

Title

The ability of the South African Small Medium Enterprise Development
Programme to promote economic growth and employment.

By

Dylan Jessup

Submitted in partial fulfilment of the requirements for the degree of
Masters in Business Administration

Business Studies Unit, Durban Institute of Technology
in the Faculty Commerce

Supervisors

Supervisor

Dr. Cornelius Myburgh and Mr. Peter Raap

29 April 2008

April 2008

TO WHOM IT MAY CONCERN

RE: CONFIDENTIALITY CLAUSE

This work is of strategic importance.

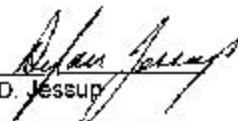
It would be appreciated if the contents of this dissertation remain confidential and not be circulated for a period of five years.

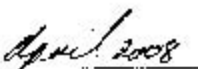
Sincerely

Dylan Jessup

DECLARATION

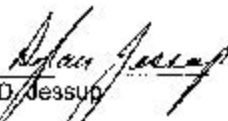
This work has not been previously accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.


D. Jessup


Date

STATEMENT 1

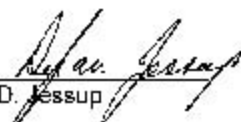
This dissertation is being submitted in partial fulfilment of the requirements for the degree of the Masters in Business Administration.


D. Jessup


Date

STATEMENT 2

This dissertation is the result of my own independent work / investigation, except where otherwise stated.

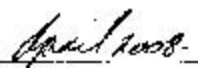

D. Jessup


Date

STATEMENT 3

I hereby give consent for my dissertation, if accepted, to be available for photocopying and inter-library loans after expiry of a bar on access approved by the Institute on the special recommendation of the Constituent / Associated Institution.


D. Jessup


Date

ACKNOWLEDGEMENTS

I hereby wish to express my gratitude to the following individuals who enabled this document to be successfully and timeously completed.

Dr. Corrie Myburgh

Peter Raap

Henri Moolman

Wade van Rooyen

Indevco Business Consultants (Incentives) (Pty) Ltd

DEDICATION

This dissertation is dedicated to my wife Sally for your unfailing support, motivation, patience and mostly her love.

To my parents, Noel and Beth, who have believed in me for many years.

ABSTRACT

The ability of the South African Small Medium Enterprise Development Programme to promote economic growth and employment.

The Department of Trade and Industry (DTI) offers the Small Medium Enterprise Development Programme (SMEDP) incentive grant programme to qualifying manufacturers in South Africa. The status of the progress of this incentive grant programme is unknown. The DTI alluded to an impact study in the 2004 DTI Annual Report but no further reference or publication of results of the impact study has been made.

The objectives of the study are to investigate the following three criteria of the SMEDP and to develop benchmarks and recommendations for future incentive grants offered by the DTI.

- Rationale for implementation of SMEDP;
- Exploration of SMEDP merits; and
- Measure of SMEDP success.

The study is a secondary analysis design with both qualitative and quantitative components. The qualitative component allows the researcher to reflect on the process by which the incentive programme under investigation came into being, whilst the quantitative component allows for comment on the result of the process as per the markers developed in the qualitative component of the design.

There were 152 sample cases used in the study.

The outcome measures are the output measures stated in the Medium Term Strategic Plan which are:

- The number of jobs sustained.

- The number of jobs created.
- The number of Greenfield's projects supported.
- The fixed investment in Rand terms.
- The improvement in employment levels.

The DTI achieved certain of the stated objectives. The empirical data analysed confirms the achievement of these objectives. There is scope for further empirical investigation for the future development of incentive grants.

The contribution of the SMEDP to economic growth and employment growth is evident and such government interventions should be continued.

The recommendations from the study include further investigation into the following areas to improve the benefits provided by manufacturing incentive programmes:

- Limit the incentive to a specified Rand value per job created;
- Volume driven turnover growth not price driven turnover growth;
- The continued inclusion of expansions in future programme; and
- Specified sector programmes i.e. textile sector.

TABLE OF CONTENTS

Page

CHAPTER 1 INTRODUCTION AND OVERVIEW OF STUDY

1.1	Background to the Study	1
1.2	History of Development Incentive Programmes in South Africa	2
1.3	Research Aims and Objectives	4
1.4	Rationale for the Study	4
1.5	Methodology for the Study	5
1.6	Limitations of the Study	6
1.7	Chapter Layout	6

CHAPTER 2 LITERATURE REVIEW

2.1	Literature Paucity / Shortage	8
2.2	What is the Small Medium Enterprise Development Programme?	9
2.3	Objectives of the Small Medium Enterprise Development Programme	11
2.4	Department of Trade and Industry Annual Reports	12
2.5	Other Industrial Development Incentive Programmes	15
2.5.1	Industrial Scheme 2001 for the Economic Development of Kutch District	15
2.5.2	Business Incentive System in Italy	17
2.5.3	Fiscal Research Programme: An Analysis of Proposed New Economic Development	19
2.5.4	Malaysian Industrial Development Authority (MIDA)	21
2.5.5	Ernst and Young Report: Regional Industrial Development Programme (RIDP)	23

CHAPTER 3 RESEARCH METHODOLOGY

3.1	Study Type	26
3.2	Population Cases	26
3.3	Sample Selection and Inclusion	27
3.4	Data Collection	28
3.5	Limitations	29
3.6	Data Analysis	31

CHAPTER 4 PRESENTATION OF RESULTS

4.1	Data Analysis	35
4.2	General Data Analysis	36
4.3	Medium Term Strategic Plan Objectives	37
4.3.1	The Number of Jobs Sustained	37
4.3.2	The Number of Jobs Created	38
4.3.3	The Number of Greenfield's Projects Supported	39
4.3.4	The Fixed Investment in Rand Terms	39
4.3.5	The Improvement in employment levels	41
4.4	The Analysis of the Relationship between Projected and Actual Investment	41
4.5	The Analysis of the Relationship between Projected and Actual Employment	44
4.6	The Analysis of the Relationship between Projected and Actual Turnover	50

4.7	The Analysis of the Opportunity Cost	53
4.8	The Analysis of the Incentive per Employee	54

CHAPTER 5 INTERPRESENTATION OF RESULTS

5.1	Data Analysis	56
5.2	General Data Analysis	56
5.3	Medium Term Strategic Plan Objectives	59
5.3.1	The Number of Jobs Sustained	59
5.3.2	The Number of Jobs Created	60
5.3.3	The Number of Greenfield's Projects Supported	61
5.3.4	The Fixed Investment in Rand Terms	62
5.3.5	The Improvement in Employment Levels	64
5.4	The Analysis of the Relationship between Projected and Actual Investment	64
5.5	The Analysis of the Relationship between Projected and Actual Employment	66
5.6	The Analysis of the Relationship between Projected and Actual Turnover	69
5.7	The Analysis of the Opportunity Cost	70
5.8	The Analysis of the Incentive per Employee	71

CHAPTER 6 RECOMMENDATIONS AND CONCLUSION

6.1	Recommendations and Conclusions	74
6.1.1	Employment Growth	75
6.1.2	Economic Growth	77
6.1.3	Establishment and Expansionary Investments	79
6.1.4	Specific Benefits for Manufacturing Sectors	81

6.1.5	Development of Benchmarks	81
6.2	Analysis of Study Objectives	83
6.2.1	Rationale for Implementation of SMEDP	83
6.2.2	Exploration of SMEDP Merits	84
6.2.3	Measure of SMEDP Success	84
6.3	Conclusion	85
	 Bibliography	 86

Tables

1. Table 2.1: Analysis of SMEDP Output Measures	14
2. Table 4.1: The Number of Jobs Created	39
3. Table 4.2: The Fixed Investment in Rand Terms	41
4. Table 4.3: Sample Case Category versus Type of Sample (Year 1)	47
5. Table 4.4: Sample Case Category versus Submission and Non-Submission of Incentive Grant Claim (Year 1)	47
6. Table 4.5: Sample Case Category versus Type of Sample (Year 2)	49
7. Table 4.6: Mean and Standard Deviation of log (ie1) for establish and expand companies	55

Figures

1. **Figure 4.1:** Projected investment (l_{pn1}) versus the actual investment (l_{an1}) on the log scale 43
2. **Figure 4.2:** Projected investment (l_{pn2}) versus the actual investment (l_{an2}) on the log scale 44
3. **Figure 4.3:** Projected employment (l_{pe1}) versus the actual employment (l_{ae1}) on the log scale 46
4. **Figure 4.4:** Projected employment (l_{pn1}) versus the actual employment (l_{an1}) on the log scale with companies in the “Above” and “Below” categories omitted 48
5. **Figure 4.5:** Projected employment (l_{pe2}) versus the actual employment (l_{ae2}) on the log scale 50
6. **Figure 4.6:** Projected turnover (l_{pt1}) versus the actual turnover (l_{at1}) on the log scale with companies in the “above” and “below” categories omitted 52
7. **Figure 4.7:** Projected turnover (l_{pt2}) versus the actual turnover (l_{at2}) on the log scale with companies in the “above” and “below” categories omitted 53

CHAPTER 1 INTRODUCTION AND OVERVIEW OF STUDY

1.1 BACKGROUND TO THE STUDY

Industrial development incentive programmes have been in existence in South Africa since the mid 1950's. The incentive programmes are described as Schedules 1 to 6, with Schedule 6 being the Small Medium Enterprise Development Programme (SMEDP).

Historically these incentive programmes have suffered from a political bias. Incentive Schedules 1 to 5 were structured to facilitate decentralisation of the manufacturing sector away from the urban areas to the historic homelands. The benefits were designed not necessarily to be economically optimal, but rather to be politically useful. More recently the SMEDP (Schedule 6) has been initiated with the objective of avoiding this political bias and fostering economic ends.

The latest revision is the SMEDP which caters for both establishing manufacturing businesses (Greenfield) and existing manufacturing business that are expanding through investment in manufacturing assets. The incentives are cash based tax free and calculated over a three year period upon the level of investment in qualifying assets as defined by the Department of Trade and Industry (DTI). The scale of benefits is calculated on a regressive sliding scale based upon investment in what are deemed to be qualifying assets, as published on the DTI website in the SMEDP Information Brochure (www.dti.gov.za/offerings).

The DTI activated the SMEDP in September 2000 with several objectives that needed to be achieved in terms of Vision 2014 and the Integrated Manufacturing Strategy (Ruiters, 2002). This study focuses on two specific objectives outlined by the DTI:

1. To promote economic growth in the Small Medium Micro Enterprise sector of the South African economy; and
2. To promote the growth of employment in the South African economy.

The only available and accessible authoritative report on the economic impact of these development investment incentive programmes in South Africa is the 1996 Ernst and Young report undertaken in conjunction with NEDLAC. This present study may therefore contribute to the development of the body of knowledge on the performance of South African manufacturing incentive programmes. This is especially pertinent because the SMEDP is to be reviewed in September 2006 by the DTI.

1.2 HISTORY OF DEVELOPMENT INCENTIVE PROGRAMMES IN SOUTH AFRICA

The investment incentive programmes historically offered in South Africa have focused on the manufacturing sector. The incentive programmes have been noted as Schedules 1 to 5 with Schedule 6 being the SMEDP. The brief history of the incentive programmes and their specific objectives are:

1. Schedule 1 Incentive Scheme or Border Industry Programme (1956 - 1971): The objective was to facilitate industrial growth in industrial areas adjacent to the former homeland areas. This was later expanded to include areas situated inside the former government designated "homeland" areas.
2. Schedule 2 Incentive Scheme or Board for Decentralisation of Industry (1971 - 1982): The objective was to promote industrial development of the former homeland economies. The incentive programme emphasised the decentralisation of industries into the homelands.
3. Schedule 3 Incentive Scheme or Regional Industrial Programme (1982 – 1991): The objective was to create employment in the

former homelands and create industrial nodes in decentralised areas away from the metropolitan areas.

4. Schedule 4 Incentive Scheme or Regional Industrial Development Programme and Simplified Regional Industrial Programme:
 - a. Regional Industrial Programme (1991 – 1993): The objective was to create concentrated self sustaining industrial areas on a regional basis optimising the resource availability and the regional comparative advantages.
 - b. Simplified Regional Industrial Programme (1993 – 1996): The objective was the same as the Regional Industrial Programme of 1991. The difference was that the aim was to cater for smaller businesses which were being established in these decentralised industrial areas.
5. Schedule 5 Incentive Scheme or Small Medium Micro Development Programme and Tax Holiday Scheme (1996 – 2000):
 - a. Small Medium Micro Development Programme: The objective was to incentivise establishment of Greenfield manufacturing businesses with a set limit upon qualifying asset capitalisation.
 - b. Tax Holiday Scheme: The objective was to provide a tax shelter for qualifying manufacturing businesses over a seven to ten year period.
6. Schedule 6 Incentive Scheme or Small Medium Enterprise Development Programme (2000 – 2006): The objective is the same as the Small Medium Micro Development Programme with the additional benefit of incentivising expansionary investment of existing businesses and increasing the capitalisation value of qualifying assets.

The incentive schedules 1 – 4 demonstrate the distinct political bias of the government of the time. The incentivisation of manufacturing decentralisation to establish manufacturing units in or adjacent to

the former homelands was aimed at satisfying a political purpose rather than an economical purpose.

1.3 RESEARCH AIMS AND OBJECTIVES

The aim of the study is to evaluate the rationale and develop possible indicators to measure the success of asset based government incentive programmes to promote economic growth and employment.

The objectives for undertaking the study are threefold:

The first objective is to establish the rationale for the implementation of an asset based incentive programme (SMEDP) and to develop operational benchmarks for employment against which such a programme can be measured.

The second objective is to explore the merits of this type of programme and to develop possible indicators by which the programme's contribution with respect to sustainable economic growth and employment might be benchmarked.

The third objective is to measure the success of the Small Medium Enterprise Development Programme's impact on economic growth and employment against appropriate indicators.

1.4 RATIONALE AND MOTIVATION FOR THE STUDY

The success or status quo of the Small Medium Enterprise Development Programme is not known and the rationale of this study is to determine the status of the SMEDP.

The study requires the development of measurable benchmarks to determine the current status of the SMEDP.

The unknown status of the SMEDP and the lack of the available literature on these and similar types of government development investment incentive programmes necessitates the development of the three different objectives laid out to provide a foundation to further facilitate studies of this subject.

The Problem Statement “Due to a lack of clearly defined indicators stipulated by the Department of Trade and Industry there is a paucity of evidence with which to determine whether the Small Medium Enterprise Development Programme presents a trade-off between increasing employment and investment in manufacturing equipment” seeks to address the objectives of the study, determine the objectives of the intervention are achieved and development benchmarks and indicators for future implementation of such governmental economic interventions.

1.5 METHODOLOGY FOR THE STUDY

The lack of comparative studies and available literature on this subject has dictated that this study will be explorative in nature. The adopted methodology in this study is to determine the measurable and quantifiable variables which have been stated by government in the objectives of this intervention. This will facilitate development of benchmarks and indicators against which this type governmental economic intervention can be measured to determine the level of success of such interventions.

The study will investigate the strength of the relationship between the projected and actual outcomes of variables. The Pearson’s Correlation Coefficient will be used as the measurement tool to determine the strength of these relationships.

The use of logarithmic scales will be used to facilitate the measurement of the raw data to reduce the spread in the data and facilitate the measurement by compacting the data. The use

Formatted: Font: (Default)
Arial

Formatted: Normal, Indent:
Left: 1.9 cm, No bullets or
numbering

Formatted: Font: (Default)
Arial

logarithms will allow the statistical description in the relationship of variables in a linear regression form. ▲

Formatted: Font: (Default)
Arial

1.6 LIMITATIONS OF THE STUDY

▲ The study has been limited to include only the manufacturing policy of the SMEDP programme. The inclusion of sample cases is limited to those qualifying manufacturing business in the Kwa Zulu Natal province in the Republic of South Africa.

Formatted: Font: (Default)
Arial

Formatted: Normal, Indent:
Left: 1.9 cm, No bullets or
numbering

The increase in employment levels was limited to the sample case and any resultant increase in upstream or downstream employment from the sample case was excluded. The influence of exchange rates on the variables within the study is excluded. The measurement of the qualifying investment for incentives is limited to the investment in plant, machinery and equipment as this category of qualifying investment provides the manufacturing capacity for the sample units. ▲

Formatted: Font: (Default)
Arial

1.7 CHAPTER LAYOUT

The rest of the thesis will be structured in the following order. Chapter Two will consist of a review of the current available literature. The gaps in the current available literature will be identified. The variables for the quantitative component of the thesis will be identified.

