# An investigation into the state of affairs and sustainability of the Emfuleni economy

by

**Tielman Johannes Christian Slabbert** 

submitted in fulfilment of the requirements for the degree

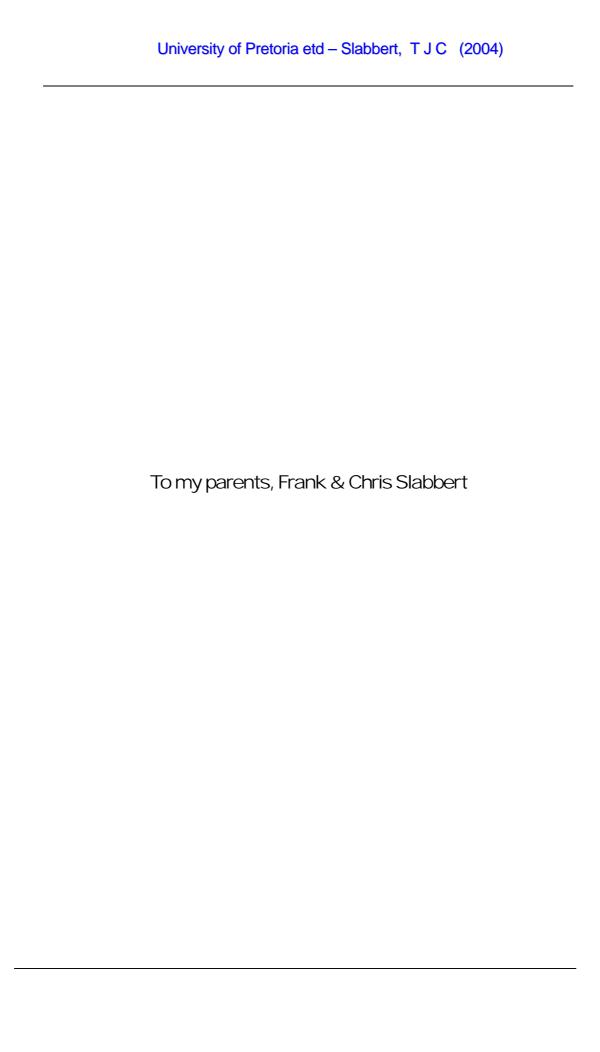
**DOCTOR COMMERCII (ECONOMICS)** 

in the

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES at the

**UNIVERSITY OF PRETORIA** 

PRETORIA APRIL 2004



Acknowledgements

Firstly, I want to thank my wife and fellow researcher, Gertrude Slabbert, for

her valuable discussions, encouragement and proof reading of the thesis.

Secondly, I want to thank my sons Timo and Ivan for their assistance in

developing appropriate programs for analysing some of the data and with the

technical aspects of the thesis.

Thirdly, I want to thank my supervisor, Professor Tamas I Fènyes, for his

advice and assistance.

Fourthly, I want to thank my parents, Frank & Chris Slabbert, for the manner

in which they have brought me up and for all I could learn from them in life.

Above all I want to thank my God and Jesus Christ, my Lord, who gave me

the talents, strength and ability.

**VANDERBIJLPARK** 

**APRIL 2004** 

AN INVESTIGATION INTO THE STATE OF AFFAIRS AND SUSTAINABILITY OF THE EMFULENI ECONOMY

## Declaration

#### I declare that

# AN INVESTIGATION INTO THE STATE OF AFFAIRS AND SUSTAINABILITY OF THE EMFULENI ECONOMY

is my own work and that all the sources used or quoted have been indicated and acknowledged by means of complete references, and that the thesis was not previously submitted by me for a degree at another university

Tielman J. C. Slabbert

## Summary

## AN INVESTIGATION INTO THE STATE OF AFFAIRS AND SUSTAINABILITY OF THE EMFULENI ECONOMY

by

Tielman Johannes Christian Slabbert

Supervisor: Professor T I Fènyes

Department: Department of Economics

Degree: Doctor Commercii (D Com)

In this study, the sustainability of the Emfuleni economy is measured in terms of its ability to reduce the levels of unemployment and poverty over a period of time. An input-output model was used to determine the impact of several proposed projects on the level of household income and employment in Emfuleni. An economic impact assessment model was developed and used to measure the impact of a change in household income on the level of poverty. A sectoral analysis of the economy and a household analysis were used to portray the state of affairs and trends in unemployment and poverty.

