CLUSTERING: IT'S IMPACT ON THE COMPETITIVENESS OF SMALL MANUFACTURERS IN THE CLOTHING INDUSTRY IN PORT ELIZABETH

BY

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ABSTRACT

This research has aimed to explore the impact of clustering on the ability of small manufacturers in the clothing industry in Port Elizabeth to enhance their competitiveness.

The research study was conducted in two stages, which included both qualitative and quantitative research methods. Firstly, an exploratory qualitative study using the Delphi method was employed to identify the key problems currently being experienced by small manufacturers in the clothing industry. Finally, the application of a structured questionnaire to small manufacturers in the clothing industry followed, exploring the awareness of and interest in clustering as a strategy for enhancing competitiveness.

A key observation to emerge from the qualitative research is that significant differences were evident between the responses of academics, professionals in small business development and small business owners. An analysis of the problems experienced by small manufacturers in the clothing industry revealed that high labour costs and low productivity were the frontrunners. The lack of knowledge was cited as the most important problem preventing the wide scale implementation of horizontal clustering.

Another key observance to emerge from the quantitative study is the fact that very few significant differences are evident between the two groups viz. small business owners and experts. The research indicated that although in the minority, horizontal linkages exist between small clothing manufacturers in Port Elizabeth. The results indicated furthermore that the majority of small clothing manufacturers in Port Elizabeth are

willing to consider collaboration relationships. The attitudinal data revealed that small business owners are satisfied that clustering benefit the participating firms and thereby displayed a positive attitude towards horizontal clustering. In regards to the role of training institutions, government and intermediaries in promoting clustering, diverse results were produced with a substantial percentage of neutral respondents. The lack of knowledge about clustering was confirmed to be the main problem preventing the wide scale implementation of clustering. The respondents were in accordance with the fact that the education of small businesses concerning the benefits of clustering represents the most likely solution to the identified problems.

Although there are many examples of clusters around the world, research in this area is fairly recent. Research in clusters should be an ongoing process and the tracking of real experiences with local clusters in South Africa as well as research studies in other manufacturing sectors in South Africa are areas that need further research.

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CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 INTRODUCTION

Globalization and liberalization are placing developing countries under increasing pressure. They are required to compete with the industrially advanced countries at a time when markets are more competitive, volatile and fluid than ever before. The new global economy is characterised by the overall lowering of trade barriers and concurrent emergence of trade blocks, the shift towards information and service-oriented activities, and the downsizing of large organisations, together with mergers and alliances. (Council of Economic Advisers, 1997) These require that today's unemployed and the new entrants to the labour force will increasingly have to be engaged at home or create their own business. Globalization also means that the earlier comparative strengths of available natural resources and labour are replaced by competitive advantage based on technological advances. Further, flexible specialisation and supply chains of out-sourcing through small, medium and micro enterprises are progressively replacing the vertical organisation of production. (Lalkaka, 1997) The small, medium and micro enterprise sector plays an increasingly important role in the development of local as well as national economies. (White Paper, 1995)

South Africa made the transition to majority rule in 1994 after two decades of economic stagnation. (Institute of Development Studies, 1997) The new South Africa brought with it

changes on an unprecedented scale. For many decades trade restrictions and protective customs regimes have shielded the South African economy from global competition. Following the political reforms in the country in the early 1990's and increasing exposure to international markets as the economy was opened up to global trade regulated by the World Trade Organisation, local industry has been forced to adapt to a global market. This exposure has shocked many industries. Some have been unable to achieve any degree of global competitiveness in the short term, and have instead attempted to resort to the protectionist approaches of the past. Many industries, including the clothing industry, are called upon to handle and respond to an environment that is changing at an alarming rate.

Theoretically, more open global markets, improved transportation and more advanced communication should diminish the role of location in competition. Paradoxically, the enduring competitive advantages in a global economy lie increasingly in local things. (Porter, 1998) Although location remains fundamental to competition, its role today differs vastly from a generation ago. Competition in today's economy is far more dynamic. Companies can mitigate many input-cost disadvantages through global sourcing, therefore rendering the old notion of comparative advantage less relevant. Instead, competitive advantages rest on making more productive use of inputs, which requires continual innovation. This role of location has been long overlooked, despite striking evidence that innovation and competitive success in so many fields are geographically concentrated. (Porter, 1998) Clusters represent a new way of thinking about location, challenging much of the conventional wisdom about how companies should be configured, how institutions such as universities can contribute to competitive success, and how governments can promote economic development and prosperity. (Porter, 1998)

1.2 THE STATEMENT OF THE PROBLEM

This research has aimed to identify the impact of clustering on the ability of small manufacturers in the clothing industry in Port Elizabeth to compete internationally, in order to identify the key problems experienced in small business management and to devise a practical strategy to overcome the problems encountered.

The specific objectives of this study were:

- To identify the key constraints to improving competitiveness experienced by small manufacturers in the clothing industry in Port Elizabeth;
- To determine the range and nature of clustering amongst small manufacturers in the clothing industry in Port Elizabeth;
- To determine the prevailing attitudes towards clustering;
- To determine the constraints to clustering;
- To devise a practical strategy for the implementation of clustering amongst small manufacturers.

1.3. THE RESEARCH QUESTIONS

The first research question

What are the key constraints to improving competitiveness currently experienced by small manufacturers in the clothing industry in Port Elizabeth?

The second research question

What is the current level of awareness and interest in clustering as a strategy for improving competitiveness?

The third research question

What are the constraints to the implementation of clustering as a strategy?

The fourth research question

What can be done to overcome the constraints identified?

1.4 THE HYPOTHESES

The following hypothesis were postulated in this research:

Hypothesis one

Competitiveness amongst small manufacturers is impeded by a lack of specialisation and differentiation.

Hypothesis two

Clustering bring about economic gains for participating businesses.

Hypothesis three

The formation of linkages is impeded by the unwillingness of small manufacturers to engage in clustering.

Hypothesis four

Constraints to competitiveness are sectoral specific.

1.5 THE DELIMITATIONS

The study was limited to all small manufacturers within the clothing industry in the Port Elizabeth area.

1.6 THE ASSUMPTIONS

The first assumption

South Africa exhibits a lack of competitiveness in all sectors of manufacturing, including the clothing industry. Research undertaken (as cited by Viljoen, 1995) with regard to the competitiveness of South Africa by SACOB (1991); Mayer *et al* (1992); The World Competitiveness Report (1997, 1998) and Monitor (1995) has indicated that the manufacturing sector in particular is not internationally competitive.

The second assumption

The sample of small clothing manufacturers in Port Elizabeth is representative of small manufacturers in the clothing industry in South Africa.

1.7 THE DEFINITIONS OF TERMS

The cluster

Clusters can mean many different things: (Lall, 1997)

- Networks of functional connections.
- Linked activities in an industrial value chain
- Geographical agglomeration of different activities
- Geographical agglomeration of similar activities
- Same, but with close linkages/specialisation
- Dissimilar agglomeration with common purpose

Competitiveness

The ability of a small manufacturer to compete against its rivals internationally.

Small business

An organisation run for profit with the following attributes:

- Employs not more than 200 employees
- Has an annual turnover of not more than R40 million

(Size according to the National Small Business Act 102 of 1996)

1.8 IMPORTANCE OF THE STUDY

The purpose of this research project was to make a meaningful contribution to academic theory, government policy making and economic development.

1.8.1 Academic Theory

The current body of knowledge in the field of marketing will benefit from this study in respect of the wider view it can provide on clustering. Although academic institutions have been introducing the concept of entrepreneurship, the revelations of this study can also provide a wider view on clustering to enhance the competitiveness of small firms with a view to their international development. It is intended to contribute in particular to the small, medium and micro enterprise research done by the Technikon Natal Entrepreneurial Research Unit in new approaches to economic development. It is also intended that this research study be transformed into a development study for incorporation into the South Africa-Netherlands Research Program (SANPAD) as well as the Cluster Initiative Study of the Center for Science Development (now National Research Foundation).

1.8.2 Government Policy Making

Government has an important role to play in the promotion of clustering whether through direct intervention such as providing seed capital for emerging clusters, or indirect support, such as stimulating demand through public sector purchasing power. The lack of success in winning support for the initiatives explored by the Department of Trade and Industry in establishing industry-wide cluster groups emphasizes the need for research in clustering. Therefore this research study can make a contribution towards new policy approaches taken by government as to how clusters can be successfully implemented. When referring to government's role in promoting clustering, this is not only restricted to national government, but both regional and local governments have a role to play in the process. The research

study can also make a contribution in the designing of economic development strategies by local government and provides impetus to put in place an appropriate support framework in which clusters can achieve success.

1.8.3 Economic Development

It is intended for this research study to make a contribution to the process of economic development in terms of the importance of the study to manufacturing, the clothing industry, the small, medium and micro enterprise sector as well as to the Eastern Cape.

1.8.3.1 Importance of the study to manufacturing

In a constantly changing world, manufacturing is increasingly challenged to create new solutions to existing and emerging issues, and to create and exploit new opportunities. The dramatic change process in South Africa has intensified this challenge and paved the way for meaningful reform of the clothing industry and also initiated this research attempt.

1.8.3.2 Importance of the study to the clothing industry

The political dispensation that came into effect in April 1994 not only changed the face of business significantly, but also resulted in the greatest change process in the history of South Africa. One of the greatest challenges to the economy at large and the new generation of decision makers in particular, were to transform **what is** into what **should be** with limited resources. It is firmly believed that the clothing industry can play an important role in

economic development and social upliftment, but this ideal is only possible if the transition process is managed effectively.

As presented in table1.1 South Africa has an important clothing industry. (Clofed, 1997)

Table 1.1 South African Clothing and Textile Industry (Clofed, 1997)

	Textile	Clothing
Percentage of total manufacturing production.	3%	2%
Employment per industry.	75 000	170 000
Production utilisation – Domestic.	80%	94%
Production utilisation – Export.	20%	6%

Source: Clofed

Exports are mainly to neighbouring countries. Similarly, only 3% of total demands for finished clothes are imported. (Clofed, 1997) The heavy dependence on the domestic market is a result of a policy with high import tariffs on raw material, intermediate goods as well as finished clothes. At present, import tariffs on yarns and fabrics amount to 20 - 36% and to 72% on finished clothes. The South African government has announced that import tariffs will be gradually reduced until 2002, when import tariffs on yarn and fabrics are scheduled to amount to 7.5 - 22%, and to 40% on finished clothes. (Clofed, 1997) The

lowering of the import tariffs for finished clothing can have a negative effect on profitability and employment in this sector. In particular, a lowering of the import tariffs is likely to lead to considerably increased competition in the market segments for cheaper clothes where East Asian manufacturers will benefit from lower labour costs and larger volumes.

Total employment, which also includes the decentralised areas and an informal sector estimate, has fallen with 10 400 jobs from December 1996 to December 1997 and more job losses have since been experienced. (Clofed, 1997) The fall in employment in the most labour-intensive manufacturing sector is cause for concern.

Decades of protection and inward thinking have produced paradigms that have to be challenged. This will imply an increased pressure on domestic manufacturers to improve their competitiveness in order to ensure the long-term survival of the South African clothing industry in a world with free trade and globalized manufacturing. In the event of clustering demonstrating its usefulness in improving competitiveness in the clothing industry, a framework can be developed to guide the successful transition from protectionism to free trade and lay a solid foundation for the future.

1.8.3.3 Importance of the study to the small, medium and micro enterprise sector

Around one billion new jobs will be needed in the next decade in developing countries and the bulk of these will have to come from the informal sector, small enterprises and the self-employed. (Lalkaka, 1997) Taking into consideration the high failure rate of small businesses and the importance of the small, medium and micro enterprise sector to the

economy, in the event of linkages demonstrating its usefulness in enhancing the competitiveness of small manufacturers, this will lead to improved chances of success and growth of the small manufacturer and will have a positive influence on job creation. Jobs empower people economically by giving them the purchasing power to obtain goods and services, they are empowered socially by enhancing self-esteem and politically by influencing the legislative decision making process.

1.8.3.4 Importance of the study to the Eastern Cape

Although manufacturing is the main contributor to the Gross Geographic Product (GGP) in the Eastern Cape, (CSS, 1995) manufacturing has declined in terms of the contribution to national output through the post-war era. (Lewis and Bloch, 1997) The Eastern Cape's industrial cities, Port Elizabeth and East London are far smaller in terms of national employment than the industrial cities in Gauteng, Western Cape and Kwazulu Natal. Gauteng, Western Cape and Kwazulu Natal also score better in terms of lower unemployment rates as a proxy for poverty. The total unemployment rate (expanded definition) for the Eastern Cape in 1994 was 45,3%, the highest in the country except for the Northern Province. (CSS, 1995) Therefore the need for local economic development as well as small, medium and micro enterprise promotion in the Port Elizabeth area is crucial.

The following table (table 1.2) illustrates the differences in the national employment figures per economic region within South Africa.

Table 1.2 National Employment

Johannesburg	10%
East Rand	16%
West Rand	3%
Vaal Area	4%
Pretoria	6%
Cape Town	14%
Durban	16%
Port Elizabeth	5%
East London	2%

Source: Lewis &Bloch (1997)

If clustering can enhance the competitiveness of small manufacturers in the Port Elizabeth area, this will lead to greater economic growth, which will have a positive influence in terms of job creation, prosperity and wealth, and will improve the well being of all the communities in the area.

1.8.3.5 Importance of the study to South Africa

In the South African context – where the development of successful small manufacturers is seen as a critical factor in achieving both growth in the economy and a reduction in the level

of unemployment, clustering can help limit the cost and level of business failure and consequently benefit the country as a whole.

1.9 THE RESEARCH METHODOLOGY

The research was conducted in two stages:

Firstly, an exploratory qualitative study, using the Delphi method, was employed to identify the key problems currently experienced by small manufacturers in the clothing industry. This was obtained through responses from individuals who were acknowledged authorities in the area of small business development. This was used to select the key variables for inclusion in the structured questionnaire that was to be administered in stage two. Finally, the application of a structured questionnaire to small manufacturers in the clothing industry as well as local government, exploring the awareness of, and the interest in clustering to improve competitiveness was undertaken.

1.10 OUTLINE OF THE REMAINING CHAPTERS

Chapter 2: The review of the related literature

This chapter has focused on the role of the small, medium and micro enterprise sector in economic development. The importance of competitiveness and clustering were discussed in detail. The chapter has also focused on international experience of clustering as well as the application of clustering to the clothing industry

Chapter 3 The clothing industry in South Africa

The primary focus of this chapter has been an overview of the South African clothing industry. The global clothing industry as well as opportunities and constraints for small, medium and micro enterprises were discussed.

Chapter 4 Methodology of data collection

This chapter has outlined the research methodology used to collect the data, which was used to answer the hypothesis for the qualitative as well as the quantitative stages of the research.

Chapter 5 The analysis of the collected data

The primary focus of the chapter has been the presentation and analysis of the collected data.

Chapter 6 Conclusions and implications

Finally conclusions and implications have been made in the last chapter.

1.11 CONCLUSION

As stated this chapter motivated the purpose of and reasons for the research project, and also explained the broad research methodology. It is clear that the clothing industry will have to change in accordance to new requirements in order to be in a position to exploit the opportunities in the new business environment. Success factors required in the previous political dispensation of protectionism differ significantly from the requirements to be successful in a free trade, competitive environment. As the most labour-intensive

manufacturing sector, the clothing industry can make a meaningful contribution to the economy and well being of the country and its people. The focus area of this research project was to determine if clustering could enhance the competitiveness of the clothing industry and in particular the competitiveness of small manufacturers. The importance of competitiveness and clustering as an approach is discussed in the following chapter.

CHAPTER 2

THE REVIEW OF THE RELATED LITERATURE

2.1 INTRODUCTION

Chapters two and three aim to build a theoretical foundation upon which the research was based by reviewing the relevant literature. The purpose of this is to identify relevant research issues. In chapter two the literature is discussed in term of the role of the small, medium and micro enterprise sector in economic development, the importance of competitiveness, the application of the cluster approach, international and the South African experience of clusters as well as the application of the cluster approach to the clothing industry

2.2 THE ROLE OF THE SMALL, MEDIUM AND MICRO ENTERPRISE SECTOR IN ECONOMIC DEVELOPMENT

In most countries of the World Bank's operations, the majority of companies are small and provide the bulk of employment opportunities in both developed and developing countries. (Lalkaka, 1997; CIPE, 1997) Measured in numbers of employees, on average more than 80 percent of the number of businesses in any country employs less than 10 people and contribute around one - third to one - half of gross national product and total employment. Many countries have thousands of fiercely independent small, often family-owned

companies, and few industrial giants. (Lalkaka, 1997; Wahjoetomo and Burhan, 1997) Small companies with growth-oriented management can adapt faster to change, create new products, and bring them to market swiftly, trim overheads, and feed the large corporations with low cost, high-value services. (Lalkaka, 1997; CCET, 1996; The Small Business Administration, 1996)

As net job creators small enterprises help raise incomes, distribute it more widely and broaden participation in asset management. Using the personal savings of entrepreneurs (and their family and friends) to start businesses, followed by retained earnings to expand, they play a role in mobilising latent resources, both human and financial. Small enterprises can serve as a seedbed for developing the skilled worker base for industrial expansion. At the regional level, small enterprises can mobilise local resources and through competition and co-operation, help revitalise the local economy and serve export markets. (Lalkaka, 1997)

Although small enterprises are generally seen as helping create most of the one billion new jobs the world will need by the end of this century, (Lalkaka, 1997; Staley and Morse, 1965; UNDP, 1995) the following constraints being encountered in respect of SMME development are well known in the transition countries: (Lalkaka, 1996; Levitsky, 1996; CIPE, 1997; IDS, 1997)

- Entrepreneurship: An entrepreneurial culture lies dormant in many developing countries;
- Financing: A critical constraint is access to medium-term investment and short-term working capital. The traditional banking system is ill equipped to incur the costs and risks of credit to businesses with no collateral;
- Bureaucracy: There are the pervasive regulatory hurdles, interpreted by an entrenched

bureaucratic system, which results in many extra months and much in fractious expenditure;

- State interventions to control small, medium and micro enterprises: These are plentiful, but are seldom explicit in terms of national policies to promote them. Inadequate policy instruments or institutions to provide effective support, incentives and markets, compound this problem;
- Small enterprise management: Businesses of any scale require a variety of skills to compete effectively in today's fast-changing global markets, and these are generally lacking;
- Technical infrastructure: An inadequate support system inhibits the development of technology- based businesses.