Chapter Three will cover the chosen methodology for the quantitative component which will include the design for the study, the sample selection and data collection. The limitations of the study will be discussed under a separate heading in this chapter.

Chapter Four will present the results obtained during the study.

Chapter Five will discuss the interpretation of the statistical results.

Chapter Six will contain the conclusions and recommendations that are drawn from the study.

The appendices and bibliography will follow this chapter.

CHAPTER 2 LITERATURE REVIEW

2.1 LITERATURE OVERVIEW

The rationale for the study originated from the impact study of the SMEDP noted in the DTI Annual Report (2003). This DTI Annual Report, made no further mention of the outcome of the impact study in the previous year's report. Furthermore there was no mention on the DTI website of the impact study's report. This lead to the question; "What is the status of the SMEDP?"

The research into other industrial development incentive grant programmes offered globally resulted in a similar outcome. Several examples of these different incentive grant programmes are discussed later in the chapter. There is information available on the different incentive grant programmes in terms of an information brochure that includes what benefits are offered, who qualifies for the incentive grant programme and how applications can be made. However, there is no published data or reports on the outcomes and / or impacts these different incentive grant programmes have had on the economies of the countries specific.

The paucity of published information on the outcomes of these programmes formulated the basis for the study's research and the stated objectives from Chapter 1. Through the achievement of the aforementioned stated objectives, the purpose of this study is to develop a body of knowledge for the future objective adjudication of the success or failure of incentive grant programmes. It is hoped to measure their ability to achieve the stated objectives and their contribution to economic growth, sustainability and employment.

The only authoritative report on the outcomes of any incentive grant programmes is the Ernst and Young Report on the Schedule 4: Regional Industrial Development Programme. This document was

difficult to locate as no copies were held by either Ernst and Young or the DTI. The document was finally located at the Fund for Research into Industrial Development Growth and Equity (FRIDGE), which forms part of NEDLAC, after six months by chance. This further reinforces the need to develop a body of available knowledge on this topic.

The largest challenge in investigating the topic of government investment incentive grants is the lack of the available literature on these programme's offerings and then the outcomes from these interventions. There are no published journal articles on the topic to substantiate the intervention or to compare the outcomes of the SMEDP intervention. The literature review is therefore limited to the available literature which is discussed in this chapter.

The only available authoritative literature is limited to the Ernst and Young Report published on the outcomes of the Regional Industrial Development Programme. This substantiates the need to develop a body of knowledge on the topic of government investment incentive grant interventions.

2.2 WHAT IS THE SMALL MEDIUM ENTERPRISE DEVELOPMENT PROGRAMME?

The information brochure located on the DTI website states the SMEDP is an asset based incentive grant with benefits calculated on a regressive percentage of the investment in qualifying assets, over a three year period. The benefits are paid in cash and are tax free. (www.dti.gov.za).

The SMEDP is available to all incorporated legal entities, partnerships, sole proprietors and co-operatives that are involved with the qualifying activities of manufacturing and tourism (www.dti.gov.za). For the purposes of this study the focus is limited

to those qualifying entities involved in manufacturing which will be discussed later in the Research Methodology chapter.

The investment in qualifying assets is comprised of investment in plant, machinery, equipment, tooling, commercial vehicles, rented or owned buildings and capitalised research development. The total qualifying value of the investment in qualifying assets is limited to a maximum of R100 million (www.dti.gov.za).

The SMEDP operates in two phases, firstly as an Establishment Grant for businesses that are younger than 180 days, i.e. where a qualifying business has been manufacturing for less than 180 days. Then there is an Expansionary Grant for businesses older than the aforementioned specified period of 180 days (www.dti.gov.za).

To access the SMEDP benefits, a company must first make an application to the DTI. Once approved, claims can be submitted to the DTI for payment of the benefit in cash. The approval of the application culminates in the issue of an SMEDP contract between the qualifying legal entity and the DTI. The successful applicant can then commence lodging claims for benefits to be paid.

The benefit paid to the company through the SMEDP is calculated on a regressive percentage as the scale or magnitude of investment in the qualifying assets increases. The benefit is calculated on qualifying investment in the following regressive steps (www.dti.gov.za): -

- 10%: R 0 – R 5 million;
- 6%: R 5 million – R 15 million;
- 4%: R 15 million – R 30 million;
- 3%: R 30 million – R 50 million;
- 2%: R 50 million – R 75 million; and
- 1% R 75 million – R 100 million.

The SMEDP policy requires measurement of benchmark criteria to be met at predetermined intervals, namely Years 1 and 2. These measurement criteria are:

- Investment is measured by investment in plant and machinery;
- Activity levels are measured by turnover; and
- Equity or solvency.

The sample cases need to meet these measurement criteria at the prescribed measurement intervals in order to submit successful claims for payment.

The SMEDP is effectively a supply side incentive grant programme which is compliant with the rules and regulations to the World Trade Organisation.

2.3 OBJECTIVES OF THE SMALL MEDIUM ENTERPRISE DEVELOPMENT PROGRAMME

The DTI's SMEDP information brochure does not explicitly state the objectives of the programme. The DTI's Medium Term Strategic Plan (www.dti.gov.za) reveals that "Vision 2014" has the following objectives: -

- Growth;
- Employment; and
- SMME growth.

"Vision 2014" is the basis of the government's Microeconomic Strategy which "by 2014, following the successful implementation of the microeconomic reform strategy and complemented by continued social development, South Africa will have a restructured and adaptive economy characterised by growth, employment and equity built on the full potential of all person's communities and geographic areas" (www.dti.gov.za).

The DTI's Medium Term Strategic Plan goes further to determine the contribution of the SMEDP. The expected output of the SMEDP is as follows (www.dti.gov.za): -

- To sustain jobs;
- To create jobs;
- To increase the number of small medium and micro enterprises in the economy;
- To increase the fixed private investment in the manufacturing sector of the economy; and
- To increase the level of permanent employment in the manufacturing sector of the economy.

The outputs of the SMEDP will be measured by the following mechanisms which correspond to the outputs as outlined above: -

- The number of jobs sustained;
- The number of jobs created;
- The number of Greenfield manufacturing projects supported;
- Fixed investment in Rand terms in the manufacturing sector; and
- The improvement in the employment levels in the manufacturing sector.

The outputs and the measurements will form the core of the quantitative component of the research. The study aims to determine whether and to what extent these outputs have been achieved. This will be done through the actual measure of the output.

2.4 DEPARTMENT OF TRADE AND INDUSTRY ANNUAL REPORTS

The information on the stated output measures contained in the DTI Annual Reports is summarised in the following table, Table 2.1, for the periods ending:

- 2002 / 3;

- 2003 / 4;
- 2004 / 5; and
- 2005 /6.

The information contained in the following has been extracted from the DTI Annual Reports for the financial years ended 31 March 2003, 2004, 2005 and 2006.

Table 2.1 Analysis of SMEDP Output Measures

Output Measure	2002 / 3	2003 / 4	2004 / 5	2005 / 6
No. of jobs sustained	5 312	44 500	Not reported	Not reported
No. of jobs created	55 870	19 700	65 340	41 873 (Projected)
No. of Greenfield Manufacturing Projects	Not reported	1397 new businesses. (There is no distinction between Manufacturing and Tourism)	2801 new businesses. (There is no distinction between Manufacturing and Tourism)	Not reported
Fixed Investment (Rands)	R 9.4 billion	R 1.3 billion	R 14.4 billion	R 14.7 billion
Improvement in employment levels	55 870	19 700	65 340	41 873 (Projected)
Incentive Value for the Year (Paid)	Not reported	R 353 million	R 562 million	R 2.2 billion
Incentive Value for the Year (Approved)	Not reported	Not reported	R 3.2 billion	R 733 billion

The table is a compilation from DTI Annual Reports 2003, 2004, 2005 and 2006.

As can be seen in the above table the DTI does not report consistently on an annual basis on the output measures as per the DTI Medium Term Strategy. This effectively does not allow comparisons to be made from one year to the next across the measurable output categories. This compounds the unknown status of the SMEDP.

2.5 OTHER INDUSTRIAL DEVELOPMENT INCENTIVE PROGRAMMES

2.5.1 Industrial Scheme 2001 for the Economic Development of Kutch District

This incentive scheme was introduced by the government of Gujarat to incentivise the rebuilding of industry in the Kutch district in India after the destruction caused by a monsoon. There are several similarities between this scheme and the SMEDP programme. The similarities include the fact that qualifying entities have to be incorporated legal entities and excludes state owned businesses or parastatals (www.gujaratindustry.gov.in).

The incentive value is calculated on the investment in land, new buildings, new plant and machinery. It includes costs that can be capitalised in bringing the plant and machinery to production for example transportation and commissioning costs, and technical costs. The Kutch Industrial Scheme does not include costs associated with rented buildings, second hand or used plant and machinery or commercial vehicles (www.gujaratindustry.gov.in). The SMEDP by contrast does permit these costs to qualify for incentive purposes. The Kutch programme is also effectively a capital based asset incentive programme similar to the SMEDP.

The Kutch programme does not make a distinction between a new (Greenfield's) or an expansionary investment as the SMEDP does.

This programme implies applicability to both new and expansionary investments.

The Kutch Industrial Scheme permits small scale manufacturing units to include costs up to and including six months after the commencement of production. Medium and large manufacturing units may include costs for up to twelve months after commencement of production. Projects exceeding 100 million Indian Rupees (Rs) up to eighteen months after the commencement of production or completion of the project set up. The SMEDP permits investment up and including the end of the second full and complete financial year for both new and expansionary investments (www.gujaratindustry.gov.in).

The benefit is “paid” to the manufacturer through an exemption from paying sales tax, a recoupment or deferment of sales tax, or a combination of the sales tax exemption and deferment. The scale of benefit is “paid” at (www.gujaratindustry.gov.in): -

- 100% for five years from date of production commencing for investment projects up to Rs 10 million;
- 100% for seven years from date of production commencing for investment projects exceeding Rs 10 million but less than Rs 50 million; and
- 100% for ten years from date of production commencing for investment projects exceeding Rs 50 million.

The benefit of the programme is limited to manufacturers located in the Kutch district which implies a regional applicability. This is not the case for the SMEDP, but is similar to the incentive programme Schedules 1 – 4 offered by the previous South African Government.

The programme does not provide any detailed report or empirical data on the impact or outcome of the investment incentive

programme. The search for this type of information proved unsuccessful. There is also no interim reporting available. This can be attributed to the fact that the programme is still paying benefits to qualifying legal entities.

2.5.2 Business Incentive System in Italy

The government grant incentive system in Italy is available only to manufacturing businesses and not to those involved in tourism. The incentives are available for “payment” in four different forms (www.italtrade.com): -

- Direct contributions from government, i.e. cash contributions which is the same as the SMEDP programme.
- Tax breaks;
- Low interest funding mechanisms; and
- Government guarantees for borrowing or loan funding.

The incentives are provided for manufacturing businesses that (www.italtrade.com): -

- Establish new manufacturing plants;
- Expand and renovate existing manufacturing facilities;
- Invest in new manufacturing machinery, plant and equipment;
- Invest in research and development;
- Train and recruit new and existing employees; and
- Boost exports.

This is similar to the SMEDP programme in that the SMEDP caters for manufacturing businesses that are investing in new manufacturing facilities or expanding existing manufacturing facilities. The SMEDP provides benefits for investment in Research and Development expenditure that is capitalised to the company's

balance sheet in the annual financial statements, rather than expensed through the income statement.

The benefit for the training of employees is covered under the SMEDP programme through the joint venture with the Department of Labour, in the form of the Skills Support Programme (SSP). This programme was renamed the Work Place Skills Development Programme (WPSDP). The SMEDP applicant has to be approved for SMEDP benefits before an application for the WPSDP can be submitted to the Department of Labour to qualify for these benefits (www.dti.gov.za).

The increase of exports does not have a distinct component to increase or decrease the benefit of the SMEDP but does have influence in the adjudication or vetting of the SMEDP application. The objective of increasing exports and the inflow of foreign exchange is not explicitly stated. The Italian incentive system does not state that the benefits are linked to the level of export promotion, which is the same as the SMEDP. However, the objective is not as clearly stated.

The manufacturing incentives available in Italy are biased towards locality of manufacturing businesses especially those in the less developed southern areas (www.italtrade.com). This is similar to the Regional Industrial Development Programme where the incentive's scale of benefits was based upon the location of the business. South Africa moved away from this type of location based investment incentive programme because of the political undertones of such programmes. The SMEDP does not discriminate against manufacturing businesses due to their location. The SMEDP applies the principle of the most optimal location.

The Italian incentive system has limitations on the incentives available for deemed sensitive industrial sectors. These deemed

sensitive manufacturing sectors require European Union approval before qualifying for the incentive grant benefits (www.italtrade.com). The SMEDP does not have any restrictions of this nature with the South African Customs Union, Southern African Development community or the African Union.

2.5.3 Fiscal Research Programme: An Analysis of Proposed New Economic Development

The proposed Kentucky State Development Incentive Programmes are categorised into the following components (Edmiston, K.D., Sjoquist, D.L., Thomas, J. 2003): -

- The Kentucky Industrial Development Act (KIDA);
- The Kentucky Rural Economic Development Act (KREDA);
- and
- Kentucky Job Development Act (KJDA).

The discussion of these incentives will be limited to the manufacturing incentive: KIDA.

Qualification for the KIDA programme requires a manufacturing business to make a combined qualified minimum investment and a minimum job creation requirement. The programme quantifies the different qualification strata into tiers, as follows (Edmiston et al., 2003): -

- Tier 1: Minimum investment of 50 000 American dollars (US\$) and a minimum of 5 jobs created;
- Tier 2: Minimum investment of US\$ 100 000 and a minimum of 10 jobs created;
- Tier 3: Minimum investment of US\$ 150 000 and a minimum of 15 jobs created; and
- Tier 4: Minimum investment of US\$ 250 000 and a minimum of 25 jobs created.

The qualifying investment is divided into the following categories of assets (Edmiston et al., 2003): -

- Land and buildings;
- Site development;
- Building fixtures; and
- Plant, machinery and equipment.

The benefit is “paid” to the qualifying businesses in the form of an exemption from State Corporate Income Tax and / or Employee Personal Tax. The benefit can be “paid” in either of the two tax categories or as a combination of the two categories. The benefits are stratified according to the tiered qualification levels (Edmiston et al., 2003): -

- Tier 1: 100% State Corporate Income Tax and 100% Employee Personal Tax exemption;
- Tier 2: 100% State Corporate Income Tax and 80% Employee Personal Tax exemption;
- Tier 3: 100% State Corporate Income Tax and 60% Employee Personal Tax exemption; and
- Tier 4: 50% State Corporate Income Tax and 40% Employee Personal Tax exemption.

The regulations of the KIDA programme allow for a company to make application for the KREDA programme benefits if located in specified areas (Edmiston et al., 2003). This results in a location bias which is dissimilar to the SMEDP programme but similar to the incentive programmes offered through Schedules 1 – 4. The KIDA benefits are “paid” in tax exemptions whereas the SMEDP benefits are paid in cash. The qualifying investment asset categories are the same as the SMEDP; however the KIDA programme has an explicit employment creation component which the SMEDP does not. The SMEDP does require a statement of employment growth in the

application document, but there is no measurement benchmark on the claiming of benefits. The manufacturer, qualifying for SMEDP benefits, only has to demonstrate that employment levels have been sustained i.e. the employment numbers in the qualifying entity have not decreased rather that the levels have increased. This effectively underpins the secondary nature of the employment objective of the SMEDP programme.

2.5.4 Malaysian Industrial Development Authority (MIDA)

MIDA provides two main types of manufacturing incentives: the Pioneer Status and the Investment Tax Allowance. The qualification for these two programmes is based upon the demonstration of (www.smidec.gov.my):

- Levels of valued added;
- The level of technology used in the manufacturing process; and
- Industrial linkages.