Taking into account both the positive impact of proposed projects and some negative impacts (e.g. the collapse of the Krion Financial scheme), projections were made for Emfuleni in terms of GGP growth, population growth, unemployment and poverty until 2015. Assuming that the two proposed projects in Emfuleni, namely, the Vaal Inland Waterfront Project and a 5% expansion of the Manufacturing sector should materialise, the analysis shows that the unemployment rate will be 53.1% in 2015 and the percentage of households below their respective poverty lines 46.6%. Without the projects the unemployment rate will increase from 51.3% in 2000 to 60.6% in 2015 and the percentage of households below their respective poverty lines will increase from 46.1% in 2000 to 60.6% by 2015. The impact of the projects will be that the unemployment and poverty rates are kept at about the same levels as in 2000. However, the analysis shows that the *number* of unemployed persons is expected to increase from 155,988 in 2000 to 243,660 in 2015 and the number of poor households is expected to increase

from 84,549 in 2000 to 114,227 in 2015. More interventions are therefore required to put the Emfuleni economy on the road towards sustainability.

An Inward Industrialisation Process (IIP) aimed at employment creation and poverty alleviation is proposed for intervention. A preliminary analysis indicates that an IIP, focussed on the townships of Emfuleni, may reduce the unemployment and poverty levels substantially and thus increase the sustainability of the economy over a period of time.

-000-

## **Table of Contents**

Ackn	owledgementsü
Decla	rationüi
Sumn	naryiv
Table	of Contentsvi
List o	f Figuresix
List o	f Tablesx
Abbre	eviationsxv
1	Introduction1
1.1	Prologue1
1.2	The research problem1
1.3	Objective of the study3
1.4	Hypothesis4
1.5	Research methodology4
1.6	Geographical area of the study8
1.7	Historical development of the area8
1.8	Layout of the study11
2	Theoretical background to the study13
2.1	Introduction13
2.2	A global categorisation of poverty14
2.3	Theories of poverty used in different parts of the world16
2.4	The philosophy of poverty research19
2.5	Towards a micro-analysis of poverty22
2.6	Poverty research in South Africa and its contribution to the alleviation
	of poverty in South Africa26
2.7	Conclusion30
3	Methodology for measuring the impact of changes in the
	economy on poverty32
3.1	Introduction
3.2	A micro-analysis of poverty32
3.3	The input-output model46
3.4	The poverty impact model54
3.5	Summary and conclusion58

4	Emfuleni population and labour force61
4.1	Introduction61
4.2	Demographic profile61
4.3	The labour force65
4.4	Income and expenditure74
4.5	Summary and conclusion80
5	An analysis of poverty in Emfuleni83
5.1	Introduction83
5.2	Measurement of poverty in Emfuleni83
5.3	Measurement of the depth of poverty in Emfuleni87
5.4	Profile of the poor in Emfuleni88
5.5	Summary and conclusion110
6	The Emfuleni economy113
6.1	Introduction
6.2	Structural composition of the economy113
6.3	Functional specialisation117
6.4	Sub-regional contribution towards the Gauteng province118
6.5	Sectoral contribution of the Emfuleni economy to Gauteng120
6.6	Potential of developing the Emfuleni economy in a provincial context122
<b>6.7</b>	Industrial regeneration125
6.8	Summary and conclusion132
7	A sectoral analysis of the Emfuleni economy and
	identification of the key economic sectors134
7.1	Introduction
7.2	Input-output model of the Vaal134
7.3	Summary and conclusion160
8	The impact of changes in the economy on existing trends in
	terms of employment and unemployment, income, poverty
	and economic growth in Emfuleni163
8.1	Introduction
8.2	Current trends (without the impact of change)163
8.3	Impact of proposed projects on Emfuleni173
8.4	Negative impacts on the Emfuleni economy178
8.5	Summary and conclusion183