Before 1985, the small and medium business sector's contribution to employment in the private sector in South Africa was approximately 38%, whilst in 1998 this share has grown to 45%. (Delport, 1998) The important role played by entrepreneurs in South Africa is further underlined by the fact that during 1998 small and medium-sized enterprises contributed 33% to GDP, an improvement on its 1985 figure of 26%. (Delport, 1998) In the 1995 White Paper on National Strategy for the Development and Promotion of Small Business in South Africa it has been estimated that there are in the vicinity of 800 000 small, medium and micro enterprises in the country absorbing approximately one quarter of the labour force of 15 million people.

With the acceptance by Parliament of the national strategy for the development and promotion of small business in March 1995, the process to eliminate the most important

obstacles to the development of entrepreneurship was set in motion. According to Finance Minister Trevor Manual in the foreword to the White Paper "*Small, medium and micro-enterprises represent an important vehicle to address challenges of job creation, economic growth and equity in our country. Throughout the world one finds that small, medium and micro enterprises are playing a critical role in absorbing labour, penetrating new markets and generally expanding economies in creative and innovative ways. We are of the view that – with the appropriate enabling environment small, medium and micro enterprises in this country can follow these examples and make an indelible mark on this economy. The stimulation of small, medium and micro enterprises must be seen as part of an integrated strategy to take this economy onto a higher road – one in which our economy is diversified, productivity is enhanced, investment is stimulated and entrepreneurship flourishes.*"

The following constraints pertaining to the small business sector are described in the White Paper: Legal and regulatory environment, access to markets, finance and business premises, acquisition of skills and managerial expertise, access to appropriate technology, quality of business infrastructure in poverty areas and the tax burden.

The primary objective of the national business strategy is: To create an enabling environment for small enterprises as primary objective, facilitating greater equalisation of income, wealth and economic opportunities, creating long term jobs, stimulating economic growth, strengthening the cohesion between small enterprises and level the playing field between big and small business.

A year later National Strategy for the Development and Promotion of Small Business was given a boost by the ratification of the National Small Business Act (Act 102 of 1996). This led to the establishment of the following institutions to assist micro, small and medium-sized enterprises:

- Khula Enterprise Finance was developed to give access to funding;
- Ntsika Promotion Agency handles the non-financial aspects of small business, such as training, technology, information and marketing;
- The National Council for Small Business was established to give small business a national voice;
- A special directorate known as the Centre for the Promotion of Small Business was also established to give stimulus and support and to monitor the national strategy for the development and promotion of small business. One of the most important aims of the Centre for the Promotion of Small Business is the establishment of a research facility for the ongoing monitoring of small business information and to appoint a legislative review committee to investigate legislation and regulations currently hampering small business development.

Although a new political order in South Africa has opened up opportunities for entrepreneurs, small businesses face considerable international competition in a world with free trade. The traditional economic barriers between countries have been removed resulting in a world economy and open and unrestricted trade between countries. The globalisation of business and trade together with the galloping pace of technological change, shape the environment in which small and medium enterprises must compete today. With the growth of the global economy, some nations seem to be much more adept than others at ensuring

sustained increases in living standards for its citizens. Now that companies can source capital, goods, information and technology from around the world, the manner in which companies and nations compete needs to be changed. The problems of small firms are important to competitiveness issues because of the potential role that this sector can play in a dynamic economy. In today's increasingly competitive environment, it is important to understand the importance of competitiveness and what is required to become competitive.

2.3 INTERNATIONAL TRADE

Authorities in all countries wrestle with the problems of what, how much, and with whom their country should import and export. Once they make decisions, officials enact trade policies to achieve the desired end results. These policies, in turn, affect business. Most models on international trade explain the commodity composition and direction of trade in terms of the law of comparative advantage - comparative advantage being the proximate or immediate determinant of the commodity trade pattern. (Greenaway and Milner, 1993) Two types of theories about trade are relevant to international business. The first type deals with trade in the absence of restrictions among countries. The second type of theory prescribes governmental interference with the free movement of goods and services among countries. (Daniels and Radebaugh, 1995) Both the descriptive and prescriptive theories have considerable impact on the international business. They provide insights about favourable market locales as well as potentially successful products. The theories also increase understanding about the kinds of governmental trade policies that might be enacted and predict how those policies might affect competitiveness.

2.3.1 Mercantilism

Mercantilism held that a country's wealth was measured by its holdings of treasure, usually in the form of gold. (Daniels and Radebaugh, 1995) According to mercantilist theory, countries should export more than they import and, if successful, would receive the value of their trade surpluses in the form of gold from the country or countries that ran deficits.

2.3.2 Absolute Advantage

Adam Smith developed the theory of absolute advantage, which holds that different countries can produce some goods more efficiently than others; thus global efficiency can be increased through free trade. (Daniels and Radebaugh, 1995) Smith reasoned that if trade was unrestricted, each country would specialize in those products that resulted in a competitive advantage for it.

2.3.3 Comparative Advantage

David Ricardo expanded on Adam Smith's theory of absolute advantage to develop the theory of comparative advantage. Ricardo reasoned that there may still be global efficiency gains from trade if a country specializes in those products that it can produce more efficiently than other products, without regard to absolute advantage. (Daniels and Radebaugh, 1995)

2.3.4 Factor-Proportions Theory

Smith's and Ricardo's theories did not help to identify the types of products that would most likely give a country an advantage. Those theories assumed that the working of the free market would lead producers to the goods they could produce more efficiently and away from those they could not produce efficiently. Eli Heckscher and Bertil Ohlin, developed the factor-proportions theory, which held that differences in countries' endowments of labour relative to their endowments of land or capital explained differences in factor costs. (Daniels and Radebaugh, 1995)

2.3.5 The Product Life Cycle

The theory of product life cycle states that certain kinds of products go through a continuum, or cycle, that consists of roughly four stages – introduction, growth, maturity and decline. The location of production will shift internationally depending on the stage of the cycle. (Daniels and Radebaugh, 1995)

2.3.6 Country-Similarity Theory

The country-similarity theory holds that once a producer has developed a new product in response to observed market conditions in the home market, it will turn to markets that are perceived to be the most similar to those at home. (Daniels and Radebaugh, 1995)

Although most trade theories deal with cross-country benefit and costs, trading decisions usually are made at the company level. Companies must have competitive advantages to be viable exporters.

2.4 IMPORTANCE OF COMPETITIVENESS

The competitiveness of nations has become an important topic of the academia, practitioners and government agencies. The academic sector studies the determinants of the competitiveness of nations in order to provide suggestions on the manner in which a nation obtains competitive advantages; business practitioners take the competitiveness of nations as a reference for evaluating the alternatives of international investments; and government agencies use the competitiveness of nations as an index for economic performances. (Chen, Tarn & Shuch, 1995)

2.4.1 The World Competitiveness Report

The annual publication of The World Competitiveness Report is an index widely accepted in measuring the competitiveness of nations. The World Competitiveness Report submits current information on the competitiveness of main industrial nations and forecasts future economic trends. This report also points out the directions in which governments, scholars and businesses follow in regard to their home country. The ways in which multinational corporations and global businesses assess demand conditions of the international markets are also discussed. (Chen, Tarn & Shuch, 1995; CELI, 1997) The implication of The World Competitiveness Report in terms of this study lies in the increased importance of

competitiveness and what characteristics contribute to a country's competitiveness. It also indicates the competitiveness of South Africa in comparison to the rest of the world.

The annual publication of the "World Competitiveness Report" was first established in 1980 by the Swiss-based consortium of Geneva's World Economic Forum and Lausanne's International Institute for Management Development. The Report defines the competitiveness of nations as: the abilities, which a nation possesses in order to create more wealth than other competing nations in the world market. (Chen, Tarn & Shuch, 1995; World Economic Forum, 1998) It refers to the ability of a nation's economy to meet the test of international competition whilst improving the real income of its citizens. Competitiveness of nations focuses on the standard of living that is the real income of citizens. Competitiveness should be viewed as the combination of productivity improvements and economic growth. (CELI, 1997) Experts on economics, strategy and competition are engaged to provide reliable and accurate conclusions on the newest competitiveness and wealth orientation of nations.

According to the report's executive summary eight characteristics contribute to a country's competitiveness: (World Economic Forum, 1998)

- Openness of the economy to trade and foreign investment - does it have the linkages to worldwide markets?
- The role of government - how intrusive it is in terms of spending, taxation and regulations?
- Maturity of financial markets - are the banking systems and stock markets developed and efficient?

- Quality of infrastructure - do adequate transportation, communications and power systems exist?
- Quality of technology - how developed are basic and applied sciences?
- Quality of business management - do businesses have the ability to react to new opportunities creatively and flexibly?
- Labour market flexibility - does government restrict labour flexibility and what is the state of industrial relations?
- Quality of the judicial and political institutions - is the legal system efficient, are contracts enforced and are property rights secure?

South Africa was ranked 42nd out of 53 countries in the 1998 Global Competitiveness Report. Three African countries featured in the report, Egypt was rated the 38th most competitive economy and South Africa's neighbour, Zimbabwe 51st. (World Economic Forum, 1998) Furthermore, research undertaken (as cited by Viljoen, 1995) with regard to the competitiveness of South Africa by SACOB (1991); Mayer *et al* (1992); The World Competitiveness Report (1997, 1998) and Monitor (1995) has indicated that the manufacturing sector in particular is not internationally competitive.

Most trade theories approach trade from a national perspective. Regardless of the advantages that a country may gain by trading, international trade ordinarily will not begin unless companies within the country have competitive advantage that will enable them to be viable traders. Further, these companies must perceive that there are opportunities for exporting and importing. Because companies have limited resources, they must decide whether to exploit those resources domestically or internationally. Only if they perceive that

the international opportunities might be greater than the domestic ones will they divert their resources to the foreign sector. Michael E. Porter (1990), a Harvard Business School professor and founder of the cluster approach to competitiveness, has developed a diamond of national advantage to illustrate how companies can be globally competitive. He is of the opinion that nations are internationally competitive in certain industries or in particular segments of industries. With the trend towards a global economy, where comparative advantage arises from ideas, product innovation and technology, the classical competitive advantage theory does not work according to Porter. Sustainable competitive advantage over time demands that companies consistently move up the hierarchy, which may begin with factor cost, followed by economies of scale, moving on to proprietary process technology.

2.4.2 Porters' Diamond of Competitiveness

Michael Porter (1990) in his book - The Competitive Advantage of Nations proposed a model that provides conditions that have to be met for a firm to be internationally competitive and successful. Ten nations - Denmark, Germany, Italy, Japan, Korea, Singapore, Sweden, Switzerland, United Kingdom, and the United States of America - have been studied over a period of four years. This model focuses on four primary conditions, which he arranged in a diamond-shaped diagram. (Figure 2.1)

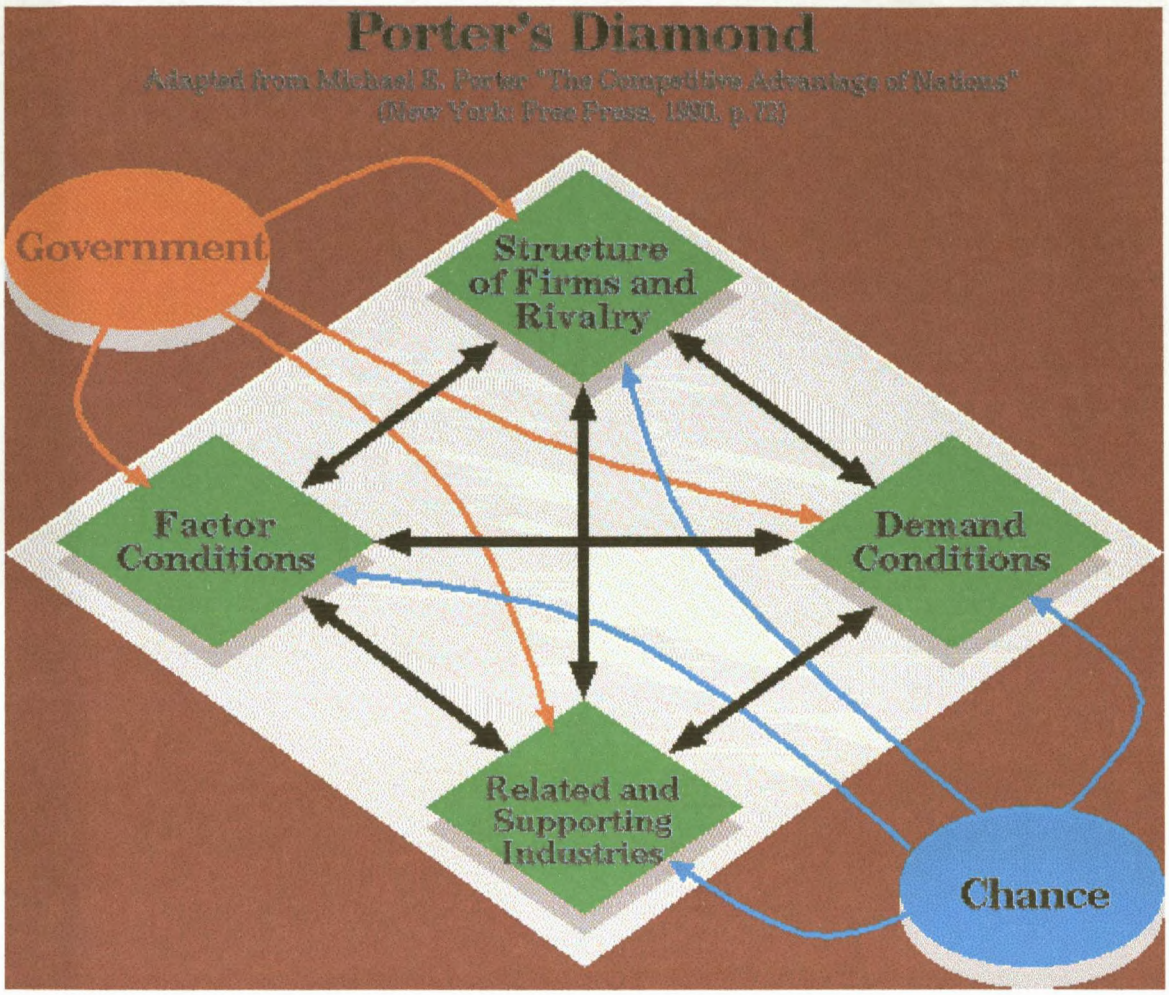


Figure 2.1 Porter's Diamond

Source: Antweiler (1998)

These four key elements to international entrepreneurial success are: (Antweiler, 1998)

1. Factor Conditions

Factor conditions relate to primary inputs, that is, the basic factors of production such as land, labour and capital, which is a necessary condition to compete in an industry.

2. Demand Conditions

Focussing on different consumer preferences can develop a competitive industry, as it is the

effect of consumer demand that will contribute to competitive effectiveness. Consumer demand drives innovation and the development of new products.

3. Related and Supporting Industries (the importance of clustering)

The presence or absence in the nation of supplier industries and other related industries that are internationally competitive. Competitive advantage is derived from the ability to exchange information and transfer technology between supporting industries.

4. Structure of Firms and Rivalry

The conditions in the nation governing how companies are created, organized and managed as well as the nature of domestic rivalry. Domestic rivalry is seen as an impetus for competitiveness, as it creates pressure for industries to be innovative.

In Porter's diamond of competitiveness, governments can influence all four of Porter's determinants through a variety of actions such as: subsidies to firms; tax codes as applicable to firms; regulation and deregulation of capital markets and foreign exchange control; education policies that effect the skill level of workers; establishment of technical standards and product standards; the governments' purchase of goods and services; and antitrust regulation.

Moreover, Porter has emphasised the role of chance in the model. Random events can either benefit or harm a firm's competitive position. Such events are: major technological breakthroughs or inventions; political decisions by foreign governments; acts of war and destruction; dramatic shifts in exchange rates; sudden price shocks affecting input goods; and sudden surges or drops in world demand or sudden shifts in consumer preferences

According to Antweiler (1998) Porter's model has been criticised by Rugman (1991), Dunning (1993), Rugman and D'Cruz (1993) and Bellack and Weiss (1993) on the following points:

1. The model focuses too strongly on developed economies.
2. The government's role can be both positive and negative. Even well-intentioned government actions can occasionally fail by cushioning domestic industries and making them less competitive internationally.
3. Chance is difficult to predict. Situations can change very quickly and unexpectedly.
4. According to Porter, firms, not nations, compete in international markets. By focusing on national comparative advantage this must be understood on a firm level rather than a country level.
5. Porter argues that only outward-foreign direct investments are valuable in creating competitive advantage, and inbound-foreign direct investments do not increase domestic competition significantly. This is due to domestic firms lacking the capability to defend their own markets and face a process of market-share erosion and decline. However, there seems to be little empirical evidence to support this claim.
6. Porter contends that reliance on natural resources alone is insufficient. Canada is an example that doesn't fit this description, as is apparent by the success of Canadian Multinational Enterprises like Alcan and Notando.
7. The Porter model also does not adequately address the role of Multinational Enterprises. There seems to be ample evidence that the diamond is influenced by factors outside the home country.
8. Porter underestimates the significance of the globalisation of production and markets

for the competitive advantage of nations.