The benefits of these two programmes are “paid” in the form of income tax exemptions. There is a regional component to the benefits of the MIDA programmes which allows greater percentage exemptions for manufacturing businesses (www.smidec.gov.my).

The period of the income tax exemption for the Pioneer Status is five (5) years during which only 30% of the statutory income tax is paid. In the designated areas of the regional component, the qualifying businesses under the Pioneer Status only have to pay fifteen (15) percent of the statutory income tax (www.smidec.gov.my). This incentive grant has similarities to the incentive grant schedules 1 – 4 offered by the South African Government.

The period of the income tax exemption under the Investment Tax Allowance is also five (5) years. The benefit is calculated to a maximum of 60% of the qualifying capital expenditure to be written off against 70% of statutory taxable income and the remaining 30% is taxed at the prevailing income tax rate. The regional component allows for business located in the designated areas permits 80% of qualifying capital expenditure to be written off against 85% of statutory taxable income (www.smidec.gov.my).

The Pioneer Status caters for new businesses and the Investment Tax Allowance caters for existing businesses that are expanding their production capacity (www.smidec.gov.my).

MIDA also provides incentive grant assistance in the form of a Reinvestment Allowance and the Accelerated Capital Allowance. The benefits of these two programmes are also “paid” in tax exemptions. The Reinvestment Allowance is for a maximum period of 15 (fifteen) consecutive years from the initial reinvestment. The benefit is calculated as a 60% allowance of qualifying capital expenditure to be written off against 70% of the statutory taxable income. The Accelerated Capital Allowance also has a 15 (fifteen) year eligibility period. The benefit is calculated in terms of an initial allowance of the qualifying capital expenditure of 40% and 20% annual allowances thereafter. The Accelerated Capital Allowance has to be used within three years (www.smidec.gov.my)

The incentive grants offered by MIDA have greater similarities to the incentive grant programmes in schedule 1 – 4 offered by the South African Government. The most obvious similarities are demonstrated by the benefits offered through the Tax Holiday Scheme and the regional bias of the Regional Industrial Development and Simplified Regional Industrial Development Programmes.

2.5.5 Ernst and Young Report: Regional Industrial Development Programme (RIDP)

The Ernst and Young Report is the only comprehensive report of the effect and the impact of the various manufacturing investment incentive programmes investigated. The report is an extensive evaluation of the programme in each of the designated regional areas and is based on the following criteria (Anon, 1996a):

- Contribution to self sustaining growth;
- Regional development;
- Urban development; and
- Employment creation.

The evaluation revealed there were serious structural shortcomings, there was limited achievement of the programme's objectives, and the cost of the programme was high. This evidence in the Ernst and Young Report provided the foundation for the Schedule 5, (Small Medium Micro Development Programme), and Schedule 6, (Small Medium Enterprise Development Programme), incentive grant programmes to be established (Anon, 1996a).

Identified on a regional basis, the evaluation determined the shortcomings of the programme (Anon, 1996b): -

- The programme did not meet regional development criteria;
- The viability of a significant percentage of the qualifying businesses on the programme was questionable;
- There was an over reliance on the incentives provided by qualifying businesses on the programme; and
- The programme's inability to foster an environment for manufacturing development.

The shortcomings of this specific manufacturing incentive grant programme has resulted in future programmes, namely Schedules

5 and 6 having no location bias and permitting the qualifying businesses to determine their most optimal location. The scale of benefit was thus not determined by the physical location as in the case of the RIDP (Anon, 1996b).

The benefits of the RIDP were divided into short- and long term benefits. These benefits were mostly “paid” in cash to the qualifying businesses. The nature of the long term benefits that a qualifying business could receive were (Anon, 1996b): -

- A transport rebate of 40 – 60 % on all outgoing products;
- An electricity concession which was determined by the physical and regional location of the factory.
- A training allowance.
- A housing subsidy for supervisory and higher level employees that was limited to R 68 000 of the interest portion on residential mortgage bonds.
- Tender preference of 4 – 10 % on all government and parastatals tenders.

The short term benefits available were (Anon, 1996b): -

- A labour incentive of 80 – 95 % subsidisation rate based upon an average calculation of wages and number of employees.
- An interest and rental subsidy on both fixed property, and movable plant and machinery, assets that was limited to R7 million. The rental subsidy fluctuated between 20 – 80% which was dependent upon the regional location.
- Relocation costs to a maximum of R500 000 and an additional 20% for any unforeseen expenses.
- A productivity incentive scheme under which the consultancy fees were subsidised.

The structure of the RIDP and the scale of benefits proved an expensive incentive programme to operate. The structure also

underpins the political bias of the incentive programme rather than being structured on optimal economic principles. The removal of the RIDP benefits through the termination of the programme resulted in qualifying businesses relocating to more optimal locations. This phenomenon reinforced the suboptimal economic principles and political bias of the RIDP incentive programme (Anon, 1996a).

CHAPTER 3 RESEARCH METHODOLOGY

3.1 STUDY TYPE

The study type is a secondary analysis design with both qualitative and quantitative components. The qualitative component will provide comment on the SMEDP incentive grant programme, from a procedural perspective. The quantitative component will provide empirical results which can be compared against the output measures stipulated in the Medium Term Strategic Plan, as discussed in the literature review.

The unit of analysis in this research is an intervention, which is the SMEDP incentive grant programme. This cannot be studied directly without studying the individual applicants and claimants on the SMEDP programme. The applicants and claimants are therefore units of observation in this study, used to analyse and scrutinise the phenomena and outcomes of this particular intervention, the SMEDP programme. The units under observation will be referred to as sample cases for the purpose of this study.

The businesses that are applicants and claimants, who have chosen to participate in the programme and who have received benefits, constitute the individual cases upon which the study is based and commentary on which the results are based.

The incorporation of both qualitative and quantitative components in the research means that the study is a hybrid study.

3.2 POPULATION CASES

The population cases include of all the SMEDP applications approved since the inception of the SMEDP programme, September 2000, for the manufacturing investment incentive grant benefit. The sample cases were limited to all manufacturing

SMEDP applications submitted by the Kwa Zulu Natal regional office of Indevco Business Consultants to the Department of Trade and Industry to participate on the SMEDP programme.

The Department of Trade and Industry offered the SMEDP investment incentive grant benefits to the manufacturing, tourism and aquaculture sectors. The programme was intended to offer benefits to include the following sectors: agriculture, agro-processing, bio-technology and information technology. However, the SMEDP policies for these sectors were not released and benefits were limited to those participants in the manufacturing and tourism sectors. This is a shift from previous investment incentive grant policy which was strictly limited under the previous programmes as discussed earlier to manufacturing only.

The scope of sample cases for this research is limited to manufacturing approved applications.

3.3 SAMPLE SELECTION AND INCLUSION

Sample cases were selected and included based upon the following criteria: -

- The approved SMEDP applicant must comply with the manufacturing criteria as determined by the Standard Industrial Classification (SIC) Code 3. The SIC Code 3 defines what the manufactured product is and applies a code to the specific product.
- The sample case must have successfully applied for SMEDP benefits through Indevco Business Consultants (Incentives) Pty Ltd (Indevco). Indevco is a specialised outsource solution company that manages and administers the investment incentive grant to manufacturing businesses.
- The sample cases were limited to successful applications made through the Indevco Kwa Zulu Natal regional office. The physical location of these sample cases may not have

been limited to the Kwa Zulu Natal province. The head office would be located in the Kwa Zulu Natal province and therefore application was made through the Indevco Kwa Zulu Natal regional office. The physical location of the manufacturing facility outside the province of Kwa Zulu Natal was deemed not significant enough to result in a significant distortion of the sample cases.

- The sample cases will be selected using purposive judgement to include all available sample cases.
- The sample cases will include both establishment and expansionary investments made by the qualifying applicants approved under the SMEDP incentive grant.
- According to Sekaran (1992: 253) the minimum number of sample cases required to conduct the quantitative component of this research is one hundred and three (103).

The criteria for sample selection was determined to provide a focused approach to the research without including the other SMEDP policies for tourism and aquaculture. The reason is that it could have distorted the results of the quantitative analysis of the research because of the different nature intrinsic to these sectors in comparison to the manufacturing sector. The narrower focus of a narrower definition within the manufacturing SIC Code 3 subsets could have negatively impacted upon the availability of sample cases for the research and rendered the results null and void for applicability to the manufacturing sector as a whole. Therefore the inclusion of all manufacturing activities classified under SIC Code 3.

3.4 DATA COLLECTION

The data collection method is a secondary collection method. The data will be collected from the DTI standard SMEDP application and claim forms as completed and submitted by Indevco on behalf of the individual sample cases.

The data contained in the SMEDP application forms is based upon the projections and expectations of outcomes by the management of the sample cases before embarking on the investment project. The data contained in the SMEDP claim forms is the actual outcome of the investment project at the specified measurement intervals as determined by the DTI. The inclusion of the application and claim documents will allow a comparative measurement of the actual outcome against the projected outcome expected. This will facilitate the investigation into the exploration of the merits of the SMEDP.

3.5 LIMITATIONS

The limitations are defined under the sample case selection and inclusion. The sample case selection criteria have been designed to provide a specific focus to the manufacturing sector and to the Kwa Zulu Natal provincial area.

The nature of the fixed capital investment is limited to the three qualifying categories; plant and machinery, buildings and commercial vehicles; permissible to qualify to attract incentives. These three categories of qualifying investment are disclosed in the SMEDP contract and are also described in the SMEDP guidelines as published on the Department of Trade and Industry website.

The level and degree of technology involved in the qualifying manufacturing process was regarded as outside the scope of the research. This exclusion shall permit greater applicability of results across a wider spectrum of the different manufacturing sectors as defined under SIC Code 3. The outcomes and recommendations will be to both high and low level technology based processes.

The categorisation of employment increase into different employment categories was regarded as outside the scope of the research. Any increase in employment whether the employee was

directly or indirectly involved in the manufacturing process within the sample case was regarded as an increase. The sample case was viewed as a whole unit and not the individual departments i.e. manufacturing, administration, finance, logistics and the like. The investment in manufacturing capacity or investment in increased capacity impacts upon the sample case as whole.

The study is limited to the analysis of the investment in plant and machinery as a qualifying capital asset because these assets provide capacity whilst the other qualifying assets of land and buildings and commercial vehicles do not as per the SMEDP policy guideline. The plant and machinery of a manufacturing business form the core structure of the SMEDP incentive grant. Therefore analysis will be based upon these assets only.

The influence of fluctuations in the foreign exchange rate on the purchase price of the capital assets of plant and machinery is excluded from the analysis. The reason for this is that the cost price of the plant and machinery is used to determine the value of the SMEDP incentive for this category of qualifying asset. The cost price is the value that the plant and machinery is capitalised at on the balance sheet of the individual sample cases.

The increase in employment either upstream or downstream from the sample case was excluded from the research because employment increases can only be measured definitively within the sample case. The inclusion of upstream or downstream employment increases from the SMEDP applicant can become an area of uncertainty. The limit for inclusion and exclusion of upstream and downstream employment increases from the applying entity becomes difficult to define hence the Department of Trade and Industry has defined the SMEDP policy to limit specifically to the sample case or the applying entity.

The reasons for sample cases not submitting claims falls outside the scope of this research and could be a topic for further study in the future.

3.6 DATA ANALYSIS

The data will be analysed on an exploratory basis to determine benchmarks and will require description through:

- The description of the observed phenomena gathered from the research;
- The determination of benchmarks from the gathered data and records to provide future hypotheses.

The lack of available literature on the topic of government investment incentives grant interventions, as stated in the literature, provides a challenge to determine the measurement of success and comparison against previous literature and studies. The study by Ernst and Young into the Regional Industrial Development Programme provides a basic analysis against the programme's objectives but does not use any statistical analysis. The Regional Industrial Development Programme also incentivised other working capital aspects which are not included in the SMEDP. Therefore a direct comparison will provide skewed results. This problem of there being a lack of comparatives facilitated this study to be exploratory in nature.

The first analysis is to analyse against the objectives stated in the Medium Term Strategic Plan as discussed in Chapter Two. This will provide a basic analysis of the achievement of the stated objectives. This comparison will not make any use of statistical tools other than to directly compare against the stated objectives.

The second phase of the analysis will measure the relationship between the projected variables in the SMEDP application document against the actual data contained in the SMEDP claim

document for each specific variable. The variables that shall be measured are:

- The actual achieved investment in plant, machinery and equipment against the projected values;
- The actual achieved level employment against the projected levels; and
- The actual achieved turnover against the projected turnover levels.

The choice of this measurement is consistent with the objective of describing the observed phenomena and seeking to develop benchmarks against these observations.

The actual and projected data will be plotted against one another in a scatter diagram to provide a visual representation of the data. The nature of the relationship will be described through a linear relationship using linear regression models. The linear regression models shall assist in the development of a prediction tool for future measurement and comparison. The use of logarithms will be used where non constant and outlying data exists to compact the data for analysis purposes.

The strength of the relationship between the actual and projected data will be tested using the Pearson's correlation co-efficient. The Pearson's correlation co-efficient is used to measure the strength of the fit of the data to the linear regression model and determine the significance of the relationship. The significance of the relationship as determined from the use of Pearson's correlation co-efficient will facilitate the development of future benchmarks for future investment incentive grant interventions based upon an existing measurement of strength.

The analysis of the relationship between projected and actual employment levels necessitated the categorisation of sample cases

into different categories because it was determined during the statistical analysis that there appeared significant deviations and differences in the actual outcome from the projected outcome. The categorisation of the data facilitated a better measurement and description of the observed data.

The measurement of the opportunity cost of the lost investment incentive grant benefit by not submitting a valid and successful claim will be measured. This measurement will be taken from the sample cases that did not meet the relevant requirements in terms of the SMEDP policy to submit claims for the benefit. The investment logarithmic regression model formula will be used to determine the magnitude of the opportunity cost. The measured opportunity cost will be limited to the investment in plant, machinery and equipment which is consistent with the limitations of the study.

The measurement of the investment incentive per employee will be measured to determine the impact of the intervention per new employee employed under the SMEDP programme. The purpose of this measurement is to determine a benchmark measurement which can be used for measurement in future investment incentive grant interventions by government. This analysis will make use of means and standard deviations as statistical tools. The data will be analysed in the two different qualifying categories, Establishment and Expansionary, as permitted by the SMEDP policy.

The measurement of the incentive per employee with the measurement of the opportunity cost should alleviate barriers to measurement and comparison where the nature and scope of the incentive programme changes in the future depending upon the needs of the economic stimulation as deemed by government.

The lack of existing comparable literature, measurements and benchmarks necessitated the exploratory investigation into the

variables from the available measurable data in the SMEDP applications and claims documents. The statistical tools used in the quantitative component of the research are basic in nature and the development of a body of knowledge needs to start from a zero base in order to create a base for future comparisons.

CHAPTER 4 PRESENTATION AND ANALYSIS OF RESULTS

4.1 DATA ANALYSIS

The data has been analysed on an exploratory basis to determine benchmarks and that required description through:

- The description of the observed phenomena gathered from the researched.
- The determination of benchmarks from the gathered data and records to provide future hypotheses.

The data was analysed against the objectives stated in the Medium Term Strategic Plan as discussed in Chapter Two. This will allow for an analysis of the achievement of the stated objectives and exploration of outcomes for any development of new or additional benchmarks as recommendations for investment incentive grant policy improvement.

The measurements of benchmarks will be achieved through the use of the appropriate statistical tools which will be used in the quantitative component of the research. The statistical analysis has been conducted and completed by a qualified academic statistician, Mr. Henri Moolman, Head of Department: Statistics at the University of KwaZulu Natal, Westville Campus.

The data has been analysed at a Year 1 and a Year 2 interval. The reason for the measurement at these two specified intervals is due the SMEDP policy requiring the measurement of the following variables, at the financial year end as disclosed in the statutory required annual financial statements of each sample case:

- Investment in qualifying plant and machinery for the period.
- Turnover for the period.
- Employment for the period.
- Owner's contribution (equity or solvency) for the period.

These are the specified DTI benchmarks or monitoring requirements that need to be achieved by the sample case in order to lodge a successful claim for payment. The projections as per the applications will be analysed against the actual outcomes demonstrated in the claims lodged for the sample cases.

