Analysis of the Manufacturing and Export Profile of the Limpopo Province: 1996-2006

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Abstract

This dissertation compiles and presents a profile of manufacturing and exports from the Limpopo Province. It reviews the literature that explains the determinants of trade and that puts forward the arguments in favour of outward-oriented policies. It reviews the geography of South African exports and policies aimed at promoting regional industrial development and exports. The manufacturing and trade data required to compile an export profile of the province are analyzed. After the manufacturing and export profile of Limpopo were compiled and analyzed, it became clear that Limpopo Province had many manufacturing sub-sectors with high export potential that could be tapped to fight the problem of unemployment and poverty that the province is experiencing.

Opsomming

Hierdie verhandeling bied 'n samestelling van 'n profiel van vervaardigingsaktiwiteite in en uitvoer van vervaardigde goedere uit die Limpopo provinsie aan. Die oorsig van die literatuur verduidelik watter faktore handel aandryf en stel die argumente ten gunste van 'n uitwaartsgeorienteerde ekonomie beleid. Daar is ook 'n oorsig van die ligging van Suid-Afrikaanse uitvoer en van die beleid wat daarop gemik is om die ontwikkeling van streeksnywerhede en uitvoer te bevorder. Data oor vervaardiging en handel is ontleed om 'n profiel van die provinsie se uitvoer-aktiwiteite saam te stel. Die ontleding van die profiel het dit laat blyk dat Limpopo provinsie 'n aantal vervaardigingsektore het wat uitvoer-potensial toon. Dit kan gebruik word om die uitdagings van armoede en werkloosheid in die provinsie die hoof te bied.

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Chapter 1: Introduction

Since the South African democratic government came into being in 1994, much has been done to address the imbalances of the past. Nevertheless, there are challenges that need immediate attention. The government is faced with the problem of alleviating poverty that embraces millions of South African residents. This problem of poverty is exacerbated by the high rate of unemployment that currently stands at 40 percent (Magibisa, 2008:17).

The government has introduced ASGISA (The Accelerated and Shared Growth Initiative for South Africa) to address the unemployment problem. The program puts forward the growth of exports as a means to curb unemployment and poverty (Mbeki, 2002:7). ASGISA focuses on:

- Building infrastructure to grow the productive capacity of the economy.
- Supporting sectors of the economy with special potential for faster growth.
- Developing the skills required.
- Addressing inequalities that marginalize the poor in the second economy.
- Making government more effective and efficient (Mbeki, 2006:30).

Basically, ASGISA is a set of interventions to promote and create conditions for accelerated and shared growth and development (Mbeki, 2006:3).

However, the implementation of ASGISA does not occur only at the level of the national economy. Policies aimed at increasing growth and employment have to be realized at provincial and local levels.

Limpopo Province has been characterized as a marginalized economy. In 1994, the province had a small provincial economy and the poorest after the Eastern Cape. It was only after 1998 that Limpopo's economic growth rate began to accelerate (LGDS, 2004:2). However, the broad unemployment rate remained high, reaching 50 per cent in 2001. The provincial growth and development strategy predicts that it is likely to worsen over the rest of the decade to more than 53 per cent by 2010 (LGDS, 2004:2). This should be seen within the context of the National Growth and Development Summit, where in June 2003, it was agreed that unemployment should have been reduced by half by the year 2010 (LGDS, 2004:38). As the level of employment is

deteriorating, the province has been plunged into absolute poverty. In the Census conducted in 2001 it was found that 67 per cent of households in Limpopo live in poverty (LGDS, 2004:40).

The provincial government has realized that the problems of poverty and unemployment need immediate attention. The province is aiming to increase economic growth from 6.5 per cent per annum in 2001 to 9 per cent per annum by 2010 (LGDS, 2004:45). To this end, four important sectors have been identified to serve as engines of growth. The sectors include mining, agriculture, manufacturing and tourism (LGDS, 2004:39).

Despite the plans that are in place to fight the problems of poverty and unemployment in the province, the projections of a reduction in unemployment is on average only 2 per cent (LGDS, 2004:56). A 2 per cent reduction in unemployment is very small, especially in the province where most of the population faces absolute poverty. Limpopo Province may need additional strategies to address the challenges of unemployment and poverty. Export promotion can open up new opportunities to the province and its population. Exports can contribute to higher economic growth rates and employment creation and reduce poverty. But before one can discuss exports and export promotion as policy options in Limpopo, it is important to first describe the export profile of the province.

1.1 Problem Statement

The Limpopo Province faces significant challenges of low economic growth, unemployment and poverty. However, before one can put export-led growth forward as a solution to the challenges faced in Limpopo Province and before export promotion is undertaken as a policy intervention, there is a need for a thorough analysis of the province's export profile. The aim of this dissertation is to compile and examine such a profile.

1.2. Motivation

Exports can play an important role in the growth and development of most economies. Evidence of export-led growth can be found across the globe. In Great Britain exports were used as engines for growth (Salvatore, 1995:332). South Korea with its strong economy has maintained high trade to GDP ratio through export promotion (Nam, 1993:76). Even in Africa, exports have played an

important role in economic progress in the past and are bound to do so in the future (Helleiner, 2002:3).

Branch (2002:30) identified some of the benefits of exports at firm level. Increased exposure to the international market means increased exposure to competition and improved competitiveness. Firms can increase turnover and exploit economies of scale. Being in contact with a wider market encourages higher standards and the use of the latest technology. Risk is spread across different markets and there is potential for increased profitability. Van Eldik and Viviers (2005:3) found that long–term expansion of the company, competitiveness, exploitation of unique technology and expertise as well as the improvements in return on investments depend on exports.

The benefits are not limited to only the firms that export. At a macro-level, export-led growth leads to improvements in productivity and employment creation. Bell (1975:496) maintained that growth initiated by expansion of exports is less likely to be brought to an end by balance of payments difficulties. As a result, exports and export promotion policies are preferred as important channels through which to stimulate economic growth world wide.

In South Africa the notion of exports-for-growth has been part of macroeconomic strategies like Growth, Employment and Redistribution: A Macroeconomic Strategy (GEAR) and ASGISA. Recently, it was re-emphasized that South Africa can grow faster when we export more goods and services and accelerate investment in areas of competitive advantage (Manuel, 2007:8). Since the focus has been on exports leading growth, South Africa has performed better in terms of gross output, investment, productivity gains and wage increases (Cassim, Onyango & Van Seventer, 2004:81). Furthermore, South Africa has delivered impressive results especially in the development of the automobile industry and the involvement of South African corporations in the rest of Africa (Akinboade & Makina, 2005:50).

Nevertheless, there are challenges that need immediate attention in the South African economy. Over the period 1994 to 2004, economic growth was 3 per cent per annum on average, which is a considerable improvement on the 1 per cent per annum growth in the decade before 1994. The economic growth rate has even reached about 5 per cent per annum in 2005 (Mlambo-Ngcuka, 2006:8). However, growth of 3 per cent per annum in the first ten years of democracy was not enough to substantially reduce unemployment in the country (Akinboade & Makina, 2005:55).

Over a period, South Africa turned its trade strategy of import substitution into export promotion (Akinboade & Makina, 2005:50). Over the period 1994 to 2004, average tariffs in manufacturing fell from 23 per cent to 8.6 per cent. Manufactured exports rose as a share of total exports, from 27.7 per cent in 1988 to 53.4 per cent in 2004 (Edwards & Alves, 2006: 478). During this time, TISA (Trade and Investment South Africa) was introduced with the sole aim of stimulating foreign direct investment and export of South African goods and services to international markets (Van Eldik & Viviers, 2005:5). However, structural changes in the world economy and domestic economy qualified the success of exports as a driver of growth. While the South African economy was opened up to the world the share of high-technology products in global trade increased from 16 to 24 per cent. The overall growth in exports came from middle-income countries with high- and medium-technology products.

In the case of South Africa there was still significant mineral dependence. Adding agro- and minerals-based manufactures to primary exports takes the share of natural resource intensive products in total exports to 60 per cent in 2002. South Africa also experienced poor export growth during the 1990s. Manufacturing export growth (6.9%) lagged behind the average of middle-income economies and the resources group. South Africa's world market share of exports declined from 0.89 per cent in 1988 to 0.53 per cent in 2002 (Edwards & Alves, 2006: 478). Despite these caveats the route taken by the South African government has paid off as the economy continued to expand at a pace of 4.9 per cent per annum and generated new jobs (Manuel, 2007:5).

Macro changes, challenges and policy shifts are usually reflected at provincial and local levels. The resolutions taken at national level have to be implemented at provincial and municipal level. Although the problem of unemployment and poverty is targeted nationally, provinces have the role to confront it. South Africa's Limpopo Province in particular is currently experiencing economic growth and capital investment but job-creation, diversification and poverty reduction are in many instances still lagging behind (LGDS, 2004:117). The current unemployment rate remains unacceptably high at 35 per cent despite the 4 per cent average annual growth rate (Moloto, 2007:4).

The Limpopo Growth and Development Strategy (2004:118) identifies the challenges faced in Limpopo Province as the following:

- Improving the quality of life of the province's population.

- Promoting sustainable job-creation and economic growth.
- Good governance.
- Addressing priorities such as BEE, HIV/AIDS-TB and poverty reduction.
- Facilitating regional economic integration, that is, harnessing Limpopo`s strategic location as the gateway to Africa towards achieving the objective of the New Partnership for African Development (NEPAD) (LGDS, 2004:118).

The most striking challenge which the province must address soon is poverty reduction. The Premier of Limpopo disclosed that the economy of the province has been growing at a higher rate than the national average while at the same time poverty has been increasing (LGDS, 2004:117).

The problem of unemployment may be addressed through exports and export promotion. The improvements in exports stimulate economic growth and employment creation. Already there are some initiatives to promote exports from the province. The province has developed Public-Private Partnerships (PPPs) in key sectors such as agriculture, mining and tourism to attract new investment and to sustain growth (Moloto, 2007:3). Trade Investment Limpopo (TIL) was also established to market the potential and investment opportunities of Limpopo to local, national and international business. Amongst other things, TIL`s services include investment promotion and marketing, product packaging, market research as well as the creation of business networking platforms (Moloto, 2007:2). Some institutions which were developed in Limpopo include the Limpopo Economic Development Enterprise (LIMDEV), the Limpopo Business Support Agency (LIBSA) and the Limpopo Manufacturing Advisory Centre (LIMAC). These agencies were introduced to form partnerships with local entrepreneurs, to give local entrepreneurs exposure to provincial, national and international markets, where they would be able to sell their products (Netshandama, 2006:65).

Apart from the institutions that have already been established to stimulate exports, Moloto (2007:3) argues that the province should move away from being an exporter of unprocessed minerals and agricultural produce towards value-added processing and manufacturing as means of creating jobs and generating wealth within the province.

Although much has been done, one can conclude that the efforts were not sufficient to promote exports and to ensure economic growth and employment creation in the province. Still more needs to be done, but for the province to make sensible policies, would require good information. It is the purpose of this dissertation to prepare and examine the province's export profile.

A detailed profile of manufacturing and current exports will aid policymakers in the formulation of future strategies and interventions.

1.3 Objectives

The general objective of this study is to compile and present a profile of manufacturing in and exports from the Limpopo Province.

This objective will be realised by achieving the following specific objectives:

- Reviewing the literature that explains the determinants of trade and that puts forward the arguments in favour of outward-orientated policies.
- Giving an overview of the geography of South African exports and the policies aimed at promoting regional industrial development and exports.
- Analysing of manufacturing and trade data to compile a manufacturing export profile of the province.
- Discussing the results and making recommendations to policymakers and for future research.

1.4 Research method

This dissertation comprises of literature review as well as the compilation and analysis of the export profile of the province. The export profile of the province was compiled by analysing, interpreting, evaluating data on exports at the levels of sectors and municipalities in Limpopo. Data on exports, sectors and geographical locations of all municipalities was drawn from Global Insight's Regional Explorer(ReX) database (2006).

1.5 Divisions of the Study

The dissertation is structured as follows: Chapter 2 provides a review of the literature on the determinants of exports. It also presents different views on outward-orientated trade policies and gives a brief overview of different policies implemented in developing countries. Chapter 3 draws the focus closer to South Africa and examines South African trade policies and the regional location of exports. The focus is on the sub-national (provincial) strategies to promote exports and economic growth. In chapter 4 manufacturing and export data at the level of the magisterial districts in the Limpopo province are analysed and interpreted to compile an export profile of

manufacturing sector of the province. In the final chapter a number of conclusions are drawn and recommendations are made.

Chapter 2: Literature Review

2.1 Introduction

Chapter 1 put forward the challenges of low economic growth, unemployment and poverty faced by South Africa and particularly the Limpopo Province. It was argued that exports can play a role in the development of the province. There are already a number of institutions and initiatives in place to support an outward-orientated economy, but for the province to make sensible policies, it would require good information. It is the purpose of this dissertation to prepare and examine the province's manufacturing export profile. To achieve this objective this chapter puts the study in the broader context of the literature on export-led growth.

There exists substantial literature on the importance of exports and trade liberalization for economic growth and development. Balassa (1978:181) showed that export-oriented policies promote efficient resource allocation, greater capacity utilization, exploitation of economies of scale, technological improvements in response to competition from abroad and increased employment. Similarly, Ram (1985:418) added that export growth relaxes the foreign resource constraint to growth and raises the productivity of labour and capital. Exports often generate positive spillovers to non-tradable sectors in the form of more efficient management styles and improved production techniques (Edwards, 1993:1380). Export-led growth increases demand for the country's output and increases real GNP, promoting the development of indigenous entrepreneurship (Jung & Marshall, 1985:3). Last but not least, outward-oriented policies eradicate poverty by reducing the cost of the consumption basket of the poor which by itself has an impact on the reduction of poverty (Matusz & Tarr, 1999:24).

This chapter sets out to review a range of perspectives on outward-orientated trade policies. There exists theoretical arguments and empirical evidence of the benefits that export-led growth specifically in terms of manufactured goods can have for an economy for example, countries like Chile and Korea showed much progress through export-led growth policies (Edwards, 1993:1376). However, much of this literature presents international evidence at the level of

national economies. In order to later examine the Limpopo Province's export profile, the second part of the chapter draws the focus narrower by focusing on the literature about regional exports. The final section draws a number of conclusions that point the way forward for the analysis of the South African context in chapter 3.

Chapter 2 is divided into four sections
2.2. Different perspectives of outward-oriented trade policies,
2.3. Evidence from selected countries,
2.4. Exports and regions and
2.5. Conclusions.

2.2 Different Perspectives of Outward-oriented Trade Policies

In this section the views of various researchers with regard to outward-oriented trade policies or trade liberalization are reviewed, followed by empirical evidence from selected countries.

Neoclassical two-gap models of development suggest a positive role for exports in economic development through attenuation of the foreign resource gap (Ram, 1985:415). It is argued that most countries are faced with trade distortions that result to low growth which can be counteracted through trade liberalization (Edwards, 1992:37).

Balassa (1978:181) identified the benefits of export-oriented policies and went further to test the relationship between exports and GNP growth. It was found that there is a high correlation between exports and GNP growth. Similarly, Michaely (1977:49) used Spearman rank correlation to determine the relationship between exports and growth. The results showed that growth is affected by export performance only if the country achieves some minimum level of development (Michaely, 1977:50). Furthermore, Heller and Porter (1978:192) emphasized that to determine how growth is related to growth of the non-export components of output, is more important than just looking at the relationship between growth and exports. They also agreed that a minimum level of development is required before export growth and economic growth are associated (Heller & Porter, 1978:192).

Apart from the minimum level of development as a pre-condition for economic growth, Edwards (1993:1379) proposed that labour as the production factor can promote exports in developing

countries. It was found that export industries are often more labour intensive (Edwards, 1993:1377). Kavousi (1984:243) concentrates on the association between export growth and economic performance to find out whether they can be influenced by the level of economic development that has already been achieved and by the commodity composition of exports. The results showed that exports of manufactured goods tend to strengthen the association between export expansion and economic performance (Kavousi, 1984:247). Even in Wood and Berge's (1997:35) study of export composition it was found that countries that exported manufacturing products performed better than countries that exported primary products. This means that manufacturing has greater growth potential than primary production.

In contrast, Coppin (1994:225) detected that the share of manufacturing exports in overall exports had no statistically significant impact on output growth but only increased levels of financial development can contribute to growth in output in less developed countries (Coppin, 1994:2250).

In contrast, earlier work by Tyler (1981:123) found a positive and highly significant relationship between economic growth and manufacturing output growth. This became clear when Tyler (1981:123) explored the inter-country analysis of the relationship between export growth, industrial development and GDP growth in developing countries.

Krueger (1980:289) argued that there are some technological factors that drive development that cannot be unlocked without export promotion. The technological factors such as minimum efficient size plant, increasing returns to scale, indivisibilities in the production process and necessity for competition enable entrepreneurs to produce whatever amount of goods they want, since the size of domestic market is no longer a binding constraint (Krueger, 1980:290). In support of Krueger's view, Murphy *et al.* (1989:1003) argued that developing countries have a good chance of achieving economic growth through industrialization accompanied by a widening market.

Jung and Marshall (1985:1) criticized the earlier studies which concentrated on the relationship between export promotion and growth without taking into consideration the direction of causation. Output growth may cause export growth or exports may cause economic growth (Jung and Marshall, 1985:4). Similarly, Darrant (1986:696) also emphasized that the direction of causation between exports and economic growth is important when dealing with export-led growth. Darrant's year findings were interesting as the test showed neither exports cause

economic growth nor economic growth causes exports as the two variables are causally independent (Darrant, 1986:697) Bahmani-Oskooee *et al.* (1991:406) re-examine the causal relationship between export growth and economic growth and find that there are countries that exhibit positive causality from export growth to economic growth. Apart from that, there are other countries that exhibit negative causality or no causality from export growth to economic growth. What is interesting is that those countries that showed positive causation between export growth and economic growth were large in number and they liberalized their trade, whereas countries that showed negative or no causal relationship between export growth and economic growth were in small numbers and they followed import substitution policies (Bahmani-Oskooee *et al.*, 1991:411). This means that outward-oriented policies are better than inward-looking policies with regard to promotion of economic growth. Dodaro (1993:228) reviews what the theory says about causation and also examines relationship between exports and growth. The investigation found mixed results and weak causation as the growth-promoting effects of exports are positively related to the levels of processing and manufacturing entering into country's export basket whereas other sectors are not included (Dodaro, 1993:230). Furthermore, it became clear that in poor LDCs, economic growth leads to export growth whereas in advanced LDCs export growth leads to economic growth.

Rami (1987:51) is in agreement on the importance of export promotion and outward orientation for economic growth. But he criticises the way earlier studies conducted their investigations as the majority of them used cross-section data covering various groups of developing countries instead of using time-series data for individual countries. Despite the importance of export growth for economic growth emphasized by many economists, Rodriguez and Rodrick (1999:4) argued that there is a tendency among academics who overstate the systematic evidence in favour of trade openness whereas there are no available empirical analysis that prove that neither export promotion nor export restrictions induce economic growth. But Edwards (1997:206) maintained that the discussion on trade policy on economic performance were seriously affected by data limitations since the data that were used were not always comparable and may provide a misleading picture of trade policy. However in his studies of the relationship between trade policy and income distribution he finds that there is no evidence linking trade liberalization to increases in inequality (Edwards, 1997:206). This showed that Edwards was not against trade liberalization as an engine to economic growth. Slaughter (1997:194) looked at the relationship between per capita income convergence and international trade and concluded that trade has helped cause income convergence. This position was supported by Ben-David (1993:665) who found that trade

liberalization reduced income disparity among the members of EEC countries. Furthermore, Krugman and Venables (1995:858) conducted studies which examine the effects of globalization on real national income by organizing the world into periphery and core areas. And it was found that if communication and transport costs fall, the countries at the periphery would experience a fall in real income first but if costs continued to fall the core countries would also have declined in real income while the peripheral countries benefited (Krugman & Venables, 1995:859). This means that at the end of the day both periphery and core countries benefit and real income is equalized. In Feestra's (1996:229) studies it was found that trade could also lead to convergence of growth rates if there is international diffusion of knowledge.

Although Pritchett (1996:308) acknowledged the benefits of outward-oriented policies it was found that measures of outward-orientation in LDCs were nearly completely unrelated in a cross-country data set. The outward-orientation policies were individually and collectively uncorrelated (Pritchett, 1996:326). This means that the application of trade policy may have different effects on growth.

However, Mazumdar (1996:1337) agreed that trade might lead to static gains in income but differs from earlier work in the fact that static gains lead to dynamic gains. It is argued that static gains from trade is not sufficient to generate growth especially when the imported goods are not capital goods as prices rise when trade is opened (Mazumdar, 1996:1327). The rising of price for capital goods leads to a counteracting effect of trade on savings. Puga and Venables (1999:309) tried to compare the effects of import substitution and trade liberalization on the level of welfare and found that trade liberalization led to higher levels of welfare. Chow (1985:56) specifically considered the causal relationship between the growth of manufactured goods and development of manufacturing industries and found that export growth caused industrialization by influencing the development of manufacturing industries. It can be argued that export growth and industrial development work together for their mutual benefit. Westerhoust (1995:15) rejects the traditional trade theory from Ricardo to Samuelson which believed that trade brings low benefits. However, by application of imperfect competition models, the results show that trade might enlarge the range of products that can be consumed and give way to better exploitation of economies of scale (Westerhout, 1995:15). Young (1991:370) developed a model in which endogenous growth is generated by learning-by-doing to analyse the impact of free trade on growth rates. It was found that free trade raised the rate of GDP growth of developed countries and lowered that of the less developed countries (Young, 1991:402).

Nevertheless, Devereux (1997:565) showed that trade liberalization had stimulated trade growth and productivity growth by reducing tariffs. But Xie (1999:165) introduced technology gap as a condition for knowledge spillovers when trade is opened up. And it was found that knowledge spillovers were possible if the technology gap between the developed and developing countries was small (Xie, 1999:182). In an endogenous growth structure trade can narrow technology gaps, differences in factor endowments and rates of growth between developed and developing countries (Eicher, 1999:195). Venables (1996:180) perceived the economy as composed of two equilibriums differentiated by the level of outputs. That is, there is a low level of output and a high level of output. If trade liberalization is applied, the economy might move from low levels of output to high levels of output which is associated with higher economic growth (Venables, 1996:195).

Li (1996:s384) was interested in the welfare effects of trade by taking into account the level and the growth effects. And it was found that even if a country's growth rate were reduced in equilibrium, the country might still be better off because of free trade. But again it was found that trade was not always beneficial to both countries as the smaller country would gain more from trade whereas the larger country might gain or lose, depending on how different the two countries' endowments were and to what extent consumers in each country prefered current to future consumption (Li, 1996:s387).

2.3 Evidence from Selected Countries

The literature shows that there are some countries that applied outward-oriented trade policies of manufactured goods as their strategy to stimulate growth. It was found that countries which introduced competitive industrial policy which is strongly export-driven have fared well in terms of economic growth compared to countries that remained resistant to change because they faced foreign exchange shortages, lack of capital equipment, and inputs which manufacturing and other sectors cannot secure domestically (Auty, 1994:15).

The following countries were selected to serve as examples of countries that used export growth as their policy to stimulate growth. Specifically, there are two international success stories and four on African countries that were selected.

2.3.1 Chile

Chile is one of the Latin American countries that applied trade liberalization. Chile's opening up of the economy was accompanied by depreciated real exchange and had a significant impact on its economic structure. In the 1990s, Chile's exports had become the engine of growth, as it experienced the highest rate of growth in Latin America with an annual growth of GDP of 4.2 percent (Edwards, 1993:1373 - 1374).

2.3.2 Korea

Korea like some other East Asian countries followed outward-oriented trade policies. As a result, Korea's merchandise exports grew in real US dollar terms at an annual rate of 23 percent. It was also found that Korean authorities maintained their success through depreciation of their real exchange rate (Edwards, 1993:1376 - 1377). Furthermore, the export promotion drive was also accompanied by direct cash subsidies, direct tax reductions, interest rate preferences, indirect tax reductions on intermediate inputs and tariff exemptions to imported intermediate materials.

2.3.3 Africa's position

Africa's history and experience with trade liberalization differ from country to country. It was found that reforms of commercial policy raised trade volumes but had a weak influence on economic growth (Rodrick, 1998:3). Similarly, it was also found that Africa's economy is characterized by export instability which is deleterious to economic growth (Fosu, 1992:329). In Africa, export diversification is static or declining as most of its exports depend on a relatively small number of commodities (Ng & Yeats, 1996:13). Even export demand for products from Africa has been low compared to other countries' and makes it difficult to stimulate growth. In Dollar's (1992:532) studies it was found that African economies were characterized by high price levels, high levels of price distortion, volatile real exchange rates and most of them were inwardly-oriented economies that limit growth.

Amongst other things, Africa has low levels of manufactured export that result to poor performance of manufactured exports and low growth. Teal (1999:1) identified some of the causes of poor performance of manufactured exports in Africa as follows:

- Low levels of skills relative to abundance of natural resources renders exporting manufacturers unprofitable.
- African governments have created a high transaction costs environment in which export growth has been retarded.
- The failure of policy to promote technological capabilities, that is the failure of firm-specific learning that served as the foundation for a successful process of industrialization in other places.
- Technological deficiency of firms that does not allow them to embrace policies which encourage innovation, economies of scale, exposure to foreign competition and availability of new goods.

Despite all the impediments to export growth some countries in Africa liberalized trade and fared well in doing so.

2.3.3.1 Botswana

Botswana liberalized its economy like any other country that wants to explore the world market. But Botswana's economic performance has been based on exports of raw and processed diamonds. Botswana has succeeded through its prudent fiscal and macroeconomic policies that embrace well-developed human resources and an early demographic transition which reduced the dependency ratio (Rodrick, 1998:23).

2.3.3.2 Mauritius

Mauritius achieved its economic success by the creation of an export processing zone operating under free trade principles, which allowed an export boom in garments to European markets and an accompanying invested boom at home (Rodrick, 1998:26). Furthermore, Mauritius dominated other countries in the growth of income and exports. It was recorded that it expanded manufacturing exports to 53 per cent of the total exports in the period 1980 to 1995 (Teal, 1999:3).

2.3.3.3 Ghana and Uganda

Both countries resorted to extensive trade liberalization after experiencing a prolonged period of economic decline. Before liberalization these countries were characterized by mass trade control such as high tariffs, stringent quantitative restrictions, export restrictions, foreign exchange restrictions and high black-market premium. Initially, reforms focused on removing the extreme distortions in the market for foreign exchange such that both countries experienced increased exports, investment and growth as measured by per capita GDP (Rodrick, 1998:30).

2.3.3.4 Mali and the Gambia

By contrast, the economies of Mali and the Gambia have been open for some time but they are still waiting to reap significant gains in terms of growth. However, the route taken by Mali and Gambia is good, the problem is that they are extremely poor in human and physical resources and their growth potential is correspondingly low (Rodrick, 1998:31).

2.3.3.5 South Africa

South Africa like other countries became interested in outward-oriented policy and used trade liberalization as the strategy for promoting economic growth and development after the democratic transition in 1994 (Naudé, 2000:246). Tariff reform was accompanied by a steady increase in exports.

(a) Tariff reform

Tariff reform has been extensive in terms of the scale of tariff reduction and in simplification of the tariff structure. The South African government decided to approach tariff policy on a sector-by-sector basis dictated by the needs and imperatives of sector strategies, that is, some tariffs may be reduced or removed taking into account the specific circumstances of the sector involved (DTI, 2008: 41).

The South African tariff reform can be summarised as follows (DTI, 2006b:11):

- A five-year tariff reduction and tariff rationalization programme, including a commitment to reduce the number of tariff categories (previously over 100) to six,
- A reduction in average weighted import duties,
- A decline in South Africa's average tariff,
- An increase in the proportion of bound tariffs, an increase in the percentage of bound-zero tariff lines, a reduction in the simple average tariff for industrial tariffs, and

▪ Tariffication of quantitative restrictions and reduction in the diversity of ad valorem tariffs in agricultural sector (DTI, 2006b:11).

By introducing tariff reform, South Africa wanted to improve non-traditional export performance, particularly in more sophisticated, value added products (DTI, 2008:41). But, the country is still largely outside the markets for dynamic products in world markets.

Nevertheless, WTO provides a unique forum for developing countries to advance their trade and development interests (DTI, 2008:42). For example, the participation in Doha Round as organized by WTO brought new market access for developing countries' exports as subsidies were cut on inefficient agricultural producers of industrial country that harm the export growth of developing countries (DTI, 2008:42).

(b) Trade relations

The main focus for South Africa's global economic strategy is to improve the country's export performance by dismantling the barriers to trade and gaining increased market access (DTI, 2006b:11). In order to achieve this South Africa has signed trade agreements to develop bilateral trade relations in Africa and abroad (DTI, 2008:43).

Some of South Africa's recent trade agreements include (DTI, 2006b:11):

▪ SA-EUFTA which provides 95 percent of South Africa's exports with duty-free access to the EU for 10 years. This agreement includes industrial goods and agriculture. In return, South Africa should remove duties on 86 percent of its total imports from the EU. And new industries to produce for the EU should be established.

▪ SADC-FTA is aimed at fostering regional prosperity as it encourages intra-regional trade and promotes investment and technology transfers.

▪ Africa Growth and Opportunity Act (AGOA) which supplements the existing US programmes aiming to increase trade and investment between the United States and developing countries (DTI, 2006b:11).

Yet, with all the above steps taken to open up South Africa's economy, one still needs to take a critical look at the success.

(c) The success of outward-orientated trade policies in South Africa

After 1994, South Africa was engaged in macroeconomic policy reforms. The whole reform effort was integrated into Growth, Employment and Redistribution macroeconomic policy (GEAR) strategy (Edwards & Alves, 2006:473). The reform focused on competitive, outward-oriented economy and was accompanied by labour markets and competition policy changes.

Due to trade liberalization which the country was busy with, the South African government was forced to renegotiate with GATT during Uruguay Round (Edwards & Alves, 2006:473).

When South Africa adopted outward-oriented policy, export of manufactures increased. However, South African exports lagged behind the East Asian countries. Furthermore, South African manufactured exports were resource-based. It was also found out that South Africa was very slow in terms of diversifying its manufactured exports into high technology products (Edwards & Alves, 2006:474). And the South African position in the international markets was that of price-taker and its exports were mostly supply driven.

However, export supply improves when technology is applied. The more the skills and technology are applied the greater the growth through productivity gains (Edwards & Alves, 2006:475). There is overwhelming evidence that high technology products are the fastest growing in world trade, with strong growth in exports of these products by middle income economies. Similarly, the South African economy experienced a structural shift towards high technology products but still depends on resource exports. Despite the shortcomings, South African manufacturing exports rose as a share of total exports from 27.7 percent in 1988 to 53.4 percent in 2004. And it showed a diversification away from resource-based products by 13.3 percent between 1988 and 2002 (Edwards & Alves, 2006:478). This is a remarkable improvement which South Africa has achieved. But in world market share of total exports, South African exports declined from 0.89 percent to 0.53 percent between 1988 and 2002 because of poor infrastructure (Edwards & Alves, 2006:496). However, its world market share of total manufactured exports rose from 0.3 percent to 0.33 percent during that period.

As the solution to shortcomings of South African exports, it was recommended that the country should shift its export production towards products with strong global demand (Edwards & Alves, 2006:479). But it was found that South African foreign export demand in terms of market access

was not a constraint to export growth. Its manufacturing exporters were predominantly price-takers in the international market and face an infinite demand for their products (Edwards & Alves, 2006:496).

However, export supply is perceived as the main determinant of the South African exports (Edwards & Alves, 2006:489). But there are some factors that affect export supply such as relative prices and competitiveness of manufacturing, variable costs of production, infrastructure, human capital and tariffs and export support measures (Edwards and Alves, 2006:496). For example, poor infrastructure in the mid-1980s has curtailed the growth of manufacturing exports in South Africa (Edwards & Alves, 2006:496). Nevertheless, the South African policy of export promotion improved the position of its manufactured exports (Edwards & Alves, 2006:496).

Although the exports showed an improvement over the years, the main challenge remains. It is not yet clear as to whether the increase in exports has reduced unemployment that the country is facing. Rankin and Schőer (2008:3) argue that exports reduce unemployment if:

- firms are able to enter the export market or current exporters can increase their exports
- increases in output or changes in output composition affect labour demands and
- the change in labour demand increases the demand for those types of people who are currently unemployed.

