

**UNIVERSITY OF KWAZULU-NATAL**

**IMPACT OF THE MOTOR INDUSTRY  
DEVELOPMENT PROGRAMME ON THE  
AUTOMOTIVE COMPONENT INDUSTRY**

By

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## DECLARATION

I, Selvin Konar, declare that:

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## **ABSTRACT**

The focus of this study revolved around the impact of the Motor Industry Development Programme (MIDP) on the automotive component manufacturers in the greater Durban area. The research objectives were to determine whether the introduction of MIDP has contributed to an increase in throughput for the automotive component manufacturers, to determine whether the introduction of MIDP has led to increased employment levels within the automotive component manufacturing industry and lastly to determine whether MIDP has resulted in increased investment in the automotive component manufacturing industry in KwaZulu-Natal. This study analysed the data received from 30 respondents, who as a pre-requisite, were employed within the component manufacturing industry in KwaZulu-Natal. The population sample was attained through the use of the author's supplier database at Smiths Manufacturing (Pty) Ltd, a tier 1 automotive component manufacturer to the original equipment manufacturers in South Africa. A self-completion questionnaire, which was quantitative in nature, was distributed to the participants and a two week data collection period was allotted. The collected data was analysed using SPSS statistical software, the results of which revealed that MIDP was of significant importance to automotive component manufacturers in KwaZulu-Natal. It further revealed that there was a direct relationship between employment, investment and throughput with the introduction of MIDP. The same findings were evident for similar programmes in India and China. It is recommended that a similar study be conducted in Gauteng and the Eastern Cape, which are the other automotive component manufacturing hubs in South Africa. Furthermore, MIDP will be replaced by the APDP during 2013, and it is recommended

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## LIST OF ACRONYMS

AIEC	Automotive Industry Export Council
AIS	Automotive Investment Scheme
APDP	Automotive Production Development Programme
CBU	Completely built-up unit
CBU vehicle	Completely Built Up Vehicle
dti	Department of Trade and Industry
GDP	Gross Domestic Product
IRCC	Import duty rebate credit certificate
ISI	Import Substituting Industrialisation
KZN	KwaZulu-Natal
MIDP	Motor Industry Development Plan
MNE	Multinational Enterprise
NAAMSA	National Association of Automobile Manufacturers of South Africa
NDP	National Development Plan
OICA	International Vehicle Manufacturers Association
OEM	Original Equipment Manufacturer (Vehicle Assembler)
PAA	Productive Asset Allowance
PGM	Platinum Group Metals
PwC	Price Waterhouse Coopers
R&D	Research and Development
SA	South Africa
SACU	Southern African Customs Union
SARS	South African Revenue Services
SPSS	Statistical Package for Social Sciences
Tier 1 supplier	Direct supplier to an original equipment manufacturer
Tier 2 supplier	Direct supplier to a Tier 1 supplier
Tier 3 supplier	Direct supplier to a Tier 2 supplier
VWSA	Volkswagen South Africa
WTO	World Trade Organisation
ZAR	South African Rand

# CHAPTER ONE

## 1.1 Introduction

During 1995, the Department of Trade and Industry (dti) implemented the Motor Industry Development Programme (MIDP). This was as a result of the challenges that faced the domestic automotive industry. Some of the challenges included the high cost structure and low production volumes. The MIDP was established to entrench the outward orientation of the industry and through restructuring was intended to achieve global competitiveness. Importantly, through this process government wanted to maintain employment and output contribution in this sector of the South African economy (Black, 2001).

Whilst the original equipment manufacturers (OEMs) certainly benefited from MIDP, there is a perception that MIDP did not significantly benefit component manufacturers (Flatters, 2002; Black, 2001). Furthermore, Kok (2008) stated that “despite the apparent successes of the MIDP in changing the goals and structure of the local industry, it has come under significant criticism from certain sectors, most notably the automotive component manufacturing sector”. These observations have given rise to and motivation for this study.

This introductory chapter provides an overview of the focus of the study undertaken and specifies the objectives of the research. It further details the motivation for this commission and details the specific limitations that existed.

## 1.2 Motivation for the Study

The undertaking of this study was motivated by the desire to understand the benefits of MIDP that flowed to component manufactures, like Smiths Manufacturing, a major Tier 1 component supplier to the original equipment market in South Africa. The author of this study is employed at Smiths Manufacturing. The preliminary objective was to ascertain whether the introduction of MIDP has contributed to an increase in throughput for the automotive component manufacturers. This was followed by a desire to establish if the MIDP has led to increased employment and lastly to establish as to whether there was an increase

in investment in the automotive component manufacturing sector, post the introduction of MIDP.

### **1.3 The Focus of the Study**

This study was confined to the owners and Managing Directors of leading first tier suppliers (in terms of turnover and number of employees) to the OEMs in the South African automotive industry. These companies are located in KwaZulu-Natal, South Africa. A targeted sample of senior associates with access to the internet was selected to participate in this study. Second and third tier suppliers within KwaZulu- Natal and those situated in other regions of the country were omitted from this study.

### **1.4 Problem Statement**

Despite the wealth of knowledge that is available in this arena, it became apparent that there was limited documented evidence relevant to the evaluation of the MIDP from the automotive component manufacturers' perspective. Since the perception existed that most benefits of the MIDP flowed to the OEM's, with little benefits flowing to the automotive component manufactures, this study was therefore undertaken to ascertain what benefit, if any, flowed to the automotive component manufacturers.

### **1.5 Research Questions**

The intention of this study was to provide answers to the following research questions.

- What has been the impact of MIDP on the KZN automotive component manufacturing sector, from a throughput perspective?
- What has been the impact of MIDP on the KZN automotive component manufacturing sector, from an employment perspective?
- What has been the impact of MIDP on the KZN automotive component manufacturing sector, from an investment perspective?

## **1.6 Objectives of the Study**

The objectives of this study were to:

- To determine whether the introduction of MIDP has contributed to an increase in throughput for the automotive component manufacturers
- To determine whether the introduction of MIDP has led to increased employment levels within the automotive component manufacturing industry
- To determine whether MIDP has resulted in increased investment in the automotive component manufacturing industry

## **1.7 Limitations of the Study**

The focus of this research was administered in the geographical area of Durban, KwaZulu-Natal only. In excluding other regions of South Africa, this was identified as a limitation.

Although the sample respondents were all based within the KZN region, the majority of their business is conducted outside of this region.

There was no catalytic converter manufacturer included in the sample, although it is the only automotive component sector which has achieved global significance with 15% global market share.

Although this study was directed to the owners or Managing Directors of the targeted organisations, middle management also participated in completing the questionnaires. In this regard, they may not have possessed sufficient knowledge of MIDP or did not understand the benefits, or lack thereof, of MIDP to their business model.

Convenience sampling was selected due to its accessibility in ensuring that the data could be easily obtained in a relatively short period of time, although this is generally the least reliable sampling technique. Analysis of the data collected may indicate certain trends or patterns that could possibly exist in the population.

Another constraint identified in this study was the time frame of six months which was allocated for this study. In view of that, the target population, method of sampling, research instrument and sample size was selected to ensure that the study was completed within this time frame.

### **1.8 Research approach/ methods**

The study was carried out amongst organisations in KwaZulu Natal supplying the automotive component manufacturing industry. The primary research technique will be self-completion questionnaires. Smiths Manufacturing is a major supplier to original equipment manufacturers in South Africa, particularly Toyota South Africa. As such, Smiths Manufacturing has suppliers based both locally and abroad to realise this end. The respondents to this study are suppliers to Smiths Manufacturing. In this regard, the Managing Directors or the owners of these organisations were the respondents to this study. Accordingly a gate keeper's letter from the Managing Director of Smiths Manufacturing has been sought in support of this study. An informed consent letter has also been procured from each respondent i.e. from the Managing Director or owner of the organisation.

The data collected was tested for reliability and validity to ensure that the objectives of the study were satisfied.

The sample size will be 30 respondents (which is statistically representative of the population size of 42 companies at the 71% confidence level). Statistical Package for Social Sciences (SPSS) was the chosen software programme used to analyse the data. The study lends itself to being quantitative in nature and secondary data in the form of, journal articles and other literature sources was used.

This chapter has provided a background review of the study that was conducted and included a look at the motivation behind undertaking this study with its associated objectives. It has alluded to the importance of MIDP, which has been further reviewed in the following chapter.

Chapter 2 provides a review of a selection of the vast amount of literature that offers a comprehensive overview on the subject of MIDP and its impact to the automotive component industry.

Chapter 3 explains the research methods used and includes the research design, data collection and analysis techniques. A copy of the research instrument has been included as an addendum to this document.

The data received from the 30 respondents has been analysed and graphically presented by means of tables, graphs and discussions of findings in Chapter 4. The first part of this chapter was of a descriptive nature while the second was inferential.

The fifth chapter concludes this research and provided recommendations based on the findings. The limitations of this study were discussed and potential recommendations for further research presented.

## **1.9 Summary**

This chapter provided an overview of the study undertaken. The research problem, the motivation as well as the focus of the study and research questions were addressed. The objectives and limitations of this study were also identified. The next chapter focuses on the literature review, which formed the basis for the empirical study.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter is based on a review of the relevant literature pertaining to the study, commencing with the global automotive industry and thereafter leading onto the South African economy. The automotive market and development programmes in South Africa are also discussed. This chapter also discussed similar programmes to the MIDP implemented in other countries and the impact thereof.

According to Jain (2007), the growth definition of economics pertains to the efficient use and better allocation of scarce resources so as to accelerate economic growth and promote social welfare. All governments and countries effectively strive towards improving the circumstances of its citizens by promoting socio-economic growth and development. Governments use incentives as one of the policy tools to attract investment. Many developing countries choose to offer fiscal incentives because outright financial grants are unviable. In this regard, South Africa has actively used fiscal incentives to support the automotive industry (Kaggwa, et al., 2007a). Mohr and Fourie (2008) explained the definition of the fiscal policy as every government regularly deciding how much to spend, what to spend it on and how to finance its expenditure. For this reason, it must have a policy in respect of the level and composition of government spending, taxation and borrowing.

According to Schiller (2007) macroeconomics “is the study of aggregate economic behaviour, of the economy as a whole”. The South African government has based its macroeconomic policy through the utilisation of accelerated infrastructure development policies, growth promoting policies and inflation targeting strategies. Amongst the main priorities of the South African government are employment, investment and the implementation of industrial policy initiatives aimed at raising productivity and employment (National Treasury Medium Term Budget, 2012).

Frequently, economic success and the acceptance of modern technologies of an economy is symbolised through a sustainable and thriving automotive industry as

evident in South Africa. The South African government has steered the development of the automotive industry by implementing specifically managed and designed government policies such as the Motor Industry Development Programme (MIDP), which has led to the improvement of not only the automotive industry but the South African economy as a whole.

Whilst significant benefits flowed to the original equipment manufacturers (OEM's), there is a perception that limited benefits flowed to automotive component manufacturers. This perception is supported by Flatters (2002) and Black (2001) who mentioned that the MIDP has come under significant criticism from certain sectors, most notably the automotive component manufacturing sector.

Although this research is focused on the automotive component manufacturing industry of KwaZulu-Natal, South Africa, it is impossible to review this sector in isolation from the global automotive industry, due to the level of parent-company association and globalization of the industry. For this reason an overview of the recent history and current trends in the global automotive history is provided below.

## **2.2. Global automotive industry**

According to Gaskin (2010), motor vehicle production is considered a driver of technological improvement. The importance of the industry is increased by the fact that it comprises of a very wide range of production processes that has downstream benefits to other manufacturing and service-related sectors. It must also be mentioned that value chains within this industry run deep, wide and global (Gaskin, 2010).

According to Gaskin (2010), the motor industry produced a total of 69.2 million light vehicles in 2007 globally, with a year on year growth of 3.7 million more vehicles when compared to the production figures of year 2006. In terms of value, the 2007 production equated to a total of around US\$ 830.4 billion, making it the world's largest and most significant manufacturing sector.

The industry's growth trajectory from 1998 to 2007 is shown in Figure 2.1, along with growth projections made by PricewaterhouseCoopers (PwC) in 2008 projecting through to 2015.

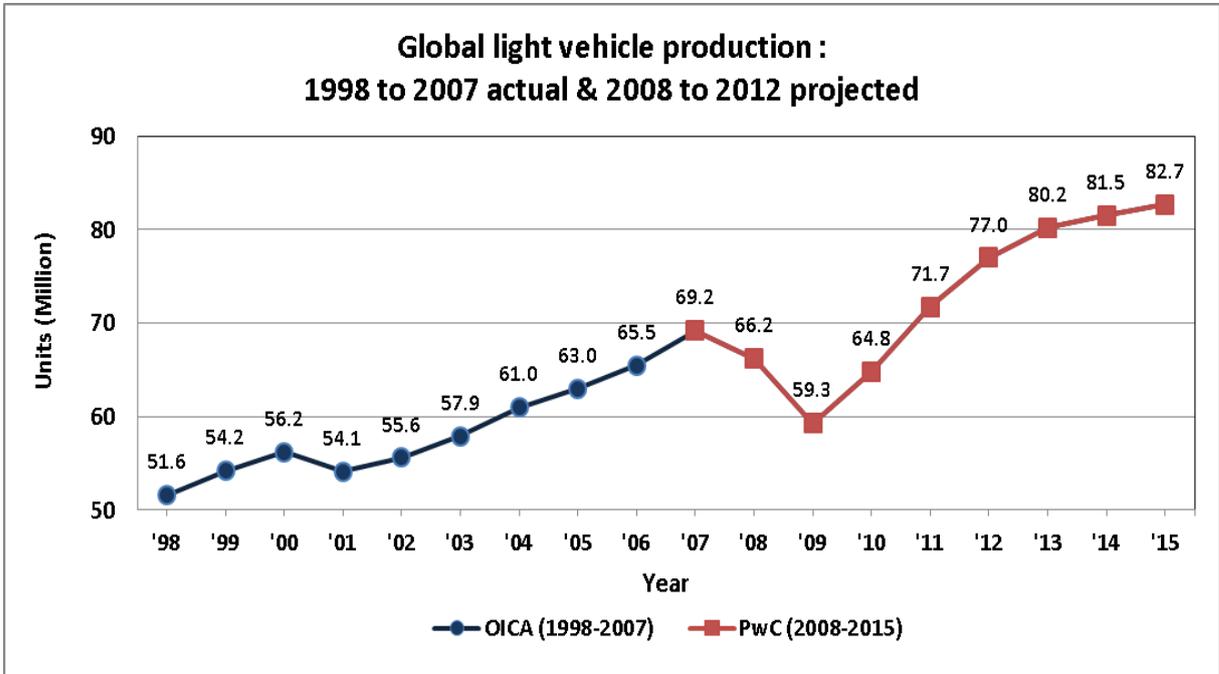


Figure 2.1 Global light vehicle production

Source: Gaskin 2010

While the industry experienced growth in production of 17.6 million vehicles from 1998 to 2007, the PwC projections for 2008 and 2009 indicate that a major contraction in the global automotive industry took place due to the global credit crisis of that period, of which the motor industry is still recovering from. PwC forecasted that the global industry contract by approximately 9.9 million units (to 59.3 million units) through 2008 and 2009 which will reduce global production back to 2003/4 levels (Pricewaterhouse Coopers, 2010 cited by Gaskin, 2010).

Global production may very well contract to 1998/1999 levels of 51-54 million units – a quick drop unprecedented in the history of vehicle manufacturing (Barnes & Hartogh, 2009).

South Africa's share of the vehicle production in relation to global vehicle production is tabled in Table 2.1 below.

Table 2.1 South Africa's share of Global Vehicle Production

	2005	2006	2007	2008	2009	2010	2011	%Change 2011/2010
Global Vehicle Production	66.55 million	69.33 million	73.18 million	70.52 million	61.70 million	77.62 million	80.09 million	3.2%
SA Vehicle Production	0.525 million	0.588 million	0.535 million	0.563 million	0.374 million	0.472 million	0.533 million	12.8%
SA Share of <b>Global</b> Production	0.79%	0.85%	0.73%	0.80%	0.61%	0.61%	0.66%	-

Source: National Association of Automobile Manufacturers of South Africa (NAAMSA, 2012)

Table 2.1 indicates that whilst global vehicle production grew by 3.2% from 2010 compared with 2011, South Africa's year on year performance for the same period indicates that South Africa's vehicle production increased by 12,8% whilst its share of global vehicle production increased by 0,05% during 2011, compared to 2010.