The Year 1 and 2 measurement intervals are defined as the first and second complete financial years of the sample case after the start of the investment project that has triggered the SMEDP intervention. The year end dates for each sample case may not coincide with one another although the most popular year end is 28 February. The choice of month for the financial year end is not deemed material. The incentive period under measurement is Year 1 and 2 as defined by the SMEDP policy guideline.

4.2 GENERAL DATA ANALYSIS

There were a total of 152 sample cases included in the population, which exceeds the minimum prescribed sample cases of 103 for statistical significance. There are 70 establishment sample cases and 82 expansion sample cases.

The number of establishment sample cases that did not qualify to submit claims in Year 1 was 17 and in Year 2 was 25. The 25 in Year 2 include the 17 from Year 1 which resulted in 8 incremental sample cases not being eligible to submit claims in Year 2.

The number of expansion sample cases that did not qualify to submit claims in Year 1 was 15 and in Year 2 was 21. The 21 in Year 2 include the 15 from Year 1 which resulted in 6 incremental sample cases not being eligible to submit claims in Year 2.

The number of establishment sample cases that had not submitted financial information to determine whether they would qualify to

submit claims in Year 1 was 1 and in Year 2 was 17. The 17 in Year 2 include the 1 from Year 1. These sample cases had not reached the specified prescribed financial year end dates for the prescribed measurement of stated benchmarks to determine whether a successful claim can be submitted to the DTI. These sample cases will be referred to as exclusion sample cases. These sample cases can still qualify to submit successful SMEDP claims. These sample cases have been excluded because of time parameters dictated by the research.

The number expansion sample cases that had not submitted financial information to determine whether they would qualify to submit claims in Year 1 was 2 and in Year 2 was 23. The 23 in Year 2 include the 2 from Year 1. The reason for non submission of a claim is the same as establishment sample cases.

4.3 MEDIUM TERM STRATEGIC PLAN OBJECTIVES

The output measures as stated in the Medium Term Strategic Plan are:

- The number of jobs sustained.
- The number of jobs created.
- The number of new projects supported.
- The fixed investment in Rand terms.
- The improvement in employment levels.

These objectives will be analysed and discussed individually in the remainder of the study.

4.3.1 The number of jobs sustained

The number of jobs sustained is specific to SMEDP expansion investment projects. The reason for this is that there are a number of jobs at the outset, which is stated in the SMEDP application that was approved. These jobs need to be sustained throughout the incentive term. The SMEDP establishment investment projects

have a zero starting value for employment to be sustained, thus are excluded from this analysis.

The cumulative number of jobs at the start of the 82 expansion sample cases is 4,690. The actual number of jobs sustained at the end of Year 1 and Year 2 is measured by deducting all the non qualifying sample cases at each of these measurement points.

The number of non qualifying sample cases at Year 1 is 15, representing a decrease in starting jobs of 645. This effectively results in only 4,045 jobs being sustained. The number of non qualifying sample cases at Year 2 is 21 which represents a further decrease in starting jobs of 1,076. This effectively results in only 3,614 jobs being sustained.

This analysis for jobs sustained includes the sample cases for which there is no information available. Should these sample cases be excluded from the analysis then there could possibly be an effective larger decrease in the number of jobs sustained. It is assumed for the purposes of this calculation that these sample cases will sustain their employment levels. The sample cases that did not qualify to submit a successful claim cannot be measured to determine whether employment levels were sustained as no measurement could take place.

4.3.2 The number of jobs created

The number of jobs created would be determined by deducting the actual employment at the beginning of each investment project from the stated employment at the specified measurement levels. This will facilitate the measurement of employment growth for expansion sample cases. The growth of employment for establishment sample cases is the actual employment at the specified measurement intervals, since the beginning employment level is zero.

The projected total number of jobs created at Year 1 is 2,442 and Year 2 is 3,451. The projected total number of jobs created at Year 1 by establishment sample cases is 1,336 and for Year 2 is 1,919. The projected total number of jobs created at Year 1 is 1,106 and Year 2 is 1,532 by the expansion sample cases.

The actual total number of jobs created at Year 1 is 3,483 and Year 2 is 2,333. The actual total number of jobs created by the establishment sample cases at Year 1 is 1,294 and Year 2 is 833. The actual total number of jobs created at Year 1 is 2,189 and Year 2 is 1,500 by the expansion sample cases.

Table 4.1 The number of jobs created

	Year 1		Year 2	
	Projected	Actual	Projected	Actual
Establishment	1,336	1,294	1,919	833
Expansion	1,106	2,189	1,532	1,500
Total	2,442	3,483	3,451	2,333

4.3.3 The number of new projects supported

The number of new sample cases in the sample is 70, of which 17 sample cases were not in a position to submit claims for SMEDP benefits in Year 1 and 25 in Year 2. The 17 non qualifying sample cases in Year 1 are included in the 25 for Year 2. There was increase in non qualifying sample cases of 8 from Year 1 to Year 2. Therefore a total of 55 new manufacturing businesses received assistance through the SMEDP.

4.3.4 The fixed investment in Rand terms

The total projected investment in plant and machinery at Year 1 is R496,139,211, which is comprised of investment by establishment

sample cases of R184,504,448 and investment by expansion sample cases of R311,634,763.

The total projected investment in plant and machinery at Year 2 is R677,553,961, which is comprised of investment by establishment sample cases of R223,563,755 and expansion sample cases is R453,990,206. This is inclusive of the investment amounts as at Year 1 and the projected growth for Year 2.

The growth in total in projected investment is R181,414,750 which is comprised of a growth in investment by establishment sample cases of R39,059,307 and growth in expansion sample cases of R142,355,443.

The total actual investment in plant and machinery at Year 1 is R461,039,897, which is comprised of investment by establishment sample cases of R168,469,582 and investment by expansion sample cases of R292,570,315.

The total actual investment in plant and machinery at Year 2 is R378,543,279, which is comprised of investment by establishment sample cases of R 130,561,869 and expansion sample cases is R247,981,410.

The results of the actual outcomes in the investment in plant and machinery against the projected investment values is summarised in the table below: -

Table 4.2 The fixed investment in Rand terms

	Year 1		Year 2	
	Projected	Actual	Projected	Actual
Establishment	184,504,448	168,469,582	223,563,755	130,561,869
Expansion	311,634,763	292,570,315	453,990,206	247,981,410
Total	496,139,211	461,039,897	677,553,961	378,543,279

4.3.5 The improvement in employment levels

The improvement in employment levels is determined by combining the number of jobs sustained and the increase in the number of jobs created. These results have been discussed in 4.3.1 and 4.3.2. Of all the stated objectives in the Medium Term Strategic Plan Objectives as listed in 4.3, this is the most difficult objective to quantify and measure. The quantification and measurement of the results of this specific objective is assumed to be covered in 4.3.1 and 4.3.2.

This objective is qualitative and is duplicated by the quantifiable objectives already discussed. This qualitative objective can have bearing on both upstream and downstream employment creation from the sample case. As stated under the study limitations, the upstream and downstream employment increases fall outside the scope of the analysis.

4.4 THE ANALYSIS OF THE RELATIONSHIP BETWEEN PROJECTED AND ACTUAL INVESTMENT

The relationship between the projected investment was tested against the actual investment for Years 1 and 2. A measure for economic growth is the measurement of growth in capital investment. The SMEDP policy requires that during the claiming process there is a measurement of the actual investment in plant and machinery against the projected investment, as stipulated in the approved application. The purpose of this test is to determine

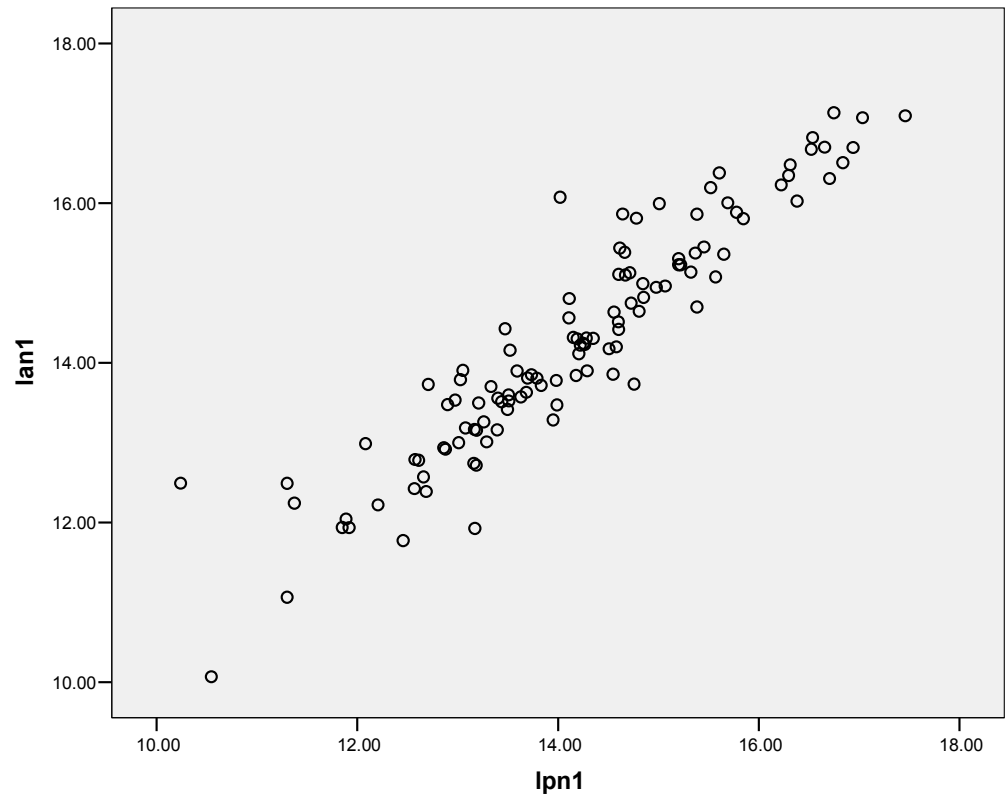
the strength of the relationship between the projected and actual investment. This is in order to determine whether this measurement or monitoring criterion is a suitable benchmark to measure the contribution to facilitate economic growth. The purpose of this test is underpinned by the exploration of the SMEDP's merit.

The physical data collected for the projected and the actual investment were plotted against one another on a scatter graph. The non constant variation and outliers in the data necessitated the logarithm of the data to be plotted against one another. The logarithm of the actual investment for Year 1, $\ln a_1$, and the logarithm of the projected investment, $\ln p_1$, resulted in a straight line equation being described as: -

$$\ln a_1 = 1.104 + 0.930 \ln p_1.$$

The Pearson's correlation coefficient (R^2) the regression equation is 0.873. The magnitude of this outcome demonstrates that the logarithmic relationship between the projected and the actual investment variables is significant at the Year 1 measurement interval. The use of this benchmark is a good indicator of success based upon the outcome of the Pearson's correlation co-efficient.

Figure 4.1 Projected investment (l_{pn1}) versus the actual investment (l_{an1}) on the log scale

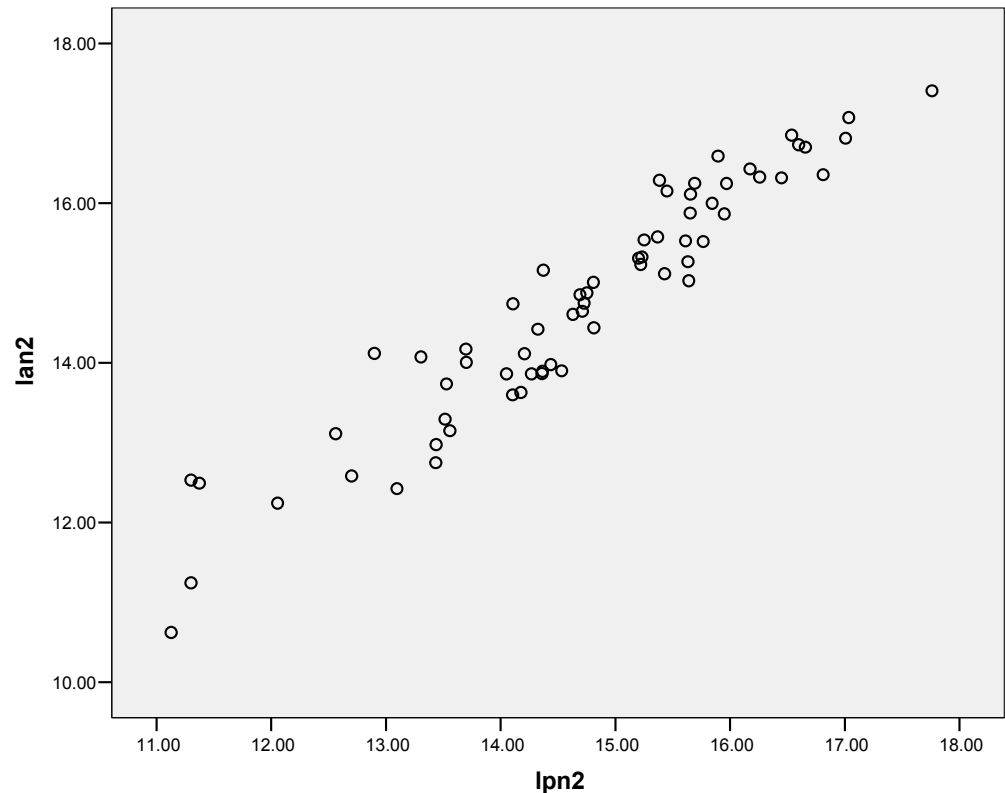


The same procedure was applied to the Year 2 projected and actual investment. The logarithm of the actual investment for Year 2, l_{an2}, and the logarithm of the projected investment, l_{pn2}, resulted in a straight line equation being described as: -

$$l_{an\ 2} = 0.698 + 0.956\ l_{pn\ 2}.$$

The Pearson's correlation coefficient (R^2) the regression equation is 0.904. The magnitude of this outcome demonstrates that the logarithmic relationship between the projected and the actual investment variables is significant at the Year 2 measurement interval. The use of this benchmark is a good indicator of success based upon the outcome of the Pearson's correlation co-efficient.

Figure 4.2 Projected investment (l_{pn2}) versus the actual investment (l_{an2}) on the log scale



4.5 THE ANALYSIS OF THE RELATIONSHIP BETWEEN PROJECTED AND ACTUAL EMPLOYMENT

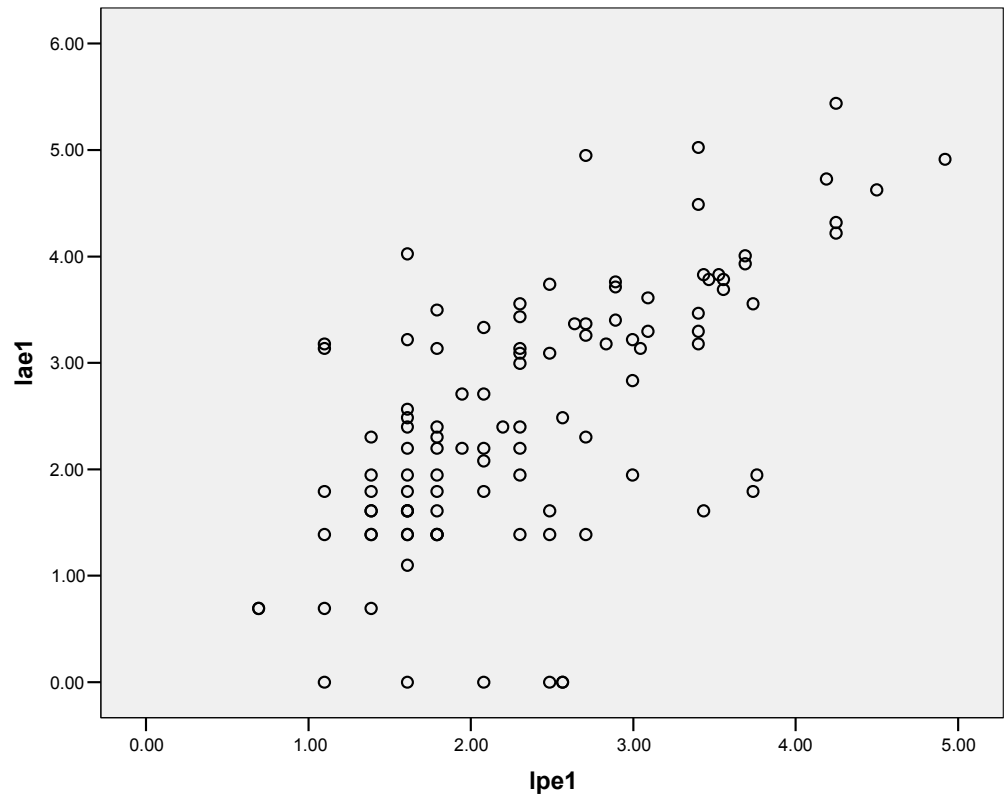
The relationship of the planned employment was tested against the actual employment for Years 1 and 2. The purpose of this test is a component of the merit exploration of the SMEDP. The test of the relationship strength of the projected employment against the actual employment is a means of testing the progress toward the achievement of the stated of employment creation under the SMEDP policy objectives.