It was found that increased trade flows led to a shift in the demand for skilled labour and insufficient demand for the unskilled in South Africa (Rankin & Schőer, 2008:4) In the case of increasing exports to reduce unemployment, it was found that most of the South African exporters export a small proportion of their output and a large amount of aggregate exports is generated by a small number of intensive exporters (Rankin & Schőer, 2008:7). Furthermore, only firms that exported outside SADC had higher productivity and employed highly educated labour than firms exporting inside SADC and non-exporters (Rankin & Schőer, 2008:8).

But SADC exporters are more likely to employ male and younger people than those employed by non-SADC exporters. It seems that SADC exporters can reduce unemployment better than non-SADC exporters as they draw labour from unemployed young people in South Africa (Rankin & Schőer, 2008:8).

In conclusion it is clear that though there are arguments and evidence in favour of outward-orientated trade policies, it is clearer that the benefits are not always realized. It is also the case that the arguments presented in the sections above do not only apply to countries at the level of the national economy. Since this dissertation is examining the challenges faced in the Limpopo Province within South Africa and proposing export-led growth as a possible solution, one should also consider the spatial character of exports and what that means for the challenges and solutions proposed.

2.4 Exports and Regions

Previously the international trade theory did not take into consideration the geography of exports. Recently the trade models also include distance, transport costs, market size, scale economies and agglomeration in their analysis. Krugman (1979,1980,1991), Venables (2001), Fujita, Krugman & Venables (2001) and Fujita & Krugman (2004) were the fore-runners of the new economic geography (NEG) theory by initiating integration of regional science and international trade theory.

The NEG theory is concerned with determinants of exports and explains that regions that are similar can have different economic activities (Ottaviano & Puga, 1998). The NEG theory aims to draw attention to the spatial economy by taking into consideration the interaction between the forces that determine the geographical structure of an economy (Fujita & Krugman, 2004). These forces may either centralise or decentralise economic activities (Amstrong & Taylor, 2000, Fujita & Krugman, 2004). Furthermore, NEG models also embrace transport costs. The decentralisation or centralisation of economic activities also depends on transport costs (Lopes, 2003)

The core-periphery model will be used to explain the dispersion and trade. In this model, it is assumed that there are two regions (1&2), two sectors of production which are agriculture and manufacturing as well as two types of labour (farmers and workers). Table 2.1, below depicts the assumptions for this model.

Table 2.1: Assumptions of the Core-periphery Model

Agriculture	Manufacturing
▪ Products are homogenous ▪ Located in only in one region ▪ Constant returns to scale ▪ Farmers are immobile (farmers are equally distributed throughout both regions) ▪ Agricultural goods are moved without cost between regions	▪ Products are differentiated (each firm produces a different variety) ▪ Located in both regions ▪ Increasing returns to scale ▪ Workers are mobile ▪ Positive transport costs (in "iceberg" form) are incurred in moving manufactured goods between regions

Sources: Krugman, (1991); Fujita and Krugman, (2004)

This model explains the geographical clustering of manufactured exports in a location by considering immobility of farmers as the central force that causes decentralisation of economic activities as they use both products. The force that contributes to centralisation of economic activities is called circular causation. Circular causation works through backward and forward linkages. When workers reside near production there are backward linkages whereas forward linkage is meant for busineses that are located in the vicinity of the larger market. It is assumed that large number of firms is located near each other in region 1, where different types of product are produced. The consumers in region 1 will be much better-off as far as the product choice is concerned than those located in region 2. The consumers in region 1 will enjoy larger income as most of the firms located in their region reap increasing returns to scale. Products are produced locally and there are no transport costs. Due to higher income in region 1, consumers will start to migrate from region 2 to region 1. As the results, the market size in region 1 will start to grow and becomes bigger than in region 2. The process of "home-market" effect is set into motion. This process of home-market effect means that firms will start to export those products for which there is a large domestic demand. Most firms relocate to region 1 as more profits are made there. Even the number of varieties produced in region 1 is greater than before. These different products are then exported to region 2 (Krugman, 1980, Krugman, 1991, Amstrong & Taylor, 2000, Brakman *et al.*, 2001, Krugman & Fujita, 2004).

The home-market effect depends on transport costs. Between the two regions transport costs are assumed to be positive whereas within the region transport costs are zero. Transport costs are defined as the various elements that may limit trade like culture, tariffs, language together with price of transporting goods from place to place (Brakman *et al.*, 2001). The model showed that

transport costs create a propensity for agglomeration. Internal economies of scale suggests that manufacturing will produce more at a single plant at a lower cost. Furthermore, a manufacturer would incur transport costs when selling his product in the other region. Manufacturers would fight to choose a location that maximises the cost saving from large-scale production and lower transport cost (Krugman, 1991, Brackpan *et al.*, 2001, Fujita *et al.,* 2001). Home production can be an option to trade if transport costs were high, but production will expand towards places where demand is high. Nevertheless, trade would not occur even if transport costs were lower, as the two regions might be identical due to the absence of forces that could reinforce agglomeration. Transport costs has an impact on agglomeration and trade in an intermediate range. At other levels of transport costs, the location with large local demand would be chosen by manufacturers. As majority of manufacturers choose to locate specifically where local demand is largest, there would be agglomeration at the centre and trade with periphery (Krugman, 1991, Brakman *et al.*, 2001).

In research conducted by Matthee and Naudé (2008) on export behaviour of sub-national regions, it was found that exports were generally erratic between 1996 and 2004. In some years not all magisterial districts were able to export manufactures (Matthee & Naudé, 2008:345). In total, the number of magisterial districts that exported manufacturers increased by 15 percent from 1996 to 2004. But, there are some magisterial districts that have zero manufactured exports. This number shrunk from 158 in 1996 to 129 in 2004 (Global Insight, 2006).

Matthee and Naudé (2007) in their study used cubic-spline density functions to estimate how exports were distributed across space relative to an export hub. They revealed that the biggest volume of exports from magisterial districts was within 100km from the export hub. Usually the highly skill-intensive goods, like electronics showed that approximately 98 percent of manufacturing takes place within 100km of export hub. Above 100km radius from export hub, fewer skill-intensive goods such as furniture, textiles and metal products are being exported. Usually such goods are produced for the domestic market and make relatively more use of natural resources (Matthee & Naudé, 2007).

This spatial view of exports has a number of implications for efforts to address the Limpopo Province's challenges through export-led growth. Spatial development and provincial policies are however the topics of the following chapter.

2.5 Summary and Conclusions

This chapter reviewed different perspectives on outward-orientated trade policy and found that exports, particularly manufactured exports are positively associated with increased efficiency in production and economic growth. Evidence from selected countries showed that they have benefited from export-led growth. Since 1994, South Africa has also opened up its economy and experienced an increased share of manufactured products in exports, greater efficiency and growth. There are however concerns that South African exports are still in the low-value-added category and in shrinking world markets. However, this dissertation is not about trade policy at the level of the national economy, but proposes export-led growth as a possible solution to the challenges of low economic growth, unemployment and poverty in the Limpopo Province. To draw the focus closer this chapter also examined exports and regions. A new economic geography model was used to explain why the sub-national location of exports is relevant, supported by recent empirical results from Matthee & Naudé (2007, 2008).

In conclusion it can be said that there is evidence that exports are part of the solution to the challenges of low economic growth, unemployment and poverty, but as the South African experience has shown, one also needs to consider the nature and location of the exports and exporters. The following chapter sets the scene for the compilation and analysis of Limpopo's export profile by reviewing South Africa's spatial policies and the development initiatives in the Limpopo Province.

Chapter 3: Policies for Regional Development and Exports

3.1 Introduction

This dissertation argues that the Limpopo Province faces challenges of low economic growth, unemployment and poverty. Promoting export-led economic growth may be a way to address these challenges. The previous chapter reviewed the literature that shows that particularly manufactured exports are positively associated with increased efficiency in production and economic growth. Evidence from selected countries showed that they have benefited from export-led growth. In South Africa there has also been significant trade liberalization since 1994, but the results of this process have been mixed. However, the focus of this dissertation is on the Limpopo Province and the final section of Chapter 2 has already introduced the issues of exports and regions. Before one can analyze the province's export profile, this chapter reviews South Africa's spatial policies and the development initiatives in the Limpopo Province. The focus is on recent national policy initiatives aimed at the development of spatial economy and on the provincial initiatives in Limpopo. This section draws substantially on National and Provincial policy documents. The text reflects the contents of these sources but references are provided throughout.

The chapter is structured as follows: Section 3.2 provides an overview of national initiatives that focus on the development of the spatial economy. Specifically, the National Spatial Development Perspective and the Regional Industrial Development Strategy (RIDS) are reviewed. These policy frameworks create the backdrop against which provinces and even local authorities strive to develop their regions. Section 3.3 examines the national export promotion plans that are part of industrial policy. In section 3.4 the provincial initiatives are put forward, specifically the Limpopo Growth and Development Strategy. Section 3.5 concludes the chapter.

3.2 The Government's Policy Framework and Spatial Economy

A particular characteristic of economic activity across South Africa and across the globe is its density. Geographically, economic activity tends to be unequally distributed and concentrated. In South Africa, 70 per cent of GDP is produced in only 20 per cent of places (Krugell & Naudé, 2005). This can be explained by examining trade and extraction along with Apartheid's social engineering.

South Africa has six "large" cities. Johannesburg, the East Rand (Ekurhuleni Metro) and Pretoria (Tshwane Metropo) are located inland in Gauteng Province. Durban, Cape Town, and Port Elizabeth (Nelson Mandela Metro) are the major port cities. Cape Town and Durban were first developed in the 17th and 18th centuries as trading posts on the shipping route between Western Europe and Asia. During the 19th century this role changed with the discovery of diamonds and gold in the interior. The port cities developed from being stop-over and service points providing shipping services, to being ports through which commodities were handled. Today this dominance continues due to the importance of sea transport for South Africa's international trade. Approximately 98 per cent of the volumes of South Africa's exports are conveyed by sea. Mineral wealth determined the location and growth of the inland cities, Johannesburg, the East Rand and Pretoria. The distances of the location of mining commodities, as well as the extraction technology required in mining then influenced the pattern of South Africa's inland development. Where railways and electric power were provided for mining, they also contributed to the development of the manufacturing sector. Industries such as steel and mining, which are heavy consumers of electricity, are predominantly located in the historic mining areas whilst chemicals are concentrated heavily around Durban from where the majority of the country's crude oil imports are obtained (Matthee *et al.*, 2007).

In the 20th century, Apartheid reinforced the historical regional development patterns induced by the emerging mineral-energy complex of the 19th century with its homeland policies and Group Areas Act. Support of inefficient industries in the homelands and the segregation of cities created a spatial economy characterised by inefficient land use, excessive transport costs, and under-investment in transport infrastructure, telecommunications and electric power. It also resulted in segmented labour and consumption markets and created artificial internal barriers to trade (Krugell, 2005).

The cost of unequal development was paid particularly by the manufacturing sector. Nel (2002:83) showed that by 1970, South African had a relatively advanced and diversified the manufacturing sector but thereafter output stagnated and employment declined. Contributing factors included: declining gold exports and gold prices, a reduction in global commodity demand from the early 1980s, the debt crises of the 1980s, depreciation of the value of the rand, the imposition of sanctions, foreign exchange shortages, and skill- and capital shortages. By the 1990s job losses occurred in places and de-industrialisation took place.

Against this background of spatial inequality, the new democratic government has, since 1994, been opening up the economy and putting forward strategies to guide spatial development. The National Spatial Development Perspective (NSDP), the Regional Industrial Development Strategy (RIDS) and other guidelines were adopted to serve as the foundation for location of economic activity and exports in South Africa.

3.2.1 The National Spatial Development Perspective (NSDP)

Traditionally, the South African economy was characterized by low levels of domestic savings, limited foreign direct investment and a high propensity to import that limited the level of new investment and the ability to restructure in the face of increasing globalization (Presidency, 2003:9). Infrastructure investment received little attention and it was concentrated in urban areas rather than in social infrastructure and in rural areas (Presidency, 2003:10). In general there is a static spatial pattern to the national spatial economy, dominated by metropolitan areas and their immediate surroundings.

The focus of the NSDP is on bulk fixed investment by government in those areas with the potential for sustainable economic development. These are areas which can achieve government's objective of promoting economic growth and alleviating poverty (Presidency, 2003:6). As export promotion has become a global phenomenon, it became imperative for the South African government to engage its citizens to move to areas of greater economic potential just within the areas where they reside. In order to make the right move the government identified categories of development potential.

3.2.1.1 Categories of development potential

The following categories of development potential are perceived as guidelines for any spatial economic development and initiatives to promote exports from national, provincial to local levels:

- Innovation and experimentation that embrace research and development and application of technology to production processes. This activity is usually located in metropolitan areas where there are highly skilled labour, good communication networks and high-quality living environments.

- Production of high value, differentiated goods not strongly dependent on labour costs. This production focuses on local and global markets such as manufacturing, and some specialized agricultural natural resource-based products.
- Production of labour-intensive, mass produced goods. These are dependent on labour costs and natural resource exploitation. However, iron and steel producers, and mining and agricultural activities depend on proximity, cheap transport and large numbers of unskilled and semi-skilled labour.
- Public services and administration. Usually every economic activity is organized through business and public management. Furthermore, this category also includes social services such as health, welfare and education. This kind of service is usually found in metropolitan areas.
- Retail and services. These services are large employers of semi-skilled workers. Their location depends on the presence of enterprises and people who are willing and able to pay for goods and services. This category is urban biased as most of the people who can afford the goods and services live in towns and cities.
- Tourism. Tourism includes the need for a tourist-attraction such as eco-scenery, cultural, heritage, good transport routes, safety and high-quality restaurants and hotels. The location of this category is mixed as it can be located in both urban and rural areas (Presidency, 2003:18).

3.2.1.2 The NSDP's vision

It is the vision of NSDP for South Africa to become a nation in which investment in infrastructure and development programmes support government's growth and development objectives. This is possible through focusing economic growth and employment creation in areas where this is most effective and sustainable, supporting restructuring where feasible to ensure greater competitiveness, fostering development on the basis of local potential and ensuring that development institutions are able to provide basic needs throughout the country (Presidency, 2003:36).

3.2.1.3 Objectives

The NSDP formulated objectives which support its vision. The objectives were spelled out as follows:

- To provide a framework within which to discuss the future development of the national space economy by reflecting the localities of severe deprivation and need, of resource potential, of infrastructure endowment and of current and potential economic activity by describing the key social, economic and natural resource trends and issues shaping the national geography.

- To act as a common reference point for national, provincial and local governments to analyze and debate the comparative development potentials of localities in the country by providing a coarse-grained national mapping of potential.
- To identify key areas of tension or priority in achieving positive spatial outcomes with the government infrastructure investment and development spending.
- To provide national government's strategic response to the above for a given time frame (Presidency, 2003:6).

The above objectives coupled with the vision, give a clue of how the national space economy should look like. But, further details will be unpacked when the NSDP discloses its policy suggestions on space economy.

3.2.1.4 Policy guidelines for space economy

The NSDP suggested that (Presidency, 2003:22):

- Economic growth should serve as a prerequisite for the achievement of other policy objectives such as poverty alleviation.
- Government spending on fixed investment should focus on localities of economic growth or economic potential to stimulate economic activities and create long- term employment opportunities.
- Efforts to address past and current social inequalities should focus on people not places.
- And future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent to or link the main growth centers.

The NSDP is a national document that prescribes the methods and plans for the whole country's spatial planning. It is important for the current study which focuses on compiling and analyzing the Limpopo's manufacturing export profile. The NSDP disclosed that areas with the potential for sustainable economic development should receive immediate attention when planning future economic activities. However, this can avoid repetition of spatial inequality created by the previous undemocratic government.

Amongst the categories of development potential explained in the NSDP document there are some categories that are relevant to this study. These embrace production of high value and differentiated goods, labour-intensive and mass produced goods, and innovation and experimentation including research and development and application of technology to production process.

The NSDP spelled out its objectives and policy guidelines that every province should consider in any spatial planning. It was disclosed that economic growth and employment creation for the benefits of all people in their specific place of residence should be promoted. And for the current study the unemployment and poverty alleviation through export-led growth strategy is important here. This study basically focuses on poverty and unemployment alleviation which is also the issue at national level and the main objective of the NSDP.

3.2.2 The Regional Industrial Development Strategy (RIDS)

The previous section presented an overview of the NSDP and the foundation which it lays for the location of economic activity and the direction that can be followed to address the imbalances of the past. The South African government went forward by developing the document that will further the objectives of NSDP. Specifically, the RIDS was developed in order promote industrial development at the regional level (DTI, 2006a:6).

Regional industrial development is a global issue and it is perceived as a spatial economic mechanism to assist regions to achieve their economic potential within the context of a market economy (DTI, 2006a:6).

3.2.2.1 The features of RIDS

The RIDS can be distinguished from other industrial development strategies by the following features (DTI, 2006a:6):

- A focus on enhancing physical and social infrastructure.
- A multi-sector approach to development which moves beyond an exclusive focus on manufacturing to a focus on knowledge-based development and improvement of human capital.
- A reliance on partnership formation and the driving of development from the bottom up through regional agencies to galvanize local development and tap into private and state resources and capacities.
- A focus on unique programmes for each region based on local strengths and opportunities.
- A focus on cluster development, and
- Support business retention and expansion programmes.

Specifically, the Department of Trade and Industry (2006a:6) suggests effective mechanisms to respond to persistent, apartheid-associated inequalities and to encourage regions to seize current and potential opportunities presented by both the national and international market economies. The RIDS aims to encourage the country's most successful economic regions to consolidate and improve on their current economic potential (DTI, 2006a:6).

3.2.2.2 The purpose of the RIDS

The RIDS was formulated for various purposes. The following are its major purposes (DTI,2006a:7):

- To help to achieve the national industrial development objectives as set out in the NSDP and the Redistribution and Development Programme (RDP).
- To further the goals of the Accelerated and Shared Growth Initiative for South Africa (ASGISA).
- To conform with the principles of the Growth, Employment and Redistribution Strategy (GEAR), the Integrated Manufacturing Strategy (IMS), the Microeconomic Reform Strategy (MRS) and the current National Industrial Policy Framework.
- To embrace the capacities and potentials identified in the Urban Spatial Competitive Framework and the proposed Local Economic Development (LED) framework that seeks to address spatial constraints and opportunities related to industrial development in municipalities.
- To conform to principles of enterprise development and black economic empowerment (BEE), and
- To conform to the government's environmental and other relevant policies (DTI, 2006a:7).

3.2.2.3 Strategic objectives

Once the RIDS's purpose was disclosed it became necessary to come up with strategic plan to achieve its purpose. The strategy operates on the basis of strategic partnerships between the public and private sectors (DTI, 2006a:10). The following strategic objectives have been identified:

- To attempt, as far as is possible to reduce economic disparities between regions, address the needs of both the first and the second economies, and narrow the gap between them;
- Pay particular attention to the needs of those regions which are lagging behind the national norm;
- Enhance current regional strengths and lead sectors of the economy,

- Promote sustainable economic growth and employment in provinces and municipalities;
- Build regional competitive capabilities and firm-level support measures, and
- Enhance regional performance in attracting foreign direct investment. (DTI, 2006a:10).

The above objectives are to be achieved through (DTI, 2006a:11):

- Localized direct support to the SME sector such as business advisory services and development and training.
- Advisory services including the maintenance of a database on developments.
- Creating a predictable regional investment and business climate to attract private sector investments that do not rely on public-sector guarantees.
- To increase production in, and improve competitiveness and diversification of, regional markets, especially in agro-industrial, manufacturing and services sectors with potential for export and employment creation.
- Organize dialogue between government and the private sector to develop a shared vision of an economic development strategy and remove constraints on private-sector development.
- Strengthen appropriate infrastructure support to regions through the provision of appropriate finance and improve access to productive support resources.
- Build effective industrial, trade and productive capacity needed to ensure optimization of production and product diversification (DTI, 2006a:11).

However, the key challenge is to support lagging regions and to assist leading regions to capitalize on their inherent strengths and potential (DTI, 2006a:11). In order to address the challenge, the Department of Trade and Industry (2006a:12) suggests that industrial development should be encouraged at a limited number of locations that can develop a competitive edge in regional and international markets. Furthermore, in regions or districts with little economic potential, measures should be taken to increase public sector investment into social services in the regional economies. Above all, the RIDS designed an industrial strategy to serve as the basis upon which all South African regional industrialization strategies can be built.

Specifically, the RIDS focuses on the development of regions using the regional expertise and resources in order to meet the needs of the people in that particular region. As such, the RIDS supports the economic growth of regions which the current study is busy addressing. Limpopo Province is one of the regions that lagged behind as far as poverty and unemployment eradication are concerned.

3.2.3 The Regional Industrial Strategy

The regional industrial development strategy was based on the contemporary approach to regional industrialization (DTI, 2006a:16). This approach focuses on:

- Strengthening the supply-side of the economy by improving education and training, promoting entrepreneurship, and enhancing research and development capabilities.
- Shifting from a top-down to a bottom-up approach, usually every strategy is planned from grassroots level.
- Regional innovation systems or clusters and tries to built on locally available skills and resources and relies less on external investment.
- Strengthening world-class regions embracing both lagging and leading regions so that they maximize their potential.
- Development of plans that become the responsibility of partnership between regional and local governments and the local sector.
- Government's role as a provider of key infrastructure, which is often seen as a critical element in determining the global competitiveness of a particular sector.

This approach is consistent with the EU Structural Funds approach (DTI, 2006a:17). The Regional Industrial Strategy supports the policy of export promotion and economic growth through regional industrial development measures. In order to promote exports the strategy identifies some of sectors that can be picked up when locating economic activities at regional levels (DTI, 2006a:62).

a) Special Economic Zones (SEZs)

Usually SEZs are used as part of an export industrialization strategy (DTI, 2006a:62). Specifically SEZs are zones that are characterized as a geographic area within a country where certain economic activities are promoted by a set of policy measures that are not generally applicable to the rest of the country (DTI, 2006a:62). RIDS recognizes IDZs (Industrial Development Zones) and SDIs (Spatial Development Initiatives) and small towns as SEZs (DTI, 2006a:62). In areas where IDZs cannot be formed, industrial parks, industrial estates, logistics parks, and innovation hubs are encouraged (DTI, 2006a:63).

(b) Industrial Parks

This is an area set aside for industrial development and usually located close to transport facilities (DTI, 2006a:63). The aim here is to reduce the costs of infrastructure by concentrating infrastructure in the particular area where the environmentalists have done their part to protect the environment (DTI, 2006a:63).

(c) Logistics Parks

These parks are designed for service providers. They embrace a single site, a one-stop logistic shop offering warehousing, customs clearance, packaging services, freight forwarders' transport and driver services (DTI, 2006a:63). Usually they simplify the work of exporters as everything can be done at one spot like clearance, manufacturing, distribution, networking, etc.

(d) Industrial Estates

Industrial Estates complement Industrial Parks by choosing specific areas zoned for industrial activity in which infrastructure such as roads, power and other utility services are provided to facilitate the growth of industries and to minimize impacts on the environment (DTI, 2006a:63).

(e) Innovation Hubs

This is a hub with a high-tech cluster where international enterprises can access a regional centre of knowledge creation and local business can successfully launch into the fast moving world of global interconnectivity. These embrace high-tech enterprises ranging from large multi-nationals in owner-built facilities and smaller and medium enterprises in rented premises to knowledge-age entrepreneurs interested in incubation and operate in the technology-led research based sectors, including information and communications technology, biosciences, and electronics (DTI, 2006a:66). In other words every business of high-value can be done from there.

Despite RIDS's initiatives to promote regional economic development and economic growth, the success depends on cooperation between local stakeholders including the private sector, government institutions, departments and civil society (DTI, 2006a:68). But the private sector is recognized as the key driver of economic growth in the regions and will need to play a lead role in driving these partnerships (DTI, 2006a:68).

Also, the RIDS has the role to support Local Economic Development (LED) through local municipalities (DTI, 2006a:71). This will be possible by implementing the RIDS policy framework for localized economic activity initiated by a local community, local authority,

external agency or non-governmental organization in rural or urban area (DTI, 2006a:71). The main aim of LED establishments was to stimulate investments that promote sustained high growth in a local community (DTI, 2006a:71).

Regional industrial strategy explains and suggests the type of industries that can be established at regional level. The suggested industries serve as the basis for export promotion. It is upon these regional sectors where exported goods can be manufactured and exported. However, part of industrial policy is export promotion which is discussed in the following section.

3.3 Industrial Policy and Export Promotion

At national level the South African government has shown commitment to promote exports by introducing various measures in support to export promotion. Even at provincial levels particularly in the Limpopo Province, initiatives were taken to promote exports.

3.3.1 South Africa's industrial policy

Once the government has realized that export promotion can advance better through industrialization, the government introduced the National Industrial Policy Framework (NIPF) in order to stimulate industrialization.

3.3.1.1 Reasons for industrialization

The South African manufacturing sector has faced significant challenges since 2003 (Kaplan, 2004:623). Even the exports were declining and the level of manufacturing employment was also very low (Kaplan, 2004:625). A decline in employment has resulted in a steady rise in labour productivity and an increase in labour remuneration. But it was biased towards unskilled and lower-paid employees in manufacturing at the expense of skilled and higher-paid employees (Kaplan, 2004:626).

It was the will of the South African government to support more equitable geographic spread of economic activities through incentives to encourage manufacturing investments in less industrialized areas. But this did not materialize because less industrialized provinces have made

no significant changes in their positions relative to the major industrialized provinces (Kaplan, 2004:626).

The country can also escape from the volatility and long-term decline in terms of trade of a number of commodities (DTI, 2008: 29). And movement into manufacturing and exportable service activities allows a country to take advantage of the rising income elasticity of demand that derives from growing income in the world trade. Lastly, high living standards are achieved as people shift from un- or under employment to a more productive form of sector (DTI, 2008: 29).

3.3.1.2 The focus for industrialization

The main focus for industrialization is (DTI, 2008:10):

- To facilitate diversification beyond the current reliance on traditional commodities and non-tradable services. This requires the promotion of increased value-addition per capita characterized particularly by movement into non-traditional tradable goods and services that compete in export markets as well as against imports.
- The long-term intensification of South Africa's industrialization process and movement towards a knowledge economy.
- The promotion of a more labour-absorbing industrialization path with a particular emphasis on tradable labour-absorbing goods and services and economic linkages that catalyze employment creation.
- The creation of a broader-based industrialization path characterized by greater levels of participation of historically disadvantaged people and marginalized regions in the mainstream of the economy.
- Contributing to industrial development on the African continent with a strong emphasis on building its productive capabilities (DTI, 2008:10).

To achieve the desired goals, timed intervention is required. But there are conditions that need to be met before industrialization can take off.

3.3.1.3 Conditions for industrialization

There are numerous conditions for industrialization and the DTI (2008:15) identified the following:

- A stable and supportive macro-economic and regulatory environment. This means that there should be macroeconomic stability and effective regulation at all spheres of government especially of matters related to small enterprises and major investment.

- Skills and education for industrialization, such that stronger alignment between industrial policies and skills institutions is maintained. And there should be integration with the educational system with a particular emphasis on ensuring larger numbers of graduates with tertiary technical skills.
- Traditional and modern infrastructure including transport, electricity and water, and fixed, mobile, wireless and satellite telecommunications networks respectively. This kind of infrastructure is required for production efficiencies, to move goods and people, and for cost-effective linking of people and business via communication networks.
- Innovation and technology that uses the existing technologies and encourage innovation and development of domestic technologies. This is possible through imports, foreign direct investment (FDI) and domestic research and development of indigenous knowledge.

Once the above conditions for industrialization have been met, the process of industrialization can take its course.

3.3.1.4 Industrial strategy interventions

The South African industrial strategy interventions were marked with the movement from inwardly and protected domestic economy into more export-oriented economy (DTI, 2008:17). This restructuring of the economy has brought stabilization of the macro-economy and opening up to the world trade accompanied by reduction in inflation and the fiscal deficit. Trade liberalization was done under the auspices of the World Trade Organization (WTO) rules (DTI, 2008:17).

The South African government intervenes in the industrialization process in various ways. The following are some of the strategies to promote exports through industrialization (DTI, 2008:19 & DT1, 2006b:9)):

- South Africa concluded bilateral trade agreements with the South African Customs Union, the Southern African Developing Community, and MERCOSUR through a Preferential Trade Agreement (PTA) and the European Free Trade Association (EFTA) through a Free Trade Agreement.
- Sector support was introduced which include the Motor Industry Development Programme (MIDP) for automotives and Duty Credit Certificate Scheme (DCCS) for clothing and textiles.
- The National Industrial Participation Programme (NIPP) was put into place to ensure that large foreign purchases by the state entities secured offsetting investment obligations in the domestic economy.

- The Spatial Development Initiatives (SDIs) were aimed at facilitating investment in regions of inherent economic potential.
- Industrial Development Zones (IDZs) were established to provide for purpose-built industrial estates linked to international ports or airports, which contain controlled Customs Secured Areas (CSAs).
- Other measures to support a shift to a more competitive environment such as Sector Partnership Fund (SPF), Competitiveness Fund (CF), Export Councils and the Export Marketing and Investment Assistance (EMIA) programmes were introduced.
- The Small Enterprise Development Agency (SEDA) and the Micro-finance Apex Fund (SAMAF) were developed to support micro-enterprises.
- And competition policy became a fundamental part of industrial policy, in order to deal with anti-competitive behaviour flowing from concentration and facilitating entry and growth of small and black-owned firms and foreign direct investment.
- Lastly, Black Economic Empowerment (BEE) was facilitated through new programmes such as The Black Business Development Supplier Programme (DTI, 2008:19 & DTI, 2006b:9).

These interventions were aimed at export promotion through industrialization at national level. But, this action focuses in some sectors.

3.3.1.5 Sector identification

Government realized that to achieve its vision it is imperative to identify and address the cross-cutting and sector-specific constrains and opportunities prevailing in the industrial economy (DTI, 2008:3). However, the quality of South African sector strategies can play a decisive role in realizing the vision of the industrial policy.

But, since South Africa has a relatively diversified and complex industrial base, it is essential to identify some sectors which show the substantial potential for growth, employment generation and diversification and growth of exports (DTI, 2008:4). Although, sector identification can be subject to constant consolidation and renewal, some of the sectors which were identified are:

(a) Natural resource-based sectors

These sectors were chosen due to abundance of mineral and plant resources coupled with cheap electricity and state support (DTI, 2008:36). These sectors can grow competitively with the rest of the world.

(b) Medium technology sectors

These sectors have potential for employment and development prospects (DTI, 2008:36). These sectors include metals fabrication, machinery and equipment, chemicals and plastics, and paper and pulp as well as oil and gas and jewellery.

(c) Advanced manufacturing sectors

It became a global norm that efforts should be directed to value-addition and improving efficiencies along manufacturing value chains i.e. new advanced manufacturing processes need to be promoted and accumulated industrial capabilities enhanced (DTI, 2008:37). Advanced manufacturing sectors include automotives, aerospace, electronics and nuclear energy.

(d) Labour-intensive sectors

These sectors can employ a large number of lower skilled labour and offer opportunities for smaller producers (DTI, 2008:37). They include primary activities such as agriculture, forestry, fishing, and certain parts of mining, clothing and textiles footwear, food, beverages and furniture.

(e) Traditional services

Like other sectors identified above, service sectors have developmental characteristics such as the ability to absorb labour and generate substantial value addition (DTI, 2008:38). Some of service sectors tend to have higher employment elasticity than manufacturing. These service sectors are business process outsourcing (BPO), ICT services, engineering, construction and mining services and film.

3.3.1.6 Sector support measures

In order to speed up the process of industrialization it became important to identify sectors that should be given full government support. The South African government put some measures to support the chosen sectors (DTI, 2007:8). Some of the chosen sub-sectors are clothing and textiles, and transport equipment (Kaplan, 2004:627). The support was in the form of import-export complementation, that is, an exporter earns either the right to import on a duty-free basis

(the Import Credit Certificate Scheme in autos and components) or an offset against the duty paid on imports (the Duty Credit Certificate Scheme in clothing and textiles) (Kaplan, 2004:627).