According to AIEC (2011) the automotive industry is a key sector of the economy globally. The production of vehicles and automotive components is accountable for nine million individuals being directly involved in the process. The latter workforce is encompasses more than 5% of the global manufacturing labour force. Additionally, numerous people are employed by industries that are indirectly related to the manufacture of vehicles, for example; industries like steel, iron, aluminium and glass to name but a few. One can approximate that a single direct job in the automotive sector, sustains around five indirect jobs, thus influencing a combined automotive workforce of around fifty million people (Gaskin, 2010).

It is within this fast changing environment that many developing countries, such as South Africa, are seeking to create for themselves a role as producer of vehicles and automotive components. When the domestic market is not large enough to absorb the production, the focus is on exports. Today, the automotive sector in

South Africa is a pillar of the manufacturing environment and is often seen as a symbol of the state of the economy, and its importance has grown in stature ever since the since the implementation of the MIDP in September 1995 (Gaskin, 2010).

### 2.2.1 Policy framework surrounding the Indian automotive sector

According to Nag (2012), the auto component industry is an important industrial sector in India and has been protected since before 1980s. The Phased Manufacturing Programme, which is similar to the South African Motor Industry Development Plan, was a plan where local OEMs had to increase domestic inputs over a precise timeframe, and up until 1991 it helped to build the base for the success of the Indian auto component sector. The strength of a country's automotive industry is recognised as a symbol of economic prosperity, hence the Indian government introduced policy measures to sustain and fuel growth of this industry. These initiatives included excise duty concessions and tax incentives for promoting investments in the sector.

The production in the automotive industry in terms of United States dollars is depicted in Figure 2.2.

### 2.2.2 Production in the automotive component industry of India

Figure 2.2 below illustrates the production in the automotive component industry of India.

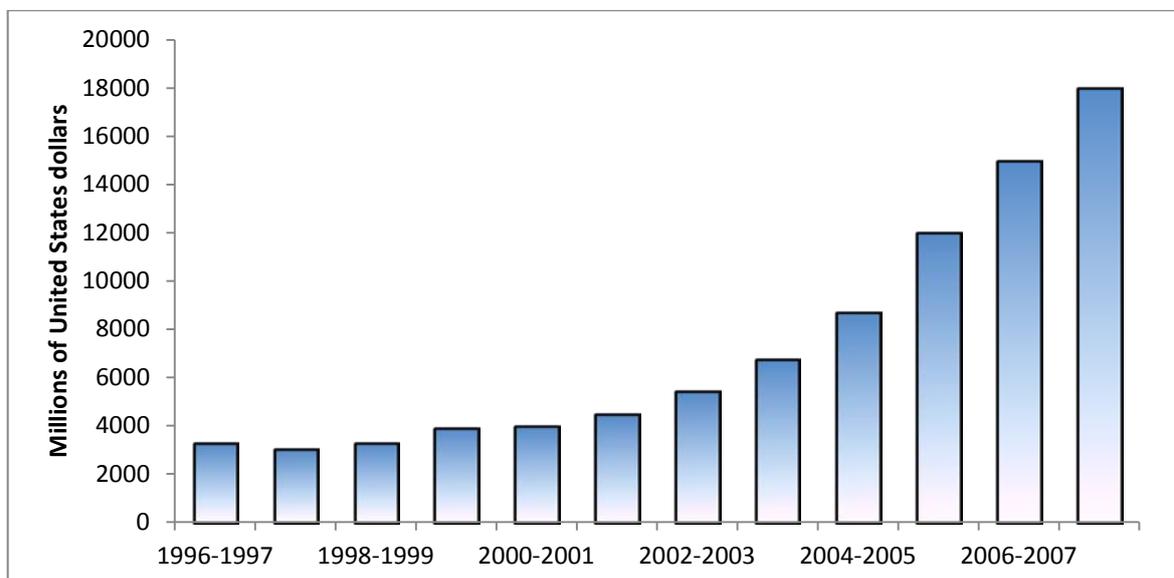


Figure 2.2 Production in the auto component industry of India

Source: Nag (2012)

It is evident from figure 2.2 that the automotive component industry in India has shown significant growth coinciding with the phased manufacturing programme, which is a similar programme to MIDP.

On a similar basis South Africa component exports amounted to approximately R36 billion during 2007 (Barnes & Hartogh, 2009).

### 2.2.3 Investment in the automotive component industry of India

The investment in the automotive component industry in India between 2001 and 2008 is illustrated in Figure 2.3.

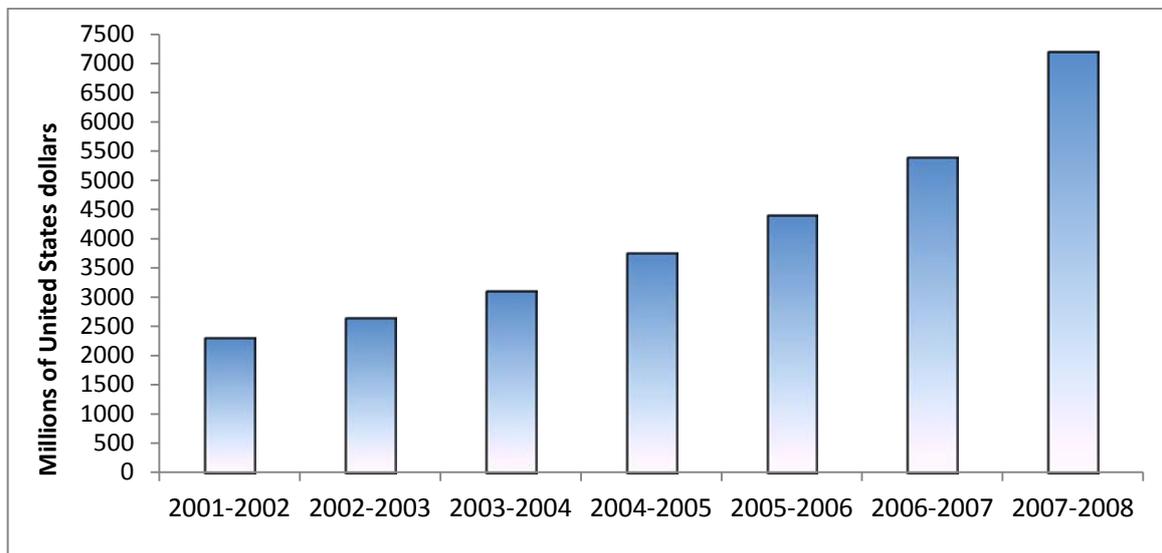


Figure 2.3 Investment in the auto component industry of India

Source: Nag (2012)

As depicted in Figure 2.3 above, investment increased more than threefold between 2000/01 and 2007/08. Figure 2.3 also highlights the growing investment within the automobile component industry. Notwithstanding the fact that the sector is dogged by environmental legislation, it has gained huge importance within the Indian market. According to Barnes and Morris (2008) between 2000 and 2006, the South African automotive industry's investment in production and export infrastructure increased significantly from R1, 5bn to R6, 2bn, before slowing to R3bn in 2007. This has been mainly driven by foreign investment, to improve

production capacity, export facilities and supporting infrastructure (Barnes and Morris 2008).

#### 2.2.4 Trend in value of automotive component exports by India

Figure 2.4 below illustrates the trend in terms of automotive component exports by India.

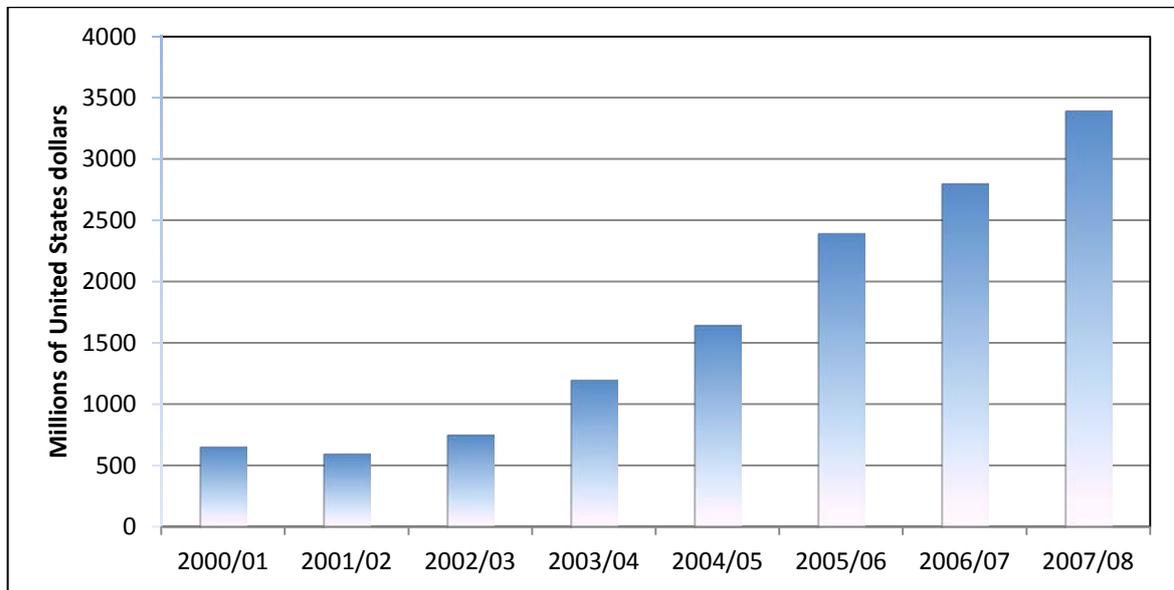


Figure 2.4 Trend in value of automotive component exports by India

Source: Nag (2012)

It is expected that by 2016 the size of the automotive industry in India would be \$145 billion and will create a further 25 million jobs on top of contributing around 10 per cent of the country's GDP. However, it is noted that compared to the likes of China, India needs to evolve the value chain of this industry as it is still very basic and not extremely aggressive (Nag, 2012).

According to Barnes and Morris (2008) South Africa exported R30.3-billion worth of automotive components in 2006. Catalytic converters accounted for almost half of all component exports mainly to Germany, Spain, the United Kingdom, the United States, France and sub-Saharan Africa.

#### 2.2.5 Evolution of automotive exports in selected African countries

According to Madani and Mas-Guix (2011), the case of Tunisia is particularly interesting, given the export promotion policies undertaken by the Tunisian

government after 1995. Figure 2.5 shows the evolution of automotive exports in selected African countries.

**Evolution of automotive exports in selected African countries (constant US dollars, 2000), in \$'millions)**

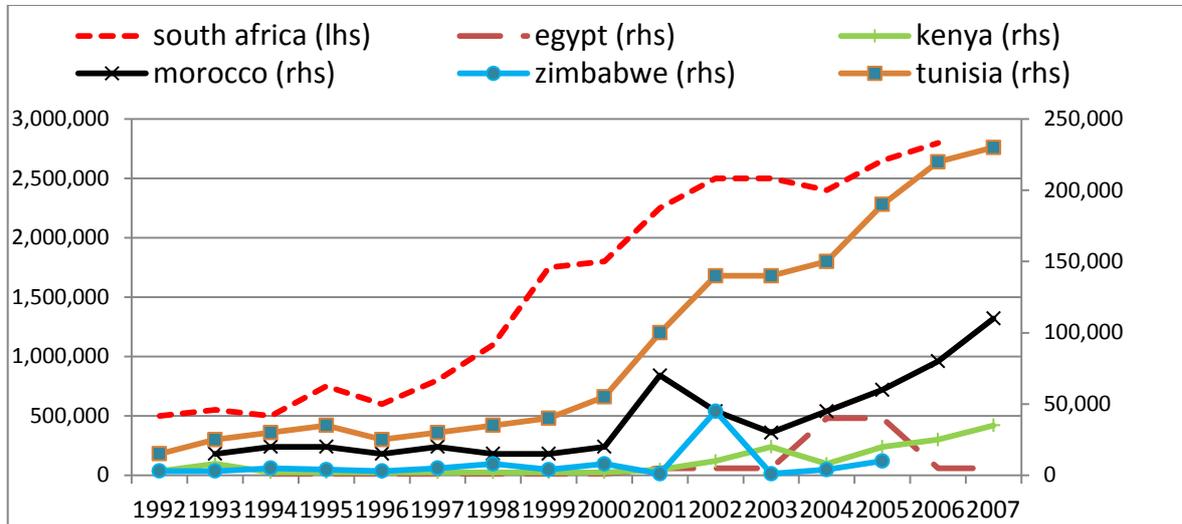


Figure 2.5 Evolution of automotive exports in selected African countries

Source: Madani and Mas-Guix (2011)

According to Madani and Mas-Guix (2011), since 1998, Tunisia enjoys duty-free access to the European Union (EU). A deal specifying ‘local content rules’ was agreed with European automakers that entailed the export of vehicles to Tunisia only in exchange for purchasing motor vehicle components manufactured by Tunisian firms. The automotive sector, in Morocco, is considered an integral part of its industrial policy (Dahir, 2004 cited in Madani & Mas-Guix, 2011).

**2.2.6 Analysis of the Chinese Automotive Policy since 2004**

In order to fuel the growth of the economy, during 1994 the Chinese government nominated a few key industries that were seen as imperative to growth and the automotive industry was chosen on an overwhelming basis. The rationale is quite obvious, since the automobile sector has a ripple effect through the economy. An expectation of an evolved automotive sector is a specialised indirect sector that can compete in high profit, niche segments on a global scale through better coordinated efforts. The automotive industry in China experienced faster growth than previously experienced, after entering the World Trade Organisation. This resulted in China becoming the fourth largest auto producer and third largest auto market in the world

(Holweg et al, 2005).

### **2.2.7 Chinese Component Suppliers**

According to Holweg et al (2005), more than half the component requirements of the complete manufacturing process is outsourced with close to seventy five percent of value-added content being purchased from its local supplier base.

As reported by the China Automotive and Technical Research Centre, in 2004, the component sector measured an overall turnover of 440 billion Yuan or US \$54 billion. Hence, many global part producers set up operations in China to supply the domestic market and take advantage of comparatively lower labour costs.

### **2.2.8 Chinese Supplier Landscape**

According to Holweg, et al. (2005), it is not unrealistic for China to be a world leader in the supply of components to the auto industry and according to the Chinese Ministry of Commerce, China aims to export between US\$ 15- 20 billion worth of automobiles and components in 2005, and more than quadruple that by 2010.

## **2.3. The South African Economy**

To help understand the South African economy, a few key indicators such as the GDP, balance of trade, employment and trade policy are discussed.

### **2.3.1 South Africa GDP Annual Growth Rate**

The Republic of South Africa has a population of 47, 9 million people. In 2008, the country's gross domestic product (GDP) was R2 283 billion with a GDP per capita of R42 704 (South Africa at a glance, 2008).

Mohr and Fourie (2008) explained GDP as “the total value of all goods and services produced within the boundaries of a country within a particular period, usually one year”.

Figure 2.6 indicates historical data for South Africa GDP Annual Growth Rate.

