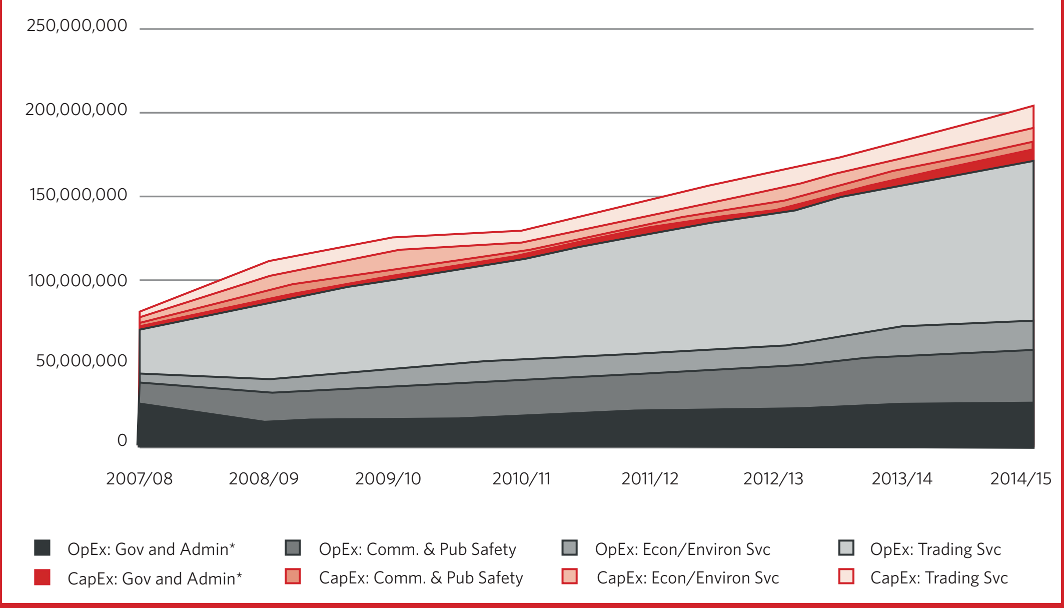
Based on the historical municipal fiscal picture in aggregate, there is little reason to believe that municipal finances as a whole are at immediate risk of becoming fiscally unsustainable. Growth in urban expenditures and revenues is taking place in a gradual and balanced manner, and municipal borrowing and debt are likewise equally stable over time. However there has been a long-term tendency for operating spending to grow more quickly than capital spending. This is an area of risk.

In addition, the current approach to spatial integration assumes that municipalities will bear many operating costs (associated with public housing and public transport) and capital costs (to provide bulk service connections to SEZs). Municipalities have also had to carry the costs of underfunded mandates for many years. Operating costs and unfunded mandates account for a rapidly rising share of aggregate municipal expenditure (box 9)—and that is not sustainable.

Box 9. Past approaches to spatial integration policy have burdened cities with rising recurrent costs

In 2015/16, R226 billion was spent on urban functions in South Africa. By far the larger share went to recurrent operating costs (81 percent) as opposed to capital investments (19 percent). The figure shows that while the difference is longstanding, recurrent costs have surged.

Municipal operating expenditure in South Africa's urban areas rose steeply from 2007/08 to 2014/15 (both absolutely and as a share of all municipal expenditures)



Note: Operating expenditure is blue, capital expenditure red. Each type is disaggregated into four broad functional categories—*governance and administration; community and public safety; economic and environmental services;* and trading services, including electricity, water, waste water management and waste management.

Source: Background paper by Boex and Karger-Lerchl (2017; see annex), based on audited figures from the Local Government Finance Database.

Box 9. Past approaches to spatial integration policy have burdened cities with rising recurrent costs (Continued)

The grey areas in the figure stand for cities' aggregate recurrent operating costs. The light grey area—and the largest—represents 'trading services': electricity, water, waste water management and waste management. Clearly, urban expenditure is being driven by the recurrent costs of public services.

While cities' aggregate operating expenditure increased fairly steeply over 2007/8–2014/15, their aggregate capital expenditure rose much more slowly. Although the main drivers for the increase in operating costs were bulk purchase or electricity and water, as well as personnel costs, there is little remaining capacity for municipalities to take on further operating costs associated with public housing and public transport programmes.

The main storyline that has emerged from the various background analyses of urban public finances and urbanization is one that finds that the overall architecture of urban public finances in South Africa continues to be sound, but which recognizes that there are numerous competing demands on urban fiscal space.

