

Chapter 5: Research Methodology

5.1 Introduction

This chapter covers the individual phases of the research chronologically. It focuses on selecting the survey instrument and the type of interview. This is followed by a more detailed explanation on preparing the questionnaire and of the sampling method used. Lastly, the chapter focuses on the methodology used to analyse the data and an explanation of the model calculations.

5.2 The population

The population analysed was manufacturing small businesses, based on the definitions in Chapter 2. The target population was manufacturing small businesses in Gauteng and North West based on the accessibility of these businesses to the researcher and the high level of economic activity in the areas. These businesses provided the largest and accessible sample with a database of approximately 200 businesses.

5.3 Time period

Businesses, that have been established or were operational during the period 1999/00 to 2003/4, were analysed. The dates are after the 1994 elections as this was the period when the legislative playing fields were levelled for all entrepreneurs operating small businesses in South Africa. This study only included businesses that were still active. The main reason why a period of five years has been selected is that businesses must keep a full set of financial information for at least five years for tax purposes and data over longer periods of time will be difficult to obtain. Data which span a few years are necessary to establish growth trends.

5.4 Research design

The main hypotheses to be tested were:

1. Whether manufacturing small businesses in South Africa (Gauteng and North West) contribute to capital generation and, therefore, economic development.
2. Whether these businesses contribute to job creation.

This was done through the development of a small business model using financial principles.

The research was sub-divided into the following main areas:

1. Defining the small business manufacturing environment.
2. Developing a model to measure contributions to economic development.
3. Understanding the small business environment that impacts on development.
4. Designing the research methodology.
5. The data gathering and findings.
6. Analysis and conclusions.

Other sub-questions that were answered as a result of the development of the model were:

1. How does job creation in small business compare to job creation in general manufacturing industries?
2. How does capital generation in small business compare to capital generation in general manufacturing industries?

3. What is the impact of business failure on the contributions of small businesses?
4. What size and age of small businesses perform best in capital generation?
5. Which industries are most suited for small businesses to generate capital?
6. How can government utilise the result of this study to improve policy about small business development?
7. What other factors affect capital generation?
8. What is the effectiveness of using capital generation, compared to using the contribution of gross domestic product, in a developing economy?

The research followed an *ex post facto* design using variables found in the sphere of research which impacts on the model. This is a causal study which considers the impact of different internal and external variables on the model.

The study not only provided a cross-sectional snapshot of the factors currently influencing small business development. It also analysed job-creation trends about the contribution of small business development to the economy.

The literature that was considered relevant developing the model can be divided into these main areas:

1. Economic theory relating to the understanding of macro-economics and economic development.
2. South African statistical data and other primary data sources.
3. Regulations and regulatory definitions guiding small business development.
4. Internationally-developed models and literature.
5. Articles on the impact of small business development, both locally and internationally.
6. Books and journals on small business development.

There is very little in South African literature about the impact of small business on the economy and to capital contribution specifically. This statement is supported by small, medium-sized and micro enterprise research done in South Africa, and published by Bbenkle and Mukuka, (2000: 1). Many subjects were addressed such as black empowerment, credit and finance, information technology, mining, policy issues, training, and so on. However, there was very little about development although mention was made of development strategies. As in many other literature sources, *development* and *growth* get confused. Development without growth is hardly conceivable, but growth is possible without development (Thirlwall, 1999: 29).

5.5 The survey and initial limitations

Initially 200 questionnaires were faxed and posted to businesses from data bases obtained from the Automotive Industry Development Centre, the National Manufacturing Advisory Centre and the Gauteng Manufacturing Advisory Centre. Data that was promised by various other organisations, such as banks and development organisations, could not be provided because of client confidentiality. Client confidentiality was not an issue when the scoping of the research was being decided. The fact that the provision of data by institutions was not initially seen as an issue changed the planning and cost dramatically when, after three months, no data were made available.

The issue of confidentiality to obtain client information from banks and development organisations could not be resolved by using confidentiality agreements. When proposals were made to depersonalise²⁶ the data, these institutions still refused to share the data. The client confidentiality argument can therefore not be the only reason for not contributing to the research. Except for client confidentiality, the reasons which follow must also be highlighted:

²⁶ Replacing the name of the company or organisation with a number or letter only for reference purposes.

1. Small business data from financial institutions will expose their risk profiles.
2. Data from financial institutions will expose their attitudes towards small business.
3. Data from financial institutions will highlight their exposure to the sector.

Data available from an Anglo Gold small business development database was too old to use. Data available from business development agencies were either unavailable or non-existent when requested, although these organisations did state that similar data were available. The data that were available did not cover all the parameters necessary and would be insufficient. This resulted in a drive to obtain data through interviews based on questionnaires. The problems experienced with the questionnaires and interviews are listed:

1. Using second- and third-year students with accounting and/or economic backgrounds to obtain data did not succeed even when appointments were made for them.
2. Using people to post and fax over 200 questionnaires provided only limited success.
3. Businesses promised to complete questionnaires but did not deliver on their promises.

The only really successful way of obtaining information directly was through visiting businesses on appointment or by telephoning personally.

During the research, the Gauteng Manufacturing Advisory Centre requested that its database not be used for any additional research because of a complaint from a business to the Gauteng Manufacturing Advisory Centre that its information had been released. It must also be mentioned that the Gauteng Manufacturing Advisory Centre database was very outdated and unreliable and the problems which follow had to be overcome:

1. Businesses were not aware that they were on the database or that they formed part of the Gauteng Manufacturing Advisory Centre programme. Businesses were also irritated because their names were used in a list of industries that were supported by the Gauteng Manufacturing Advisory Centre.
2. Data were outdated and many businesses no longer existed, had moved premises, or had changed contact details.
3. Data such as addresses, contact persons and telephone numbers were not accurate.
4. Many of the businesses were only at the conceptual phase and were not even operational.

It is possible that lack of support was the result of fears about exposing internal inefficiencies in the businesses or about unsubstantiated claims of the businesses' real influence.

The Automotive Industry Development Centre had the most up-to-date database and many of its businesses replied.

Internet and telephone directories were used to identify respondents and referrals by successful interviewees were also successful.

5.6 Data analysis

The data analysis was based on data obtained in interviews from manufacturing small businesses in Gauteng and North West. The interviews were based on the questionnaire in Appendix 2. The data were analysed to determine whether small business contributed towards capital generation by determining:

1. Contribution to taxes.
2. Contribution to assets.

3. Contribution to owners' incomes.
4. Contribution to employees' incomes.

The qualitative data were used to analyse capital contribution in various regions, industries, and in different businesses according to age and size. All the small businesses for this study formed part of the formal businesses environment. The cut-off size was determined according to the definition developed in Chapter 2. Qualitative data from the literature were used to interpret the model's results.

5.7 Objective of the questionnaire

The objective of the questionnaire was to obtain data to analyse and interpret capital generation as a measurement of the contributions of small and medium-sized enterprises to economic development.

Based on development economic theory²⁷, a business will contribute to economic development if it can generate capital. Capital generation is measured through the items as listed in sub-section 5.6, points one to four.

The questionnaire was structured to cover three main sections:

1. **An administrative section.** This was intended to obtain the respondents' data, to determine whether they needed summaries as feedback to the research, a confidentiality agreement, and to determine whether they could be referred to as contributors.
2. **The status of respondents.** This was intended to determine whether the respondents could be included in the sample: the number of people employed, whether they operated in the manufacturing industry and in

²⁷ See Figure 3.7: Combination of capital production function with labour production function

what sector, and whether they operated in North West or Gauteng provinces were factors.

3. ***Period and contributions data.*** The last part of the questionnaire was intended to obtain data for a period covering the operations of the respondents during the previous five years in order to analyse their:
 - I. Contributions to growth in taxes.
 - II. Contributions to growth in employees' incomes.
 - III. Contributions to growth in owners' incomes.
 - IV. Contributions to the growth of business assets.

5.8 Type of interview

A fully-structured interview format was chosen. Some of the questions were designed with pre-coded responses. The last section of the questionnaire was designed to accommodate financial data. The interviews were conducted in person to ensure the best results.

Responses from the entrepreneurs differed, from very detailed financial data responses, to rounded figures based on financial data with a high degree of accuracy. The impact of the rounding of data is not dramatic, since trends were analysed, but must be acknowledged. The effect of these rounded data figures were considered when the data were analysed.

The process of obtaining data for the research was very complex. Data were mostly obtained during personal interviews based on a *relationship of trust* with the interviewer.

5.9 Confidentiality and non-disclosure agreements

Confidentiality and non-disclosure agreements were made because the data was sensitive. Initially the respondents were very reluctant to provide the financial data necessary for the study.

Different reasons can be provided for this initial resistance. These are based on feedback from the businesses:

1. The researcher used inexperienced interviewers to obtain the data.
2. Suspicion that data were being collected for the Receiver of Revenue or for labour organisations.
3. Suspicion that the data were being collected for competitors or for new entrants to the market.
4. Owners and managers of the businesses that were not doing well felt embarrassed about providing the data.

A standard confidentiality agreement, obtained from BMW South Africa, was used. The agreement was altered to reflect the nature of the research and is included in Appendix 1.

5.10 The questionnaire

The questionnaire reflected all the variables that formed part of the research question. It took between 30 minutes and one hour to complete the questionnaire. It consisted of eight questions with sub-sets of questions. Most of the time was spent on identifying and securing willing respondents, with a success rate of one in three. Travelling between interviews was also time-consuming.

The questionnaire gave a summary of the research objective, contact details of the researcher and the study leader on the first page, followed by the questions.

5.11 Analysis methodology

This section focuses on the methodology used to analyse the data. It will focus firstly on the data characteristics, secondly on the mathematical analysis and thirdly on the different interrelationships and types of analysis.

5.12 Objectivity of the data

During the collection of the data various observations were made by the researcher that must be listed as they might impact on the quality of the data. It must be noted that a large percentage of the entrepreneurs who agreed to interviews had tertiary education, but this was not quantified during the research. The quality and accuracy of the financial data might differ because the skills of the entrepreneurs, in providing the data, differed. In many cases, the entrepreneurs or managers only provided verbal data over the telephone or from their financial statements without actually revealing the data. It must be noted that the data could have been altered to hide issues of tax or remuneration.

In general, the entrepreneurs were extremely suspicious. Their suspicions were based mainly on tax and labour issues. These suspicions were followed by concerns of industrial espionage by new market entrants and competitors or that customers would obtain the data for price negotiations.

It also seemed that businesses that were doing exceptionally well, or were struggling, did not want to provide their data.

5.13 Interpretation of data

Available data were collected for the previous five years. However, if a business was younger than five years old the last available data were collected and if a

business's first financial year did not extend over 12 months the data were ignored.

All data were *deflated* with the consumer price index, excluding interest rates on mortgage bonds, inflation data obtained from Statistics South Africa (Statistics South Africa, 2004). The statistical data extend over a 12-month period from January to December and they did not always coincide with the financial years of the businesses. The effect of the lag or lead on the data should however be minimised over the period analysed.

5.14 Preparation of data for analysis

The data were divided into three fields for the purpose of analysis:

1. The raw data were captured, by business, for the five-year period if it were available. The data covered the four main areas of analysis which were contributions to assets, owners' incomes, employees' incomes and to tax income. The data also covered the ages of the entities, the numbers of owners and employers, and the industries, provinces and areas of operation.
2. The raw data were normalised or deflated to a base, or reference, year by using the inflation-rate data from Statistics South Africa for the five-year period, if the data were available. The data covered the four main areas of analysis which were contributions to assets, owners' incomes, employees' incomes and to tax income.
3. The raw data were used to establish growth trends, in order to simulate the capital generated, if the businesses grew at the same rate as increases in the consumer price index, excluding interest rates on mortgage bonds. The data were collected for the five-year period if they were available. The data covered the four main areas of analysis which

were contributions to assets, owners' incomes, employees' incomes and to tax income.

The data were reworked into three groups:

1. **The raw data.** These data were used as reference points to calculate the trend data and the normalised data. Comparisons between actual, or raw, data and inflation-based growth and trend data were necessary to determine whether growth occurred. If the actual or raw data were larger than the inflation-based growth and trend data the businesses were contributing *positively*. If the actual or raw data were smaller or equal to the inflation-based growth and trend data, the businesses had smaller or no growth.
2. **The growth and trend data** were used to make the comparisons explained in *raw data* above.
3. **The normalised or deflated data** were used to compare different parameters from the same base line, such as in trying to determine whether businesses were able to increase their contributions to asset growth, in real terms, compared to job creation.

The consumer price index, as published by Statistics South Africa, was used to calculate a baseline for measurement. This index was used to calculate a trend for growth as well as to normalise the data.

Since the aim of the study was to calculate capital growth, it made sense to compare businesses' capital contributions, measured by growth in assets, tax contributions, employees' and owners' incomes, in relation to consumer-related inflation and not to production-related inflation:

1. If businesses increased their assets, in relation to consumer-related inflation, they would be in better positions to borrow capital and/or have

- more capital available to purchase assets based on a consumer price index-related increased cost.
2. If businesses increased their tax contributions, in relation to consumer-related inflation, government would have more capital available.
 3. If businesses increased their owners' and employees' incomes, in relation to consumer-related inflation, the owners and employees would be in better positions to improve their standards of living and purchasing power to purchase assets, or any other services, based on a consumer price index-related increased cost. (If owners' and employees' incomes were seen as production-related costs the *Production Price Index* would have been used.

5.15 Calculation methodology and testing of logic

The examples used were calculated from actual data. The asset-growth data from the sample data were used to highlight the effects and the logic of the calculations.

5.15.1 The raw data

The raw data were based on annual figures for total assets, owners' and employees' incomes, and after-profit tax contributions in Rands:

1. Owners' incomes, which included all salaries and benefits paid to the owners of businesses, including shares, dividends and taxes.
2. Employees' incomes, which included all the salaries and benefits paid to the employees of a business including shares if they were issued to employees. They also included employment-related taxes paid by the business.

3. Assets, which included all the physical assets such as capital, machines and stock.
4. Taxes paid, which included only after-profit taxes. They did not include taxes on salaries or unemployment benefits. These are included in the total cost of employment. They did, however, include regional service levies and taxes on land.