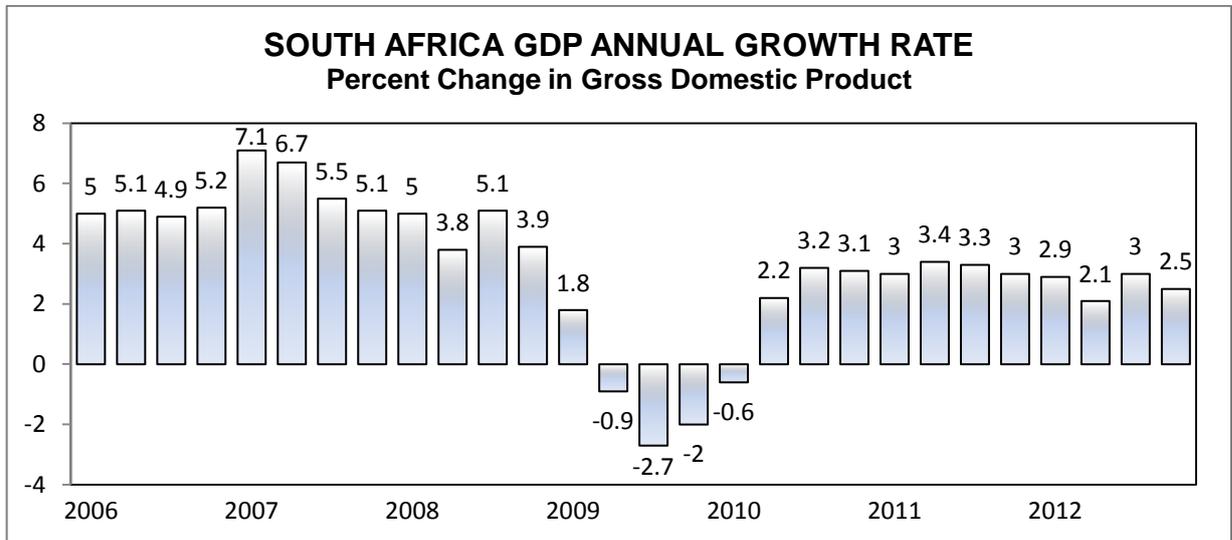


Figure 2.6 South Africa GDP Annual Growth Rate

SOURCE: [www.tradingeconomics.com](http://www.tradingeconomics.com)

South Africa's Gross Domestic Product (GDP) increased by 3 % in the second quarter of 2012 in comparison to the same quarter of the previous year. Between 1994 and 2012, South Africa GDP Annual Growth Rate averaged 3.3 % (Mohr & Fourie, 2008).

### 2.3.2 South Africa's Balance of Trade

Figure 2.7 shows South Africa's balance of trade.

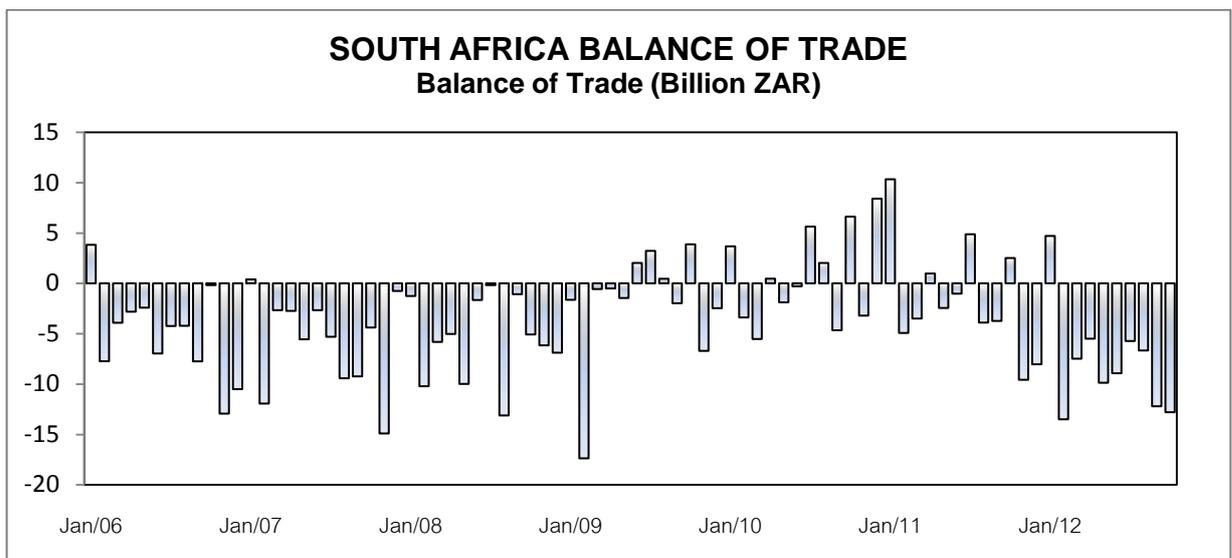


Figure 2.7 South Africa Balance of Trade

SOURCE: [www.tradingeconomics.com](http://www.tradingeconomics.com)

In August of 2012. South Africa reported a trade deficit of R12.21 billion between 1990 and 2012; the average deficit was R0.33 Billion. The balance of trade, also referred to the balance of payments, is defined by Mohr and Fourie (2008, p. 384) as “a systematic statistical account of all the economic transactions between the residents of a country and the residents of other countries in a specific period”.

### 2.3.3. Unemployment

In 2012, South Africa’s unemployment rate was 24.9 percent. Mohr and Fourie (2008) explained that to measure the number of unemployed persons, one has to ascertain how many people are willing and able to work but do not have jobs at that point in time. Between 2000 and 2012, South Africa’s unemployment rate averaged 25.5 percent. Figure 2.8 includes historical data for South Africa’s unemployment rate.

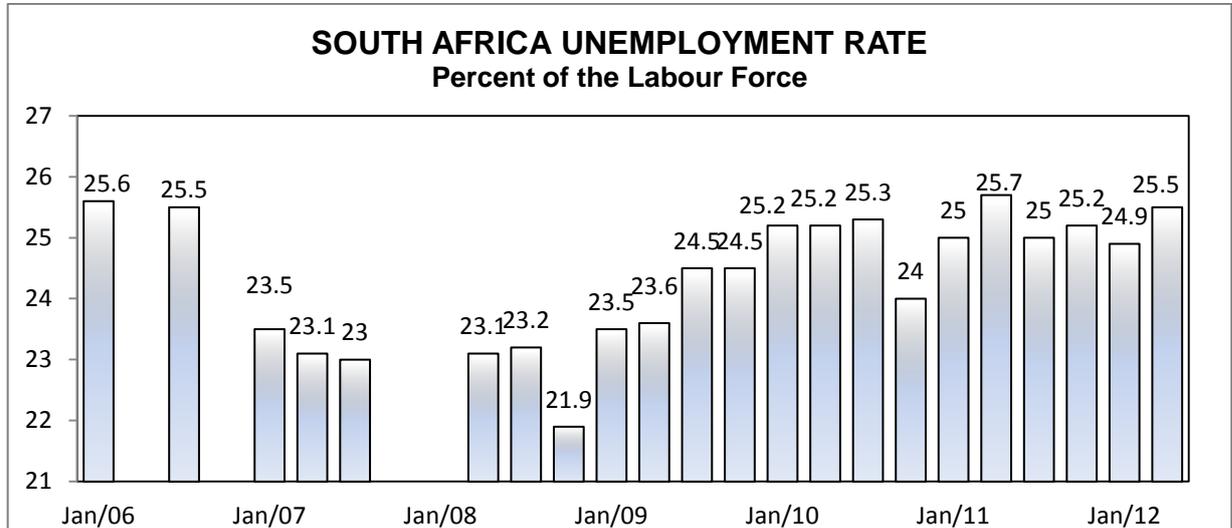


Figure 2.8 South Africa Unemployment Rate

SOURCE: [www.tradingeconomics.com](http://www.tradingeconomics.com)

According to Statistics South Africa (2011), there was an increase in the total number of employed persons in South Africa, from 8 383 000 persons in March 2012 to 8 425 000 persons in June 2012. Between 1973 and 2012, the average number of employed people in South Africa was 5 632 032.

Government anticipates that five million jobs will be created by 2020 under the New Growth Path. Government also envisages 11 million jobs to be created by 2030 as reported recently in the National Development Plan (NDP) of the National Planning Commission. The NDP is solution oriented and action driven especially its emphasis on addressing the challenges of unemployment amongst other issues. The NDP's jobs target is premised on an average annual GDP growth of around 5, 4%. The achievement of government's objectives will largely depend on the on-going successes of priority sectors, such as the domestic automotive sector (South African Automotive Week, 2012).

#### **2.3.4 Trade Policy**

The increase in world trade, increase in globalisation as well as the easy access to information and electronic mediums of transacting has allowed countries to interact and trade more freely with each other. According to Mohr and Fourie (2008), free trade between countries leads to an increase in economic welfare. However, this has not been the case, as in many instances government has placed barriers to free trade in the form of import tariffs, subsidies, quotas, and other non-tariff barriers and exchange control measures.

Mohr and Fourie (2008) conceded that every government takes measures to shield local firms against global competition and to manage the degree of imports entering the country. This is done with the intent by the government to enhance the local industry and allow domestic firms to increase or maintain sales, improve employment levels within the specific industry and hence the domestic country and thereby aiming to increase profits. According to Mohr & Fourie (2008), governments generally argue that trade barriers are necessary to protect jobs and industries from foreign competition. Given that unemployment in South Africa is very high, this argument is favoured by trade unions which regularly call upon government to intervene in international trade flows for the purpose of conserving jobs (Mohr & Fourie, 2008).

#### **2.4 The South African Automotive Market**

According to Barnes and Morris (2008), the South African automotive industry is 7% of South Africa's GDP and accounts for over 120,000 jobs. However, South

Africa from a global perspective only accounts for 0.7% of vehicle output. South Africa was ranked 24<sup>th</sup> in respect of global vehicle production with a market share of 0, 61% in 2010. Total employment in the vehicle manufacturing sector in 2010 accounted for 28 128 persons. Significant investment programmes driven by export plans have been implemented by all the OEMs since the commencement of the MIDP and capital expenditure by the OEMs from 1995 to 2010 amounted to R39, 7 billion.

The industrial policy applied within the manufacturing sector of the South African economy has led to an innovative automotive sector. Emerging economies can take heart from South Africa's auto industry success and can develop their own automotive sector via focused industrial policies. There was substantial growth since 1961 due to state intervention within an import substituting industrialisation (ISI) paradigm (Barnes, 1998)

According to Gaskin (2010), South Africa had the biggest domestic market for vehicles in Africa. According to the International Vehicle Manufacturers Association (OICA, 2009), South Africa accounted for 79, 8% of the continent's production in 2008. South Africa has the ability to continue being a global export source of vehicles and automotive components, and this ability is enhanced by general economic growth and political stability. Furthermore, South Africa's comparative advantages include having among the best infrastructure, industrial resources and access to raw materials and labour of any developing nation.

Primarily owing to the booming economy, government's MIDP and the general improvement in the standard of living for many South Africans, records in new vehicle sales, with year-on-year increases of 25, 9%, 28, 2% and 15, 7%, were achieved for three consecutive years from 2004 to 2006. South Africa was also the best performing new vehicle sales market internationally in 2005 (Gaskin, 2010).

In 2009 there were approximately 360 component manufacturers in South Africa with 180 considered key suppliers to local vehicle assemblers (Barnes & Hartogh, 2009). The geographic spread of these component manufacturers is such that they are clustered in close proximity to the vehicle assemblers.

In terms of catalytic converters, the industry is one of the very few South African manufacturing industries to which have achieved global significance. The industry currently has in the region of fifteen per cent of the global market share, with 80 per cent market share in Europe (AISA, 2008). Almost one hundred per cent of this sector is focused on exports and stimulates major demand for the beneficiation of platinum group metals (PGM).

Figure 2.9 illustrates South African automotive component exports, for the top 5 products exported as well as other components making up the full export complement.

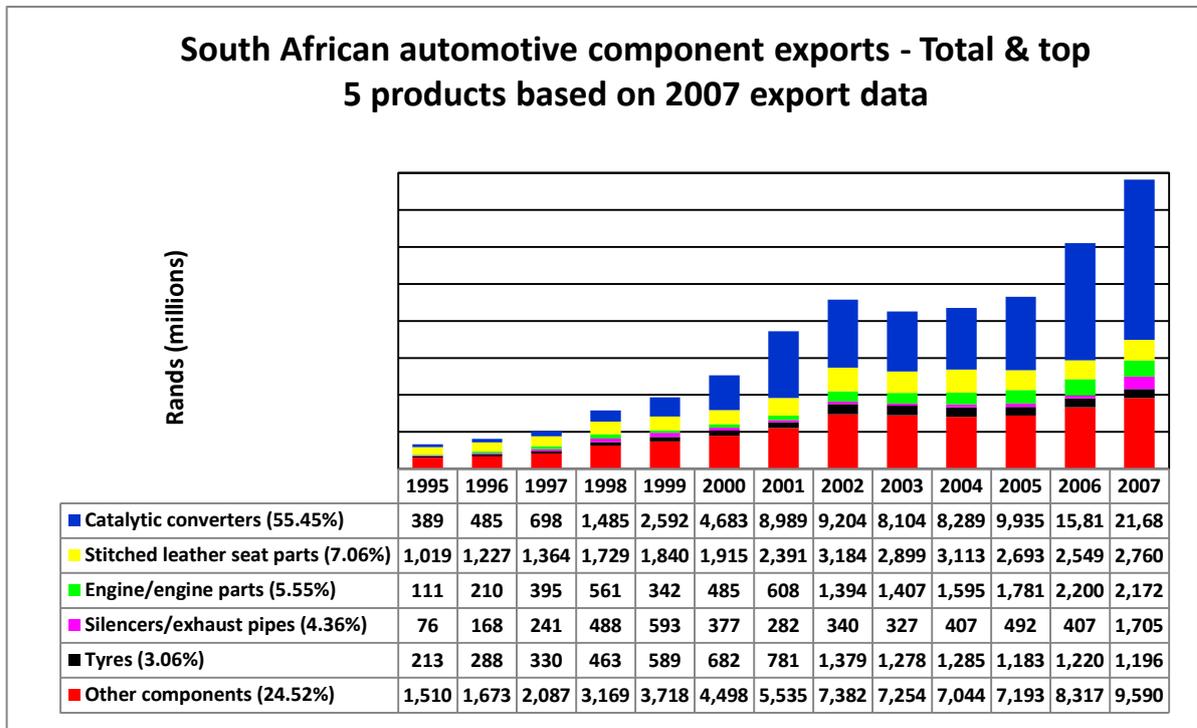


Figure 2.9 South African Automotive Component Exports

Source: Barnes and Hartogh (2009)

According to figure 2.9 there has been a consistent increase in exports with catalytic converters accounting for more than half (55.45%) of the total exports.

The MIDP facilitates the outward orientation of the domestic automotive industry through its various policy mechanisms. However, the MIDP cannot control global

market dynamics impacting on the South African automotive industry. These include global developments, logistics costs, raw material prices and currency movements as well as administrative prices impacting on the cost of doing business in South Africa (AIEC, 2011).

Government's 2020 vision which is supported by industry is to double vehicle production from 600 000 to 1 200 000 vehicles, under the new Automotive Production Development Programme (APDP). The APDP is set to replace the MIDP from 2013 onwards (AIEC, 2011).

#### **2.4.1 South African Automotive Industry Balance of Trade**

Despite the South African automotive industry's exports the trade deficit has widened. Figure 2.10 indicates the automotive industry's balance of trade from 2005 to 2010.

Year	Imports (R billion)	Exports (R billion)	Net Forex Usage
2005	72,5	45,3	(27,2)
2006	88,5	54,7	(33,8)
2007	102,2	67,6	(34,6)
2008	108,9	94,2	(14,7)
2009	79,9	61,0	(18,9)
2010	100,2	69,5	(30,7)

Figure 2.10 South African Automotive Industry Balance of Trade

Source: Automotive Industry Export Council (2011)

Figure 2.10 shows a consistent trade deficit, ranging from R27.2 billion in 2005 to R30, 7 billion in 2010. Under MIDP the domestic automotive industry's trade balance shows that exports and imports have simultaneously increased, with exports being responsible for the industry's negative trade balance. This is mainly due to South Africa's reliance on importing components such as engines, gearboxes and interior electronic components.

## 2.4.2 The economic impact of the motor industry on the South African Economy

The South African automobile sector has always caught the attention of South African policy makers and therefore has had some form of intervention from government (Lorentzen & Barnes 2004).

According to Beires (2011), the first OEM's to respond to the MIDP were VWSA, BMW and Daimler Chrysler. These motor plants injected huge sums of capital into SA for the production of vehicles, with export business being the major thrust of this initiative. The reward for this initiative was duty rebates on imports. This specific strategy, driven by MIDP, had significant success during the period 1994-2002, with export output increasing twofold. (Barnes, et al., 2003).

Figure 2.11 traces the automotive sector's share of GDP from 1999 to 2006.