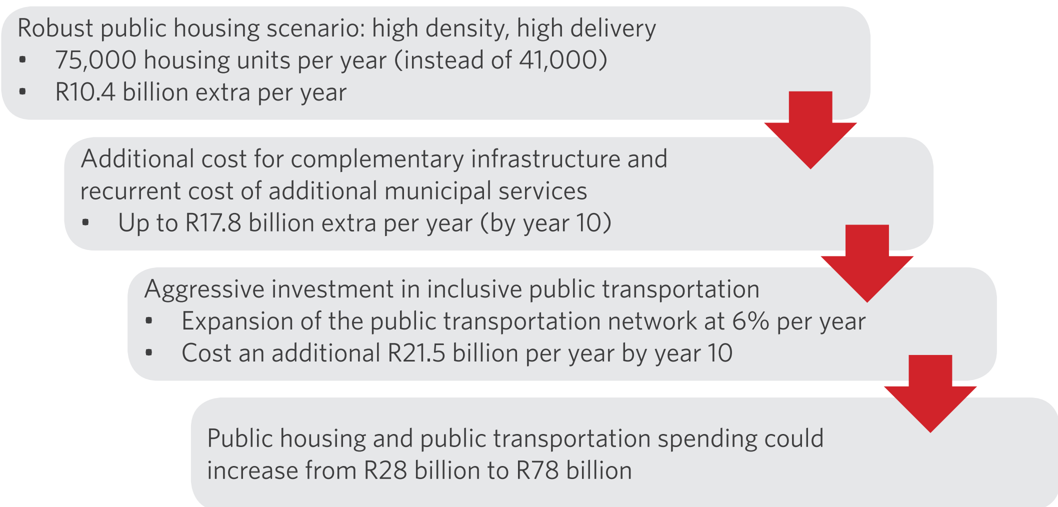
On the revenue side of the ledger, there is a reasonable concern that perpetual deferred maintenance and under-investment in key urban infrastructure could eventually curtail urban economic growth, which is the only sustainable long-term generator of urban fiscal space. At the same time, it appears that there are structural obstacles in the nature of urban revenues that are preventing metropolitan municipalities from successfully converting upward economic mobility into sustained growth of their revenue base. Indeed, as urban fiscal space is tight—and looks to be tightening further in the future—the urban finance system may be at an inflection point where some fiscal adjustments may be necessary.

On the expenditure side of the ledger, even if South Africa's cities are not facing an imminent or systemic fiscal crisis, a 'business as usual' approach to public housing and transport policies will pose long-term cumulative fiscal risks. Neither the urban municipalities' operational budgets nor their capital budgets are on track to meet future needs for public housing and transportation, at least as envisioned under current policies.

Any effort to keep up with demand by expanding fully subsidised public housing and public transport using today's policies and standards would inflict high costs on metropolitan municipalities (figure 5).

This troubling fiscal picture has resulted in part from past approaches to subsidised housing provision and public transport investments (such supply-side approaches are often inefficient) combined with the allocation of operating and servicing costs to cities. Of the more than 40 percent of urban housing expenditure that is made by provincial governments, a majority goes to public housing development, with related services up to the municipality to provide (although the equitable share grant is intended to cover these costs). In effect, municipalities have a considerable fiscal incentive to reduce the pace of new housing construction for the urban poor. Similarly, of the nearly two-thirds of urban public transport expenditure that is made by national and provincial governments, a large portion is capital intensive (commuter rail, dedicated bus lanes) yet relies on future fare collection and enforcement to cover long-term operating costs. In many cases the future fare revenues cannot realistically be expected to cover these costs, so ongoing operating subsidies are required.

Figure 5. Expanding today's urban public housing and transport investments would cost far too much



Source: South Africa Urbanisation Review background papers.

Municipal capital budgets also call for attention: capital expenditures are lagging behind cities' needs. In 2015/16, urban municipal governments spent R30 billion on capital infrastructure—yet a recent study had found that metropolitan municipalities would need to spend an average R43 billion annually to provide key services, reduce backlogs and support urban growth (South Africa National Treasury, 2015). The ideal approach to bridging this gap would be more sustainable than simply obtaining more capital grants or borrowing more money: urban municipalities could instead identify ways to generate higher operating surpluses.