Despite the shortcomings prevalent in the Porter approach, the approach has gained global recognition in terms of the application of clusters to improve competitiveness and provides the theoretical context in which the clustering concept has emerged.

2.4.3 The South African Diamond of Competitiveness

The applicability of Porter's Diamond of Competitiveness to the South African situation will be discussed according to Kotze and Kotze (1997).

1. Factor Conditions

Although South Africa disposes of strong basic factors (minerals, climate, pool of relatively low cost labour), it is not efficiently utilised. Limited upgrading and specialisation of basic factors occur and geographical distance from major markets and historical inland economic development has resulted in high transport cost.

2. Demand Conditions

A significant number of domestic customers in South Africa is unsophisticated and price sensitive. Demand lags, rather than leads international demand in most products. Furthermore, low economic growth committed to slow growth in domestic purchasing power.

3. Related and Supporting Industries

In South Africa important supporting industries are poorly developed (machinery, training and education) and suppliers often pass price, service and quality disadvantages. Conflicting relationships, rather than "mutual destiny", are common in South African clusters

4. Firms Strategy, Structure and Rivalry

Domestic market focus leads to lowest cost strategies and limited factor upgrading and specialisation. Conglomerates dominate the South African market and low levels of domestic rivalry exist. South Africa experienced limited exposure to global competition and competes on basic factors (low energy cost, natural resources and relatively cheap labour).

2.4.4 Manufacturing and competitiveness

The manufacturing sector in South Africa is the largest contributor (29%) to the country's Gross Domestic Product, (CSS, 1993) with the greatest potential to generate employment opportunities and enhance national economic growth. (Viljoen, 1995; Mbendi Information Services, 1998) South Africa, in terms of manufacturing competitiveness, has been characterised as being highly ineffective and inefficient. (Joffe *et al*, 1995)

The strategic power of manufacturing in supporting business strategy and creating competitive advantage has been an important theme in the literature on manufacturing management since the 1960s. (Clark, 1993) In 1969 Skinner in a seminal article, stressed the importance of manufacturing strategy as the missing link between manufacturing and business strategy. (Skinner, 1969) According to Swink and Way (1994), since the

emergence of this article, there has been a multitude of views and approaches put forward by various researchers regarding the content of manufacturing strategy. Work by Skinner, Hayes, Abernathy, Wheelwright and Schmenner, among others, showed that linking major, long-term decisions in manufacturing to business strategy could transform manufacturing from a millstone to a competitive weapon. (Swink and Way, 1994) In the framework developed by Skinner and his colleagues, decisions in manufacturing play a critical, strategic role in business and provide capabilities critical to the business's competitive success. This perspective on manufacturing is based on six central propositions:

- There are many ways to compete. Even within the same industry, firms may choose any one of a number of dimensions on which to differentiate them;
- Firms cannot be all things to all people. Firms that try to do everything exceptionally well and fail to develop competitive priorities will end up second - best compared to those firms, which concentrate their efforts;
- There are trade-offs in manufacturing decisions regarding structure and infrastructure. In effect, "you can't have it both ways". A manufacturing operation confronts limits on its ability to perform in any specific dimension;
- Manufacturing strategy is defined by the pattern of decisions across many categories of structure and infrastructure. Manufacturing strategy is not limited to a few key decisions about technology, capacity, or other dimensions of the manufacturing system. It is defined by the total pattern of decisions across the full range of the manufacturing system;
- A manufacturing strategy's success is determined by the coherence of the pattern across decision categories, and by the match between the strategy, other functions, and the overall business. The pattern developed must also match the requirements of the

business strategy and the requirements and opportunities in other functions within the business;

- Over the long term, a manufacturing strategy succeeds as its guides the business in building capabilities essential to achieve the firm's chosen competitive advantage. Manufacturing must proactively build capabilities that create advantage in the market place for the firm.

The need for ongoing development in industrial practices has been experienced as a result of three basic trends: Firstly globalisation of competition leads to increased pressure on national industries, challenging their ability to change their strategies and practices. Secondly existing technological and organisational practices enhance the possibilities for flexible and cost-efficient production of high quality products. The willingness and ability to adopt such practices are of vital importance for national competitiveness. Lastly emerging social and environmental demands cause the traditional technological and organisational modes to become increasingly obsolete. (Kim and Lee, 1993)

A cornerstone of wealth creation in any country is international trade. It is vital that countries endeavour to use their factors of production more effectively and efficiently than other competing countries, in order to ensure that their products are internationally competitive and that their products will be in demand, thereby ensuring the creation of wealth. (Viljoen, 1995) The creation of wealth through, *inter alia*, international competitiveness is critical for the future success of South Africa at this stage of the country's development. (Viljoen, 1995) The manufacturing sector has a major role to play in ensuring that its factors of production are effectively and efficiently employed to assist in

the creation of wealth, which will be to the advantage of the sector and the inhabitants of South Africa as a whole. (Viljoen, 1995) The manufacturing sector faces many challenges within international markets and it is critical that this sector takes the necessary actions to ensure that it is internationally competitive in the future.

The comparison of the Porter approach to traditional paradigms used in manufacturing, emphasised important ramifications with regard to economic strategies in the manufacturing sector. In order to ensure sound economic development as well as competitiveness, four key elements have emerged to achieve this. (Peart *et al*, 1998) Firstly, clusters determine regional competitiveness – one of the main contributors to economic development is the formation of industrial clusters. Secondly, economic foundations provide the factor inputs clusters require for success – a requirement for clusters to function well is the existence of an economic infrastructure that offers support in terms of human, technology and financial resources. Thirdly, economic development strategy must be driven by public – private partnerships: effective collaboration between government and the private sector is critical to the promotion of a healthy economy. Lastly, global market focus: it is important to establish a presence of products and services in strategic world markets. The impact of clusters on competitiveness will be discussed in the following sector.

2.4.5 Clusters and competitiveness

Clusters dominate today's economic map of the world: clusters are critical masses of unusual competitive success in particular fields. (Porter, 1998) Clusters are geographic concentrations of interconnected companies and institutions in a particular field. (Porter,

1998) Clusters encompass an array of linked industries and other entities important to competition. Poor countries lack well-developed clusters; they compete in the world market with cheap labour and natural resources. To move beyond this stage, the development of well-functioning clusters is essential. (Porter, 1998)

Clusters are not unique, however, they are highly typical – and therein lies a paradox: the enduring competitive advantages in a global economy lie increasingly in local things – knowledge, relationships, motivation – that distant rivals cannot match. (Porter, 1998) In a global economy – which boasts rapid transportation, high-speed communication and accessible markets - one would expect location to diminish in importance. But the opposite is true. The enduring competitive advantages in a global economy are often heavily local. Untangling the paradox of location in a global economy reveals a number of key insights about how companies continually create competitive advantage. What happens inside companies is important, but clusters reveal that the immediate business environment outside companies plays a vital role as well. Clusters affect competitiveness within countries as well as across national borders. Therefore, they lead to new agendas for all business executives – not just those who compete globally.

Clusters affect competition in three broad ways: (Porter, 1998) Firstly, clusters and productivity: Being part of a cluster allows companies to operate more productively in sourcing inputs, accessing information, technology, and needed institutions, co-ordinating with related companies, and measuring and motivating improvement. Secondly, clusters and innovation: In addition to enhancing productivity, clusters play a vital role in a company's ongoing ability to innovate. Some of the same characteristics that enhance current

productivity have an even more dramatic effect on innovation and productivity growth. Thirdly, clusters and new business formation: The formation of new businesses within a cluster is part of a positive feedback loop. A cluster amplifies all the benefits - it increases the collective pool of competitive resources, which benefits all the cluster's members. The net result is that companies in the cluster advance relative to rivals at other locations.

Clusters reveal the mutual dependence and collective responsibility of all role players for creating the necessary conditions for productive competition.

2.5 THE APPLICATION OF THE CLUSTER APPROACH

It is important at this stage to distinguish between clusters, networking and linkages. Economic analysis of enterprise growth and development, which typically examines firms' internal behaviour and participation in various types of markets, recognises the importance of firms' interactions with other actors in their environment. These interactions often occur within geographically bounded clusters of enterprises and entrepreneurial networks. A cluster is a group of firms concentrated in one geographic location and working in the same sector. (IDS, 1997) A network is a collection of firms working in co-operation, though not necessarily in the same place. (IDS, 1997) It essentially involves the sharing of information, the sharing of ideas for collective innovation, collaborative marketing and a variety of other collective activities. It is similar to clustering activity but with much looser linkages and the networked firms are often geographically dispersed. (Small Business Project, 1999) The competitive gains are also less than those achieved through clustering. Only further research will allow networking and clustering to be better defined and characterised. (Small Business

Project, 1999) At the basis of the cluster concept is the establishment of cooperative linkages between firms, their raw materials suppliers, equipment suppliers, subcontractors, customers and service providers. (Colleye and Dutz, 1996) Linkages take on either a vertical or horizontal nature. Horizontal linkages across small firms will reduce input costs, increase productive capacity and enhance the overall competitiveness of the sector. Vertical linkages between large manufacturing organisations and small manufacturing organisations, result in collective efficiency. It is intended that the wider scale implementation of business linkages will contribute to the formation of clusters and thereby regional competitiveness.

According to the *South African Cluster Programme* of the South African Department of Trade and Industry (1997) clusters are made up of four integrated elements or spheres. (Figure 2.2) The firms at the core of the cluster are an array of specialist businesses. Within a clothing cluster, clothing manufacturers are the core of the cluster. The second sphere includes financial and legal service providers as well as suppliers, equipment manufacturers and servicing. Textile suppliers as well as suppliers of trim and sewing machines are included in this sphere. The third sphere includes educational institutions, industry training organisations and trade associations. The Clothing Federation and its training organisation are represented in this sphere. Hard Infrastructure (fourth sphere) is closely integrated into other elements of the cluster.

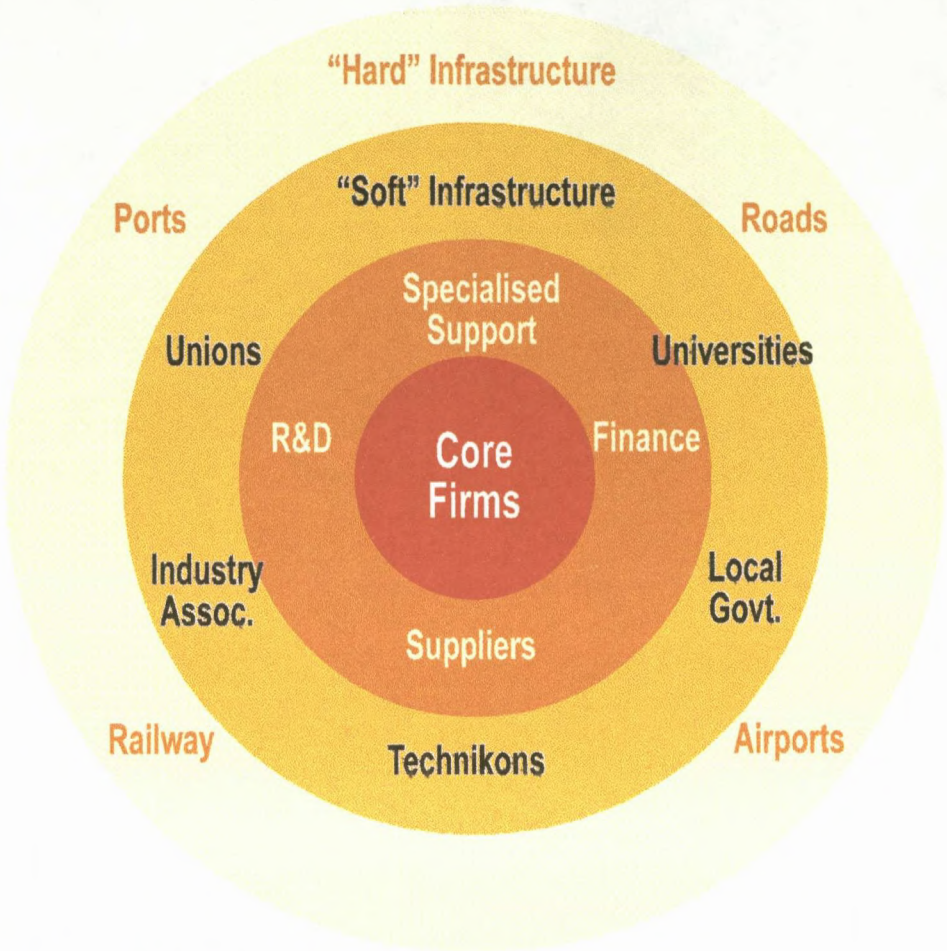


Figure 2.2 Clusters – four integrated elements

Source: Department of Trade and Industry (1997)

2.6 INTERNATIONAL EXPERIENCE OF CLUSTERS

In many countries local small enterprises have been evolving together to produce and sell a range of competitive products. (Lalkaka, 1997; IDS, 1997) Such collective efforts have been taking place over decades, and their value in the new world trade-technology order is now better recognised. (Lalkaka, 1997)

Interest in clusters in small, medium and micro enterprises was fuelled initially by the experience of a number of successful regions - primarily in Europe, but also in North America and Japan - in which rapid growth of small, medium and micro enterprises based industries, was associated with the concentration of firms in particular locales. These clusters succeeded in expanding production, often into international markets and in developing highly desegregated, but linked, production systems. Perhaps most important, they evidenced a capacity to upgrade production and remain competitive by combining rapid technological innovation with superior product quality and rapid responses to changes in market conditions. (Colleye and Dutz, 1996)

A recent study by DRI/McGraw Hill identified 350 clusters in the United States that between them accounted for 57% of total employment, 62% of total output, but 78% of total exports. (Colleye and Dutz, 1996) Silicon Valley, south of San Francisco has been transformed over four decades from apricot and walnut orchards to the pre-eminent high technology centre in the world. (Colleye and Dutz, 1996)

Among the most effective, have been the clusters in Italy which have been widely regarded as a model of how high wage manufacturing economies can compete and be successful despite world-wide migration of production to low wage economies. (Colleye and Dutz, 1996) These districts - Emilia Romagna, Tuscany and Veneto compete not on price but on the basis of quality, innovation, specialised labour and entrepreneurship. Moreover, widespread inter firm co-operation has enabled the district's myriad small firms to garner significant economies of scale in areas such as market research and technology. Italy is well known for tiles; 60 percent of all tiles traded internationally come from 150 tile

manufacturers in Sassuolo. Nearby is the town of Capri with 2500 apparel producers, possibly the densest clustering of apparel manufacturers to be found anywhere in the world. Modena is famous for racing cars (Ferrari, Masserati and Lamborghini) - the sports car capital of the world. The region of Emilia - Romagna accounts for 10 percent of Italy's exports and 4 percent of imports. (And now it is time to pound power, 1996) Chihuahua is at the forefront of cluster-based economic development in Mexico, which began in 1991. Its statewide development strategy, termed "Chihuahua Century XXI," is illustrative of the potential of cluster-based processes to strengthen key parts of an industry's value-added chain by stimulating the continuous upgrading that enables a region to attract more and higher-paid employment. Chihuahua has sought to strengthen incipient clusters by providing information on opportunities and developing capabilities that attract investments to weaker areas of existing value-added chains. Clusters seem to have had a positive impact on Chihuahua's economy. Permanent employment generation has been positive and the State's economy did not suffer as acutely as did those of other states as a consequence of the 1995 fiscal crisis. (Colleye and Dutz, 1996)

The footwear cluster in Brazil's Sinos Valley has grown over the span of three decades from a cluster of small shoemakers producing mainly for regional markets into a major player in both national and international markets. In Ceara State, Brazil, the need to create employment in a drought-prone region by producing wooden wheelbarrows has led to a large woodworking industry for export furniture. Through a jointly organised effort of SEBRAE, the Brazilian agency that promotes small and medium enterprises and the state government, demand for school furniture was channelled to a group of small firms in the town of Sao Joan de Avuarn. The impact of the programme on the town was startling. In

five years, starting with four sawmills, a vibrant cluster has been developed with 42 mills, 350 workers and 1000 people indirectly employed. (Lalkaka, 1997; Colleye and Dutz, 1996) Importantly, the customer base has been diversified over time, such that more than 70 percent of output is presently consumed by the private sector.

International experience has illustrated that the clustering of small companies has proved extremely beneficial in a number of areas: (The Real Service Centre, 1998)

- Economies of scale: The sharing of costs can be beneficial, enabling joint financing of activities such as marketing, Research & Development, training, or the development of joint purchasing policies;
- Information: Information is of vital importance in the marketplace, and the effective management and distribution of information will aid competitive advantage;
- Innovation - collective development of ideas: Collaboration can enable the development of ideas/products that would not have been produced individually, due to the combination of relevant skills, complementary technology or joint financing. Innovation is a key to small enterprise growth, with the development of new products and the opening of new markets;
- Sharing of facilities: There is valuable economy of scale benefits to be gained from the sharing of facilities, such as equipment, administrative staff etc;
- Single source servicing: Co-operation between companies can enable the establishment of a "collective identity " providing a wider range of services than could be achieved individually;
- Increased productive capacity: Clusters of small enterprises have the capacity to take onboard larger contracts that they would have been able to individually. This provides

the opportunity for expansion of individual company activities and workload, and increases the potential for contracts through increased opportunity for tender;

- Interest groups: Collective strength allows small enterprises to have a greater voice in each specific industry area, pushing local/regional policy development;
- Specialisation - development of areas of expertise: Co-operation between companies providing similar services, through collaborative networks, can increase their areas of specialisation, reducing the level of local competition, and developing niche/specialists products, either individually, or as part of a cluster wide range of products.