Specifically, the support measures were as follows:

- In autos and auto components, the Motor Industry Development Programme (MIDP) was introduced. This includes phase-down of tariffs, a removal of local content requirements, duty-free imports of components up to 27 percent of the wholesale value of the vehicle, and a duty rebate credits to be earned on exports (Kaplan, 2004:627). Furthermore, exporters of auto components earn an Import Rebate Credit Certificate (IRCC) equal to the local value of the export.
- The clothing and textiles sector's support encompassed a tariff phase down combined with an export incentive (Kaplan, 2004:633). And firms importing yarn, fibre or fabrics in order to produce clothing for export were to do so, on a duty free basis. Similarly, the Duty Credit Certificate Scheme (DCCS) was introduced to allow firms to claim a remission of duty for proven exports. However, the level of support depends on the product exported, with highest support for clothing followed by fabric and then yarn (Kaplan, 2004:635).

All the initiatives to promote exports and growth through industrialization were accompanied by constraints that still require immediate attention.

3.3.1.7 The constraints to sustainable growth and industrialization

Various constraints were identified which hinder the progress of exports growth (DTI, 2007b:7). Some of these constraints are:

- The volatility of the currency that deters investors in tradable goods and services.
- Relatively small market size coupled with relatively costly and unreliable infrastructure and high logistics costs, particularly for freight and commuter transport.
- The monopolistic pricing of key intermediate inputs into the manufacturing sector.
- Challenges with respect to skills development and training.
- An intensely competitive global environment, and
- Inadequate state support for investment, upgrading, innovation and technology (DTI, 2007a:2).

In conclusion, the South African industrial policy focuses on decentralization of economic activities to other areas that lack industries so that no region is left behind. And the focus is directed at value-added manufactured goods that have export potential rather than traditional

goods and services. Even the labour absorbing industrialization is encouraged as the country is faced with the problem of unemployment. The industrial policy even suggested to some of the sectors that the region might start with full support from the government. But, the following section will focus specifically to the Limpopo Province's initiatives to support the national call of regional development and export promotion.

3.4 Provincial initiatives

The National Spatial Development Perspective (NSDP) and the Regional Industrial Development Strategy (RIDS) informed the establishment of Limpopo Growth and Development Strategy (LGDS) 2004. Developmental plans about the spatial location of economic activities are made nationally but implemented at provincial and local levels. Limpopo, like any other province, developed its Growth and Development Strategy to advance the objectives of the province.

The LGDS has a number of objectives (LGDS, 2004:19):

- The need to improve the quality of life of the population of Limpopo.
- Growing the economy of the province, sustainable job creation, innovations and competitiveness.
- Improve the institutional efficiency and effectiveness of Government.
- Address priorities that cut across the three objectives above, such as Black Economic Empowerment, HIV/AIDS-TB, poverty reduction, issues of land and the environment etc, and
- Attain regional integration.

The objectives were set as means to facilitate economic growth and capital investment as well as job creation in the province (LGDS, 2004:19). In other words the main aim of LGDS is to improve quality of life by growing the economy, made possible by institutional efficiency of the government.

Thus, the provincial government has committed itself to the general growth and development of the province. The commitment is based on a strategy of seven developmental industrial clusters following the value-chain approach adopted in a development summit, as a means to (LGDS, 2004:24):

- Create employment opportunities.
- Raise the international competitiveness and investment rating of the province, and

- To combine public and private sector contributions to development and to align the interventions of various public development institutions for greater impact.

The province has realized that the national stand to promote exports as a means to improve the lives of people is also relevant here. And as such the Limpopo Province has engaged itself in various activities and trade agreements in order to promote manufactured exports.

Geographically, Limpopo Province is situated at the northern-most tip of South Africa and is ideally positioned for easy access to African markets. By sharing its borders with Mozambique, Zimbabwe and Botswana, Limpopo is a gateway to Africa and in a position to expand its exports to the neighbouring countries (LGDS, 2004:1).

Currently, mining, agriculture and the tourism sector put Limpopo at competitive edges (LGDS,2004: i). And Limpopo is busy investing in infrastructure development, adequate skills provision, and sustainable primary health care and entrepreneurial development to promote exports (LGDS, 2004: ii). The province is also focusing on Black Economic Empowerment, land reform and SMME development in order to enhance economic participation by all (LGDS, 2004:17). Access to technology and knowledge-based activities, and the capacity of the provincial administration to deliver public services are being improved to promote the flow of information and trade (LGDS, 2004:22).

Apart from the above, Limpopo Province is considering collaboration and partnerships with neighbouring states in areas of mutual benefit. Once agreements are signed, the province could secure trade with these countries (LGDS, 2004:24).

The province showed much commitment to the promotion of exports when it established Trade and Investment Limpopo (TIL). TIL is an official agency for the Limpopo Provincial Government to market the potential and investment opportunities of South Africa's most northren province to local, national and international business (Moloto, 2007:2). The agency has trade and investment interest in Africa and the Middle East, Asia, the Americas as well as the European Union (Moloto, 2007:2). TIL was established because the focus of the province has changed from being an exporter of unprocessed minerals and agricultural produce to value-added processing and manufacturing (Moloto, 2007:3).

The tasks of TIL are (Mathebula, 2007:8):

- To identify investment opportunities and undertake research and to package them for presentation to potential investors.
- To organize trade and investment missions abroad and to invite foreign groups to visit the province to assess projects and meet potential partners. Business people are included in most missions abroad to give them exposure and opportunities to establish contacts.
- To forge close ties with South Africa's Southern African neighbours to establish the province as a regional trade and investment base.
- To establish the Limpopo Export Advisory Council to assist Limpopo exporters to overcome trading obstacles and boost exports.
- To undertake an extensive municipal capacity building programmes, which helps local governments to clearly define competitive advantages in their areas and to market them, and
- To form strategic partnerships with development agencies such as the Limpopo Business Support Agency, the Limpopo Tourism and Parks and the Limpopo Economic Development Enterprise in order to access additional expertise.

Limpopo went much further to promote exports. Limpopo has established a wide range of international relationships to promote investment in the province and open export markets for companies and communities (Schneider, 2007:12). Trade and Investment Limpopo signed economic co-operation agreements with the neighbouring Botswana and Mozambique (Schneider, 2007:12).

The overseas trade agreements include the following (Schneider, 2007:12):

- The Swiss organization for Facilitating Investments (Sofi) to establish contacts with Swiss investors and traders.
- The Manly Group, the US-based group assists TIL to establish contacts in Florida, Tennessee, Pennsylvania, California and Hawaii.
- IJM Corporation Berhad, Malaysia. This is a service level agreement which enables TIL to send Limpopo university graduates on two-year training courses at this diversified multinational, and
- The SA-Netherlands Chamber of Commerce. This organization offers business solutions for small to medium enterprises in Limpopo, and facilitates linkages between SMEs in the Netherlands and Limpopo.

TIL also eases trade and investment missions to Europe and Asia and it was also represented at SA's global trade shows (Schneider, 2007:12).

However, all the efforts made by the Limpopo Province to promote exports are not conclusive; there are other avenues that need to be explored to consolidate the province's role in international markets.

3.5. Summary and Conclusion.

In this chapter the discussion was centered around the policy perspective on the location of economic activity and promotion of exports. The National Spatial Development Perspective laid a foundation as to how the policy for location of economic activity should be made. The Regional Industrial Development Strategy endorsed the suggestions made in the NSDP. RIDS also went on to suggest economic sectors that have potential to promote exports. The South African government through the Department of Trade and Industry revealed various measures to promote exports. The industrial and trade policy is perceived as a strong government intervention towards export promotion. At provincial level the objective of the national government to promote exports is also visible. Limpopo province in particular, is pursuing this policy of export promotion (Moloto, 2007:2). This was confirmed when the Limpopo Growth and Development Strategy was introduced.

Furthermore, the establishment of the agency Trade and Investment Limpopo is a clear indication that Limpopo is fully committed to the promotion of exports. Since the introduction of TIL, trade and investments opportunities were created regionally and abroad. All these initiatives were taken with the sole purpose of promoting manufactured exports. Nevertheless, the details of Limpopo export profile will be dealt with in the next chapter wherein the exports will be analyzed sector by sector from provincial to municipal level.

Chapter 4: Limpopo's Manufacturing and Export Profile

4.1 Introduction

In the previous chapter the initiatives by Limpopo Province to promote exports were discussed. Some of the sectors were identified that have export potential. However, before one can put export-led growth forward as a solution to the challenges faced in Limpopo Province and before export promotion is undertaken as a policy intervention, there is a need for a thorough analysis of the Province's export profile specifically manufactures. The challenges that face the province are low economic growth, unemployment and poverty. It is necessary to address the challenges by putting forward the argument in favour of outward-oriented policies. And to review the geography of South African exports and policies aimed at promoting regional industrial development and exports. The analysis of manufacturing and trade data to compile an export profile of the province is of particular importance here. The purpose of this chapter is to compile a spatial profile of manufacturing and compare it to the export profile in Limpopo.

The analysis has two main parts. The first is to examine key trends in the various manufacturing sub-sectors in Limpopo. The analysis will focus on:

- Output growth.
- Employment growth.
- Wage growth.
- Profit growth.

The period under consideration is 1996 to 2006. The second part analyses where in Limpopo manufacturing is taking place. Chapter 3 showed that manufacturing, exports and export promotion can have a strong spatial character. It is upon this background where Limpopo export profile can be compiled, taking into consideration the spatial character of Limpopo's manufacturing sector. This chapter will also present a breakdown of manufacturing activity per municipality. The data used to present this provincial profile is from Global Insight's Regional Explorer database (REX,2006).

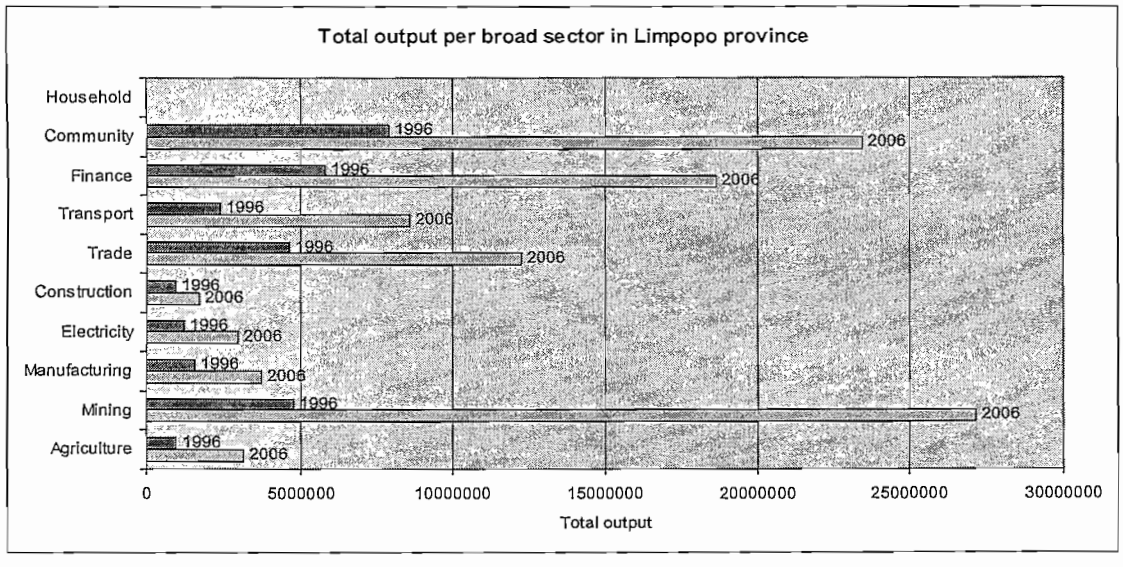
The chapter is structured as follows. Section 4.2 presents a snapshot of economic activity in Limpopo Province and the key trends in manufacturing in the province. In section 4.3 the detailed manufacturing sub-sectors are described in terms of changes in output, employment, wages and

profits over the period 1996 to 2006. Section 4.4 outlines the spatial trends in manufacturing in Limpopo Province. The focus is on where economic activity takes place. Section 4.5 presents the province's export profile, both in terms of the different manufacturing sectors' contributions to provincial exports and different places' contribution to provincial exports. Section 4.6 gives a summary of the profile and draws conclusions about what the profile implies for possible export-led growth.

4.2 Total manufacturing in the Limpopo Province

Before the trend of manufacturing is displayed, the place of manufacturing in the Limpopo's economy will be outlined. The position of manufacturing is visible in the following graphs.

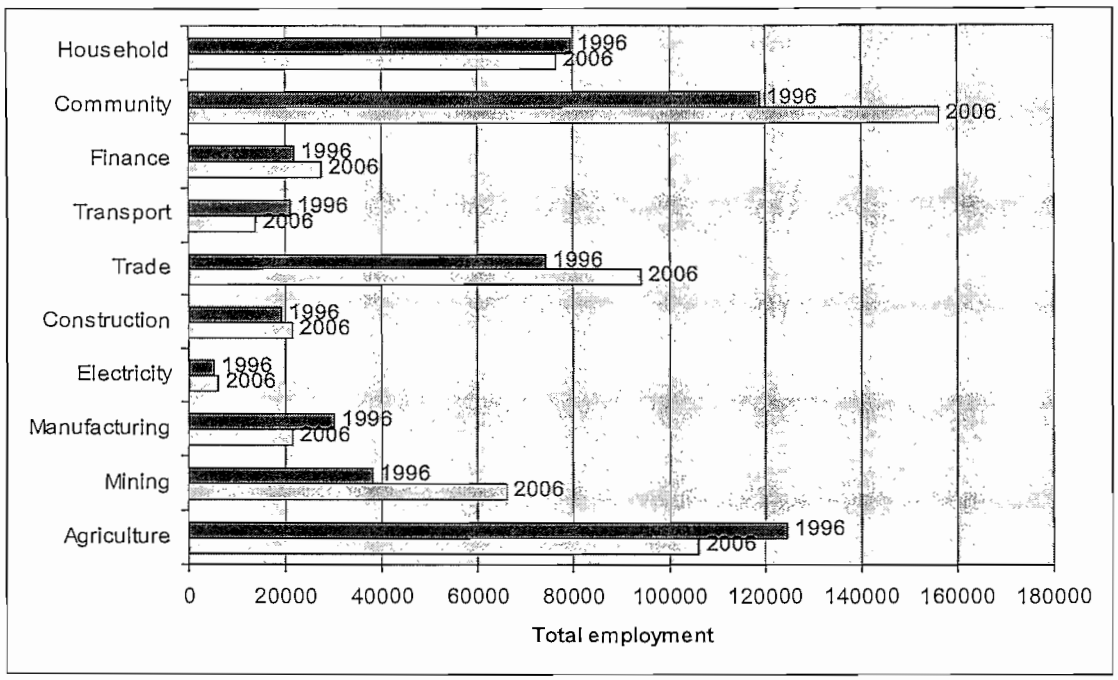
Figure 4.1: Total output per broad sector in Limpopo province in 1996 and 2006



Source: Global Insight Regional Explorer(REX), 2006

Figure 4.1 shows the manufacturing sector as the sixth important sector in a total of nine broad sectors in Limpopo's economy. But the sector has growth potential because since 1996 the output growth is more than doubled. This is a clear indication that if the manufacturing sector can be promoted, the province's economy can benefit more. But as far as employment is concerned Figure 4.2 below will show how the sector performed compared with other broad sectors in the province.

Figure 4.2: Total employment per broad sector in Limpopo province in 1996 and 2006



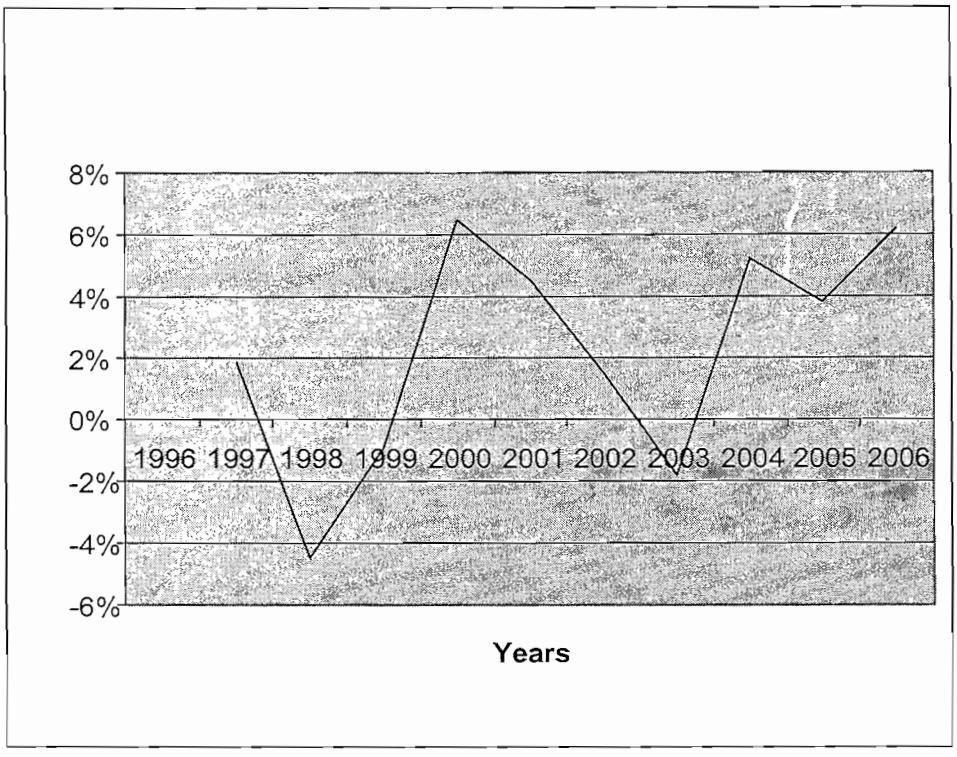
Source: Global Insight Regional Explorer(REX), 2006

The total number of employment in the manufacturing sector has decreased by almost half since 1996 as displayed in Figure 4.2 above. However, this was a general trend since some of the broad sectors showed a decline in employment during this period. But this shows that something needs to be done to promote employment in the manufacturing sector. Nevertheless, the trend of the manufacturing sector will be analyzed in the following section.

4.2.1. Total manufacturing output growth

Figure 4.3 below shows changes in output in manufacturing over the ten year period 1996-2006. Initially output growth contracted from 1.8 percent per annum in 1997 to-4.5 percent in 1998. Thereafter manufacturing output recovered with growth reaching 6.5 percent per annum in 2000. There was again a decline over the period 2001 to 2003, with an upward trend starting in 2003. On average, output growth was positive at a rate of 2.2 percent growth per annum over the period.

Figure 4.3: Growth in GDP at constant prices in manufacturing 1996-2006

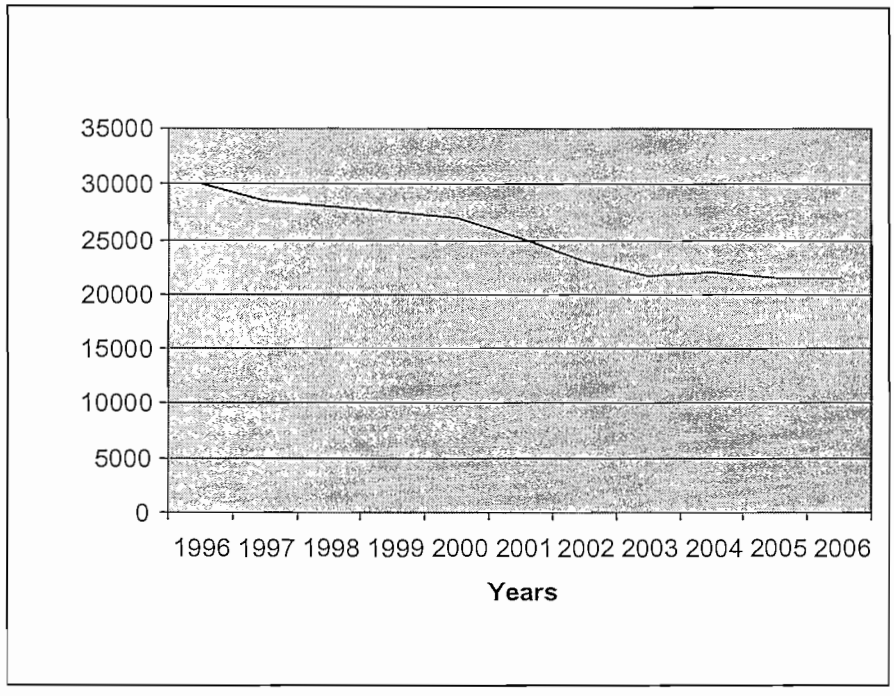


Source: Global Insight Regional Explorer(REX), 2009)

4.2.2 Employment in manufacturing

Figure 4.4 below shows changes in the level of total employment in the Limpopo Province's manufacturing sector since 1996. Change in employment in manufacturing sector was not favourable. It showed a downward trend since 1996. About 8 469 jobs were lost over the period of ten years: 1996 to 2006.

Figure 4.4: Employment in total manufacturing 1996-2006

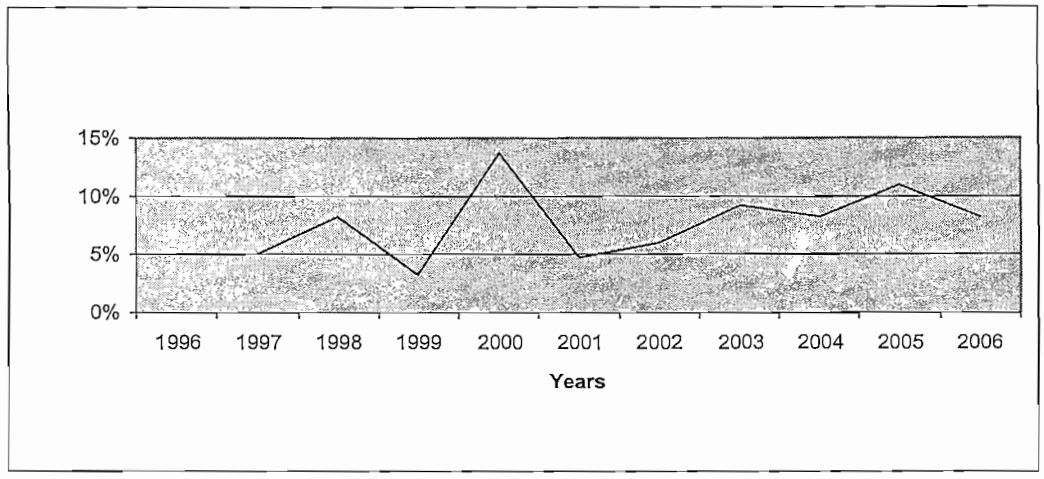


Source: Global Insight Regional Explorer(REX), 2006

4.2.3 Growth in wages in total manufacturing in the Limpopo Province

Figure 4.5 below depicts the growth in total wages in the manufacturing sector in Limpopo since 1997. The wage growth rate showed an upward trend from the beginning but slump from 1998 reaching growth of only 3.2 percent per annum in 1999. But it recovered again in 2000. However, wages growth rate was characterized by up and downward movement over the years, but has remained positive since 1997.

Figure 4.5: Growth in wages in manufacturing in Limpopo province 1996-2006

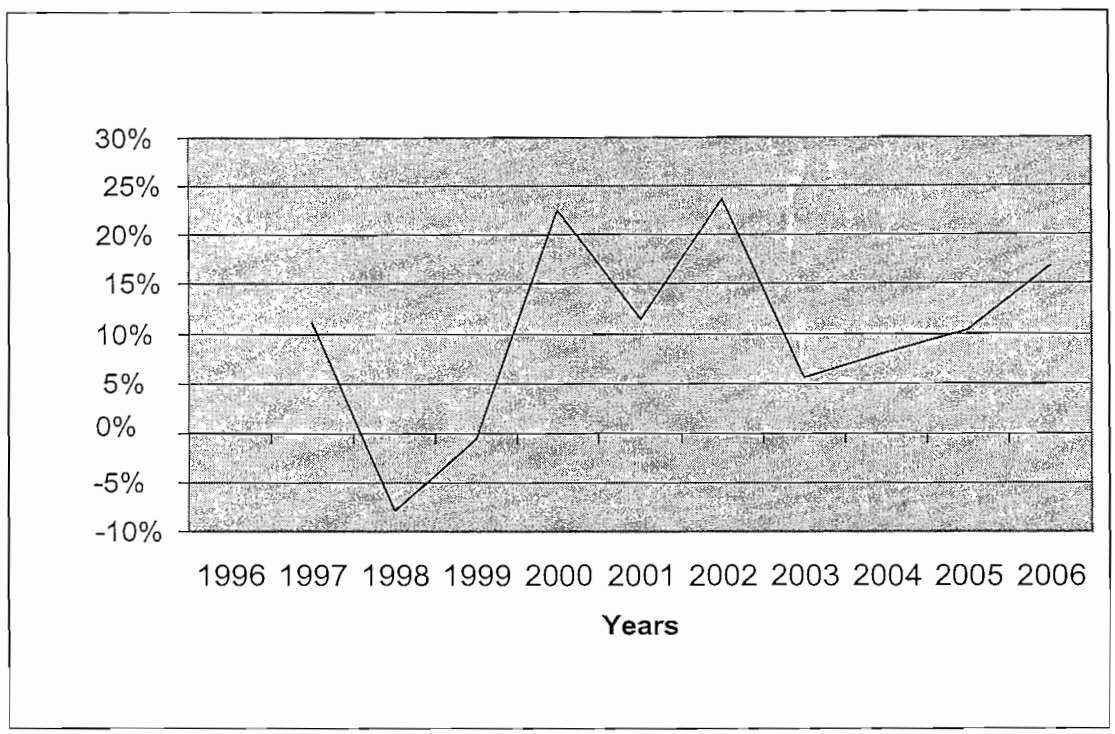


Source: Global Insight Regional Explorer(REX), 2006

4.2.4 Growth in profits in total manufacturing in Limpopo province

Figure 4.6 below shows the growth in profits as from 1996 and it is measured by total gross operating surplus of the whole manufacturing sector. In 1997 the growth of GOS was 11 per annum but declined and reached -7.9 percent per annum in 1998. It picked up again reaching the peak of 23.6 percent in 2002. And as from 2003 the profit growth depicts an upward trend until 2006.

Figure 4.6: Growth in profitability of manufacturing in Limpopo province 1996-2006



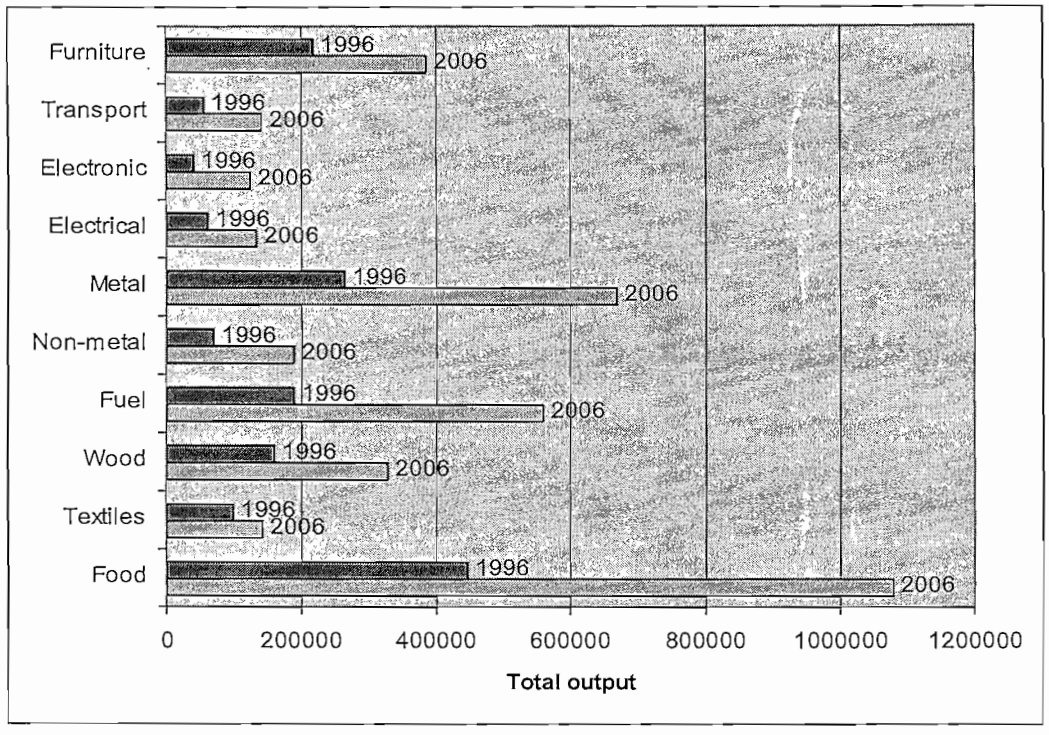
Source: Globa Insightl Regional Explorer(REX), 2006

It became visible from the above discussion that manufacturing sector is one of the most important sectors in Limpopo. Manufacturing output growth was positive since 1996 although employment slumped over the years 1996 to 2006. Growth in wages as well as profits was positive in manufacturing.

4.3 Detailed Manufacturing Sub-sectors in the Limpopo Province

From the previous section the trends in output, employment, wages and profits were shown in total manufacturing. In this section the focus is on sub-sectors of manufacturing. In figures 4.5 and 4.6 below the place of every sub-sector in total manufacturing is depicted through the output and employment in 1996 and 2006. The manufacturing sub-sectors embrace food, textiles, wood, fuel, non-metal, metal, electrical, electronic, transport and furniture.

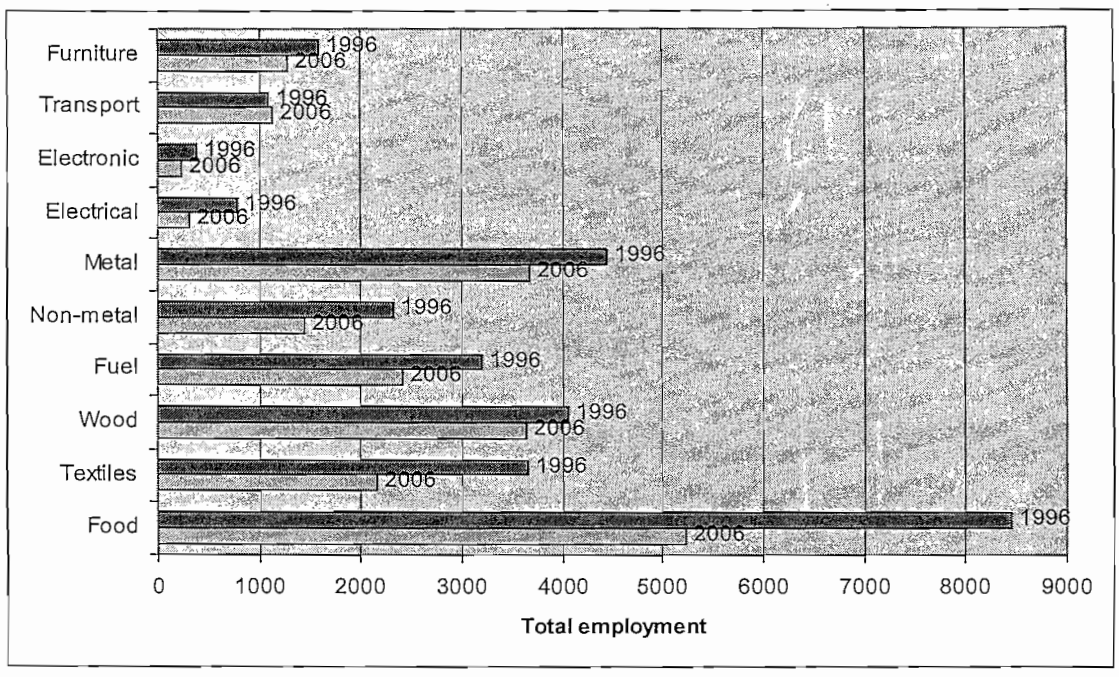
Figure 4.7: Total output per detailed sector in Limpopo Province 1996 and 2006



Source: Global Insight Regional Explorer(REX), 2006

In figure 4.7 above food, beverage and tobacco production sector showed to be the most important sub-sector in manufacturing in Limpopo in 1996 and 2006. Positions two and three are occupied by metal products, machinery and households appliances and fuel, petroleum, chemical and rubber products sectors respectively. Electronic, sound/vision, medical and other appliances sector was the smallest contributor to total manufacturing sector in the Limpopo Province in 1996 and 2006.