5.15.2 Calculating trend data

The calculation was simplified to highlight clearly the logic of the calculation. The consumer price index²⁸ inflation rate, as published by Statistics South Africa, is used in the calculation in Table 5.1.

The example which follows is used as a basis for calculating trend data:

Table 5.1 The consumer price index from the 1999/2000 tax year to the 2004/2005 tax year

Year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
Consumer price index, excluding interest rates on mortgage bonds	1.069	1.078	1.066	1.093	1.068	1.045*

**Estimate*

A value of 1.069 in the Table 5.1 represents an inflation rate of 6.9%. The 2004/2005 inflation rate was based on an estimate for that year, since no official data were available when the data were analysed. The final published rate by

²⁸ Consumer price index excluding interest rates on mortgage bonds

Statistics South Africa was 4.3%. This would have increased the positive returns of small businesses.

Data from the first year (1999/0) were seen as the base data. Thus, if a business had assets worth R100.00 in the 1st year it would need to increase the asset value by 7.8%, or R107.80, in the 2nd year (2000/1) to even out the effect of inflation. This effect is illustrated in Table 5.2. This is applicable to all the parameters tested.

Table 5.2 Calculating a trend for growth, required to equalise inflation pressure

Year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
Growth trend	100.00	107.80	114.91	125.60	134.14	140.18

Based on the results in Table 5.2, a business's assets, tax contributions, employees' and/or owners' incomes need to be equal to R140.18 in 2004/5 if they were R100 in 1999/0.

5.15.3 Calculating averages

It was necessary to calculate averages to counter the effects of additional employees or owners entering the business before a trend could be calculated, or the data could be normalised.

If a business employed ten people in the first year, and paid R1000 per person, the total salary bill would be R10 000 per month, or R120 000 per year. If the business showed an increase in its total annual salary bill to R150 000 per year, but it increased the number of people employed to 16, the average employee

income would have reduced to R781.25. This example does not include the effect of inflation.

The concern was to see whether people were in better positions when compared to inflation. Thus the calculation was used to compute the average owners' and employees' incomes. Increases in the contributions of the business to salaries and owners' incomes were not calculated.

5.15.4 Calculating percentages

Percentages were used to simplify the data and to highlight changes in the data. They were used to highlight the effect of actual data compared to inflation-based trend data.

Table 5.3 Actual data from business financial statements

Year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
Actual data	100	200	300	130	130	130

Table 5.4 shows that the business grew its income by R100 per year for the first three years and then reduced its income by R170, in the year 2002/3, to R130. If these actual results are compared to Table 5.2 they can be expressed in percentage growth achieved compared to inflation-based trends (Table 5.4).

Table 5.4 Growth expressed in percentages

Year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
Actual growth	0%	86%	161%	3.50%	-3.09%	-7.26%

Year one, as the base year, showed that there was no growth because the actual data were the same as the achieved data. In the 2nd year (2000/1), excluding the

effect of inflation, the business would have grown by 100%, from R100 to R200. If the effect of inflation is included, it managed a growth of 86%. The drop in income in 2002/3 can be clearly seen with an under-achievement in the next years.

5.15.5 Normalised or deflated data

Data was normalised or deflated to cancel the effects of inflation and to enable the analysis of the data on an equal basis. The process of normalising data is illustrated in Table 5.5

Table 5.5 The effect of normalising the actual raw data

Year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
Actual data	100.00	107.80	114.91	125.60	134.14	140.18
Normalised or deflated data	100.00	100.00	100.00	100.00	100.00	100.00

If a business grew its capital income, as illustrated in Table 5.5, it can be stated that the business managed to grow from R100 in the 1st year to R140.18 in the last year. If the effect of inflation, on the value of the investment, is taken into account it can be seen that the business did not grow at all. Normalised or deflated data was used to determine whether a business grew its capital compared to inflation.

As a conclusion, the calculations are summarised in Table 5.6.

Table 5.6 A summary of all calculation parameters showing an example that had a growth equal to the consumer price index

Year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
Consumer price index, excluding interest rates on mortgage bonds	1.069	1.078	1.066	1.093	1.068	1.045*
Actual data	100.00	107.80	114.91	125.60	134.14	140.18
Normalised or deflated data	100.00	100.00	100.00	100.00	100.00	100.00
Trend data	100.00	107.80	114.91	125.60	134.14	140.18
Growth %	0%	0%	0%	0%	0%	0%

The actual data and the trend data, by business, are available in Appendices 3 to 6.

Chapter 6: Findings

6.1 Introduction

This chapter covers the analysis of the data collected from the sample of 45 small businesses in the manufacturing sector. The data were not used to draw conclusions regarding the impact of small and medium-sized businesses on the industry but to confirm the functionality of the model that was developed and to indicate typical results from the model. It will require a larger sample to be able to draw really meaningful conclusions and to make accurate inferences regarding the contributions of small and medium-sized industries to capital generation.

This chapter consists of two major sections. It starts by describing the method of analysis, the selection of measuring instruments and the grouping of these instruments. This is followed by a detailed analysis of all the parameters in the model.

6.2 The method of analysis

6.2.1 Sample data

The sample data were collected over a six-month period. The data show financial information from businesses for a five-year period starting in the 1998/1999 tax year and ending in the 2003/2004 tax year. Not all of the businesses were five years old at the time the data were collected. This meant that some data fields were missing for the years when the businesses were not operational. It is important to acknowledge this and not to interpret these missing data fields as zero value entries. Zero entries would result in the incorrect calculation of averages for individual businesses and for the different groups of businesses in

the different samples. The total sample consisted of 45 small businesses classified as manufacturing businesses.

Because of the sensitivity of the data the businesses are not referred to by name, but as businesses numbered 1 to 45. The researcher had to sign non-disclosure agreements about how the data would be used in the research. The questionnaires and the names of the businesses are available to verify the authenticity of the research but may not to be published.

6.2.2 Measurement parameters

Based on the design of the model, there are four groups of factors that contribute to capital generation. These are:

1. Contributions to tax growth.
2. Contributions to growth in employee income.
3. Contributions to growth in owner income.
4. Contributions to growth in assets²⁹.

The data for these four factors were normalised or deflated by using the consumer price index for the five-year period. It was necessary to normalise the data to have a single basis of comparison to work from. The normalised or deflated data were used for analysis within each of the data sets. The process of analysis was detailed in Chapter 5.

The contributions to capital generation were evaluated and compared to the number of people employed in each business, the province and area where each business is located, the age of each business and the type of manufacturing industry each business is engaged in as independent variables.

²⁹ The four factors contributing to capital generation are discussed in Chapter 3 as part of the development of the model and in Chapter 5 during the interpretation and calculation of the data.

Table 6.1 Evaluation variables (independent variables) used to investigate the growth criteria (dependent variables)

		Group 1	Group 2	Group 3	Group 4	Group 5
1	Number of people employed	1 to 10	11 to 19	20 to 40	40 to 123	
2	Province where business is located	North West	Gauteng			
3	Area where business is located	Rosslyn and Silverton	Brits and GaRankuwa	Rustenburg	Johannesburg and Vereniging	
4	Business age in years	1 to 5	6 to 10	11 to 35		
5	Manufacturing sector	Motor	Building	Mining, Agricultural and General equipment	Furniture and Funeral	Food

The five evaluation criteria that were used to establish whether the different groupings of businesses had an impact on the results, based on the four factors measured to determine capital contributions, are shown in Table 6.1.

As was explained in Chapter 3, an economy needs jobs that are supported by an increase in gross domestic product output per job (per head) and an increase in *per capita* income to achieve economic stability. It is also important to create growth through the four factors that support it. It is clear that the four factors of growth are difficult to manipulate, particularly when the size of the workforce and the availability of natural resources are considered. The second two factors, namely the quantity and quality of capital and technology, can be manipulated if an economy has the capital to increase the quality of labour through training, has

the capital to expand the economy or the level of technological competitiveness through research, and the capital to purchase new technologies³⁰.

The model measured the creation of capital as the most important factor influencing economic development. This development was measured by using readily available financial data to calculate the contribution of capital generation. The detailed calculation of the contribution is explained in Chapter 5. In essence, the model calculates the capital growth rate of a business. If this growth rate is positive, taking into account the effect of inflation, the business does contribute. The converse is also true.

The data were used in a comparative study in order to test the model. The complete data sheets are shown in Appendices 3 to 6.

The main research hypotheses were:

1. H_{10} : Small businesses do not generate additional capital ($H_{10} \geq 0$).
2. H_{1a} : Small businesses generate additional capital ($H_{1a} > 0$).

The H_{10} and H_{1a} hypotheses have the sub-hypotheses which follow:

- i. H_{20} : Small businesses do not generate additional income for their employees ($H_{20} \geq 0$).
- ii. H_{2a} : Small businesses generate additional income for their employees ($H_{2a} > 0$).
- iii. H_{30} : Small businesses do not generate additional income for government (tax) ($H_{30} \geq 0$).
- iv. H_{3a} : Small businesses generate additional income for government (tax) ($H_{3a} > 0$).

³⁰ See sub-section 3.3

- v. H_{40} : Small businesses do not generate additional income for their owners ($H_{40} \geq 0$).
- vi. H_{4a} : Small businesses generate additional income for their owners ($H_{4a} > 0$).
- vii. H_{50} : Small businesses do not generate additional income for investment in assets (capital and goods) ($H_{50} \geq 0$).
- viii. H_{5a} : Small businesses generate additional income for investment in assets (capital and goods) ($H_{5a} > 0$).

These eight sub-hypotheses are followed by the final two hypotheses regarding job creation by small businesses:

- 1. H_{60} : Small businesses do not contribute to job creation ($H_{60} \geq 0$).
- 2. H_{6a} : Small businesses contribute to job creation ($H_{6a} > 0$).

6.3 Statistical analyses of data

Various statistical analyses were conducted on the sample with the assistance of the department of Statistics at the University of Pretoria. The complete results of the statistical analyses are reported in Appendix 8. The net results of the analyses are that the data does not show significant trends. There are many factors that contribute to the reasons why the data did not show significant trends. Some of these factors are:

- 1. A company that is capital-intensive will utilise considerably more assets than a company that is not capital-intensive. This is illustrated by an example from the data. Business (12) employed seven people on average over the period with assets in the second year measured at R1 900 000. Business (20), on the other hand, employed an average of 4.75 people with assets in the second year measured at R2 000. Although both

businesses are classified as small, with similar numbers of people working for them, their assets cannot be compared directly.

2. Different industries have different salary scales and levels of specialisation. These demand different packages.
3. Different industries differ in profitability.
4. A young business may have a lot of seed funding, making it larger than an older and well-established business.

Many other reasons can be listed for the large variances in the sample contributing to the fact that the data are less significant.

Only the two largest factors, age and size of the businesses, were analysed statistically. Smaller factors, such as industry focus or location of the businesses, were not tested. The results of the *F*-test on the factors were not significant and fell outside the 95% confidence interval for most of the factors tested. The analyses indicate that many other factors, other than the ages or sizes of businesses, influence their contributions to capital generation.

Three factors fell inside or just outside the confidence levels confirming that small portions of the data were statistically significant.

Table 6.2 Statistical significance of the data used to test the model

Dependent variable	Independent Variable	Independent Variable	Pr > t/
Owners' incomes	Large businesses	6 to 10 years	0.0601
Employees' incomes	Large businesses	6 to 10 years	0.0447
Tax income	Large businesses	6 to 10 years	0.0324

The analysis showed that the ages and the sizes of businesses, or a combination of sizes and ages, do not have a statistically significant impact on the growth in

owners' incomes, in employees' incomes, in tax income or in assets. Although not statistically supported, the model does show a trend, as is illustrated in this chapter. The literature made no references to statistical analyses of similar sets of economic data. An example is the study done by Snodgrass and Biggs (1996: 53) on *per capita* gross domestic product for different business sizes in 34 countries. The Snodgrass and Biggs study made no reference to the statistical significance of the data.

6.4 The data

The first analysis was to determine whether a business employed more, the same number, or fewer personnel, how these affect, or compare with, the capital generation of a business when the four parameters in the model are considered. In both cases (job and asset creation) the starting numbers of people and assets in year one were compared with the final numbers of assets and people in year five to determine positive or negative growth. Table 6.3 compares the inflation-normalised or deflated data for asset growth (comparing assets at the starting date to assets at the ending date) with personnel growth, by business (comparing personnel numbers at the starting date to personnel numbers at the ending date).

This first section of the analysis only determined how many of the businesses in the sample contributed to the different aspects of growth. This method is typical of many research projects studied as part of this research. It will not provide information on the net contribution of the sector if the gross contributions of businesses that increased and the gross contributions of businesses that shrunk their contributions are considered. This important conclusion can only be drawn at the end of the chapter.

Table 6.3 compares asset growth with the numbers of people employed for all businesses, for businesses that employed fewer than 20 people at the start, and for businesses that employed 20 or more people at the start.

Table 6.3 Deflated asset growth data compared with number of people employed

Asset and personnel growth				
<i>Total Sample</i>	Personnel increase	Personnel same	Personnel decrease	Total
Asset increase (frequency)	16	7	1	24
Asset increase (percentages)	35.56%	15.56%	2.22%	53.33%
Asset decrease (frequency)	10	4	7	21
Asset decrease (percentages)	22.22%	8.89%	15.56%	46.67%
Personnel growth (total)	26	11	8	45
Personnel growth (percentages)	57.78%	24.44%	17.78%	100%

Asset and personnel growth				
<i>< 20 employees</i>	Personnel increase	Personnel same	Personnel decrease	Total
Asset increase (frequency)	10	5	1	16
Asset increase (percentages)	35.71%	17.86%	3.57%	57.14%
Asset decrease (frequency)	8	2	2	12
Asset decrease (percentages)	28.57%	7.14%	7.14%	42.86%

Asset and personnel growth				
< 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Personnel growth (total)	18	7	3	28
Personnel growth (percentages)	64.29%	25.00%	10.71%	100%

Asset and personnel growth				
≥ 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Asset increase (frequency)	6	2	0	8
Asset increase (percentages)	35.29%	11.76%	0.00%	47.06%
Asset decrease (frequency)	2	2	5	9
Asset decrease (percentages)	11.76%	11.76%	29.41%	52.94%
Personnel growth (total)	8	4	5	17
Personnel growth (percentages)	47.06%	23.53%	29.41%	100%

Of the 45 businesses analysed, 24 of the businesses increased their total assets and 21 decreased them. The data also shows that 26 increased the number of people employed, 11 stayed the same and 8 decreased their numbers. Businesses employing fewer than 20 people generally performed better in asset generation and in employment growth.