Key conditions for success: (And now it is time to pound power, 1996)

Experience with network development in countries as varied as Denmark, Italy, Germany, Poland, Argentina and the USA, indicates that the following factors contribute to successful development of networks:

1. Endogenous development

The determination to work locally and the building the competence of existing firms are important factors to the successful development of networks.

2. Belief in incremental change

Instead of seeking the "big breakthrough" (the new large firm or the world class invention) progress is defined as a large number of small steps that move entire industries up the value added curve.

3. Market led development services

A solid understanding of markets is the key to manufacturing success. This understanding should, in reversal of conventional wisdom, take precedence over technology transfer.

4. Information

Networks thrive on information. A continuous flow of information among members and between members and other market actors are critical for survival.

5. New roles

People and organisations that are in regular contact with businesses such as service providers and associations have learned to function as " brokers " spotting networks needs and opportunities and bringing firms together.

6. Bottom up planning

The private sector leads the network development and associations and other representative organisations are brought into project planning at the earliest stages. The appropriate public sector role is to facilitate.

7. Sectoral focus

The emphasis is placed on co-operation between firms in the same sector or in related sectors. They are often also located in the same geographic area, which eases communication.

8. An eye on the global economy

Business and government learn that the real competition is not down the street or in the next town, it is coming from other countries and continents.

Clusters and network promotion in developing regions and countries are most effective when premised on "The Triple C Approach". (Humphey and Schmitz, 1995) Its message is that policies and projects aimed at promoting development and growth of small firms are most effective, firstly, when they are driven by the need of the customer. This forces firms to tackle their key problems of competitiveness. Successful interventions are those, which help firms to learn about their customers and provide the assistance, required to meet their needs. Policies and projects are most effective, secondly, when they are directed at groups of enterprises. This means targeting support to business associations or other enterprise groupings. Where they do not already exist, it means linking support to the formation of such groups. This collective approach has two advantages: it has lower transaction costs than assistance to individual enterprises, and it helps bring about mutual learning. Policies and projects are most effective, thirdly, when these characteristics, in turn, established the conditions for the third C: the cumulative capacity for networks and clusters to upgrade and become less dependent on external support. Being competitive is not a state; it is a process of remaining competitive through improvement. Policy interventions at the micro level should aim to develop the capability of groups of firms to use inter-firm linkages and contact with the market to improve themselves, thereby reducing the need for continued public support. (Humphey and Schmitz, 1995)

International experience by small businesses shows that clusters and networks in developing countries that follow these broad policy guidelines are able to achieve this cumulative ability. Government assistance plays a vital role in this process. When successful, assistance becomes gradually unnecessary, permitting government to shift to new challenges.

2.7 SOUTH AFRICAN EXPERIENCE OF CLUSTERING

As part of the EAGER/Trade Regimes and Growth component the competitiveness of textiles and clothing manufacturing in South Africa was investigated. One hundred and five clothing and textiles firms, representing a diversity of sizes, product types, locations, plant modernity, labour relations, retail channels, and dependence on exports and imports were interviewed. The study revealed that there are many routes to success. For large firms, success depends on market segment and factory management. Success in small firms depends upon knowledge of industry trends and investment. The data revealed that worker and manager education and upgrading skills levels are central to improving company performance. Furthermore, access to working capital is critically important, particularly for growing small firms. With regard to technology development, researchers have found little evidence in South Africa of collaborative public-private development of applied technologies, to further the competitiveness of textiles and clothing manufacturing. Clear, medium-term policy parameters should be established to minimize uncertainty about macro-, labour, and sectoral policy environments, which complicate firms' strategic planning. It is also in managements' interest to collaborate with its labour force to promote multi-skilled workers, improve productivity and enhance competitiveness. The study revealed that there is considerable optimism in the industry that collaborative efforts are beginning to yield a

productive business export strategy. This optimism in respect of collaborative efforts emphasized the need for further research to explore the interest of small manufacturers towards clustering.

The US Agency for International Development-funded BEES project commissioned a two - month exploratory study of horizontal linkages among twelve small businesses in Gauteng, during April and May of 1996. (Colleye and Dutz, 1996) Twelve small business owners representing various types of businesses were interviewed for the project. Although exploratory in nature, the study yielded a number of potentially useful findings. Lack of understanding of the cluster concept was but one of a number of obstacles to co-operation identified by the study. Others included the lack of trust, concerns about partners' performers, reservations about third-party involvement and intimations of poor economic health. Concern was expressed that partners in collaborative efforts might fail to respect the confidentiality of business-related information or attempt to steal clients.

Well-established firms worried that some partners' poor performance or failure to commit fully to a customer's business might damage their image. The motives of third parties involved in co-operation were suspect and some feared that such individuals or organisations intended to "take over " the firms' operations at some point. Firms that pursued co-operation relationships with other firms were perceived to be struggling. The following benefits were acknowledged: The ability to secure and fulfil larger orders, the provision of a forum for sharing ideas with others in the same industry, greater independence afforded by smaller firm's ability to satisfy large contracts on their own and the facility to enhance market visibility at minimum cost by sharing resources.

Overall, the study demonstrated that co-operation among small firms was desirable and held considerable economic promise for participants. To initiate such co-operation, it would be necessary to clearly spell out to all parties the anticipated benefits and individual responsibilities and obligations and to secure a formal agreement to the latter by all involved. The BEES project implies the need for further research in clustering in South Africa. There is a need to confirm whether the constraints to clustering identified in the BEES study are valid to the clothing industry in particular and to determine the awareness of and interest of small manufacturers in clustering.

Small business clusters are not a vision or a theory. They are an everyday reality in the most prosperous areas of industrial countries. Evidence as reviewed in the literature is mounting that small firms can realise substantial competitive advantages from clustering and networking, a circumstance that has considerable relevance for policy makers in developing regions and countries. (Humphey and Schmitz, 1995) However, clustering does not guarantee success. Ongoing research is seeking to explain why some clusters do well and others stagnate, why within clusters there are segments which grow and others that just survive: and how clusters respond to the challenges of liberalisation and globalisation. (Humphey and Schmitz, 1995)

2.8 CONCLUSION

In this chapter the importance of the small, medium and micro enterprise sector and specifically the manufacturing sector as a contributor to job creation has been emphasised.

Small, medium and micro enterprises represent an important way to address the challenges of job creation, economic growth and equity in South Africa. Throughout the world small business is playing a critical role in absorbing labour, opening up new markets and generally expanding economies. The ability of the business sector in South Africa to absorb job seekers is extremely limited and renewed emphasis will have to be placed on the growth of the small business sector. However, most small firms are experiencing constraints concerning financing, technology, access to markets, legal aspects and many more. On their own, small firms find it hard to overcome these barriers.

The cluster methodology has been explored as a method to enhance the competitiveness of small firms. There is mounting evidence that clustering helps small firm to compete and grow. By working together, firms can gain the benefits of collective efficiency, enabling them to challenge larger competitors and break into national and global markets. Many of the most impressive examples are in Italy and Brazil. International experience of clusters has illustrated that small firms can reach levels of collective competitive advantage which as individual firms would not have been possible.

How to foster small-scale local enterprise is a concern for policy makers world-wide. (IDS, 1997) What has changed in the 1990s is that economies are more open than in the past and international competition much fiercer. This makes the task both more difficult, and more urgent. The next chapter will review the South African clothing industry it's characteristics; and the application of the cluster approach to the clothing industry.

CHAPTER 3

THE CLOTHING INDUSTRY

3.1 INTRODUCTION

The Clothing Industry is presently going through a particularly difficult period in its history and faces major challenges to ensure its future success. (Theron, 1998) With the advent of a democratic government, the South African economy has become part of the global village. As much as South Africa is undergoing internal changes to its own economic structure, so is the world and the way in which international trade is transacted. Competing in a world market has changed important business requirements and increased competition has become increasingly important. Consequently, the pressures on the industry to adapt have compounded. This chapter has focused on: An overview of the global clothing industry as well as the South African clothing industry and application of the cluster approach on the clothing industry.

3.2 AN OVERVIEW OF THE GLOBAL CLOTHING INDUSTRY

Trade in textiles and clothing products has long been a particularly sensitive issue in Europe and other industrial countries, such as the United States, and this led to the situation where textiles and clothing trade was removed from normal GATT rules in 1970 and thereafter regulated by the Multi-Fibre Arrangement (MFA). The Multi-Fibre Arrangement allowed for

quantitative restrictions to be introduced by importing countries. (Brittan, 1996) The re-integration of textiles and clothing in GATT was agreed in the World Trade Organization (WTO) in 1994. At the heart of this agreement is a mechanism, which gradually removes restrictions over four integration phases with the last quotas being eliminated in 2005. The second phase of the Agreement on Textiles and Clothing came into force on January 1st, 1998. This phase requires that 17% of certain products be integrated and the third phase between 2002 and 2004 plans for an 18% integration. On 1st January 2004, the remaining 49% are to be integrated, thereby putting an end to all quotas. (Turkish Clothing Industry, 1999)

However, a controversy has arisen between developing countries, which are exporters, and developed countries, which are importers in relation to the Agreement on Textile and Clothing application during the first phase. Demands are being discussed for an Agreement on Textile and Clothing review of the subject with suitable revisions to be made in the light of new developments.

There are a lot of similarities between the South African clothing industry today and their British counterparts of the late 1970's. Strong foreign competition, weak domestic demand, high labour rates and prohibitive capital equipment costs all served to eliminate large sections of a once dominant industry. (Majewski, 1998) A new breed of clothing industry has emerged in Britain. Technology-driven niche producers are thriving, while commodity manufacturers are merely distant memories. America, during the same period, was quick to shed its industry, with the consumer benefiting from cheap imports and investors migrating to greener pastures. America, however, lacked the social systems to cope with the high

resultant unemployment, and started to take a fresh look at the industry as a source of jobs. The result there has been a resurgence of a very competitive industry, less focused on high technology niches, but more focused on the overall management of the textile pipeline. Countries such as the United States of America and Japan are perfect examples of confident and assertive marketers, while Italy is a trendsetter in terms of finesse, style and design. When it comes to research and development in the clothing and textile industry, the East is very much on the cutting edge. (Borland, 1999)

At the 1998 International Apparel Federation Convention the following major trends in the clothing industry were identified: (Richards, 1998)

- Globalization is a continuing theme. The clothing/textile supply pipeline will continue to condense in terms of time, placing greater demands on participants who wish to thrive.
- Mass customization is a powerful response in first world countries to the low cost mass production techniques of third world countries. Mass customization is the drive towards allowing customers to express their individuality through ordering and purchasing of garments to their own fit and their own styling at an acceptable price.
- In a world where values/prices are becoming more and more comparable, retailers and manufacturers distinguish themselves from their competitors through service and technology. Being in stock in the right place at the right time is of paramount importance.
- The strategic manufacturing/retail partnership continues to grow in importance.
- Menswear is revolutionizing. The old dress rules no longer apply.
- Value for time is a new concept that is emerging. This need is being catered for through the Internet.

The shape and dynamics of international textile and clothing production and trade will have changed significantly by 2005. Countries and individual clothing industries are anticipating, preparing for, and beginning to adjust to the anticipated market and technological changes being felt all over the globe. These changes hold important implications for the competitiveness of firms everywhere and for the management and policy strategies pursued by firms and the governments that regulate their markets. This defines the set of challenges facing South African firms today. (Salinger *et al*, 1998)

3.3 AN OVERVIEW OF THE SOUTH AFRICAN CLOTHING INDUSTRY

The year 1998 was a year of financial shocks in which South Africa teetered on the economic knife-edge, constantly threatened by crashing international confidence in emerging markets, speculative pressure on the rand, high interest rates, substantially sliding commodity prices and shrinking export volumes, in line with the weaker world demand. (Broughton, 1999) The clothing industry is enduring what many perceive as the worst trading climate in the last fifty years. (Broughton, 1999) Liquidations, closures, mergers and massive restructuring in the clothing industry are the order of the day. The majority of clothing manufacturers are struggling for survival and in need of a future direction.

The industry is operating within the framework of the seven-year tariff phase-down programme introduced by the government in 1995. The government's strategic vision for the industry is as follows: (Theron, 1998)

- A minimisation of the loss of job opportunities in the textile industry;

- The growth and net creation of jobs in the clothing sector, both formal and informal;
- Successful, in general, export-orientated clothing and textile industries;
- The acceptance by the industries of a greater responsibility for their own future by lessening their dependence on government by improving productivity through human resource development, work organisation and upgraded technology;
- A conscious move out of the lower end of the market with simultaneous efforts to retain these activities within the region;
- A competitive environment where everyone gains, including the consumer, by making basic goods more affordable.

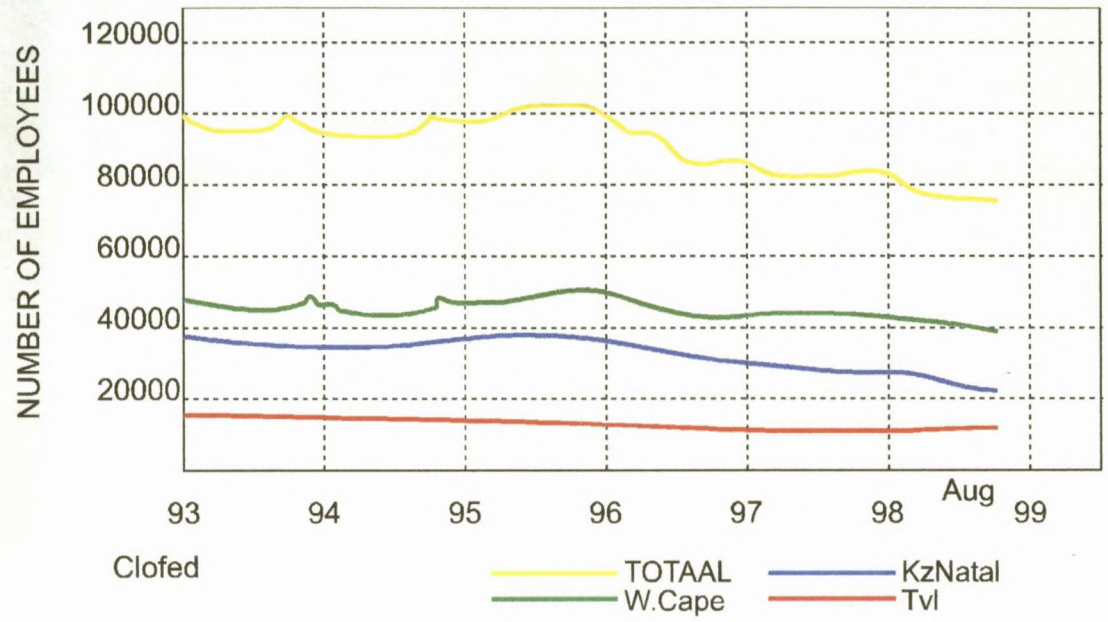
As one of the largest employers in the manufacturing sector, the clothing industry is vital to South Africa's future. It is apparent that the long-term job-creating growth in terms of the government's vision will have to be driven by the labour intensive clothing industry, however, the required formal job creating growth in the labour-intensive clothing sector is not happening. (Theron, 1998)

3.3.1 Employment Decline

The decline in employment continues. According to the Central Statistical Services, total employment has fallen from 144 200 in November 1997 to 138 000 in March 1998 (the most recent figures available) – a net loss of 6200 jobs. (Theron, 1998) As presented in Figure 3.1 employment in the bargaining council area of Clofed has fallen from 83 700 in November 1997 to 79 500 in March 1998 and to 74 400 in August 1998 – a net loss of

9300 jobs. This continued decline of tax paying income earners in the most labour intensive section of the manufacturing sector is a cause of concern.