The data collected for the projected and the actual employment were plotted against one another on a scatter graph. The non constant variation and outliers in the data necessitated the logarithm of the data to be plotted against one another. There was

only a single outlier sample case, which was excluded to avoid any potential skewing of the results. The logarithm of the actual employment for Year 1, $lae1$, and the logarithm of the projected employment, $lpe1$, was plotted against one another. The outlier sample case was omitted from the logarithm scatter graph to facilitate clearer description of the sample case data points. The scatter graph demonstrates a moderate positive linear relationship.

The Pearson's correlation coefficient is 0.648. The magnitude of this outcome demonstrates that the logarithmic relationship between the projected and actual employment variables is fair but not significant at the Year 1 measurement interval. The use of this benchmark is a fair indicator of success based upon the outcome of the Pearson's correlation co-efficient. The DTI would need to improve the strength of this relationship as a benchmark indicator of success.

Figure 4.3 Projected employment (lpe1) versus the actual employment (lae1) on the log scale



The relationship between the planned and actual employment is characterised by differences in value that could, in some instances, be described as significant. In order to investigate these identified differences further, the sample cases were categorised into the following categories: -

- “Below”: if $lae\ 1 < lpe\ 1-1$;
- “Between”: if $lpe\ 1 - 1 \leq lae\ 1 \leq lpe\ 1 + 1$; and
- “Above”: if $lae\ 1 > lpe\ 1+1$.

The data was tabulated into tables that follow below comparing the three different categories described against the type of sample case being either an establishment or expansion sample case.

Table 4.3 Sample Case Category versus Type of Sample (Year 1)

Type Comparison	Below	Between	Above
Establishment	4	45	1
Expansion	8	35	14

The data was tabulated to compare the three different categories described against whether an incentive grant claim was submitted or not submitted to determine what trend is evident. This investigation does not make the distinction between the sample cases being establishment or expansion sample cases.

Table 4.4 Sample Case Category versus Submission and Non Submission of Incentive Grant Claim (Year 1)

Submission Comparison	below or between	Above
No claim submitted	13	0
Claim submitted	79	15

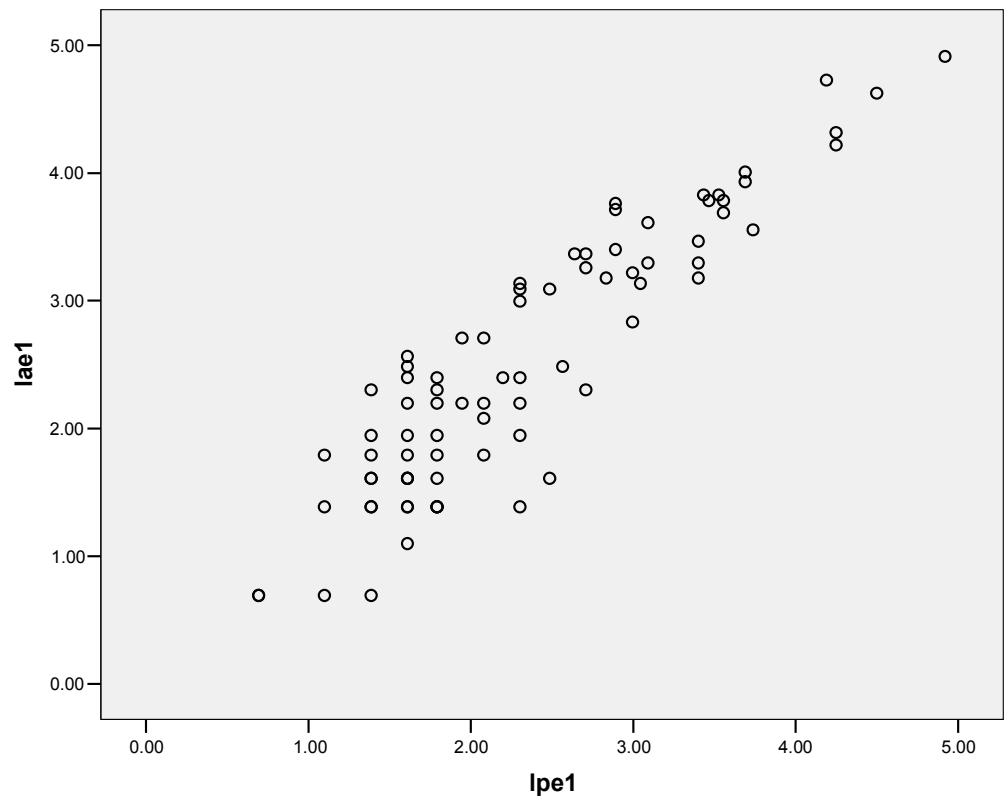
The 15 companies that submitted incentive grant claims that were categorised as “Above” are expansion sample cases.

The linear relationship of the projected employment and the actual the employment was plotted on a scatter graph using the logarithm scale which excluded the categories described as “Above” and “Below”. The following straight line equation describes the relationship between the log of projected employment, lpe_1 , and the log of actual employment, lae_1 , as: -

$$\text{lae}_1 \text{ between} = 0.168 + 1.007 \text{ lpe}_1 \text{ between}$$

The Pearson's correlation coefficient (R^2) the regression equation is 0.832. The magnitude of the Pearson's correlation co-efficient improves when the "Above" and "Below" categories are excluded from the analysis. The strength of the relationship becomes significant under the revised analysis parameters. This demonstrates that DTI needs to increase the focus on employment into the future with new investment incentive grant interventions as a benchmark indicator of success.

Figure 4.4 Projected employment (lpe1) versus the actual employment (lae1) on the log scale with companies in the "Above" and "Below" categories omitted



The Year 2 sample case data was subjected to the same statistical treatment. The scatter graph of the logarithm of actual and projected employment resulted in a correlation coefficient of 0.603. The sample cases were categorised into the following categories: -

- "Below": if $lae\ 2 < lpe\ 2 - 1$;

- “Between”: if $\text{lpe } 2 - 1 \leq \text{lae } 2 \leq \text{lpe } 2 + 1$; and
- “Above”: if $\text{lae } 2 > \text{lpe } 2 + 1$.

The data was tabulated into tables that follow below comparing the three different categories described against the type of sample case being either an establishment or expansion sample case.

Table 4.5 Sample Case Category versus Type of Sample (Year 2)

Type Comparison	Below	Between	Above
Establishment	3	24	0
Expansion	5	22	9

The data was tabulated to compare the three different categories described against whether an incentive grant claim was submitted or not submitted to determine what trend is evident. This investigation does not make the distinction between the sample cases being an establishment or an expansion sample case.

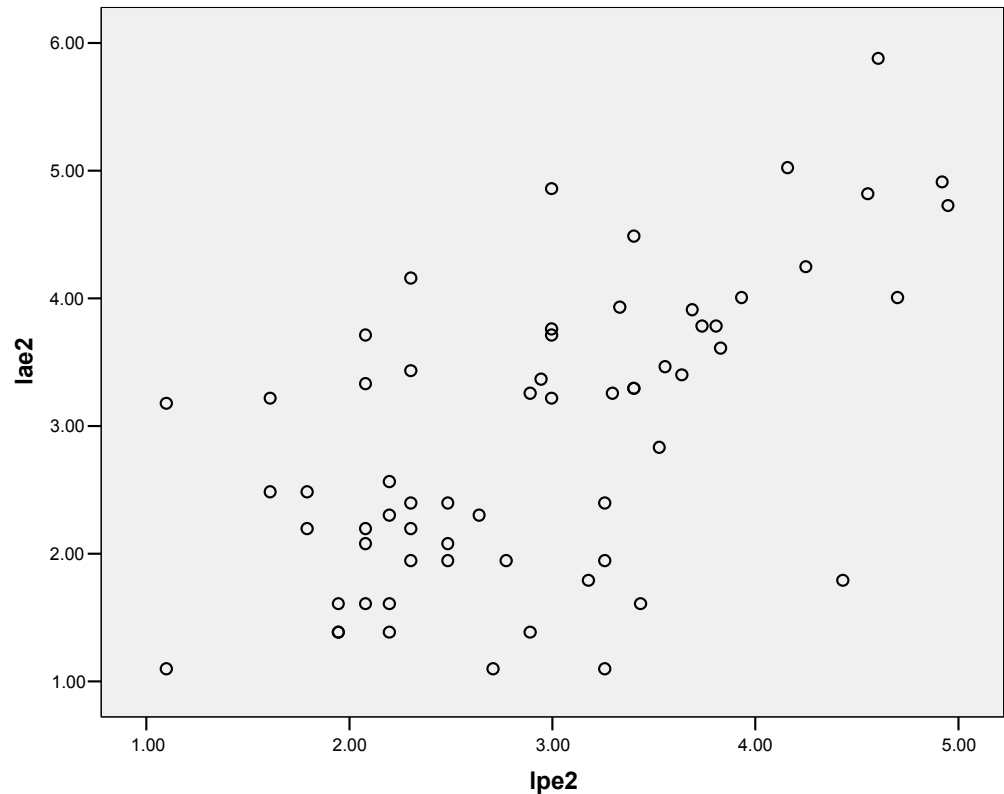
The linear relationship of the projected employment and the actual the employment was plotted on a scatter graph using the logarithm scale which excluded the categories described as “Above” and “Below”. The following straight line equation describes the relationship between the log of projected employment, $\text{lpe } 2$, and the log of actual employment, $\text{lae } 2$, as: -

$$\text{lae } 2_{\text{between}} = -0.055 + 1.004 \text{ lpe } 2_{\text{between}}$$

The Pearson’s correlation coefficient (R^2) the regression equation is 0.809. The magnitude of the Pearson’s correlation co-efficient remains fairly constant under the revised analysis parameters of excluding the “Above” and “Below” categories. The strength of this

relationship remains significant under these revised parameters at the Year 2 measurement interval.

Figure 4.5 Projected employment (lpe2) versus the actual employment (lae2) on the log scale



4.6 THE ANALYSIS OF THE RELATIONSHIP BETWEEN PROJECTED AND ACTUAL TURNOVER

A measure for economic growth is growth in activity levels as illustrated by turnover. The SMEDP policy requires that during the claiming process there is a measurement of the actual turnover at the prescribed measurement intervals; Years 1 and 2; against the projected turnover at the same measurement intervals, as stipulated in the approved application. The purpose of this test is to determine the strength of the relationship between the projected and actual turnover which constitutes a component of the explorative nature of the study. This is in order to determine

whether this measurement or monitoring criterion is a suitable benchmark to measure the contribution to facilitate economic growth.

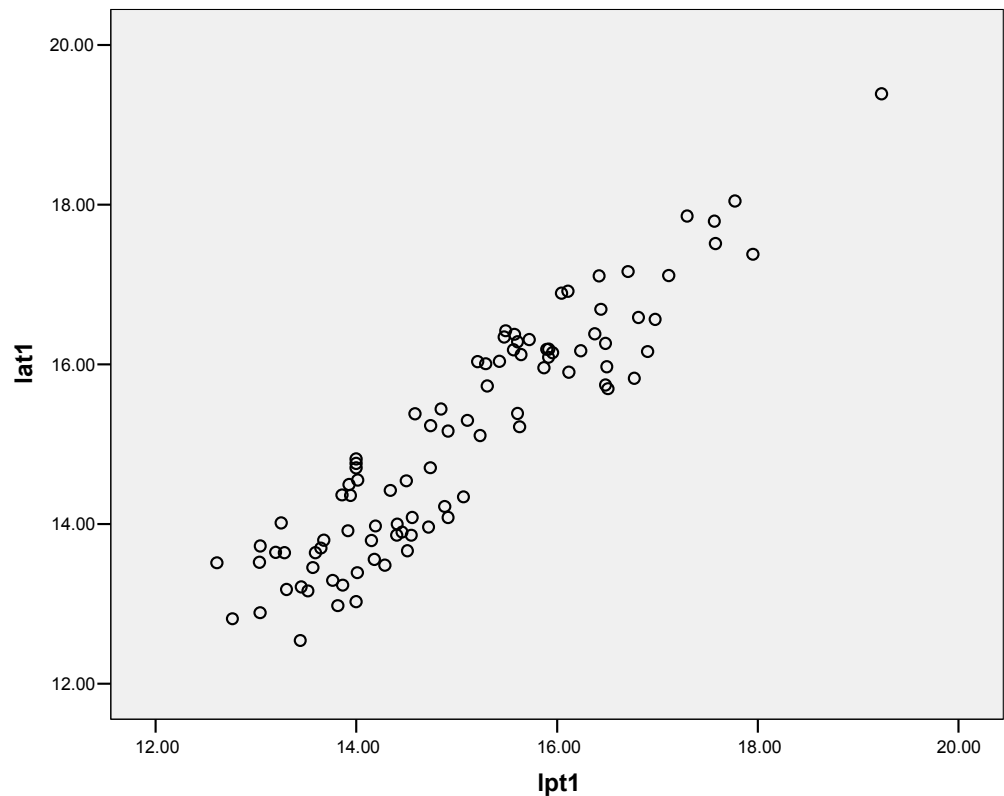
The projected and actual turnover for the sample cases was plotted against one another in a scatter graph. There was one outlying sample case that was excluded because of the magnitude of projection and the realised turnover. The logarithm of the sample cases projected and actual turnover were plotted against one another on a scatter graph. There is a visibly strong relationship between the log of projected turnover, $\text{lpt } 1$, and the log of actual turnover, $\text{lat } 1$.

The Pearson's correlation coefficient is 0.834. The magnitude of this outcome demonstrates that the logarithmic relationship between the projected and actual turnover variables is significant at the Year 1 measurement interval. The use of this benchmark is a significant indicator of success based upon the outcome of the Pearson's correlation co-efficient.