Figure 4.8: Total employment per detailed sector in Limpopo Province 1996 and2006



Source: Global Insight Regional Explorer(REX), 2006

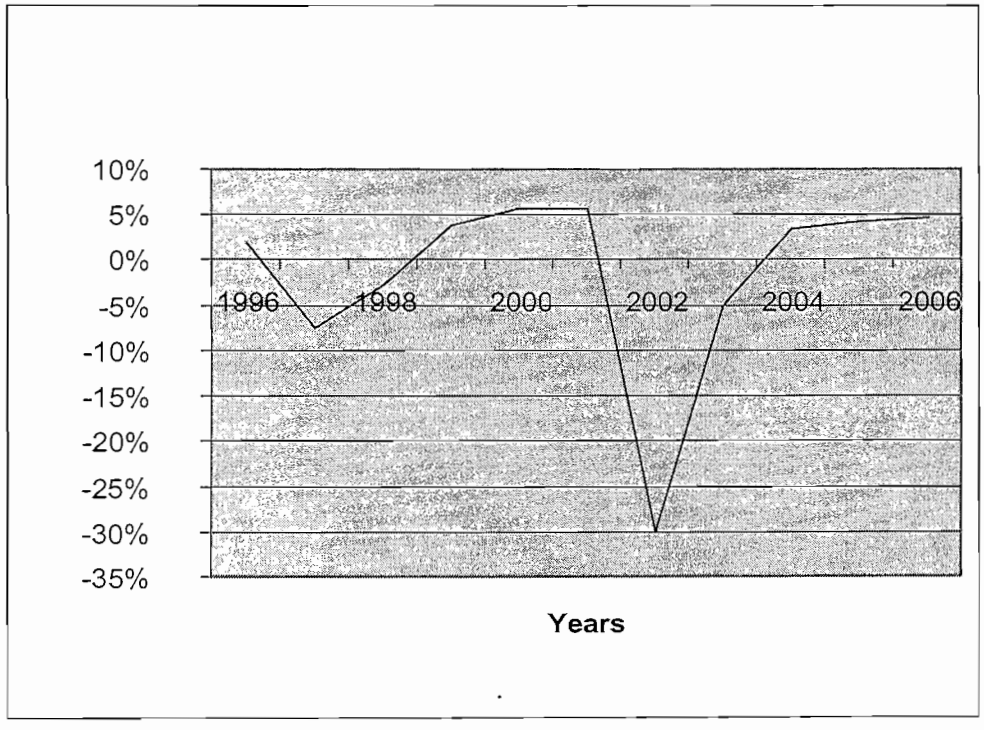
In figure 4.8 where total employment per detailed sector is depicted, the large number of workers employed in the manufacturing sector comes from food, beverage and tobacco production sectors. But, surprisingly wood and wood products sectors employed more workers than fuel, petroleum, chemical and rubber products sectors despite their lower outputs. However, employment shrunk in all detailed sectors in 2006. But the detailed information will be unpacked as the trends in output, employment, wages and profits in each sector are going to be looked at in turn.

4.3.1 Key trends in food, beverage and tobacco production

4.3.1.1 Output growth

Figure 4.9 below shows the changes in output of food, beverage and tobacco in Limpopo Province since 1996. The rate of output growth plunged after 1996 but recovered thereafter. In 2001 the output growth declined once again and the sub-sector showed a -30 percent contraction in 2002. However the position changed for the better in 2003 through 2006.

Figure 4.9: Growth in output of food processing 1996-2006

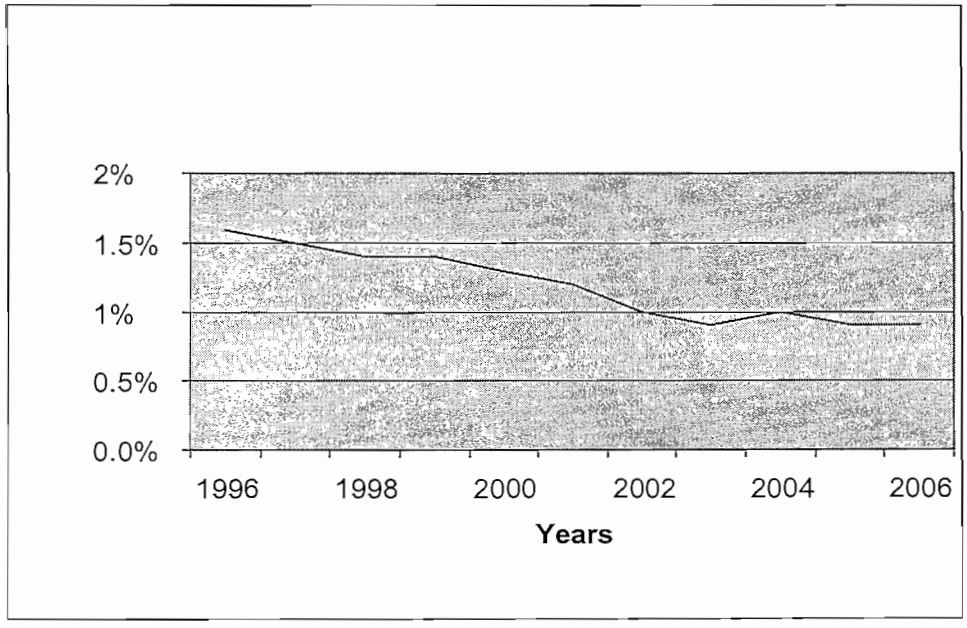


Source: Global Insight Regional Explorer(REX), 2006

4.3.1.2 Employment growth

It is clear from figure 4.10 below that the growth in employment in food processing was going down since 1996. Although employment growth showed downward trend it never became negative over the years 1996 to 2006. This showed that there was still room for improvement in employment in this sector.

Figure 4.10: Growth in employment in the food processing sector 1996-2006

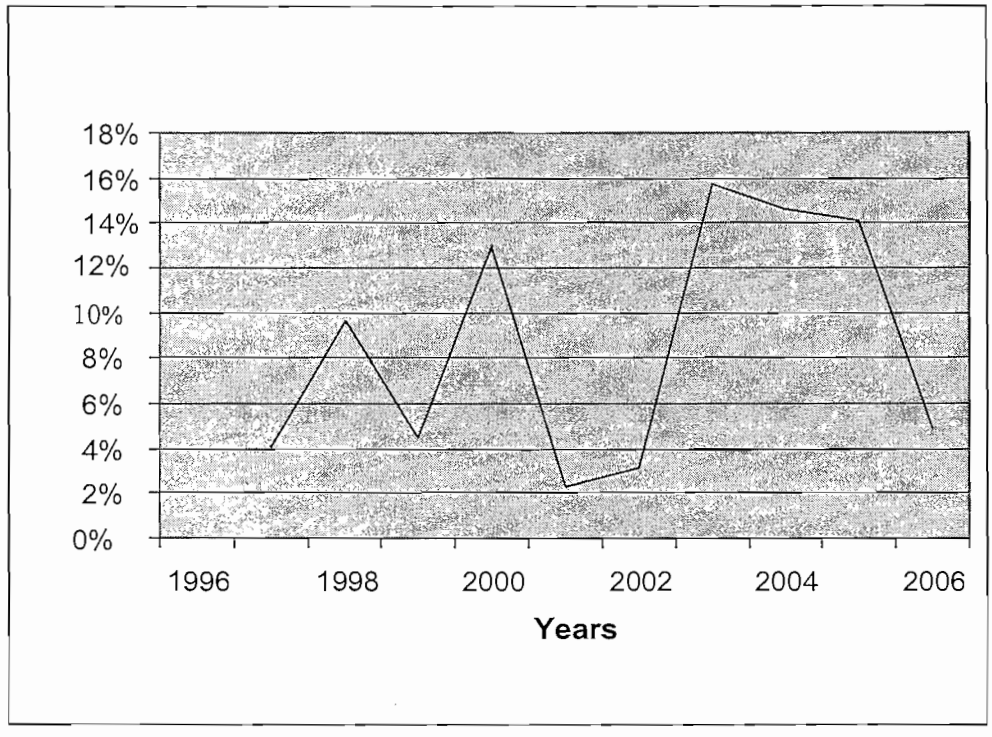


Source: Global Insight Regional Explorer(REX), 2006

4.3.1.3 Wages growth

In figure 4.11 below the wages growth in the food processing sector in Limpopo Province is displayed. It was positive since 1997 and unstable throughout the period 1997 to 2006. The average growth rate over the period was 8.5 percent per annum.

Figure 4.11: Growth in wages in the food processing sector 1996-2006

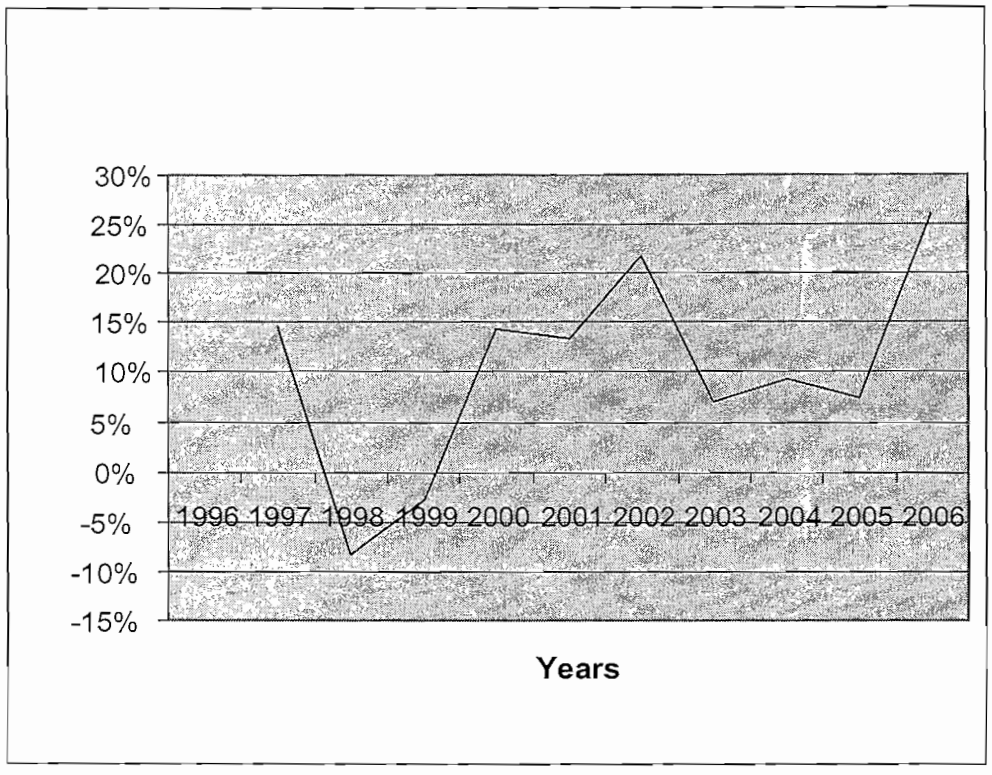


Source: Global Insight Regional Explorer(REX), 2006

4.3.1.4. Profit growth

Figure 4.12 shows that profit growth plunged to -8.3 percent per annum in 1998 but it increased considerably and reached 25.9 percent in 2006. This means that in food sector opportunities were available for investors as profits were attractive and showed an upward trend over the years 1997 to 2006.

Figure 4.12: Growth in profits in the food processing sector 1996-2006



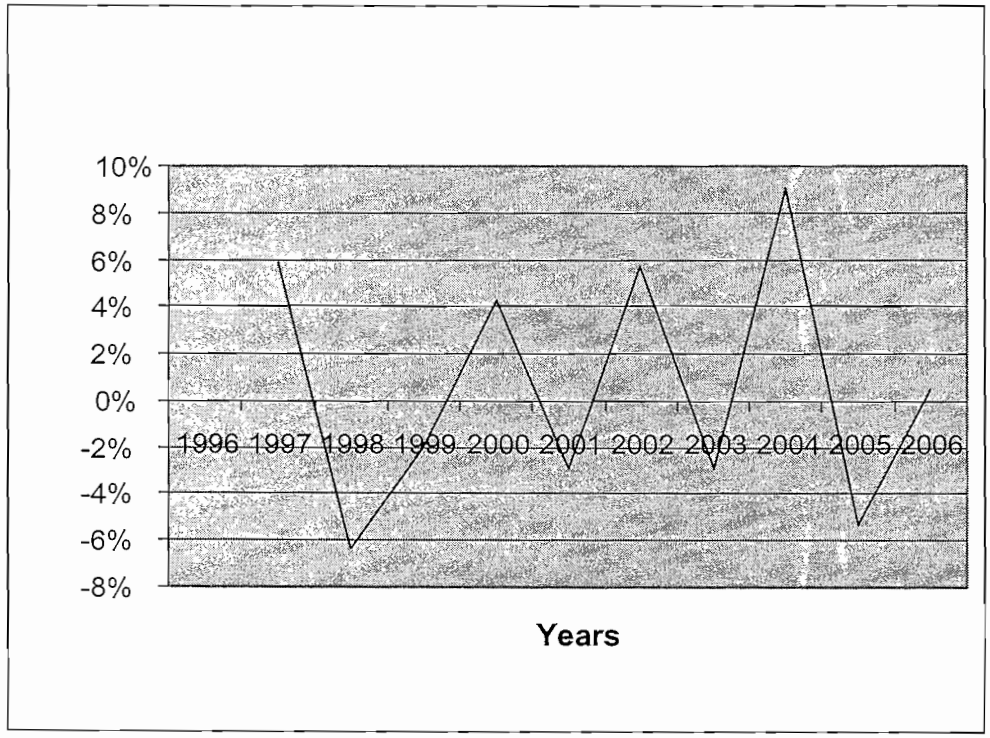
Source: Global Insight Regional Explorer(REX), 2006

4.3.2 Key trends in textiles, clothing and leather goods

4.3.2.1 Output growth

Figure 4.13 below shows unstable growth in output over the period of ten years 1997 to 2006. The output growth plunged in 1997 and became negative in 1998. But since 1998 it recovered and contracted on a one year cycle until 2006.

Figure 4.13: Growth in output of textiles and clothing 1996-2006

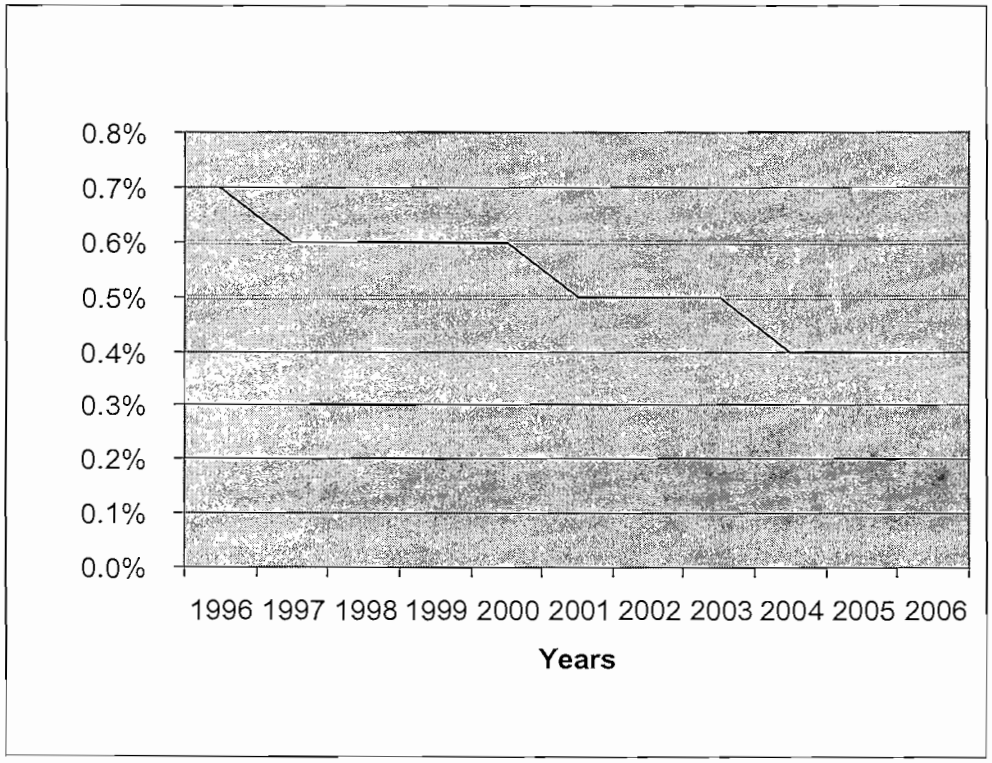


Source: Global Insight Regional Explorer, 2006)

4.3.2.2. Employment growth

In figure 4.14 below the employment growth in textiles, clothing and leather production sectors is shown. Employment growth declined since 1996 and it grew at a rate below 1 percent per annum over the years 1996 to 2006. The growth trend was going down until 2006.

Figure 4.14: Growth in employment in textiles and clothing sector 1996-2006

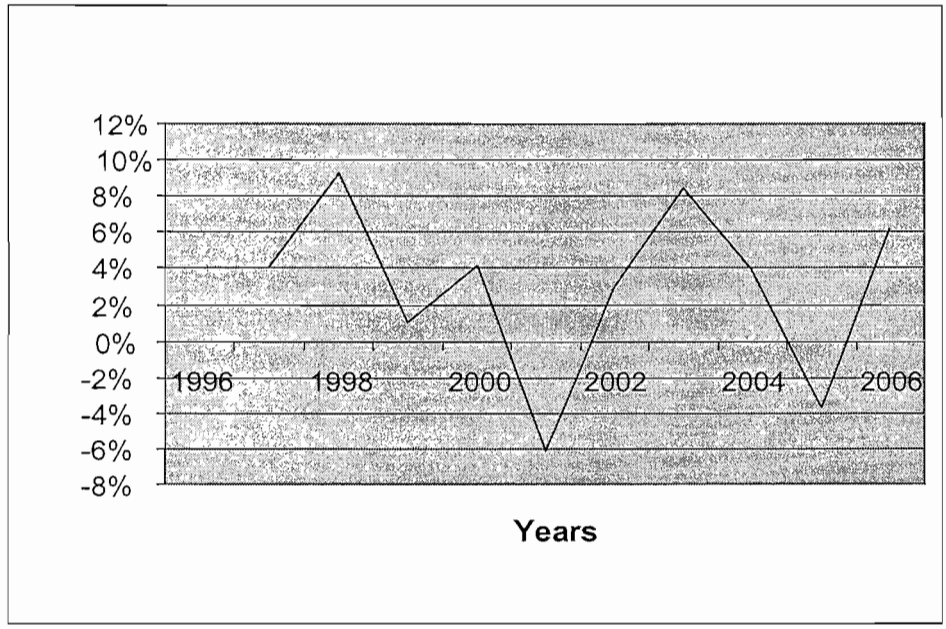


Source: Global Insight Regional Explorer(REX), 2006

4.3.2.3 Wages growth

Figure 4.15 depicts wage growth that expanded in 1997 and contracted in 1998 and reached a record low of -6 percent in 2001. But it recovered again in 2002 and plunged down once again in 2003. However, since 2005 wages growth shows upward trend.

Figure 4.15: Growth in wages in textiles and clothing sector 1996-2006

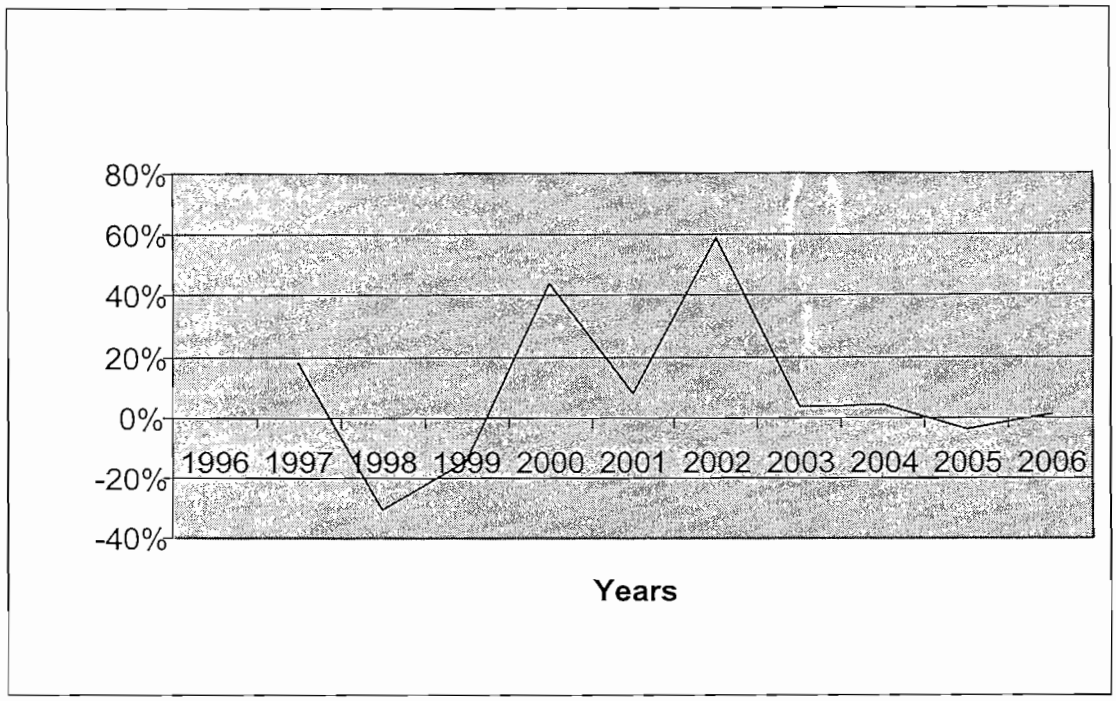


Source: Global Insight Regional Explorer(REX), 2006

4.3.2.4 Profit growth

Figure 4.16 shows how profits grew in the textiles, clothing and leather goods sectors in the Limpopo Province since 1997. Profit growth was unstable but it reached a record high of 58.8 percent in 2002 and started to fall. From 2003 it was minimal.

Figure 4.16: Growth in profits in the textiles and clothing sector 1996-2006



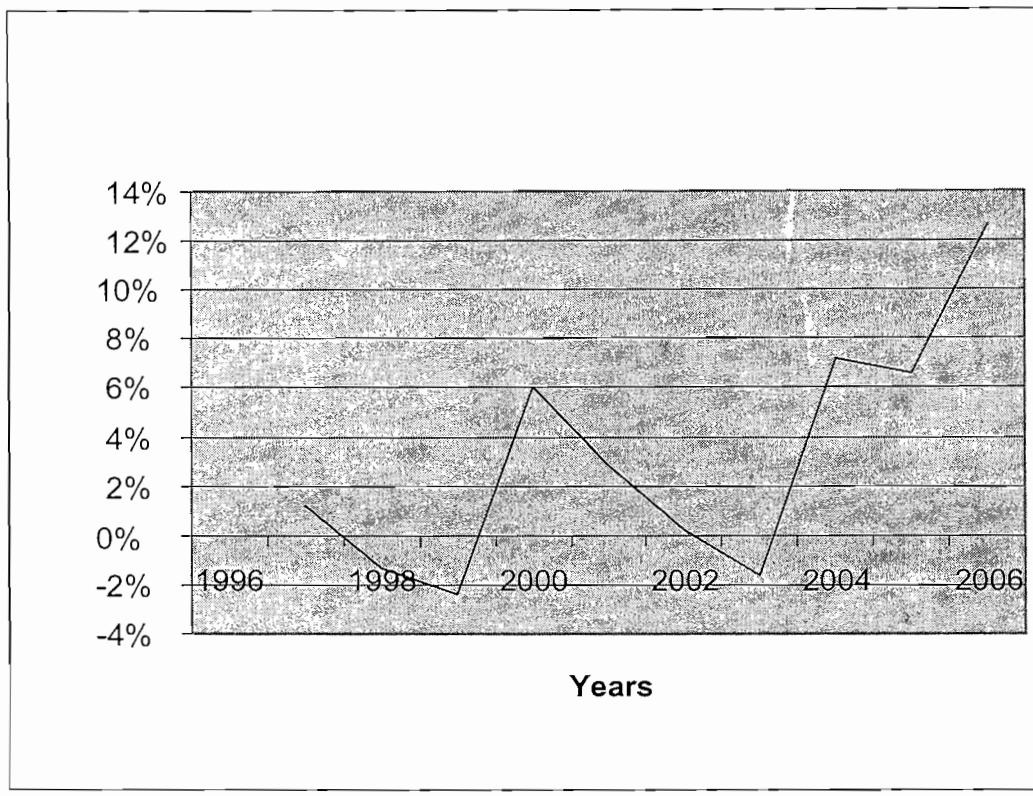
Source: Global Insight Regional Explorer(REX), 2006)

4.3.3 Key trends in wood and wood products sector

4.3.3.1 Output growth

Figure 4.17 shows the output growth in wood and wood products sectors. From 1997 the output growth was very low but after 2003 the position changed drastically for the better. In wood and wood sector output growth shows an upward trend since 2003. This means that there was great potential in this sector that could be tapped for the improvement of the province's economy.

Figure 4.17: Growth in output of wood and wood products sector 1996-2006

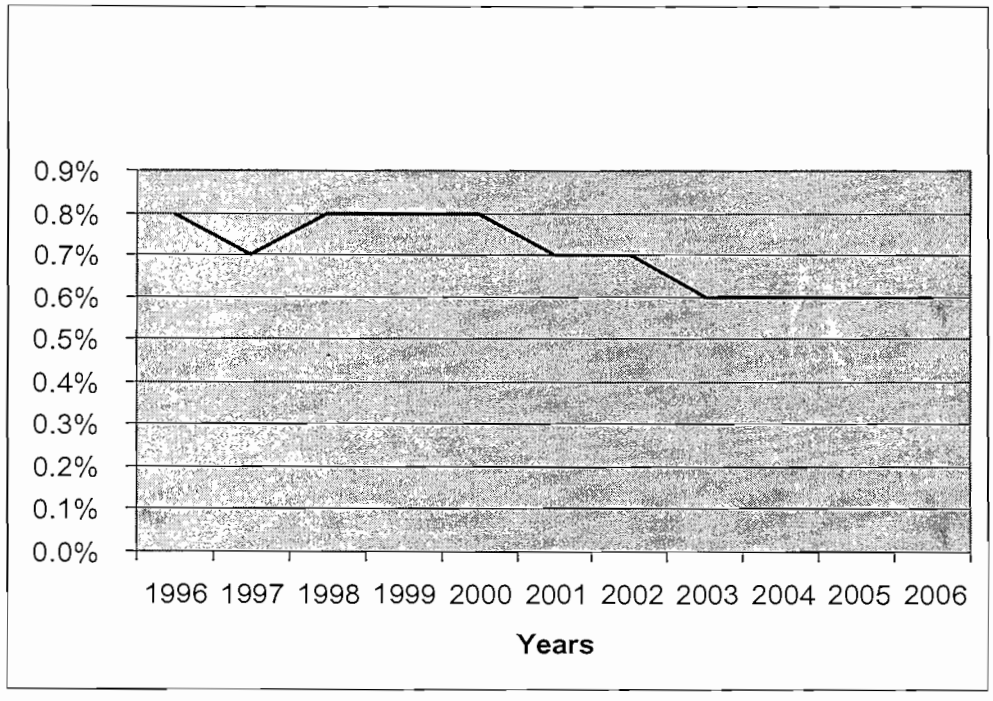


Source: Global Insight Regional Explorer(REX), 2006

4.3.3.2 Employment growth

Employment growth in wood and wood products sectors was below 1 percent per annum over the years 1996 to 2006 as depicted in figure 4.18 below. Employment growth slumped from 0.8 percent in 1996 to 0.7 percent in 1997 and picked up again in 1998. But since 2001 employment growth showed a downward trend. Nevertheless, employment growth remained positive since 1996.

Figure 4.18: Growth in employment in wood and wood products sector 1996-2006

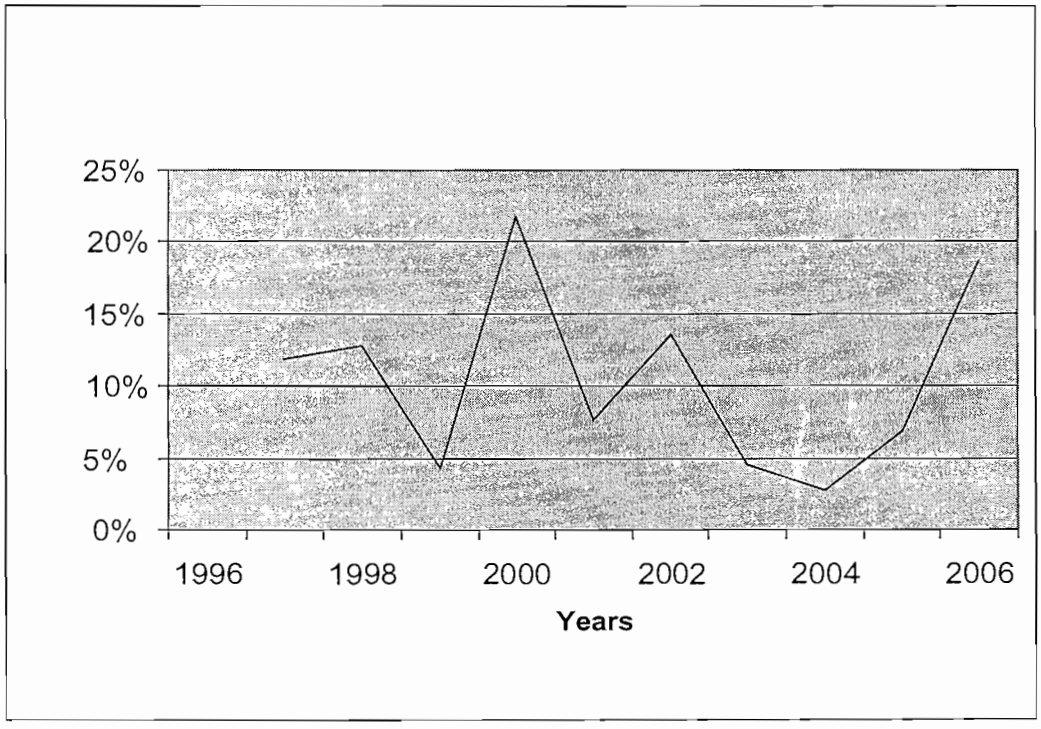


Source: Global Insight Regional Explorer(REX), 2006

4.3.3.3 Wages growth

Figure 4.19 shows growth in wages in wood and wood products sectors in Limpopo Province since 1997. Wages growth was favourable throughout the years 1997 to 2006. It showed an upward trend although it was characterized by heavy swings year after year.

Figure 4.19: Growth in wages in wood and wood products sector 1996-2006

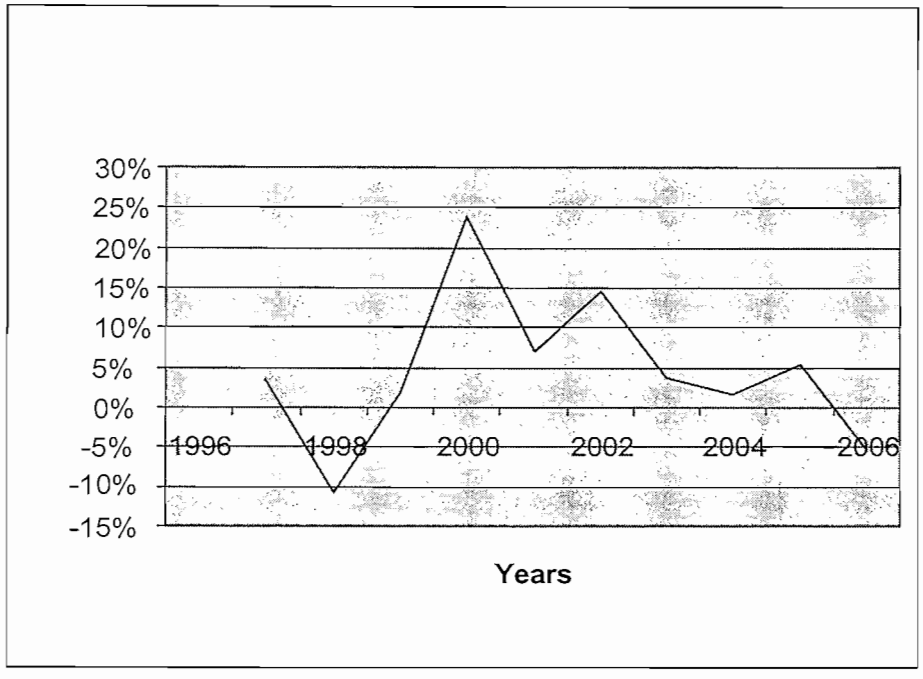


Source: Global Insight Regional Explorer(REX), 2006

4.3.3.4 Profit growth

Profit growth contracted from 3.5 percent per annum in 1997 to -10.8 percent in 1998 as depicted in figure 4.20. But in 1999 profit recovered and reached 24 percent in 2000. In 2006 profit growth slumped despite greater output growth.