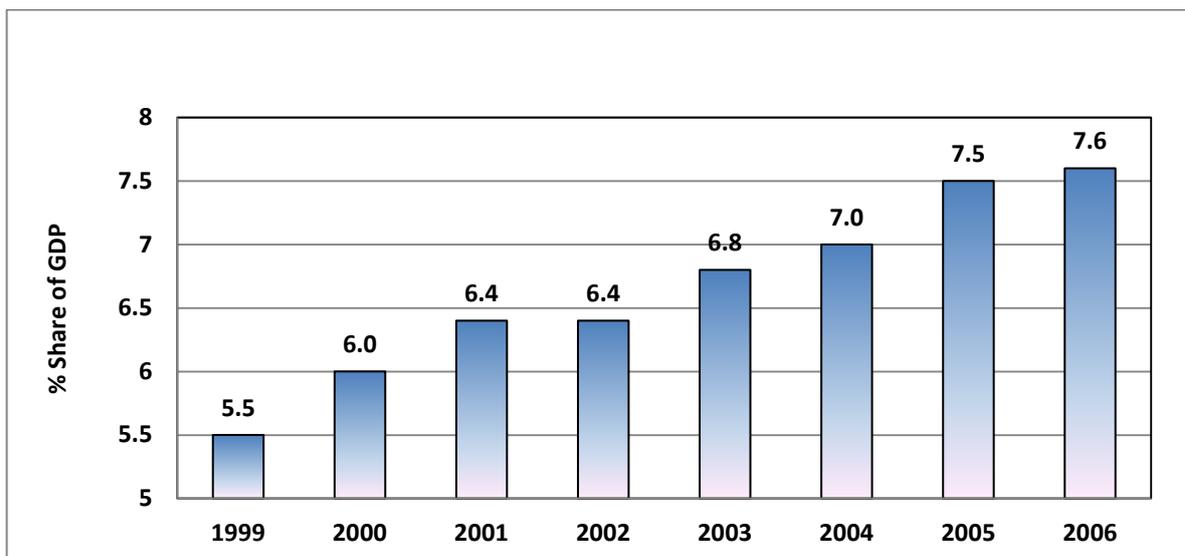


Figure 2.11 Automotive Sector Share of GDP

Source: Beires (2011)

Once again the picture that is painted is that this sector has become an increasingly significant contributor to the South African economy, with in 2006 it reaching its peak contribution of 7,6% of the share of GDP. This equated to R1, 727 billion contributions in rand terms.

### **2.4.3 The impact of the motor industry on the KZN Economy**

According to Beires (2011), the province of KZN contributes significantly to the local economy via the third largest automotive sector of South Africa (Lorentzen, et al, 2004). KZN has one OEM which is Toyota Motor Corporation which was established in the 1960's/70's in KZN. Toyota is a major employer within KZN, accounting for 7000 people.

Toyota SA currently achieves a local content of approximately 50% in its final product. It is estimated that motor vehicles and parts manufacturing contributes around 3, 7% of total manufacturing output which is produced in KZN, as cited in Beires (2011)

### **2.5 The Motor Industry Development Programme (1995 – 2012)**

The South African Government's Motor Industry Development Programme is the policy implemented to stimulate growth and restructure the automotive manufacturing sector in line with contemporary global pressures. According to Dampens & Simon (2004), some of the objectives of the programme were to increase automotive exports, improve international competitiveness and facilitate investment.

The MIDP was an enhancement of the Local Content Programme (Phase VI), where local content requirements were abolished and a tariff phase down was introduced. The tariffs were reduced and entrenched the principle of export complementation. As opposed to the World Trade Organisation (WTO) requirement, South Africa reduced its tariffs at steeper rate (Damoense & Simon, 2004).

According to Flatters (2005), a fundamental concept of the MIDP is that for each South African Rand of local content value exported, one Rand of import duty rebate credit is earned and thus import-export complementation occurs. The Department of Trade and Industry (DTI) issues import-duty rebate credit certificates (IRCCs) and according to Flatters (2005) these IRCCs translate into a rebate of between 26 per cent rebate on imported vehicles and a 30 per cent rebate on imported components. MIDP is a success story of national policy that

has helped to move the industry from apartheid isolation and integrate South Africa into a global source of high-technology, high-quality automotive products to demanding world markets.

According to Damoense and Simon (2004), the MIDP helps reduce import duties vehicle manufacturers and component producers by promoting export through government incentives. Barnes and Morris (2008) refer to this regime of incentives as import-export-complementation, which is at the very heart of the non-compliance with WTO rules.

According to the Department of Trade and Industry (1999), the automotive industry in 1998, imported approximately R20 billion and exports about R10 billion making this sector a net foreign exchange user.

### **2.5.1 Investment Assistance**

Under the MIDP this is called the Productive Asset Allowance (PAA) which was phased out in 2009 and replaced with the Automotive Investment Scheme (AIS). To ensure the correct context a brief outline of the Productive Asset Allowance is provided below.

### **2.5.2 Productive Asset Allowance history**

According to Kaggwa, et al. (2007b), the PAA was an import rebate which was earned by assemblers, registered with the DTI, for manufacturing specific light motor vehicles. The PAA was vehicle assembler focused and component manufacturers could only gain access to the PAA if the components were to be supplied to a PAA-qualified vehicle assembler for fitment into a PAA-based vehicle. In 2000, the PAA, which is a fiscal incentive, was introduced. This supported the automotive industry investment in technologically advanced production assets thereby facilitating global competitiveness.

### **2.5.3 Original Equipment Manufacturers Investment**

The automotive sector has attracted a significant level of mostly foreign investment, with capital expenditure in vehicle manufacturing rising from less than R1bn in 1995 to a peak of R6.2bn in 2006. Investment receded to R3.3bn in 2008

but is poised to rise again in 2010-2014. In 2008 Toyota South Africa, the largest manufacturer, completed a R2.4bn investment to expand and modernise its production facilities to a capacity of 250,000 units a year, while Volkswagen South Africa is in the midst of a R3.3bn, three-year investment programme to increase its exports of completely built-up cars by 45%, to 40,000 units, and its component export revenue by 8%.

Ford announced in 2010 that it would double the size of its investment programme to R3bn to produce new models and a new diesel engine plant at its facilities in Pretoria and Port Elizabeth (Barnes & Morris 2008).

## **2.6 Conclusion**

On a very high level, the industry consists of vehicle and component manufacturing. Both of these sectors have proven to be very significant to the automobile sector as a whole, with at times the component sector being labelled as the “lifeblood “of the automotive industry.

This chapter has highlighted the effects of the MIDP as well as the South African government’s policy of assisting the automotive sector in order to build and hence enhance the global position of the sector, and in doing so alleviate the widespread unemployment rates that plague this country as well as the balance of payment challenges faced.

The MIDP has run its course and is being replaced by the APDP.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The vast literature portrayed in the previous chapter illustrates the need for further research on the subject at hand. This chapter will therefore focus on the methods that were employed to conduct the research, with emphasis being placed on the research instrument. Cooper and Schindler (2006), describes research as a process that comprises collecting data. It is imperative that the research is based on a logical system of collecting, gathering and analysing information. Bryman and Bell (2007) stated that good research always result in data that is reliable, replicable and provide valid conclusions.

The sample for this study was drawn from the various suppliers with the automotive industry that are clients of Smiths Manufacturing, with all participants based in KwaZulu-Natal. The measurement instrument used was an online questionnaire comprising 20 questions.

Even though a fair amount of research has already been conducted into the field of MIDP, there are still areas that need to be addressed and the preceding chapter provides ample support for further research to be conducted on the MIDP in SA.

#### **3.2. Research Methodology**

Research methodology is a structured approach used to solve a particular problem that requires research and may therefore be understood as the science of conducting research. Research methodology is very diverse and is wider than that of research methods currently available. It is not only about what methods or techniques that one prefers to use, but rather considers the logic that underpin these decisions. The idea behind effective research is to be able to provide answers to the research questions using varying approaches, one of which will be to apply scientific procedures. Kothari (2008) stated that research objectives broadly fall into the following main groupings. Table 3.1 below provides a brief description of research objectives.

Descriptive	to accurately portray the characteristics of a particular individual, situation or group
Hypothesis Testing	to test a causal relationship between variables
Explorative	to gain familiarity or new insights with a phenomenon
Diagnostic	the frequency with which something occurs or which is associated with something else

Table 3.1 Description of Research objectives

Source: Kothari (2008)

Research may be broken down into the following categories:

- i. Quantitative vs. Qualitative: The former is based on a definite measurement i.e. the quantity is known (Kothari, 2008). In this approach, information is generally gathered through questionnaires and the results can then be analysed. These findings are conclusive. This data is generally gathered from interviews, which also uses open ended questions as well. Data may also be gained through researcher observation and this could therefore be subjective as well.
- ii. Descriptive vs. Analytical: Kothari (2008) states that the researcher can only report on his findings and cannot control the variables. Sekaran and Bougie (2010) advocates that the data gathered at this stage is important and should be carefully analysed before performing any corrective measures.
- iii. Applied vs. fundamental: The former is used to solve an immediate or isolated problem, whereas fundamental research adds to information that already exists on a subject (Kothari, 2008).
- iv. Conceptual vs. empirical: The former is based on ideas or theory, whereas the later depends a lot on experiences where the researcher draws conclusions. These conclusions can be verified through further observations and even experiments.

The study will be descriptive and fundamental in nature which will explore the impact that the MIDP has had on the automotive industry in KwaZulu Natal and South Africa.

### **3.3 Ethical Issues**

According to Herbst and Coldwell (2004), it is important that when conducting research and gathering data, that people rights are not imposed upon which can result in them suffering personal harm or damage, hence the need for prior approval before participating.

In this study, permission was sought from the various suppliers that needed to participate in this research and the relevant gatekeepers letter was received before any data could be collected. This relevant process with the Ethics committee of the university was duly complied with.

### **3.4. Aim and Objectives of the Study**

A statement of intent, that dictates the primary direction of a study, may be defined as the aim for that study. The objectives are used to break the study down and are used to provide answers to various research questions. According to Kumar (2005), objectives are the clear and specific goals the researcher sets out to achieve in the study.

#### **3.4.1 Aim**

The aim of this study was to determine the impact that the MIDP has had on the motor industry in South Africa.

#### **3.4.2 Objectives**

The objectives of this study are:

- To determine whether the introduction of MIDP has contributed to an increase in throughput for the automotive component manufacturers;
- To determine whether the introduction of MIDP has led to increased employment levels within the automotive component manufacturing industry; and
- To determine whether MIDP has resulted in increased investment in the automotive component manufacturing industry

The key questions guiding this research are going to be the impact of the MIDP on the KZN automotive sector:

- from a throughput perspective?
- from an employment perspective?
- from an investment perspective?

### **3.5 Constraints**

The method used to conduct any research is largely influenced by the constraints at hand and is therefore essential to understand the constraints with which one has to work with. According to Cohen, et al. (2007), it is crucial to attach a timeframe to research, so that it allows the researcher to set realistic goals in terms of what is achievable or what is not. In the study at hand, time was considered to be the main constraint. The data had to be gathered within six months, and if a longer time period was allowed, then more detailed data could be collected. The time constraint therefore influenced the type of research, target population and questionnaire used so that the data derived can be analysed.

### **3.6 Sampling**

According to Herbst and Coldwell (2004), a sample is used to represent the bigger population. It may be defined as the process of selecting part of a population that will be representative of the entire population based on different parameters. In this survey, the researcher is only using 42 companies to derive data because it would not be practical to gather data from all automotive component manufacturers in KwaZulu Natal. Cohen, et al. (2007) further states that research can fail or the results can be highly skewed if the inappropriate sampling strategy is implemented.

Herbst and Coldwell (2004) stated that the main reasons for using sampling included:

- Economies of scale;
- Time restriction within which data is required;
- The actual population may just be too large and sometimes may not be accessible;
- The accuracy and precision of the collected data may be compromised when the sample size is very huge.

According to Bryman and Bell (2007), the researcher should avoid bias creeping into the data collected or attempt to keep it at a minimum. Bias may be defined as a population that is not fairly represented. This misrepresentation will therefore affect the quality of the research.

Three sources of bias were identified:

- i. Non-probability vs. non-random sampling method – These type of techniques could result in some members of the population being more likely to be selected than others;
- ii. Inadequate sampling frame – this is a result when the population is not fully represented. The sample chosen is not comprehensive or is inadequate will therefore create bias in the analysis.
- iii. Non-response – if the research yields more questions that are not answered compared to those that are, then this immediately creates bias.

Sampling rather than a complete census was considered for this study. With over 1000 companies in the South African automotive industry (NAACAM, 2011), it would be logistically difficult to conduct a full census and would have been too expensive and time consuming; hence sampling was done.

### **3.6.1 Population**

Herbst and Coldwell (2007) stated that a population “is a group of individual persons, objects or items from which samples are taken for measurement”. The target population for this study consisted of 42 organisations in KwaZulu Natal supplying the automotive component manufacturing industry. The primary research technique was an online self-completion questionnaire. Smiths Manufacturing is a major supplier to original equipment manufacturers in South Africa, particularly Toyota SA. As such, Smiths has suppliers, both local and overseas, to realise this end. The respondents to this study are suppliers to Smiths Manufacturing. In this regard, the Managing Directors or the owners of these organisations were the respondents to this study.

### 3.6.2 Sample

There are basically two types of sampling techniques or approaches. One can either opt to use probability or a non-probability sampling approach. The former uses random selection, implying that each item has an equal chance of being selected, provided that this item reflects the character to that of the entire population. The technique is used primarily to keep sampling errors to an absolute minimum. According to Bryman and Bell (2007), the main advantage of probability sampling is that one is able to generalise findings from the sample to the population.

A non-probability sampling technique is one where certain items have a greater chance of being selected than others. Based on this, Bryman and Bell (2007), states that it becomes difficult to generalize the findings since the entire population is not being represented fairly.

Figure 3.1 illustrates the basic sample designs and highlights the design chosen for this study.

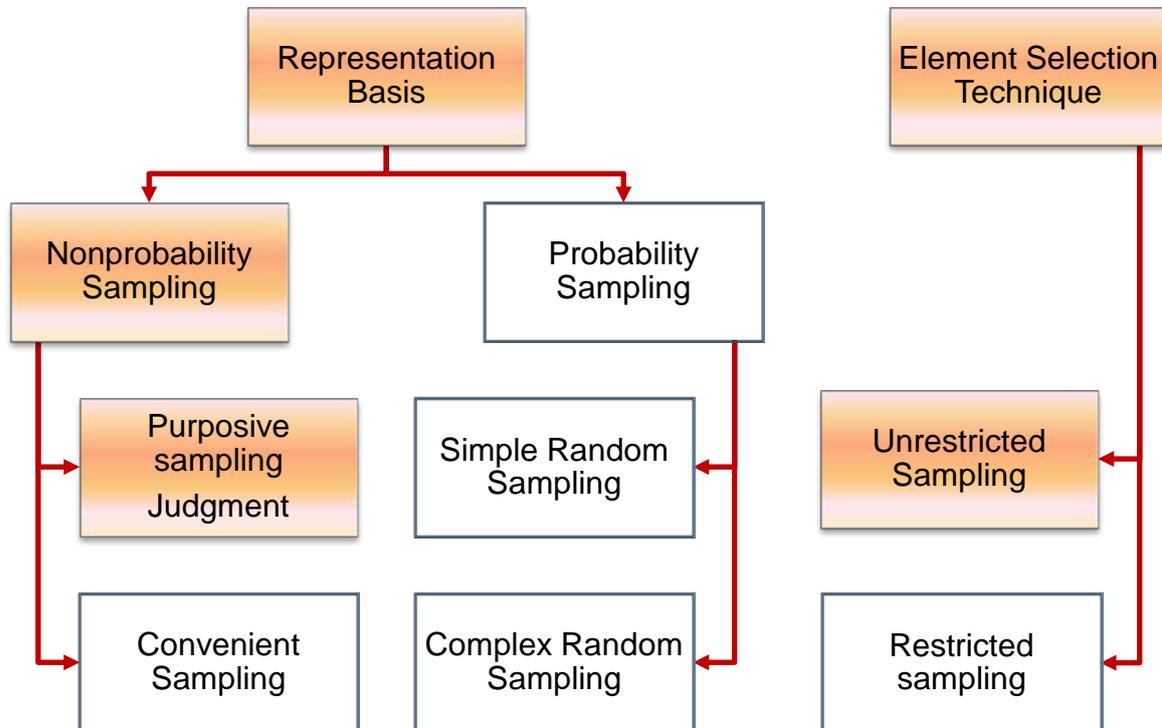


Figure 3.1 Basic Sampling Designs

Source: Kothari (2008)

Probability sampling, based on the definitions above, was deemed more appropriate for this study mainly from a time and cost constraint point of view.