The strength of the relationship is improved with the removal of the "Below", $\text{lat } 1 < \text{lpt } 1 - 1$, and "Above", $\text{lat } 1 > \text{lpt } 1 + 1$ sample cases as was illustrated in the above analysis of employment relationship. The Pearson's correlation coefficient becomes 0.859. The following straight line equation describes the relationship between the log of projected turnover, $\text{lpt } 1$, and the log of actual turnover, $\text{lat } 1$, as: -

$$\text{lat } 1_{\text{between}} = 0.116 + 0.995 \text{ lpt } 1_{\text{between}}$$

Figure 4.6 Projected turnover (lpt1) versus the actual turnover (lat1) on the log scale with companies in the “above” and “below” categories omitted

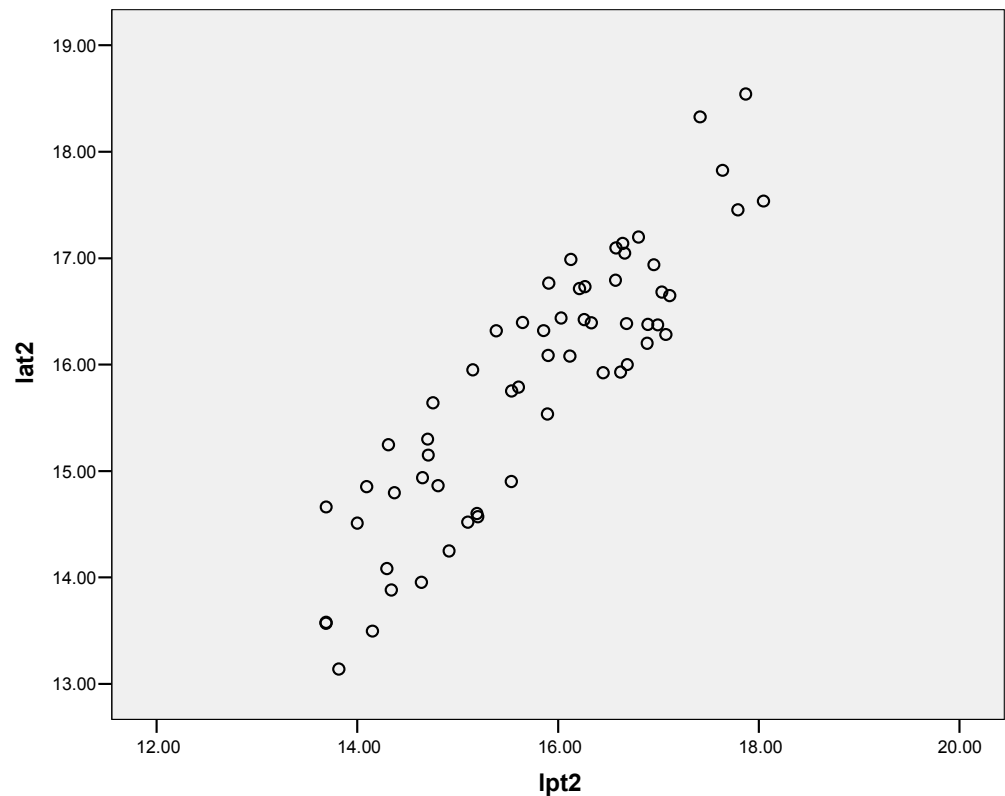


The projected and actual turnover for the sample cases for Year 2 was plotted against one another in a scatter graph. The logarithm of the sample cases projected and actual turnover were plotted against one another on a scatter graph. There is a visibly strong relationship between the log of projected turnover, lpt 2, and the log of actual turnover, lat 2. The Pearson’s correlation coefficient is 0.855. The magnitude of this outcome demonstrates that the logarithmic relationship between the projected and actual employment variables is significant at the Year 2 measurement interval. The use of this benchmark is a significant indicator of success based upon the outcome of the Pearson’s correlation coefficient.

The strength of the relationship is weakened with the removal of the “Below”, $\text{lat } 2 < \text{lpt } 2 - 1$, and “Above”, $\text{lat } 2 > \text{lpt } 2 + 1$ sample cases. The Pearson’s correlation coefficient becomes 0.800. This is contrary to the observed outcome in the analysis of employment when employing the similarly revised conditions. The following straight line equation describes the relationship between the log of projected turnover, $\text{lpt } 2$, and the log of actual turnover, $\text{lat } 2$, as: -

$$\text{lat } 2_{\text{between}} = 1.018 + 0.939 \text{ lpt } 2_{\text{between}}$$

Figure 4.7 Projected turnover (lpt2) versus the actual turnover (lat2) on the log scale with companies in the “above” and “below” categories omitted



4.7 THE ANALYSIS OF THE OPPORTUNITY COST

The opportunity cost is the loss of the SMEDP incentive grant benefit caused through failure to submit an SMEDP claim. The purpose of the test is a further component to explore the merits of

the SMEDP. The reason for not submitting a claim for the purposes of this research is irrelevant. The magnitude of the opportunity cost is dependent upon the value of the investment proposed by the sample case in the application document. The value of the opportunity cost for the 47 sample cases can be estimated using the log of projected investment and substituting into the logarithm formula: $\ln_1 = 1.104 + 0.930 \ln_1$. This formula was used to describe the relationship between projected and actual investment in Year 1. The antilog of the determined value is taken and is totalled to determine the projected total opportunity cost. The total value of SMEDP incentive grant lost is R9,841,488. The average per sample case is R209,393.

The determination of the opportunity cost in Year 2 follows the same procedure as Year 1. The logarithm formula into which the projected investment is substituted is $\ln_2 = 0.698 + 0.956 \ln_2$. The total value of SMEDP incentive grant lost is R12,966,860. The average per sample case is R275,890.

The total opportunity cost over the period of the SMEDP incentive grant three year period is R35,775,208. The average per sample case is R761,174.

4.8 THE ANALYSIS OF THE INCENTIVE PER EMPLOYEE

The incentive per employee (ie) is determined annually by the division of the actual incentive paid by the actual number of employees per annum. The purpose is to explore the merits of the SMEDP benefits as a measure to incentivise employment growth. This analysis was conducted only for those sample cases where the actual incentive and the actual number of employees is positive. There was an expansion sample case where the number of employees decreased and the annual incentive was paid to the

sample case by the DTI which is contradictory to the SMEDP policy guideline.

The result of the mean and standard deviation was determined using the logarithm for the sample cases as illustrated in the table below: -

Table 4.6 Mean and Standard Deviation of log (ie1) for establish and expand companies

Sample Cases	Establishment	Expansion
Mean	8.829	8.403
Standard Deviation	1.473	0.862

It can be determined from the results that the mean of the log incentive per employee is significantly higher for Establishment sample cases than for Expansion sample cases. The median incentive per employee for Year 1 is R6,234.61 for Establishment sample cases and R4,628.99 for Expansion sample cases. The median incentive per employee for Year 2 is R6,910.09 for Establishment sample cases and R5,922.79 for Expansion sample cases.

CHAPTER 5 INTERPRETATION OF RESULTS

5.1 DATA ANALYSIS

The data has been analysed according to the Medium Term Strategic Plan Objectives which is effectively the analysis of the sample cases without any statistical application to remain consistent with the objectives stated. The data has been further analysed through statistical application to determine the strength of the relationships between the projected values in the application and the actual achieved values as represented in the claim documents for Years 1 and 2 for each sample unit, where applicable. The statistical analysis is the exploratory component of the different variable relationships.

The format of the analysis of the results will follow a similar format to the presentation of results where presentation will be discussed.

5.2 GENERAL DATA ANALYSIS

The sample cases that did not submit claims where they did not meet any of the three stipulated monitoring requirements in Years 1 and 2, which explains the decrease in the number of claims submitted in Years 1 from the initial number of sample cases whose submitted applications were approved. There is a further decrease from the number of claims submitted in Year 1 to Year 2 for the same reason. The detail of which of the stipulated monitoring requirements were not achieved falls outside the scope of the study. It is suffice for the purposes of the study whether monitoring requirements were met or not.

The monitoring requirements are: -

- The investment in plant and machinery i.e. those capital assets that provide manufacturing capacity. This requirement is measured on a cumulative basis in Years 1 and 2.
- The turnover i.e. gross sales excluding Value Added Tax as recorded in the annual financial statements for the specified period.
- The owner's contribution (equity) in the sample unit.

The owner's contribution monitoring requirement is excluded from the analysis of the research due to external factors that fall outside the scope of the research.

The reporting periods recorded in the claims submitted correspond to the financial year of each sample unit. Therefore some sample cases will have a financial year end that could be any month of the calendar year and are not consistent with another, for example the majority of sample cases have a financial year end of the last day in February whilst other sample cases have any other month. The choice in the financial year end falls outside the scope of the study. Although the sample cases do not have the same financial year end this was not seen as material to results. The measurements are recorded as Year 1 and 2 according to the requirements of the SMEDP programme.

The numbers of establishment and expansion sample cases that form the population are "similar" which indicates there is equality of access to the SMEDP programme for both new and existing businesses. There are slightly more expansion sample cases but this is not seen as significant in isolation.

The number of establishment sample cases not submitting claims in Years 1 and 2 exceeds the number of expansion sample cases not

submitting claims. This is similar in magnitude for Year 1 of 17 establishment sample cases and 15 expansion sample cases. In Year 2, 25 establishment sample cases and 21 expansion sample cases did not submit claims. The difference of 4 sample cases does not indicate any significant difference between the two categories of sample cases. The interesting aspect is that the previous incentive grant programme the Small Medium Micro Development Programme was structured towards supporting the establishment of new businesses which has been changed to include existing business in the SMEDP. The inclusion of sample case data of existing businesses that are expanding indicates a higher success in numbers than newly established businesses to submit claims. The higher failure rate to qualify to submit successful SMEDP claims by Establishment businesses is contrary to the objective of increased support for Greenfield's businesses.

The number sample cases unable to submit claims at Year 1 is a factor that the prescribed financial year end was not reached. The relevant annual financial statements had not been provided to submit a claim for payment of benefits by DTI and be included in the measurement. The DTI allows a 12 month window period from the financial year end date to submit the claim for the relevant period. These sample cases will be termed exclusion sample cases as their qualification to submit claims is indeterminate.

The number of sample cases not submitting claims for Year 1 is 3, which is not deemed to be significant. The number increases in Year 2 for the reason that the Year 1 number is included and for the reasons mentioned previously. The total number of claims not submitted in Year 2 is 40. From these exclusions it can be anticipated that the number of sample cases submitting claims would exceed those not submitting claims. The statistician did not deem these exclusions for Years 1 and 2 to have a significant impact on the results of the statistical analysis.

These samples have either submitted or not submitted a claim subsequent to the measurement and could be included in any future extension of this research in either a category of submitted or not submitted.

5.3 MEDIUM TERM STRATEGIC PLAN OBJECTIVES

5.3.1 The number of jobs sustained

The determination of the number of jobs sustained is limited to the expansion sample cases because establishment sample cases start with a zero balance for employment. The analysis shows a decreasing trend of the number of jobs sustained because of the non qualifying expansion sample cases in Years 1 and 2. This can provide skewed results because, although the sample cases do not qualify to submit a claim, they can continue to operate in business and sustain the number of jobs stated in the application.

It would be inappropriate to assume that the number of jobs sustained would decrease unless the sample unit terminated operating which would result in an effective decrease in jobs sustained. Another reason could be if the sample case undergoes a process of retrenchment which results in a reduction in the employment numbers. The measurement of these sample cases undergoing a process of retrenchment falls outside the scope of the study parameters. In order to obtain an accurate analysis, these sample cases would need to submit data for inclusion in the measurement. However, the SMEDP does not require this data to be collected and therefore these sample cases are excluded from the measurement. This is an identified flaw in the measurement process because a complete measurement cannot be accurately achieved. The only possible means to accurately determine the number of jobs sustained is to have an end of project report. This is

in addition to all successful claims submitted, to facilitate this measurement. The participation of all claimant sample cases would be needed and perhaps made compulsory, i.e. a required claim for submission, to accurately gauge the measurement of this objective's achievement.

The political objective of sustaining jobs and maintaining employment levels in the South African economy is noble and appropriate but an accurate measure of this objective is not possible from the structure of the SMEDP programme because of the possibility of a skewed result as noted above.

Based upon this interpretation, the decreasing trend is not an accurate reflection of this objective and has limitations in terms of measurement and is a more qualitative objective than a quantitative objective.

5.3.2 The number of jobs created

The total number of jobs created in Year 1, 3483, exceeds the projection in Year 1 of 2442. The contribution from the expansion sample cases exceeds the establishment sample cases, where the actual number of jobs created by the establishment sample cases is lower than the projection. The contribution from the establishment sample cases is less than 50% of the projection for Year 2. The contribution from the expansion sample cases is 32 less than the projected for Year 2.

This analysis excludes the actual values from the exclusion sample cases. The contribution from these sample cases cannot be determined as they cannot be determined whether they qualify to submit claims.

The significance of this measurement is that expansion sample cases are a larger contributor to employment creation than

establishment sample cases. This could be explained by either the over budgeting of employment needs in establishment sample cases and vice versa for expansion sample cases. The other possible explanation could be that establishment sample cases simply do not actually contribute as much to job creation as expansion sample cases because the business is in an infancy phase and cost containment is important for survival during this period. This holds an important outcome for future incentive grant programmes.

This outcome retains great value for the future development of incentive grant programmes with an objective of employment creation which should continue to include existing manufacturing businesses that are expanding. The study does not categorise where employment increases are created either in manufacturing or non manufacturing functions on the sample cases.

5.3.3 The number of Greenfield's projects supported

The sample includes 70 new businesses. Of the 70 new businesses 17 were not supported in Year 1 and 25 in Year 2 due to these sample cases not meeting any of the three stipulated monitoring criteria to submit successful claims.

The number of new businesses included in the sample is exceeded by expansion sample cases by 12. This implies an equality in distribution between support for new and existing businesses. The objective of increased support for new or Greenfield businesses has not been achieved by volume of expansion sample cases supported with SMEDP benefits.

The higher number of establishment sample cases failing to qualify to submit a successful claim exceeds the number of expansion sample cases not able to submit a successful claim. This indicates there is more support offered to expansion sample cases than

establishment sample cases as more expansion sample cases have qualified to submit a successful SMEDP claim. The reasons for this phenomenon can result from the over budgeting of establishment sample cases in the application of the monitoring criteria or that new businesses need a longer period to establish than the 3 year period of the SMEDP programme permits or the basic premise, i.e. business plan and market research, of the new business is not adequate for short term sustained success to meet the monitoring requirements of the SMEDP.

This could result in the need to relax the monitoring criteria for new businesses to qualify to benefit from the SMEDP programme in order to increase the support provided to new businesses. A more stringent investigation into the viability of new businesses applying for support is possibly required, to promote support from the SMEDP. A more stringent investigation would then limit the accessibility of new businesses to the benefits of the programme but should improve the levels of qualification to receive benefits.

This poses a further trade off for DTI policy makers in providing viable accessible support to new business. This would indicate a further need to assist new businesses in the area of market research and mentoring in establishment of a business. The access to funding for businesses may require attention to capitalise on the establishment businesses qualifying to access the benefits of the investment incentive grant and improve the achievement of this objective.

The objective to support new business is moderately achieved based upon the results presented.

5.3.4 The fixed investment in Rand terms

The projected fixed investment in Rand terms exceeds the actual fixed investment in Rand terms. In Year 1 the total projected

exceeds the actual achieved by R35,099,314. The Year 2 projection exceeds the actual fixed investment by R299,010,682. The significant differences are a result of the number of sample cases unable to submit a successful claim and those sample cases where it is indeterminate whether a claim can be submitted. Although stated earlier the number does not appear significant, however this measure emphasises the discrepancy and significance. Based upon these outcomes the SMEDP could be deemed a failure.

Further reasons for the significant differences are:

- The over budgeting in the application of plant and machinery.
- The under estimation of the manufacturing capacity of the plant and machinery to be invested in.
- The strengthening of the South African currency against other currencies during the period in question thus reducing cost of the investment being capitalised onto the sample cases' balance sheet as the qualifying cost for incentive measurement purposes.
- The over estimation of capacity requirements in the business, to service market demand requirements.
- The affordability of investing in the plant and machinery required and therefore making alternative arrangements for production.
- The access to funding for the investment project is limited.

Certain of the aforementioned factors are favourable and others are unfavourable for the sample cases. The implication is that the manufacturing capacity is reduced. This reduction is attributable to inadequate research into the equipment and the capabilities of the equipment and inadequate market research in the business plan. The effect of the currency fluctuation is random and effected by external factors excluded from the research that could impact on the affordability of the plant and machinery.

The analysis excludes the sample cases that have made the projected investment but did not qualify to submit a successful SMEDP claim. The total measurement is therefore not completely accurate but is consistent with the qualification to submit a successful SMEDP claim. This is an identified flaw in the measurement process.

The objective of increased fixed investment in Rand terms has been achieved to a limited degree because there has been an increase in investment of plant and machinery but limited in terms of achievement against the projections stated in applications by the sample cases. The higher level of investment undertaken by the expansion sample cases further substantiates future inclusion in incentive grant programmes.

5.3.5 The improvement in employment levels

This has been discussed previously under the two separate headings. The objective of the SMEDP programme to increase employment levels has been achieved. The limitation identified on this objective is due to focus on the individual sample case. The difficulty is to design a measurement module that would include the measurement of upstream and downstream economic units, for an effective measurement. This could result in a study on its own to determine where and effect of employment growth stimuli starts and ends with respect to investment incentive grants.

5.4 THE ANALYSIS OF THE RELATIONSHIP BETWEEN PROJECTED AND ACTUAL INVESTMENT

The Pearson's correlation coefficient of 0.873 and 0.904 for Year's 1 and 2 respectively indicates a strong relationship between the projected investment and the actual investment. The non qualifying

sample cases are excluded from this statistical analysis of the relationship in order to maintain the integrity of the results in order to avoid any skewing and misrepresentation of the results. Therefore all the sample cases that have qualified to submit successful claims have been included.