Table 6.4 compares the inflation-normalised data for the growth in owners' incomes with growth in personnel, by business, for all of the businesses. These businesses were divided into businesses that employed fewer than 20 people when they started and businesses that employed 20 or more people when they started.

Table 6.4 Deflated owners' income data compared with the number of people employed

Owners' incomes and personnel growth				
<i>Total sample</i>	Personnel increase	Personnel same	Personnel decrease	Total
Owners' income increase (frequency)	18	8	3	29
Owners' income increase (percentages)	40.00%	17.78%	6.67%	64.44%
Owners' income decrease (frequency)	8	3	5	16
Owners' income decrease (percentages)	17.78%	6.67%	11.11%	35.56%
Personnel growth (total)	26	11	8	45
Personnel growth (percentages)	57.78%	24.44%	17.78%	100%

Owners' incomes and personnel growth				
< 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Owners' income increase (frequency)	13	5	1	19
Owners' income increase (percentages)	46.43%	17.86%	3.57%	67.86%
Owners' income decrease (frequency)	5	2	2	9
Owners' income decrease (percentages)	17.86%	7.14%	7.14%	32.14%
Personnel growth (total)	18	7	3	28
Personnel growth (percentages)	64.29%	25.00%	10.71%	100%

Owners' incomes and personnel growth				
≥ 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Owners' income increase (frequency)	5	3	2	10
Owners' income increase (percentages)	29.41%	17.65%	11.76%	58.82%
Owners' income decrease (frequency)	3	1	3	7
Owners' income	17.65%	5.88%	17.65%	41.18%

Owners' incomes and personnel growth				
≥ 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
decrease (percentages)				
Personnel growth (total)	8	4	5	17
Personnel growth (percentages)	47.06%	23.53%	29.41%	100%

Of the 45 businesses analysed, 26 increased the numbers of people employed, 11 stayed the same and eight decreased their numbers. The data also showed that 29 of the businesses increased their owners' incomes and only 16 decreased their owners' incomes. Generally, businesses that employed fewer than 20 people performed better in owners' income generation and in job creation than did the larger businesses.

Table 6.5 compares the inflation-normalised data for employee income growth with personnel growth, by business. These businesses were divided into businesses that employed fewer than 20 people at the start and businesses that employed 20 or more people at the start.

Table 6.5 Deflated employee income data compared with the number of people employed for all businesses

Employee income and personnel growth				
Total sample	Personnel increase	Personnel same	Personnel decrease	Total
Employee income increase (frequency)	14	7	4	25
Employee income	31.11%	15.56%	8.89%	55.56%

Employee income and personnel growth				
<i>Total sample</i>	Personnel increase	Personnel same	Personnel decrease	Total
increase (percentages)				
Employee income decrease (frequency)	12	4	4	20
Employee income decrease (percentages)	26.67%	8.89%	8.89%	44.44%
Personnel growth (total)	26	11	8	45
Personnel growth (percentages)	57.78%	24.44%	17.78%	100%

Employee income and personnel growth				
<i>< 20 employees</i>	Personnel increase	Personnel same	Personnel decrease	Total
Employee income increase (frequency)	9	4	1	14
Employee income increase (percentages)	32.14%	14.29%	3.57%	50.00%
Employee income decrease (frequency)	9	4	1	14
Employee income decrease (percentages)	32.14%	14.29%	3.57%	50.00%
Personnel growth	18	7	3	28

Employee income and personnel growth				
< 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
(total)				
Personnel growth (percentages)	64.29%	25.00%	10.71%	100%

Employee income and personnel growth				
≥ 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Employee income increase (frequency)	5	3	3	11
Employee income increase (percentages)	29.41%	17.65%	17.65%	64.71%
Employee income decrease (frequency)	3	1	2	6
Employee income decrease (percentages)	17.65%	5.88%	11.76%	35.29%
Personnel growth (total)	8	4	5	17
Personnel growth (percentages)	47.06%	23.53%	29.41%	100%

Of the 45 businesses analysed, 26 increased the numbers of people employed, 11 stayed the same and 8 decreased their numbers. The data also shows that 25 of the businesses increased their employees' incomes and 20 decreased them. Larger businesses, which employed more than 20 people, generally did better than did the smaller businesses in contributing to employees' incomes.

Table 6.6 compares the inflation-normalised data for tax income growth with personnel growth, by business. These businesses were divided into businesses that employed fewer than 20 people at the start and businesses that employed 20 or more people at the start.

Table 6.6 Deflated tax income data compared with the number of people employed for all businesses

Tax income and personnel growth				
<i>Total sample</i>	Personnel increase	Personnel same	Personnel decrease	Total
Tax income increase (frequency)	22	8	5	35
Tax income increase (percentages)	51.11%	20.00%	11.11%	77.78%
Tax income decrease (frequency)	4	3	3	10
Tax income decrease (percentages)	8.89%	6.67%	6.67%	22.22%
Personnel growth (total)	26	11	8	45
Personnel growth (percentages)	57.78%	24.44%	17.78%	100%

Tax income and personnel growth				
<20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Tax income increase (frequency)	16	4	1	21
Tax income increase (percentages)	57.14%	14.29%	3.57%	75.00%
Tax income decrease (frequency)	2	3	2	7
Tax income decrease (percentages)	7.14%	10.71%	7.14%	25.00%
Personnel growth (total)	18	7	3	28
Personnel growth (percentages)	64.29%	25.00%	10.71%	100%

Tax income and personnel growth				
≥ 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Tax income increase (frequency)	6	4	4	14
Tax income increase (percentages)	35.29%	23.53%	23.53%	82.35%
Tax income decrease (frequency)	2	0	1	3
Tax income decrease (percentages)	11.76%	0.00%	5.88%	17.65%
Personnel growth (total)	8	4	5	17

Tax income and personnel growth				
≥ 20 employees	Personnel increase	Personnel same	Personnel decrease	Total
Personnel growth (percentages)	47.06%	23.53%	29.41%	100%

Of the 45 businesses analysed, 26 increased the number of people employed, 11 stayed the same and 8 decreased their numbers. The data also showed that 35 of the businesses increased their tax contributions and only ten decreased them. Generally, larger businesses, which employed more than 20 people, performed better than did the smaller businesses.

6.5 Summary of employment effects

The data showed that 57.8% of the businesses increased personnel. The balance either stayed the same (24.4%) or decreased personnel (17.78%). This growth in employment is compared with the four growth parameters of the model, summarised in Table 6.7.

Table 6.7 Summary of the four capital growth parameters

	Personnel growth	Asset growth	Owners' incomes	Employees' incomes	Tax income
Total Sample	57.8% (+)	53.33% (+)	64.44% (+)	55.56% (+)	77.78% (+)
< 20 employees	64.29% (+)	57.14% (+)	67.86% (+)	50% (+)	75% (+)
≥ 20 employees	47.06% (+)	47.06% (+)	58.82% (+)	64.71% (+)	82.35% (+)

Table 6.7 shows that smaller businesses grew their employment faster than did the larger businesses. It is also clear that the small businesses outperformed the large businesses in asset growth and in generating owners' incomes. The converse is true when employees' incomes and tax income for the same sample are compared.

In the total sample the number of businesses which increased owners' incomes and tax income exceeded the number of businesses which increased personnel growth. The number of businesses which increased asset growth and employees' incomes did not lag far behind the number of businesses which increased personnel growth.

If the sample is split into businesses which employed 20 or more people and into businesses which employed fewer than 20, there was a greater number of larger businesses that increased employees' incomes and tax income than there were smaller businesses.

If the sample is split into businesses which employed 20 or more people and into businesses which employed fewer than 20, there was a greater number of smaller businesses that increased personnel growth, asset growth and owners' incomes than there were larger companies.

A growth or decline in job creation does not reflect on a business's capability to increase or decrease capital generation. Businesses, in this small sample, performed better in capital generation than they did in job creation. The validity of this data, however, needs to be confirmed in a larger sample.

It would be interesting to determine why there are differences between businesses employing different numbers of people in the different capital generation parameters.

6.6 Comparing the capital generating parameters

Table 6.8 compares the inflation-normalised-data for asset growth with the inflation-normalized data for owners' incomes.

Table 6.8 Deflated asset growth data compared with normalized owners' income data

Asset and owners' income growth			
<i>Total Sample</i>	Larger owners' incomes	Smaller owners' incomes	Total
Asset increase (frequency)	20	4	24
Asset increase (percentages)	44.44%	8.89%	53.33%
Asset decrease (frequency)	9	12	21
Asset decrease (percentages)	20.00%	26.67%	46.67%
Owners' income growth (total)	29	16	45
Owners' income growth (percentages)	64.44%	35.56%	100%

Of the 45 businesses analysed, 24 businesses increased total assets and 29 increased owners' incomes. In 21 of the businesses total assets decreased and 15 of the businesses reflected a decrease in owners' incomes. Of these, 12 decreased assets and owners' incomes over the period.

Table 6.9 compares the inflation-normalised data for asset growth with the inflation-normalized data for employee's incomes.

Table 6.9 Deflated asset growth data compared with normalised employee income data

Asset and employees' income growth			
<i>Total Sample</i>	Larger employees' incomes	Smaller employees' incomes	Total
Asset increase (frequency)	14	10	24
Asset increase (percentages)	31.11%	22.22%	53.33%
Asset decrease (frequency)	11	10	21
Asset decrease (percentages)	24.44%	22.22%	46.67%
Employees' income growth (total)	25	20	45
Employees' income growth (percentages)	55.56%	44.44%	100%

Of the 45 businesses analysed, 24 businesses increased total assets and 25 of the businesses increased their employees' incomes. In 21 of the businesses, total assets decreased and in 20 businesses the incomes of employees decreased. Of all these businesses ten decreased employees' incomes and assets simultaneously.

Table 6.10 compares inflation-normalised data for asset growth with inflation-deflated tax income data.

Table 6.10 Deflated asset growth data compared with deflated tax income data

Asset and tax income growth			
<i>Total Sample</i>	Larger tax income	Smaller tax income	Total
Asset increase (frequency)	19	5	24
Asset increase (percentages)	42.22%	11.11%	53.33%
Asset decrease (frequency)	16	5	21
Asset decrease (percentages)	11.11%	4.44%	46.67%
Tax income growth (total)	35	10	45
Tax income growth (percentages)	77.78%	22.22%	100%

Of the 45 businesses analysed, 24 of the businesses increased the total assets and 35 increased their tax contributions. In 21 of the businesses total assets decreased and in ten of the businesses the tax income decreased. Five businesses decreased both their assets and tax contribution simultaneously.

Table 6.11 compares the inflation-normalised data for owner income growth with inflation-normalised data for employee income growth.

Table 6.11 Deflated owner income data compared with deflated employee income data

Owner and employee income growth			
<i>Total Sample</i>	Larger employees' incomes	Smaller employees' incomes	Total
Owner income increase (frequency)	18	11	29
Owner income increase (percentages)	40.00%	24.44%	64.44%
Owner income decrease (frequency)	7	9	16
Owner income decrease (percentages)	15.56%	20.00%	35.56%
Employee income growth (total)	25	20	45
Employee income growth (percentages)	55.56%	44.44%	100%

Of the 45 businesses analysed, 29 businesses increased owners' incomes and 25 the businesses increased employees' incomes. In 16 of the businesses owner income decreased and in 20 employee income decreased. Only nine businesses decreased owners' and employees' incomes simultaneously.

Table 6.12 compares the inflation-normalised data for owner income growth data with inflation-normalised tax contribution growth data.

Table 6.12 Deflated owner income data compared with deflated tax contribution data

Owner and tax income growth			
<i>Total Sample</i>	Larger tax income	Smaller tax income	Total
Owner income increase (frequency)	25	4	29
Owner income increase (percentages)	55.56%	8.89%	64.44%
Owner income decrease (frequency)	10	6	16
Owner income decrease (percentages)	22.22%	13.33%	35.56%
Tax income growth (total)	35	10	45
Tax income growth (percentages)	77.78%	22.22%	100%

Of the 45 businesses analysed, 29 businesses increased total owner income and 35 businesses increased tax contribution. At 16 businesses, the total owner income decreased and tax contribution decreased in ten businesses. In six of the businesses the tax contribution and owner income decreased.

Table 6.13 compares the inflation-normalised data for employee income growth with inflation-deflated tax contribution growth.

Table 6.13 Deflated employee income data compared with deflated tax contribution data

Employee and tax income growth			
<i>Total Sample</i>	Larger tax income	Smaller tax income	Total
Employee income increase (frequency)	23	2	25
Employee income increase (percentages)	51.11%	4.44%	55.56%
Employee income decrease (frequency)	12	8	20
Employee income decrease (percentages)	26.67%	17.78%	44.44%
Tax income growth (total)	35	10	45
Tax income growth (percentages)	77.78%	22.22%	100%

Of the 45 businesses analysed, 25 businesses increased employees' incomes and in 35 of the businesses the tax contributions increased. At 20 of the businesses employees' incomes decreased and the tax contributions decreased in ten. Only eight of the businesses decreased their contributions to tax and employee income simultaneously.

6.7 Summary of capital generation

The majority of the businesses showed an increase in capital generation in assets, owners' incomes, employees' incomes and in tax contributions. Of the 45

businesses, between 31.11% and 55.56% showed simultaneous increases in at least two of the parameters of capital generation. Between 4% and 22% of the businesses showed simultaneous decreases in capital generation of at least two of the parameters.