Figure 4.20: Growth in profits in wood and wood products 1996-2006



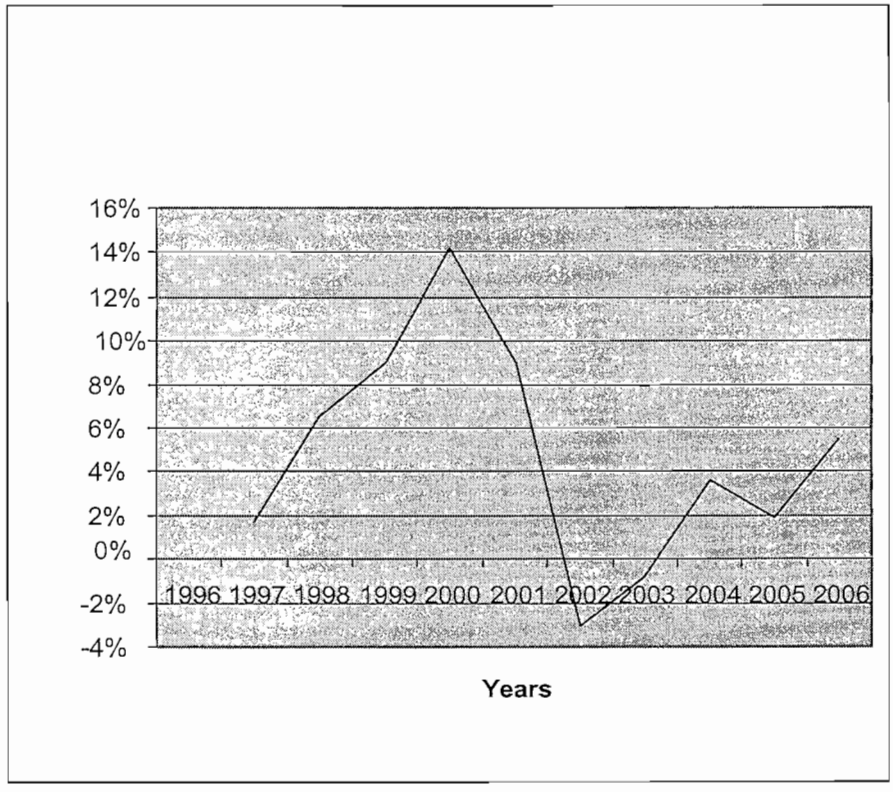
Source: Global Insight Regional Explorer(REX), 2006)

4.3.4. Key trends in fuel, petroleum, chemical and rubber products

4.3.4.1 Output growth

In figure 4.21 output growth in fuel sector was not stable over the years 1997 to 2006. Output growth expanded since 1997 and contracted in 2002. But since 2003 output growth expanded and showed upward trend until 2006.

Figure 4.21: Growth in fuel, petroleum, etc. sector1996-2006

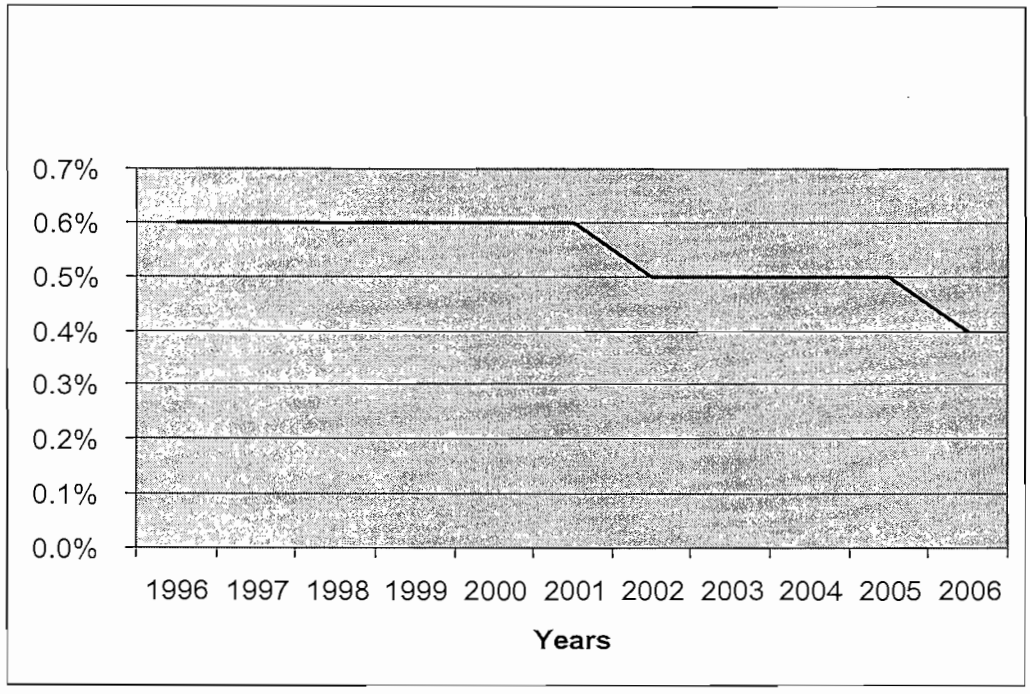


Source: Global Insight Regional Explorer(REX), 2006

4.3.4.2 Employment growth

The employment growth in fuel, petroleum, and chemical and rubber sectors is shown in figure 4.22 below. Employment growth was steady at 0.6 percent per annum since 1996. But, slumped to 0.5 percent in 2001 and remained on a downward trend until 2006. However, it never became negative over the years 1996 to 2006.

Figure 4.22: Growth in employment in fuel, petroleum, etc. 1996-2006

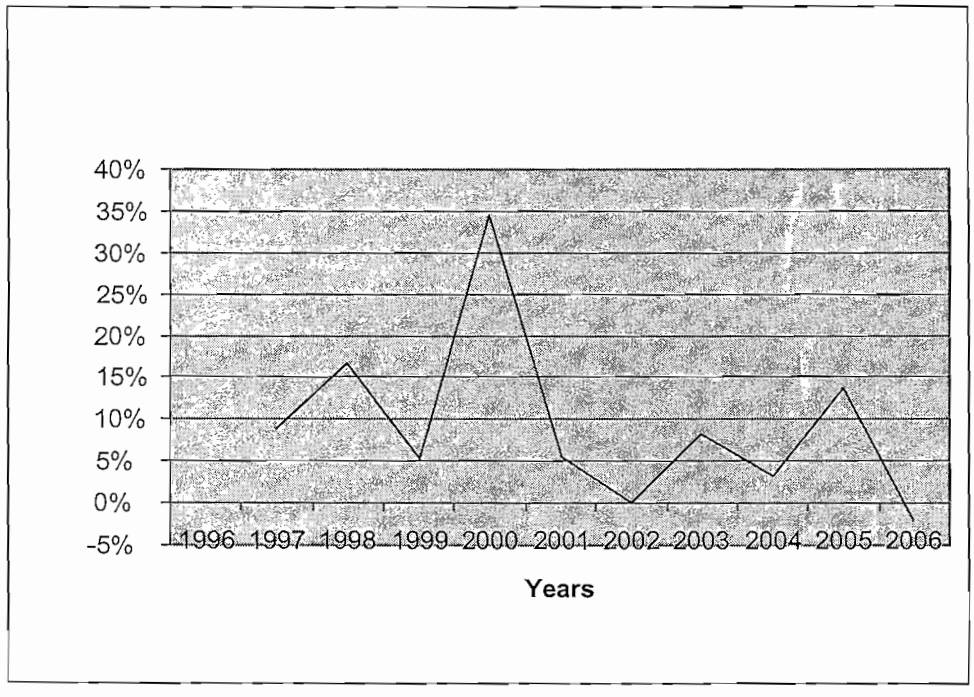


Source: Global Insight Regional Explorer(REX), 2006

4.3.4.3. Wages growth

In figure 4.23 below, the wages growth in the fuel sector expanded from 9 percent in 1997 and reached 16.7 percent in 1998. But, it slumped in 1999. In 2000 it reached a record high of 34.5 percent growth and started to contract again in 2001. In 2006 wages growth became negative.

Figure 4.23: Growth in wages in fuel, petroleum, etc. 1996-2006

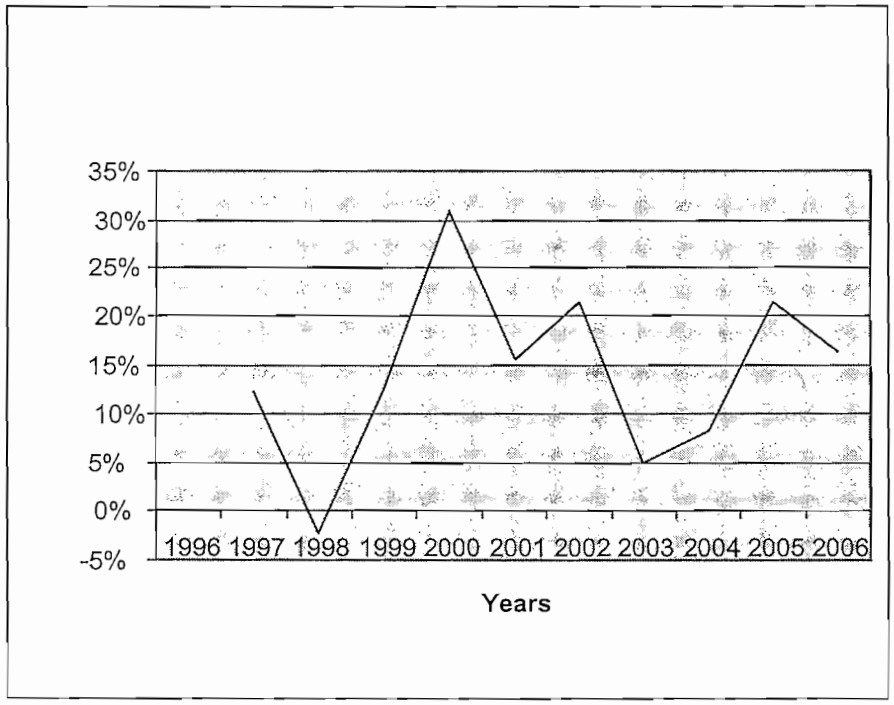


Source: Global Insight Regional Explorer(REX), 2006

4.3.4.4 Profit growth

As far as profits are concerned, the growth in profit slumped since 1997 and reached -2.3 percent in 1998. But, profit growth recovered in 1999. In 2000 profit growth reached 31 percent and this became possible due to a high output growth in fuel sector. However, since 2001 profit growth was characterized by up and down swings in a two year cycle. Profit growth remained positive since 2001 as depicted in figure 4.24 below.

Figure 4.24: Growth in profits in fuel, petroleum, etc 1996-2006.



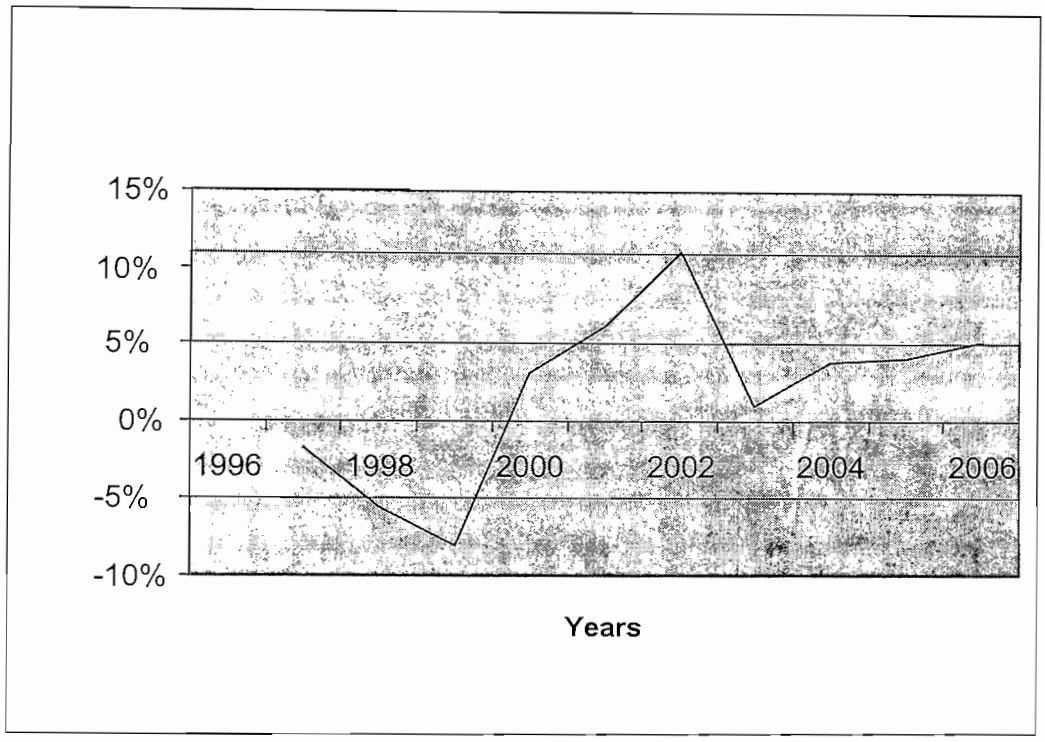
Source: Global Insight Regional Explorer(REX), 2006

4.3.5 Key trends in other non-metallic mineral products

4.3.5.1 Output growth

Figure 4.25 below depicts output growth in non-metallic mineral growth since 1997. The output growth shrunk since 1997 but recovered in 2000. Output growth reached a peak in 2002 and remained positive through to 2006.

Figure 4.25: Growth in output of non-metallic mineral products 1996-2006

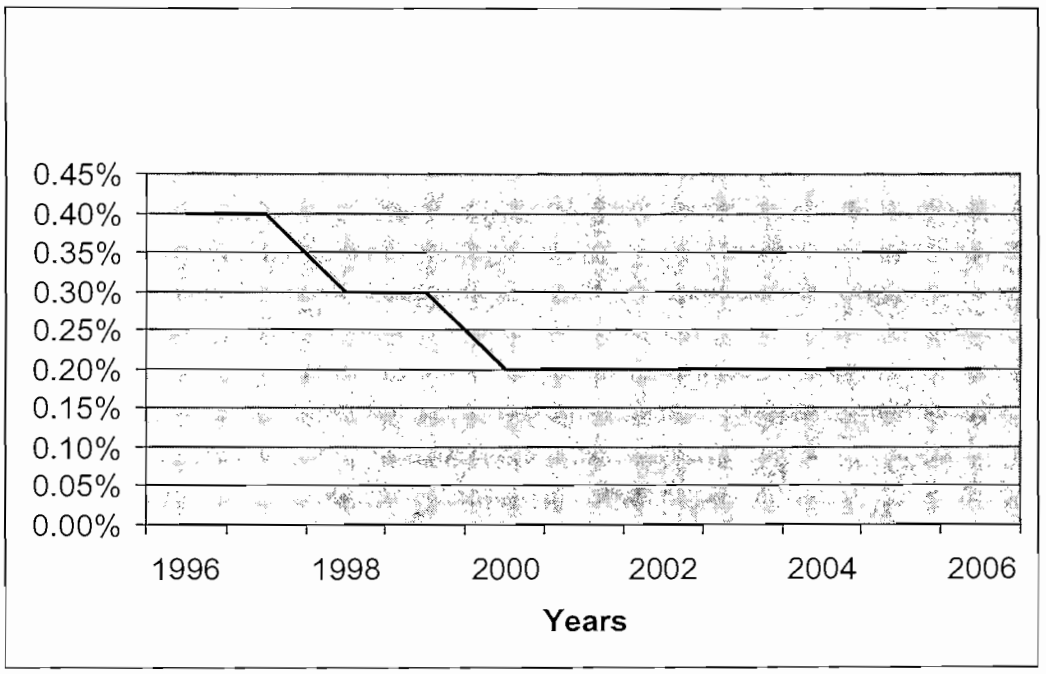


Source: Global Insight Regional Explorer(REX), 2006

4.3.5.2 Employment growth

Figure 4.26 below depicts employment growth in other non-metallic mineral product sectors since 1996. Employment growth shrunk from 0.4 percent in 1996 to 0.3 percent in 1998. In 2000, employment growth contracted again to 0.2 percent and remained there until 2006. But what is interesting is that employment growth remained positive over the years 1996 to 2006.

Figure 4.26: Growth in employment in the non-metallic mineral products sector 1996-20006

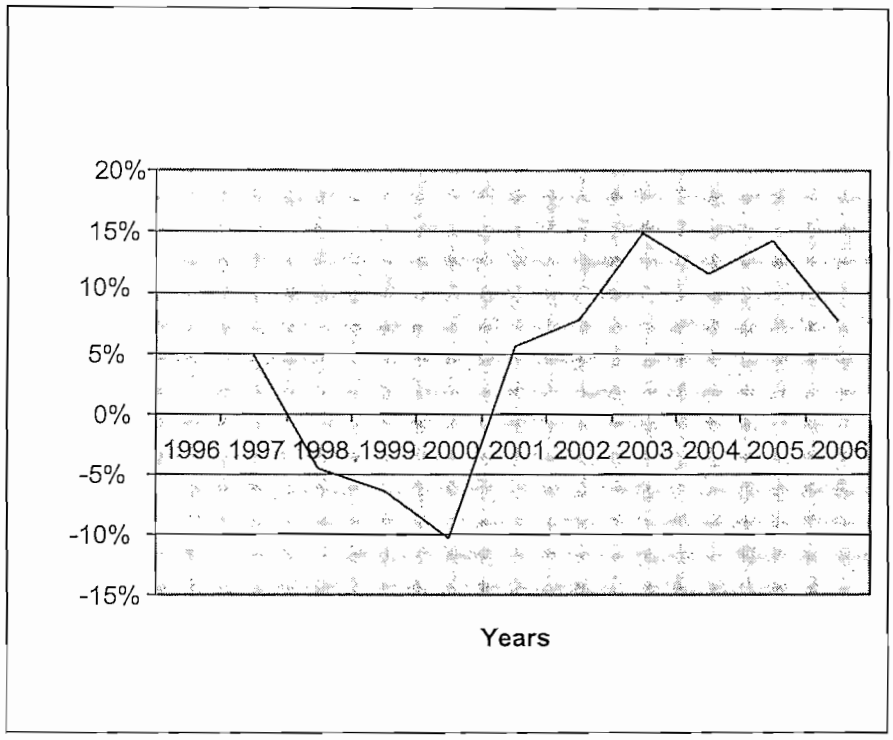


Source: Global Insight Regional Explorer(REX),2006)

4.3.5.3 Wages growth

In figure 4.27 below, the wages growth contracted in 1997 and remained negative until 2000. In 2001 wages growth expanded and reached peak in 2003. But in 2004 it slumped and expanded again in 2005. Despite the ups and downs in wages growth, it showed upward trend.

Figure 4.27: Growth in wages in the non-metallic mineral products sector 1996-2006

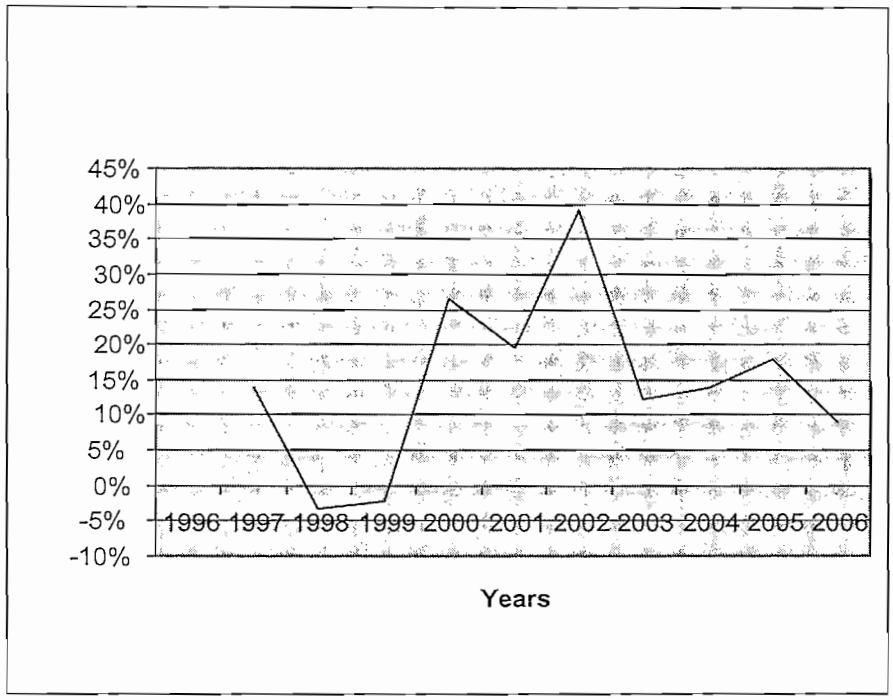


Source: Global Insight Regional Explorer(REX), 2006

4.3.5.4 Profit growth

In figure 4.28 the profit growth in the non-metallic mineral sector is shown. Profit growth shrunk in 1997 and in 1998 and 1999 changes in profit were negative. But, in 2000 profit growth increased and reached a record high of 39 percent in 2002. However, in 2003 it slumped and recovered in 2004. But, profit growth was above 9 percent since the year 2000.

Figure 4.28: Growth in profits in non-metallic mineral sector 1996-2006



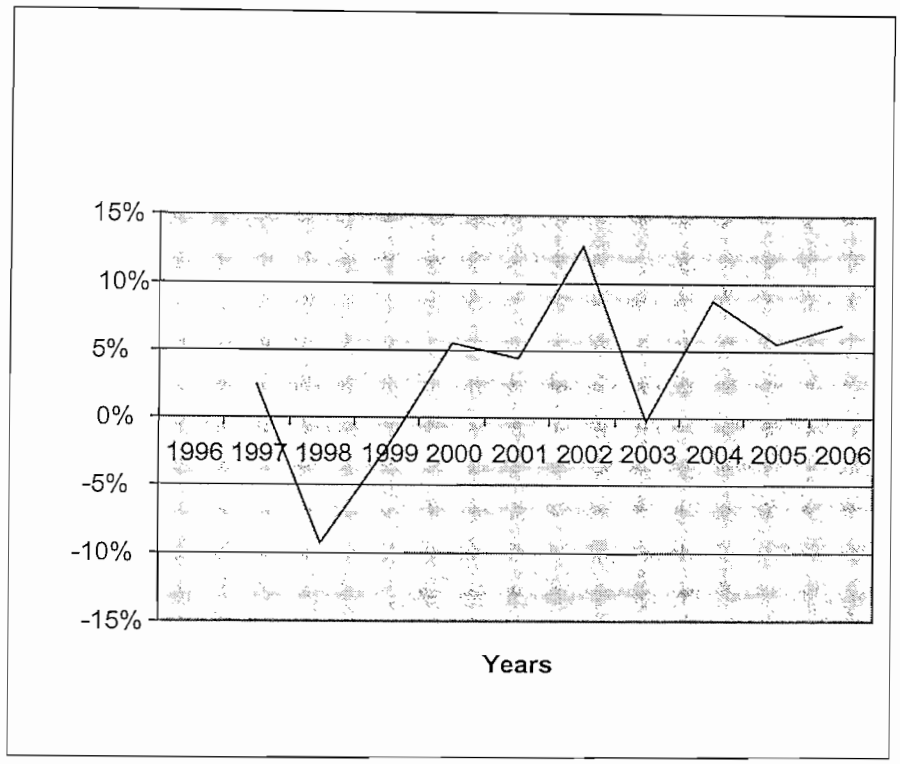
Source: Global Insight Regional Explorer(REX), 2006)

4.3.6 Key trends in metal products, machinery and household appliances

4.3.6.1 Output growth

Figure 4.29 below depicts the output growth in metal products, machinery and household appliances in the Limpopo Province since 1997. Output growth contracted since 1997 but recovered from 2000 and reached 12.8 percent per annum in 2002. In 2003 it slowed down and expanded again in 2004. However, output growth showed an upward trend over the years 1997 to 2006.

Figure 4.29: Growth in output of metal production 1996-2006

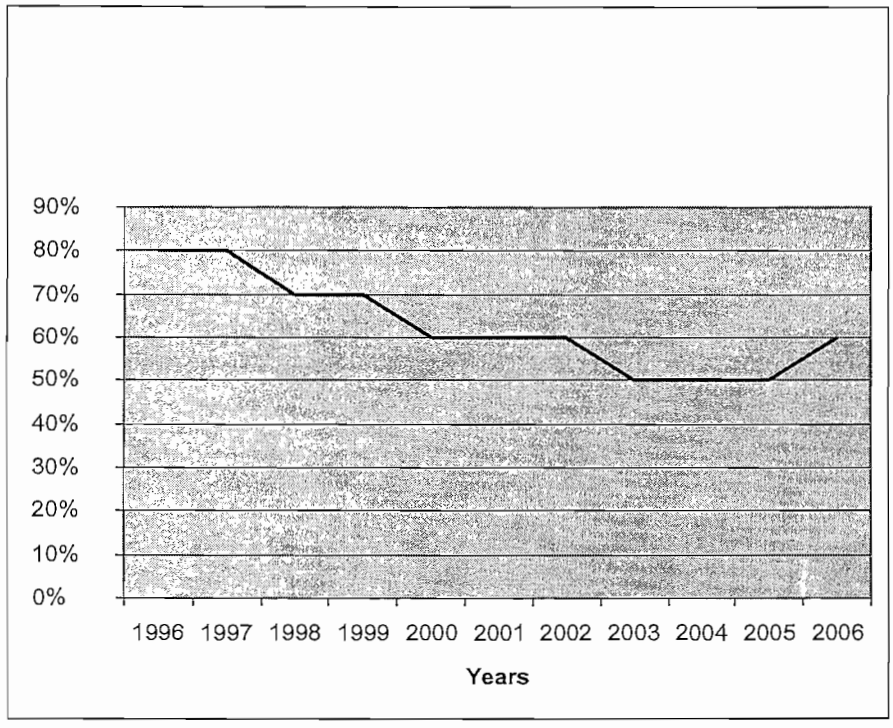


Source: Global Insight Regional Explore(REX)r, 2006)

4.3.6.2 Employment growth

Figure 4.30 below depicts employment growth in metal products, machinery and household appliances sectors. The employment growth slumped since 1997. In other words it showed a downward trend over the years 1996 to 2006.

Figure 4.30: Growth in employment in metal production sector 1996-2006

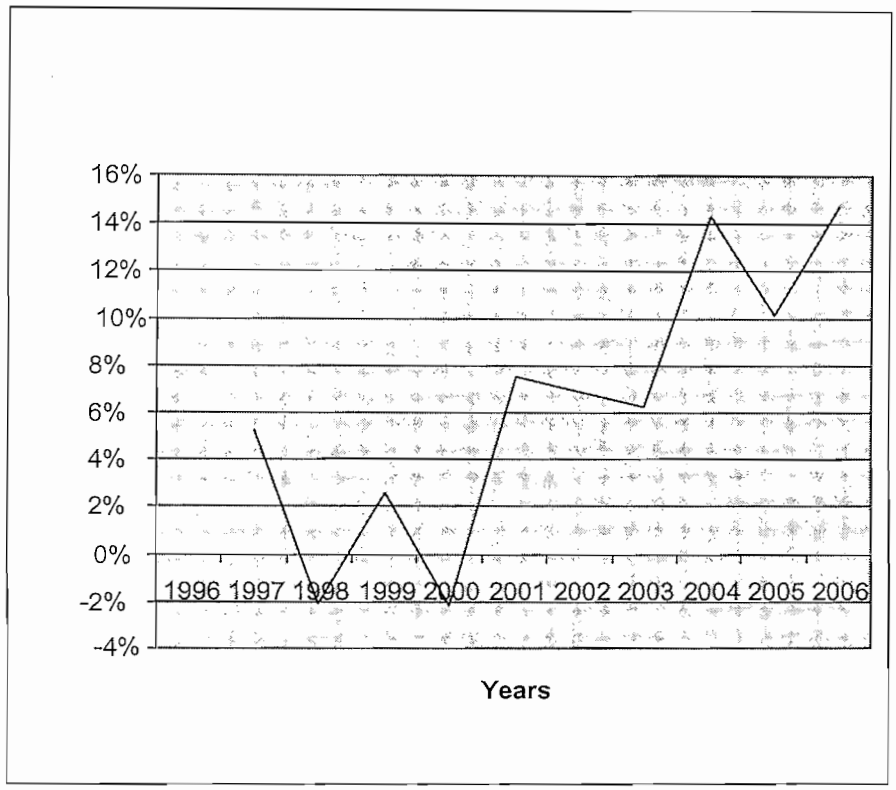


Source: Global Insight Regional Explorer(REX), 2006

4.3.6.3 Wages growth

Figure 4.31 shows the wages growth in the metal production sector in Limpopo since 1997. It contracted in 1997 and expanded in 2001 and reached 14.3 percent in 2004 but, contracted slightly in 2005 and recovered in 2006. However, since 2001 wages growth showed an upward trend until 2006.

Figure 4.31: Growth in wages in metal production sector 1996-2006

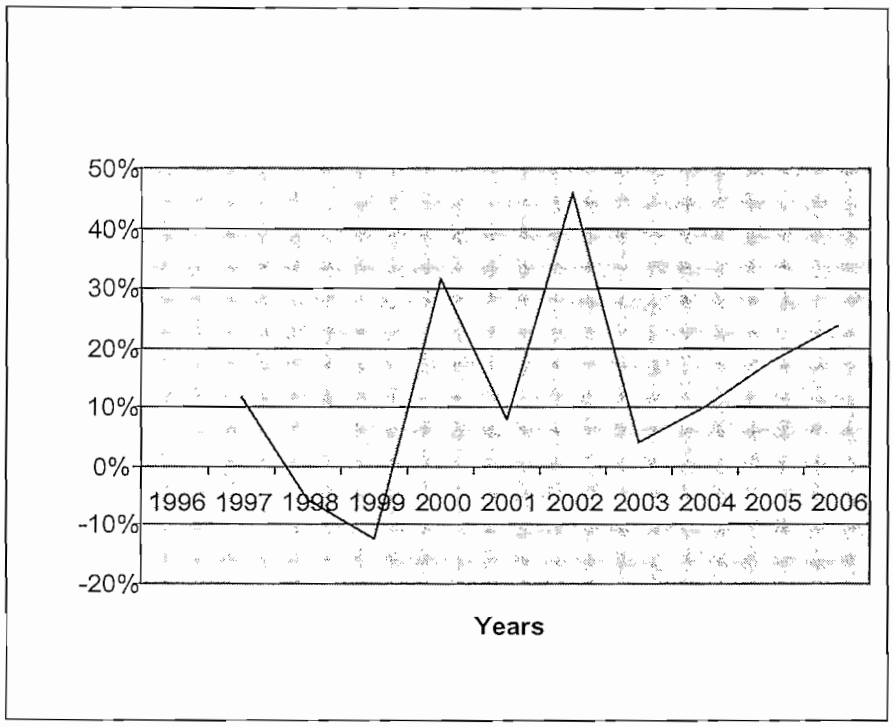


(Source of data: Global Insight's Regional Economic Explorer database, 2009)

4.3.6.4 Profit growth

In figure 4.32, profit growth contracted in 1997 but recovered and reached 31.5 percent per annum in 2000. Profit growth reached a peak in 2002, the same year where the output growth reached the maximum growth. But in 2003 profit growth contracted to 4.2 percent whereas in 2004 profit growth recovered again and showed an upward trend until 2006.