Generally, the use of capital grants—fiscal transfers from national or provincial government—may deserve scrutiny. While constituting less than 20 percent of urban municipalities' total financial resources, capital grants account for more than 40 percent of urban capital investment. [4] The grant system may thus be giving national and provincial governments undue influence over urban plans and policies, including integration policy, while committing cities to burdensome recurrent costs. The grants may also fail to account for the evolving, 'second-generation' infrastructure needs of cities. And three-year budgeting further inhibits the use of grants for more forward-looking investments. [5] Finally, the cities' dependence on grants to fund capital expenditures in itself raises policy concerns: if capital investments are to eventually support revenue-generating growth, why are they not self-financing? [6]

In short, to make urban finance more sustainable in a basic sense, ways of mobilizing more local revenue for South African metros should be identified and introduced. The nation's urban areas have seen a substantial socio-economic transformation: in 2001, two out of three households in these areas were living below the poverty line, in 2011 just one out of three (StatsSA censuses). But this sea-change has not been reflected in revenue growth. Metropolitan municipalities generally have not found ways to bring formerly poor and fiscally non-contributing households (using free basic services and not paying rates or tariffs) into a fiscally productive relationship with municipal government (paying rates and paying tariffs for services received). Possible reasons for this include a rising share of urban residents receiving pensions or social benefits; widespread informality in income-generating activities; housing market inefficiencies (motivating households with rising incomes to remain in housing that is generally not taxed); and reluctance among local political leaders to tax newly non-poor households.

Long-term urban fiscal sustainability will therefore depend to a large extent on the ability of the intergovernmental finance system to create stronger links between the urban economic ladder and the urban fiscal ladder, whether by addressing the failures in land and housing market, or by finding ways to (indirectly) tax informal economic activity. To the extent that municipalities are constitutionally, politically, administratively and handicapped in introducing new local revenue sources, it may be unavoidable for them to rely more heavily on intergovernmental fiscal transfers or revenue sharing. But it is far preferable in principle for cities to finance urban expenditure through urban economic growth. But it is far preferable in principle for cities to finance urban expenditure through urban economic growth.

7. Conclusions: towards a more productive approach

Where we have succeeded and where we seem to be going wrong

South Africa's urban development programmes have delivered a great deal in the last 24 years, notably with respect to housing. Government spending on housing, public transport, special economic zones and other dimensions of urban development (especially health, education, policing and social services) has been extremely high.

But it is clear from many analyses—including those in the National Development Plan (NDP) and the Integrated Urban Development Framework (IUDF)—that these efforts have done little to reverse South Africa's legacies of spatial segregation and economic disparity. In some ways these legacies seem to have become even further entrenched since 1994.

South Africa's urban integration and development programmes generally share a common set of characteristics. They are supply-side interventions; they consist of large capital projects; they rely on the contracting and implementation capacity of government departments and agencies; and they do not sufficiently consider the long-term operating costs required to sustain them.

Given these features, these urban programmes tend to neglect the demand side. They tend not to appreciate that better-located but smaller interventions also have a role—and may even generate better spatial and social results in the long term. They tend not to appreciate the value of incentivising private and social action as distinguished from that of government. And they generate unsustainable operating costs.

Furthermore, when social deprivation manifests itself—

[4] *Whereas the largest single funding flow to urban municipalities is the Local Government Equitable Share (39 percent), the largest category of transfers is composed of national direct conditional grants (about 51 percent).*

[5] *However, one welcome improvement is being made: consolidated urban grants such as the USDG have been introduced to increase local discre tion and reduce the fragmentation of conditional grants.*

[6] *Excluding from consideration those uses of grants that strictly target social needs with redistributive spending.*

whether in a need for formal housing, in a lack of public transport or in a lack of jobs for poorer areas of the country—government programmes have tended to deliver `physical' solutions such as mass housing megaprojects, transport infrastructure initiatives and production facilities in rural special economic zones.

While physical and spatial dimensions of exclusion are starkly visible symptoms, the root causes of deprivation and exclusion are mainly economic and institutional. In economic terms, although South Africa's urban areas are the `engines of growth'—growing faster than the nation as a whole—their productivity remains constrained by inefficiencies in land markets, in labour markets, in urban transport and in linkages to regional and international markets. Firms and people (jobs and skills) are not as well-connected as they should be; nor are buyers and sellers. The social and economic benefits which urban areas and especially cities should generate (based on their agglomeration effects) are significantly constrained. The poorest not only need to climb the economic ladder but also the fiscal one – they need formal jobs in addition to services.

On the institutional side, part of the challenge is that national, provincial and municipal governments have functional responsibilities for which their incentives may be poorly aligned or even conflicting. The result is projects which make little spatial sense, and which end up doing little to reduce either spatial segregation or income disparity. For example:

- *Housing:* Large publicly-funded housing projects offer residents homes—but only at the cost of marooning them at the city's edge. Workers find themselves far from jobs and from other social and economic opportunities, while the city remains as spatially segregated as before.