It can therefore be concluded that there is a 31.11% to 55.56% possibility that, if a business is contributing to capital in one of the four areas measured, it is likely to contribute to capital generation in at least one other area. This section of the analysis did not compare the net effect of all the businesses towards capital generation. The analysis of the net contribution is reported in the next part of this chapter.

6.8 Number of people employed

The data were divided into four groups based on the number of people employed by businesses during the first year that data was available. The employment figures, by business, were selected based on the number of people employed during the 1999/2000 financial year, or during any year thereafter, if the businesses were younger and started after 1999/2000. According to the definition developed in Chapter 2, a small business in the manufacturing industry will employ between 20 and 100 people and a very small business between 1 and 19. The businesses analysed maintained, reduced or increased the number of people employed over the five-year period.

Various uncontrollable economic parameters, such as domestic demand, exports, business conditions and confidence, will impact on the final results achieved by small businesses (Laubscher, 1999: 1). It is therefore important not to interpret the results of the model in isolation, but in the context of the greater economy. Small businesses might not contribute to capital generation because of a downturn in the economy and not because of their individual performances. Businesses of different sizes should be compared over a similar time period in

order to understand and interpret the model. The model should therefore be used to analyse all businesses and then to compare the contributions of small businesses with those of larger businesses. For this study, businesses employing fewer than 20 people were compared with businesses employing 20 or more people.

Therefore a business that had 20 employees when it started and now employs only 18 people, or a business that employed 100 people when it started and now employs 120 people, would not have been used if average or current employee status had been used. Since the aim of the research was to determine the impact of small businesses on capital generation, businesses that fell within the definition at the base year, or the year in which the business was started, were analysed.

Businesses with fewer than 20 employees were also surveyed to compare very small, small businesses (one to 19 people) with small businesses (20 to 132 people) in accordance with the definition.

Table 6.14 Number of businesses, by group, for each of the four groups of people employed

	1 to 10 people	11 to 19 people	20 to 40 people	41 to 132 people
Very small businesses (one to 19 people)	14 respondents	12 respondents		
Small businesses (20 to 132 people)			12 respondents	7 respondents

The four employee groups, as listed in Table 6.14, were compared on asset contributions, owners' incomes, employees' incomes and tax contributions. The consumer price inflation rate was used to compare the growth in real terms.

Table 6.15 Asset growth contribution by number of people employed

	Year	Year	Year	Year	Year	Average	Per year
Number of employees	1	2	3	4	5	Asset growth (R)	Average asset growth (%)
1 to 10	0%	10%	20%	44%	41%	1117495	28%
11 to 19	0%	9%	16%	14%	19%	735944	12%
20 to 40	0%	-4%	-4%	-12%	-5%	-525057	-6%
41 to 132	0%	-3%	-4%	-1%	-14%	-1930003	-5%

Table 6.15 compares the asset contributions of businesses, employing different numbers of employees, with the growth rate calculated on an inflation-escalated base year.

It is important to explain inflation-based escalation as a basis for comparing growth. If the inflation rate is 10% in year one and year two, as an example, a business with an asset base of R100 will need to grow by R10 in year one (to R110) and by R11 in year two (to R121) only to neutralise the effect of inflation. If it grows more than the inflation rate it will contribute positively to asset growth and *vice versa*.

Table 6.15 shows that businesses which employ between one and ten and between 11 and 19 people, on average, grew their assets above the inflation targets set by the model. Businesses employing 20 or more, between 20 and 40 and between 41 and 132 people grew their assets below the inflation growth rate.

Table 6.16 Owner income growth contributions by number of employees

	Year	Year	Year	Year	Year	Average	Per year
Number of employees	1	2	3	4	5	Owners' growth (R)	Average owners' growth (%)
1 to 10	0%	-3%	-1%	15%	28%	32410	1%
11 to 19	0%	-4%	-22%	5%	-23%	-48995	-1%
20 to 40	0%	-21%	-15%	-20%	-31%	-96629	-2%
41 to 132	0%	-120%	-132%	-74%	-60%	-1065141	-6%

Table 6.16 compares the owner income contributions by number of employees with the expected growth rate according to inflation-escalated base year data.

Table 6.16 shows that businesses that employ between one and ten people on average grew their owners' incomes 1% faster than inflation. Businesses employing between 11 and 19, between 20 and 40 and between 41 and 132 people grew the businesses between 1% and 6% below the inflation growth rate. The trend in the data is that smaller small businesses made larger contributions to owners' incomes.

Table 6.17 Employee income contribution growth by number of employees

	Year	Year	Year	Year	Year	Average	Per year
Number of employees	1	2	3	4	5	Employees' growth (R)	Average employees' growth (%)
1 to 10	0%	-13%	-19%	47%	48%	34238	1%
11 to 19	0%	8%	7%	9%	15%	21712	1%
20 to 40	0%	-14%	-18%	-49%	-86%	-78391	-2%

	Year	Year	Year	Year	Year	Average	Per year
Number of employees	1	2	3	4	5	Employees' growth (R)	Average employees' growth (%)
41 to 132	0%	-2%	-2%	0%	2%	-571	0%

Table 6.17 compares the employees' income contribution, by number of employees, with the expected growth rate according to inflation-escalated base year data.

Table 6.17 shows that, businesses employing between one and ten, between 11 and 19, and between 41 and 132 people, on average, increased their employees' incomes slightly below or above the inflation growth rate. Businesses employing between 20 and 40 people increased their employees' incomes below the inflation growth rate. On average small businesses increased their employees' incomes 2% below the inflation rate. This yields an overall negative return on employee income growth contributions. This can be attributed to the large negative contribution of businesses employing between 20 and 40 people.

Table 6.18 Tax contribution growth by number of employees

	Year	Year	Year	Year	Year	Average	Per year
Number of employees	1	2	3	4	5	Tax growth (R)	Average tax growth (%)
1 to 10	0%	71%	64%	88%	85%	118858	78%
11 to 19	0%	18%	51%	0%	4%	95422	20%
20 to 40	0%	-2%	-152%	53%	21%	89008	15%
41 to 132	0%	17%	44%	58%	66%	757796	47%

Table 6.18 compares the tax contribution, by number of employees, with the expected growth rate according to inflation-escalated base year data.

Table 6.18 shows that all businesses contributed to income tax growth. Businesses employing between one and ten people contributed 78% above the inflation growth rate. On average, small businesses grew 36% above the inflation rate. This yields an overall positive return on growth in tax income contributions. It is important to state that small businesses start from a very low tax base. This is because most new businesses are not making profits during the first few years of operation. There are various tax deductions and taxes are paid from owners' incomes as profits are not kept in the businesses.

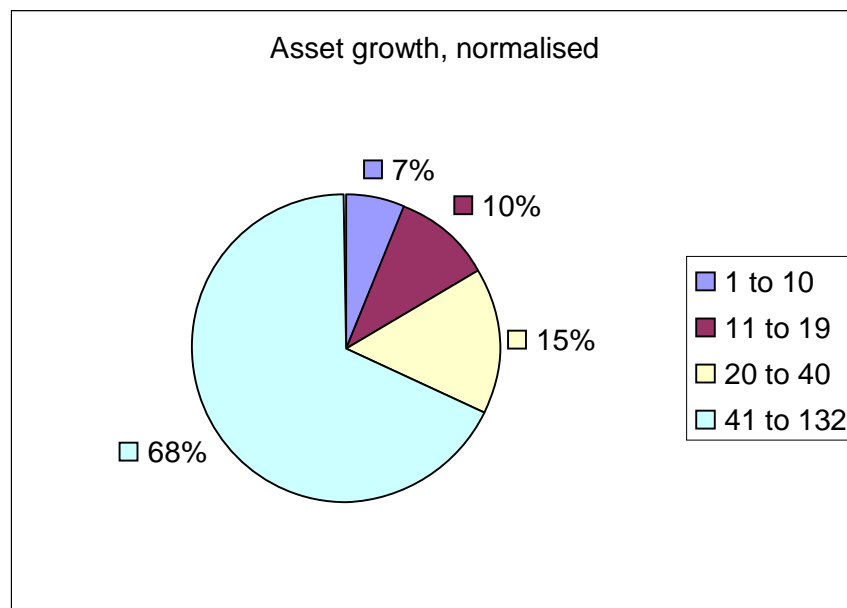


Figure 6.1 Asset growth contributions by number of employees

Figure 6.1 indicates the percentage contribution that different-sized businesses make towards asset growth.

Figures 6.1 to 6.4 will be used mainly to illustrate that it is important to realise that the impact of small businesses are relative to the size of the sample. For

example, a 1% change in asset growth for businesses employing between 41 and 132 people has a much larger effect than a 1% change for businesses employing between one and ten people. This becomes important when conclusions are drawn.

Figure 6.1 shows that, the more people a business employs, the larger are the total assets owned by the business. Businesses which employ between 41 and 132 people contribute 68% of all assets used in businesses, compared to 32% by the balance of the other businesses which employ between one and 40 people.

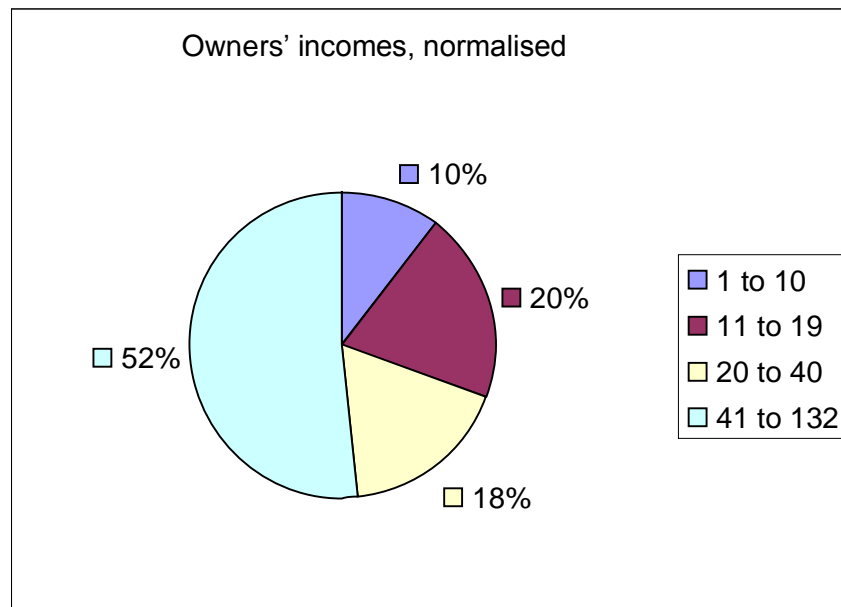


Figure 6.2 Owner income contributions by number of employees

Figure 6.2 shows the percentage contributions that different-sized businesses make towards owner income as an average income, by owner by year.

Figure 6.2 shows that the more people a business employs, the larger is the owner income contribution. Businesses, which employ between 41 and 132 people contribute 52% of all owners' income. Businesses which employ between one and 40 people contribute the balance of 48% of owners' income.

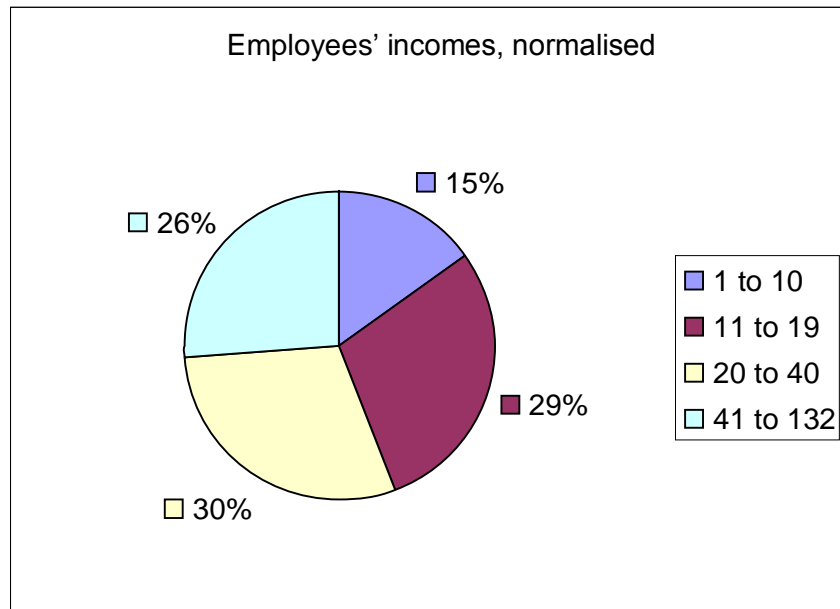


Figure 6.3 Employee income contributions by number of employees

Figure 6.3 indicates the percentage contribution that different-sized businesses make towards employee income as an average income, by employee by year.

Figure 6.3 shows that, the more people a business employs, the larger is the employee income, except in those businesses which employ more than 40 people. Businesses which employ between 41 and 132 people contribute 26% of employee income. Businesses which employ between 20 and 40 people contribute 30%. Businesses which employ between 11 and 19 people contribute 29%, while businesses which employ between one and ten people contribute 15%. The contribution, by employee, is more evenly distributed between different size businesses. This can be attributed to labour legislation.

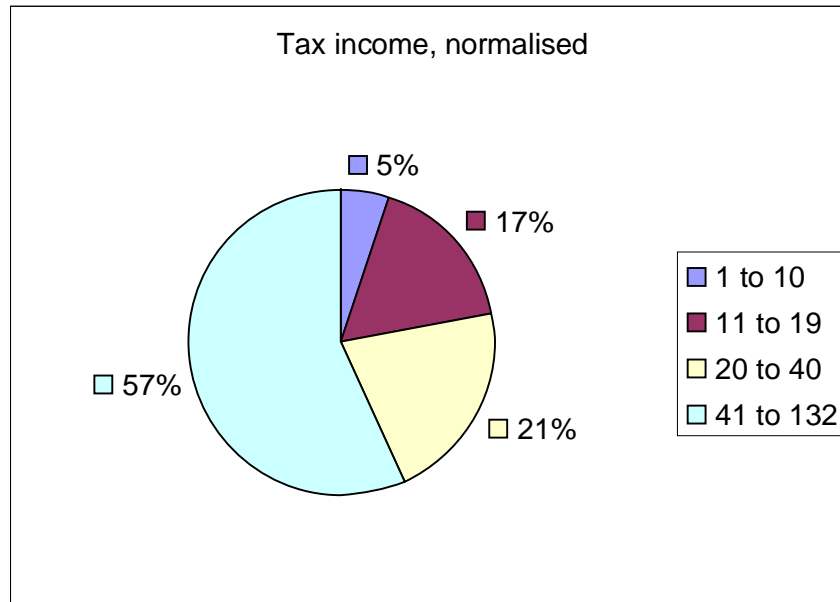


Figure 6.4 Tax contributions by number of employees

Figure 6.4 indicates the percentage contribution that different-sized businesses make towards tax.