The sample was mainly selected because the organisations were easily accessible by the researcher. Bryman and Bell (2007) stated that this type of non-probability sampling is termed convenience sampling. Herbst and Coldwell (2004) further argued convenience sampling was not the most reliable sampling technique, but was deemed good enough mainly because of the minimal financial implications and the ease at which it could be conducted. According to Adler and Clark (2011), this technique can be used and will provide acceptable results, however one is cautioned not to try and massage the data further.

A sample population of 42 organisations was chosen to participate in this study. The only restriction was that these companies needed to have access to the internet. The Managing Director of each of these organisations was the targeted and responsible individual. Participants had to sign a consent form in order to take part in the survey. The next step is selecting the appropriate method to collect the data.

### **3.7. Data Collection Strategies**

An online, self-administered questionnaire using QuestionPro.com was the research instrument for this study. According to Bryman and Bell (2007), self-administered questionnaires are preferred because of the following reasons:

- Easily accessible to the full sample population;
- The data is easily exported from the SPSS and data analysis can be performed;
- Eliminates subjectivity on the part of the researcher in terms of the results gathered;
- Giving predefined options for the questions in terms of acceptable answers implies that uniformity could be established;
- The questionnaire can be answered by the respondents at their convenience, provided it is within the data collection period; and
- Cheap and quick to administer

According to Bryman and Bell (2007), the following were identified as disadvantages of self-completion questionnaires as compared to structured interviews:

- Should the respondent want any clarity at the time of completing the questionnaire, no individual is present to provide clarity.
- If there is a perception that the questionnaire is boring or not relevant, the respondent can abort the questionnaire;
- Additional data, through the interviewer probing, cannot be collected;
- Should postal questionnaires be used, the researcher is often not able to determine whether the actual intended respondent completed the questionnaire, as often this is delegated to other family members/individuals;
- If there any open-ended questions, then the respondent is likely to ignore or abort the questionnaire;
- There is always the risk of missing data or partially filled questionnaires;
- The questions are definite implying that the researcher cannot ask follow on questions thereby getting more of an answer than they initially wanted;
- Questionnaires generally fetch a lower response rate than structured interviews.

Structured interviews were not used in this instance because of the profile of the individuals completing the questionnaire and it would not have been practical to do so. To simplify the questionnaire, closed-ended questions were used.

According to Leedy and Ormrod (2005), questionnaires must be designed extremely carefully in order to gain accurate results. Taking the above into account, the following parameters were adhered to:

- There were no double barrelled questions and they were free of any bias;
- There were no leading questions meaning that the respondent was guided towards any particular answer;
- Answering the research objectives was the primary focus, hence the questions were structured as such;
- The respondents were encouraged to attempt all questions; and to
- Create a positive attitude about participating in the study.

In designing the questionnaire, the following rating scales were used:

- Multiple choice questions - eliciting a single response.
- Multiple choice, with a multiple response scale – This was used when more than one answer could apply. According to Cooper and Schindler (2006), this question design is useful if one wants to elicit a complete picture of a respondents thinking, however caution must be exercised that not all questions may be answered fully. It is always wise to include the “other” category, which may offer the respondent the opportunity to include alternatives not considered by the researcher.
- The Likert scale is the most popular summation rating scale and is used to express either a favourable or an unfavourable attitude toward the object of interest (Cooper & Schindler, 2006).

The questionnaire design of this research comprised of multiple choice questions with single responses only. Once the questionnaire was constructed and the rating scales selected a pilot study was conducted.

### **3.8 Pretesting and Validation**

Schwab (2005) argued that since questionnaire design remains an imprecise research process, it is recommended to conduct a pilot test to see how the final questionnaire will be received. Pilot tests are always used as it improves questionnaire design and implementation thereof.

A pilot study was conducted amongst 10 colleagues to check content, validity, interpretability and structure of the questions in the questionnaire and to ensure that there is no ambiguity in the questions. The options for the final question were also amended for validity. The other reason for the pilot was to also determine the average time that it would take the respondents to complete the questionnaires and this was communicated to the final respondents.

QuestionPro, which is an online survey tool, was used to post the questionnaire and to gather data. A self-explanatory e-mail, which included the URL link, was sent to all respondents. The researcher opted for the online data collection method, using the above software, since the package allows the researcher to export all the raw data and to do analysis on the survey software, even though SPSS was also used. Question Pro is also capable of coding the data responses thereby eliminating all possible human input errors. With this functionality, it greatly reduces the time taken to collate and present the information.

E-mail reminders to complete the questionnaires for those of have not, was sent approximately two weeks after the first invite to participate. Two further weekly reminders were sent thereafter, before the survey data was exported from Question Pro.

### **3.9 Analysis of the Data**

Statistical Package for Social Sciences (SPSS) Version 19 was used for further analysis. SPSS is capable of doing both descriptive and inferential data analysis. The following statistical techniques/measures were completed:

- Percentages;
- Correlation; and
- Cross Tabulation

According to Menter, et al. (2011) data preparation is the first step of data analysis. This process will involve proper record keeping, checking for data accuracy, putting all raw data in a proper database and then transforming this data according to techniques or measures mentioned above. According to Menter, et al. (2011), it was further argued that failure of the researcher to ensure that the data collected is reliable and error free will have serious implications for the validity of the study.

#### **3.9.1 Reliability**

According to Bryman and Bell (2007), the degree to which a measure of a concept is deemed stable may be defined as reliability. However, the measurement must be consistent. The test-retest method can be used to check for reliability and the most commonly used measure for reliability is the Cronbachs alpha.

### 3.9.2 Cronbach's Alpha

According to Pallant (2007), the Cronbach's alpha is an index that can be used to test the internal reliability. Cronbach's alpha is used to confirm the reliability of the measuring instrument. Sekaran and Bougie (2010) suggested that Cronbach's alpha be utilised to test internal consistency and reliability. Ideally the Cronbach's alpha coefficient of a scale should be above 0.7. This outcome of this test is an indication of research consistency and repeatability. This test will be conducted using SPSS.

### 3.9.2 Validity

Validity refers to whether or not an indicator, or set of indicators, devised to gauge a concept, really measures that concept (Bryman & Bell, 2007). According to Pallant (2007) there are 3 main types of validity as per table 3.1

Content Validity	This measure deals mainly with the content of the questions being asked. For this study, this measure was carefully discussed between researcher and supervisor.
Criterion Validity	This measure is derived from the relationship between certain scale scores and specific criteria that needs to be measured. This study was not checked for criterion validity.
Construct Validity	This measure is used to see to what extent, the validity conforms to projected correlations with other hypotheses. This study was checked for construct validity using correlation.

Table 3.2 Three main types of validity

Source: Pallant (2007)

Data that is analysed can either be descriptive or inferential.

### 3.9.3 Descriptive Statistics

Menter, et al. (2011) states that descriptive statistics are used to describe and provide a summary about the important characteristics of the base dataset.

The following descriptive statistics were used for this study:

### **3.9.3.1 Percentages**

According to Cooper and Schindler (2006), percentages are used when information on the ratio of respondents within each of the biographical variables. A common example involves the comparisons of males to females participating in a survey. Histograms and bar charts are commonly used to display these ratios, although pie graphs are commonly used to display them as well.

### **3.9.3.2 Frequency Distribution**

This statistic is used to illustrate the number of instances in which a variable takes each of its possible values (Oxford Dictionary 2002). Bryman and Hardy (2009) stated that frequency analysis is one of the best ways of displaying variation or proportions that exist within variables. Frequency tables will be used to display the findings of the study.

### **3.9.4 Inferential Statistics**

According to Healy and Prus (2009), inferential or inductive statistics is a specialized technique used to draw conclusions about a larger group or population from carefully selected samples. Kothari (2008) stated that inferential statistics is used to illustrate the various tests of significance for testing hypotheses and are mainly used to draw conclusions.

One can also make predictions and make calculated decisions on the character of the population. These tests are done to ascertain the validity and conclusiveness of the data. The following methods of inferential statistics will be used in this study.

#### **3.9.4.1 Correlation**

It is important for the researcher to know what the variables for the study are, but more importantly, how the variables relate to each other. Correlation coefficients are therefore used as an indication of the strength and direction of a particular association which takes into consideration the two respective variables. A perfect positive correlation would be represented by 1.0 whilst a perfect negative correlation is represented by 0.

#### **3.9.4.2 Cross Tabulation**

If a relationship exists between the variables, then a cross tabulation should be done to examine this relationship further. Kothari (2008) states that “a cross tabulation is a joint frequency distribution between two or more variables” based on differing categories. Cross tabulations is also used to determine if variables are statistically independent or if there is any association between them.

According to Kothari (2008), the value that results from this analysis shows the degree with which one variable predict or vary with those of the other variable.

### **3.10 Summary**

The main objective of this chapter was to look at the methodology used to carry out the study. In principle, it outlined the research and sampling design, data collection process and the statistical techniques that had to be jointly used to address the research questions.

Various research methods have been discussed, outlining the logic within each one, although emphasis was placed on the methods that were deemed most appropriate to address this study.

The research instrument, namely an online questionnaire, was discussed and emphasis was placed on its administration, data collection and analysing the raw data.

## **CHAPTER FOUR**

### **PRESENTATION AND DISCUSSION OF RESULTS**

#### **4.1 Introduction**

This chapter follows on from the research methodology described in chapter three. Data that was gathered from the sample is presented and analysed. The analysis focuses on detecting patterns in the responses. These emerging patterns or themes are discussed in the following paragraphs.

The first section of the data analysis is of a descriptive nature while the second section focuses on inferential data analysis, related to the objectives of the study.

#### **4.2 Treatment of data**

The raw data from the online questionnaire was extracted from QuestionPro and was imported into SPSS version 19, so that further analysis could be undertaken. The data collected, was first screened for errors and only complete and accurate data was used for further analysis.

The results of this analysis are presented by means of tables and graphs. Percentages have been rounded off, with no decimal points.

#### **4.3 Reliability of questionnaire**

The reliability of the questionnaire was evaluated by the Cronbach's Coefficient Alpha. The rating scales used in the questionnaire yielded a Cronbach's Coefficient Alpha of 0.789, which is an indication that the questionnaire is reliable. According to Gliem and Gliem (2003) the closer the alpha value is to 1, the greater the level of reliability. The data could therefore be used confidently for this study.

#### 4.4. Data Analysis

##### 4.4.1 Profile of respondents

Table 4.1 indicates the frequency profile of respondents.

		Percentage
Annual Turnover/Revenue	<R10 million	13
	R10 million to R49.9 million	23
	R50 million to R199.9 million	23
	R200 million to R499.9 million	3
	R500 million +	38
Primary Activity	Assembly	0
	Logistical services	27
	Fabrication	7
	Financial services	0
	Maintenance	0
	Accessories	0
	Packaging	3
	Manufacturing – Automotive	47
	Components	13
	Retail	3
	Other	0
Role in organization	Executive Management	65
	Senior Management	19
	Middle Management	16
	Supervisory	0
	Operational	0
Percentage of turnover attributed to trade in KZN automotive cluster	<20%	45
	20-39%	25
	40-59%	10
	60-79%	10
	80-100%	10

Table 4.1 Profile of Respondents

According to Table 4.1 the majority of respondents had an annual turnover in excess of R500 million (38%) as compared to 23% of respondents which had a turnover of between **R10 million to R49.9 million**. Table 4.1 also indicates that 23% of respondents had a turnover of between **R50 million to R199.9 million**, 13% less than R10 million and 3% between **R200 million to R499.9 million**. It is evident from table 4.1 that the majority of respondents were in the manufacturing (automotive) sector (47%). This was followed by logistical services (26%), components (13%), fabrication (6%), packaging (3%) and retail (3%). There were no respondents from the financial services, maintenance and accessories sectors. According to table 4.1 65% of respondents were from Executive management, thereby adding credibility to this research study through with their thorough knowledge of the MIDP, the automotive industry and their authority to answer sensitive questions included.

#### 4.4.2 To determine whether the introduction of MIDP has contributed to an increase in throughput for the component manufacturing industry

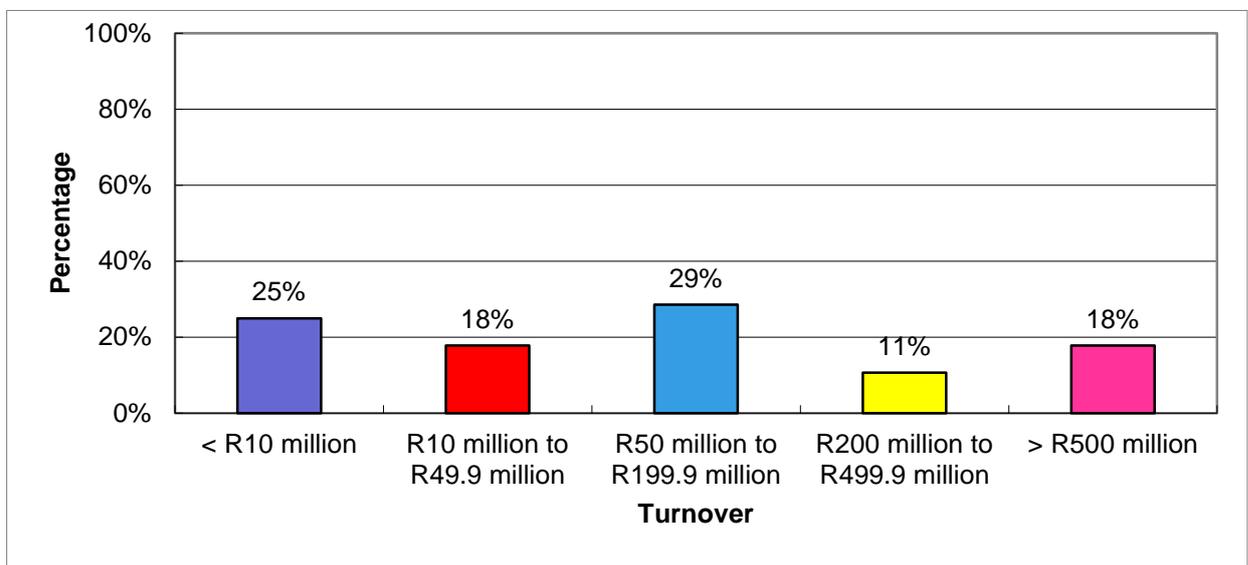


Figure 4.1 Organisations turnover prior the introduction of MIDP

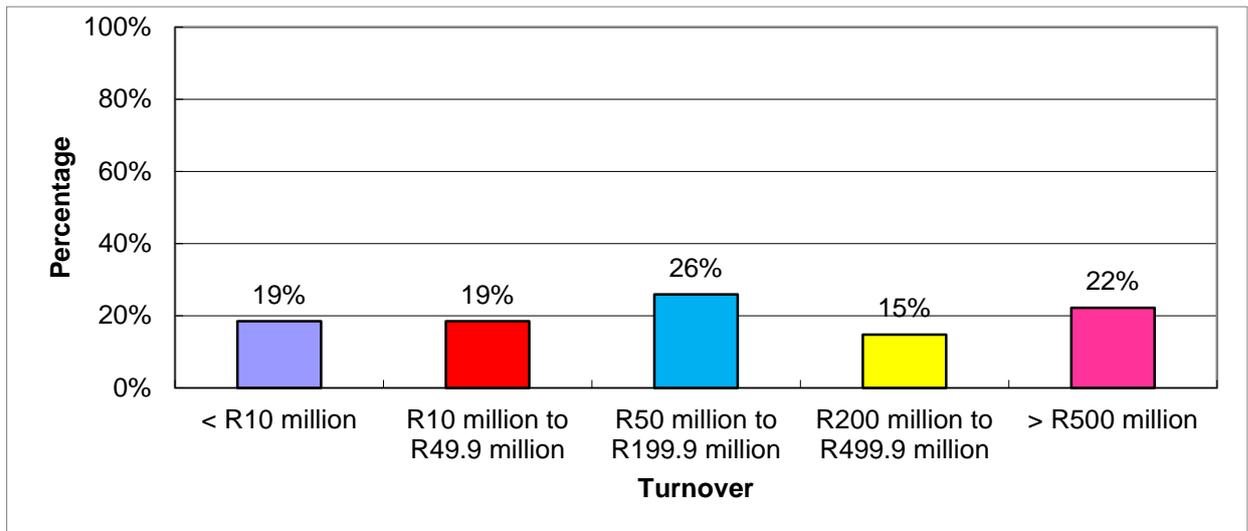


Figure 4.2 Organisations turnover post the introduction of MIDP

It is evident from Figures 4.1 and 4.2 that the introduction of MIDP resulted in an increase in turnover for the component manufacturing industry. Post the introduction of the MIDP, 22% of respondents had an annual turnover in excess of R500 million, as compared to 18%, prior to the MIDP introduction. 15% of respondents had an annual turnover between R200 million and R499.9 million post the introduction of the MIDP, as compared to 11%, prior to the MIDP introduction. Only 19% of respondents had a turnover of less than R10 million as compared to 25% prior to the MIDP introduction. The above findings are consistent with Barnes and Morris (2008) who reported that the automotive components industry, similar to the original equipment manufacturers, has experienced substantial revenue growth and output levels. 75 automotive component manufacturer members of the South African Automotive Benchmarking Club (SAABC) experienced an inflation adjusted growth of 50.2% for the period 2001-2006 (SAABC Database, 2008). Barnes, et al. (2003) reaffirms the above by stating that there is sufficient literature that MIDP has resulted in a remarkable transformation of imports, exports and production in the South African automotive sector. This increase in turnover helps sustain the success of these organisations and ultimately contributes positively to the economy.