- *Connections:* Separate supply-side funding streams for rail, provincially contracted bus services, and municipal bus services, all operating on the supply side, do not generate sufficient incentives for collaboration and integration. And the most important and most flexible public transport service receives the least support.

- *Jobs and economic growth:* The SEZ programme aims to generate jobs across South Africa—but most SEZs are far from cities, and even those relatively close are insufficiently linked to metropolitan plans. Supplying infrastructure and amenities to remote locations is far more expensive than supplying them to a city, where costs can be shared by a larger number of customers. In addition, locating SEZs away from cities prevents firms from realizing efficiencies related to urban agglomerations.

When urban economic growth is constrained by fragmented and inefficient markets for land, labour, products and services, and when the incentives for institutional and spatial alignment are weak, spatial disparities are bound to persist—and indeed to become further entrenched.

A thorough spatial integration of South Africa's cities would involve broad shifts in land use and residential patterns. Such shifts cannot be dictated by housing projects and infrastructure investments alone: they must be driven by evolving demand, both from firms and from a rising class of housing consumers. Spatial integration thus presupposes economic growth, and it presupposes government programmes which engage productively with this evolving demand.

Additional formal subsidised housing or public transport services will, through current government programmes, benefit only a very small fraction of current or future urban residents. Our housing and infrastructure investments do not come close to meeting demand.

If the government were able to expand programmes to meet that demand while retaining current approaches, it would break the financial backs of metro and other municipalities and impose enormous costs on other spheres of government. For example, if the government is to supply an additional 3 percent of poor urban residents (both from natural growth and from migration with formal housing annually under existing policies, the annual estimated costs—including complementary infrastructure investments and recurrent costs for municipal service provision—would rise by as much as R25.2 billion. While capital grants might fund much of the complementary infrastructure, the added recurrent costs would fall entirely on municipalities. Similarly, expanding public transport networks by 6 percent annually would increase costs by an estimated R21.5 billion per year within 10 years. The system could still suffer further losses in fare revenues per unit, with people opting out because (despite the expansion) public transport would remain limited in scale and coverage.

Although municipalities generally are not underfunded, they are on a trajectory which will generate revenue shortfalls and operating deficits, especially if they are `beneficiaries' of substantial capital spending on human settlements megaprojects, public transport (BRT) programmes, and special economic zones (SEZs).

Such municipalities have no foreseeable way to bear the recurrent operating costs of large public investments in their current form, whether in mass housing, public transport or SEZs.

Municipalities will become responsible for these operating costs, even though the initial capital expenditures were mandated and funded by other spheres of government. That the national and provincial spheres of government are not accountable for the operating cost implications of these investment choices strongly attests to misaligned incentives, and the need for more coordination in South Africa's urban policy.

Our current urban development trajectory is not delivering sufficient economic growth, social inclusion or spatial integration, nor is it even fiscally sustainable.

Urgent need to increase focus on economic growth

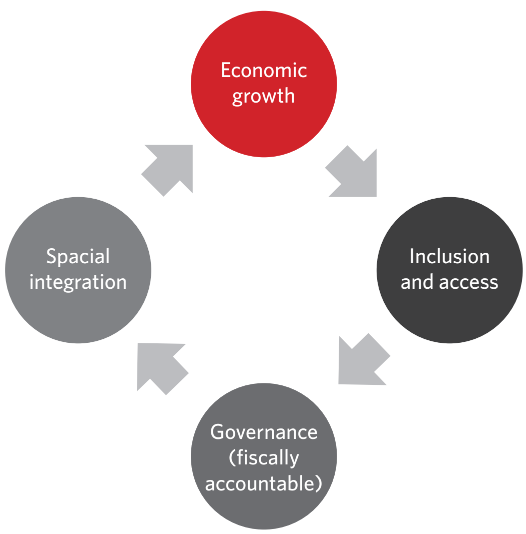
Given the slow progress on integration up to now, the time may have come to rethink existing programmes for housing, for transport, and for economic and industrial development. A good start would be a renewed discussion of the general dynamics of cities, which increasingly shape the nation's future. How do urban forms take hold? How have those forms, and the processes that shaped them, affected a city's patterns of economic activity and density? Which policies can encourage further spatial and economic growth of a kind that is inclusive and integrates people, both in cities and nationally through mobility?

