Data Reliability and Metadata Report

Programme of Support to Local Economic Development in the Eastern Cape

Eastern Cape
Competitive Advantage Assessment
And Training Support Project

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1 Data Reliability and Metadata Report

This sub-report first raises points regarding the reliability of the data used in the quantitative analysis of the competitive advantage of Eastern Cape municipalities and then briefly notes methodological steps taken in the formulation of indices and indicators. It should be noted that, in spite of the obvious concerns regarding data reliability, it is anticipated that the Municipal "snapshots" are sufficiently based on fact to ensure viable data for use in assessing competitive advantages and opportunities across the Province.

1.1 The Question of Data Reliability

Since Global Insight (GI) provides the most comprehensive source of figures relating to socio-economic data throughout the Province it has been drawn upon most extensively in this brief assessment. Accordingly, the majority of questions relating to data reliability pertain to the Global Insight database. A full listing of sources drawn upon in formulating the Eastern Cape competitive advantage assessment is appended to this sub-report.

1.2 Area and implications

Specifications of municipal areas in square kilometres vary substantially across the range of sources. The most reliable source is the Municipal Demarcation Board (www.demarcation.co.za) and these geographic areas have been utilised wherever possible. However, in the interests of internal consistency, Global Insight specifications are used for all analyses where an analysis of their data by area is undertaken.

Global Insight's database relies on old magisterial districts and has not, as yet, been updated to the current municipal areas. This is a point of major concern since, it follows, that the entire database is organised according to an old demarcation which does not align with the present spatial reality. As such, the database cannot be accurate and the data presented by municipal areas are merely approximations.

1.3 Query of Estimations

Global Insight provides clear breakdowns of how particular figures have been arrived at throughout their database in their "*Methodology*" document included with the data package. However, mention must be made of the fact that several estimations are across-the-board and belie any uniqueness that an area may offer against the "norm" in South Africa.

1.4 Sectoral Generalisations

Growth rates for economic sectors are commonly applied across areas – for instance, every Municipality across the Province emerges with a consistent GVA growth rate (2.02%pa) in Community Services and twelve municipalities claim the same (1.58%pa) rate of growth in Agriculture. Also, relative to the national economy for employment performance, every Municipality in the Province reflects the identical growth performance (100%) for households, and every Municipality in the Province reflects an identical growth performance (100%) for Community Services plus overly comparable Agricultural growth figures. This situation is nigh impossible and, at best, extraordinarily implausible.

Sub-sectors appear to be generalised across regions, which raises the question of the reliability of this level of economic analysis. For instance, Makana (EC104) and Nyandeni (EC155) identify mining as an important industry, yet for both these areas employment and GVA for mining are reflected as zero.

1.5 Support of ECSECC's Initial Statements

Initial statements made by ECSECC, in the baseline research notes, prove true in respect of questionable data reliability, particularly that:

- The percentage growth in both Agriculture and Community Services, relative to the Provincial and National rates, is implausibly similar; and that
- Utilities (Electricity and Water) is a minor sector, which is inconsistent with recorded growth in the bulk of the Provincial local economies.

2 Metadata Sub-Report

The quantitative analysis undertaken for each municipal area is based on a series of indicators and indices drawn from available data and organised according to four identified elements of competitive advantage, namely: Infrastructure and Services; "Rules of the Game" (the Institutional Environment); Economy; and Capacity. Each element explores crucial aspects of the economic development environment. However, these four elements are not intended to stand alone but interact to inform the compilation of a Composite Index of competitive advantage in the Eastern Cape.

The variables considered in developing each of the four elements of competitive advantage are tabulated below.