Fig 3.1 South Africa Clothing Industry: Formal employment in bargaining councils

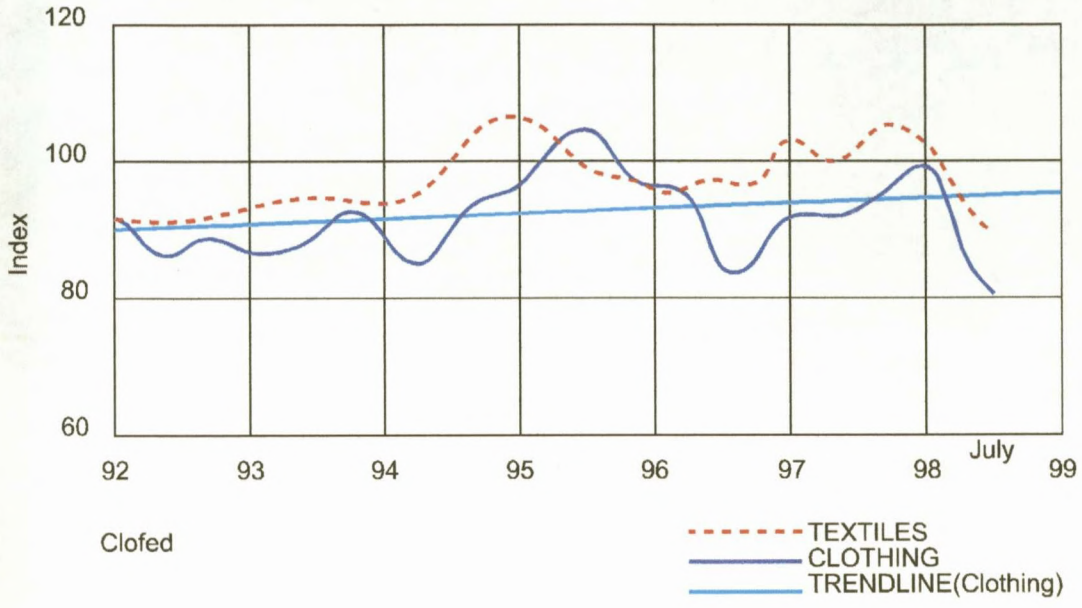


Source: (Theron, 1998)

3.3.2 Clothing Production Volumes

In comparison with 1997, the production volume index has declined in 1998. (Figure 3.2) The difference between local supply and demand is increasingly being made up by imports. This can be attributed to the Duty Credit Certificate Scheme, which is making it easier and more attractive for the industry's customers to import clothing rather than buy locally. The production sales value also declined from R9, 9 billion in 1997 to R9, 3 billion in 1998 (current prices). (Theron, 1998)

Fig 3.2 Clothing production volumes (Deseasonalised, smoothed, constant 1995 prices)

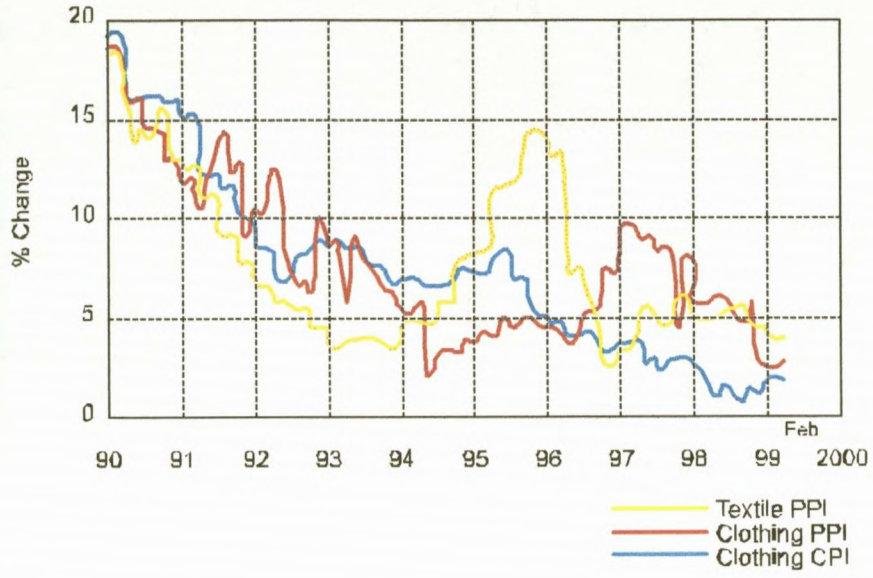


Source: (Theron, 1998)

3.3.3 Clothing Production Price Index

As presented in Figure 3.2, at February 1999, the clothing production price index (PPI) continued to show a declining trend (2,6%) and was lower than the textile PPI (4.0%). Both rates were lower than the overall manufacturing PPI, which was 5,1%. The clothing consumption price index (CPI) was also lower at 1,8% compared to the general CPI of 8,6%. While the consumer benefits from this situation, which is partially the result of weak demand, the clothing manufacturers' margins are under severe and continuous pressure. (Theron, 1999)

Fig 3.3 Production and Consumption Prices



Source: (Theron, 1999)

3.3.4 Imports

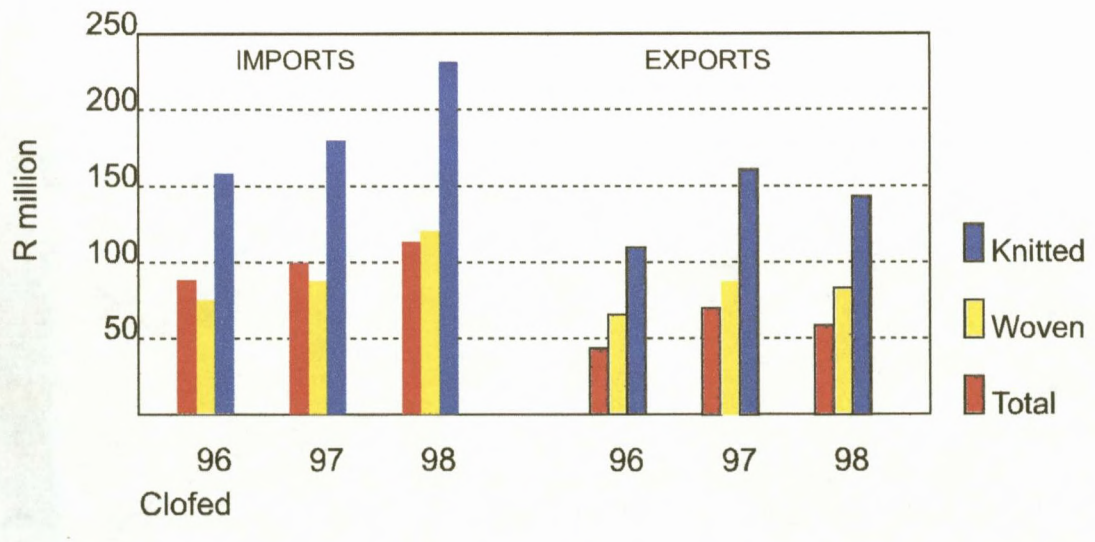
The biggest threat facing the local clothing industry comes from the flood of illegal and smuggled imports that are pouring into South Africa. (Texfed, 1997) Goods are smuggled into the country and are therefore evading duties and VAT payments. Goods are also greatly undervalued to evade the correct payment of duties, or are cleared under fraudulently issued permits. During the period February 1996 to May 1997, Custom and Excise had seized textiles and clothing to the value of R57 million. (Texfed, 1997) In the case of import fraud, the loss of revenue to the government is not the only problem, but continued fraudulent imports will also result in more job losses. A lowering of the import tariffs is likely to lead to increased competition in the market segments for cheaper clothes. The vision recognises the need for South African manufacturers to move up the value-added chain and to release the

lower end of the market.

3.3.5 Exports

In 1996 exports grew by 28%. During 1997, imports grew by 13% and the export performance of the industry reached R 930 million. This resulted in a favourable trade balance for the year. The figures reflect less dependency on the domestic market – exports, as a percentage of total domestic production, have grown from 5% in 1995 to 10% in 1996 and to 15% in 1997. (Theron, 1998) The import and export statistics for the first quarter of 1998 show imports increased whilst exports did not sustain the same level of the previous year.

Fig 3.4 Clothing Imports and Exports Jan-March 96/97/98



Source: (Theron, 1998)

Favourable trade agreements giving preferential market access are a vital aspect of creating an export-friendly environment.

3.3.6 Trade Agreements

The three major trade initiatives have not yet borne fruit. The US Congress has passed a free trade bill, that would offer duty free, quota-free access for Sub-Saharan African exporters to the US market and it is anticipated that its passage through Senate and signing by President Clinton will pose no problems. The US Africa Growth and Opportunity Act had been revived and is again being considered in the Senate and Congress.

A Free Trade Agreement between South Africa and European Union have been finalized which, subject to ratification by South Africa and European Union governments, will possibly be implemented by 1 January 2000. The agreement will confirm that South Africa will phase down its tariffs over the next eight years, while the European Union will phase down its tariffs to zero on 80% of the tariff items over three years, and tariffs on the remaining 20% to zero over six years. (Theron, 1999)

South Africa's rapid progress towards full international acceptance has created new opportunities for strengthening commercial and other bonds with neighbouring and more distant African countries. The Southern African Development Community, which will ultimately be a free trade area, was formed and has as its members South Africa, Mozambique, Botswana, Malawi, Lesotho, Namibia, Swaziland, Angola, Tanzania, Zambia, Zimbabwe and Mauritius. Many of the Southern African Development Community countries

have some advantage in the manufacturing of clothing due to lower wage rates. Of particular concern with regard to the Southern African Development Community arrangement, is that a spate of such arrangements could disrupt trade by providing a channel for illegal imports of cheaply produced clothing from various Asian and Pacific Rim countries.

Favourable outcomes of these trade agreements will certainly give the industry the necessary boost to become a global player and to break away from the vagaries of the domestic market. This emphasizes the need for clothing manufacturers to become more competitive and therefore implicates the need for research to explore how linkages can enhance competitiveness in the clothing industry.

3.3.7 Opportunities and constraints for small, medium and micro enterprises.

Constraints experienced by the formal clothing industry resulted in opportunities for small manufacturers. According to a study done by VL Consulting of the Cape clothing industry, the informal sector grew rapidly in response to a number of factors: Firstly, increasing regulation of the formal sector encouraged by labour laws and other restrictions; Secondly, a rise in entrepreneurialism in the informal sector and retrenchments in the formal clothing sector; Thirdly, a need for flexibility in working time by working mothers; Fourthly, higher labour and production costs crippling larger companies and forcing closure of factories and lastly, complete labour flexibility, sharply lower wages and costs, no security for workers, no annual leave or sick pay and no income tax. (Hood, 1999)

The Department of Trade and Industry is trying to find a formula that meets both the industry's needs, and the government's political need to provide jobs. The Department of Trade and Industry has admitted that formal industry will be hard pressed to preserve jobs, let alone create them. A separate sectoral focus on small, medium and micro enterprises, however, is the strategy that the Department of Trade and Industry hopes will create a thriving feeder industry to the formal sector, and in the process, create jobs and opportunities for both workers leaving the formal sector as well as new entrants.

3.4 APPLICATION OF THE CLUSTER APPROACH TO THE CLOTHING INDUSTRY

The clothing industry is currently overexposed to a single domestic market and is dependent on that market for growth. (Theron, 1998) Export markets provide the avenue to spread risk and achieve long-term growth. Clusters of small manufacturers have the capacity to take onboard larger contracts than that they would have been able to individually. This provides the opportunity for expansion of individual small manufacturing activities and workload, and increases the potential for contracts through increased opportunity. As a collective, small firms in the clothing industry, will have the ability to adapt better to changes in the industry or market patterns. This flexibility helps the participating firms to survive better in global markets than individual firms in the same industry. Small clothing manufacturers will enjoy economies of scale equal to larger forms, gain access to services such as Research and Development and quality control, which might otherwise be unaffordable and will be able to innovate on a grander scale. Co-operation between small manufacturers in the clothing industry can increase their areas of specialisation - reducing the level of competition, and

developing niche/specialists products. Collaboration can also enable the development of ideas/products. Innovation is a key to small enterprise growth, with the development of new products and the opening of export markets.

By sharing costs, ideas and goals, clothing manufacturers could present a unified plan to potential customers. The cluster theory recognizes that all the elements of producing a product are best utilized when found in reasonably close proximity, including support functions like design, labour, electricity and raw materials. By building on the theory of an integrated cluster, instead of an "Every man for himself" approach, a more forceful front can be presented to customers.

3.5 CONCLUSION

In this section of the research project a global clothing industry overview as well as an overview of the South African clothing industry was given. The potential exists for small manufacturers in the clothing industry to enhance their competitiveness by way of applying the cluster approach. However, there is a need, firstly to establish the key constraints to improving competitiveness currently experienced by small manufacturers in the clothing industry. Secondly, to establish the nature of interest and awareness in clustering and thirdly, to establish the nature of constraints to clustering. Finally, we will have to determine what can be done to overcome these constraints.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

Chapter 2 and 3 identified several research issues; this chapter describes the methodology used to provide data to investigate them. An introduction to the research methodology was provided in section 1.7 of chapter 1; this chapter aims to build on that introduction and to provide assurance that appropriate procedures were followed. This chapter is organised around the response data, the collection procedures and the treatment of the data.

4.2 THE DATA

Primary data

The results of responses from experts in small business development, academics, and small business owners as well as representatives of local government formed the primary data.

Secondary data

This was obtained by reviewing:

- Literature on small business management and the cluster concept;
- Case studies of successful clusters in developed as well as developing countries.
- Newspaper reports and business magazine reports on small business development,

clustering and competitiveness.

- Academic Journals
- Internet
- Trade magazine reports on the clothing industry.

4.3 THE CRITERIA GOVERNING THE ADMISSIBILITY OF THE DATA

Only responses from the specified sample, which were experts in the field of small business, were used in stage 1 of the study. Only responses from the specified sample, which were owners of the specific small manufacturers as well as experts in the field of small business, were used in stage 2 of this study.

4.4 THE RESEARCH METHODOLOGY – STAGE 1 (Qualitative study)

The purpose of this stage was to:

- Establish the variables relevant to identify the key problems currently experienced by small manufacturers in the clothing industry.
- Provide the basis for the structuring of the questionnaire in stage two.

4.4.1 The Delphi Technique

The Delphi technique involves the controlled exchange of information between anonymous panelists over a number of rounds, with the average of estimates on the final round, being taken as the group judgement. Olaf Helmer, for the Rand Corporation first developed the Delphi technique in the early 1950s. (Sweigert, 1974) There were two main factors that provided an impetus for the development of "Project Delphi". World War II had recently ended, leaving behind many large complex organizations that required strategic planning to move into the post war years. Also, the cold war was just beginning, filling the American people with a general malaise of fear, uncertainty and distrust. The name of the technique comes from the Greek oracle, Pythia, who forecasted future events from the temple of Apollo at Delphi. A priest would submit questions to the oracle and then interpreted her responses to the citizens.

The Delphi technique was chosen as the research methodology for the first stage of the research based on several factors. Firstly, the problem does not lend itself to precise analytical techniques but can benefit from the subjective judgements of a group of experts. Secondly, the group of experts required to contribute their opinions have no underlying organisational ties and represent a diverse population with respect to background, experience, expertise and location. Thirdly, the Delphi technique represents the most economical and cost effective method of soliciting expert opinion and arriving at group consensus on the issues. Fourthly, all responses are anonymous to other group members. All respondents receive controlled feedback on all answers from the previous round. This anonymity offers a distinct advantage for all respondents; it can offset a domineering

personality, fear of losing face by bringing up original ideas and difficulties in publicly contradicting individuals of higher rank. (Dailey, 1990) Therefore the Delphi technique appears to be the best way of structuring communication among the members of an expert group, which includes attitudes and feelings.

4.4.2 The Questionnaire

The study required the identification of key constraints to improving competitiveness experienced by small manufacturers in the clothing industry. Information was exchanged via facsimile and email. In the context of the objectives of the qualitative study as well as the hypothesis the questionnaire was divided in four sections addressing the following areas:

Problems/Solutions - The purpose of this section was to identify the constraints to competitiveness in the clothing industry and possible solutions to these constraints.

Technology transfer – The purpose of this section was to identify the level of understanding of what contributes to technology transfer.

Management Strategies – The purpose of this section was to identify the level of understanding of what contributes to competitiveness and which strategies are most suitable for small business.

Clustering – The purpose of this section was to identify the current level of understanding of the term as well as to generate ideas on problems with linkages.

A total of 11 open-ended questions were posed. The questionnaires were numbered in sequence so that specific follow-up could be done.

4.4.3 Research Process

The following process was followed:

- The creation of an introduction letter, requesting co-operation: (See Appendix A) The initial letter describing the importance of the study was prepared and sent, and invited the addressee to co-operate.
- The creation of a cover letter: A cover letter was prepared that accompanied the questionnaire. (See Appendix B)
- The identification of the issues and solicitation of responses: (See Appendix C) A questionnaire was prepared and sent, which asked each participant to engage in individual brainstorming in order to generate as many responses as possible for dealing with the questions.
- Response to questionnaire: Each participant listed his/her responses and returned the list to the researcher. No attempt was made to evaluate or justify these responses at that point in time.
- Resolution: (See Appendix D) A formal assessment of the group's opinions of the merits of the responses conducted. A questionnaire was prepared that listed all the responses and asked participants to indicate their level of agreement on a 7-point scale and to rank order the five most important issues. The respondents returned the rating forms and the results were compiled and rank-ordered.

4.4.4 Mailing Schedule

The following mailing schedule was followed:

- The pre-letters were faxed on 6 June 1999.
- On the 13th June 1999 the cover letters and questionnaires were faxed or emailed.
- On the 27th June 1999 reminders were faxed to all respondents. (Appendix F)
- On the 27th July 1999 a telephone follow-up was started to those who had not responded.

4.4.5 Sample Selection

Usually a group of experts is chosen as participants in a Delphi study. The groups of respondents included in this study were perceived to have basic areas of expertise regarding this topic. As a first step in the research process the following response groups, which included academics, professionals in the area of small business development and business owners were selected.

Academics have the ability to make judgements on training and educational competencies and have the knowledge and understanding of current global changes and needs in small business management. The professionals in the field of small business development have another kind of expertise, the basic understanding of what small business development is and its potential and limitations. Among the business owners there is yet another kind of expertise because ultimately the business owner will be the one benefiting from this research.

Each group consisted of 8-12 respondents. Academics and professionals in the area of small business development were selected by judgement sampling. Judgement sampling was selected in respect of expertise being a critical criterion for selecting these respondents. Small business owners were selected by random sampling using the roulette wheel method. Random sampling was selected for the purpose of selecting a sample from the whole population of small clothing manufacturers in Port Elizabeth in such a way that the characteristics of the sample approximates the characteristics of the total population. As a result of the small population of small clothing manufacturers in Port Elizabeth the roulette wheel was used. Each firm was assigned a number in alphabetical order and corresponding numbers were on a roulette wheel. (Appendix E).

4.4.6 Response Rate

The response to the questionnaire was initially slow. After numerous requests 12 out of a total of 26 questionnaires, which represented forty six percent (46%) of the sample were returned. The responses on the rating sheet represented a thirty five percent (35%) response rate. The low response rates can be attributed to the unwillingness of the respondents to cooperate.

4.4.7 Data Analysis

The completed questionnaires were edited and checked for adequacy of completion and inconsistencies. Where necessary respondents were telephoned to rectify missing data. The responses of experts were manually analysed. To identify the pertinent issues for each

question considered by the respondents to be important, the researcher's own judgement was utilised. The five most important responses were ranked in order of importance and the mean level of agreement for each statement was calculated. The manual analysis was undertaken to identify pertinent issues for inclusion in the questionnaire for stage 2.