The starting point in this discussion has been the consideration that *economic growth—led by urban economic efficiency and growth—is central to both economic and spatial integration.* Economic growth boosts household income, which drives housing affordability, which in turn increases spatial mobility through enhanced effective demand. Critically, housing affordability and buoyant property markets can also empower municipalities to seek new vehicles for collecting property rates and service charges—sustaining municipal finances and enabling expanded investments in economic and inclusive growth.

To make progress on spatial and social integration, policies and programmes should make urban economic growth a more urgent and immediate priority—both as a driver of spatial mobility and as a prerequisite for further, more inclusive growth.

All spheres of government will have roles: national, provincial and municipal. However, because the key sites of this re-orientation towards growth will be the urban areas, the municipal responsibility for spatial coherence and alignment will be will be especially important. All projects and developments take place in a local space; and the success of projects and developments depend upon their connections to nearby activities, services and infrastructure.

Figure 6. Integration: a virtuous circle starting with economic growth (IUDF strategic goals prioritised)



The Integrated Urban Development Framework (IUDF; CoGTA 2016) offers useful guideposts on this. Four strategic goals for urban policy are identified: *spatial integration, inclusion* and *access, growth,* and *governance.* To reflect the overriding need for inclusive growth—growth harnessed to integration objectives—this report shows these goals as a virtuous circle, with economic growth at the top: it is the first priority that makes the others attainable (figure 6).

In identifying economic growth as the first, most urgent IUDF priority—aligned with and furthering those of inclusion, governance, and spatial integration—this report advocates for a specific perspective on the IUDF levers and their application to policy (box 10). Faster urban economic growth and increased urban economic efficiency are not optional, but essential, to advancing South Africa's spatial integration.

Box 10. From supply-side to demand-side policies: a challenge to harness markets to IUDF lever 3 (integrated and sustainable human settlements) and IUDF lever 6 (inclusive economic development)

The IUDF envisions a long-term spatial transformation of South Africa's urban geography, eventually unlocking the constraints of the apartheid spatial form and achieving IUDF lever 3: "Integrated and sustainable human settlements." Towards this end, the IUDF identifies a large number of "short-to-medium term" policy priorities for lever 3, followed by a less detailed list of "longer-term" priorities (CoGTA 2016, p. 63–67).

While our discussion has touched on many of these short-to-medium term priorities for lever 3, we also underline the direct relation of all these priorities to policy lever 6: "Inclusive economic development." To be sure, the IUDF calls lever 6 "triggered by" lever 3 (CoGTA 2016, p. 83). But policy discussions could be much more explicit about the primary role of urban economic efficiency and growth in spatial transformation.

Additionally, more immediate attention could be given to what the IUDF calls a "longer-term" priority for lever 3—"putting in place a regulatory and policy environment that allows other role-players to provide housing options . . . for different needs." This "longer-term" priority is regarded as, in fact, a shorter-term imperative for discussion—not only in housing provision, but more generally for economic and spatial integration objectives.

Regulations and policies shape markets. And if urban economic growth is to become a more efficient engine for inclusion and integration, policymaking across sectors may need to shift its focus away from supply and towards a renewed appreciation of demand—and of markets as instruments for meeting demand.

In addition, there is need to shift from the direct provision of facilities (housing, transport infrastructure, SEZs) towards the promotion of efficient urban markets and demand-driven inclusive growth, which will imply rethinking domestic development expenditures.

This is not intended to suggest that any programme should be abruptly terminated. Supply-side programmes also have a role to play, but the current (almost) exclusive focus on such programmes is unbalanced and generates sub-optimal results:

- Housing megaprojects have a role, though in the long term they would have a far more beneficial impact if they were better located.
- Bus rapid transit systems also have a role, though only in the context of well-developed integrated public transport networks (IPTNs), and probably only on specific trunk routes with high passenger demand.
- Special economic zones also have a role, though only if they are well-integrated into the local spatial economy.

While existing programmes should not be abruptly terminated, there is urgent need to revisit the broad institutional framework and examine how various incentives can work better to encourage growth and inclusion through economic restructuring; and by realigning those incentives as needed. A rapid and progressive expansion of demand-side programmes will increase the incentives to properly engage private suppliers and spatially align government programmes.

Need to get institutions and incentives right, implement integrated multimodal public transport networks, and give municipalities a greater voice

It is urgent that urban areas should be launched onto a new and more promising path, in particular by recalibrating urban policy to:

- ***Get institutions and incentives right:*** Focus on coordinating policies and aligning incentives, whether across government levels or in the market. Industrial jobs should not be pushed out to remote areas, nor homes built disconnected from urban centres. There is need to reset government programmes to enhance awareness of economic geography and seek efficiencies, especially by engaging the demand-side more effectively; and in these ways to advance inclusive growth.

