

Questioning the compact city: The Income/Employment/Migration spatial gradients for urban planning

Introduction: Spatial approaches to unemployment

As an issue for government's urgent attention, youth unemployment may have a claim to be the single most serious policy issue facing South Africa; the threat of lifelong unemployment for a critical part of the population carries the risk that the anticipated benefits of the demographic dividend may turn into a demographic liability, severely unbalancing the economy through staggering welfare costs to the fiscus. Seeking policy options, the National Development Plan (2011) endorses spatial planning as a route to increasing the efficiency of the economy. To combat unemployment – for youth, for women, and for all the unemployed – government policy has been exploring the use of spatial access principles to open up labour market access for the rural-to-urban migration stream.

In this light, to avoid peripheralising the poor is becoming a principle of urban delivery planning, seeking to avoid imposing transport costs that may hold back access to the concentrated job markets of the metro city core zones. Using the principles of compact city planning, which suggests holding urban economic development tightly inside a demarcated city edge, it is now widely argued that the state's housing programme has been mistakenly supplying subsidised housing that is spatially out of reach of work, because it is largely located on the urban peripheries.

Built on DST's StepSA research from the science councils, this policy note looks first at the new debate over how to plan South Africa's cities and deliver housing that will support job search by unemployed rural youth, by identifying where in metro space poor migrants will find their best chances. It puts the case for a new understanding of how migration works in the cities and questions the compact city model, based on the evidence of StepSA's spatial opportunity gradients for South Africa's metro sector. (Please refer to Appendix 1 for Diagrams 1-7 for Metro Cities Spatial Gradient Outcomes, Shack Settlement Areas)

Policy and debates

Current policy is laid out in Outcome 8 of Cabinet's 12 Outcomes document, which relies on an implicit centre/periphery virtual map of the cities to boost the employment chances of poor job seekers: a key goal is to upgrade shack areas with 400 000 units of permanent owned housing, so as to bring the excluded populations of the migrant poor now in shack areas into contact with the concentrated economic activity in the central city zones. Proposals have also circulated for subsidising transport costs for work-seeking youth, to improve access chances relative to the metro core zones.

With massive government spending commitments at stake, a new debate may be taking shape around the centre/periphery question, touching on how Outcome 8 can best be applied, and sparked by cutting-edge



international work from New York University's spatial planning research group (Angel et al 2011). Using in-depth results from 130 major world cities, the NYU group argues that in a developing country with high urban migration rates, it is effectively impossible to contain either settlement activity or economic activity within a compact city delimitation.

In this interpretation, both business operations and the arriving rural poor need to find low-cost, less-congested spaces with infrastructural services, and are often unable to fill their needs in the congested and expensive city cores. Economic activity and poverty-level settlement are therefore flung outward, to the periphery as an intensely active zone. Resisting centre-priority planning interventions, economic activity frequently leapfrogs any planned confinement line and establishes new centres outside it, leading to polycentric city regions emerging from rapid periphery development.

This argument can be read to suggest that in effect core and periphery are competing to attract migration, with periphery expansion often holding the edge in demographically turbulent, high-migration cities. If so, it is possible that subsidy housing in South Africa is being delivered in the right places; however, *stepSA's research raises the question of whether subsidy housing is going to the right cohort.*

Reconsidering Urban Space

How do the spatial mechanics of urban migration really work? Migration theory (Todaro 1979; Todes et al 2011) says rural-to-urban migration flows are dominated by the labour markets and the chances of work. If the key driver of migration is access to the best wage levels, then migration and settlement in the metro cities will try to concentrate in the spatial locations with the best accessible economic outcomes. We use the StepSA survey results from the Delivery Demand Charts database to examine the space structure of opportunities as expressed in the spatial gradients of income, unemployment and migration rates across settlement types, from the informal settlements through backyards to the formal townships.

Drawing together the average values for *per capita income*, reported *formal employment* and *in-migration rates* for each spatial zone of the informal settlements in selected urban centres, results for the spatial gradients show the urban labour markets marshalling migration and settlement. A positive gradient, with high income and employment levels in the core zone declining toward to lower levels on the periphery, indicates the urban core providing work effectively to rural migrants. This kind of gradient will exert a strong urban sorting force, and can be expected to pull migration rates into a parallel distribution.

Each city gradient is different and individual, depending on the strength and pulling power of job creation in the city core. Of South Africa's metros, only Tshwane and Ekurhuleni showed strong centre-driven gradients for their in-migrant shack populations – eThekweni reflected a weak centre-priority gradient, while Cape Town and Buffalo City showed periphery-dominant gradients for their shacks populations, and the Johannesburg gradient reverses direction once outside the high-earning core and peaks again at the periphery. Buffalo City's core zone shacks recorded per capita income estimated at R 175, lower than the average for rural poor settlements in the Eastern Cape. For Buffalo City's poor, putting new permanent housing into the core does not look advisable until the economy improves.