Infrastructure & Services	"Rules of the Game"	Economy	Capacity
Communications - Transport infrastructure (Roads; Rail; Air and Sea Ports) - Telecommunications (Telephone Access and Cellular Coverage) Quality of Life - Basic Services (Water; Electricity; Sanitation and Refuse and Housing) - Health and Education (Clinics; Hospital Beds and Schools) Economic Infrastructure - Economic Property (Available Business space, Incubators, and IDZs) - Enterprise Support (Finance and Business Support)	*Weightings: Municipal Regulatory Capacity; and Economic Diversity* Land / Property Security - Unsettled Land Claims; Tenure and Property Ownership Crime - Livestock and Business-related, Crime Rates Transaction Costs (Weighted by access to a Telkom Service Branch) - Expenditure on Transport, Communications and Finance - Travel Time to a Major Economic Centre Finance and Enterprise Support - Access to Finance (Commercial Banks and Financial	Poverty and Dependency - Unemployment; Poverty and Welfare Dependence - Dependency Ratio; Population aged under 20 and over 64 years Performance of Formal Economy - Growth Performance, Shift in Share and Contribution (GVA & Employment) - Exports and Trade Balance; Financial Grant Dependency and Tress Index Productivity Indicators - GDP per Worker (formal & informal); GDP vs Employment Growth Rates - GDP vs Remuneration Growth; - Skills of Available Workforce	Resident Skills Capacity - Literacy; Education Levels and Qualification Rates Resident Participation Capacity - HIV Prevalence; Child-Headed Households and HDI - Access to Health and Teaching Professionals Women's Economic Participation - Proportion EAP Female; Female Employment and Unemployment Municipal Capacity - Municipal Functions Performed with Capacity

	Intermediaries) - Access to Support (Tourism and Development Agencies) <u>Service Providers</u> - Finance, Investment and Business Support Consultants and Services	<u>Economic Absorption Capacity</u> - Total Disposable Income and Buying Power and Income : Expenditure Ratio - Formal : Informal Employment Ratio and Economic Multipliers	- LED Officers, Community Liaison and Development Workers, Experience

2.1 General comment on Index Calculations

Components of each index had to be adjusted to ensure consistency in the results being measured – a high percentage for a measure may be positive or negative, depending on what is being measured. For instance, a high percentage access to services is a positive measure while a high percentage child-headed households is negative. All measures have been adjusted such that a higher percentage, score or index reflects as positive, thereby enabling comparison of measures as well as facilitating their inclusion into a composite index.

2.2 Typology

The municipal typology adopted for this study is that used by the ECSECC Local Government Research team (November 2005).

"It is an analytical tool and the boundaries between the different categories are not fixed. Rather they are more porous meaning that the line between one category and the next is not absolute and therefore borderline municipalities could fall into either category. The typology would become particularly useful when information on competitive advantage of the municipal area is undertaken, possibly defining it as having high, medium or low economic potential." (ECSECC November 2005) This municipal classification typology is reproduced below.

Code	Typology	Institutional	Population	% urban formal	Economic Characteristics
A	Metro	Relatively large budgets and staff	> 1,000,000	>67%	Formal business sector well developed and enterprises have access to market supplied business services.
B1	Secondary City	Relatively large budgets and staff	200,000 to 1,000,000	>50%	Formal business sector well developed and enterprises have access to market supplied

Code	Typology	Institutional	Population	% urban formal	Economic Characteristics
					business services.
B2	LMs with large town as core (surrounding agricultural areas)	Reasonably adequate budgets and staff	50,000 to 200,000	>40%	Large towns with associated resources where LED activities are emerging into strategies and programmes to take advantage of economic potential. Areas with substantial numbers of SMMEs, considerable opportunity for market opportunities, but private sector business development services are not well developed.
B3	LMs with small towns (surrounding agricultural areas and villages)	Limited budgets and staff	<100,000	>20%	Small centres, which are impoverished in terms of resources and where LED activities are often most discernable at the level of the small project. Areas with few SMMEs and limited opportunities (scope for market opportunities is limited, dependence on public support is great).
B4	Rural LMs (with mainly villages and subsistence agriculture)	Limited budgets and staff	>75,000	<20%	Small centres, which are impoverished in terms of resources and where LED activities are often most discernable at the level of the small project. Areas with few SMMEs and limited opportunities (scope for market opportunities is limited, dependence on public support is great).
C1	DMs with largely urban areas	Reasonably adequate budgets and staff		>30%	
C2	DMs with largely rural areas	Limited budgets and staff		<30%	

2.3 Distances and Travel Time

Approximate distances from the centre of each municipality to the Province's primary (Port Elizabeth (PE)) and secondary (East London (EL)) economic hubs were captured from road atlases using the shortest distances over the best available roads (i.e. preferably tarred, national then regional). Within the principal economic centres of the Metro and Buffalo City (BCM), an average travel distance was arrived at by halving the distance between the main centre (PE / EL) and secondary town centre (Uitenhage / King Williams Town) within that Municipal area.