- ***Adapt public transport to South Africa's polycentric cities by introducing integrated multimodal networks:*** All new public transport investment decisions should reflect accurate demand planning. If demand is not realistically considered, public transport systems may end up serving relatively few commuters without substantially reducing the congestion that increasingly afflicts rising urban populations. Accepting economic polycentrism also means making public transport more efficient and reducing its costs.

- ***Give municipalities a stronger voice in their future:*** The needs of each city are unique—though they are not always differentiated clearly enough by national and provincial government departments. Municipal governments should gain more control over local housing and transport policy; a greater voice in economic development policy; and the power to fully integrate these policies with their spatial development plans. Such empowerment will improve decision-making by allowing an investment's social, economic and financial costs and benefits to be weighed and aligned within one sphere of government. Cities best understand their own needs and challenges. And making municipalities more accountable (whether through revenue, expenditure or regulatory mechanisms) would add incentives for them to create value and attract and generate jobs while being inclusive.

Practical and short-term actions to achieve these ends are both known and possible in South Africa, thereby altering the trajectory of urban development, and unlocking opportunities for more inclusive urban growth. They have been the subject of repeatedly policy proposals, such as the NDP and IUDF, but have not received the dedicated attention needed to advance implementation. Two specific intermediate steps appear possible now in South Africa, as the most effective way to address the ineffectiveness, incoherence and unaffordability of current urban programmes:

- ***To quickly and carefully devolve key housing and public transport responsibilities to metro municipalities.*** The current allocations of responsibilities in these fields clearly leads to perverse outcomes. The best solution is to locate decision-making in a single sphere—the local sphere—that will carry both the long-term costs and the long-term benefits. While it is acknowledged that the accreditation of municipalities to perform more housing and public transport functions is not an end in itself, it can – if well designed - trigger more effective spatial alignment and better decision-making around investments for inclusive urban development. Such accreditation, moreover, would not involve wholesale functional transfers. Instead it would involve partial and calibrated transfers of responsibility for specific sub-functions. Moreover, scope exists to require such accreditation to be complemented by stronger city leadership on matters such as the regulation of land development rights.

- ***To rapidly and progressively shift the focus of central government funding for urban development to demand side subsidies that support the agency of households and communities.*** This entails a relative reduction in the current dominance of supply side programmes, such as housing and transport subsidies that are delivered through large scale projects. The scale of existing subsidies is large enough to overcome concerns with the lumpiness of these expenditures, while the growing recognition of the need for stronger and more practical social partnerships provides significant scope for reform. Technological advances in public transport ticketing, for example, create scope for targeted subsidies to be delivered directly to users, while the scale and range of need for affordable housing is already recognised, if not adequately funded, in the national housing subsidy system.

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Background papers

The following nine papers were prepared specifically for the Urbanisation Review of South Africa:

Arndt, C., R. Davies and J. Thurlow. 2018. 'Urbanisation, Structural Transformation and Rural–Urban Linkages in South Africa'.

Boex, J. 2018. 'Urban Public Finances, Urbanisation and the Inclusiveness of Urban Space in South Africa'.

Boex, J. and T. Karger-Lerchl. 2017. 'A Preliminary Exploration of the Composition and Sustainability of Urban Finance in South Africa'.

D'Aoust O. and S. V. Lall. 2018. 'Jobs to People or People to Jobs? Levering Public Housing Programmes to Support the Formation of Economic Sub Centres in South Africa'.

Farole, T. and M. Sharp. 2017. 'Spatial Industry Policy, Special Economic Zones and Cities in South Africa'.

Gardner, D., with inputs by N. Graham. 2018. 'Analysis of the Human Settlement Programme and Subsidy Instruments'.

Joubert, J. 2017. 'Logistics and Freight Patterns, Constraints to Productivity and Network Mapping'.

Shilpi, F., L. Xu, R. Behal and B. Blankespoor. 2018. 'People on the Move: Spatial Mismatch and Migration in Post-Apartheid South Africa'.

van Ryneveld, P. 2017. 'Urban Transport Analysis'.

These papers are available to the public via the following link:

https://csp.treasury.gov.za/Resource%20_Centre/Conferences/Pages/CSP-Tools.aspx

This report and the background papers is available from the CSP website.

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