

# A Cartography of State Capacity in Post-Apartheid South Africa

## Toward a Spatial Measure of the 21<sup>st</sup> Century Developmental State

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### Theoretical Background:

Amartya Sen's capabilities approach to development has become paradigmatic. Sen defines development as the expansion of people's capabilities to "lead the kind of lives they value – and have reason to value" (Sen 1999: 10). Scholars and policymakers agree that the priority of development should be the expansion of health, education and basic services. Recent sociological work argues that capability-enhancing development should be led proactively by states (Evans 2008). Despite growing consensus that the state must provide capability-enhancing services, we lack a consistent measure of state capacity in this regard. We fill this lacuna by proposing a spatial index of the 21<sup>st</sup> Century Developmental State (21C-DS Index) that captures the state's capacity in providing health, education and basic services. We apply the 21C-DS Index to examine the case of the post-apartheid Johannesburg, South Africa.

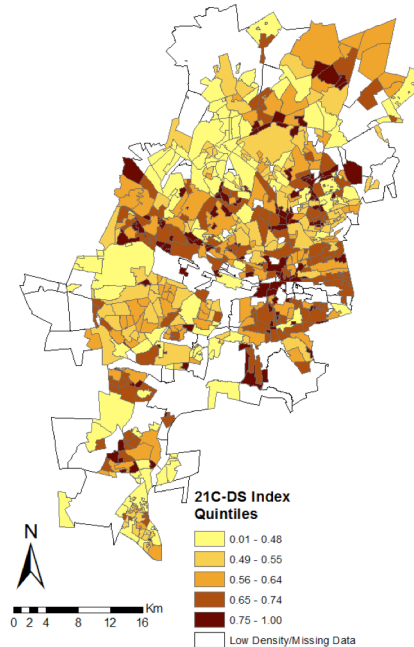
### 21<sup>st</sup> Century Developmental State Index:

The most common development measure, the Human Development Index, ignores the state's critical role in providing the opportunities through which development may be achieved. It measures health, educational, and economic outcomes. In contrast our 21C-DS Index measures the state's developmental capacity and provides a rich spatial cartography of local development.

### Case Selection:

South African apartheid resulted in the concentration of health, education and basic services in white designated of Johannesburg. The post-apartheid state promised to address social inequality and the spatial hierarchy of urban South Africa through the expansion of services. Post-apartheid Johannesburg, with its deeply entrenched inequalities, combined with the state's transformative commitments, represents an ideal case through which to measure the state's developmental character and capacity.

### Johannesburg, South Africa



### Data & Methods:

Data for 683 *subplaces* comes from the 2001 South African national census, and from Johannesburg municipal infrastructure datasets. The index is composed of three factors: schools, clinics, and basic services:

$$21C-DS\ Index = \frac{SI + CI + BSI}{3}$$

### Primary schools:

$$School\ Index\ (SI) = 1 - \left( \frac{\log(ENS'_{max}) - \log(ENS'_{min})}{\log(ENS'_{max}) - \log(ENS'_{min})} \right)$$

### Primary health clinics:

$$Clinic\ Index\ (CI) = 1 - \left( \frac{\log(ENC'_{max}) - \log(ENC'_{min})}{\log(ENC'_{max}) - \log(ENC'_{min})} \right)$$

### Composite measure of basic services (electricity & water):

$$Basic\ Services\ Index\ (BSI) = \frac{EI + WI}{2}$$

We used geo-coded point data that allowed us to generate a count of schools and clinics for each subplace. To this value, we added the number of schools and clinics in the nine neighboring subplaces, discounting their numeric weight by distance from the subplace in question.

### Findings:

This map shows the spatial distribution of the 21C-DS Index by quintiles. Higher index scores are clustered around white suburban areas. After controlling for factors commonly associated with service placement (results not shown), regression analysis indicates that a higher proportion of non-white residents is associated with lower index scores, suggesting the persistence of inequality and the importance of race in the provision capability-enhancing services. Variation in local developmental state capacity points the importance of state-civil society linkages and the mobilizational capacity of civil society.

### Conclusion:

As states focus their developmental agenda on capability-enhancing services, it has become increasingly important to measure the state's performance in creating the opportunity structure for human development. The 21C-DS Index provides a richer understanding of state capacity and illuminates important spatial variation in this regard. Moreover the 21C-DS Index is a useful tool for improving accountability of the 21<sup>st</sup> Century Developmental State.

### Works Cited:

Evans, P. 2008. "In Search for the 21st Century Developmental State." *Center for Global Political Economy Working Paper #4*. UK: University of Sussex.  
Sen, A. 1999. *Development as Freedom*. New York: Knopf.