Figure 6.4 shows that businesses which employ between 41 and 132 people contribute 57% of tax income. Businesses which employ between 20 and 40 people contribute 21%. Businesses which employ between 11 and 19 people contribute 17%, while businesses which employ between one and ten people contribute 5% of tax income.

6.9 Summary of people employed

When the total contributions towards assets, employees' incomes, tax income and owners' incomes are considered, the larger businesses, based on the number of people employed, make smaller contributions to capital growth. The trend that large businesses (according to the number of employees) contribute less to growth is clearly shown in the data. The interesting and very important

fact is that the larger businesses employ the largest total amount of capital but generally show the slowest growth rate.

If inflation is used as a baseline to determine growth the smaller businesses in the sample, which employ between one and 19 people, performed the best in capital generation. They were also the only businesses, generally, that contributed positively to asset growth, tax income, and employees' incomes. They were slightly negative in their contributions to owners' incomes. All the larger businesses contributed negatively to all these aspects, except for a general positive contribution to tax income. This is illustrated in Table 6.19 and 6.20.

Table 6.19 Capital contribution growth in businesses employing fewer than 20 people

	Year	Year	Year	Year	Year	Per year
	1	2	3	4	5	Average
Assets	0	9%	18%	29%	30%	20%
Owners' incomes	0	-3%	-14%	9%	1%	-1%
Employees' incomes	0	1%	0%	27%	31%	16%
Tax income	0	31%	53%	42%	38%	38%

Table 6.20 Capital contribution growth for businesses employing 20 or more people

	Year	Year	Year	Year	Year	Per year
	1	2	3	4	5	Average
Assets	0	-3%	-4%	-4%	-11%	-5%
Owners' incomes	0	-78%	-78%	-54%	-50%	-47%
Employees' incomes	0	-10%	-13%	-31%	-47%	-20%
	1	2	3	4	5	Average
Tax income	0	9%	8%	56%	52%	36%

The pie charts, given earlier in this chapter, show that small businesses make a small contribution to total capital generation but make a large contribution to capital growth, as is indicated in the tables above.

Table 6.21 Total capital growth for the sample

	Year	Year	Year	Year	Year	Per year
	1	2	3	4	5	Average
Assets	0%	-1%	0%	4%	-1%	1%
Owners' incomes	0%	-47%	-52%	-27%	-30%	-30%
Employees' incomes	0%	-5%	-7%	1%	-1%	-2%
Tax income	0%	16%	27%	53%	49%	36%

Table 6.21 shows that employees' incomes, and particularly owners' incomes, did not contribute to capital generation. Tax income as well as asset generation did contribute.

The sum of all the contributions will not provide a net total capital contribution as employees' and owners' incomes are normalised, thereby reducing the total impact on the sample.

6.10 Age of business

The data were divided into three groups based on the age of the businesses in the sample. The businesses were divided into:

1. *New* businesses that are between one and five years old.
2. *Established* businesses that are six to ten years old.
3. *Older* businesses that are 11 to 32 years old.

The first group was selected as a reference group to enable comparisons between groups. The first group is known for its very high failure rate, differentiating it from the older businesses. The second and third group consisted of all the other businesses. These businesses were selected on the assumption that these businesses were less exposed to the risk of start-up failure. The second and third groups were selected to determine whether there were any visible differences as the businesses get older.

Table 6.22 Asset growth contributions according to the ages of the businesses

	Year	Year	Year	Year	Year	Average	Per year
Age	1	2	3	4	5	Asset growth (R)	Average asset growth (%)
1 to 5	0%	15%	10%	20%	13%	1362183	12%
5 to 10	0%	-4%	-1%	-6%	-18%	-697791	-6%
10 to 32	0%	-7%	-11%	0%	7%	-211038	-1%

Table 6.22 compares asset contributions, according to the ages of the businesses, with the inflation-normalised growth rate escalated according to the consumer price index inflation tables on an annual basis.

Table 6.22 shows that the older businesses contributed negatively to asset growth. The older businesses (10 to 32 years old) contributed -1% to asset growth, while the five- to ten-year old businesses contributed -6%. The new businesses increased their contributions by 12%. This is only true if growth was measured against inflation.

Table 6.23 Owner income growth contributions according to the ages of the businesses

	Year	Year	Year	Year	Year	Average	Per year
Age	1	2	3	4	5	Owners' growth (R)	Average owners' growth (%)
1 to 5	0%	-5%	-13%	4%	24%	8987	3%
5 to 10	0%	-30%	-29%	-11%	-26%	-120461	-18%
10 to 32	0%	-77%	-96%	-58%	-55%	-768309	-51%

Table 6.23 compares owner income, according to the ages of the businesses, with the inflation-normalised growth rate escalated according to inflation on an annual basis.

Table 6.23 shows that the older businesses contribute less to their owners' incomes. The older businesses, of ten to 32 years old, underperformed in growth (51% below inflation) compared to the businesses of one to five years old (3% above inflation). This is only true if growth was measured against inflation. The five- to ten-year old businesses grew at 18% below inflation but did not make as much of a negative contribution as did the older businesses (10 to 32 years old).

Table 6.24 Employee income growth contribution according to the ages of the businesses

	Year	Year	Year	Year	Year	Average	Per year
Age	1	2	3	4	5	Employees' growth (R)	Average employees' growth (%)
1 to 5	0%	-14%	-11%	45%	49%	30794	22%
5 to 10	0%	-5%	-8%	-20%	-35%	-37742	-13%
10 to 32	0%	-2%	-3%	-5%	7%	-726	0%

Table 6.24 compares employees' incomes, according to the ages of the businesses, with the inflation-normalised growth rate escalated according to the inflation rate on an annual basis.

Table 6.24 shows that the contributions of the older businesses to employee income were equal to or below the inflation rate. The older businesses (ten to 32 years old) showed 0% growth. Businesses that were five to ten years old grew by -13% and business that were one to five years old years grew by 22%.

Table 6.25 Tax income growth contribution according to the ages of the businesses

	Year	Year	Year	Year	Year	Average	Per year
Age	1	2	3	4	5	Tax growth (R)	Average tax growth (%)
1 to 5	0%	38%	43%	78%	70%	166456	49%
5 to 10	0%	5%	20%	27%	36%	95192	21%
10 to 32	0%	19%	29%	56%	51%	553918	39%

Table 6.25 compares tax income, according to the ages of the businesses, with the inflation-normalised growth rate escalated according to the inflation rate on an annual basis.

Table 6.25 shows that all the businesses contributed positively to taxable income. The five- to ten-year old businesses had the smallest positive contribution at 21%. The businesses between one and five years old were the best contributors at 49%, followed by the businesses between ten and 32 years old, at 39%. It must be noted that new businesses start from a very low tax basis, skewing their real ability to grow.

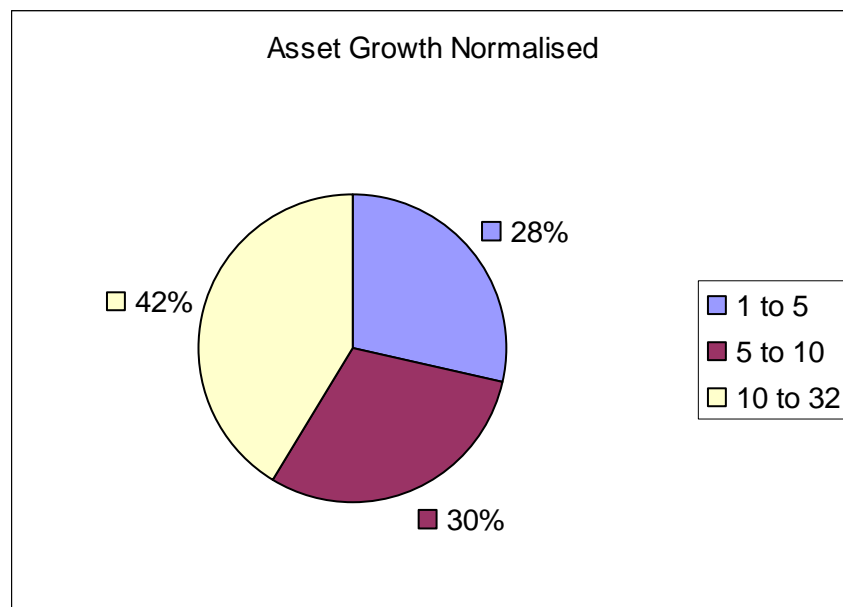


Figure 6.5 Asset contributions of businesses of different ages

Figure 6.5 indicates the percentage contribution that different-sized businesses make towards assets.

Figure 6.5 shows that older business make larger asset contributions. Older businesses contribute 42% of all assets in the businesses, compared to 30% by established businesses and 28% by new businesses.

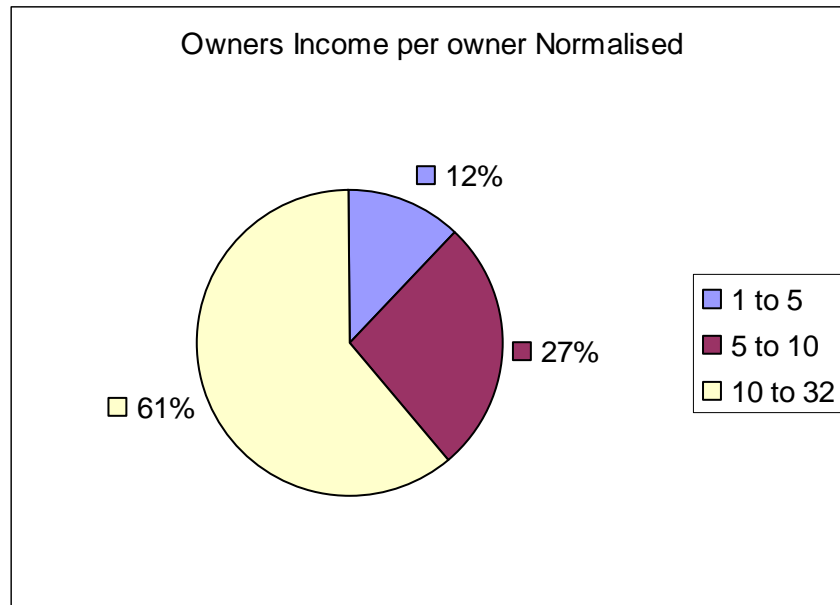


Figure 6.6 Owner income contributions for businesses of different ages

Figure 6.6 indicates the percentage contribution that different-sized businesses make towards owner income as an average income, by owner by year.

Figure 6.6 shows that older businesses make larger contributions to owner income. Older businesses contribute 61% of all owner income in the businesses, compared to 27% by established businesses and 12% by new businesses.

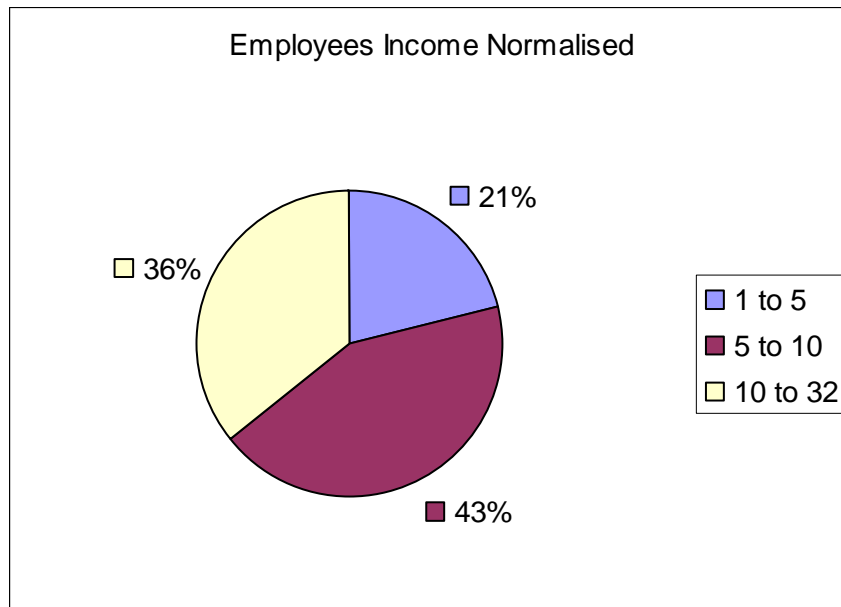


Figure 6.7 Employee income contributions for businesses of different ages

Figure 6.7 shows the percentage contribution that different-sized businesses make towards employee income as an average income, by employee by year.

Figure 6.7 shows that the older businesses contribute 36% of all employees' incomes. This is less than established businesses, which contribute 43%, but more than new businesses which contribute 21%.