4.5 RESEARCH METHODOLOGY – STAGE 2 (Quantitative study)

The purpose of this stage was to:

- To determine the range and nature of linkages amongst small manufacturers in the clothing industry in Port Elizabeth;
- To determine the prevailing attitudes towards linkages;
- To determine the constraints to linkages;
- To devise a practical strategy for the implementation of horizontal linkages amongst small manufacturers.

4.5.1 Questionnaire Design

Using the results from stage 1, a structured questionnaire was developed and administered to small manufacturers in the clothing industry in Port Elizabeth as well as experts in small business development.

The questions were close-ended with ordered response options formatted on a five-point Likert scale. All affective characteristics have three attributes: intensity, direction and target. Intensity refers to the degree or strength of the feeling. The direction refers to the positive,

neutral or negative aspect of the feeling. The target identifies the idea or opinion at which the feeling is being directed. (Florida Agricultural Information Retrieval System, 1997) These three attributes can be incorporated into a scale. Semantic scales like the Likert, are used for constructing most instruments used in business research. (Munshi, 1990) This scale is based on a simple summation of an individual's responses to a number of statements, each of which carries the same weight in determining the scale score. The response option consisted of the following five categories: "Strongly agree"; "Agree"; "Neither agree or disagree"; "Disagree"; and "Strongly disagree". Values of 1 to 5 were assigned to each category of the positively worded items and 5 to 1 for each of the negatively worded items. The items that best discriminate between respondents' highest and lowest scores were then finally used in the scale that had been constructed. It has long been recognised that the reliability and the validity of instruments are determined to a large degree by the design and construction of the scales. (Thurstone, 1928) Likert, in his original paper, did not consider the number of alternatives to be an important issue. (Likert, 1932) A traditional five-point ordinal scale which is economical, easy to construct, to complete and to score, appeared to be the most useful. This allowed some discrimination, but not an excessive amount.

Information was exchanged via mail, facsimile or email. A written questionnaire possesses the advantage that it enables the researcher to reach the respondents at a low cost. It also avoids the problem of the interviewer being biased towards or against any respondent. Respondents have more time to give considered answers and can be anonymous. In designing the questionnaire, specific note was taken of the general principles laid down by David S. Walonick (1997) for the design of mail surveys. In accordance to the objectives of the quantitative research as well as the hypothesis the questionnaire was divided in six

sections: Competitiveness, Inter-firm collaboration, Attitudes, The Model, Clustering and Problems/Solutions.

Competitiveness – The purpose of this section was to solicit the level of agreement or disagreement with the constraints to competitiveness as well as possible solutions.

Inter-firm collaboration – The purpose of this section was to determine the current level and nature of inter-firm collaboration relationships in the clothing industry in Port Elizabeth.

Attitudes – The purpose of this section was to determine the attitudes of the respondents towards linkages.

The model – The purpose of this section was to determine the form of inter-firm relationships they are currently engage in and their willingness to consider other forms of relationships.

Clustering – The purpose of this section was to solicit the level of agreement or disagreement concerning the understanding of the term.

Problems/Solutions – The purpose of this section was to solicit levels of agreement or disagreement with problems preventing wide scale implementation of clustering as well as possible solutions.

A total of 23 questions were posed. Questionnaires were numbered in sequence so that specific follow-up could be done.

4.5.2 Research Process

The following process was followed:

The questionnaire was designed and pilot tested. The questionnaire was produced and

distributed to the respondents. Telephone follow-ups were made to request co-operation and as a reminder. After the completed questionnaires have been received, the questionnaires were analysed.

4.5.3 Mailing Schedule

The following mailing schedule was followed:

- The cover letter and questionnaire were mailed on the 25th November 1999; (See Appendix G & H)
- On the 1st December 1999 a telephone follow-up to those who had not responded was made;
- On the 6th December 1999 a telephone follow-up to those who had not responded was made.

4.5.4 Pilot Study

To validate the questionnaire, a pilot study was conducted. A small sample of one respondent per group was used to test the questionnaire. The specific purpose of the pilot study was: Firstly, to test how long it took to complete the questionnaire; Secondly, to check whether the questions were not too ambiguous; Thirdly, to check that the instructions were clear and lastly to allow eliminating questions that did not yield usable data. The questionnaire took approximately thirty minutes to complete and was not altered.

4.5.5 Sample selection

As a first step in the research process, two response groups, which included experts and small business owners were selected. Academics have been perceived as experts as they have the ability to make judgements on training and educational competencies and have the knowledge and understanding of current global changes and needs in small business management. Professionals in the field of small business development have also been perceived as experts as they have the basic understanding of what small business development is and its potential and limitations. These experts were selected by judgement sampling based on their expertise in the field of small business management. (See Appendix I) Judgement sampling was selected in respect of expertise being a critical criterion for selecting these respondents. Questionnaires were sent to all respondents (19) who were perceived as experts by the researcher in the Port Elizabeth area. The questionnaire was administered by a census study to 39 small, micro and medium manufacturers in the clothing industry in the Port Elizabeth area from the membership directory of the Clothing Federation, the Bargaining Council for the Clothing Industry, PERRCI, PERMAC and Pursuit Magazine. (See Appendix I) As a result of the small population of small clothing manufacturers in Port Elizabeth, a census survey was used.

4.5.6 Response rate

A total of 19 completed questionnaires (11 small business owners and 8 experts) that represented 33% of the sample were returned. The low response rates can be attributed to the unwillingness of the respondents to cooperate.

4.5.7 Data analysis

The completed questionnaires were edited and checked for adequacy of completion and inconsistencies. The completed questionnaires were analysed using a statistical analysis software package called SPSS. SPSS was used to undertake frequency tabulations, cross tabulations, Mann-Whitney tests and Discriminant analysis. The Mann-Whitney test is perceived as the most appropriate regarding small response groups with the purpose to evaluate the differences in means between two groups. As a refinement Discriminent analysis was used to determine which variables discriminate between two or more naturally occurring groups.

Producing the highest quality and most cost effective research requires that the data collection instruments and procedures fit the criteria of validity and reliability. The objective is to produce the most valid, reliable, and useful instruments and procedures given the practical research environment..

4.5.8 Reliability

Reliability can be defined as the extent to which an experiment, test or any measuring procedure yields the same result on repeated trials. (Colorado State University, 1997) Without the agreement of independent observers to replicate the procedures a researcher has conducted, researchers would be unable to make claims about generalizability of their research, satisfactorily draw conclusions from that research, or formulate theories explaining that research. The goal of a reliability study is to amass evidence demonstrating the

reliability of a measurement instrument. A measurement can be reliable, but not necessarily valid. Both reliability and validity are necessary for accurate measurement in a research study. The approach to a reliable study involved internal consistency statistics. Internal consistency (indexed by Cronbach's Alpha) indicates the degree to which the items in a measurement instrument correlate with one another. A single measurement instrument is administered to a group of people on one occasion to estimate reliability. Cronbach's Alpha is mathematically equivalent to the average of all possible split-half estimates.

4.5.9 Validity

Validity refers to the extent that measurement procedures accurately reflect the specific concept that the researcher is attempting to study. (Colorado State University, 1997) A valid instrument may be defined as an instrument from which we can make valid inferences. While reliability is concerned with the actual measuring instrument, validity is concerned with the instrument's ability to measure the specific proposed idea. The four types of validity are as follows: Face validity, Content validity, Criterion validity and Construct validity. Only Face validity by peer review can be claimed for the questionnaire design.

4.5.10 Statistical Significance

In statistical terms, significance does not necessarily mean important but rather that it is most probably true. (Creative Research Systems, 1998) Significance levels indicate how likely a result is due to chance. The most common level, which is used to indicate that something is good enough to be believed, is .95. This means that the finding has a 95%

chance of being true. However the probability values should be read in reverse (1-p).

4.6 CONCLUSION

In this chapter the research methodologies of the qualitative and the quantitative stages have been discussed. Each stage has been discussed in terms of the procedures followed, the sample selection as well as the data analysis. Based on this, the findings of these stages will be discussed in the following chapter.

CHAPTER 5

RESEARCH RESULTS

5.1 INTRODUCTION

This chapter presents patterns of results and an analysis of their relevance to the research hypotheses. This first section will be restricted to the presentation and analysis of the collected data related to the qualitative study. The second section of this chapter will focus on the analysis of data in respect of the quantitative study. Chapter 6 will thereafter discuss the implications of the results generated in chapter 5 within the context of the literature.

5.2 THE QUALITATIVE STUDY

The purpose of this stage was to establish the variables relevant to identify the key problems currently experienced by small manufacturers in the clothing industry and to provide the basis for the structuring of the questionnaire in stage two.

As discussed in chapter 4 the questionnaire was divided in four parts. The findings of the qualitative study are therefore also presented in four parts namely problems/solutions, technology transfer, management strategies and clusters.

5.2.1. Part 1 - Problems/Solutions (Refer Appendix J)

An analysis of the problems revealed that the frontrunners were high labour costs and low productivity levels – critical issues impacting on the growth of small manufacturers. Following closely on this was the thorny issue of labour legislation and the lack of entrepreneurship culture. Lack of business management skills amongst entrepreneurs was also identified as a major problem impacting on their growth.

With respect to the solutions to the problems identified above, all three groups (academics, small business owners and professionals in small business development) agreed that action has to be taken by government against illegal and/or fraudulent imports. At the grassroots level it is imperative that training of workers be emphasized and that entrepreneurship development be undertaken to assist the small manufacturers in solving their problems. A possible solution could be to undertake market research to determine markets that could be explored and developed and to identify niche markets.

All three groups collectively scored a low mean level of agreement of 3 on the re-introduction of import duties and protection tariffs as a solution to the problems identified. This is an indication that the respondents are in favour of moving away from the old paradigm of protectionism.

Vertical clustering between large and small firms have been identified as one of a range of solutions to the problems in the clothing industry with a collective mean level of agreement of 5. However, vertical linkages have not been ranged amongst the five most pertinent

solutions to these problems.

A convergence of opinions by all three groups was obtained on two occasions namely the lack of business management skills as a constraint to competitiveness and the creation of export opportunities as a solution.

The remainder of the problems and solutions reflected divergences in opinions by all three groups. Labour problems and legislation as well as a lack of access to finance reflected two major differences between the respondents. Small business owners regarded these problems as very important (mean level of agreement of 7), whilst professionals in small business development regarded labour problems as less important (mean level of agreement of 3) and academics regarded a lack of access to finance as less important (mean level of agreement of 3).

5.2.2 Part 2 – Technology Transfer (Refer Appendix J)

The respondents identified a range of definitions for the term "Technology Transfer" as well as a range of different forms of sub contracting relationships. In respect of "Technology Transfer" the most important definitions were identified as the transfer of technical skills and the correct application thereof; as well as the switch from manual to technological advanced machinery, followed closely by the acquisition of appropriate technology to match capacity needs and market demands; and the empowering of small, medium and micro enterprises to improve production by technical means. Capacity building and the developing of resource capability was the least preferred option.

The most favoured forms of sub contracting relationships were the privatization of production cells to current employees to facilitate the establishment of their own new enterprises and manufacturing under contract. This was followed closely by independent contractual customer/supplier agreements and empowerment programs of big business where small, medium and micro enterprises are monitored to enable them to supply the required products/services at the right price and quality. The dissemination of market information and products was the least preferred option.

Convergences of opinions were obtained on two occasions namely to invite small, medium and micro enterprises to observe and learn with factory visits as a definition of "Technology Transfer" and the take-on of surplus orders from large manufacturers as a form of sub contracting relationship.

The remainder of the responses reflected divergences in opinions on the relevant issues. However, the outsourcing of financial management as a form of sub contracting relationship reflected a major difference between academics and small business owners. Small business owners regarded this as very important (mean level of agreement of 7), whilst academics regarded this as insignificant (mean level of agreement of 2). Professionals in small business development seemed to agree more with small business owners on this issue and scored a mean level of agreement of 6.

5.2.3 Part 3 – **Management Strategies** (Refer Appendix J)

The respondents identified a range of management strategies as well as strategies appropriate to small manufacturers to improve their performances. The prioritising of productivity and quality improvement was cited as the best management strategy to improve the competitiveness of a firm. This was followed by the change in the mindset of management from protectionism to global trade, market and product research, quick response to market conditions and the identification of customer needs.

The identifying of new/niche markets and the development of workers skills were cited as the best management strategy for small manufacturers. This was followed by the assistance in the marketing of products, small business development programs and consultants to assist and advice small, medium and micro enterprises.

Horizontal linkages between firms have been identified as one of a range of management strategies, (collective mean level of agreement of 5) whilst vertical as well as horizontal linkages have been identified as appropriate strategies for small manufacturers (collective mean level of agreement of 5). Clustering were however neither ranged amongst the five most pertinent management strategies nor were they ranged amongst the five most pertinent strategies for small manufacturers.

Convergences of opinions were obtained in respect of three management strategies as well as one strategy appropriate to small manufacturers. The management strategies focused firstly on improved technical training for machinists and for supervisors, secondly on making

productivity and quality improvements priority number one and lastly, to develop the administrative skills of small business owners. The strategy applicable to small manufacturers focused on the fact that marketing orientation is of higher value than production orientation.

The remainder of the responses reflected divergences in opinions on the relevant issues.

5.2.4 Part 4 - Clusters (Refer Appendix J)

The respondents firstly identified, a range of definitions for the term "Clustering", followed by the listing of a range of problems and solutions for vertical clustering and lastly, a range of problems and solutions for horizontal clustering.

The data revealed that the respondents have a diverse opinion as to what the term "Clustering" implies. The results however indicated that consensus was achieved on five definitions. Firstly and most importantly the joining together of a group of small, medium and micro enterprises in the same sector to strive towards common objectives. Secondly, the creation of a hub that would provide specialist services like finance, accounting and marketing to a group of small manufacturers. Thirdly, the forming of alliances/strategies in order to be able to compete more effectively and therefore benefit enterprises who would not have achieved success on their own. Fourthly, a group of individuals with basic assembly skills that get together to complete a required garment and lastly the specialization of small firms within a given sector with allied enterprises.

Concerning vertical clustering the data revealed that the lack of skills of small, medium and micro enterprises to meet big firm requirements in terms of delivery, quality, etc and the lack of trust were the two most important problems preventing the wide scale implementation of this concept. Constraints in technology and specialization of small firms, infrastructure problems (particularly urban and rural linkages) and the historical baggage regarding the lack of co-operation between big corporate business and informal small business were cited as another relevant problems.

The education of small as well as large businesses concerning the benefits of these linkages as well as communication between the relevant firms were considered to be the two most important solutions to the above-mentioned problems. In addition to the previous, further solutions were considered to be the mentoring of small businesses by large businesses, the promotion of business incubators with central business support and the expanding of the existing MAC (Manufacturing Advisory Centres) program to develop small, medium and micro enterprises.

The most important problem preventing the wide scale implementation of horizontal clustering can be attributed to the lack of cluster knowledge. The lack of skills of small, medium and micro enterprises to meet requirements in terms of delivery, quality etc. and the lack of trust – a critical issue impacting on building relationships, were also identified as major problems preventing wide scale implementation. Finally, the administration and the facilitation of the operation of the cluster were also identified as relevant problems.

All three groups of respondents agreed to the fact that the education of small businesses regarding the benefits of horizontal clustering represents a solution to the above problems and should be undertaken. It is also imperative that the building on synergies and commonalties in terms of market segment, technology, etc. be emphasized and that the building of trust could be used to address the fears of the small business sector. The formulation of solutions must include the proper structuring of the cluster with an agreed constitution to govern membership through the full commitment of all partners and the full support of the government and large businesses.

The following convergences of opinions concerning the definitions of "Clustering" were obtained: Firstly, a group of individuals with basic assembly skills get together to complete a required garment, secondly, inter-firm co-operation and thirdly, an industrial district of firms with highly integrated backward and forward linkages. Convergences in terms of horizontal linkages were obtained on four issues: Firstly, the lack of skills of small, medium and micro enterprises, secondly, the administration of the cluster, thirdly, the education of small business concerning the benefits of linkages and lastly, the proper structuring of the cluster.

The remainder of the responses reflected divergences in opinions on the relevant issues. However, the expanding of the existing MAC program to develop small enterprises as a solution to the problem preventing wide scale implementation of vertical linkages reflected a major difference between academics and small business owners. Small business owners regarded this as very important (mean level of agreement of 7), whilst academics regarded this as not important (mean level of agreement of 3). The dominance of the formal business sector in relationships was considered to be a problem, which prevents the implementation

of horizontal linkages and represented another major difference between academics and small business owners. Small business owners regarded this as very important (mean level of agreement of 7), whilst academics regarded this as not important (mean level of agreement of 3).

5.2.5 Summary

The key problems impacting on the competitiveness of small manufacturers in the clothing industry as well as possible solutions were identified. Vertical linkages were considered as one of the possible solutions to the problems. For the majority of problems and their solutions, the means of the three groups revealed differences.

In respect of 'Technology Transfer" and sub contracting relationships the most relevant definitions and sub contracting relationships were identified. For the majority of these definitions and different forms of sub contracting relationships the means of the three groups revealed differences.

The data revealed that horizontal linkages have been suggested as a management strategy to improve competitiveness. Vertical as well as horizontal linkages have been suggested as strategies appropriate to improve small manufacturers' competitiveness.

The data revealed diverse definitions for "Clustering". The most important constraint to vertical clustering was cited as the lack of skills of small, medium and micro enterprises. In respect of horizontal clustering the lack of knowledge was considered to be the most

relevant. With respect to the solutions to the above-mentioned problems preventing the wide scale implementation of clustering, the respondents collectively agreed that the education of small and large firms comprised the most viable solution to the above-mentioned problems and should be undertaken. For the majority of the statements, the mean of the three groups revealed differences.