9	An adjustment of Emfuleni's Local Economic Development		
	strateg	y towards economic sustainability	186
9.1	In	troduction	186
9.2	Tl	ne importance of LED	186
9.3	L	ED in Emfuleni	188
9.4	Pı	coposal for altering Emfuleni's LED strategy to enhance economic	
	su	stainability	202
9.5	C	onclusion	206
10	Summ	ary and conclusion	209
10.1	In	troduction	209
10.2	St	atus quo and trends in Emfuleni	210
10.3	In	npact of change on the future sustainability of Emfuleni	216
10.4	C	onclusion	219
10.5	Re	ecommendations	220
Annexure A: Household Surveys		Household Surveys	222
Annexure B:		Economic activities	227
Bibli	ography .		231
	0 1		

#### List of Figures FIGURE 1.1 MAP OF THE EMFULENI MUNICIPAL AREA...... 8 FIGURE 4.1 TRENDS IN THE UNEMPLOYMENT RATE, VAAL, FBT ....... 70 EMPLOYMENT PROFILE OF EMFULENI (2003) ......73 FIGURE 4.2 FIGURE 4.3 OCCUPATIONAL PROFILE OF THE ECONOMICALLY ACTIVE POPULATION (2001) ......74 TOTAL REMUNERATION PER SECTOR FOR EMFULENI FIGURE 4.4 SOURCES OF HOUSEHOLD INCOME IN EMFULENI FIGURE 4.5 EXPENDITURE PROFILE OF HOUSEHOLDS IN FIGURE 4.6 POOR HOUSEHOLDS' INCOME AS PERCENTAGE OF FIGURE 5.1 THEIR HSL: EMFULENI (2003).......86 PERCENTAGE OF THE POOR POPULATION IN FIGURE 5.2 DIFFERENT AGE CATEGORIES (2003).......92 NUMBERS OF UNEMPLOYED POOR: SKILLS (2003)........ 108 FIGURE 5.3 FIGURE 6.1 ECONOMIC STRUCTURE OF EMFULENI: GGP CONTRIBUTION, R-MILLION (2000).......114 FIGURE 6.2 INDUSTRIAL ACTIVITIES AND THEIR SHARE OF FIGURE 6.3 SUB-REGIONAL PERCENTAGE CONTRIBUTION OF EMFULENI TOWARDS GGP OF GAUTENG PROVINCE (2000).......119 PERCENTAGE CONTRIBUTION OF THE EMFULENI FIGURE 6.4 ECONOMY TO THE GGP OF GAUTENG (2000) ...... 121 LOCATION OF BLUE IQ PROJECTS IN GAUTENG......123 FIGURE 6.5 FIGURE 8.1 ESTIMATED POPULATION, EMFULENI (2000 - 2015)........ 165 EMPLOYMENT AND UNEMPLOYMENT IN EMFULENI FIGURE 8.2 FIGURE 8.3 ESTIMATED EMPLOYMENT IN EMFULENI (2000 - 2015)... 168

FIGURE 8.4	POVERTY AND UNEMPLOYMENT RATES: TRENDS	170
FIGURE 8.5	ESTIMATED UNEMPLOYMENT AND POVERTY RATES	
	IN EMFULENI (2000 – 2015)	172
FIGURE 8.6	ESTIMATED IMPACT OF PROPOSED PROJECTS ON	
	UNEMPLOYMENT IN EMFULENI (2000 – 2015)	175
FIGURE 8.7	ESTIMATED IMPACT OF PROPOSED PROJECTS ON	
	EMPLOYMENT IN EMFULENI (2000 – 2015)	
FIGURE 9.1	EXPENDITURE IN THE FBTS OF EMFULENI (2003)	203
FIGURE 9.2	IMPACT OF JOB CREATION ON LEVELS OF POVERTY	
	IN EMFULENI	206
	_ , ,	
List of T	ables	
TABLE 3.1	CALCULATION OF THE MONTHLY HOUSEHOLD	
	SUBSISTENCE LEVEL (HSL) FOR HOUSEHOLDS IN	
	EMFULENI: AUGUST 2003	40
TABLE 3.2	FEATURES OF AN INPUT-OUTPUT TABLE	47
TABLE 3.3	A SKELETAL INPUT-OUTPUT TABLE	51
TABLE 3.4	DIRECT INPUT COEFFICIENT MATRIX	52
TABLE 3.5	LEONTIEF INVERSE MATRIX	53
TABLE 4.1	THE EMFULENI SUBURBS AND POPULATION (2001)	62
TABLE 4.2	LABOUR FORCE OF EMFULENI	68
TABLE 4.3	TRENDS IN UNEMPLOYMENT (PERCENTAGE OF	
	POPULATION AND UNEMPLOYMENT RATES), VAAL,	
	FORMER BLACK TOWNSHIPS	70
TABLE 4.4	EMPLOYMENT PROFILE OF EMFULENI (2003)	72
TABLE 4.5	OCCUPATIONAL PROFILE OF THE ECONOMICALLY	
	ACTIVE POPULATION (2001)	73
TABLE 4.6	TOTAL REMUNERATION PER SECTOR FOR	
	EMFULENI (2000)	75
TABLE 4.7	SOURCES OF HOUSEHOLD INCOME IN EMFULENI	
	(2003)	76