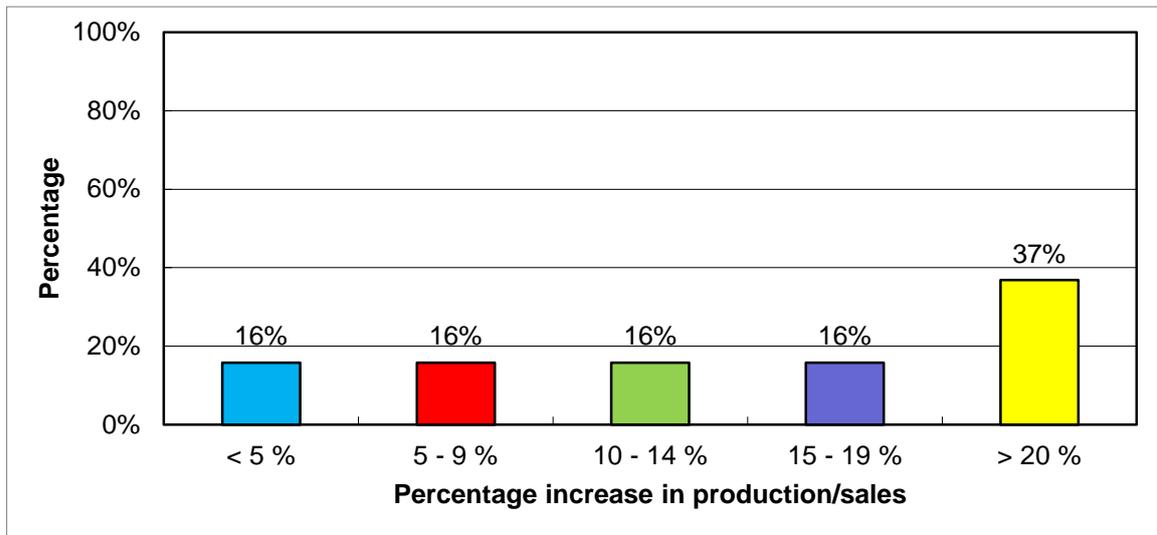


Figure 4.3 Percentage increase in production/sale of units post the introduction of the MIDP

According to figure 4.3, the majority of respondents (37%) experienced an increase in production and/or sales of greater than 20%. For 16% of respondents there was an increase of between 15 to 19%. There were also increases of 10 to 14% for 16% of the respondents and between 5 to 9% for 16% of respondents. Only 16% of respondents experienced increased production and/or sales of less than 5%.

According to Mandani and Mas-Guix (2011) there is consensus that MIDP has resulted in a remarkable transformation of imports, exports and production in the South African automotive sector. Barnes, et al. (2003), indicate that since the implementation of the MIDP, South Africa has seen substantial growth in the automotive sector, based not only on a swift rise in exports of completely-built-up units (CBU's), especially after 1988, but also exports of automotive components.

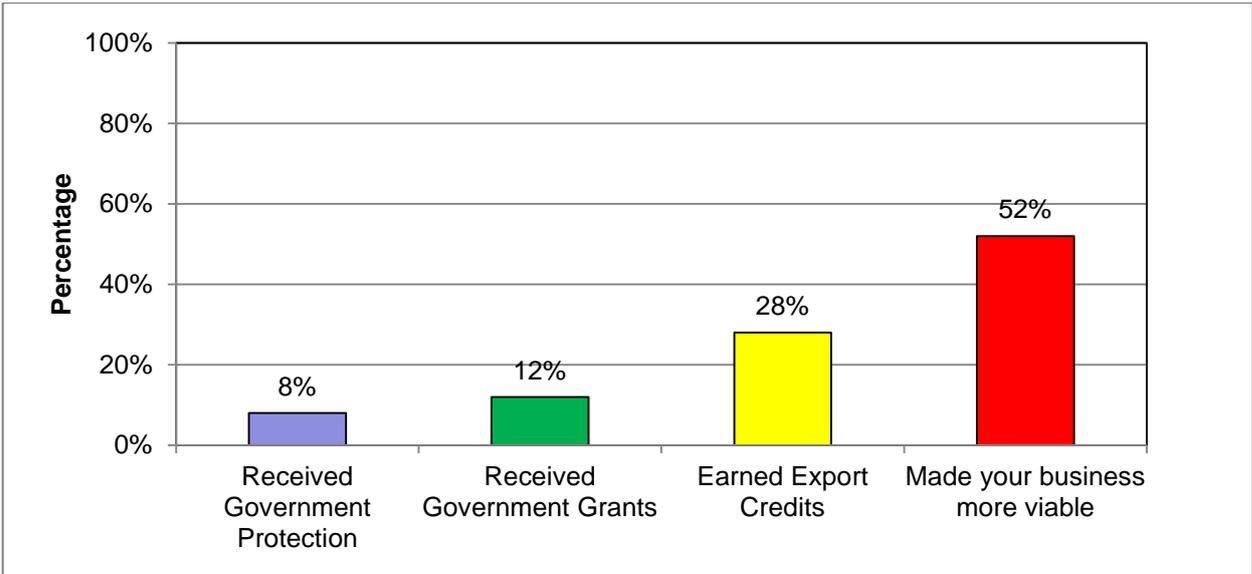


Figure 4.4 Manner in which the MIDP benefitted respondents

In terms of the manner in which the MIDP benefitted respondents, 52% indicated that it made their businesses more viable. Twenty eight percent earned more export credits, 12% received government grants and 8% received government protection (Figure 4.4).

**4.4.3 To determine whether the introduction of MIDP has led to increased employment levels within the component manufacturing industry**

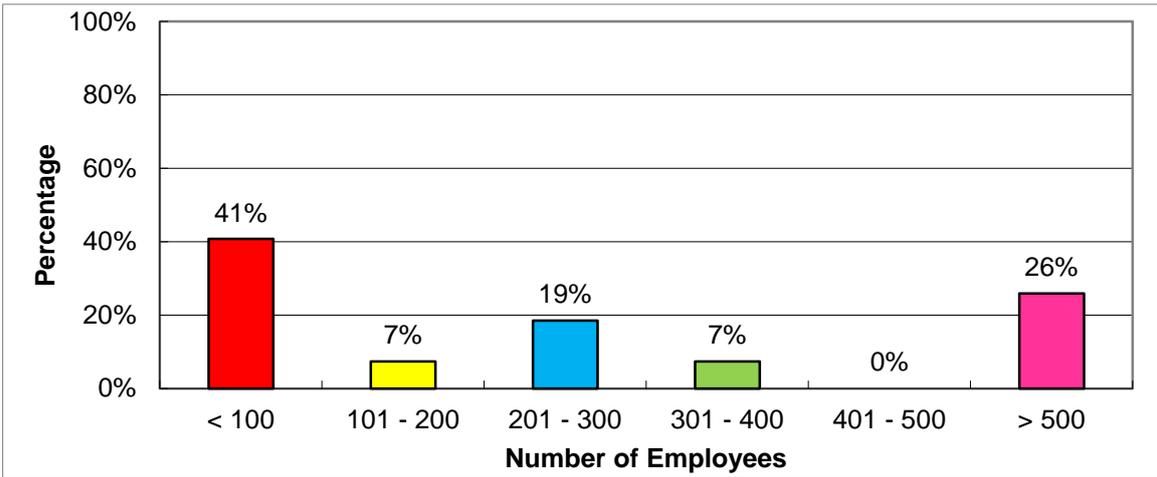


Figure 4.5 Total number of employees prior to the introduction of MIDP

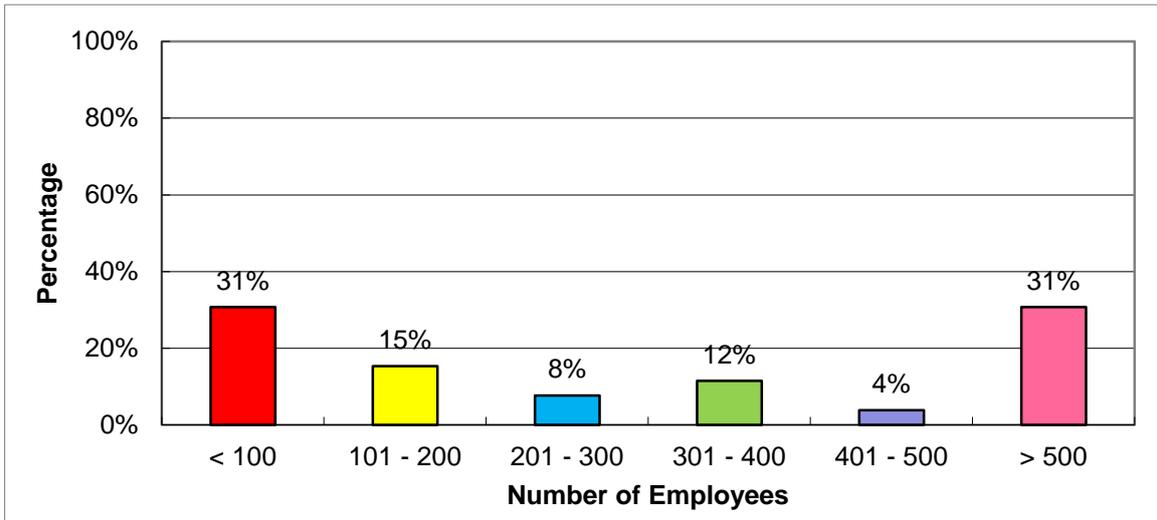


Figure 4.6 Total number of employees post the introduction of MIDP

It is evident from Figures 4.5 and 4.6 that the introduction of MIDP resulted in an increase in the total number of employees in the component manufacturing industry. Subsequent to the introduction of the MIDP, 31% of respondents had more than 500 employees, as compared to 26%, prior to the MIDP introduction. Four percent of respondents had between 401 and 500 employees post the introduction of the MIDP, as compared to 0%, prior to the introduction of MIDP.

As indicated by Figure 4.7 the automotive industry in South Africa provides significant employment.

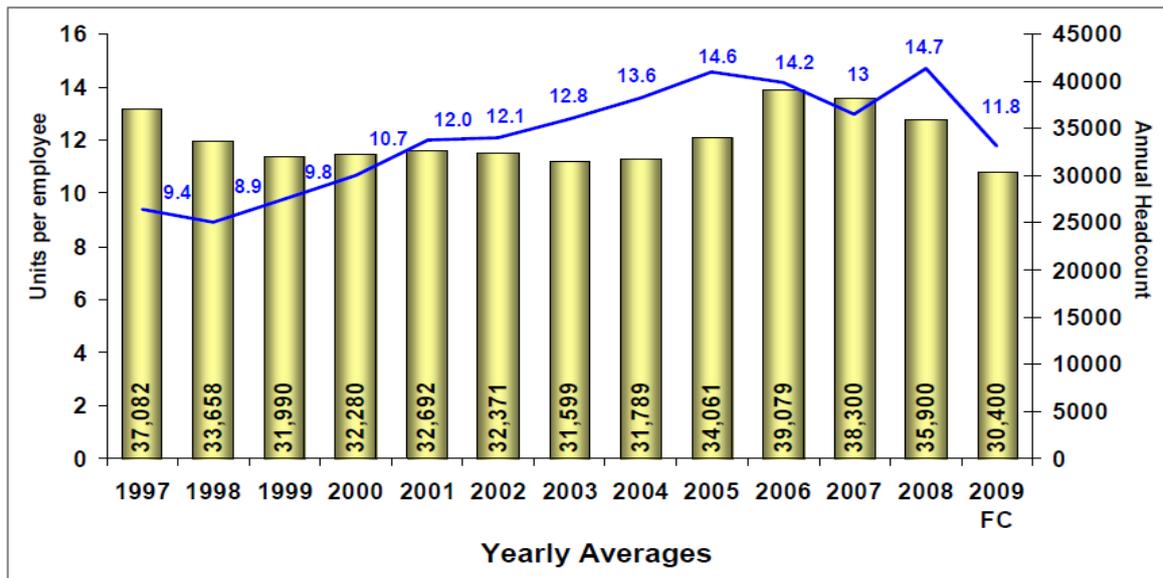


Figure 4.7 Number of employees in the OEM sector of the automotive industry

Source: NAAMSA (2011)

According to NAAMSA (2011), the automobile manufacturing industry is one of the largest employers in the manufacturing sector. There are currently approximately 30 000 employees in this sector while the component manufacturing industry employs approximately 81 000 workers.

There are also about 200 000 employees in the vehicle sales and vehicle maintenance and servicing field. The impact of the industry on South Africans is significant, with the industry, in addition, providing employment in many other areas, such as logistics. With exception to the period 2007-2009, which can be attributed to the global economic and financial downturn period, there has been a gradual increase in employment in the automotive sector in South Africa.