The use of the logarithm scale was needed to assist in the management of the sample unit's data into a more compact scale to facilitate the analysis of the collected data.

The strong Pearson's correlation coefficient indicates that the measure for the monitoring criteria to determine qualification for claim submission for the investment in plant and machinery is good. Therefore the benchmark requirement stated in the policy guideline for the SMEDP qualification for plant and machinery is appropriate. This is despite the nominal measurement in 4.3.4 not having been achieved conclusively.

The exclusion of the non qualifying sample cases and the exclusion sample cases in the analysis of the relationship does not affect the outcome. The inclusion of the appropriate exclusion sample cases in the analysis based upon the qualification to submit a successful claim is anticipated to strengthen the relationship and result in an improved Pearson's correlation coefficient. The reason for the strengthened relationship is the inclusion of a larger number of sample cases to substantiate the existing relationship, as more sample cases are anticipated to qualify to submit a successful SMEDP claim than would not qualify to submit a successful SMEDP claim.

This existing benchmark SMEDP investment relationship measure is strong and should be maintained into future investment incentive programmes. The study does not identify what number of sample

cases did not qualify to submit claims because of the failure to meet the investment monitoring criterion.

5.5 THE ANALYSIS OF THE RELATIONSHIP BETWEEN PROJECTED AND ACTUAL EMPLOYMENT

The Pearson's correlation coefficient for the analysis of the relationship between projected and actual employment for Year 1 is 0.648. This indicates there are certain sample cases where significant differences exist and negatively impact on the strength of the relationship. The relationship was then categorised into three different categories: -

- "Below": if $lae\ 1 < lpe\ 1-1$;
- "Between": if $lpe\ 1 - 1 \leq lae\ 1 \leq lpe\ 1 + 1$; and
- "Above": if $lae\ 1 > lpe\ 1+1$.

In Year 1 there are 80 sample cases that fit into the "Between" category which represents the majority of the sample cases, of which 45 were expansion sample cases and 35 were establishment sample cases. There are 12 sample cases that were categorised into the "Below" category, of which 8 were expansion sample cases and 4 establishment sample cases. There were 15 sample cases that were categorised in the "Above" category, of which 14 were expansion sample cases. The exclusion of the "Above" and "Below" categorised sample cases reduces the influence of deemed outliers to provide a better analysis of the relationship.

This indicates that there is a better distribution equality in the "Between" category which represents an accurate assessment of the projected employment requirements in the majority of the sample cases. There is a significant discrepancy in the "Above" category between establishment and expansion sample cases which indicates there is an under assessment of employment requirements in more expansion sample cases than establishment sample cases. The "Above" category is significantly less than the

number of sample cases categorised as “Between”. There is almost an equivalent number of sample cases categorised as “Below” as “Above”. This indicates there is an over assessment of the employment requirements in these sample cases. There is a more even distribution between establishment and expansion sample cases in the “Below” category compared to the “Above” category. The total number of sample cases falling into the “Above” and “Below” categories is 27 which can be construed as significant.

The indication of the significance of these sample cases in these two categories is the Pearson’s correlation coefficient for the linear relationship for the “Between” category which is 0.832. This represents a significant strengthening of the relationship between projected and actual employment from 0.648.

The same procedure was employed in the analysis for the Year 2 data. The Year 2 correlation coefficient is 0.603 before the categorisation into “Below”, “Between” and “Above”. This confirms the weak relationship and the significant differences as indicated above.

In Year 2 there are 66 sample cases that fit into the “Between” category which represents the majority of the sample cases, of which 22 were expansion sample cases and 24 were establishment sample cases. There are 8 sample cases that were categorised into the “Below” category, of which 5 were expansion sample cases and 3 establishment sample cases. There were 9 sample cases that were categorised in the “Above” category, of which all 9 were expansion sample cases. The establishment sample cases remained fairly stable from Year 1 in the below category and a decrease of 3 sample cases for expansion sample cases.

The indication of the significance of the sample cases in these two categories is the Pearson’s correlation coefficient for the linear

relationship for the “Between” category which is 0.809. This represents a significant strengthening of the relationship between projected and actual employment from 0.603.

The lack of correlation between the projected and actual employment could be due to the lack of a monitoring requirement contained in the SMEDP policy guideline to demonstrate increases in employment with the corresponding increase in turnover or investment in plant and machinery. This is contrary to the Strategic Investment Project Programme and other previous incentive grant programmes that attach an increase in employment numbers to the increases in investment of plant and machinery. The KIDA investment incentive grant dictates a minimum employment increase with the qualifying additional investment.

The SMEDP policy has adopted a position of “wealth creation” through the Year 3 monitoring requirement of total staff costs as a percentage of deemed fixed operating costs. This requirement is impacted by the number of employees and the level of remuneration paid to the employees without prescribing a minimum level of employment growth.

Expansion sample cases do not have to increase the level employment but cannot decrease the level of employment to achieve this requirement in the application. The expansion sample cases can project employment increases but only have to sustain the employment level during the claiming phase. This could contribute to the weakness of the relationship. There should be a measurement requirement included to stipulate a minimum growth requirement for employment based upon the projected increase in employment similar to turnover and investment.

5.6 THE ANALYSIS OF THE RELATIONSHIP BETWEEN PROJECTED AND ACTUAL TURNOVER

The relationship between projected and actual turnover measures the activity level of the sample cases in contributing to the economic growth in economic and financial terms. The Pearson's correlation coefficient is strong at 0.834 for Year 1. The removal of the sample cases in the "Above" and "Below" categories, similarly to the analysis of the employment relationship, increases the strength of the relationship to 0.859. The Pearson's correlation coefficient for Year 2 is 0.855 and weakens to 0.800 with the removal of the "Above" and "Below" categories which is contrary to the expected outcome. The strength of the Pearson's correlation coefficient indicates that there is a strong relationship between the projection and the actual turnover outcome for both Year's 1 and 2.

The increase in turnover required for expansion sample cases is not dictated by an increase in volume sold and could be resultant from a price increase through inflationary necessity or any ad hoc price increases. The increased turnover as a result of price increases and not product volume increases can over inflate the objective of increasing economic activity in the South African therefore a misrepresentation of economic growth. The converse is true for certain industries that are subject to low unit cost price competition through imports, whereby significant production and volume increases are required to benefit from scale economies and increased productivity levels in the sample cases to compete on lower cost with cheap imported products. This is in order to sell their product at lower prices to maintain rather than increase existing turnover levels. This is especially evident in the textile industry where retrenchments have been experienced through cheap imported products from South East Asia against which South African manufacturers cannot necessarily compete.

The additional investment in plant and machinery, for expansion sample cases, can also be misconstrued. These investments can be made for the purposes of updating manufacturing technology employed by the sample cases and decreasing the reliance on labour intensive or labour based manufacturing processes thereby decreasing the labour content without any additional production volume being generated. This is in order to remain competitive in global and domestic markets, by maintaining activity levels without realising any production volume increases.

The relationship between projected and actual turnover over the two year period appears strong. Therefore the use of turnover as measurement benchmark from the analysis of the statistical data can be misleading. This can result in an over statement of the economic activity levels and any growth in the economy from domestic manufacturing growth. THE SMEDP needs to measure activity levels in the sample cases to ensure the incentivised investment in qualifying assets are productive and contribute toward economic growth.

5.7 THE ANALYSIS OF THE OPPORTUNITY COST

The analysis of the opportunity cost of lost SMEDP benefit is significant when analysing the cumulative potential of the total incentive lost. The values of the lost SMEDP benefit is calculated using the projected values of the plant and machinery contained in the application. The total value of the incentive grant lost in Year 1 is R9,841,488 with an average per sample unit of R209,393 for the 47 sample cases not able to submit successful claims. The total value of the benefit forfeited in Year 2 is R12,966,860 with an average of R275,890 per sample unit. The increase in the value of the lost benefit is caused through the increased projected investment during Year 2 as per the approved application. The total value of the lost benefit over the three year period of the SMEDP

programme is R35,775,208 with an average of R761,174 per sample unit. This “lost” value of more than three quarters of a million rand in tax free cash to the sample cases is significant.

This incentive could have been used for reinvestment in the sample case to further enhance the manufacturing capacity or redemption of debt utilised to fund the investment in plant and machinery. This essentially requires such debt to be redeemed or further investment to enhance the manufacturing capacity to be funded from cash flow resources or further borrowings. This could place additional burden on the sample unit to sustain itself during the growth period unassisted rather than have the burden reduced through the injection of the SMEDP grant benefit into the cash flow of the sample case.

The lost benefit is far outweighed by the benefit gained by those sample cases qualifying to receive the grant through the submission of successful claims. The opportunity cost should not be seen as a cost to the economy but rather to the non qualifying individual sample cases. The “lost” benefit would be transferred by the DTI to provide benefit to other qualifying SMEDP projects and is therefore not deemed a deadweight loss to the South African manufacturing sector. The opportunity cost to the sample case that did not qualify to submit a successful claim would view the “lost” benefit as a dead weight loss. The impact of the “loss” is amplified if the sample case leveraged the income from the investment incentive grant to assist in the funding of the investment.

5.8 THE ANALYSIS OF THE INCENTIVE PER EMPLOYEE

The test for equality of means between the establishment and expansion sample cases for the incentive per employee indicates that the incentive per employee for the establishments is significantly higher for establishment sample cases, R8,829, than

expansion sample cases, R8,403. The median incentive per employee is R6,243 for an establishment sample cases which is significantly higher than R4,628 for expansion sample cases. This increases in Year 2 to R6,910 and R5,922 for establishment and expansion sample cases respectively.

This indicates that there is a higher qualifying investment in plant and machinery required for establishment sample cases than expansion sample cases per employee which translates into a higher incentive per employee. This is corroborated by there being fewer establishment sample cases in the “Above” category and more in the “Between” category as stated under the analysis of the employment relationship.

The cause for the lower employment levels in establishment sample cases compared to the expansion sample cases that affects the incentive per employee is a function of the cost of the investment in plant and machinery, the nature of the technology level of the plant and machinery, and there is no manufacturing base, existing plant and machinery, to leverage production. The investment in plant and machinery by establishment sample cases could be of a higher technology level that requires fewer employees to operate the plant and machinery. This could also be affected by a larger degree of multi tasking of employees in establishment sample cases to reduce operating costs to maintain or generate profits to generate return on investment. The establishment sample cases did not generate more employment than expansion sample cases therefore mathematically the incentive per employee is higher.

The expansion sample cases are not able to retrench employees when investing in new plant and machinery that could result in a substitution of the labour requirement. The protection offered by labour legislation requires redeployment before retrenchment and still there is the need to recruit the necessary skills to operate the

plant and machinery. The expansion sample cases created more employment and therefore results in a lower incentive per employee.

The impact of technology levels on the investment in plant and machinery is excluded from the scope of this research and therefore the direct impact cannot be determined without further research and categorisation of the nature and level of technology in the investment of qualifying plant and machinery. The impact of technology levels on employment levels needs further analysis when developing future incentive programmes because the nature of the investment incentive programme is capital asset based which in theory could reduce the reliance on labour or be viewed as a labour substitute. This effectively provides a trade-off for the sample case when making the investment decision, and the DTI by attempting to generate employment growth through the implementation of a capital asset based investment incentive grant programme.

CHAPTER 6 RECOMMENDATIONS AND CONCLUSION

6.1 RECOMMENDATIONS AND CONCLUSIONS

The recommendations from this study are limited due to the paucity of literature on the analysis of the outcomes of government intervention through the provision of investment incentive grants. The investment incentive grant programmes analysed in the Literature Review have not published their results or outcomes of these interventions. Therefore it is difficult to provide a comparison against the SMEDP of the success of the intervention. The sole exception is the Ernst and Young Report of the Evaluation of the RIDP programme. The outcome of this report has seen a change of direction in the investment incentive grants offered by the South African government through the DTI.

The lack of published results and outcomes of the other reviewed investment incentive grant programmes questions the effectiveness of the implementation of these interventions hence the lack of published results and whether government funding has been wisely “spent”? Therefore the purpose of this study is to construct a body of knowledge on this subject in order to assist in the future development of such government interventions to deliver positive outcomes from the intervention. This shall then enhance the achievement of ideals and the objectives stated at the outset of such interventions.

The problems encountered in this study from the lack of available and comparable literature and comparable measurements from previous or similar studies on this topic hampers any explicit recommendations being drawn from this study. The study is developmental in nature as stated from the outset because of these very reasons. The developmental nature of the study does require additional investigation into the future. The future investigation

should include comparisons made from future programmes against the SMEDP.

The stated objectives of the SMEDP are not presented in quantifiable values but rather as qualitative statements. This does not facilitate the measurement of success or failure of the SMEP programme without stating benchmarks for achievement that can be measured. The impact of the intervention is therefore unknown until stated objectives are stated as quantifiable benchmarks to determine success or failure.

The recommendations and conclusions drawn from this study will be limited to the analysis of the empirical data contained within the study and comparisons to the other incentive grant programmes reviewed in the Literature Review although there is no empirical data from these investment incentive grants. The comparisons will be limited to the structure of the different programmes and seek to identify significant differences and areas for improvement. This limited comparison will necessitate further investigation.

6.1.1 Employment Growth

The magnitude of the growth in employment has been analysed in the previous two chapters and the outcome has been the moderate achievement of this objective. The lack of attention applied to this criterion in the structure of the SMEDP policy questions whether the stated objective of employment growth is primary or secondary to the outcome of the intervention?

The empirical data demonstrates that the growth of employment in the expansion sample cases exceeds the contribution made by establishment sample cases. This has a significant impact on future development of future investment incentive grant programmes. The inclusion of an employment growth as a stated objective should

therefore include expansionary investment projects because of their larger contribution to employment growth.

The source of the employment growth does not require explanation or demonstration of the SMEDP programme. The source of the employment increase could be attributable to the increase of the staffing requirement by the sample cases in the indirect support and administration structures without an increase in the direct manufacturing structure. This is especially the case in expansion sample cases where existing operational structures exist.

The technology component of the investment in plant and machinery is not considered in the SMEDP application. The impact of technology on the investment in the qualifying manufacturing assets could result in the reduction of manufacturing employment because the labour saving nature of these assets. Modern plant and machinery has become automated and mechanised through the use of robotics and computerisation to the point where the number of employees required is reduced. The most common modern business panacea to reduce cost structures in businesses is to replace labour with automated plant and machinery thereby reducing the costs associated of having staff.

The influence to technology needs to be considered when developing new incentive grant programmes to ensure that accessibility to meet employment creation and generation objectives. The Kentucky example attached an incremental employment target for the incremental value of qualifying investment which could become difficult to achieve with improved technology levels being experienced globally.

In developing a new investment incentive grant programmes the prospect of suboptimal economic outcomes being demonstrated for the period of the investment incentive grant needs to be monitored

concerning employment. The RIDP experienced similar location phenomenon where businesses relocated to more optimal locations after the termination of their RIDP incentive grant period. It would be contradictory to the objective of the programme that retrenchments are experienced after receiving the benefits of the investment incentive grant programme. This would negatively impact the South African economy on a macro level and fail to meet the stated employment objective of the intervention. Therefore the sustainability of the employment increases needs to be monitored to ensure the employment increases is not a short term phenomenon but rather a more long term sustainable phenomenon.

6.1.2 Economic Growth

The measure of economic growth is two fold: -

- The increase in turnover of the sample cases; and
- The increase in fixed investment of the sample cases.

The empirical data demonstrates a strong relationship between the projected and actual turnover which demonstrates there is economic growth. What the relationship does not demonstrate is whether this is a production volume driven growth or a price driven growth. The increase in turnover dictated by increased volumes is a genuine measure of the economic growth whereas this is not necessarily the case with price driven growth. The increase in turnover attributable to increased prices may not result in economic growth increases because it is not accompanied by production volume increases. Price driven growth could lead to inflationary fuelled turnover growth, which is not necessarily a good indicator or benchmark to measure economic growth.

