

FINANCIAL AND FISCAL COMMISSION
POLICY BRIEF

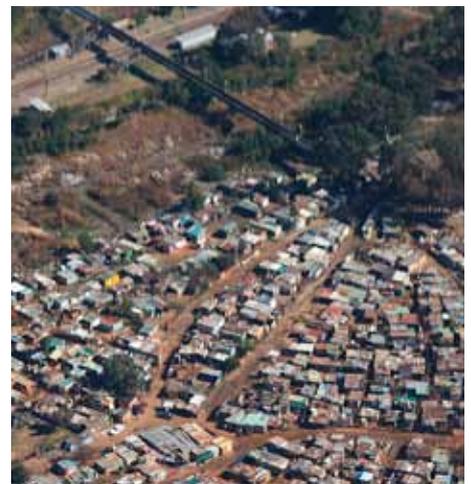
Economic and Fiscal Costs of Inefficient Land-use Patterns

EXECUTIVE SUMMARY

The Commission has identified various policy options that can be used to encourage the densification of cities. These include transport subsidies, infrastructure grants, local taxes and charges and land-use regulation.

Vibrant urban economies lie at the heart of the national economy and drive growth and development. In South Africa, cities are major contributors to the economy, with the five largest metros accounting for over half the national output. However, compared to similar cities internationally, South African cities use land inefficiently and are less dense. Existing land-use patterns marginalise the poor, deepening historical inequalities, and result in high carbon emissions.

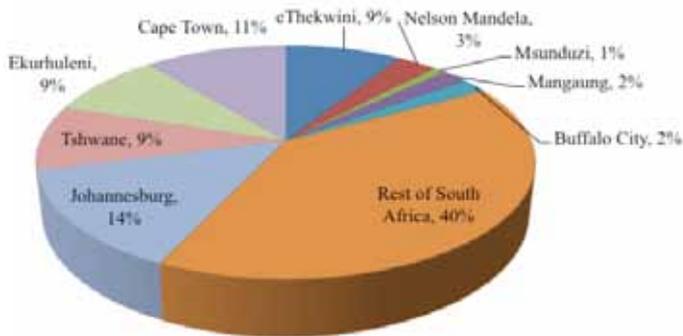
As part of ongoing research by the Financial and Fiscal Commission (the Commission) into the effect of current land-use patterns in South Africa, a model of a hypothetical city was constructed using data from Johannesburg, eThekweni and Cape Town. Using this model, the costs of a compact city were compared to those of a sprawling city typical to South Africa. The study found that denser (or compact) cities are more efficient, result in lower expenditure (by households, industry and the state) and reduced carbon emissions, and require less public infrastructure investment.



INTRODUCTION

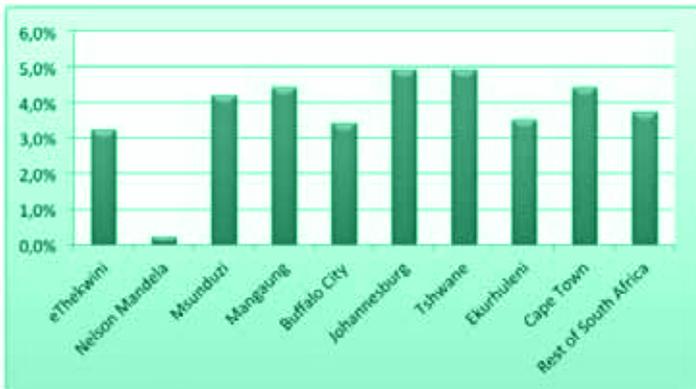
Vibrant urban economies lie at the heart of the national economy, but in South Africa inefficient land-use patterns are stifling urban growth and development. As Figures 1 and 2 show, in South Africa urban economies play a significant role in development and economic growth. In 2009, the nine biggest cities contributed 60% of gross value added (GVA),¹ and the five biggest metros accounted for 52% of total output. Five of the cities had a higher GVA growth rate than the rest of South Africa.

Figure 1 Share of Total GVA in South Africa, 2009



Source: South African Cities Report 2011

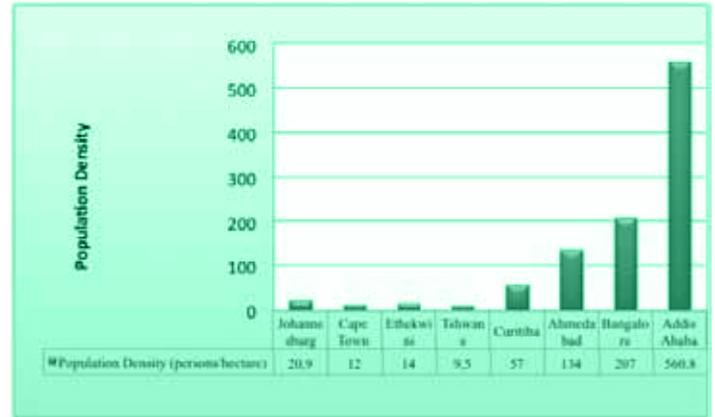
Figure 2 GVA Growth Rate 2009



Source: South African Cities Report 2011

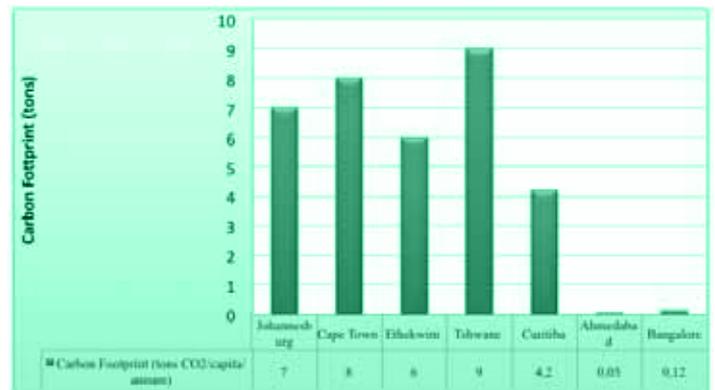
While South African cities may contribute significantly to the economy, compared to other similar international cities they have lower population densities (see Figure 3) and relatively high carbon emissions (see Figure 4).