**4.4.4 To determine whether MIDP has resulted in increased investment in the component manufacturing industry**

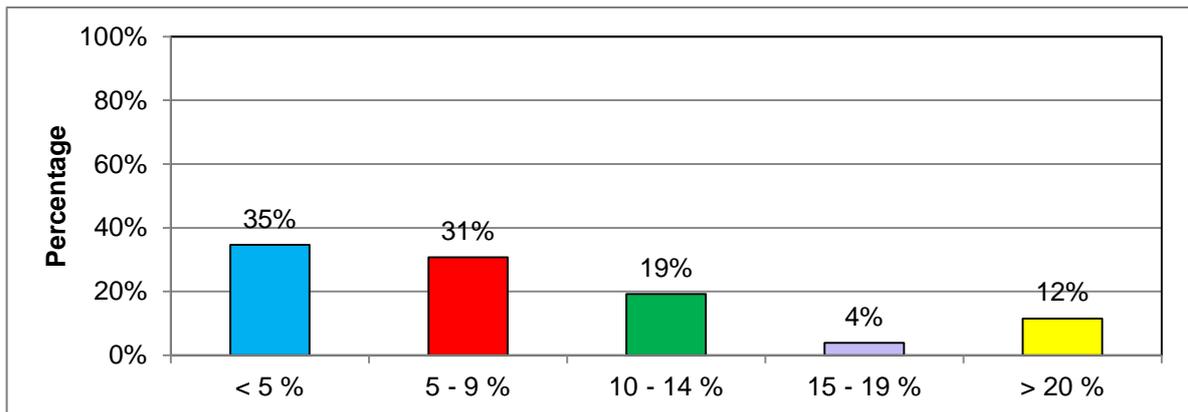


Figure 4.8: The level of your organisations investment, relevant to turnover, prior to the introduction of MIDP

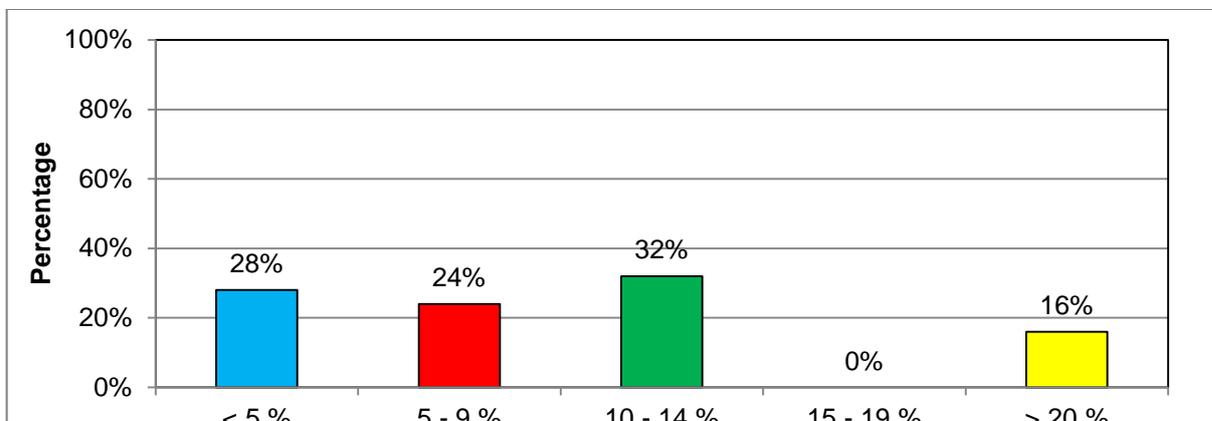


Figure 4.9: The level of your organisations investment, relevant to turnover, post the introduction of MIDP

According to Figures 4.8 and 4.9 there was an increase in the level of investment by the respondents, post the introduction of the MIDP. 32% of respondents had an increase of between 10 and 14%, as compared to 19% of respondents prior to the MIDP introduction. There was an increase investment of greater than 20% by 16% of respondents, as opposed to 12% prior to the introduction of MIDP. There were also more respondents (35%) who had an investment of less than 5% prior to the introduction of the MIDP as compared to those post the introduction of MIDP (28%).

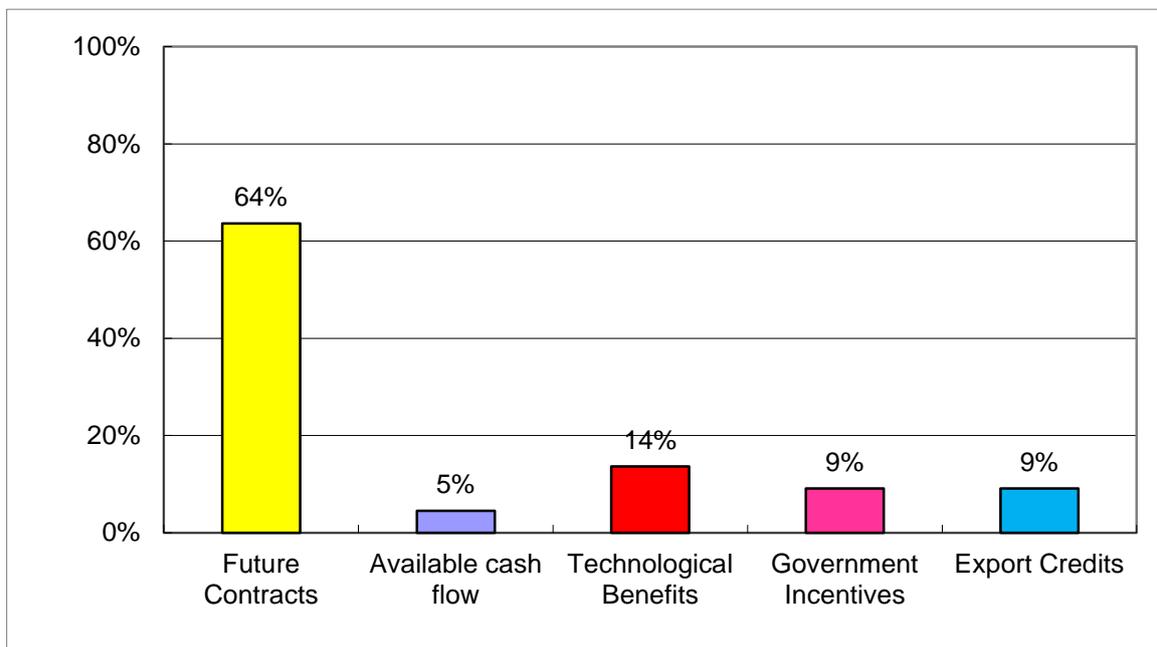


Figure 4.10: The reasons for an increase in investment

Figure 4.10 illustrates that 64% of respondents experienced an increase in investment as a result of future contracts. This was followed by 14%, who indicated that it had invested for technological benefits. The reason for 9% of respondents increasing their investments was due to government incentives, while 9% invested due to export credits. Only 5% invested as a result of available cash flow.

Although Barnes and Morris (2008) warned of potential challenges faced by the industry in acquiring updated technologies and expanding capital capabilities, the findings in this study is supported by NAAMSA (2011).

CAPITAL EXPENDITURE IN R MILLIONS				
Year	Product / Local / Content / Export Investment / Production Facilities	Land and Buildings	Support Infrastructure (I.T., R&D, Technical, etc.)	Total
2000	1 311,2	109,7	140,6	1 561,5
2001	1 800,1	33,3	244,9	2 078,3
2002	2 311,4	152,0	262,4	2 725,8
2003	1 989,4	141,5	193,9	2 324,8
2004	1 816,3	129,6	273,7	2 219,6
2005	2 805,3	512,1	258,7	3 576,1
2006	5 058,1	758,0	398,8	6 214,9
2007	2 458,7	382,4	254,4	3 095,5
2008	2 807,7	329,1	153,1	3 289,9
2009	2 215,9	178,7	74,1	2 468,7
2010	3351,1	441,2	202,4	3994,7

Table 4.2 Capital Expenditure

Source: NAAMSA (2011)

In 2009, as a result of the global financial and economic crisis, many projects were either cancelled or deferred. This resulted in a decline in capital expenditure (Table 4.2). However OEMs started investing again in 2010 and 2011, in preparation for the impending APDP (NAAMSA, 2011).

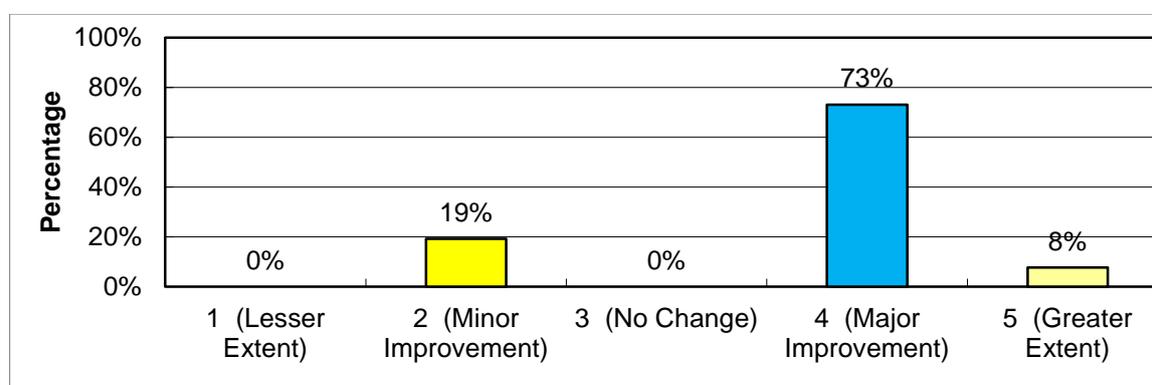


Figure 4.11: The extent export incentives can promote further development in the SA automotive industry.

It is evident from figure 4.11 that the majority of respondents (73%) believed that export incentives would result in a major improvement in further development in the SA automotive industry, while 19% believed that would only be a minor improvement. 8% felt that there would be a greater extent of development. No one believed that there would be no change or development to a lesser extent.

According to NAAMSA (2011) there has been a gradual increase in the number of vehicles manufactured domestically, for local and export markets. Table 4.3 shows the automotive sector's export as a percentage of South Africa's total exports.

	<b>1995</b>	<b>2000</b>	<b>2007</b>
<b>Total SA Exports (R Billion)</b>	102.1	210.4	494.4
<b>Total Automotive Exports (R Billion)</b>	4.2	23.4	67.6
<b>Automotive Exports as a % of Total SA Exports</b>	4.1%	11.1%	13.7%

Table 4.3 Automotive exports as a percentage of total SA exports

Adapted from AIEC (2011)

The automotive sector was responsible for 13.7% of South Africa's total exports during 2007. (AIEC, 2011). According to NAACAM (2011), the government's Motor Industry Development Programme (MIDP) has helped the automotive industry to evolve into an increasingly self-sufficient industry, despite all the OEMs in South Africa being wholly or mainly owned by multinational firms.

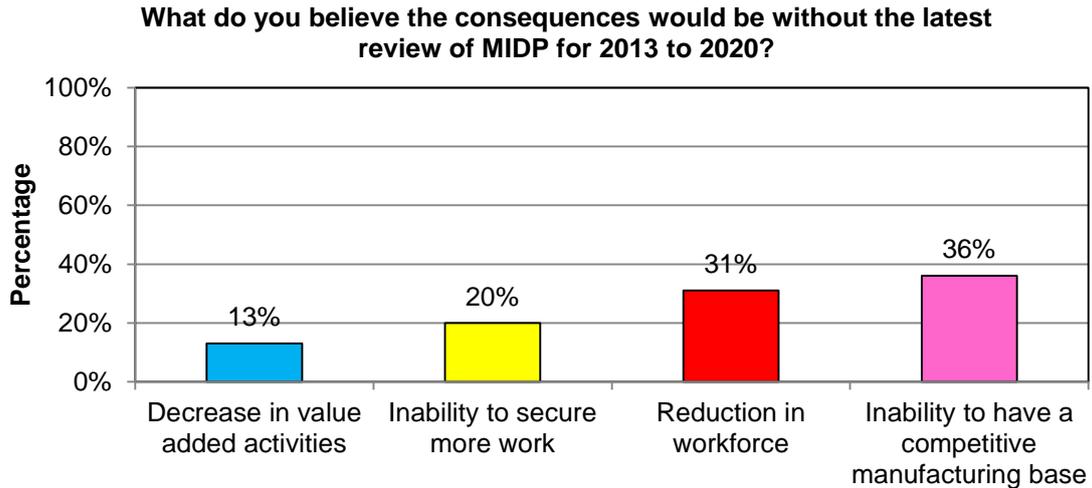


Figure 4.12: The consequences for not reviewing the MIDP for 2013 to 2020

According to figure 4.12, 36% of respondents believed that the SA automotive industry would not be able to establish a competitive manufacturing base without the review of the MIDP for 2013 to 2020. This was followed by 31%, who believed that there would be a reduction in work force, 20% who indicated that they would be unable to secure more work and 13% who understood that there would be a decrease in value added activities.

#### 4.5 Inferential Statistics

Inferential statistics makes it possible to draw conclusions, make predictions and decisions on the characteristics of the population based on the information contained in the sample. Various correlations and cross tabulations were undertaken to understand if any significant conclusions can be made.

##### 4.5.1 To determine whether the introduction of MIDP has contributed to an increase in throughput for the component manufacturing industry

In order to determine if a relationship existed between respondents' primary activity and the increase in production or sales, a correlation analysis was conducted (Table 4.4).

		Primary Activity	Increase in production or sale of units
Primary Activity	Pearson Correlation	1	.615**
	N		30

Table 4.4 Correlation of primary activity and increase in production or sales

According to Table 4.4 there is a significant positive relationship between respondents' primary activity and the increase in production or sales ( $r = 0.615$ ).

		Percentage increase in production or sale of units					Total
		< 5%	5- 9%	10- 14%	15-19%	> 20%	
Primary Activity	Fabrication	1	1	0	0	0	2
	Components	1	1	1	0	1	4
	Logistical Services	1	1	2	1	2	7
	Manufacturing Automotive	0	2	2	4	7	15
	Retail	1	0	0	0	0	1
	Packaging	1	0	0	0	0	1
<b>Total</b>		<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>30</b>

Table 4.5 Cross tabulation of primary activity and increase in production or sales

It is evident from table 4.5 that the respondents from the automotive manufacturing sector enjoyed the greatest increase in production or sales, with 7 respondents experiencing increases of greater than 20% and 4 respondents between 15 and 19%. This was followed by Logistical services with 2 out of 7 respondents experiencing increases of greater than 20% and 1 respondent between 15 and 19%. One respondent out of 4 in the component sector experienced an increase of greater than 20%.

India's equivalent of the MIDP is the Phased Manufacturing Programme, under which domestic OEMs had to increase their local content. Its success in helping to sustain economic growth encouraged the Government of India to introduce policy initiatives to support the growth of the industry. Some initiatives included excise duty reductions and tax incentives (Nag B, 2012).

Figure 4.13 below shows that production has increased significantly in recent years, rising from around \$4 billion in 2000/01 to \$18 billion in 2007/08.

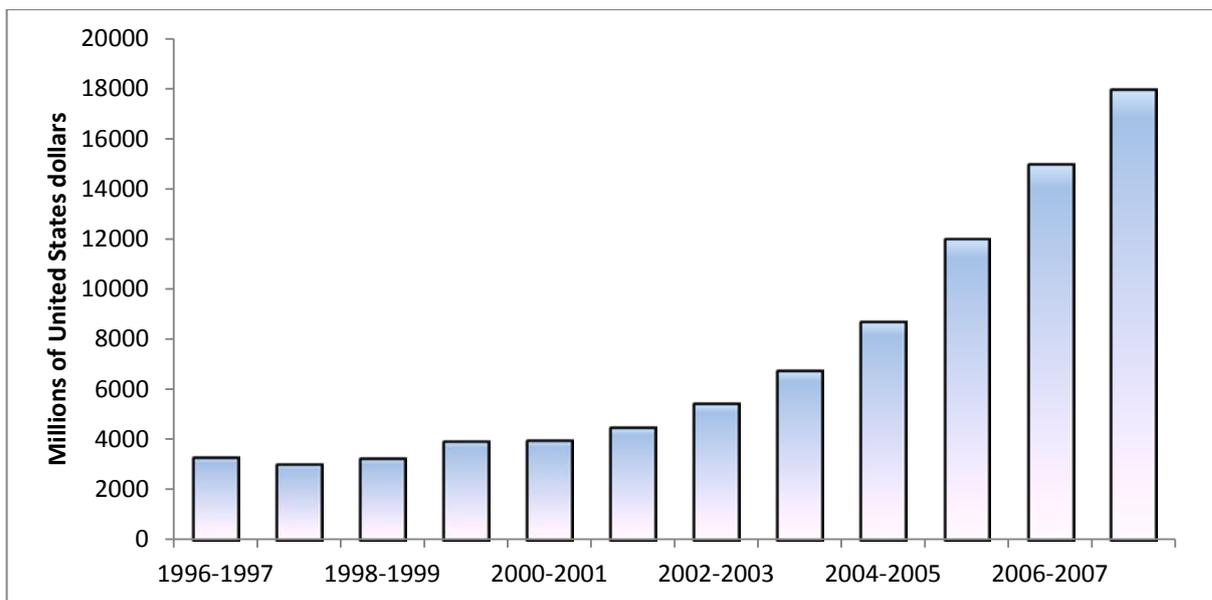


Figure 4.13: Production in the auto component industry of India

Source: Nag B (2012)

In 2002, as a prerequisite of joining the World Trade Organisation (WTO), China had to open up its markets. Subsequently tariffs were reduced and local content requirements eliminated. This resulted in rapid growth of its automotive industry. With the automotive industry also linked to the machinery, rubber, petrochemicals, electronics, textiles, auto financing, aftermarket distribution channels, and automotive repair services sectors, China has identified this industry as a key industry to drive growth throughout the entire economy.