Figure 4.32: Growth in profits in metal production sector 1996-2006



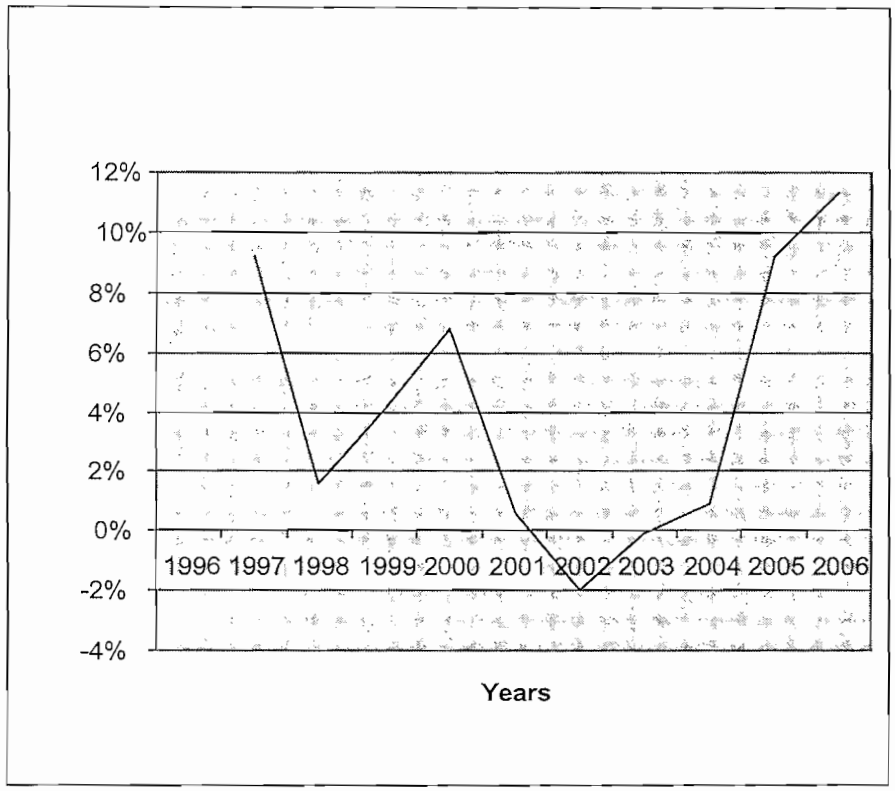
Source: Global Insight Regional Explorer(REX), 2006

4.3.7 Key trends in electrical machinery and apparatus sector

4.3.7.1 Output growth

In electrical machinery and appliances sector, output growth slumped from 9.2 percent in 1997 to 1.6 percent in 1998. But, it recovered again. In 2002 and 2003 output growth was negative. However, from 2004 onwards, output growth showed an upward trend as depicted in Figure 4.33 below.

Figure 4.33: Growth in output in electrical machinery and apparatus sector 1996-2006

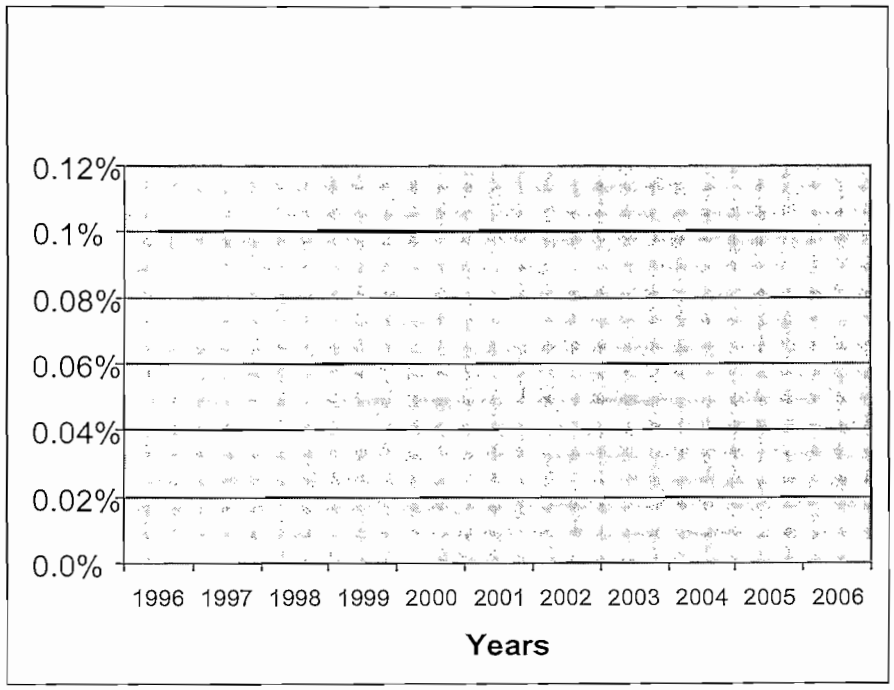


Source: Global Insight Regiona Explorer(REX), 2006

4.3.7.2 Employment growth

Figure 4.34 depicts the growth in employment in electrical machinery and apparatus sector in the Limpopo Province since 1996. The employment growth was stable and the trend line was horizontal.

Figure 4.34: Growth in employment in electrical machinery and apparatus sector 1996-2006

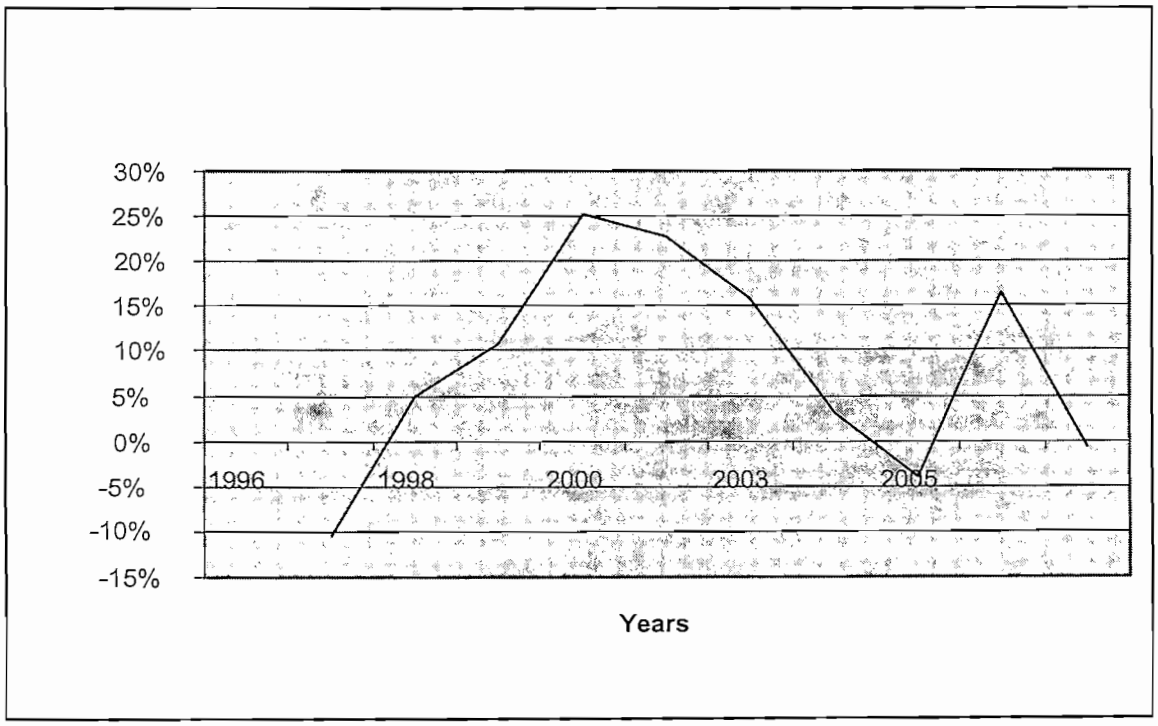


Source: Global Insight Regional Explorer(REX), 2006

4.3.7.3 Wages growth

The wages growth recovered from a -10.5 percent contraction in 1997 to 25.3 percent growth in 2000 as depicted in Figure 4.35. But, since 2001 wages growth contracted sharply and reached a negative from year 2004 to 2006. In other, it showed a downward trend since the year 2000.

Figure 4.35: Growth in wages in electrical machinery and apparatus sector 1996-2006

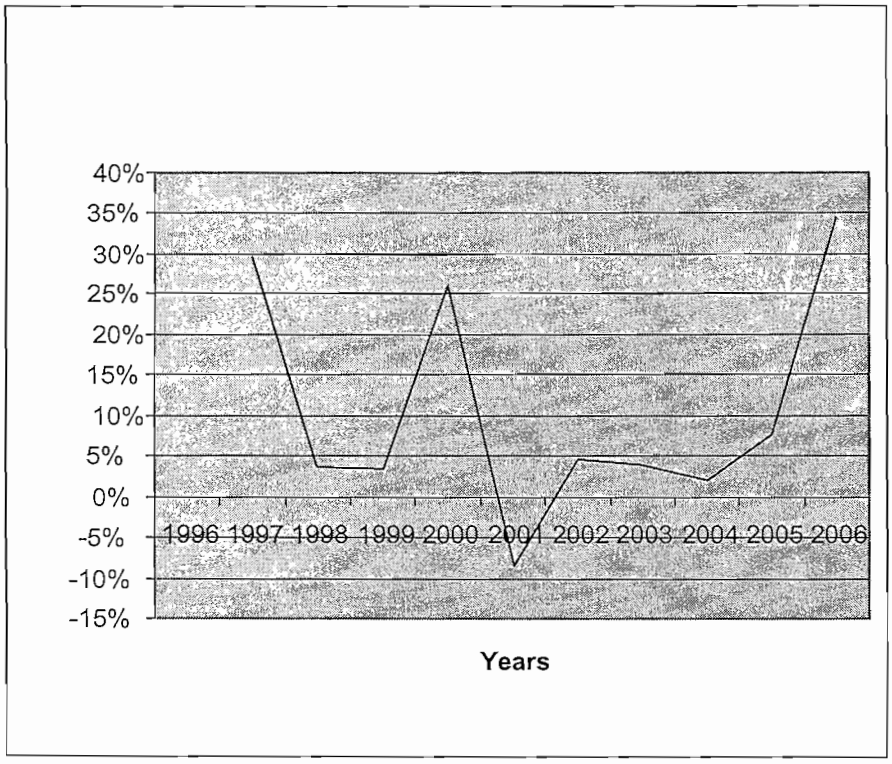


Source: Global Insight Regional Explorer(REX), 2006

4.3.7.4 Profit growth

As far as profit is concerned, profit growth in Figure 4.36 below is characterized by regular fluctuations over the years 1997 to 2006. It is only in 1997, 2000 and 2006 that profits were very high. Overall profit growth showed an upward trend.

Figure 4.36: Growth in profits in electrical machinery and apparatus sector 1996-2006.



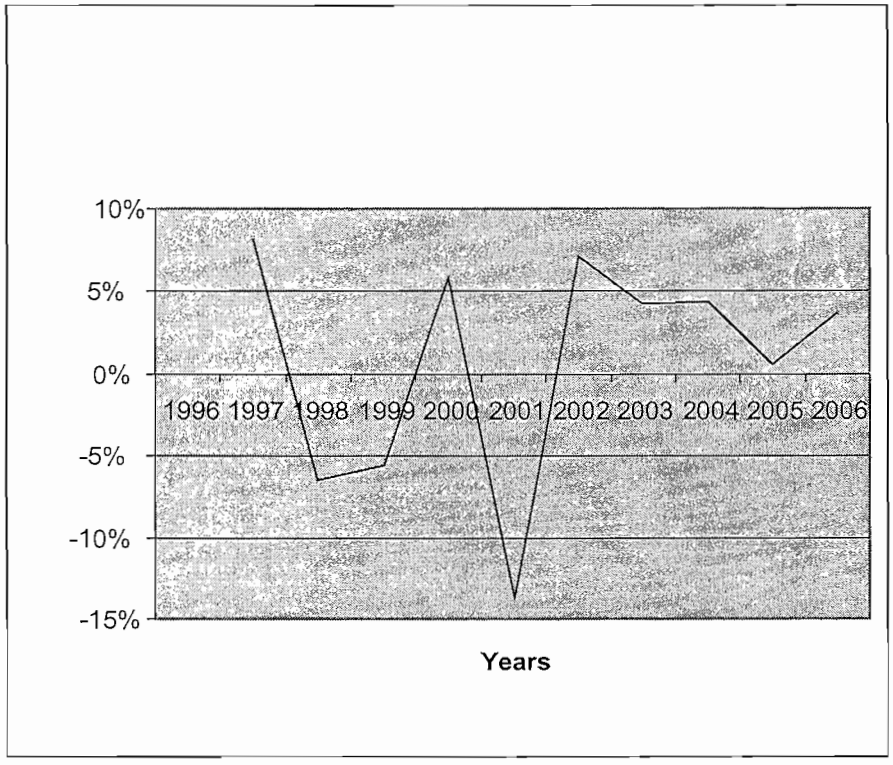
Source: Global Insight Regional Explorer(REX), 2006

4.3.8 Key trends in electronic, sound/vision, medical and other appliances

4.3.8.1 Output growth

Output growth of electronic, sound/vision, medical and other appliances sector plunged from 8.2 percent in 1997 to -5.5 percent in 1999 as depicted in Figure 4.37 below. In 2000, output growth recovered but slumped again in 2001. But, since 2002 the output growth recovered and remained positive until 2006.

Figure 4.37: Growth in output in electronic, sound/vision, medical and other appliances 1996-2006.

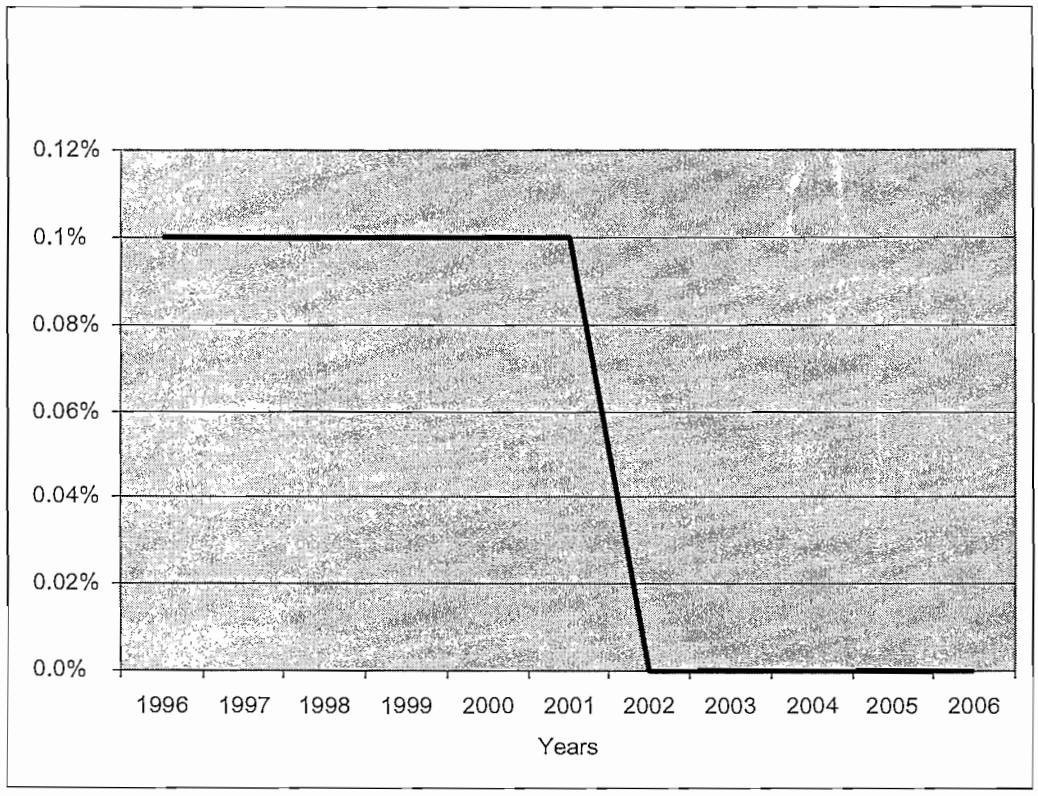


Source: Global Insight Regional Explorer(REX), 2006

4.3.8.2 Employment growth

In Figure 4.38 below, the employment growth was 0.1 percent from 1996 until 2002. But, since 2003 employment growth contracted to 0.0 percent until 2006. In other words the employment growth in electronic, sound/vision, medical and other appliances sector showed a downward trend over the years 1996 to 2006.

Figure 4.38: Growth in employment in electronic, sound/vision, medical and other appliances 1996-2006

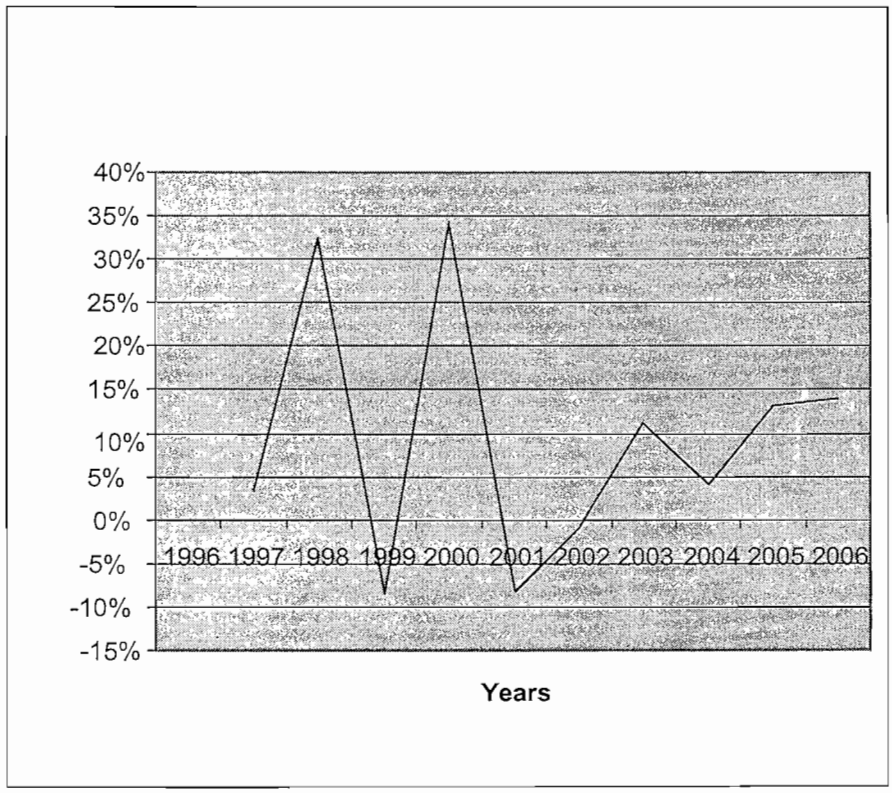


Source: Global Insight Regional Explorer(REX), 2006

4.3.8.3 Wage growth

The wages growth in Figure 4.39 below expanded from 3.3 percent per annum in 1997 to 32.4 percent in 1998. But, in 1999 it plunged to -8.6 and recovered to 34.2 percent in 2000. However, in 2001 and 2002 the output growth was negative. But from 2003 to 2006 it became positive. Generally, the wages growth was not stable since 1997.

Figure 4.39: Growth in wages in electronic, sound/vision, medical and other appliances sector 1996-2006.

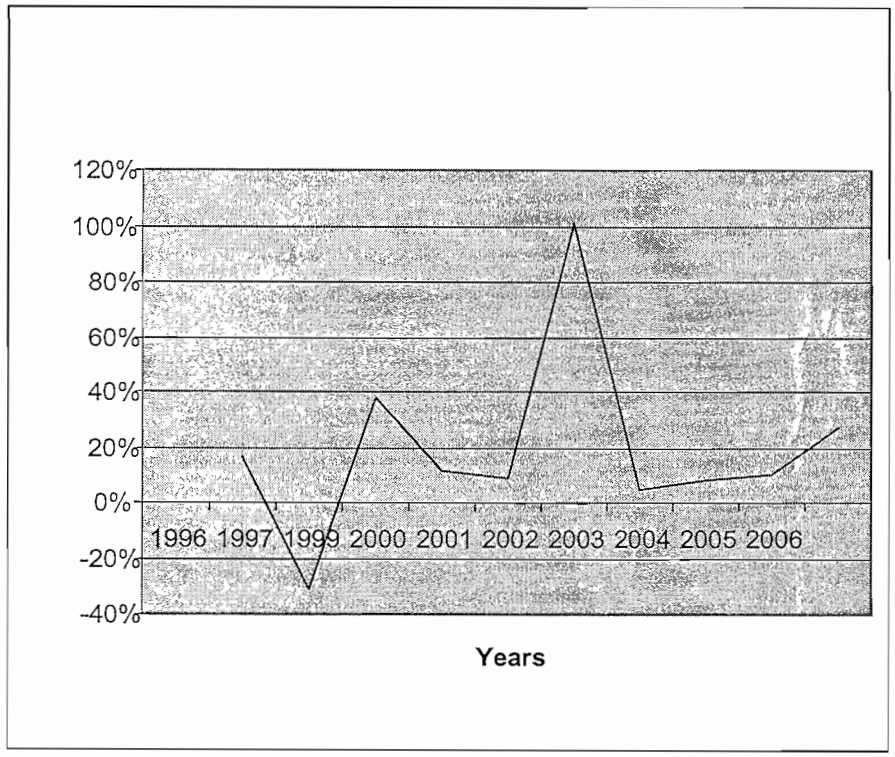


Source: Global Insight Regional Explorer(REX), 2006

4.3.8.4 Profit growth

Despite the output growth which was unstable, profit growth in Figure 4.40 was very much attractive since 1997 except in 1998 where profit growth contracted by -30.9 percent. In 2002 profit growth reached 101 percent which was a dramatic increase over the years 1997 to 2006. However, profit growth showed an upward trend which was a good incentive to investors.

Figure 4.40 Growth in profits in electronic, sound/vision, medical and other appliances 1996-2006.



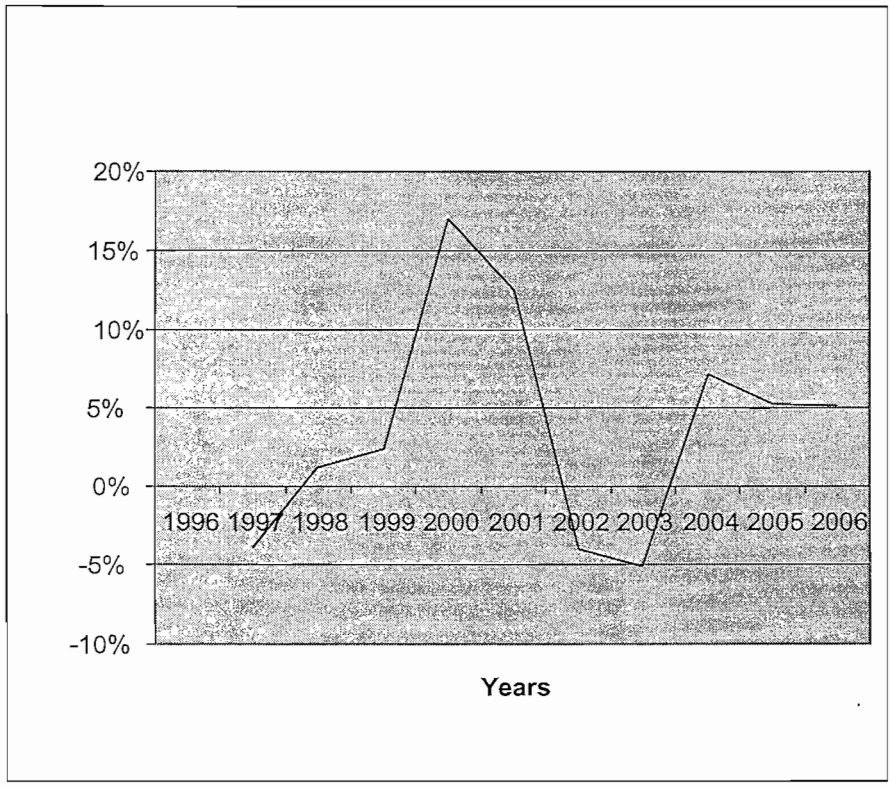
Source: Global Insight Regional Explorer(REX), 2006

4.3.9 Key trends in transport equipment

4.3.9.1 Output growth

Figure 4.41 depicts output growth in the transport equipment sector in Limpopo Province. The output growth recovered from a -3.9 percent decline in 1997 to 17 percent in 2000. But, in 2001 output growth contracted again and became negative in 2002 and 2003 and in the remaining three years 2004 to 2006, output growth was positive despite the downward trend depicted by the graph.

Figure 4.41: Growth in output of transport equipment 1996-2006

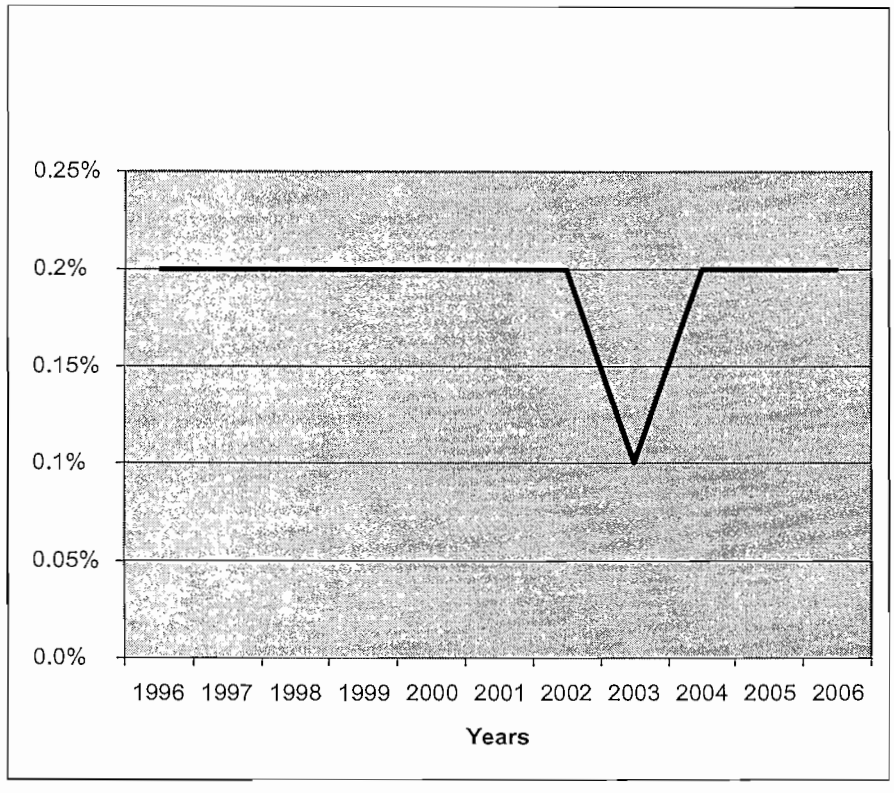


Source: Global Insights Regional Explorer(REX), 2006

4.3.9.2 Employment growth

However, employment growth was 0.2 percent over the years 1996 to 2006 except in 2003 where it contracted to 0.1 percent. Generally, the employment growth in Figure 4.42 was stable since 1996 to 2006.

Figure 4.42: Growth in employment in transport equipment sector 1996-2006

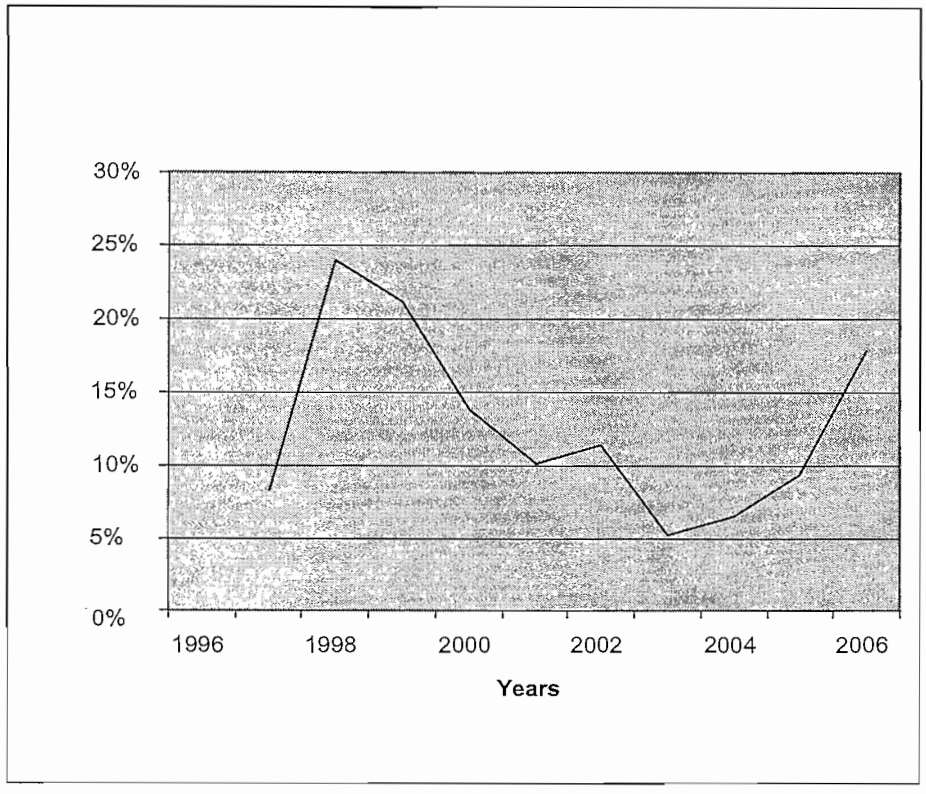


Source: Global Insight Regional Explorer(REX), 2006

4.3.9.3 Wage growth

As far as wages is concerned, Figure 4.43 depicts that wages growth recovered from 8.3 percent per annum in 1997 to 24 percent in 1998. But in 1999 it contracted again. However, in 2004 wages growth recovered and remained positive until 2006. Nevertheless, wages growth showed an upward trend over the years 1997 to 2006.

Figure 4.43: Growth in wages in transport equipment sector 1996-2006

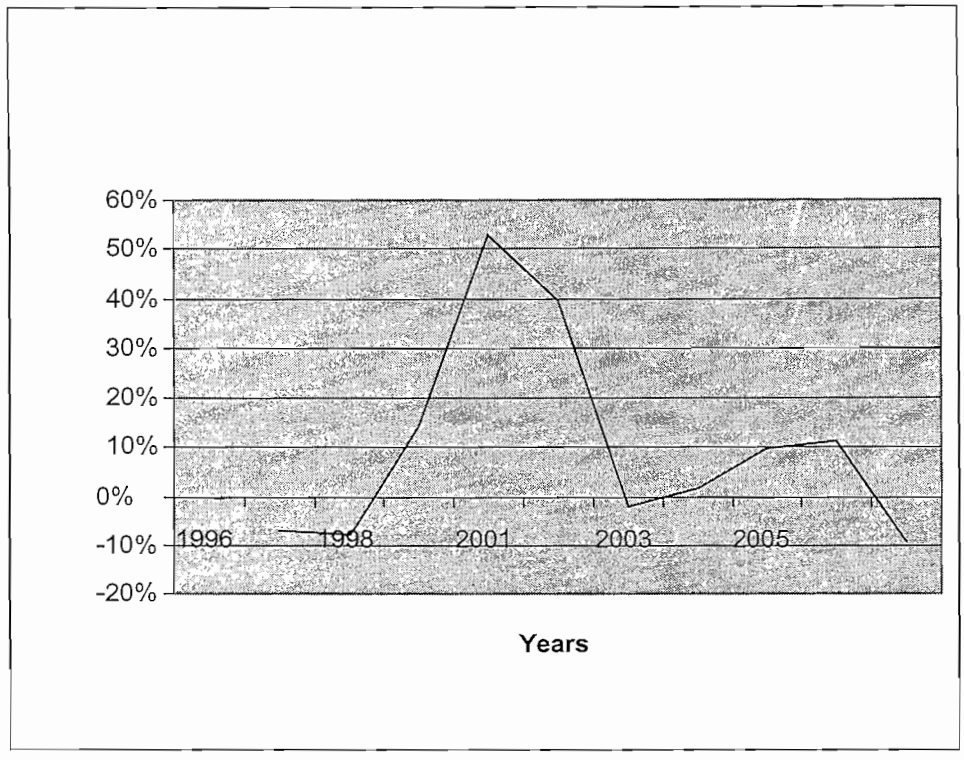


Source: Global Insight Regional Explorer(REX), 2006

4.3.9.4 Profit growth

The profit growth in Figure 4.44 plunged in 1997 and recovered in 1999. In 2000 profit growth reached 52.9 percent which was a considerable increment. But, in 2001 it declined and reached -2.1 percent in 2002. However, in 2003 it recovered again and contracted once more in 2006.