In order to compare distances with some consideration of road quality, national and regional roads were allocated a travel time, informed by personal experience, of 80km/h. Secondary roads were allocated a travel time of 60km/h.
In addition, a 5-minute "toll" was applied for each town travelled through en route. Distances and times between centres are scored on the basis of maximum and minimum figures across the Province.
Recognising that half of the municipal centres in the northern Districts of OR Tambo and Alfred Nzo are closer to the primary KwaZulu-Natal economic centre of Durban than to the secondary Provincial centre of East London, leakage must be expected to Durban. Where distance and time factors are more favourable for Durban – a primary provincial and secondary national economic centre – over East London, primary (PE) scoring is applied for Durban.

2.4 Poverty Measures

The Global Insight database has been drawn upon for the poverty measures of "Poverty Rate" and "Poverty Gap". The poverty rate indicates the percentage of people resident in households living below the poverty income. The poverty income is the minimum monthly income needed to sustain a household, which varies by household size. Global Insight based their calculations on the Bureau of Market Research's Minimum Living Level (MLL) and used the following monthly poverty incomes, by household size, in forecast modeling to arrive at poverty estimates, by area, for subsequent years.

Household Size	Monthly Poverty Income by Household Size (R per month)							
	1996	1997	1998	1999	2000	2001	2002	2003
1	431	468	501	527	555	586	640	678
2	568	616	659	693	730	772	842	892
3	755	820	877	922	971	1,027	1,121	1,187
4	948	1,030	1,101	1,158	1,219	1,289	1,407	1,489
5	1,133	1,230	1,314	1,383	1,456	1,539	1,681	1,779
6	1,327	1,441	1,540	1,620	1,706	1,804	1,969	2,084
7	1,509	1,639	1,752	1,842	1,941	2,051	2,239	2,371
8+	1,839	1,997	2,135	2,245	2,365	2,500	2,729	2,889

The poverty gap provides an indication of the depth of poverty by reflecting the difference between impoverished households' income and the poverty income, as reflected on above. The poverty gap is calculated by aggregating the poverty gap for each poor household, thereby indicating the amount required to bring all poor households up to the poverty line.

2.5 Economic Performance Measures

The Global Insight database has been drawn upon for economic measures relating to employment, GDP and GVA and trade and tress indices.
Growth performance indices for GVA and employment, relative to the Provincial and national economies, for the period 1996 to 2004, have been calculated according to the following formula: [(Value X_{96} / Value X_{04}) / (Aggregate $Value_{96}$ / Aggregate $Value_{04}$)] x 100.

Location Quotients for GVA and employment, relative to the Provincial and national economies, have been calculated according to the following formula: [(Sector Value / Total Value) / (Aggregate Sector Value / Aggregate Total Value)].
Economic Multipliers have been arrived at by calculating the respective contributions to GVA and employment made by all sectors of each local economy divided by the total contributions made by the leading sectors (those sectors with Location Quotients greater than 1.00) of each local economy.

Financial Grant Dependence draws on data captured by the Municipal Demarcation Board (MDB) and is a simple calculation of the percentage contribution of Government Funding to the 2002/03 Municipal Budget.

2.6 Capacity Performance Measures

The Global Insight database has been drawn upon for measures relating to education, women's participation and the Human Development Index (HDI), while municipal capacity data is drawn from the Municipal Demarcation Board (MDB). The 2001 Census (StatsSA) and the Eastern Cape Department of Health have been sourced for data relating to child-headed households and HIV infection rates. In respect of the latter, the Department reports a 95% confidence index on the accuracy of the data.

The qualification rate has been calculated by summing the total number of residents with a matric and any tertiary qualification, divided by the total number of residents aged 25 years and older. The age of 25 was selected since it is the youngest feasible age at which a person could gain the highest university degree (a PhD) – assuming that one matriculates at 18 years, gains a bachelors degree at 21 years, an honours and masters respectively at 22 and 23 years, and a doctorate at 25 years.

The proportion of child-headed households was established by dividing the number of heads of household aged under 15 years by the total, and the number of heads aged up to nineteen years by the total. The second calculation (percentage households headed by children up to nineteen years) was applied in determining Resident Participation Capacity.
Women's Economic Participation was measured by considering the proportion of women making up the Economically Active Population (EAP), the extent to which women are employed and the growth rate, from 1996 to 2004, of women in employment.