Figure 3 Population Density (persons/hectare)



Source: South African Cities Report 2011

Figure 4 Carbon Footprints (tons CO2/capita/annum)



Source: South African Cities Report 2011

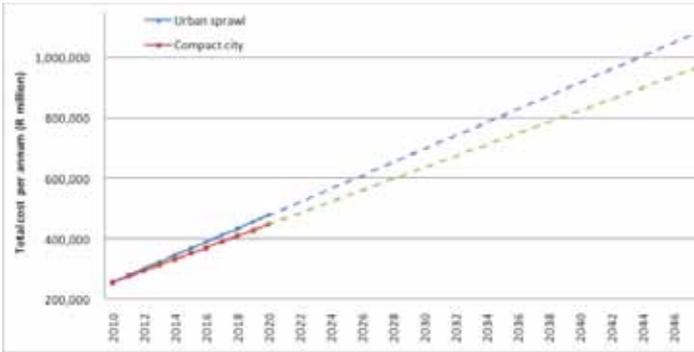
South African cities are also characterised by highly unequal land distribution patterns and a sprawling spatial form. The poor are typically located on the outskirts of cities, marginalised from the formal urban economy, face high transport costs and have little access to housing and services. Such inefficient land use not only exacerbates inequalities but also disproportionately affects the poor. An alternative, better land-use pattern is needed that will improve the social, economic and environmental effectiveness of South African cities.

As part of an ongoing research programme, the Financial and Fiscal Commission (the Commission) has quantified the financial and fiscal costs of current land-use patterns in South Africa. Using data from Johannesburg, eThekweni and Cape Town, the Commission constructed a model of a hypothetical city, which was used to compare the costs of a compact (or denser) city with the current reality. The study concluded that compact cities are considerably more efficient than the current sprawling form of South African cities, with savings to the state, households and

1. GVA, or, gross value added, is linked to GDP (GVA + taxes on products – subsidies on products = GDP). GVA is used to measure gross regional domestic product, as total taxes and subsidies on products are only

environment. Over 10 years, a sprawling city will cost R57 billion more than a compact city, equal to 1.4% of projected GDP. The projected cost differences are shown in Figure 5 below.

Figure 5 Projected total capital and recurrent costs for six South African metros under two growth scenarios (R million), 2010–2050



2. Urban infill development refers to the process of developing vacant land within already developed areas. On the other hand, brownfield refers to the renovation and development of inner city derelict buildings.

According to the study, the benefits of a more compact urban form are:

- On average all households are better off living in a compact city. Compared to the compact city, the sprawling city scenario showed costs for households will be 7% higher per year over 10 years.
- Low-income households benefit most from a compact city. After 10 years, household expenditure will be 24% lower in the compact city than in the sprawling city.
- Public infrastructure investment requirements are lower. In the compact city scenario, the state infrastructure subsidy reduces by 14% and the City's contribution by 3%. A direct benefit will be a 4% decrease in public transport subsidies, as fewer households commute.
- Environmentally, 22% less carbon is emitted in the compact city than in the urban sprawl scenario because of the decrease in travel distances and use of private cars.

EMERGING POLICY OPTIONS

As Figure 5 clearly illustrates, the current land-use patterns in South African cities result in high economic and financial costs. In contrast, a compact city form brings social, economic and environmental benefits. Some of the ways in which the state can encourage the restructuring of urban land-use patterns include the following:

1. Subsidies to households.

Subsidies, in particular for transport and housing, are useful instruments for encouraging the development of compact cities. Public transport subsidies should prioritise developments in high-density, low-income areas, and specifically urban infill and brownfield developments. Housing subsidies can be used to incentivise higher-density developments in specific locations. Although subsidies have some well-known flaws such as distorting price signals, and being a burden on the treasury, they help reduce the costs of capital investment, which is an important aspect of any spatial development. Such subsidies will make compact city development less expensive than that of an urban sprawl.

2. Infrastructure grants and other (tax and subsidy) incentives.

These grants can be used to direct future city and regional development, by providing municipalities that have proper densification plans with the capacity to implement such plans. Government could also use tax incentives and subsidies to attract private sector investment in transport infrastructure and related amenities in dense and low-income neighborhoods.

3. Local taxes and development charges.

Taxing under-utilised land at a higher scale, especially in inner city areas, can promote densification and encourage the development of high-rise buildings. Property owners should pay the full costs of developing land on the outskirts of the city, including being charged appropriately for access to infrastructure networks.

4. Land use regulation and development approvals.

Higher density development can be encouraged through adjusting existing municipal zoning schemes and accelerating approvals for these developments.

CONCLUSION

Cities are the major contributors to the national economy, but inefficient land-use patterns are stifling their growth and development in South Africa. Compared to similar cities internationally, South African sprawling cities have low population densities and high carbon emissions. Sprawling cities cost society more and disadvantage disproportionately poor households. Therefore, South Africa should encourage cities to become more compact and dense. Policy options that can promote densification include transport and housing subsidies and infrastructure grants, while local taxes and charges can discourage underutilisation of land, and land-use regulations can smooth the progress of densification.

The Commission will continue to investigate appropriate fiscal policy options to support the emergence of a more compact urban form in South African cities. The Commission will also actively encourage peer review, discussion and debate on the costing model developed to measure the financial implications of alternative urban forms.

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