Figure 4.44: Growth in profit in transport equipment sector 1996-2006



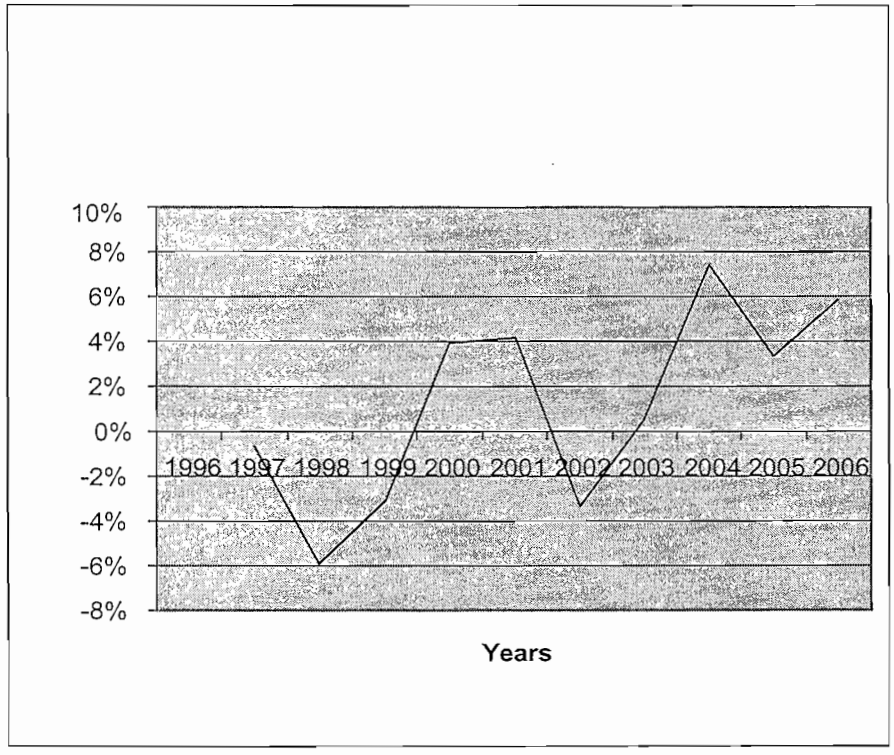
Source: Global Insight Regional Explorer(REX), 2006

4.3.10 Key trends in furniture and other items, NEC and recycling sector

4.3.10.1 Output growth

In Figure 4.44, output growth in furniture and other items, NEC and recycling sectors plunged for the first three years 1997 to 1999, but recovered in 2000 to 2001. In 2002, output growth slumped again to -3.3 percent but recovered again in 2003 and remained positive until 2006. However, output growth in furniture sector showed an upward trend over the years 1997 to 2006.

Figure 4.45: Growth in output in furniture and other items, NEC and recycling sector 1996-2006

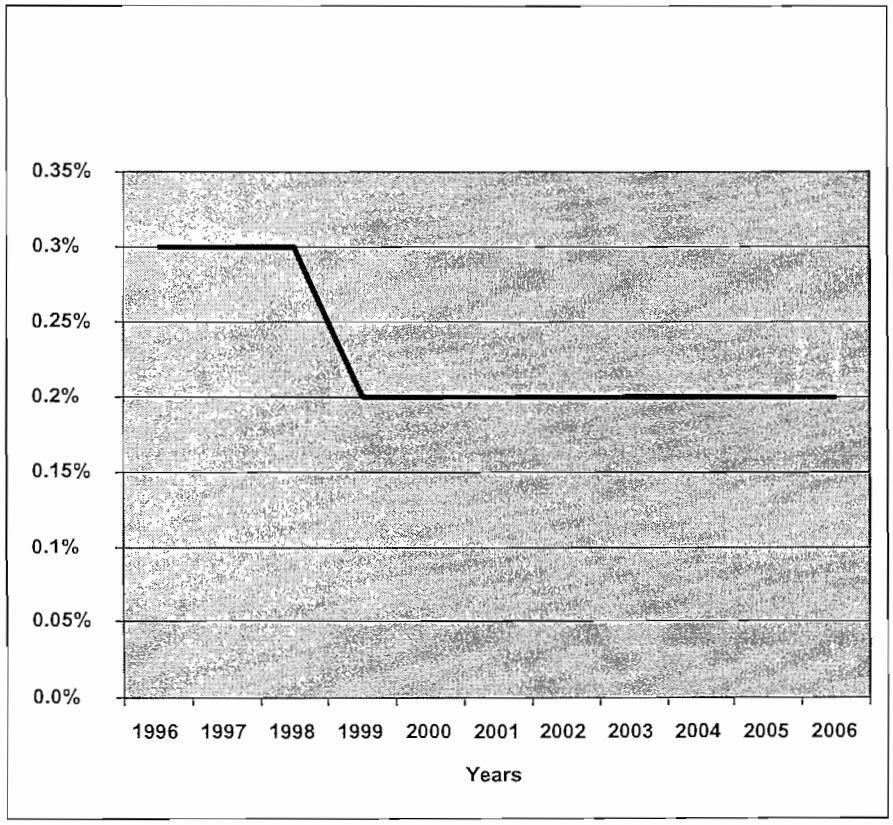


Source: Global Insight Regional Explorer(REX), 2006

4.3.10.2 Employment growth

For the first three years 1996 to 1998, employment growth was 0.3 percent in furniture sector as depicted in Figure 4.46. But, in 1999 employment contracted to 0.2 percent until 2006. However, the employment growth showed downward trend over the years 1996 to 2006.

Figure 4.46: Employment growth in furniture and other items, NEC and recycling 1996-2006

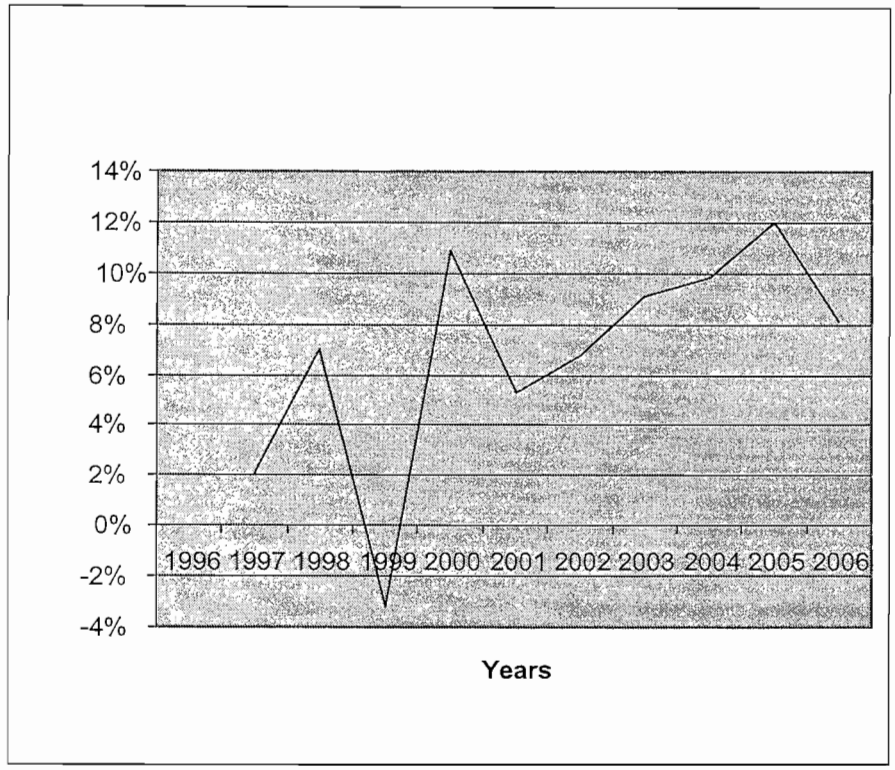


(Source: Global Insight Regional Explorer(REX), 2006

4.3.10.3 Wages growth

In Figure 4.47, wages growth expanded from 2.1 percent in 1997 to 7 percent per annum in 1998. In 1999, wages growth plunged to -3.2 percent, but recovered in 2000 and became positive until 2006. However, it showed upward trend in the furniture sector.

Figure 4.47: Growth in wages in furniture and other items, NEC and recycling sector 1996-2006

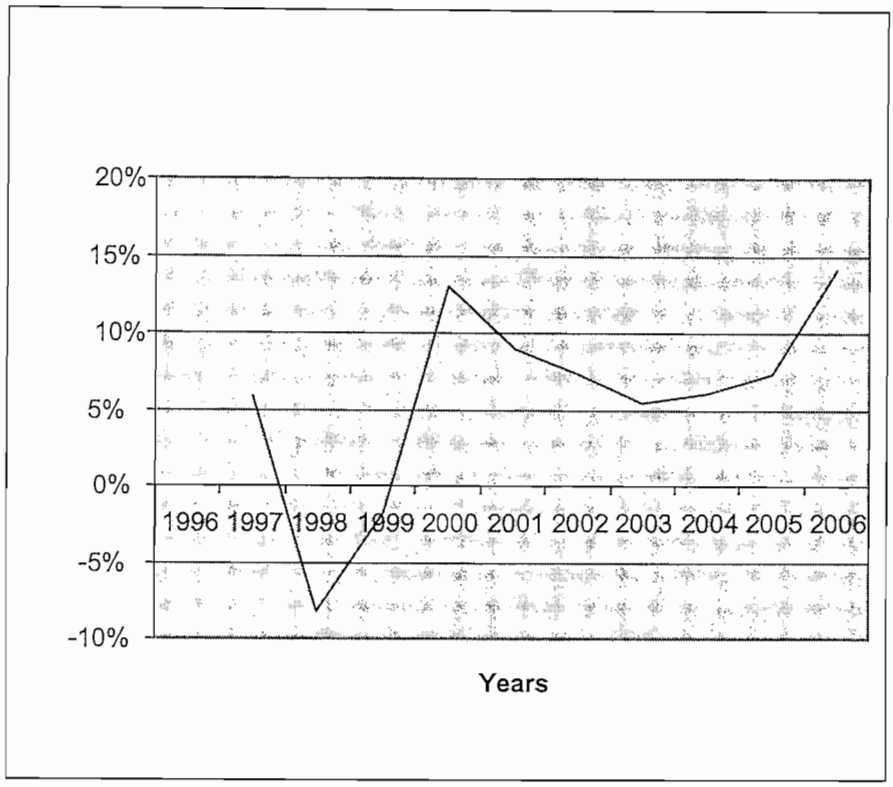


Source: Global Insight Regional Explorer(REX), 2006)

4.3.10.4 Profit growth

Profit growth in Figure 4.48 plunged from 5.8 percent in 1997 to -8.2 percent and -1.8 percent in 1998 and 1999 respectively. In 2000, profit growth recovered and slumped slightly from 2001 but remained positive until 2006. However, profit growth showed upward trend over the years 1997 to 2006.

Figure 4.48: Growth in profits in furniture and other items, NEC and recycling sector 1996-2006



Source: Global Insight Regional Explorer(REX), 2006

4.3.11 Summary and conclusion

Amongst the ten sub-sectors analysed above, food, beverages and tobacco sector showed more growth in output than all other sectors in the Limpopo Province. The fuel, petroleum, chemical and rubber products sector and electrical machinery and apparatus sector were second and third best sectors in output growth over the years 1997 to 2006. This means that the above sectors had a potential to grow and needed to be supported to drive the province's economy forward. However, there were other sectors that showed less output growth. Those sectors included electronic, sound/vision, medical and other appliances and textiles, clothing and leather goods sectors. These struggling sectors showed less potential for growth.

As far as employment growth is concerned, the food, beverages and tobacco sectors are still the top performing sectors in the province. This means that if these sectors are developed further, there is potential to employ more workers in the future. Furthermore, wood and wood products, metal products, machinery and household appliances sectors showed much improvement in

employment growth as well. In addition, fuel, petroleum, chemical and rubber products, textiles, clothing and leather goods sectors have improved in employment growth over the years 1996 to 2006. Nevertheless, there are other sectors which showed the least employment growth. They include transport equipment production, furniture and other items, NEC and recycling, electrical machinery and apparatus, electronic, sound/vision, medical and other appliances sectors. This means that much effort is needed to stimulate the above sectors to employ more workers in the future.

4.4 Spatial Trends in Manufacturing in the Limpopo Province

It is the purpose of this section to identify where the manufacturing sector is concentrated and the types of manufacturing sectors are that clustered in different districts and local municipalities in the Limpopo Province. The main aim is to review the geography of provincial exports and the policies aimed at promoting regional industrial development and exports. Furthermore, the analysis of manufacturing and trade data is important in order to compile an export profile of the province. In addition, the overview of developments and trends in the manufacturing sector in every district and local municipality is discussed in this section.

4.4.1 Spatial contributions to Limpopo's economy

It is imperative to have an understanding of Limpopo's spatial economy in order to draw the spatial context of the manufacturing sector. In other words the contributions of the various local and district municipalities to overall economic output (GDP) and growth is dealt with. And it is made clear where in the province various products are produced.

4.4.1.1 Size of total economic output per district and local municipality

There are five district municipalities composed of 26 local municipalities in the Limpopo Province. From Table 4.1 below, it is clear that the provincial economy is centered in the Capricorn and Waterberg District Municipalities taking into consideration their annual contributions to GDP of 5.4 and 6.4 percent respectively.

Table 4.1: Contributions to the GVA of Limpopo Province per District Municipality 1996-2006 (in %)

Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1996	23.7	16.9	23.7	26.9	8.8
1997	23.5	16.6	23.9	27.1	8.8
1998	23.0	16.1	24.4	27.9	8.6
1999	23.3	15.5	25.0	27.7	8.5
2000	22.3	14.9	26.2	28.3	8.3
2001	23.0	13.9	25.7	29.1	8.3
2002	23.3	13.9	24.9	29.4	8.4
2003	25.8	13.8	24.4	27.1	8.9
2004	24.5	13.7	24.4	28.7	8.7
2005	24.1	13.5	24.5	29.3	8.6
2006	24.1	13.5	25.0	28.5	8.9

Source: Global Insight Regional Explorer(REX), 2006

Vhembe and Greater Sekhukhune District Municipalities contributed less to the province's economy over the years 1996 to 2006. But the largest contributor to the overall economic activity in the province is the Waterberg District Municipality.

In Table 4.2 below the local municipalities were listed together with their contributions to Limpopo's GDP in 2006. The table depicts that the economy was dominated by two local municipalities. Polokwane and Thabazimbi local municipalities contributed 16.3 percent each to GDP. But, Ba-Phalaborwa also made a sizable contribution of 10.9 percent.

Table 4.2: Contributions per Local Municipality to Limpopo GDP in 2006 (Rands)

Local Municipality	2006	% Contribution to GDP
Greater Giyani	2762926	4.2
Greater Letaba	1425861	2.1
Greater Tzaneen	3239453	4.9
Ba-Phalaborwa	7266447	10.9
Maruleng	1116289	1.7
Kruger National Park	191632	0.3
Musina	780413	1.2
Mutale	294856	0.4
Thulamela	3866524	5.8
Makhado	4002337	6.0
Blouberg	820616	1.2
Aganang	659884	1.0
Molemole	2649124	4.0
Polokwane	10913225	16.3
Lepelle-Nkumpi	1577744	2.4
Thabazimbi	10885062	16.4
Lephalale	2000940	3.0
Mookgopong	481104	0.7
Modimolle	1404146	2.1
Bela-Bela	1783008	2.7
Mogalakwena	2378149	3.6
Greater Marble Hall	836941	1.3
Elias Motsoaledi	2300853	3.5
Makhuduthamaga	902656	1.4
Fetakgomo	371814	0.6
Greater Tubatse	1494548	2.3

Source: Global Insight Regional Explorer(REX), 2006)

4.4.1.2 Growth in total economic output per district and local municipality

Table 4.3 shows the annual economic growth rates per district municipality in Limpopo. Waterberg and Capricorn district municipalities are the fastest growing municipalities in Limpopo province. Furthermore, Mopani also shows much improvement in economic growth over the years 1997 to 2006. Vhembe district municipality is the slowest growing municipality in the province

Table 4.3: Economic growth in the district municipalities in Limpopo 1997-2006 (in %)

Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1997	6.4	5.3	8.4	8.2	6.4
1998	0.6	0.1	4.9	5.7	1.2
1999	3.0	-2.4	4.2	1.0	0.2
2000	-3.9	-3.8	5.3	2.4	1.3
2001	10.4	0.7	5.0	10.5	7.1
2002	6.2	4.5	1.7	5.8	6.1
2003	13.6	1.3	0.2	-5.5	7.7
2004	-2.2	2.3	3.2	3.2	1.3
2005	2.6	3.5	4.7	6.3	3.4
2006	5.0	4.3	7.2	2.1	7.9
Annual Average	4.0%	1.5%	4.5%	4.5%	3.9%

Source: Global Insight Regional Explorer(REX), 2006)

In the following two pages the annual growth rates of the various local municipalities in Limpopo will be analysed using table 4.4.

Table 4.4: Average annual growth in GDP per Local Municipality in Limpopo 1997-2006 (in %).

Local Municipality	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual Average
Greater Giyani	11.0	6.7	6.7	-5.0	7.4	2.5	2.6	4.8	6.3	8.5	5.1
Greater Letaba	4.5	1.4	-1.0	-4.2	7.7	3.6	7.2	0.9	1.8	5.4	2.7
Greater Tzaneen	5.7	1.8	0.2	-1.1	6.8	2.9	5.3	1.0	2.8	6.2	3.1
Ba-Phalaborwa	5.4	-3.1	4.3	-4.6	15.6	10.6	25.7	-6.8	0.8	3.1	4.7
Maruleng	6.9	2.8	1.6	-5.6	3.4	2.9	1.9	3.1	6.8	5.9	2.9
Kruger National Park	5.8	5.2	1.6	-3.3	7.4	-0.5	-11.9	-4.1	0.6	2.1	0.1
Musina	3.3	-0.4	-4.0	-5.0	1.1	8.1	0.5	0.5	2.2	6.4	1.2
Mutale	6.6	0.6	-2.1	-1.6	-0.5	3.4	1.0	1.0	3.0	3.9	1.5
Thulamela	7.5	0.9	-1.8	-4.5	-0.7	3.3	0.7	1.9	3.6	3.7	1.4
Makhado	3.4	-0.7	-2.7	-3.1	2.1	5.2	2.0	3.2	3.7	5.4	1.7
Blouberg	11.8	3.3	1.9	2.8	4.4	1.3	2.4	3.2	4.0	6.8	3.9
Aganang	12.9	5.6	3.2	3.9	5.0	1.4	-0.1	2.8	4.2	6.5	4.5
Molemole	6.9	5.1	4.4	6.3	5.0	1.4	-0.3	3.5	5.4	7.4	4.5
Polokwane	8.0	5.1	4.6	5.9	5.0	2.0	0.3	3.1	4.5	7.3	4.6

Local Municipality	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual Average
Lepelle-Nkumbi	9.7	4.1	2.8	2.3	4.7	0.8	0.4	3.1	5.0	6.8	3.9
Thabazimbi	6.7	4.9	-0.3	1.1	10.3	2.1	-10.7	11.3	7.6	0.8	3.2
Lephalale	2.7	1.9	-1.8	3.6	4.0	5.7	-0.5	11.4	0.8	3.4	3.1
Mookgopong	16.5	10.5	4.2	3.0	13.8	16.6	2.5	4.4	5.9	5.0	8.1
Modimolle	15.0	10.3	4.3	4.7	13.0	15.2	3.4	4.7	5.7	-2.2	7.3
Bela-Bela	12.6	13.1	10.8	8.7	15.5	10.8	3.8	5.5	6.6	8.4	9.5
Mogalakwena	17.4	7.5	3.3	3.1	12.8	14.7	2.5	4.9	5.7	4.4	7.5
Greater Marble Hall	10.3	4.0	0.3	-0.6	10.7	11.4	1.8	6.0	5.0	6.7	5.5
Elias Motsoaledi	5.7	1.0	0.3	-3.6	6.2	2.8	-0.8	5.0	4.6	11.2	3.2
Makhuduthamaga	7.3	O.7	-2.1	1.3	3.9	4.1	10.4	-0.8	2.0	5.3	3.2
Fetakgomo	2.9	-1.8	-2.9	-2.6	11.5	10.4	24.1	-4.8	0.4	3.6	3.8
Greater Tubatse	6.1	1.3	0.7	0.9	7.6	9.1	18.8	-3.0	2.6	6.4	4.8

Source: Global Insight Regional Explorer(REX), 2006)

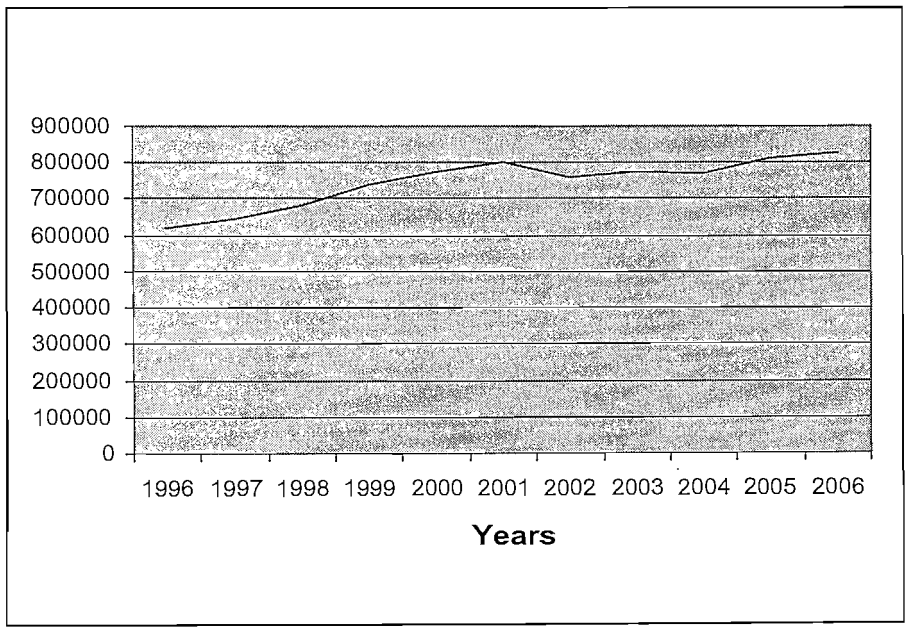
From Table 4.4 above, Bela-Bela local municipality economy is the fastest growing economy in the province followed by Mookgopong local municipality. Musina and Kruger National Park local municipalities are struggling economies as far as economic growth is concerned. This means that Bela-Bela local municipality has shown growth potential above all other local municipalities in the province.

4.4.1.3 Total employment per district and local municipality

In this section total employment per district and local municipalities are be analysed. But, the total employment in the whole province is analysed first.

Figure 4.49 below depicts that employment was expanding since 1996 but in 2002 it slumped a little and recovered again in 2003 and kept on increasing until 2006. This means that in Limpopo Province, output growth has been accompanied by employment growth but policies have to make the economy even more labour absorptive.

Figure 4.49: Total employment in Limpopo 1996-2006



Source: Global Insight Regional Explorer(REX), 2006

Table 4.5 below shows the employment level per district municipality since 1996. In all districts, total employment was increasing over a period. Capricorn and Waterberg district municipalities employed the largest number of people in the province while the Greater Sekhukhune District Municipality employed the lowest.

Table 4.5: Total employment per district municipally in Limpopo 1996-2006

Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1996	142297	119453	164618	140601	53332
1997	146684	122410	172422	147276	54883
1998	152982	126661	185020	157506	56910
1999	165458	134074	204529	172654	60340
2000	167735	136939	221089	184957	63228
2001	176304	137948	225427	196800	65414
2002	166036	132880	205482	192635	63178
2003	172760	134078	204020	195727	66071
2004	168854	132165	201790	202517	65113
2005	176772	138134	212695	217385	68606
2006	179293	139614	215811	221948	69905

Source: Global Insight Regional Explorer(REX), 2006

The total employment per local municipality is shown in Table 4.6 below. The focus is on the contributions of the various local municipalities to total employment in 2006.From Table 4.6 below, Polokwane local municipality is the largest employer in the province followed by Mogalakwena local municipality. And smallest employer local municipality is Kruger National Park because it employed only 0.1 percent of the total employees in 2006

Table 4.6: Total employment per local municipality in Limpopo, 2006

Local municipality	2006	% contributions to employment
Greater Giyani	37170	4.5
Greater Letaba	28188	3.4
Greater Tzaneen	54876	6.6
Ba-Phalaborwa	39837	4.8
Maruleng	18047	2.2
Kruger National Park	1174	0.1
Musina	13280	1.6
Mutale	3848	0.5
Thulamela	50401	6.1
Makhado	72084	8.7
Blouberg	11728	1.4
Aganang	11130	1.4
Molemole	32786	4.0
Polokwane	126941	15.4
Lepelle-Nkumpi	33226	4.0
Thabazimbi	57202	6.9
Lephalale	26644	3.2
Mookgopong	5954	0.7
Modimolle	26727	3.2
Bela-Bela	20303	2.5
Mogalakwena	85118	10.3
Greater Marble Hall	10795	1.3
Elias Motsoaledi	26382	3.2
Makhuduthamaga	11397	1.4
Fetakgomo	3417	0.4
Greater Tubatse	17914	2.2
Total	826569	100

(Source: Global Insight Regional Explorer(REX), 2006

4.4.1.4. Total Gross Operating Surplus (Profit) across the district and local municipalities

The Gross Operating Surplus is part of value added that accrues to the owners of capital. Gross Operating Surplus can serve as an indication of investment return to capital in the province. Total GOS can give an investor a clue as to where to locate an investment.

Table 4.7: Gross Operating surplus per district municipality in Limpopo 1996-2006

Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1996	3621180	2563929	3277957	3306774	1329289
1997	4075145	2832310	3806413	3931187	1476745
1998	4463398	2974519	4217559	5074132	1589618
1999	4974852	3078165	4690935	6228431	1696567
2000	5616344	3245724	5700991	8723222	1944545
2001	7145623	3576955	6421459	11516557	2386220
2002	8739321	4218228	7139385	13606207	2853671
2003	10256205	4641086	7819425	12041452	3180781
2004	10406871	5135980	8776057	14066220	3378866
2005	11458036	5671738	9556727	16902395	3702414
2006	13622449	6333998	11111430	19357885	4579383

Source: Global Insight Regional Explorer(REX), 2006)

In table 4.7 above Waterberg District municipality shows more profits than any other district municipality in the province. But, Mopani District municipality became the second district municipality which contributes large profits to the province's economy. This means that Waterberg and Mopani District Municipalities are the good grounds for investors as there are high profit prospects. In general all five district municipalities showed a significant improvement in the GOS over the years.As far as local municipalities are concerned, Thabazimbi local municipality showed to be highest profit earner in the province as depicted in table 4.8. Polokwane and Ba-Phalaborwa local municipalities also contributed substantially to profits in the province. This means that Thabazimbi, Polokwane and Ba-Phalaborwa local municipalities are the best place for investment as investors are attracted by high profits.

Table 4.8: Gross operating surplus per local municipality in Limpopo 1996

Local Municipality	2006	% contribution to GOS
Greater Giyani	1921513	3.5
Greater Letaba	1054682	1.9
Greater Letaba	2457608	4.5
Ba-Phalaborwa	7218061	13.1
Maruleng	751183	1.4
Kruger National Park	219401	0.4
Musina	541363	1.0
Mutale	169346	0.3
Thulamela	2688923	4.9
Makhado	2934366	5.3
Blouberg	503264	0.9
Aganang	417144	0.8
Molemole	1727081	3.1
Polokwane	7266974	13.2
Lepelle-Nkumpi	1196967	2.2
Thabazimbi	12859594	23.4
Lephalale	1493054	2.7
Mookgopong	423468	0.8
Modimolle	1275961	2.3
Bela-Bela	1358795	2.5
Mogalakwena	1947013	3.5
Greater Marble Hall	591205	1.1
Elias Motsoaledi	1810098	3.2
Makhuduthamaga	646526	1.2
Fetakgomo	304980	0.6
Greater Tubatse	1226576	2.2
Total	55005146	100

Source: Global Insight Regional Explorer(REX), 2006)

4.4.2 Spatial contributions to total manufacturing in Limpopo

It became evident from the above presentation that there are various areas where economic activity in the Limpopo Province is concentrated. In this section, spatial patterns of total manufacturing in Limpopo is shown. Furthermore, the contributions of different district and local municipalities to total manufacturing output, growth, employment and profits are also disclosed. Further analysis discusses various manufacturing sub-sectors' spatial distribution and clustering.

4.4.2.1 Size of total manufacturing output per district and local municipality

In Table 4.9 below the contributions of each district municipality to total manufacturing output in Limpopo province are shown.

Table 4.9: Total manufacturing output (R1000) per district municipality in Limpopo, 1996-2006 (Current prices)

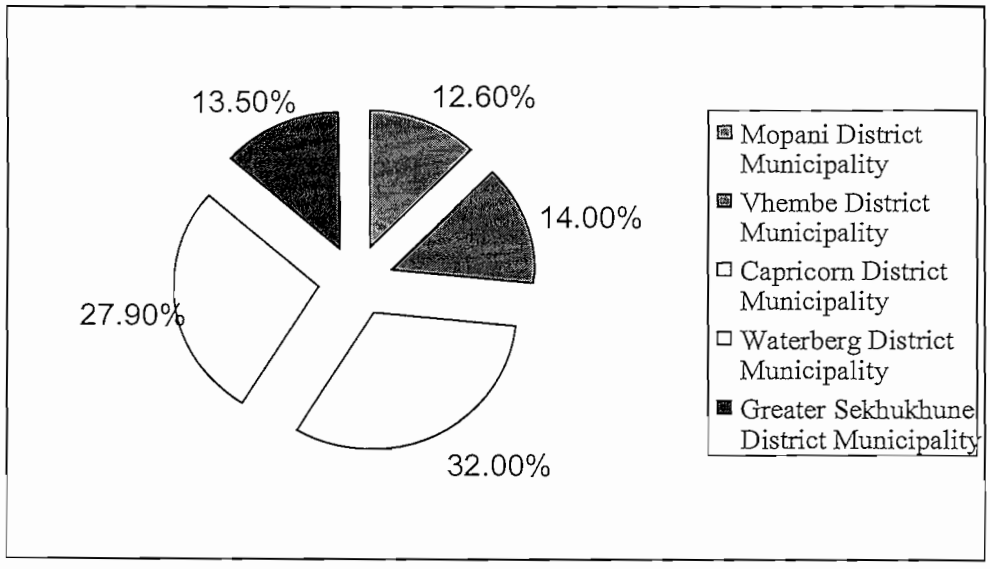
Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1996	249714	314956	506574	268690	259605
1997	266217	324275	561850	310563	271238
1998	260999	300052	578490	328048	252877
1999	260938	281792	603215	350600	238950
2000	280107	304590	740942	454719	273862
2001	304724	309711	787636	532370	291866
2002	334186	360195	875039	670297	340316
2003	353434	387914	920527	738892	360864
2004	379056	423001	982298	812465	390619
2005	417312	464831	1066837	915873	438638
2006	473265	523662	1196392	1043109	506075

Source: Global Insight Regional Explorer(REX), 2006

It is clear from Table 4.9 above that most manufacturing activities are concentrated in the Capricorn District Municipality. The district has shown the largest manufacturing output over the years 1996 to 2006. The Waterberg District Municipality also contributed more to the total manufacturing output in the province over the same period.

The percentage contributions to total manufacturing in 2006 per district municipality are shown in Figure 4.50 below.