5.2.6 The implications for the quantitative component of the study.

The aim of this qualitative study was to identify key variables for the development of the quantitative instrument. No changes were thought to be required to the specific variables to be included in the quantitative questionnaire.

5.3 THE QUANTITATIVE STUDY

The purpose of this stage was to quantify the range and nature of linkages amongst small manufacturers in the clothing industry in Port Elizabeth, to determine the prevailing attitudes as well as the constraints towards clustering and to devise a practical strategy for the implementation of horizontal clustering amongst small manufacturers.

As discussed in chapter 4 the questionnaire was divided in six sections. The findings of the quantitative study are therefore also presented in six sections namely competitiveness, inter-firm collaboration, attitudes, the model, clustering and problems/solutions.

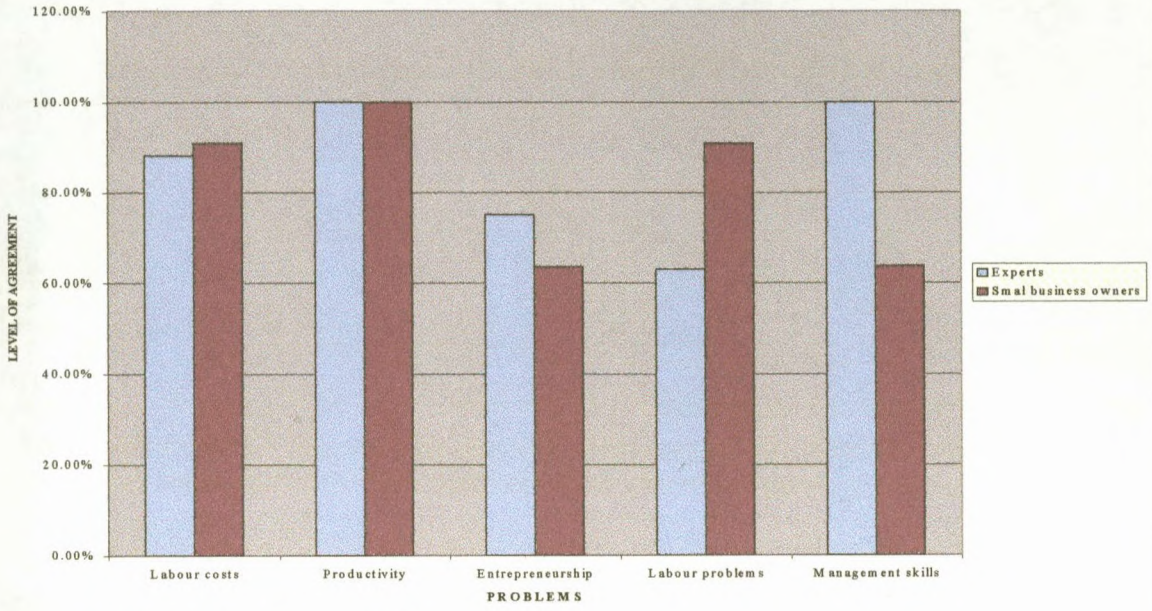
5.3.1 General information

Seventy four percent (74%) of the respondents in this survey were male. Forty five percent (45%) of the small businesses were close corporations and fifty percent (50%) of these businesses employed less than 25 employees. Only two firms in the survey claimed to have more than 100 people in their employment. The mean age of the firms was 17 years since inception. The oldest firm was established forty-seven years ago and the newest firm has been established for only seven years. The mean age of the respondents was 43 years and eighty two percent (82%) of the small business owners had a post matric qualification.

5.3.2 Part 1- Competitiveness

With regard to the problems impacting on competitiveness, values 1 and 2 were obtained on the Likert scale and the data revealed that the majority of small business owners (82%) indicated a high level of agreement. Figure 5.1 reflects that the majority of the experts (85%) also indicated a high level of agreement. High labour costs and low productivity were consequently confirmed as being key factors impacting on the ability of small firms to compete effectively.

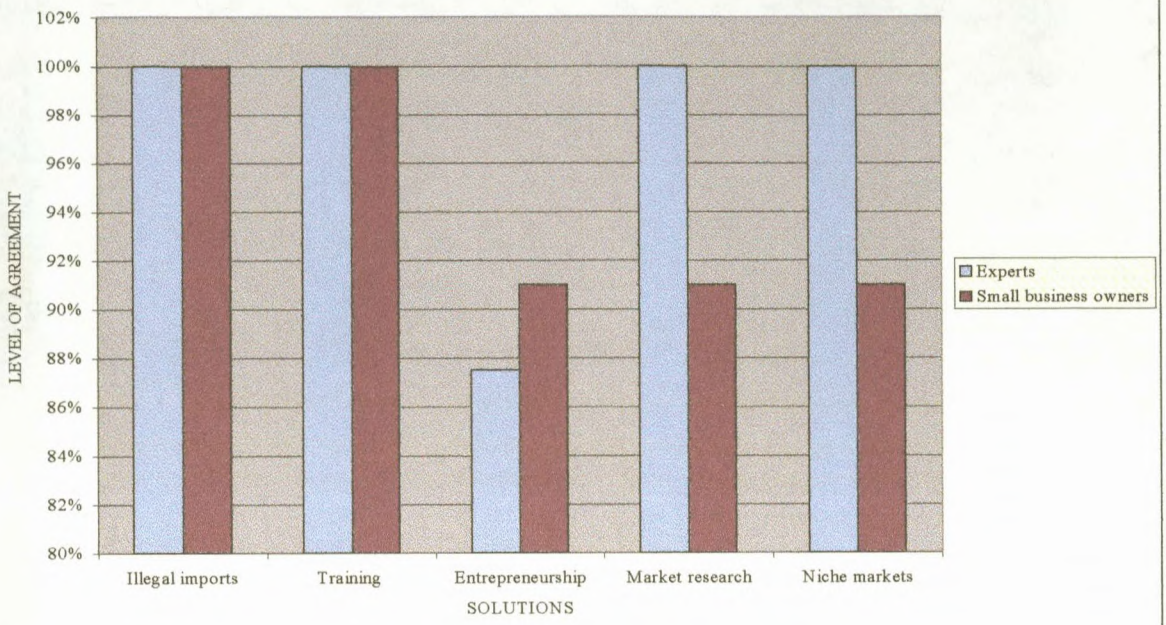
Figure 5.1 Level of agreement with the problems impacting on the competitiveness of small clothing manufacturers (values 1 and 2 on the Likert scale)



Source: analysis of survey data (Appendix J)

The data revealed values 1 and 2 on the Likert scale in respect of the solutions to these problems, where the majority of the small business owners (95%) indicated a high level of agreement. Figure 5.2 furthermore revealed that the majority of experts (98%) also indicated a high level of agreement. This indicates that a general consensus exists that action by government against illegal imports and the training of workers are the most likely solutions to improving levels of competitiveness.

Figure 5.2 Level of agreement with the solutions to improve the competitiveness of small clothing manufacturers (values 1 and 2 on the Likert scale)



Source: analysis of survey data (Appendix J)

Two differences of opinions between the groups, small business owners and experts were evident. The Mann-Whitney test ($p = .001$) as well as Discriminant analysis (98.5%) reflected firstly a difference with regard to the lack of business management skills negatively impacting on the competitiveness of small firms. The data revealed that all the experts (100%) indicated value 1 on the Likert scale. The Mann-Whitney test ($p = .010$) as well as Discriminant analysis (78.9%) reflected secondly a difference with regard to the action by government against illegal and/or fraudulent imports as a possible solution to improving levels of competitiveness. The data revealed that all the small business owners (100%) indicated value 1 on the Likert scale.

5.3.3 Part 2 - Inter-firm Collaboration

It is clear from the research results that the majority (64%) of small businesses have not entered into any inter-firm collaboration relationships with other small clothing manufacturers during the last five years, neither are they currently involved in any inter-firm collaboration relationships.

The remaining small businesses (36%) are currently involved in relationships in the form of horizontal collaboration between small clothing manufacturers. Half of these respondents indicated that they were satisfied with the relationships and cited the lack of commitment being the only problem experienced. In this regard training was suggested as a solution.

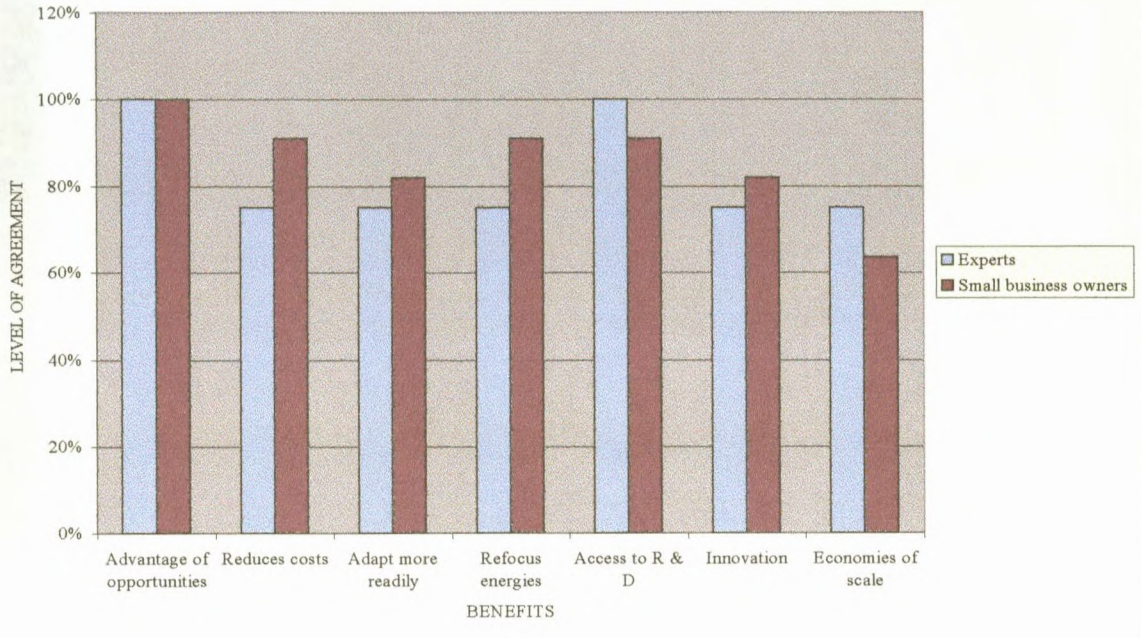
The low relationship participation levels are indicative of a lack in knowledge about the advantages of linkages and the need to rectify this situation through the education of the small business owners.

5.3.4 Part 3 - Attitudes

As presented in figure 5.3 the data revealed that the majority of small business owners (86%) indicated a high level of agreement in regards to the benefits of clustering. This high level of agreement is represented as values 1 and 2 on the Likert scale. In comparison, the majority of experts (82%) also indicated a high level of agreement. This confirms that a general consensus exists regarding the fact that clustering can benefit the participating firms. The data furthermore indicated small business owners as well as the experts displayed a

positive attitude towards clustering.

Figure 5.3 Level of agreement with the benefits of clustering (values 1 and 2 on the Likert scale)



Source: analysis of survey data (Appendix J)

The Mann-Whitney test ($p = .004$) as well as Discriminant analysis (100%) reflected however one difference of opinions between small business owners and experts concerning the benefits of clustering. These two groups viewed the statement that firms can gain access to services such as Research & Development and quality control, which might otherwise be unaffordable, differently. The majority of experts indicated a very high level of agreement represented as value 1 on the Likert scale, whilst the majority of small business owners indicated a high level of agreement represented as value 2 on the Likert scale.

5.3.5 Part 4 - The Model

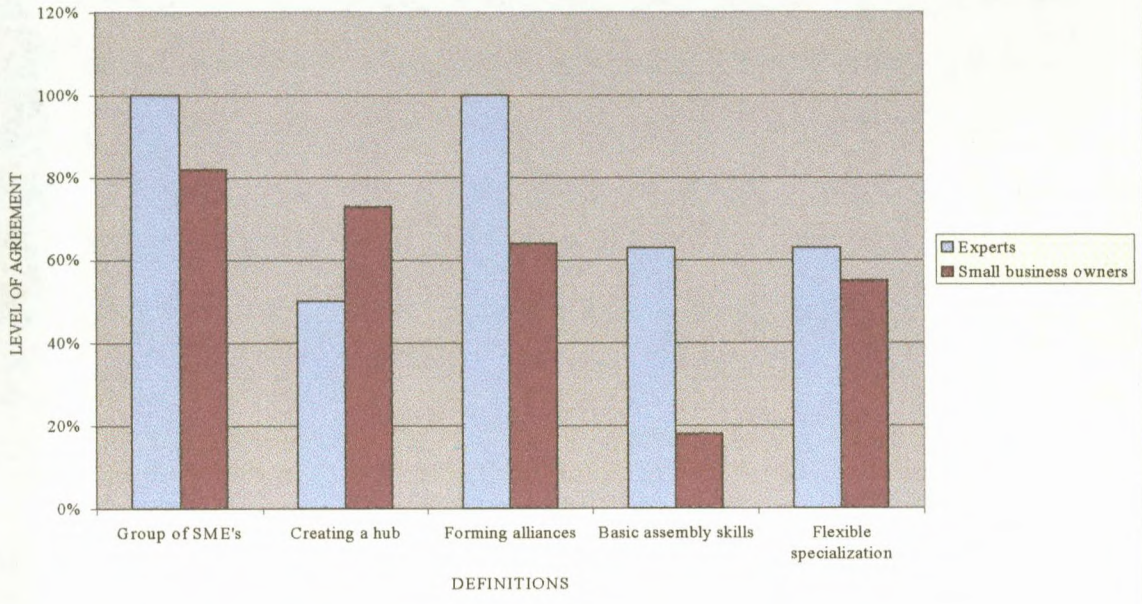
Only three small businesses (27%) are currently collaborating with other small manufacturers by working together towards the same objectives. The majority of small business owners (55%) however indicated that they would be willing to consider inter-firm relationships, which is a further reflection of a positive attitude towards clustering.

The lack of trust was raised as the main reason for the unwillingness of small business owners to engage in these relationships. The lack of trust is an additional indication of a lack of knowledge concerning linkages/clustering.

5.3.6 Part 5 - Clustering

Nearly all the respondents (95%) collectively claimed to have heard of the term "Clustering. Values 1 and 2 on the Likert scale were obtained and this data revealed that the majority of small business owners (82%) indicated a high level of agreement to all but one of the definitions of clustering. The majority of the experts (75%) highly agreed with all the different definitions of clustering. The results are reflected in figure 5.4 and indicated that a diversity of definitions for clustering exists, which can be the cause of the current confusion regarding this concept. The opposite may however also be true namely that a lack in knowledge in terms of clustering may result in this diversity of definitions.

Figure 5.4 Level of agreement with the definitions of clustering (values 1 and 2 on the Likert scale)



Source: analysis of survey data (Appendix J)

The majority (64%) of the small business owners and all the experts highly agreed (values 1 and 2 on the Likert scale) that clustering can contribute to the "Transfer of Technology". Therefore, a general consensus exists that where clustering is defined as small businesses forming linkages with each other, clustering contributes to the transfer of technology.

A general consensus furthermore exists that clustering can be employed as a management strategy to improve the competitiveness of small clothing manufacturers. Eighty two percent (82%) of small business owners as well as eighty eight percent (88%) of the experts highly agreed (values 1 and 2 on the Likert scale) with this statement.

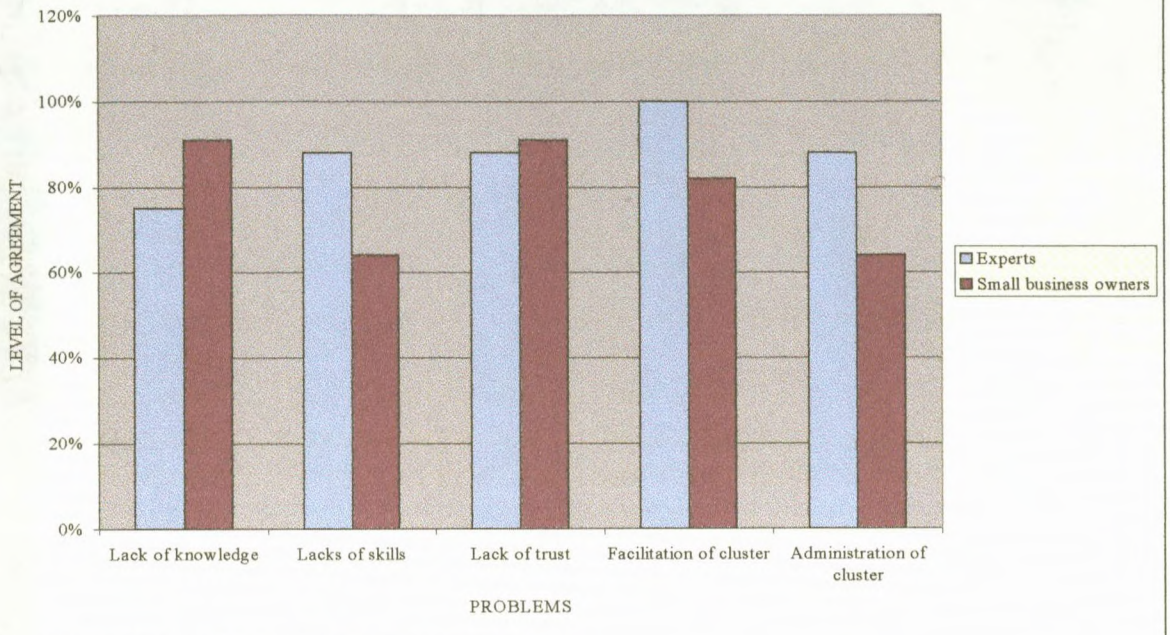
A key observation is that small business owners are undecided in regards to the role of training institutions, government and intermediaries in the promotion of clustering. The results indicated that a substantial percentage (32%) were neutral concerning the role of training institutions. Forty five percent (45%) of small business owners highly disagreed that government should intervene in the development of clustering by indicating values 4 and 5 on the Likert scale. Twenty seven percent (27%) of small business owners were neutral regarding the role of government and the majority (55%) of small business owners were neutral on the role of intermediaries.