TABLE 4.8	EXPENDITURE PROFILE OF HOUSEHOLDS IN	
	EMFULENI (2003)	80
TABLE 5.1	PERCENTAGE OF HOUSEHOLDS IN DIFFERENT	
	INCOME CATEGORIES EXPRESSED AS PERCENTAGE	
	OF THEIR HSL: EMFULENI (2003)	85
TABLE 5.2	PERCENTAGE OF HOUSEHOLDS BELOW THEIR	
	POVERTY LINES IN DIFFERENT INCOME	
	CATEGORIES EXPRESSED AS PERCENTAGE OF	
	THEIR HSL: EMFULENI (2003)	86
TABLE 5.3	POVERTY GAP ANALYSIS OF POOR HOUSEHOLDS IN	
	EMFULENI (2003)	87
TABLE 5.4	HEADS OF POOR HOUSEHOLDS, FBT (1999)	89
TABLE 5.5	STATUS OF MEMBERS OF POOR HOUSEHOLDS	
	(2003)	90
TABLE 5.6	MARITAL STATUS OF MEMBERS OF POOR	
	HOUSEHOLDS (2003)	90
TABLE 5.7	PERCENTAGE OF THE POOR POPULATION IN	
	DIFFERENT AGE CATEGORIES (2003)	92
TABLE 5.8	PERCENTAGE AGE DISTRIBUTION OF HEADS OF	
	POOR HOUSEHOLDS (2001)	93
TABLE 5.9	DISTRIBUTION OF POOR POPULATION BY GENDER	
	(2003)	94
TABLE 5.10	QUALIFICATIONS OF POOR PUPILS IN SCHOOL (2003)	95
TABLE 5.11	QUALIFICATIONS OF POST-SCHOOL POOR	
	POPULATION (2003)	96
TABLE 5.12	ECONOMIC STATUS OF THE POOR POPULATION	
	(2003)	96
TABLE 5.13	ECONOMIC STATUS AND GENDER OF THE POOR	
	POPULATION (2003)	97
TABLE 5.14	EMPLOYMENT BY SECTOR FOR THE POOR (2003)	98
TABLE 5.15	MEAN MONTHLY WAGE OF THE POOR EMPLOYED IN	
	THE MAIN SECTORS OF THE ECONOMY (2000)	99
TABLE 5.16	SECTIONS OF POOR HOUSEHOLDS AFFECTED BY	
	POVERTY (2003)	100