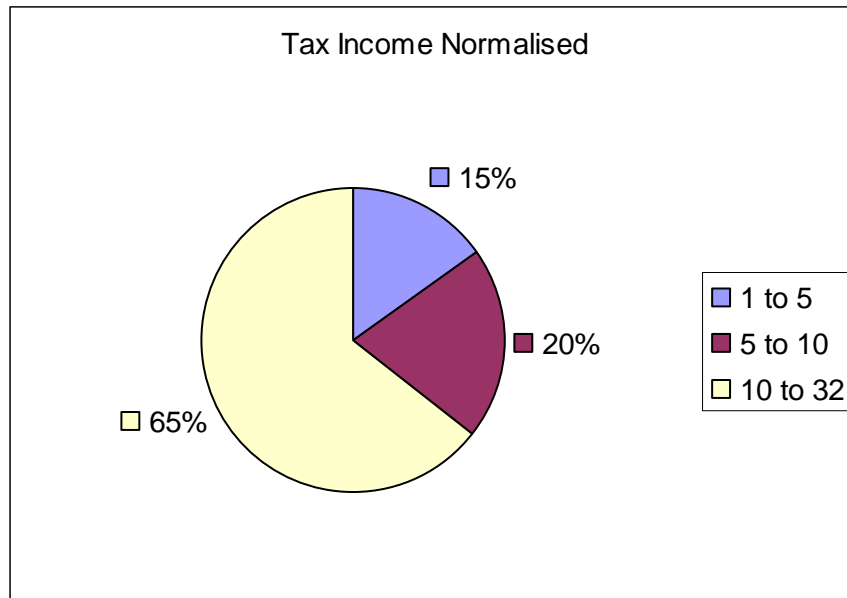


Figure 6.8 Tax contributions by businesses of different ages

Figure 6.8 indicates the percentage contribution that different-sized businesses make towards tax income.

Figure 6.8 shows that the older businesses contribute 65% of all taxes. The contributions decrease according to the ages of the businesses. Established businesses contribute 20% and new businesses contribute 15%.

6.11 Summary by age of business

Table 6.26 The age of a business

	Asset Growth	Owners' incomes	Employees' incomes	Tax Income
1 to 5	12%	3%	22%	49%
5 to 10	-6%	-18%	-13%	21%
10 to 32	-1%	-51%	0%	39%

Generally, an increase in age can be linked to a negative contribution to capital generation. The exception is the contribution to tax. The young businesses, of between one and five years old, generally contributed positively in all capital contribution factors. Generally, the older businesses (ten to 32 years old) performed better than did the five- to ten-year old businesses, except in owners' incomes. The older businesses had a larger contribution to the total volume of capital contribution, as illustrated in Figures 6.5 to 6.8.

6.12 Industry

The data were divided into five groups based on the industries in the sample. The businesses were classified according to the main industry that they were supporting. The small sample made it necessary for some of the sectors to be combined. While the motor, building and food industries had larger samples, the mining, agricultural and general equipment manufacturers were combined.

They were all manufacturing equipment for industry and the businesses in these industries were working across industries, although they were focusing on mining or agricultural equipment.

The different sectors within these groups will have different economic drivers that will make it difficult to draw comparisons. The furniture businesses were mostly involved in providing services to the funeral sector. This, according to the interviewees, was driven by a large demand for coffins over the past few years.

Table 6.27 Asset growth contributions by industry

	Year	Year	Year	Year	Year	Average	Per year
Industry	1	2	3	4	5	Asset growth (R)	Average asset growth (%)
Motor	0%	-3%	-3%	-2%	-9%	-686447	-4%
Industry	1	2	3	4	5	Asset growth (R)	Average asset growth (%)
Building	0%	19%	15%	28%	28%	1956247	19%
Mining/Agr/Gen	0%	-6%	-7%	60%	3%	413146	18%
Furniture/Funeral	0%	-1%	24%	21%	41%	1000176	21%
Food	0%	-7%	-13%	-34%	-31%	-283967	-15%

Table 6.27 compares asset contributions according to the industry in which the business operates.

Table 6.27 shows that the food industry (at -15%) is the smallest contributor to asset growth followed by the motor industry (at -4%). All other industries showed a positive growth in capital contributions. The mining industry showed an 18% growth compared to inflation, followed by the building industry at 19%, and the furniture and funeral industry, with the largest growth at 21%.

Table 6.28 Owner income growth contributions by industry

	Year	Year	Year	Year	Year	Average	Per year
Industry	1	2	3	4	5	Owners' growth (R)	Average owners' growth (%)
Motor	0%	-59%	-66%	-39%	-44%	-424663	-36%
Building	0%	-7%	-32%	15%	31%	25460	6%
Mining/Agr/Gen	0%	-8%	-9%	-47%	-32%	-26635	-16%
Furniture/Funeral	0%	0%	35%	31%	40%	59640	26%
Food	0%	36%	32%	48%	-97%	31816	22%

Table 6.28 compares the owner income contributions according to the industry in which the business operates.

Table 6.28 shows that the motor industry is the smallest contributor to owner income growth. The growth in the industry was below the inflation-based growth rate. The mining, agricultural and general engineering industries were the second smallest contributors. All the other industries grew positively. The food industry grew at 22%, furniture and funeral industry at 26% and the building industry at 6%.

Table 6.29 Employee income growth contributions by industry

	Year	Year	Year	Year	Year	Average	Per year
Industry	1	2	3	4	5	Employees growth (R)	Average employees' growth (%)
Motor	0%	4%	4%	7%	8%	12136	5%
Building	0%	-27%	-33%	63%	64%	70646	38%
Mining/Agr/Gen	0%	1%	-3%	-10%	13%	640	1%
Furniture/Funeral	0%	-6%	-20%	-27%	-3%	-11945	-10%
Food	0%	-23%	-25%	-85%	-175%	-159146	-42%

Table 6.29 compares employee income contributions according to the industry in which the business operates.

Table 6.29 shows that the food industry is the smallest contributor to employee income growth, and there was a constant decrease in contributions over the five years. The growth in the industry, at -42%, was far below inflation-based growth. The furniture and funeral industry was the only other industry that underperformed against the inflation growth rate, at 10% below inflation. The motor industry and the building industry both showed a steady increase in employee income.

Table 6.30 Tax contributions by industry

	Year	Year	Year	Year	Year	Average	Per year
Industry	1	2	3	4	5	Tax Growth R	Average% Tax growth
Motor	0%	10%	20%	50%	44%	262526	30%
Building	0%	40%	52%	74%	74%	346734	58%
Mining/Agr/Gen	0%	0%	0%	96%	96%	36720	96%
Furniture/Funeral	0%	27%	40%	16%	35%	108521	26%
Food	0%	48%	-15%	85%	-70%	16349	54%

Table 6.30 compares tax contributions according to the industry in which the business operates.

Table 6.30 shows that all industries contributed positively to tax. The mining, agriculture and general engineering businesses performed best.

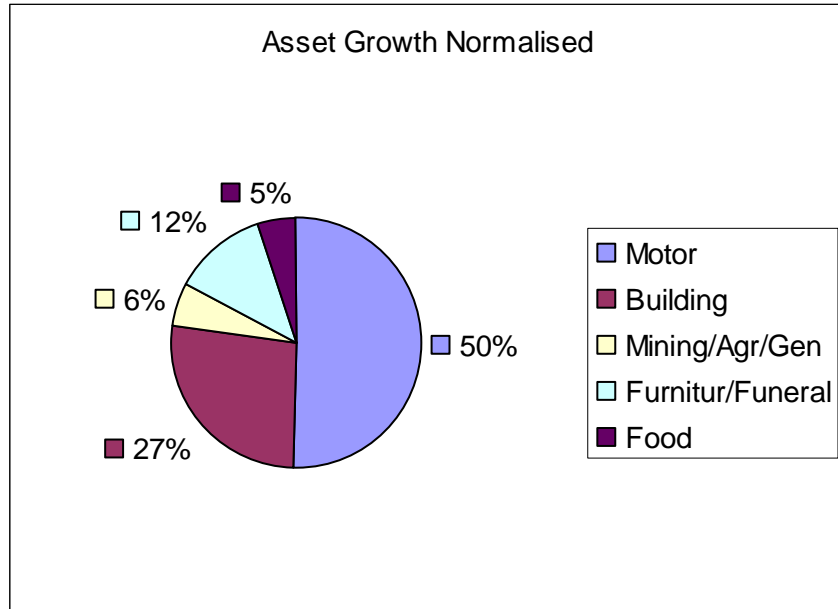
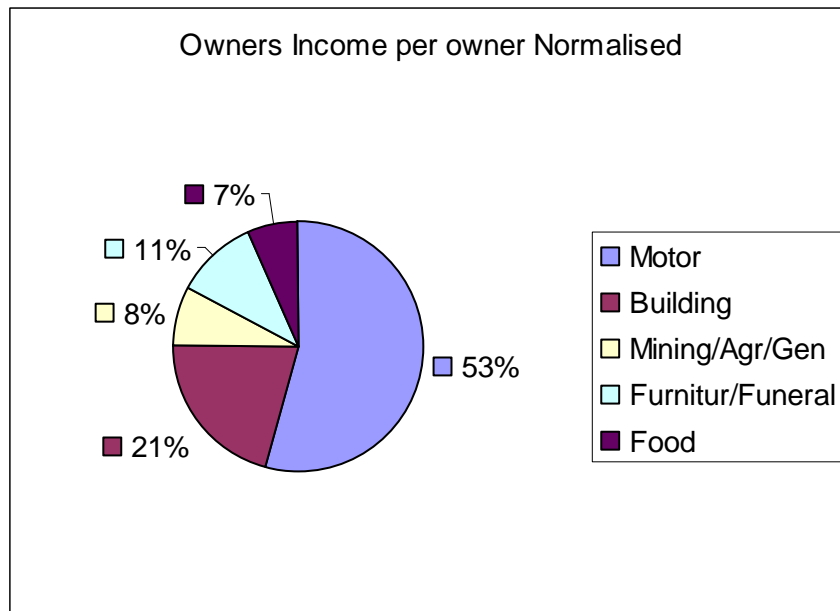


Figure 6.9 Asset contributions by businesses in different industries

Figure 6.9 indicates the percentage contributions that businesses, in different manufacturing sectors, make towards assets.

Figure 6.9 shows that the motor industry contributes 50% of all asset growth in the sample. The second largest contributor is the building industry. The balance of the sectors combined contributes only 23%.



Figure

6.10

Owner income contributions for businesses in different industries

Figure 6.10 indicates the percentage contributions that businesses in different manufacturing sectors make towards owner income contribution as an average income, by owner by year.

Figure 6.10 shows that the motor industry contributes 53% of owner income. The second largest contributor is the building industry, at 21%. The balance of the sectors combined contributes only 26%.

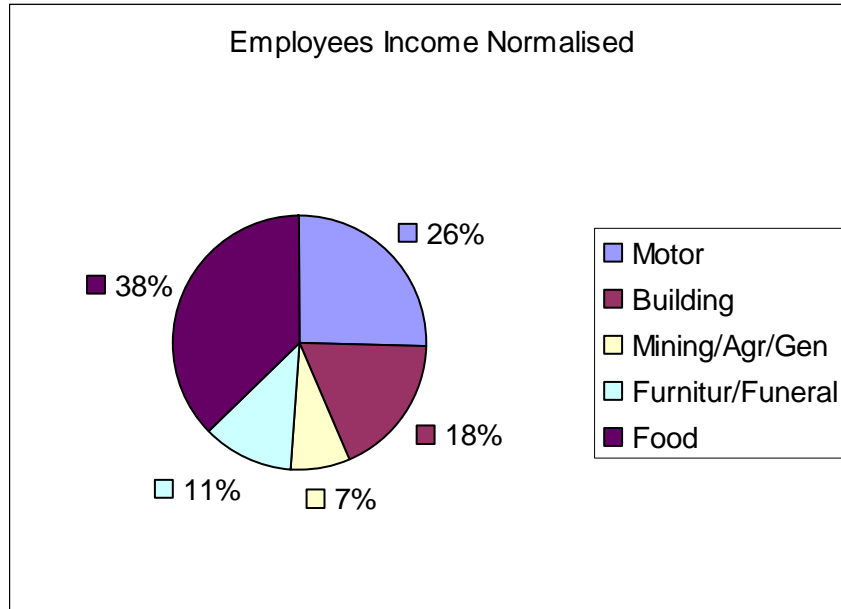


Figure 6.11 Employee income contributions for businesses in different industries

Figure 6.11 indicates the percentage contribution that businesses in different manufacturing sectors make towards employee income as an average income, by employee by year.

Figure 6.11 shows that the food industry contributes 38% of employees' income. The second largest contributor is the motor industry, at 26%, followed by the building industry. The balance of the sectors combined contributes only 18%. The contribution of employees' income in the food sector does not correspond with its contributions in other areas. Contributions are more balanced, compared to asset or owner-income contribution. The equal distribution by industry is in line with employee income distribution based on age and people employed.

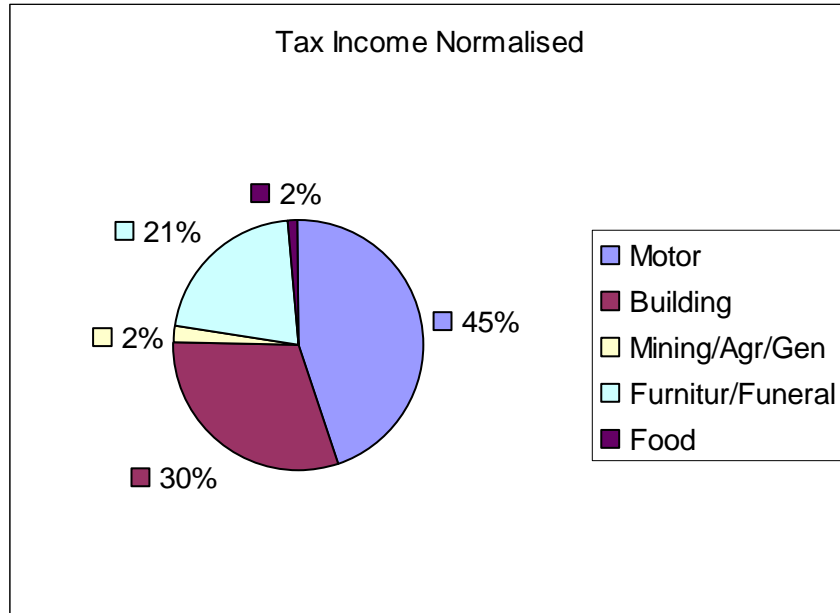


Figure 6.12 Tax income contributions for businesses in different industries

Figure 6.12 indicates the percentage contribution that businesses in different manufacturing sectors make towards tax income.