The inclusion of a turnover benchmark is necessary to ensure that the businesses are active and that benefits are not provided to inactive businesses. The benefits must be provided to businesses that genuinely deserve the benefits of the intervention. Should the

benefits be provided to inactive businesses this could result in a deadweight loss of the benefits and should be avoided. Therefore a benchmark requiring a demonstration of an increase in manufacturing volumes should be included in the structure of a new investment incentive grant programme. This is to determine there is actual volume driven turnover growth rather than price driven turnover growth thereby ensuring the growth in the activity measurement is real economic growth.

The increase in fixed investment in capital assets is a good indicator of economic growth. The empirical data demonstrates there has been a significant increase in capital formation from the influence of the SMEDP. The relationship between the projected and actual capital investment is statistically strong and therefore the existing benchmark measurement for investment is an appropriate measure between projection and outcome.

The higher number of expansion sample cases qualifying to successfully lodging SMEDP claims further demonstrates that expansionary investments should be included in the future frameworks for development of investment incentive grant programmes. The expansion sample cases constituted a greater contribution to fixed investment than establishment sample cases. The expansion sample cases contributed more to creation of employment than establishment sample cases; increased employment is a measure of economic growth. The reasons have been discussed in the previous chapter.

The nature of technology of the qualifying asset investment needs to be addressed because of the high levels of automation in modern manufacturing plant and machinery. South Africa cannot continue to manufacture on labour intensive manufacturing processes because of the negative impact this would have on the end product costs and the ability to compete in global markets. This would negatively

impact the economic growth potential of the South African economy. The technology component therefore poses a trade off between maintaining employment levels and global cost competitiveness of domestically manufactured products.

A possible means to address this trade off is to institute a ceiling level for an incentive per employee or the incentive per job created. This will allow benefits to be paid to businesses that are achieving both the objectives of employment growth, increasing fixed investment and contributing to economic growth. The measurement of an incentive per job created would not be difficult to administer because the growth in employment and fixed investment is measured from the annual financial statements provided currently under the SMEDP programme which would result in a slight adaptation of the existing claim procedure. The increase in the cost of administration of such a measure to the parties involved is negligible and therefore deemed immaterial because this information is already required and provided in the current administration of the SMEDP claims.

This incentive per job created would negate businesses from only achieving one of the stated objectives in the incentive programme of benefiting from the fixed investment and not employment creation.

6.1.3 Establishment and Expansionary Investments

The empirical data has demonstrated in the quantitative component of the study that there is a greater qualification for SMEDP benefits by expansion sample cases than establishment sample cases. This is concerning regards the stated objective of supporting Greenfield businesses. The greater compliance by expansion sample cases indicates there is a necessity to continue with the inclusion of expansionary investments in future investment incentive grant

programmes to achieve stated objectives similar to those of the SMEDP.

The high number of establishment sample cases not qualifying to submit successful SMEDP claims is concerning because this impacts negatively on the achievement of the stated objective to support Greenfield businesses. The question that arises and requires further investigation is the reasons for the establishment sample cases not qualifying to submit successful SMEDP claims, and how this trend can be reversed.

The high number of establishment sample cases not submitting successful SMEDP claims could facilitate investigation as to other forms of intervention to assist and facilitate the long term sustainability of such businesses. The types of interventions can include assistance with market research and compiling business plans in order to start the business as part of the investment incentive grant programme. This will alleviate incorrect budgeting of capital investment, correct determination of manufacturing capacity of capital investment to service the market and avoid overstating market sizes to be serviced. This should facilitate the greater inclusion of establishment businesses in the benefits of the programme. The core problem with establishment businesses is there no history of performance on which to base and extrapolate future projections as required by the DTI.

The important factor is not to unfairly disadvantage existing businesses by not offering investment incentive grants however similar benefits can be provided to existing businesses. The nature of these interventions can be a spectrum of services and facilities to assist with specific needs of the business, for example accessing export markets and education of export markets.

There is a reluctance to institute more stringent analysis of establishment application's viability and feasibility because it could reduce their access to the benefits of the investment incentive grant programme. The important aspect is to increase the access to the benefits of these investment incentive grant programmes to promote achievement of objectives. This could potentially increase the cost through the payment of benefits to qualifying businesses. The limitation on the incentive per job created could counter balance the increased cost and improve accessibility to the investment incentive grant benefits.

6.1.4 Specific Benefits for Manufacturing Sectors

The SMEDP is a generic manufacturing incentive grant programme for all manufacturing sectors. There is a potentially a need to develop more specific benefits based on the intrinsic natures of the different manufacturing sectors. This is evidenced by the benefits of the Italian example where specific sectors are identified for specialised government investment incentive benefit support. The same could be intimated for the South African textile industry which is currently under pressure from low cost imports from the eastern and south eastern Asian economies.

The introduction of specialised incentive grants for specific manufacturing industrial sectors could increase the cost of administration and require specific investigation into the specific characteristics of the identified sectors in order to tailor the benefits offered and improved accessibility. This will reduce the generic applicability of the SMEDP for all manufacturing sectors but could potentially provide better benefits for the specifically identified manufacturing sectors.

6.1.5 Development of Benchmarks

The current SMEDP has four specified monitoring criteria or benchmarks: -

- Investment in plant and machinery;
- Turnover growth;
- Equity or owner's contribution measurement; and
- Human Resource Requirement.

The empirical analysis has investigated and analysed the relationships of investment in plant and machinery and turnover. The measurement of the Human Resource Requirement has not been measured because it has an emphasis on the cost of employment rather than specifically the number of jobs created. The equity contribution has been excluded from measurement because it does not form part of the stated objectives of the SMEDP and the measurement is dependant upon external factors that is influenced by structures that fall outside the scope of the objectives of this study.

The nature of the statistical relationships investigated shows there is a strong relationship between the projected and actual outcomes for investment in plant and machinery, and turnover. The weakest of the relationships is the relationship between projected and actual employment. This is potentially due to the lack of focus on actual jobs created. Therefore the statistical analysis has utilised the categorisation the three different categories of "Above", "Between" and "Below" to obtain a better measure of the strength of this relationship.

The weakness of this relationship needs future attention in the development of future incentive grant programmes. This would facilitate better achievement of the employment creation objective. The focus in the SMEDP on the Human Resource Requirement which is a cost based benchmark is influenced by the level of employment but does actively focus on the employment levels. This

indicates the secondary nature of the employment objective of the SMEDP.

The strength of the investment and turnover relationships investigated shows these benchmarks are suitable and should be continued into future incentive grant programmes. There is a need for an improved benchmark for the objective of increasing employment. This is indicated by the weak relationship between projected and actual employment. There needs to be further investigation into the development of a benchmark specifically for employment creation. The use of the incentive per employee could provide an alternative avenue for investigation to facilitate the achievement of this objective.

6.2 ANALYSIS OF STUDY OBJECTIVES

6.2.1 Rationale for implementation of SMEDP

There has been significant support provided through the SMEDP programme to manufacturing businesses that are establishing or expanding. The rationale of providing a government investment incentive to support and promote growth of existing business and assist in the establishment of new businesses through incentivisation is sound. The analysis of the other incentive programmes reviewed show that these similar investment incentive programmes are offered throughout the world to promote business through incentivisation of investment in manufacturing capacity. The nature of the benefits received may be different but the benefits provided are an assistance to facilitate and promote economic growth and employment in those specific regions.

The lack of literature of the outcomes of these other incentive grant programmes is similar in nature. The other reviewed programmes incentivise the supply side of the economy. Rather than incentivise the demand side of the economy which could contravene the World

Trade Organisation regulations to globally reduce trade barriers and promote free trade. The South African government therefore has to offer similar incentive programmes to protect the domestic economy with similar actions and interventions that are compliant with World Trade Organisation regulations.

6.2.2 Exploration of SMEDP Merits

The merit of the SMEDP incentive programme is evidenced by the positive outcomes observed in the empirical component of the research in achieving the stated objectives to varying degrees. The continuation to provide benefits of such incentive programmes will continue to benefit the South African economy and to facilitate sustainable economic growth into the future.

The contribution to consolidate the supply side of the economy bears merit through incentivisation. Failure to offer such interventions could negatively impact the future of the manufacturing sector in South Africa to compete globally and contribute to the diversification of the South African economy from a mining based economy.

6.2.3 Measure of SMEDP Success

It has been demonstrated through the research findings presented that certain of the stated objectives have been achieved and others have had limited success. The overall picture needs to be analysed because there is no single solution and there will continue to be trade offs amongst the different objectives. There needs to be a priority structure to the achievement of the set stated objectives to measure the success and failure.

The overall impression from the empirical analysis is that the objectives of the SMEDP have been achieved through the promotion of economic growth which was measured by the growth

in capital investment and the growth in turnover observed. There was growth in employment as discussed in Chapter 5.

The failure of the SMEDP is the inability to measure the impact on the stated objectives by sample cases not qualifying to submit a successful SMEDP claim. This could provide a skewed measurement of the success because these sample cases may have achieved certain of the stated objectives but are not measured because not all benchmarks have been achieved to submit a claim.

An end of project report should be submitted by all participants at the end of the incentive period in order to measure the overall achievement of the investment incentive programme's stated objectives. The end of project report should be a compulsory submission to provide a balanced overview of the success of the investment incentive grant intervention.

6.3 CONCLUSION

The conclusion of the study is to investigate the following recommendations stated for inclusion in the development of future investment incentive programmes. These recommendations are summarised as follows:

- Limit the incentive to a specified Rand value per job created;
- Volume driven turnover growth not price driven turnover growth;
- The continued inclusion of expansions in future programme
- Specified sector programmes i.e. textile sector.
- Compulsory submission of an end of project report.

The contribution of the SMEDP to economic growth and employment growth is evident from the presented results and such government interventions should be continued into the future.

BIBLIOGRAPHY

Anon. 1996a. Ernst and Young Evaluation of the Regional Industrial Development Programme (1991 RIDP and 1993 SRIDP): Summary Report of Findings, Conclusions and Recommendations.

Anon. 1996b. Ernst and Young Report of the Panel of Experts on the Evaluation of the Regional Industrial Development Programme as an Element of the Regional Development Policy in Southern Africa.

Business Incentive System in Italy. [Online].
<http://www.italtrade.com/invest>. [Accessed 30 October 2004].

Chow, G. 2000. China's Economic Reform and Policies at the Beginning of the 21st Century. Perspectives. 2 (1). [Online].
http://oycf.org/Perspectives/7_083100/china.htm [Accessed 10 October 2005].

Curran, J. 2000. What is Small Business Policy in the UK for? Evaluation and Assessing Small Business Policies. International Small Business Journal. 18 (3): 36-50.

Department of Labour. 2003. The Department of Labour. Labour Market Review May 2003. [Online]. Available from:
<http://www.labour.gov.za/publications>. [Accessed 21 March 2004].

Department of Trade and Industry. 2001. Small Medium Enterprise Development Programme Information Brochure. [Online]
<http://www.dti.gov.za/publications>. [Accessed 21 March 2004].

Department of Trade and Industry. 2002. the dti in the Real Economy

Annual Report 1 April 2001 / 31 March 2002 [Online].
<http://www.dti.gov.za/publications> [Accessed 21 March 2004].

Department of Trade and Industry. 2002. the dti's Medium Term Strategic Plan: 2002 – 2004. [Online]. <http://www.dti.gov.za/publications> [Accessed 21 March 2004].

Department of Trade and Industry. 2003. Dynamic, diverse South Africa: Geared for Growth. [Online]. <http://www.dti.gov.za/publications> [Accessed 21 March 2004].

Department of Trade and Industry. 2003. the dti Annual Report 2002 / 2003. [Online]. <http://www.dti.gov.za/publications> [Accessed 21 March 2004].

Department of Trade and Industry. 2004. the dti Annual Report 2003 / 2004. [Online]. <http://www.dti.gov.za/publications> [Accessed 13 June 2004].

Department of Trade and Industry. 2004. the dti Statistics in Brief Q1 Publication 2004. [Online]. <http://www.dti.gov.za/publications> [Accessed 13 June 2004].

Department of Trade and Industry. 2004. the dti Statistics in Brief Q2 Publication 2004. [Online]. <http://www.dti.gov.za/publications> [Accessed 13 June 2004].

Department of Trade and Industry. 2005. Research Report: South African Labour Market: International Benchmarking against Selected Economies. [Online]. <http://www.dti.gov.za/publications> [Accessed 15 December 2005].

Department of Trade and Industry. 2005. The dti Annual Report 2004 / 2005. [Online]. <http://www.dti.gov.za/publications> [Accessed 15 December 2005].

Department of Trade and Industry. The dti's Medium Term Strategic Plan. [Online]. <http://www.dti.gov/publications> [Accessed 21 March 2004].

Dobson, W. 2002. A Guide to the Microeconomic Reform Strategy. [Online]. <http://www.dti.gov.za/publications>. [Accessed 21 March 2004].

Edmiston, K.D., Sjoquist, D.L., Thomas, J. 2003. An Analysis of Proposed New Economic Development Initiative. FRP Report No. 81. Georgia State University.

Gordon, R.H and Li, D.D. Taxes and Government Incentives: Eastern Europe vs. China. [Online] <http://www.bm.ust.hk/~davidli/> [Accessed 15 April 2006].

Government of Gujarat. 2001. Incentive Scheme 2001 for Economic Development of Kutch District. [Online]. Available from: <http://www.gujaratindustry.gov.in/publications>. [Accessed 30 October 2004].

Hong Kong Trade Development Council. 2001. Foreign Investment Incentives to Stay after WTO Entry. [Online]. <http://www.tdctrade.com/alert/cba-e0110i.htm> [Accessed 10 October 2005].

Hu, Z and Khan, M.S. 1997. Why is China Growing so Fast?

International Monetary Fund Economic Issues. 8. [Online].
<http://www.imf.org/external/pubs/ft/issues8/> [Accessed 10 October 2005].

Kleynhans, E.P.J. 2003. The Effect of Globalisation on Regional Industrial Development: The South African Experience. Paper presented at the Conference in Honour of Professor Sebastiano Brusco. Clusters, Industrial Districts and Firms: the Challenge of Globalization; Sep12-13, 2003; Modena, Italy.

Li, D.D. 1998. Changing Incentives of the Chinese Bureaucracy. [Online]. <http://www.bm.ust.hk/~davidli/> [Accessed 15 April 2006].

Li, D.D. 2005. The Dynamics of Institutional Change in China: The Role of Bureaucracy. [Online].
<http://ieas.berkeley.edu/shorestein/1998.03.html> [Accessed 10 October 2005].

Malaysian Industrial Development Authority (MIDA). Small and Medium Industries Development Corporation. [Online].
<http://www.smidec.gov.my/detailpage.jsp?section=financialassistance> [Accessed 30 October 2004].

Ministry of Economic Development New Zealand. Industry and Regional Assistance Programmes. [Online].
http://www.med.govt.nz/irdev/asst_prog.html [Accessed 30 October 2004].

Morrison, W.M. 2005. China's Economic Conditions. CRS Issue Brief for Congress. Library of Congress. 2005.

Reserve Bank of South Africa. 2004. Labour Market Frontiers June

2004, No. 5. [Online]. <http://www.reservebank.co.za/publications>
[Accessed 5 August 2004].

Sekaran, U. 1992. Research Methods for Business: A Skill Building Approach. 2nd Edition. New York: John Wiley.

United Nations Industrial Development Organisation. 2002. Integrated Industrial Development Programme to Facilitate Private Sector Development in Mozambique. [Online]. <http://www.unido.org/> [Accessed 30 October 2004].

Visser, J. 2005. A Student Guide to Helpful Hints with Bibliographical References. [Online]. [Accessed 10 October 2005].

World Bank. 2004. Document of the European Bank for Reconstruction and Development: Strategy for Kazakhstan [Online].
<http://www.worldbank.org/publications>. [Accessed 14 July 2004].

World Bank. 2004. Document of the European Bank for Reconstruction and Development: Strategy for Serbia and Montenegro [Online].
<http://www.worldbank.org/publications>. [Accessed 14 July 2004].

World Bank. 2004. Monitoring and Evaluation: Some Tools, Methods and Approaches. World Bank Operations Evaluation Department: Evaluation Capacity Development. [Online].
<http://www.worldbank.org/publications>. [Accessed 13 July 2004].

World Bank. 2004. World Bank List of Economies and World Development Indicators Database. [Online].
<http://www.worldbank.org/publications>. [Accessed 13 July 2004].