Gradients calculated for townships and backyard populations were not the same as the gradients for the in-migrant population in the informal settlements: the urban-born township populations, and to some extent backyard





residents, showed more employment and income benefit from living in the core zones than did the mainly migrant population in the shacks. And overall, averaged across South Africa, for shack residents the spatial gradient for all municipalities combined appears as periphery-driven: that is, for household outcomes, *core-zone labour market access did not work as well for the informal settlements population as periphery access in most South African municipalities.*

Recognizing the urban migration cycle

Once inside the cities, migration patterns across the life cycle of individuals and households chase spatial opportunity and functionality according to the household's current needs and the cities' current opportunity gradients. Youth migrating to find work rarely need permanent housing before they establish their families, but stepSA's qualitative interviewing with officials reported single youth as the most frequent recipients of subsidy housing (Cross et al 2013). For unemployed youth, a successful search phase usually requires moving around through informal housing, using backyards, rentals or shacks that support mobility: these offer temporary stays with easy, fast entry and exit processes that government housing processes intrinsically cannot provide.

Where gradients are strong, this characteristic urban movement cycle is most clearly evident. As single work-seekers, many youth move inward toward the city core to search for jobs, though others remain on the periphery throughout their search phase; once incomes are secured, young migrants can form permanent households and move outward again, to find permanent family housing in the periphery's informal suburbs. However, owned housing on the periphery provided too early to youth may hold back search mobility and therefore may not always represent a clear benefit relative to labour market access, though youth are also not likely to reject a chance to obtain a valuable asset when it is offered.

Recommendations

- Plan delivery of housing and infrastructure for household outcomes, using spatial data at community level to monitor household results.
- Recognize life cycle migration: prioritize housing subsidies to young families ready to settle, rather than to single youth starting their job search phase.
- Promote access to the city core zones through temporary, short to medium term rental options in place of permanent housing delivery.
- Allow poor and migrant households to choose and change their city locations, by supporting a free-running, semi-formal housing market that the poor can use.
- Recognize the dynamic role of the periphery zone in driving settlement for the in-migrant poor in most South African municipalities.



APPENDIX 1

Diagrams 1-7 Metro Cities Spatial Gradient Outcomes, Shack Settlement Areas

Colour intensity scales with per capita income to indicate returns to migration. Metro zones appearing in white indicate no shacks recorded in 2009-2010 combined survey dataset.

- Spatial distance from urban centre point appears on upper vertical axis.
- Per capita income on lower vertical axis.
- Unemployment level on right horizontal axis.
- Migration rate 1996-2001 on left horizontal axis

