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# DISSERTATION TITLE

## A National Evaluation of Sustainability Indicators

**DEGREE**

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# ABSTRACT

The presents study reflects on the multidimensional nature of sustainable development and recognizes the interdependence of the economic, social and the environmental dimensions. A total of 40 variables are used to address the meaning of sustainable development at a local level in South Africa. The relationship between indicators and their use in measuring the broad concept of sustainable development is explored. Attempt to capture the spatial dimension in the evaluation of sustainable development indicators is made.

This study shows an association between districts characterized by low percentage of functional literacy and poverty gap. Districts with high poverty gap have poor access to water and latrine facilities and high unemployment rate. Further districts with high percentage functional literacy tend to have access to latrine and water facilities. There is a positive association between an increasing urban-rural spread and population density, percentage functional literacy, and access to latrine and water services, community services and the mining intensity index. As expected districts characterized by a high population growth rate have high population density and high unemployment rate. Districts with high population growth rate also have poor access to water facilities.

Districts with high poverty gap and unemployment rate tend to be associated with low amounts of pesticide and fertilizer application. Districts with large arable land per capita are associated with low amounts of fertilizer and pesticide application, and low intensity

of cattle production. Districts with large protected areas show high population growth rate and poverty gap. Districts with low unemployment rate are associated with mining and quarrying activities. Also districts with high mining intensity index show a positive association with desirable social conditions such as the increase in percentage functional literacy, access to water and latrine water facilities.

On the overall indices of social sustainability indicate a poor state of social sustainable development in many South African magisterial districts in the Eastern Cape, KwaZulu Natal, Gauteng and Northern Province. The overall pattern of economic sustainable development shows many economically active districts in Western Cape, Free State and Gauteng Province. However many districts in the Eastern Cape, KwaZulu Natal, Northern Province, Northern Cape and some in Mpumalanga Province indicate low economic activity. Many districts show a pattern of high environmental sustainability, but districts in Eastern Cape, KwaZulu Natal, Gauteng and some in Mpumalanga and Northern Province indicate a poor state of environmental sustainability.