According to Holweg, et al. (2005) China is now the fourth largest auto producer and third largest auto market in the world. In 2002 and 2003 overall production

increased by 38.8% and 36.7% respectively, with the automotive component industry enjoying an annual turnover of US \$54 billion in 2004. Many major international automotive component manufacturers have established manufacturing operations in China in order to supply local OEMs and also to take full advantage of low labour costs for exports.

#### 4.5.2 To determine whether the introduction of MIDP has led to increased employment levels within the component manufacturing industry

A correlation analysis was conducted (Table 4.6) to determine if a relationship existed between total number of employees and the organisations turnover post introduction of the MIDP.

		What was your organisations turnover post the introduction of MIDP
Total number of employees post the introduction of MIDP	Pearson Correlation	.811**
	N	30

Table 4.6 Correlation of total number of employees and the organisations' turnover post introduction of the MIDP

There is a strong positive relationship between respondents' total number of employees and the organisations' turnover post introduction of the MIDP ( $r = 0.811$ ).

		Total number of employees prior the introduction of MIDP						Total
		< 100	101 - 200	201 - 300	301 - 400	401 - 500	> 500	
Organisations turnover post the introduction of MIDP	< R10 million	5	0	0	0	0	0	5
	R10 million to R499 million	4	3	0	0	0	0	7
	R50 million to R199 million	0	2	2	1	1	1	7
	R200 million to R499 million	0	1	0	1	2	1	5
	>R500 million	0	1	0	1	0	4	6
<b>Total</b>		9	7	2	3	3	6	30

Table 4.7 Cross tabulation of total number of employees and the organisations' turnover prior introduction of the MIDP

		Total number of employees post the introduction of MIDP						Total
		< 100	101 - 200	201 - 300	301 - 400	401 - 500	> 500	
Organisations turnover post the introduction of MIDP	< R10 million	5	0	0	0	0	0	5
	R10 million to R499 million	2	4	0	0	0	0	6
	R50 million to R199 million	0	2	2	1	1	2	8
	R200 million to R499 million	0	0	0	1	0	2	3
	>R500 million	0	1	0	1	0	6	8
<b>Total</b>		7	7	2	3	1	10	30

Table 4.8 Cross tabulation of total number of employees and the organisations' turnover post introduction of the MIDP

It is evident from tables 4.7 and 4.8 the MIDP has contributed to an increase in employment prior to the introduction of the MIDP, six respondents with a turnover of more than R500 million had a total number of employees in excess of 500, while post the introduction of the MIDP there were ten respondents with turnover over R500 million and more than 500 employees. There were nine respondents with less than 100 employees before the MIDP introduction and seven post the introduction of the MIDP.

#### 4.5.3 To determine whether MIDP has resulted in increased investment in the component manufacturing industry

In order to determine if a relationship existed between respondents' primary activity and the increase in investment post the introduction of the MIDP, a correlation analysis was conducted (Table 4.9).

		Primary Activity	Increase in investment in the component manufacturing industry
Primary Activity	Pearson Correlation	1	.721**
	N		30

Table 4.9 Correlation of primary activity and increase in investment post MIDP introduction

There is a strong positive relationship between respondents primary activity and an increase in investment after the introduction of the MIDP ( $r = 0.721$ ).

	Percentage increase in investment					Total
	< 5%	5- 9%	10- 14%	15-19%	> 20%	
Primary Fabrication	0	1	1	0	0	2
Activity Components	1	1	1	0	1	4
Logistical Services	1	1	2	1	2	7
Manufacturing Automotive	0	2	2	5	6	15
Retail	1	0	0	0	0	1
Packaging	1	0	0	0	0	1
<b>Total</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>30</b>

Table 4.10 Cross tabulation of primary activity and increase in investment post MIDP introduction

According to table 4.9, the introduction of the MIDP had a positive effect in terms of investment in the respondents. Nine respondents had an increase in investment of over 20%, with six of these belonging to the automotive manufacturing sector. There were two others from the logistics sector and one from the component sector. There were also five respondents from the manufacturing automotive sector that experienced an increase in investment of between 15 and 19%. Only four respondents had an increase of less than 5%.

#### 4.6 Other Correlations

The following correlation analyses were also conducted but had no significant relationships:

- Investment post MIDP introduction and increase in production units/sales
- Investment prior to the MIDP introduction and turnover prior to MIDP introduction
- Investment post MIDP introduction and turnover post MIDP introduction
- Number of employees prior to MIDP introduction and turnover prior to MIDP introduction

#### **4.7 Summary**

Data that was collected from respondents was analysed. Some of the salient findings include:

- The MIDP contributed to an increase in employment, production/sales and investment in the automotive industry
- The biggest beneficiaries within the supplier sector were the component manufacturers
- The MIDP played a significant role in sustaining the competitiveness of suppliers
- 

These findings were related to the objectives of the study that were outlined in chapter one.

Based on the above findings, some conclusions have been drawn from which recommendations are suggested. The limitations of the study have been identified and recommendations for further research are described in the next chapter.

## **CHAPTER FIVE**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

In this chapter the study is concluded by stating the research outcomes in relation to the research objectives, and by providing recommendations for future research on this topic.

#### **5.2 Salient Findings**

##### **5.2.1 Objective One**

The study indicated that component manufacturers increased its turnover and throughput. In this regard, 22% of respondents had an annual turnover of R500 million post the introduction of MIDP as compared to 18% prior to the introduction of MIDP. This increase in turnover helps sustain the success of these organisations and ultimately contributes positively to the economy. Mandani and Mas-Guix (2011) stated that there is consensus that MIDP has resulted in a remarkable transformation of imports, exports and production in the South African automotive sector. Barnes, et al. (2003), further support this notion by indicating that “since the implementation of the MIDP, South Africa has seen rapid growth in the automotive sector, based not only on a speedy rise in the exports of completely-built-up units (CBU’s), especially after 1988, but also exports of automotive components”. In reviewing similar policies, in reference to the MIDP, applied in India and China, increased throughput and turnover was experienced by automotive component manufacturers in these countries as well.

##### **5.2.2 Objective Two**

The study indicated that the introduction of MIDP resulted in an increase in the total number of employees in the component manufacturing industry. Subsequent to the introduction of the MIDP, 31% of respondents had more than 500

employees, as compared to 26%, prior to the MIDP introduction. According to NAAMSA (2011), employment in the automobile manufacturing industry currently amounts to approximately 30 000 persons whilst employment in the component manufacturing industry is of the order of 81 000 employees, making the industry one of the largest employers in the manufacturing sector.

### **5.2.3 Objective Three**

Objective 3 sought to understand as to whether the introduction of MIDP has contributed to increased investment within the automotive component manufacturers. The study indicated that 64% of respondents experienced an increase in investment as a result of future contracts. Although Morris and Barnes (2008) warned of potential challenges faced by the industry in acquiring updated technologies and expanding capital capabilities, the findings in this study is supported by NAAMSA (2011). The increase in capital expenditure during 2010 and 2011 may be attributed to OEMs preparing to take full advantage of the impending APDP (NAAMSA, 2011).

### **5.3 Implications of this Research**

- This research study sought to add to the body of knowledge of MIDP, from a component manufacturing perspective to enable organisations to review the benefits that exists within MIDP. The study also indicated that similar programmes implemented in India, China and selected African countries clearly indicated similar benefits flowed to organisations in these countries, as a result of government's intervention in providing a stimulus to the automotive manufacturing industry.
- From a South African perspective, it is evident from the study that export incentive is a major tool that can promote further development in the automotive industry.
- The research further indicated that should the MIDP programme, which will be replaced by the Automotive Production Development Programme (APDP) commencing in January 2013, not be extended, 36% of respondents indicated that the industry will not be able to establish a

competitive manufacturing base, whilst 31% of the respondents believed that there would be a reduction in work force.

- Barnes and Morris (2008) indicated that currently global excess capacity is forty-two times the entire vehicle output of South Africa. Based on the global risks for this industry there is consensus that should the MIDP have not been implemented, the automotive industry of South Africa itself would have collapsed in the face of global competition.
- According to Barnes and Morris (2008), in terms of employment, the forecasts are favourable, showing that employment numbers should grow by 68 per cent by 2020, however slower than the growth curve of the industry's volume due to the expected efficiency gains in the industry in the long term.
- The protectionism offered by the MIDP to the automotive sector, has not encouraged this sector in becoming globally competitive in terms of world class manufacturing. This view is supported by Kaplan (2004). Further, Flatters and Netshitomboni (2006) also note there has been very little adjustment in the industry and that the MIDP has instead insulated the country's manufacturers from global competition, with the risk that manufacturing activities and related employment are not sustainable without permanent support at high levels. Black (2001), on the other hand argues that "coupling tariff reductions with strong export support has provided crucial access to high volume markets for both vehicles and components and in turn encouraged investments, which have gone some way to making parts of the South African automotive industry competitive."

#### **5.4 Limitations of this Study**

The following limitations were identified:

- Although the sample respondents were all based within the KZN region, the majority of their business is conducted outside of this region.

- This study focused solely on Tier 1 suppliers and excluded Tier 2 and Tier 3 suppliers.
- There was no catalytic converter manufacturer included in the sample, although it is the only automotive component sector which has achieved global significance with 15% global market share.
- Flatters (2005) contends that the lack of transparency into the inner workings of the programme itself and precisely how much it costs the South African economy makes the MIDP very difficult to analyse.
- This study was conducted in KwaZulu-Natal and excluded other manufacturing hubs, namely Gauteng and Eastern Cape.

### **5.5 Recommendations for Future Research**

- It is recommended that the APDP be assessed from a component manufacturing perspective.
- The inner workings of APDP are reviewed in depth to understand how much it costs the South African economy.
- Similar studies can be conducted in Gauteng and the Eastern Cape.

### **5.6 Summary**

The respondents of the study exhibited high levels of awareness in relation to the impact of MIDP on their respective organisations. The data collected served to answer the research questions and showed that throughput, employment and investment, from an automotive component manufacturing sector had positive gains. This study will now put to rest any negative perception that may exist, relevant to the gains that flowed, to the automotive component manufacturing sector, from a MIDP perspective.

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## APPENDIX I - Questionnaire

Informed Consent MBA Research Project Researcher:

Selvin Konar (083 267 0034)

Supervisor:

Prof. A. M. Singh (031-2607564)

Research Office:

Ms P Ximba (031-2603587)

Dear Respondent,

I am Selvin Konar, an MBA student at the University of KwaZulu-Natal. As part of fulfilling the requirements relevant to completing the Masters in Business Administration at the Graduate School, University of KwaZulu-Natal, I require the under mentioned questionnaire to be completed. You are invited to participate in a research project entitled: Impact of the MIDP on the automotive component industry.

The aim of this study is to: understand whether MIDP has contributed the following to your business:

- a] Increased Throughput
- b] Increased Employment
- c] Increased Investment

Through your participation I hope to understand whether MIDP has provided any benefits to the automotive component industry. Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey/focus group. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business, UKZN.

If you have any questions or concerns about completing the questionnaire or about

participating in this study, you may contact me or my supervisor at the numbers listed above. The survey should take you about 5 minutes to complete. I hope you will take the time to complete this survey.

If you agree to the above and want to proceed to the questionnaire, please select the I AGREE checkbox and then click on CONTINUE, alternatively to opt out of the questionnaire, please select the EXIT SURVEY link on the top right corner of the screen.

Sincerely

S Konar

Date: 10/01/2011

Q1. Annual Revenue / Turnover

1. < R10 million
2. R10 million to R49.9 million
3. R50 million to R199.9 million
4. R200 million to R499.9 million
5. > R500 million

Q2. Primary Activity

1. Assembly
2. Fabrication
3. Maintenance
4. Packaging
5. Components
6. Logistical Services
7. Financial Services
8. Accessories
9. Manufacturing - Automotive
10. Retail

Q3. Your role in the organization?

1. Executive Management
2. Senior Management
3. Middle Management
4. Supervisory
5. Operational

Q4. What is the nature of your company's trade with the automotive cluster?

1. Mainly a Supplier
2. Mainly a Customer
3. Both Customer and Supplier
4. A support service

Q5. What approximate percentage of your turnover can be attributed to trade in the KZN automotive cluster?

1. < 20 %
2. 20 - 39 %
3. 40 - 59 %
4. 60 - 79 %
5. 80 - 100 %

Q6. What was your organisation's turnover prior to the introduction of MIDP?

1. < R10 million
2. R10 million to R49.9 million
3. R50 million to R199.9 million
4. R200 million to R499.9 million
5. > R500 million

Q7. What was your organisation's turnover post the introduction of MIDP?

1. < R10 million
2. R10 million to R49.9 million
3. R50 million to R199.9 million
4. R200 million to R499.9 million
5. > R500 million

Q8. Has the production/ sale of units increased post the introduction of MIDP?

1. Yes
2. No

Q9. If you answered yes to the above question, indicate the percentage production/sale of units increased by?

1. < 5 %
2. 5 - 9 %
3. 10 - 14 %
4. 15 - 19 %
5. > 20 %

Q10. Has the introduction of MIDP been beneficial to your organization?

1. Yes
2. No

Q11. If you answered yes to the question above, indicate the reason/s why?

1. Received Government Grants
2. Received Government Protection
3. Earned Export Credits
4. Made your business more viable

Q12. Total number of employees prior to the introduction of MIDP

1. < 100
2. 101 - 200
3. 201 - 300
4. 301 - 400
5. 401 - 500
6. > 500

Q13. Total number of employees post the introduction of MIDP

1. < 100
2. 101 - 200
3. 201 - 300
4. 301 - 400
5. 401 - 500
6. > 500

Q14. By what percentage do you expect your company's workforce to increase in 2011?

1. < 5 %
2. 5 - 9 %
3. 10 - 14 %
4. 15 - 19 %
5. > 20 %

Q15. By what percentage do you expect your company's workforce to decrease in 2011?

1. < 5 %
2. 5 - 9 %
3. 10 - 14 %
4. 15 - 19 %
5. > 20 %

Q16. What was the level of your organization's investment, relevant to turnover, prior to the introduction of MIDP?

1. < 5 %
2. 5 - 9 %
3. 10 - 14 %
4. 15 - 19 %
5. > 20 %

Q17. What was the level of your organization's investment, relevant to turnover, post to the introduction of MIDP?

1. < 5 %
2. 5 - 9 %
3. 10 - 14 %
4. 15 - 19 %
5. > 20 %

Q18. If you indicated an increase in investment levels, please indicate the reason/s why?

1. Future Contracts
2. Available cash flow
3. Technological Benefits
4. Government Incentives
5. Export Credits

Q19. To what extent do you believe export incentives can promote further development in the SA automotive industry?

1. 1 (Lesser Extent)
2. 2 (Minor Improvement)
3. 3 (No Change)
4. 4 (Major Improvement)
5. 5 (Greater Extent)

Q20. What do you believe the consequences would be without the latest review of MIDP for 2012 to 2020?

1. Reduction in workforce
2. Inability to secure more work
3. Inability to have a competitive manufacturing base
4. Decrease in value added activities

## APPENDIX II - Ethical Clearance



16 November 2012

Mr S Konar 208522109  
Graduate School of Management and Leadership  
Westville Campus

Dear Mr Konar

Protocol reference number: HSS/0195/010 M  
Project title: Impact of Motor Industry Development Programme on the automotive component industry

**Approval and change supervisor**

I wish to confirm that ethical clearance has been granted full approval for the above mentioned project:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the school/department for a period of 5 years

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....  
Professor Steven Collings (Chair)

cc New supervisor Dr A Kader  
cc Academic leader Dr S Bodhanya  
cc School Admin. Mrs W Clarke

Professor S Collings (Chair)  
Humanities & Social Sc Research Ethics Committee  
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