The measure of municipal capacity included consideration of the years of experience of municipal and financial management, the number of municipal employees relative to the resident population and, most significantly, the extent to which municipalities are performing their municipal functions with capacity according to the Municipal Demarcation Board 2005 Capacity Assessments. A "municipal functions performance capacity" score was gained by

calculating the proportion of functions performed and with Priority 1 and Priority 2 functions weighted by three and two, respectively. Municipal functions, by priority, are tabulated below.

Priority 1 Functions	Priority 2 Functions	Priority 3 Functions
Water	Cleansing	Local Sports Facilities
Sanitation	Building Regulations	Municipal Parks & Recreation
Electricity	Street Lighting	Public Places
Health Services	Licensing - Food	Local Tourism
Roads	Street Trading	Billboards
Refuse	Trading Regulations	Local Amenities
Planning	Control - Public Nuisance	Licensing - Dogs
Stormwater	Fencing	Airport
Cemeteries, funeral parlours, crematoria	Noise Pollution	Control - Liquor
Fire Fighting	Pounds	Child Care Facilities
Traffic & Parking	Air Pollution	Facilities - Animal
	Beaches & Amusement	Markets
	Public Transport	Abattoirs
	Pontoons & Ferries	

Annexure: Bibliography

District Code	Authority Name	Municipal Code	IDP 2002	IDP 2003	IDP 2004	IDP 2005
Metro	Nelson Mandela	Metro	W	W	Y	W
DC10	**Cacadu DM**	DC10	W	W	Y	WY
DC10	Camdeboo	EC101	W			
DC10	Blue Crane Route	EC102	W	W	Y	
DC10	Ikwezi	EC103	W		Y	Y
DC10	Makana	EC104	W	W	W	
DC10	Ndlambe	EC105	W	W	Y	
DC10	Sunday's River Valley	EC106	W	W		
DC10	Baviaans	EC107	W	W	Y	
DC10	Kouga	EC108	W	W		
DC10	Kou-Kamma	EC109	W	W	Y	
DC12	**Amatole DM**	DC12	W		Y	
DC12	Mbhashe	EC121	W		Y	
DC12	Mnquma	EC122	W		Y	
DC12	Great Kei	EC123	Y		Y	
DC12	Amahlathi	EC124	W		Y	
DC12	Buffalo City	EC125	W		W	WY
DC12	Ngqushwa	EC126	W		Y	
DC12	Nkonkobe	EC127	W		Y	
DC12	Nxuba	EC128	W		(damaged)	
DC13	**Chris Hani DM**	DC13	W		Y	W
DC13	Inxuba Yethemba	EC131	WY			
DC13	Tsolwana	EC132	W	Y		
DC13	Inkwanca	EC133	W	Y	Y	
DC13	Lukanji	EC134	W			
DC13	Intsika Yethu	EC135		Y		
DC13	Emalahleni	EC136		Y		
DC13	Engcobo	EC137	W	Y	Y	
DC13	Sakhisizwe	EC138	W	Y		
DC14	**Ukhahlamba DM**	DC14	W		(table only)	WY
DC14	Elundini	EC141	W		Y	
DC14	Senqu	EC142	W			
DC14	Maletswai	EC143	W		Y	
DC14	Gariep	EC144	W			
DC15	**O. R. Tambo DM**	DC15	W	Y		
DC15	Mbizana	EC151	W		Y	
DC15	Ntabankulu	EC152	W			
DC15	Qaukeni	EC153	W		Y	
DC15	Port St Johns	EC154	W		Y	
DC15	Nyandeni	EC155	W			
DC15	Mhlontlo	EC156	W			
DC15	King Sabata Dalindyebo	EC157	W	Y +SDF		

District Code	Authority Name	Municipal Code	IDP 2002	IDP 2003	IDP 2004	IDP 2005
DC44	**Alfred Nzo DM**	DC44	W	Y	Y	
DC44	Umzimkhulu	ECO5b1	W		Y	
DC44	Umzimvubu	ECO5b2	W			
		Accessed	**43**	**18**	**26**	**5**
		Percentage	**95.6**	**40.0**	**57.8**	**11.1**

W - IDPs accessed on the IDPNC website. Y - IDPs accessed