Diagram 1: Ekurhuleni Spatial Gradient

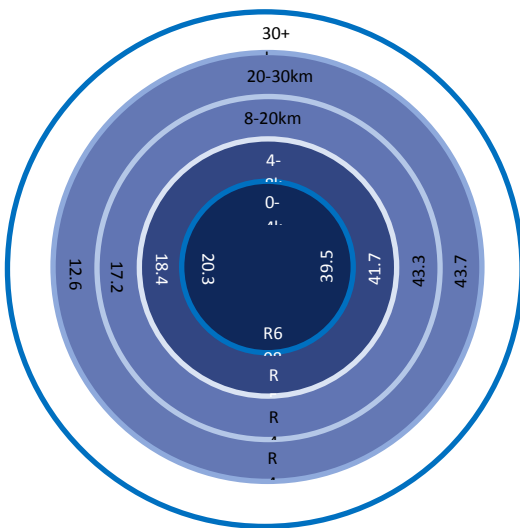


Diagram 2: Johannesburg Spatial Gradient

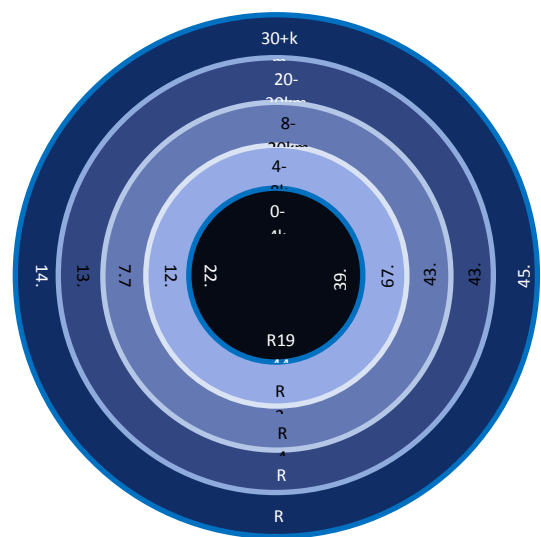


Diagram 3: Tshwane Spatial Gradient

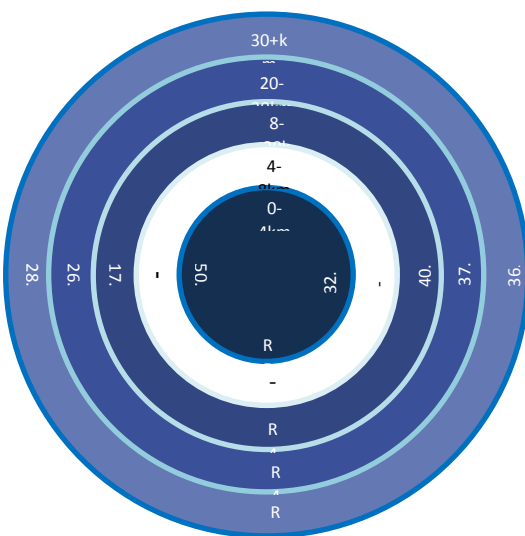
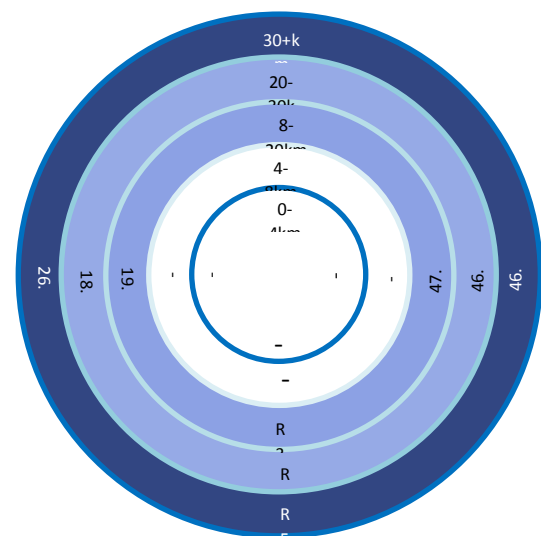


Diagram 4: Cape Town Spatial Gradient





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Diagram 5: Ethekewini Spatial Gradient

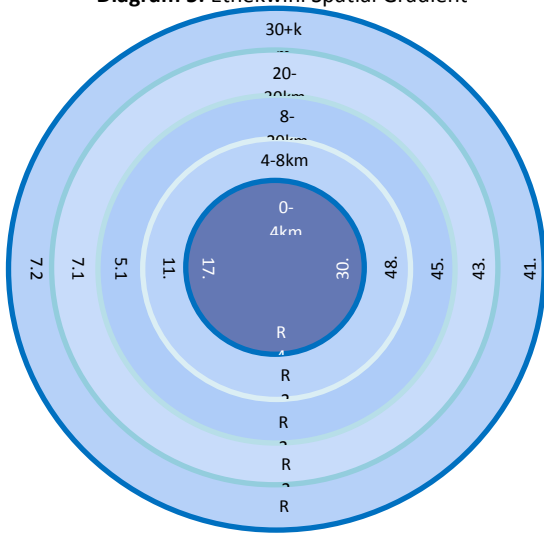


Diagram 6: Buffalo City Spatial Gradient

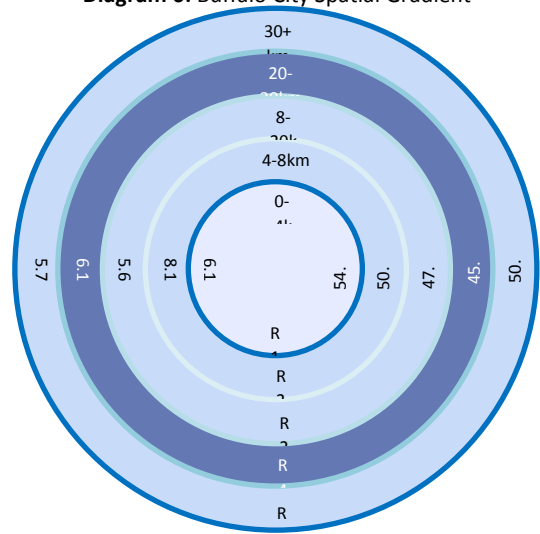
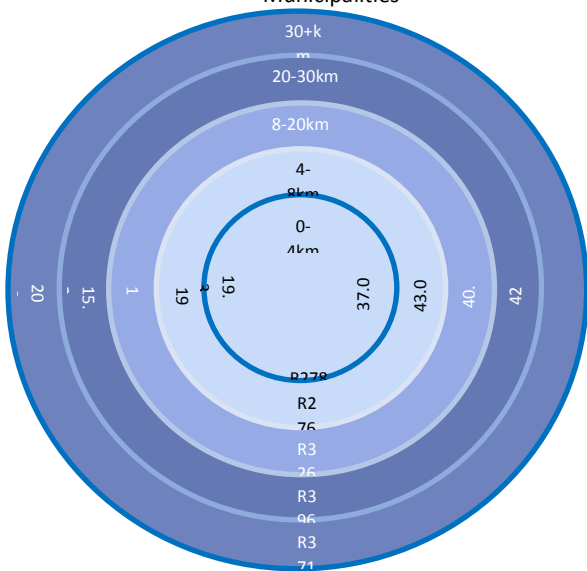


Diagram 7: South Africa National Spatial Gradient: Average Of All Municipalities





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