Figure 6.12 shows that the motor industry contributes 45% of tax income. The second largest contributor is the building industry, at 30%, followed by the furniture and funeral industry (21%). The balance of the sectors combined contributes only 4%.

6.13 Summary by industry

Table 6.31 Summary of growth in capital contribution by business sector

	Asset growth	Owners' income	Employees' Incomes	Tax income
Motor	-4%	-36%	5%	30%
Building	19%	6%	38%	58%
Mining/Agr/Gen	18%	-16%	1%	96%

	Asset growth	Owners' income	Employees' Incomes	Tax income
Furniture/ Funeral	21%	26%	-10%	26%
Food	-15%	22%	-42%	54%

Table 6.31 shows a mixed contribution towards capital generation. The building industry is the only industry that showed an overall positive contribution. All the industries contributed positively to tax.

6.14 Province

The samples were taken in Gauteng and North West. Although the samples were taken in two different provinces, the areas of operation were, in some cases, closer across provincial borders than they were within the provinces. For example, the motor manufacturing businesses in Rosslyn (Gauteng) and those in Brits (North West) were closer to each other than were the businesses in Vereniging and Johannesburg (both in Gauteng), relative to Rosslyn. Because of these phenomena the areas were individually analysed as separate entities in the next section.

Table 6.32 Asset growth contributions in the two provinces

	Year	Year	Year	Year	Year	Average	Per year
Province	1	2	3	4	5	Asset growth (R)	Average asset growth (%)
Gauteng	0%	-3%	-4%	-1%	-6%	-452147	-3%
North West	0%	2%	4%	9%	4%	441273	4%

Table 6.32 compares asset contributions according to the province in which the businesses operate.

Table 6.32 shows that the businesses in Gauteng contributed less to asset growth, at -3%. North West contributed at 4% compared to inflation growth.

Table 6.33 Owner income growth contribution in the two provinces

	Year	Year	Year	Year	Year	Average	Per year
Province	1	2	3	4	5	Owners' growth (R)	Average owners' growth (%)
Gauteng	0%	55%	69%	80%	80%	-411241	-44%
North West	0%	38%	37%	-5%	-2%	-62223	-10%

Table 6.33 compares owner income contributions according to the province in which the businesses operate.

Table 6.33 shows that the businesses in Gauteng contributed less to owner income at -44%. North West businesses contributed -10% to growth in owners' incomes.

Table 6.34 Employee income growth contributions in the two provinces

	Year	Year	Year	Year	Year	Average	Per year
Province	1	2	3	4	5	Employees' growth (R)	Average employees' growth (%)
Gauteng	0%	1%	2%	4%	-5%	-249	0%
North West	0%	8%	11%	-4%	4%	-8450	-4%

Table 6.34 compares employee income contributions according to the province in which the businesses operate.

Table 6.34 shows that the businesses in Gauteng contributed nothing additional to employees' incomes. North West province underperformed with an average growth of -4% (below the inflation growth base line).

Table 6.35 Tax growth contributions in the two provinces

	Year	Year	Year	Year	Year	Average	Per year
Province	1	2	3	4	5	Tax growth (R)	Average tax growth (%)
Gauteng	0%	12%	116%	-4%	1%	-61938	-12%
North West	0%	-36%	-60%	-71%	-69%	380436	58%

Table 6.35 compares the tax contributions according to the province in which the businesses operate.

Table 6.35 shows that the businesses in Gauteng contributed least to tax growth at -12%. North West contributed 58% and over performed in tax contributions compared to Gauteng.

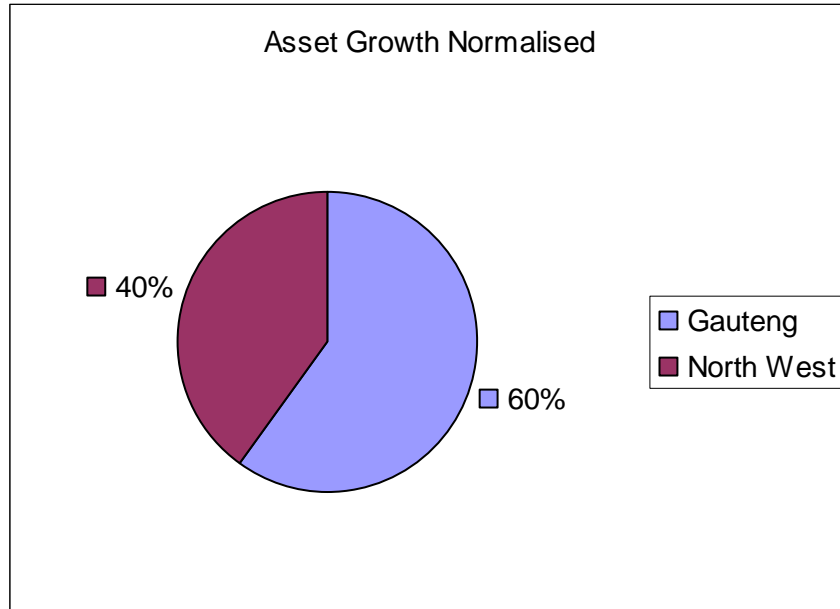


Figure 6.13 Asset income contributions for businesses in different sectors

Figure 6.13 indicates the percentage contribution that businesses in different manufacturing sectors make towards asset income.

Figure 6.13 shows that Gauteng contributes 60% of asset income. North West contributes 40%.

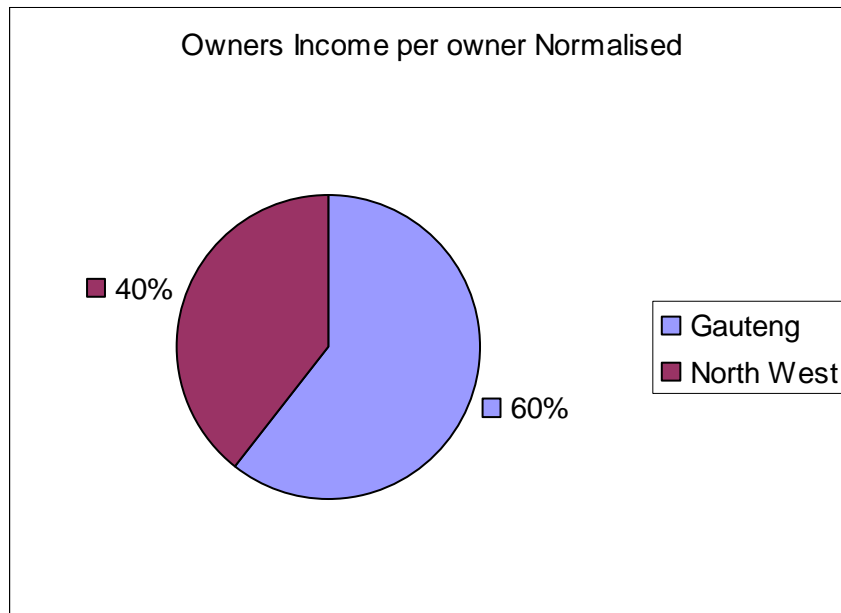


Figure 6.14 Owner income contributions for businesses in different industries

Figure 6.14 indicates the percentage contribution that businesses in different manufacturing sectors make to asset income as an average income, by owner by year.

Figure 6.14 shows that Gauteng province contributes 60% of owner income. North West contributes 40%.

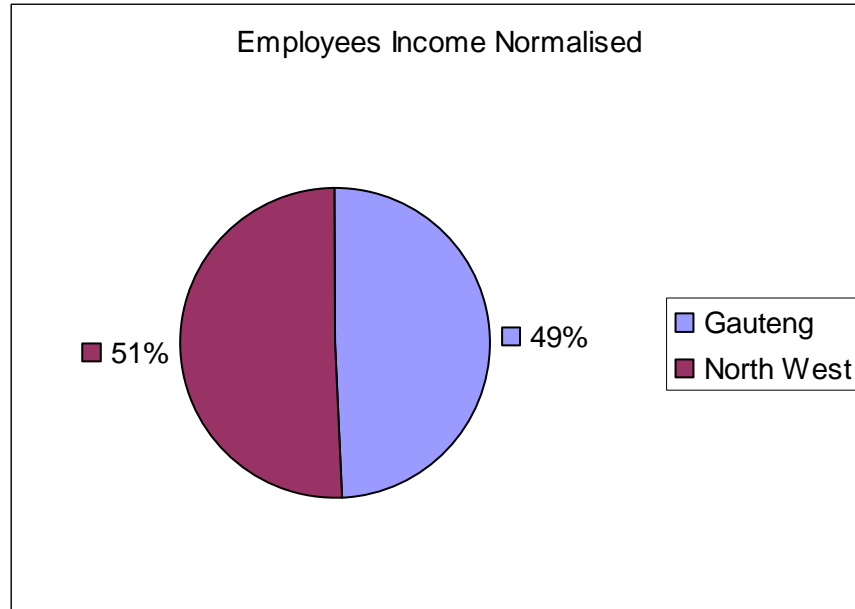


Figure 6.15 Employee income contributions for businesses in the two provinces

Figure 6.15 indicates the percentage contributions that businesses in different manufacturing sectors make towards employee income as an average income, by employee by year.

Figure 6.15 shows that Gauteng contributes 49% of employee income. North West province contributes 51%. The contributions of the two provinces are very similar.

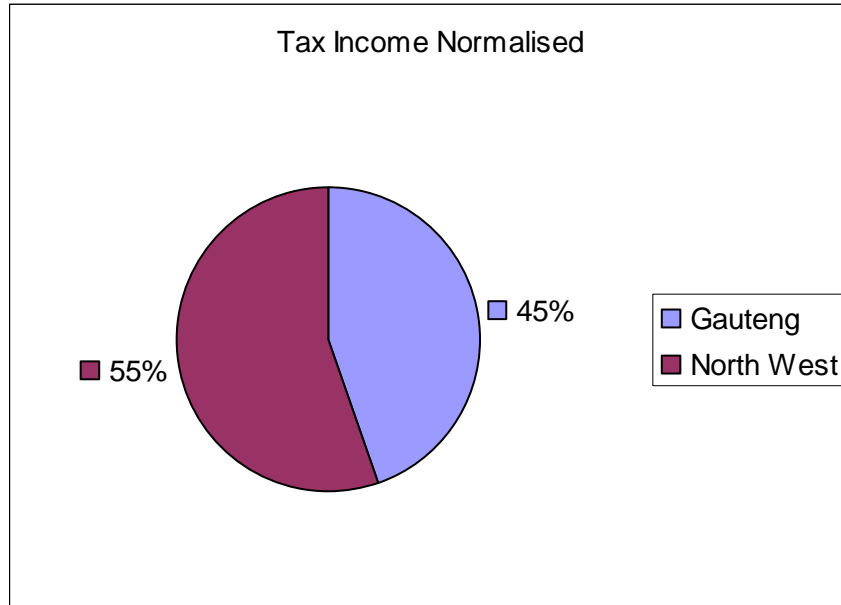


Figure 6.16 Tax income contributions of businesses in the two provinces

Figure 6.16 indicates the percentage contribution that businesses in different manufacturing sectors make towards tax income contribution.

Figure 6.16 shows that Gauteng contributes 55% of tax income. North West contributes 45%.

6.15 Summary by province

Table 6.36 Summary of growth in capital contribution by province

	Asset growth	Owners' income	Employees' income	Tax income
Gauteng	-3%	-44%	0%	-12%
North West	4%	-10%	-4%	58%

It can clearly be seen in Table 36 that, although Gauteng provides the biggest contribution, the growth in capital generation is greater in North West for all parameters except employees' incomes.

6.16 Area

Businesses in Rosslyn (Gauteng) and in Brits (North West) were closer to each other than to other areas in their same provinces. These areas also house the motor manufacturing sector-related industries. This means that it was more logical to group the data by area than by province. Because of these phenomena the areas were individually analysed as separate entities. Areas that were close in proximity (such as Rosslyn, Silverton and Brits), and Johannesburg and Vereeniging were grouped because the sample was too small to form new geographical locations.

Table 6.37 Asset growth contributions according to areas within the provinces

	Year	Year	Year	Year	Year	Average	Per year
Area	1	2	3	4	5	Asset growth (R)	Average asset growth (%)
Rosslyn/Silverton/Brits	0%	-6%	-6%	-5%	-11%	-1053338	-6%
Rustenburg	0%	2%	4%	9%	5%	485514	4%
Johannesburg	0%	1%	1%	8%	4%	265477	3%

Table 6.37 compares asset contributions according to the areas in which the businesses operate.

Table 6.37 shows that the businesses in Rosslyn, Silverton and Brits contributed least to asset growth. These areas are also associated with the motor industry, which also showed a negative contribution. Rustenburg and Johannesburg both

showed a positive contribution, at 4% and 3% respectively, and outperformed the consumer price index compared to the inflation baseline.

Table 6.38 Owner income growth contributions according to areas within provinces

	Year	Year	Year	Year	Year	Average	Per year
Area	1	2	3	4	5	Owners' growth (R)	Average owners' growth (%)
Rosslyn/Silverton/Brits	0%	-87%	-105%	-117%	-115%	-631534	-67%
Rustenburg	0%	-39%	-37%	6%	2%	-67985	-10%
Johannesburg	0%	-4%	-17%	-26%	-27%	-75906	-12%

Table 6.38 compares owner income contributions according to the areas in which the businesses operate.

Table 6.38 shows that the businesses in Rosslyn, Silverton and Brits contributed least to owner income growth. This area is associated with the motor industry. Rustenburg and Johannesburg also had negative contributions, but not at the same level as Rosslyn, Silverton and Brits.

Table 6.39 Employee income growth contributions according to area in the provinces

	Year	Year	Year	Year	Year	Average	Per year
Area	1	2	3	4	5	Employees' growth (R)	Average employees' growth (%)
Rosslyn/Silverton/Brits	0%	-1%	2%	0%	-1%	-240	0%
Rustenburg	0%	-8%	-12%	4%	-4%	-9246	-4%
Johannesburg	0%	-2%	-4%	-7%	10%	-307	0%

Table 6.39 compares employee income contributions according to the areas in which the businesses operate.