TABLE 5.17	SOURCES OF INCOME FOR POOR HOUSEHOLDS	404
TABLE 5.18	(2003)AVERAGE MONTHLY EXPENDITURE OF POOR	101
17 DEL 0.10	HOUSEHOLDS ON DIFFERENT ITEMS (2003)	. 102
TABLE 5.19	EMPLOYMENT STATUS OF THE POOR (2003)	
TABLE 5.20	NUMBER OF YEARS UNEMPLOYED, POOR (2003)	
TABLE 5.21	NUMBER OF YEARS IN EMFULENI, UNEMPLOYED	
	POOR (2003)	104
TABLE 5.22	PLACE OF ORIGIN BEFORE MOVING TO EMFULENI:	
	UNEMPLOYED POOR (2001)	105
TABLE 5.23	SATISFACTION SURVEY RESULTS ON LIFE IN	
	EMFULENI: POOR (2001)	105
TABLE 5.24	SKILLS POSSESSED AND DESIRED SMALL BUSINESS	
	OPPORTUNITIES: UNEMPLOYED POOR (2001)	106
<b>TABLE 5.25</b>	FORMAL SECTORS OF EMPLOYMENT FOR THE	
	UNEMPLOYED POOR (2001)	107
<b>TABLE 5.26</b>	DESIRED MINIMUM SALARY EXPECTED BY THE	
	UNEMPLOYED POOR (2003)	109
TABLE 6.1	ECONOMIC STRUCTURE OF EMFULENI: GGP	
	CONTRIBUTION (R-MILLION)	113
TABLE 6.2	INDUSTRIAL ACTIVITIES, EMFULENI (2000)	115
TABLE 6.3	FUNCTIONAL SPECIALISATION OF EMFULENI'S	
	URBAN AREAS	117
TABLE 6.4	SUB-REGIONAL PERCENTAGE CONTRIBUTION	
	TOWARDS THE GGP OF GAUTENG PROVINCE, VAAL	
	(1970-2000)	118
TABLE 6.5	PERCENTAGE CONTRIBUTION OF THE EMFULENI	
	ECONOMY TO THE GGP OF GAUTENG (2000)	120
TABLE 6.6	TEN MEGA-PROJECTS SPEARHEADED BY BLUE IQ	
	(2000)	124
TABLE 7.1	GGP-CONTRIBUTION AND SECTORAL GROWTH	
	RATES, VAAL	135
TABLE 7.2	INPUT-OUTPUT TABLE OF THE VAAL ECONOMY	
	(2000)	138

TABLE 7.3	TECHNICAL COEFFICIENTS OF THE VAAL ECONOMY	
	(2000)	139
TABLE 7.4	LEONTIEF INVERSE MATRIX OF THE VAAL ECONOMY	
	(2000)	140
TABLE 7.5	INDUSTRIAL ACTIVITIES, EMFULENI (2000)	145
TABLE 7.6	BACKWARD LINKAGES OF THE DIFFERENT SECTORS	
	OF THE VAAL ECONOMY (PERCENTAGES) (2000)	155
TABLE 7.7	FORWARD LINKAGES OF THE DIFFERENT SECTORS	
	OF THE VAAL ECONOMY (PERCENTAGES) (2000)	156
TABLE 7.8	SECTORAL MULTIPLIERS OF THE VAAL ECONOMY	
	(2000)	158
TABLE 8.1	POPULATION ESTIMATES, EMFULENI (2000 - 2015)	164
TABLE 8.2	GGP GROWTH PROJECTIONS FOR EMFULENI (2000 -	
	2015) – CONSTANT PRICES	166
TABLE 8.3	ESTIMATED UNEMPLOYMENT RATE, NUMBER OF	
	EMPLOYED AND UNEMPLOYED, EMFULENI (2000 –	
	2015)	167
TABLE 8.4	ESTIMATED FORMAL, INFORMAL AND TOTAL	
	EMPLOYMENT, WITH PERCENTAGES OF LABOUR	
	FORCE, EMFULENI (2000 – 2015)	168
TABLE 8.5	POVERTY RATE, POVERTY GAP RATIO AND	
	UNEMPLOYMENT RATIO FOR FORMER BLACK	
	TOWNSHIPS AND EMFULENI (1991, 1994 AND 2000)	169
TABLE 8.6	ESTIMATED UNEMPLOYMENT AND POVERTY RATES,	
	EMFULENI (2000 – 2015)	171
TABLE 8.7	ESTIMATED NUMBER OF UNEMPLOYED POOR AND	
	NON-POOR, EMFULENI (2000 – 2015)	172
TABLE 8.8	IMPACT OF DIFFERENT PROPOSED PROJECTS ON	
	EMFULENI	174
TABLE 8.9	ESTIMATED IMPACT OF TWO PROPOSED PROJECTS	
	ON EMPLOYMENT AND UNEMPLOYMENT IN	
	EMFULENI (2000 – 2015)	175