Figure 4.50: % contributions in total manufacturing by district municipalities in Limpopo in 2006



Source: Global Insight Regional Explorer(REX), 2006

It is clear from Figure 4.50 above that Capricorn and Waterberg district municipalities are leading as far as contributions in total manufacturing in Limpopo is concerned with 32.0 and 27.9 percent respectively. It is evident that manufacturing in Limpopo is spatially concentrated in the Capricorn District Municipality. The small number of manufacturing is found in the Mopani District Municipality.

The contributions of various local municipalities towards manufacturing output are shown in Table 4.10 below.

Table 4.10: Total manufacturing output (R1000) per local municipality in Limpopo, 2006

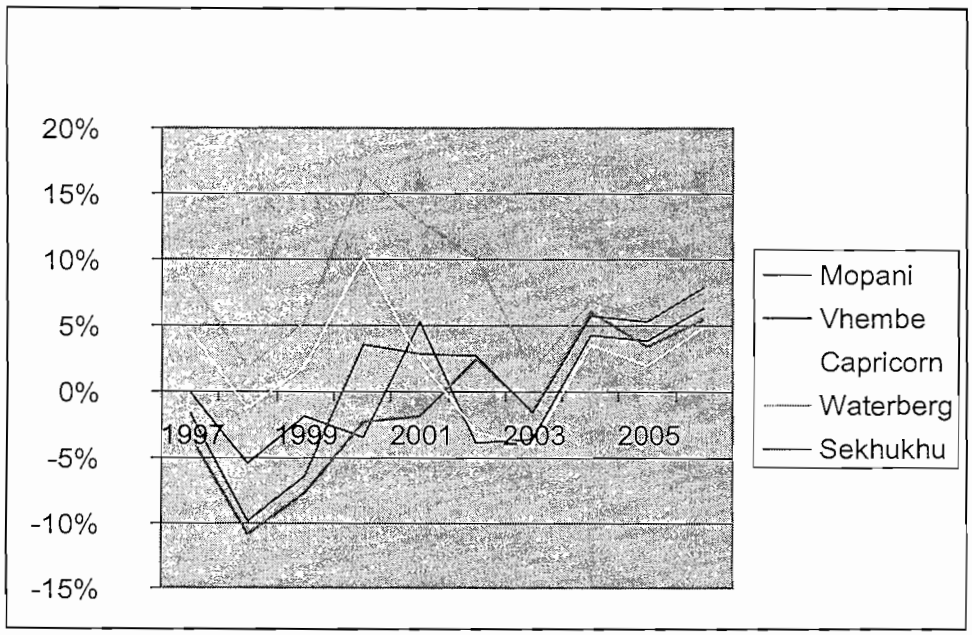
Local Municipality	Total manufacturing output at current prices (R1000) in 2006	% Contributions
Greater Giyani	136841	3.7
Greater Letaba	49484	1.3
Greater Tzaneen	180220	4.8
Ba-Phalaborwa	59730	1.6
Maruleng	44319	1.2
Kruger National Park	2671	0.1
Musina	24863	0.7
Mutale	5542	0.1
Thulamela	224480	6.0
Makhado	268778	7.2
Blouberg	39450	1.1
Aganang	65913	1.8
Molemole	185053	4.9
Polokwane	812541	21.8
Lepelle-Nkumpi	93436	2.5
Thabazimbi	633716	16.9
Lephalale	76011	2.0
Mookgopong	46021	1.2
Modimolle	91255	2.4
Bela-Bela	66650	1.8
Mogalakwena	129457	3.5
Greater Marble Hall	56811	1.5
Elias Motsoaledi	270877	7.2
Makhuduthamaga	23827	0.6
Fetakgomo	4725	0.1
Greater Tubatse	149835	4.0
Total	3742506	100

Source: Global Insight Regional Explorer(REX), 2006

From Table 4.10 above, it is clear that Polokwane Local Municipality contributes 21.7 percent to the total manufacturing output in the province followed by Thabazimbi Local Municipality with 16.9 percent. Other local municipalities contribute less than 1 percent. This means that manufacturing is spatially concentrated in Polokwane and Thabazimbi local municipalities in the Limpopo Province. The struggling local municipalities as far as manufacturing is concerned are Mutale, Kruger National Park and Fetakgomo local municipalities.

4.4.2.2 Growth in total manufacturing per district and local municipality

Figure 4.51: Growth in total Manufacturing per district municipality, 1997-2006.



Source: Global Insight Regional Explorer(REX), 2006

Figure 4.51 above depicts growth in total manufacturing per district municipality in Limpopo. Initially growth was divergent across the district municipalities. But as from 2003 growth tended to be convergent. That is, growth rates fluctuated together in all districts municipalities. However, the Waterberg District Municipality is shown as the fastest growing municipality in the province as far as manufacturing output is concerned.

In Table 4.11 below, the average annual growth rates of output are shown in every district municipality over the period 1996 to 2006.

Table 4.11: Average annual growth in total manufacturing output per district municipality in Limpopo, 1996-2006.

District Municipality	**Average annual growth in manufacturing output (in %)**
Mopani District Municipality	0.1
Vhembe District Municipality	-1.2
Capricorn District Municipality	2.0
Waterberg District Municipality	7.5
Greater Sekhukhune District Municipality	0.7

Source: Global Insight Regional Explorer, 2006

It became evident from Table 4.11 that manufacturing output growth was faster in the Waterberg District Municipality whereas in the Vhembe District Municipality the manufacturing growth was negative and output contracted over the period 1996 to 2006.

Table 4.12: Average annual growth in total manufacturing output per local municipality in Limpopo, 1996-2006.

Local Municipality	**Average Annual growth in manufacturing (in %)**
Greater Giyani	3.5
Greater Letaba	-2.2
Greater Tzaneen	-0.9
Ba-Phalaborwa	-0.7
Maruleng	-0.9
Kruger National Park	-0.6
Musina	-0.8
Mutale	-5.9
Thulamela	-1.6
Makhado	-0.7
Blouberg	2.1
Aganang	3.3
Molemole	1.8
Polokwane	1.9
Lepelle-Nkumpi	2.7
Thabazimbi	9.1
Lephalale	-0.9
Mookgopong	7.9
Modimolle	8.3
Bela-Bela	8.3
Mogalakwena	7.7
Greater Marble Hall	2.4
Elias Motsoaledi	0.3
Makhuduthamaga	-2.1
Fetakgomo	-4.0
Greater Tubatse	1.6

Source: Global Insight Regional Explorer(REX), 2006

Table 4.12 above depicts that manufacturing output growth was high in five local municipalities. These included Thabazimbi, Modimolle, Bela-Bela, Mookgopong and Mogalakwena local

municipalities. At the bottom of the ladder was Mutale Local Municipality with -5.9 percent average annual growths in total manufacturing.

4.4.2.3. Employment in total manufacturing in the district and local municipalities in Limpopo.

It is clear from Table 4.13 below that employment in manufacturing declined over the years 1996 to 2006. This means that the manufacturing sector as the best employer has weakened over the years 1996 to 2006.

Table 4.13: Total employment and employment in manufacturing in Limpopo, 1996-2006.

Year	Manufacturing employment	Total employment	Manufacturing as % of total
1996	29 999	533 444	5.62
1997	28 572	542 425	5.27
1998	28 017	552 538	5.07
1999	27 460	566 677	4.85
2000	26 976	570 767	4.73
2001	25 049	572 275	4.38
2002	23 025	571 160	4.03
2003	21 627	584 367	3.70
2004	22 030	579 107	3.80
2005	21 500	584 644	3.68
2006	21 530	589 195	3.65

Source: Global Insight Regional Explorer, 2006

The total manufacturing employment per district municipality in Limpopo is shown in Table 4.14 below.

Table 4.14:Total employment in manufacturing per district municipality in Limpopo, 1996-2006

Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1996	8814	8435	12200	5472	2596
1997	8629	8118	12250	5808	2482
1998	8402	7565	12509	6131	2323
1999	9085	8004	13664	7149	2345
2000	8557	7647	14362	8036	2363
2001	8566	7252	13815	8685	2298
2002	6989	6233	11651	8021	2034
2003	6683	6139	10973	8058	1952
2004	6864	6416	11219	8394	2030
2005	7158	6774	11363	8864	2150
2006	7308	6895	11392	9031	2239

Source: Global Insight Regional Explorer(REX), 2006

From Table 4.14 above it can be seen that the largest contributors to total employment in manufacturing in 2006 were Capricorn and Waterberg district municipalities with 11392 and 9031 respectively. Employment in Capricorn district municipality shrunk in 2002 and recovered in 2004. However the general appearance is that in most district municipality total manufacturing employment in Limpopo Province slowed down since 1996.

Table 4.15 depicts manufacturing employment per local municipality in the Limpopo Province in 2006.

Table 4.15: Manufacturing employment per local municipality in Limpopo 2006

Local Municipality	Manufacturing employment 2006	% contribution to manufacturing employment
Greater Giyani	1094	3.0
Greater Letaba	1168	3.2
Greater Tzaneen	3384	9.2
Ba-Phalaborwa	899	2.4
Maruleng	730	2.0
Kruger National Park	34	0.1
Musina	387	1.0
Mutale	79	0.2
Thulamela	3080	8.4
Makhado	3348	9.1
Blouberg	417	1.1
Aganang	637	2.7
Molemole	1973	5.4
Polokwane	7497	20.3
Lepelle-Nkumpi	868	2.4
Thabazimbi	2078	5.6
Lephalale	643	1.7
Mookgopong	558	1.5
Modimolle	2494	6.8
Bela-Bela	1342	3.6
Mogalakwena	1915	5.2
Greater Marble Hall	396	1.1
Elias Motsoaledi	920	2.5
Makhuduthamaga	202	0.5
Fetakgomo	39	0.1
Greater Tubatse	682	1.9
Total	36864	100

Source: Global Insight Regional Explorer(REX), 2006

Polokwane local municipality contributed 20.3 percent to the total manufacturing employment in 2006. In this same year it contributed 21.8 percent in total manufacturing output and became the top performing local municipality of the year as depicted in Tables 4.10 and 4.15 above. Greater Marble Hall contributed the smallest share to manufacturing employment in the whole province in 2006. As far as manufacturing output was concerned it contributed 1.5 percent in 2006. This means that manufacturing should be stimulated in Greater Marble Hall so that the larger number of labour force employed can be increased in this region.

4.4.2.4 Gross operating surplus in manufacturing per district and local municipality

Unlike in section 4.4.1.4 where the gross operating surplus for the whole province was discussed, in this section the gross operating surplus (profits) in the manufacturing sector is put forward.

Table 4.16 below depicts the gross operating surplus (GOS) in manufacturing and compares it to the overall GOS.

Table 4.16: Gross operating surplus in manufacturing in Limpopo, 1996-2006.

Year	Manufacturing GOS (Rands)	Total GOS (Rands)	Manufacturing GOS as % of total GOS
1996	902 820	1 4099 130	6.40
1997	1002 633	1 6121 799	6.22
1998	923 196	1 8319 226	5.04
1999	917 844	2 0668 949	4.44
2000	1124 563	2 5230 825	4.46
2001	1253 719	3 1046 814	4.04
2002	1550 061	3 6556 812	4.24
2003	1636 526	3 7938 949	4.31
2004	1768 761	4 1763 996	4.24
2005	1951 506	4 7291 310	4.13
2006	2280 050	5 5005 146	4.15

Source: Global Insight Regional Explorer(REX), 2006

It can be seen from the above table that GOS in manufacturing was not stable, even its percentage contributions to total GOS contracted over the years 1996 to 2006. This means that

manufacturing's profits were decreasing compared with other economic sectors in Limpopo and much need to be done to stimulate its growth.

The GOS per district municipality in manufacturing is shown in Table 4.17 below.

Table 4.17: Gross operating surplus per district municipality, 1996-2006 (in Rands)

Year	Mopani District Municipality	Vhembe District Municipality	Capricorn District Municipality	Waterberg District Municipality	Greater Sekhukhune District Municipality
1996	119 013	192 935	246 849	152 652	191 371
1997	131 460	203 122	284 162	181 670	202 219
1998	117 971	177 778	261 922	182 309	183 216
1999	116 617	165 317	271 847	192 327	171 727
2000	131 303	183 551	348 182	260 926	200 601
2001	148 920	190 561	388 000	311 301	214 737
2002	176 733	231 098	468 835	416 421	256 974
2003	183 484	245 627	482 466	454 278	270 672
2004	195 495	266 779	513 911	500 087	292 489
2005	213 306	291 116	553 814	565 266	328 004
2006	252 293	336 525	647 561	659 181	384 489

Source: Global Insight Regional Explorer(REX), 2006

From the Table 4.17 above it can be seen that Capricorn district municipality's profits dominated all district municipalities except in 2005 and 2006 where Waterberg became the leader in profits generation in the province. The Mopani district municipality contributed least to manufacturing profit in the province. However, the position of local municipalities will be shown on table 4.18 in the next page.

Table 4.18: Gross operating surplus per local municipality in Limpopo

Local Municipality	GOS 2006	% Contributions to GOS
Greater Giyani	90366	3.96
Greater Letaba	22565	0.99
Greater Tzaneen	95312	4.18
Ba-Phalaborwa	24223	1.06
Maruleng	18927	0.83
Kruger National Park	900	0.04
Musina	7669	0.34
Mutale	3759	0.16
Thulamela	152072	6.67
Makhado	173026	7.59
Blouberg	24425	1.07
Aganang	48005	2.11
Molemole	92571	4.06
Polokwane	421467	18.49
Lepelle-Nkumpi	61093	2.68
Thabazimbi	438620	19.24
Lephalale	38552	1.69
Mookgopong	23189	1.02
Modimolle	47036	2.06
Bela-Bela	36270	1.59
Mogalakwena	75514	3.31
Greater Marble Hall	35430	1.55
Elias Motsoaledi	207331	9.09
Makhuduthamaga	17898	0.79
Fetakgomo	3697	0.16
Greater Tubatse	120132	5.27
Total	2280049	100

Source: Global Insight Regional Explorer(REX), 2006

Table 4.18 above shows that Thabazimbi and Polokwane local municipalities contributed the most profits with 19.24 and 18.49 percent respectively. In the Mutale and Kruger National Park local municipalities the manufacturing sector struggled to make profits.

In Tables 4.19 and 4.20 below the percentage contributions to total output and employment per district municipality to detailed sub-sector are shown. It is from this analysis where concentrations of specific sub-sectors in specific places can be done.

Table 4.19: Output contributions in detailed sub-sectors per district municipality in Limpopo in 2006

District Municipalities	Food, beverages and tobacco	Textiles, clothing and leather goods	Wood and wood products	Fuel, petroleum, chemical and rubber products	Other non-metallic products	Metal products, machinery and households appliances	Electrical machinery and apparatus	Electronic, sound/vision, medical and other appliances	Transport equipment production	Furniture and other items, NEC and recycling
Mopani	24.0%	12.5%	17.6%	12.8%	5.4%	10.0%	7.5%	5.7%	5.2%	12.6%
Vhembe	0.6%	11.6%	11.7%	10.7%	11.5%	11.6%	12.3%	7.4%	15.0%	25.0%
Capricorn	0.5%	52.3%	23.7%	34.0%	22.7%	17.1%	30.6%	65.2%	50.9%	20.3%
Waterberg	68.1%	19.4%	36.6%	30.5%	51.0%	41.5%	34.0%	12.5%	19.9%	11.7%
Greater Sekhukhune	6.7%	4.3%	10.4%	12.1%	9.4%	19.8%	15.8%	9.2%	8.9%	30.4%

Source: Global Insight Regional Explorer(REX), 2006

Food, beverages and tobacco sectors are spatially concentrated in the Waterberg and Mopani district municipalities as both municipalities contribute more to output in this sector. But in Table 4.20 below most people are employed in the Capricorn district despite its contribution to output in the food sector in 2006.

Textiles, clothing and leather goods sector is concentrated in the Capricorn district municipality. Even the Waterberg district municipality has done well in output contribution in this sector. Furthermore, a large a number of employees is employed in the Capricorn and Waterberg district municipalities as depicted in Table 4.20 below. The Greater Sekhukhune district municipality was at the bottom of the ladder in both output and employment contribution in textiles, clothing and leather goods sectors in 2006.

The Waterberg and Capricorn district municipalities showed more concentration of wood and wood products sectors in their place as shown by output contribution in Table 4.19. However, employment in this sector is dominated by Capricorn and Mopani district municipalities.Fuel, petroleum, chemical and rubber products sectors are concentrated in the Capricorn and Waterberg district municipalities. Even employment is dominated by Capricorn and Waterberg district Municipalities.

Other non-metallic mineral products sectors are spatially concentrated in the Waterberg District Municipality as more than half of the output of the province in this sector is from Waterberg. But as far as employment is concerned, both Waterberg and Capricorn district municipalities dominate in this sector. Even the metal products, machinery and households appliances sectors are concentrated in the Waterberg District Municipality. But, a large number of the labour force is employed in the Capricorn District Municipality.

The electrical machinery and apparatus sector is concentrated in the Waterberg and Capricorn municipalities and more people are employed in the munispalities.The electronic, sound/vision, medical and other appliances sector is concentrated in the Capricorn District Municipality, which contributed more than half of the province's output in this sector. Even employment is high in this district municipality.

The transport equipment sector is also concentrated in the Capricorn district municipality. Employment is high in this municipality. The Greater Sekhukhune and Vhembe district municipalities dominate in furniture and other items, NEC and recycling sectors. But with regard to employment, Capricorn district takes the lead followed by Mopani district municipality. The Greater Sekhukhune which showed more contribution to GDP is the worst in employment in the furniture sector.

Table 4.20: Employment contributions in detailed sub-sectors per district municipality in Limpopo in 2006

District Municipalities	Food, beverages and tobacco	Textiles, clothing and leather goods	Wood and wood products	Fuel, petroleum, chemical and rubber products	Other non-metallic products	Metal products, machinery and households appliances	Electrical machinery and apparatus	Electronic, sound/vision, medical and other appliances	Transport equipment production	Furniture and other items, NEC and recycling
Mopani	1.8%	14.9%	26.1%	14.5%	14.4%	17.5%	12.9%	12.7%	11.2%	18.7%
Vhembe	15.0%	17.6%	17.1%	15.8%	12.8%	11.7%	13.6%	18.6%	12.2%	13.0%
Capricorn	40.6%	38.3%	28.1%	35.8%	34.1%	29.6%	37.5%	43.2%	49.0%	39.6%
Waterberg	17.8%	24.8%	21.9%	28.0%	36.4%	27.3%	31.2%	21.6%	26.2%	16.6%
Greater Sekhukhune	4.7%	4.4%	6.9%	6.0%	3.3%	11.3%	4.7%	3.8%	2.4%	12.0%

Source: Global Insight Regional Explorer(REX), 2006

The above analysis disclosed that most of the manufacturing activities broken down by sub-sectors are concentrated in the Waterberg and Capricorn district municipalities. The GDP is fairly high in these two municipalities. But, employment is high in the Capricorn district municipality in

all sub-sectors except other non-metallic mineral products sectors where employment is high in the Waterberg district municipality. Generally, the Capricorn District Municipality is the province's economic hub. Even the Waterberg District Municipality showed great potential of growth in the province.

4.5 LIMPOPO'S SPATIAL PROFILE OF EXPORTS

In this section the export profile of the Limpopo Province is analysed. The data available depicts the period from 1996 to 2004 and only on the old magisterial district boundaries (not the municipal boundaries). As a result, the analysis is presented by product for the province as a whole. However, the spatial profile of manufacturing analysed above reveals where the potential for exports lies.

Although there were some challenges in the data, this section shows the products with more export potential. But various products are clustered under the manufacturing sub-sectors.

4.5.1 Overall exports by product

In Table 4.21 below the overall exports by product is depicted. The total exports for every product per sub-sector are analysed.

Table 4.21: Limpopo overall exports by product

Product	Total export 2004(R)	% Contribution per product to total exports	Export Growth (2002-2004)
Food, beverages and tobacco products	122046670	8.0	1.6
Textiles, clothing and leather goods	18104157	1.29	324.3
Wood and wood products	3244575	0.23	-30.3
Fuel, petroleum, chemical and rubber products	881266415	62.9	6.6
Other non-metallic mineral products	6666063	0.48	-46.2
Metal products and machinery	351784681	25.1	6.9
Electrical machinery and apparatus	3059532	0.22	110.5
Electronic, sound/vision, medical and other appliances	3688196	0.26	102.9
Transport equipment	7860023	0.56	69.1
Furniture and other items.	13180136	0.94	-15.0

Source: Global Insight Regional Explorer(REX), 2006

Table 4.21 above disclosed that the most exported products in the Limpopo Province are fuel, petroleum, chemical and rubber products. In 2004 fuel, petroleum, chemical and rubber products contributed 62.9 percent to the total sub-sectors exports. But, metal products and machinery contributed 25.1 percent to sub-sectors exports which is also a considerable contribution. Food, beverages and tobacco products and textiles, clothing and leather goods were third and fourth place exporters in 2004 respectively. The worst exporter in 2004 was electrical machinery and apparatus products sector.

As far as export growth is concerned, there are some products that improved tremendously over the years 2002 to 2004. Textiles, clothing and leather goods export grew by more than three hundred percent. Even electrical machinery and apparatus products and electronic, sound/vision, medical and other appliances export grew by more than hundred percent respectively. Nevertheless, there are other products that are struggling in exports. Other non-metallic mineral

products and wood and wood products sectors export contracted by 46.2 and 30.3 percent respectively. This means that more effort is needed in these products to stimulate export growth.

4.6. Summary and conclusions

The above analysis revealed that the manufacturing sector is the sixth important sector in both output and employment in the province's broad sector.

The detailed manufacturing sub-sectors in the Limpopo Province showed that the food, beverage and tobacco production sector was the greatest manufacturing sector as far as output and employment was concerned. The metal products, machinery and household appliances sector, fuel, petroleum, chemical and rubber products sector and furniture and other items, NEC and recycling sector have made substantial contributions to the province's total manufacturing output. In employment, metal products, machinery and households appliances sector, wood and wood products sector and fuel, petroleum, chemical and rubber products sector are some of the biggest employers in the province.

In Limpopo Province, fuel, petroleum, chemical and rubber products sector is the fastest growing sector when output growth is considered. The electrical machinery and apparatus sector, transport equipment sector and metal products, machinery and household appliances sector also showed significant improvement over the years 1996 to 2006. Other sectors that showed to be fastest in workers absorption are food, beverage and tobacco production sector, wood and wood products sector, metal products, machinery and household appliances sector, textiles, clothing and leather goods sector and fuel, petroleum, chemical and rubber products sector.

The transport equipment sector showed to be the fastest growing sector in wages. And the electronic, sound/vision, medical and other appliances sector, other non-metallic mineral products sector, fuel, petroleum, chemical and rubber products sector and metal products, machinery and household appliances sector showed to be the fastest growing sector in profit-making.

Generally, the fastest growing sectors are the electronic, sound/vision, medical and other appliances sector; the fuel, petroleum, chemical and rubber products sector; the transport equipment sector; the metal products, machinery and household appliances sector and the electrical machinery and apparatus sector.

The fastest growing sectors are located in all district municipalities. But they are concentrated in the Capricorn and Waterberg district municipalities.

The fastest growing exporting sectors are the textiles, clothing and leather goods sector; the electrical machinery and apparatus sector, the electronic, sound/vision, medical and other appliances sector and the transport equipment sector. However, in chapter 5 policy recommendations for sectors that were discussed above will be highlighted.

Chapter 5: Summary, Conclusions and Recommendations

5.1 Summary

The Limpopo Province faces a significant challenge of low economic growth, unemployment and poverty. The problem of low economic growth, unemployment and poverty was and still will be debated upon at national level. Although, the problem of unemployment is targeted nationally, it must be confronted provincially. This study has argued that exports and export promotion may be part of the solution. Exports stimulate economic growth and employment. The general objective of this study was to compile and present a profile of manufacturing in and exports from the Limpopo Province.

The literature reviewed different perspectives on outward-oriented trade policy and found that exports, particularly manufactured exports are positively associated with increased efficiency in production and economic growth. Evidence from selected countries showed that they have benefited from export-led growth. Since 1994 South Africa has also opened up its economy and experienced an increase in its share of manufactured products in exports, greater efficiency and growth. There are however concerns that South African exports are still in the low value-added category and in shrinking world markets.

Although this dissertation is not about trade policy at the level of the national economy, the policies in place in South Africa and Limpopo, particularly South Africa's spatial policies and development initiatives in the Limpopo Province, were discussed. The policies set the scene for compiling Limpopo export profile and analysis thereof.

Since 1994 there was a shift from inward-oriented economy to outward-export oriented economy. Policies such as the National Spatial Development Strategy (NSDP), the Regional Industrial Development Strategy (RIDS), Growth, the Employment and Redistribution Strategy (GEAR), the Integrated Manufacturing Strategy (IMS), the Microeconomic Reform Strategy (MRS), the National Industrial Policy Framework and the Accelerated and Shared Growth Initiative for South Africa (ASGISA) were put in place. In Limpopo Province, the Limpopo Growth and Development Strategy (LGDS)(2004) as well as the Trade and Investment Limpopo (TIL) are in place to promote growth and exports in the province. The policy discussion in Chapter 3 was

centered around the policy perspective on the location of economic activity and promotion of exports.

The National Development Perspective laid a foundation as to how the policy for location of economic activity should be made. The Regional Industrial Development Strategy endorsed the suggestions made in the National Development Perspective. Regional Industrial Development Strategy suggested economic sectors that had a potential to promote export growth. The South African government through the Department of Trade and Industry revealed various measures to promote exports. The industrial and trade policy is perceived as a strong government intervention towards export promotion. At the provincial level the objective of the national government to promote exports was visible. The Limpopo Province in particular is pursuing this policy of export promotion. This was confirmed when the Limpopo Growth and Development Strategy was introduced. Furthermore, the establishment of the Trade and Investment Limpopo Agency is a clear indication that Limpopo is fully committed to the promotion of exports. Since the introduction of Trade and Investment Limpopo, trade and investments opportunities were created regionally and abroad. All these initiatives were taken with the sole purpose of promoting exports.

This dissertation revealed that the manufacturing sector is the sixth biggest economic sector in the province. In the detailed manufacturing sub-sectors, food, beverage and tobacco production sector, metal products, machinery and household appliances sector, fuel, petroleum, chemical and rubber products sector and furniture and other items, NEC and recycling sector are the biggest sub-sectors in the province. And the fastest growing sectors are electronic, sound/vision, medical and other appliances sector, fuel, petroleum, chemical and rubber products sector, transport equipment sector, metal products, machinery and household appliances sector and electrical machinery and apparatus sector. These fastest growing sectors are located in all district municipalities but concentrated in Capricorn and Waterberg district municipalities. Textiles, clothing and leather goods sector, electrical machinery and apparatus sector, electronic, sound/vision, medical and other appliances sector and transport equipment sector showed to be the fastest export growth sectors in the province.

5.2 Conclusions

It became evident at the beginning of this dissertation that the main focus was to address the problem of low economic growth, unemployment and poverty in Limpopo Province. The study suggested export-led growth as a solution to the challenges that faced the province. The literature also revealed that output-oriented trade policy and exports, particularly manufactured exports are positively associated with increased efficiency in production and economic growth.

Evidence from selected countries such as Chile, Korea and Mauritius shows that these countries have benefited through trade liberalization since 1994 although they exported more low-value-added products.

The study also reviewed the policies that existed in South Africa and the Limpopo Province in particular. It was found that there were policies that guided and directed the spatial location of economic sectors. The policies extend to suggesting the location of value-added manufacturing sectors. As most of the policies are planned at national level but implemented at provincial level, evidence of policy efforts in Limpopo is visible in that the province has changed its focus from being an exporter of unprocessed minerals and agricultural produce to value-added processing and manufactured goods.

It became clear from the above analysis that the manufacturing sector is one of the top six sectors in the province's economy. Since 1996 manufacturing output doubled. This means that the sector has growth potential and it must be promoted.

The broader sector economic activities are clustered in Greater Sekhukhune, Capricorn and Vhembe district municipalities whereas at local level they are clustered at Thabazimbi, Polokwane, Ba-Phalaborwa, Makhado, Thulamela and Greater Tzaneen local municipalities. But districts that showed greater economic growth are Capricorn, Waterberg and Mopani district municipalities. And Belabela, Mookgopong, Modimolle, Mogalakwena, Greater Marble Hall and Greater Giyani local municipalities also showed higher economic growth. This means that there are districts and local municipalities that have the potential to grow in the Limpopo Province. But as far as employment is concerned, Capricorn and Waterberg district municipalities as well as Polokwane, Mogalakwena and Makhado local municipalities employed more workers in the province.

The greatest profits are made in Waterberg, Mopani and Capricorn district municipalities as well as in Thabazimbi, Polokwane and Ba-Phalaborwa local municipalities. As the profits reveal, Waterberg, Mopani and Capricorn district municipalities are good areas for spatial location of manufacturing sector.

The greatest concentration of the manufacturing sector is in Waterberg and Capricorn district municipalities particularly in Thabazimbi and Polokwane local municipalities. Manufacturing growth is also high in Waterberg and Capricorn district municipalities and Thabazimbi, Bela-Bela, Modimolle, Mookgopong and Mogalakwena local municipalities.

A large number of workers is employed in Capricorn and Waterberg district municipalities particularly in Polokwane, Makhado, Thulamela and Greater Tzaneen local municipalities. Large profits are made in Waterberg and Capricorn district municipalities as well as in Thabazimbi and Polokwane local municipalities. This means that Waterberg and Capricorn district municipalities, particularly Thabazimbi and Polokwane local municipalities, are the manufacturing hubs of the province and they need continuous support.

The manufacturing detailed sub-sector analysis showed that food, beverage and tobacco production sector, fuel, petroleum, chemical and rubber products sector, metal products, machinery and household appliances sector, wood and wood production sector and furniture and other items, NEC and recycling sector are the top five greatest sub-sectors in the province. Furthermore, electronic, sound/vision medical and other appliances sector, fuel, petroleum, chemical and rubber products sector, transport equipment sector, metal products, machinery and household appliances sector and electrical machinery and apparatus sector are the fastest growing sectors in the province. This means that these sectors can serve as engines for growth in the province. But, food, beverage and tobacco production sector, furniture and other items, NEC and recycling sector and wood and wood production as some of the top five greatest sectors lagged behind as far as growth is concerned. This means that this is the area where policy intervention such as regional industrial development and exports is needed to fast-track their growth.

The top five fast growing sectors are concentrated in two district municipalities. Electronic, sound/vision, medical sector and other appliances and transport equipment sector are concentrated in the Capricorn District Municipality whereas metal products, machinery and

household appliances sectors are concentrated in the Waterberg District Municipality. Fuel, petroleum, chemical and rubber products sector and electrical machinery and apparatus sector are concentrated in both the Waterberg and the Capricorn district municipalities. This means that the two district municipalities are of strategic importance as the most performing sectors are concentrated there.

Fuel, petroleum, chemical and rubber products sector, metal products, machinery and household appliances sector and food, beverage and tobacco production sector export more products in the province. But the fastest growing exporters are textiles, clothing and leather goods sector, electrical machinery and apparatus sector, electronic, sound/vision, medical and other appliances sector, transport equipment sector and metal products, machinery and household appliances sector. In the Limpopo Province, the fastest growing sectors are also the fastest growing exporter sectors. This means that if most of these fastest growing sectors are supported, the problem of unemployment and poverty can be eliminated. But there are some sectors that are struggling and they need strong policy intervention such as subsidies and other rebates to stimulate them.

5.3 Recommendations

The above analysis showed that some sectors were growing fast and others that were that lagging behind. Some significant sectors were not the greatest exporters, like food, beverage and tobacco production sector and furniture and other items, NEC and recycling sector. These sectors are amongst the top five bigger sectors but they lagged behind as far as output and export growth are concerned. This means that policy intervention to stimulate these sectors may be lacking. And it is recommended that policy makers should coordinate policies at national, provincial and local levels. Furthermore, the top-level policy makers should be enriched with local knowledge so that they can plan inclusive policies. Specifically, the government can stimulate regional industrial development by providing the necessary infrastructure such as port, railway lines and warehousing and encourage exportation of goods and services through incentives and other rebates to promote exports.

For the future researchers, it is recommended that they take a closer look at sub-national data and the timeliness and quality of information available to policy makers. Join efforts of policy

makers, academics and statistical authorities will be required to improve the information that is available for analysis and decision-making.

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