Table 6.39 shows that the businesses in Rustenburg contributed least to employee income growth. Johannesburg, Rosslyn, Silverton and Brits showed a 0% contribution and only managed to maintain employees' incomes.

Table 6.40 Tax income growth contributions according to area in the provinces

	Year	Year	Year	Year	Year	Average	Per year
Area	1	2	3	4	5	Tax growth (R)	Average tax growth (%)
Rosslyn/Silverton/Brits	0%	-17%	-336%	-3%	-1%	-116735	-21%
Rustenburg	0%	36%	60%	71%	69%	408134	57%
Johannesburg	0%	-2%	-2%	26%	1%	19111	5%

Table 6.40 compares tax income contributions according to the areas in which the businesses operate.

Table 6.40 shows that the businesses in Rosslyn, Silverton and Brits contributed least to tax income growth. Rustenburg over performed compared to the other regions, with a 57% growth. Johannesburg, at 5% growth, was the second best tax income generating region.

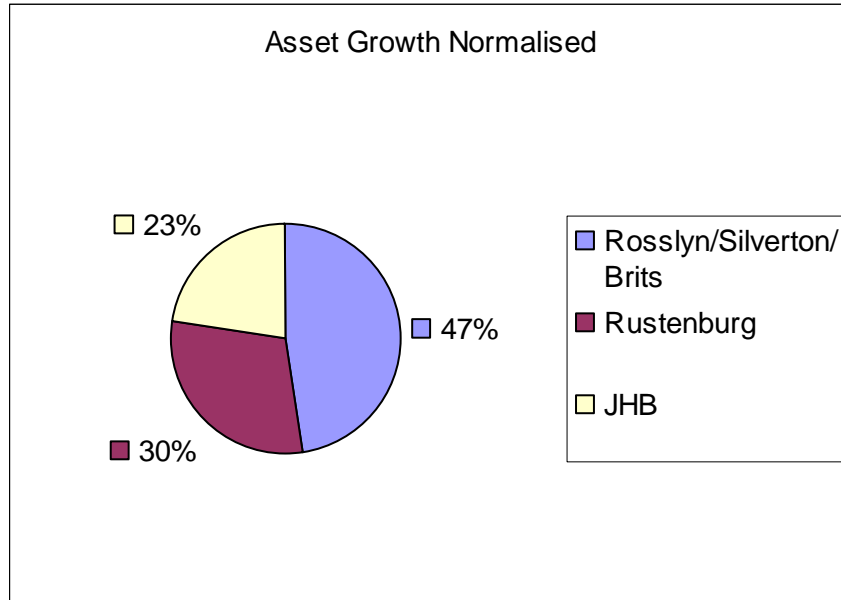


Figure 6.17 Asset income contributions for businesses in different regions in the provinces

Figure 6.17 indicates the percentage contribution that businesses, in different manufacturing sectors, make to asset income.

Figure 6.17 shows that Rosslyn, Silverton and Brits contribute 47% of asset income. The second largest contributor is Rustenburg, in North West province (30%), followed by Johannesburg with a 23% contribution.

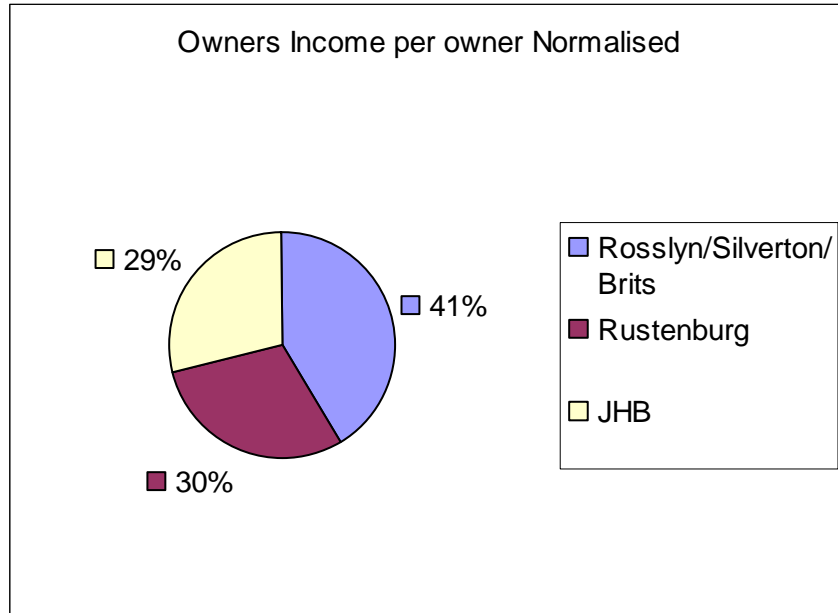


Figure 6.18 Owner income contributions for businesses in different regions in the provinces

Figure 6.18 shows the percentage contributions that businesses in different manufacturing sectors make towards owner income contribution as an average income, by owner by year.

Figure 6.18 shows that Rosslyn, Silverton and Brits contribute 41% to tax income. The second largest contributor is Rustenburg, in North West (30%), followed closely by Johannesburg with a 29% contribution.

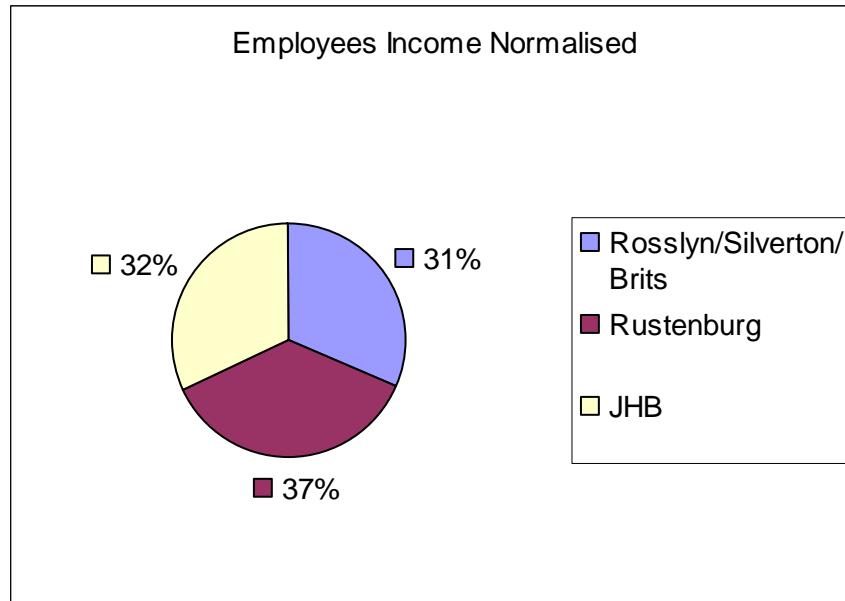


Figure 6.19 Employee income contributions for businesses in different regions in the provinces

Figure 6.19 indicates the percentage contributions that businesses in different manufacturing sectors make towards employee income contribution as an average income, by employee by year.

Figure 6.19 shows that Rosslyn, Silverton and Brits contribute 31% of employee income. The largest contributor is Rustenburg in North West (37%), followed closely by Johannesburg with a 32% contribution. As in other areas of analysis the employee income distribution is fairly consistent.

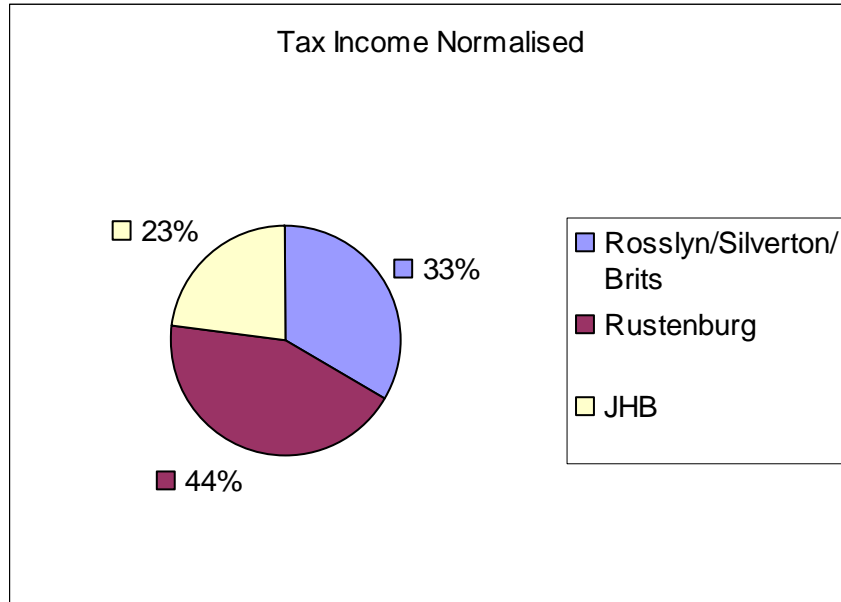


Figure 6.20 Tax income contributions of businesses in different regions in the provinces

Figure 6.20 indicates the percentage contribution that businesses in different manufacturing sectors make towards tax income.

Figure 6.20 shows that Rosslyn, Silverton and Brits contribute 33% of tax income. The largest contributor is Rustenburg in North West (44%). Johannesburg contributes least with a 23% contribution to taxes.

6.17 Summary by area

Table 6.41 Summary of capital contributions by area

	Asset growth	Owners' incomes	Employees' incomes	Tax income
Rosslyn/Silverton/Brits	-6%	-67%	0%	-21%
Rustenburg	4%	-10%	-4%	57%
Johannesburg	3%	-12%	0%	5%

Table 6.41 shows that Rosslyn, Silverton and Brits performed worst. This contrasts with their total contribution. There were mixed, although generally better, performances in the other areas.

6.18 Capital contribution overall

Table 6.42 Overall capital growth contribution by area

	Year	Year	Year	Year	Year	Per year
	1	2	3	4	5	Average
Assets	0%	-1%	0%	4%	-1%	1%
Owners' incomes	0%	-47%	-52%	-27%	-30%	-30%
Employees' incomes	0%	-5%	-7%	1%	-1%	-2%
Tax income	0%	16%	27%	53%	49%	36%

Small businesses contributed negatively towards owners' and employees' incomes and positively towards assets and taxes. Generally, small business contributes positively, with a 1% growth above inflation. It is also interesting to observe that businesses employing 20 or more people generally perform worse than do the smaller businesses. It is also important to observe that businesses in different areas, provinces, industries and ages all share a similar trend in that large amounts of capital employed deliver slow growth.

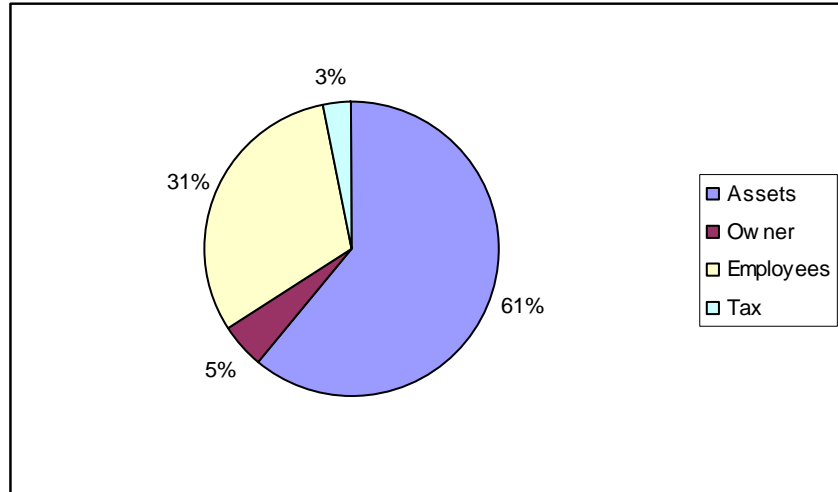


Figure 6.21 Total contribution of the four capital generating parameters

It is important to notice that assets play an important role in total capital contribution and that owner' incomes (total and not normalised), which show highly negative returns, play small parts in the total capital contribution of small businesses.

Table 6.43 and Table 6.44 are reported as overviews of the capital growth and capital contributions for the different samples in the study. They exclude the sizes of the businesses according to the number of people employed.

Table 6.43 A summary of the growth results of the study, excluding the breakdown by number of employees

Description	Description	Asset growth	Owners' incomes	Employees' incomes	Tax income
1 to 5	Age	12%	3%	22%	49%
5 to 10	Age	-6%	-18%	-13%	21%
10 to 32	Age	-1%	-51%	0%	39%
Motor	Industry	-4%	-36%	5%	30%
Building	Industry	19%	6%	38%	58%

Description	Description	Asset growth	Owners' incomes	Employees' incomes	Tax income
Mining/Agr/Gen	Industry	18%	-16%	1%	96%
Furniture/ Funeral	Industry	21%	26%	-10%	26%
Food	Industry	-15%	22%	-42%	54%
Gauteng	Province	-3%	-44%	0%	-12%
North West	Province	4%	-10%	-4%	58%
Rosslyn/Silverton/Brits	Area	-6%	-67%	0%	-21%
Rustenburg	Area	4%	-10%	-4%	57%
Johannesburg	Area	3%	-12%	0%	5%

Table 6.44 Weighted contribution capital generation excluding the breakdown by number of employees

The data listed in this table are available from all the figures in Chapter 6 in this study.

Description	Description	Asset Growth	Owners Income	Employees Income	Tax Income
1 to 5	Age	28%	12%	21%	15%
5 to 10	Age	30%	27%	43%	20%
10 to 32	Age	42%	61%	36%	65%
Motor	Industry	50%	53%	26%	45%
Building	Industry	27%	21%	18%	30%
Mining/Agr/Gen	Industry	6%	8%	7%	2%
Furniture/ Funeral	Industry	12%	11%	11%	21%
Food	Industry	5%	7%	38%	2%
Gauteng	Province	60%	60%	49%	45%
North West	Province	40%	40%	51%	55%
Rosslyn/Silverton/Brits	Area	47%	41%	31%	33%

Description	Description	Asset Growth	Owners Income	Employees Income	Tax Income
Rustenburg	Area	36%	30%	37%	44%
Johannesburg	Area	23%	29%	32%	23%