TABLE 8.10	ESTIMATED IMPACT OF KRION SCHEME AND	
	EQUILIBRIUM/FUTURA INTERNATIONAL ON THE GGP	
	GROWTH RATES IN EMFULENI (2002 – 2015) -	
	PERCENTAGE DECREASE OF GGP	. 179
TABLE 8.11	ESTIMATED IMPACT OF KRION SCHEME AND	
	EQUILIBRIUM/FUTURA INTERNATIONAL ON	
	UNEMPLOYMENT IN EMFULENI (2002 – 2015)	. 180
TABLE 8.12	ESTIMATED IMPACT OF KRION SCHEME AND	
	EQUILIBRIUM/FUTURA INTERNATIONAL ON	
	HOUSEHOLD INCOME IN EMFULENI (2002 – 2015)	. 181
TABLE 8.13	ESTIMATED IMPACT OF KRION SCHEME AND	
	EQUILIBRIUM/ FUTURA INTERNATIONAL ON	
	POVERTY IN EMFULENI (2002, 2015)	. 182
TABLE 8.14	ESTIMATED IMPACT OF KRION SCHEME AND	
	EQUILIBRIUM/FUTURA INTERNATIONAL, EMFULENI	
	(2002, 2015)	. 182
TABLE 8.15	ESTIMATED IMPACT OF TWO PROPOSED PROJECTS	
	AND THE FAILURE OF THE FINANCIAL SCHEMES ON	
	EMPLOYMENT AND UNEMPLOYMENT IN EMFULENI	
	(2000 – 2015)	. 184
TABLE 8.16	ESTIMATED IMPACT OF TWO PROPOSED PROJECTS	
	AND THE FAILURE OF THE FINANCIAL SCHEMES ON	
	POOR HOUSEHOLDS IN EMFULENI (2000 – 2015)	. 184
TABLE 9.1	ROLES MUNICIPALITIES CAN PLAY IN LOCAL	
	ECONOMIC DEVELOPMENT	. 198
TABLE 9.2	IMPACT OF AN INWARD INDUSTRIALISATION	
	PROCESS: EMFULENI FBTS (2003)	. 204
TABLE 10.1	PROJECTIONS OF UNEMPLOYMENT AND POVERTY	
	IN EMFULENI	. 217
TABLE 10.2	ESTIMATED IMPACT OF TWO PROPOSED PROJECTS	
	AND THE FAILURE OF THE FINANCIAL SCHEMES ON	
	EMPLOYMENT AND UNEMPLOYMENT IN EMFULENI	
	(2000 – 2015)	. 217

## **Abbreviations**

BAC - Business Advice Centre

CPS - Current Population Survey

CSA - Customs Secured Area

CSIR - Council for Scientific and Industrial Research

DANIDA - Danish International Development Aid

DPLG - Department of Provincial and Local Government

DTI - Department of Trade and Industry

EAP - Economically Active Population

ELM - Emfuleni Local Municipality

ERU - Employment Research Unit

EVMS - Eastern Vaal Metropolitan Substructure

FBT - Former Black Townships

FWT - Former White Towns

GGP - Gross Geographic Product

GNP - Gross National Product

GSEZP - Gauteng Special Economic Zone Programme

HEL - Household Effective Level

HSD - Human Scale Development

HSL - Household Subsistence Level

IDP -Integrated Development Plan IDZ -Industrial Development Zone IIP -**Inward Industrialisation Process** ILO -International Labour Organisation ISA -Industries and Services Area ISCOR -Iron and Steel Corporation of South Africa LBSC -**Local Business Service Centres** LED -Local Economic Development MAC -Manufacturing Advisory Centre MHSL -Minimum Humane Standard of Living MLL -Minimum Living Level NGO -Non-Governmental Organisation NPI -National Productivity Institute OHS -October Household Survey PDL -**Poverty Datum Line** PPP -Public Private Partnerships PSLSD -Project for Statistics on Living Standards and Development PWV -Pretoria, Witwatersrand and Vereeniging RDP -Reconstruction and Development Programme RSA -Republic of South Africa

SDI - Spatial Development Initiative

SDM - Sedibeng District Municipality

SEZ - Special Economic Zones

SLL - Supplementary Living Level

SMME - Small, Medium and Micro Enterprise

Ur - Unemployment rate

VERB - Vaal Economic Regeneration Board

VRG - Vaal Research Group

WEFA- Wharton Economic Forecasting Associates

WVMS - Western Vaal Metropolitan Substructure