No significant differences were evident between the two groups.

5.3.7 Part 6 - Problems/Solutions

As presented in figure 5.5, seventy eight percent (78%) of small business owners and eighty eight percent (88%) of the experts indicated values 1 and 2 on the Likert scale in regard to the problems preventing the wide scale implementation of clusters. This implies that the respondents highly agreed with these problems. The lack of knowledge about clustering, the lack of skills of small firms and the lack of trust were therefore confirmed to be the main problems preventing wide scale implementation of horizontal clustering.

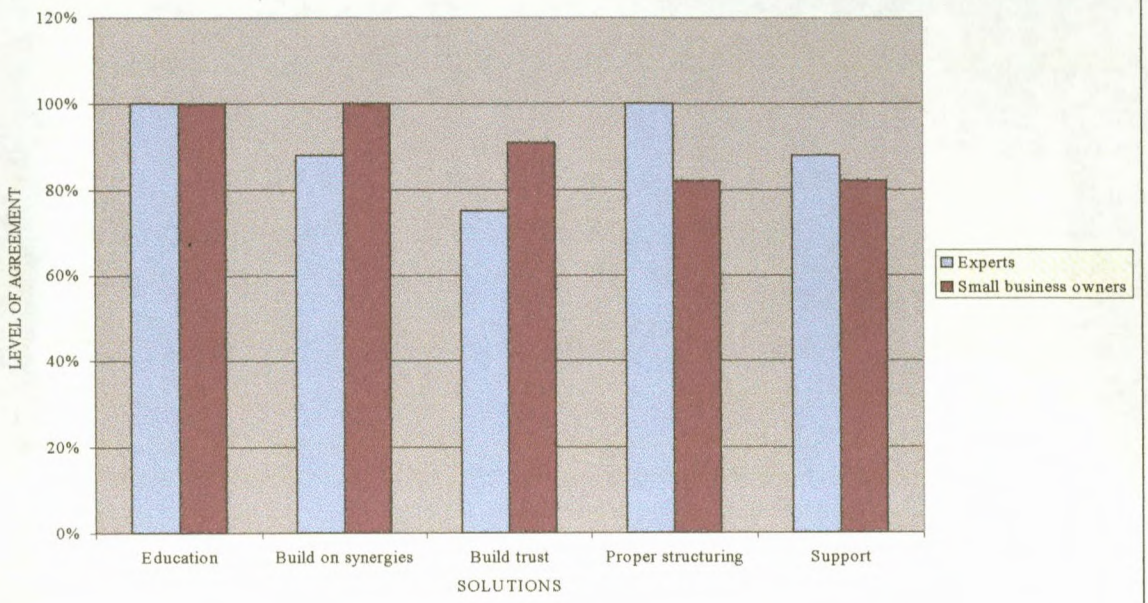
Figure 5.5 Level of agreement with the problems preventing the wide scale implementation of horizontal clustering (values 1 and 2 on the Likert scale)



Source: analysis of survey data (Appendix J)

In respect to the solutions to these problems as presented in figure 5.6, ninety one percent (91%) of small business owners and ninety percent (90%) of the experts highly agreed with the statements. This indicates that these two groups were in accordance with the fact that the education of small businesses concerning the benefits of linkages represents the most likely solution to the identified problems, which prevent the wide scale implementation of this concept within the clothing industry.

Figure 5.6 Level of agreement with the solutions to the above-mentioned problems (values 1 and 2 on the Likert scale)



Source: analysis of survey data (Appendix J)

The small business owners and the experts concurred that clustering can improve the competitiveness of small clothing manufacturers. Eighty two percent (82%) of the small business owners and all the experts (100%) highly agreed with the statement by indicating values 1 and 2 on the Likert scale.

The Mann-Whitney test ($p = .013$) as well as Discriminant analysis (84%) reflected a difference of opinions between small business owners and experts in regards to the problems preventing the wide scale implementation of horizontal clustering. A substantial percentage (36%) of small business owners were neutral on the issue of the administration of the cluster.

5.3.8 Reliability analysis

Cronbach Alpha reliability analysis was undertaken to demonstrate the reliability of the measurement instrument. Internal consistency indicates the degree to which the items in a measurement instrument correlate with one another. Cronbach Alpha reliability analysis was undertaken using only the Likert scale questions and the reliability coefficient of .8423 indicated that the measurement instrument was reliable. (Appendix J)

5.3.9 Summary

Four significant differences were evident between the two groups viz. small business owners and experts. Key differences were observed in the following variables: The lack of business management skills, action by government against illegal and/or fraudulent imports, firms can obtain access to services such as Research and Development, which might otherwise be unaffordable and finally the problem concerning the facilitation of the operation of the cluster.

The problems and solutions identified in stage 1 were confirmed as being key factors impacting on the competitiveness of small firms as well as the most likely solutions to these problems.

With respect to inter-firm relationships, horizontal linkages exist amongst one third of the small manufacturers. The majority of small business owners furthermore indicated that they would be willing to consider inter-firm collaboration relationships. The lack of trust was

raised as the main reason for the unwillingness of small businesses to engage in these collaborative relationships. A vast majority of small business owners as well as the experts have heard of clustering and a general consensus exists that clustering can benefit the participating firms. This also indicated that the small business owners as well as the experts have a positive attitude towards clustering.

The majority of small business owners and experts were in consensus that clustering contributes to "Technology Transfer". It was also confirmed that clustering can be employed as a management strategy as well as a strategy appropriate for small manufacturers to enhance competitiveness.

The data revealed that the small business owners and the experts were uncertain in regards to the role of training institutions, government and intermediaries in the promotion of clustering. This is probably due to the fact that the cluster concept is still a new concept.

The majority of the small business owners and the experts confirmed the problems preventing the wide scale implementation of clustering as well as the solutions to these problems as identified in stage 1. A consensus exists that clustering can enhance the competitiveness of small clothing manufacturers.

5.3 CONCLUSION

In this chapter the findings of the qualitative as well as the quantitative study were presented. The qualitative study results presented in four sections namely

problems/solutions, technology transfer, management strategies and clusters while the findings of the quantitative study were presented in six sections namely competitiveness, inter-firm collaboration, attitudes, the model, clustering and problems/solutions. Chapter 6 will discuss the implications of the results of chapter 5 within the context of the literature.

CHAPTER 6

RESEARCH CONCLUSIONS

6.1 INTRODUCTION

The primary purpose for this research study was to identify the impact of horizontal clustering on the ability of small manufacturers in the clothing industry in Port Elizabeth to compete internationally. Most small firms are experiencing constraints including a lack in specialization and differentiation, access to mainstream markets and to appropriate technology leading to a lack of competitiveness. The cluster methodology was explored as a method to enhance the competitiveness of small manufacturers. The relevant literature illustrated that small firms can reach levels of collective competitive advantage which as individual firms would not have been possible. The overview of the clothing industry indicated that there appeared to be potential for small manufacturers to enhance their competitiveness by way of applying the cluster approach. However, there was a need, firstly to establish the key problems currently experienced by small manufacturers in the clothing industry. Secondly, to establish the nature of interest and awareness in clustering, thirdly, to establish the nature of constraints to clustering and finally, to determine what could be done to overcome these constraints. It was in the context of these research issues that the research methodology was designed and the qualitative and quantitative studies were completed. The findings of the qualitative as well as the quantitative studies were presented and this chapter is aimed at drawing conclusions regarding these findings.

6.2 THE CONCLUSIONS – THE QUALITATIVE STUDY.

The quantitative study was exploratory in nature, and was employed to identify the key problems currently experienced by small manufacturers in the clothing industry.

A key observation to emerge from the qualitative research is that significant differences were evident between the responses of academics, professionals in small business development and small business owners. Having made these qualifications it is relevant to note that the specific variables in which key differences between the groups were observed, were evident in all four sections namely problems/solution, "Technology Transfer", Management strategies and clustering. Further research is needed to explore the extent and significance of the differences between these groups of respondents. To do this, a broader sample base is required.

An analysis of the problems experienced by small manufacturers in the clothing industry revealed that high labour costs and low productivity were the frontrunners. A review of the related literature revealed that the clusters in Italy have been amongst the most effective. Those clusters have been widely regarded as a model of how high wage manufacturing economies can compete and be successful. (Colleye and Dutz, 1996) Furthermore, according to Porter (1998) poor countries lack well-developed clusters, they compete in the world market with cheap labour and natural resources. To move beyond this stage, the development of well-functioning clusters is essential. Also according to Porter (1998) clusters affect competition in three ways, one of which is productivity. Being part of a cluster allows companies to operate more productively. In respect of the problems

identified as well as the review of the related literature, clusters could be used to overcome the constraints currently hampering small manufacturers in the clothing industry and thereby extending their competitive advantage.

The data revealed that horizontal linkages have been suggested as a management strategy to improve competitiveness. Vertical as well as horizontal linkages have been suggested as strategies appropriate to improve small manufacturers' competitiveness. This could be an early indication that there is an awareness of the possible benefits of linkages amongst the respondents.

The data furthermore revealed diverse definitions of clustering. This corresponds with the findings of the Small Business Project (1999) that there are many interpretations and applications of clustering in the international literature. The implication of this is confusion surrounding what is understood to be a cluster and how to apply the clustering methodology in firms.

The lack of knowledge was cited as the most important problem preventing the wide scale implementation of horizontal clustering. This corresponds with the findings of the BEES project (Colleye and Dutz, 1996) and indicates the need to educate small manufacturers regarding the dynamics of clustering.

6.3 THE CONCLUSIONS – THE QUANTITATIVE STUDY.

The conclusions arising from the findings as generated through the quantitative study are explained within the context of the following research hypotheses, these being: Competitiveness is impeded by a lack of specialisation and differentiation, horizontal linkages generates economic gains for participating businesses; the formation of clusters is impeded by the unwillingness of small firms to engage in horizontal linkages; and the constraints to competitiveness are sectoral specific.

A key observation to emerge from the quantitative study is that very few significant differences are evident between the two groups viz. small business owners and experts. The smallness of the sample could be a contributing factor and this issue needs to be further researched.

The majority of small business owners highly agreed with the constraints to competitiveness as well as their solutions as identified in stage 1. The data revealed that high labour costs and low productivity were confirmed to be the key factors impacting on the competitiveness of small clothing manufacturers and therefore, the hypothesis that competitiveness amongst small enterprises is impeded by a lack of specialization and differentiation is not confirmed. High labour costs and low productivity levels are very relevant constraints that negatively impact on the clothing industry, which represents one of the most labour intensive manufacturing sectors (Clofed, 1997) and can therefore be considered as sectoral specific. This implies that the hypothesis, which states that constraints to competitiveness are sectoral specific, is confirmed for any sector, which has the same or similar characteristics to the

clothing industry.

The research indicated that although low in priority, horizontal linkages exist between small clothing manufacturers in Port Elizabeth. The results indicated furthermore that the majority of small clothing manufacturers in Port Elizabeth are willing to consider collaboration relationships. The attitudinal data revealed that small business owners are satisfied that linkages benefit the participating firms and thereby displayed a positive attitude towards horizontal linkages. The majority of small business owners are convinced that clustering can improve the competitiveness of small manufacturers in the clothing industry. These findings are similar to the findings of the BEES project (Colleye and Dutz, 1996) in that co-operation amongst small firms was desirable and held considerable economic promise for participants. The EAGER study reported a considerable optimism in the industry towards collaborative efforts as an export strategy, which corresponds with the positive attitude of small business owners towards linkages as revealed in this study. (Salinger, et al., 1998) The hypothesis, which reflects that horizontal linkages bring about economic gains for participating businesses, is confirmed.

The lack of knowledge regarding the cluster concept was confirmed to be the key problem preventing wide scale implementation of horizontal clustering. This lack of knowledge furthermore corresponds with the Small Business Project observations (1999), which attributed South Africa's retarded cluster implementation rate to a lack of awareness and an in depth understanding regarding the benefits of the cluster process. The two groups namely, small business owners and experts, were in accordance with the fact that the education of small businesses concerning the benefits of linkages represents the most viable solution to

the promotion of a wide scale implementation of this concept within the clothing industry. The hypothesis, which states that the formation of clusters is impeded as a result of the unwillingness of small firms to engage in horizontal linkages, is therefore not confirmed.

In regards to the role of training institutions, the government and intermediaries in promoting clustering, diverse results were produced with a substantial percentage of neutral respondents. The related literature revealed that these institutions all have played a major role in the development of clusters around the world. This result is probably due to the fact that, clustering is still a new concept and the respondents are therefore unsure of what the roles of these organizations should be. This further emphasized the need for education as previously identified.

6.4 CONCLUSIONS ABOUT THE RESEARCH PROBLEM

The research has aimed to identify the impact of horizontal clustering on the ability of small manufacturers in the clothing industry in Port Elizabeth to enhance their competitiveness. The key constraints to improving competitiveness were identified in the qualitative study and were quantified in the second stage of this research project. It was confirmed that inter-firm collaboration relationships exist amongst small manufacturers in Port Elizabeth and that small business owners disclosed a positive interest in horizontal linkages. The small clothing manufacturers furthermore agreed that horizontal linkages could bring about economic gains for these businesses that participate in this system. This study has therefore succeeded in identifying the constraints to clustering and also produced a confirmed conclusion that small manufacturers are willing to engage in horizontal linkages.

The following practical strategy is recommended as a device to overcome the problems encountered: Firstly, building trust and open communications are the most important components for successful linkages. This research indicated that when applying linkages to enhance competitiveness it should involve a process of learning during which small firms should be educated about the benefits of linkages. Business owners should be convinced that there are both individual and collective gains to be derived from linkages. Demonstrated success is crucial to strengthen relationships and to form new linkages. The focus should be on the business people instead of having the infrastructure and support aspects in place. Secondly, when promoting linkages the emphasis should be on a demand-side approach. Firms should take the initiative themselves to generate market demand and should be allowed to co-operate and compete. Thirdly, accepting that public support is important, the emphasis should be on playing a facilitating role. Public sector support should also be as decentralized as possible. This support should furthermore be driven by economic criteria such as the promotion of job creation, economic growth and assistance to firms in meeting market demands. Lastly, worldwide experience has shown that institutional support played a major role in the development of linkages. Trade bodies and associations have a practical function to fulfill in the grouping of firms and therefore the complementing of the linkage processes in which firms engage. They also have a facilitating role to fulfill in the passing on of industry information, market opportunities, etc.

6.5 IMPLICATIONS FOR THEORY

The current body of knowledge in the field of marketing benefits from this study in respect of the wider view it provides on the vast range of definitions regarding the cluster concept

and the many interpretations of clustering in the international literature. Although academic institutions have been introducing the concept of entrepreneurship, the revelations of this study also provides a wider view on the cluster concept to enhance the competitiveness of small firms with a view to improve their position in terms of international developments. It contributes in particular to the new approach to economic development in terms of the small, medium and micro enterprise research done by the Technikon Natal Entrepreneurial Research Unit. The need for education was emphasized in this research study and the data revealed that small business owners are unsure about the role of training institutions in promoting the development of clusters. It is intended that this research study be transformed into a development study for incorporation into the South Africa-Netherlands Research Program (SANPAD) as well as the Cluster Initiative Study of the Center for Science Development (now National Research Foundation).

6.6 IMPLICATIONS FOR POLICY AND PRACTICE

Government has an important role to play in the promotion of the cluster concept. Whether this is done through direct interventions, such as the provision of seed capital for an emerging cluster, or indirect, through the stimulation of demand brought about by its public sector purchasing power. The lack of success in winning support for the initiatives explored by the Department of Trade and Industry in establishing industry-wide cluster groups emphasized the need for further cluster research. This research revealed that small manufacturers supports this view that more research in terms of the cluster concept and the role of government in the promotion thereof needs to initiated. The necessity for further research finds its origin in the fact that the study has clearly demonstrated that a need exists

for clear policy guidelines in terms of clustering. This research study therefore contributes towards any new policy approaches, which government may take on to successfully implement clusters in the clothing industry and through its implementation to achieve the objectives set for the industry.

Furthermore, this research study contributes to the process of building small firm clusters, especially those in the clothing industry. The small business owners indicated the constraints to clustering as well as possible solutions to overcome these constraints. Notwithstanding these constraints, small business owners are convinced that clustering can enhance the competitiveness of small clothing manufacturers. This research study makes a contribution towards those small firms that are the core participants and beneficiaries of the clustering process. It provides those small firms with an insight into the actions required to strengthen the framework within which firms cluster. The importance of the small, medium and micro enterprise sector as a contributor to job creation and the growing of a strong economy emphasizes the importance of clusters as a vehicle for developing vibrant small business sectors.

This is also applicable to service providers and trade associations like TEXTEK, PERMAC and CLOFED in the context of the substantial percentage of small business owners, which were neutral in respect of the role of intermediaries in the promotion of clusters. These service providers have also a role to play in the education of small clothing manufacturers about the clustering process.

6.7 IMPLICATIONS FOR FURTHER RESEARCH.

Although there are many examples of clusters around the world, research in this area is fairly recent. Clusters and clustering are terms that have been applied to a vast range of different situations and there are many interpretations and applications of clustering in the international literature. Research on clusters should be an ongoing process and the tracking of real experiences with local clusters in South Africa as well as research studies in other manufacturing sectors in South Africa are areas, which require further research.

As outlined through this research, the cluster concept can enhance the competitiveness of small manufacturers, bearing in mind that the application of the clustering methodology to accomplish it is not a tool for instant success. Notwithstanding the fact that the application of the cluster methodology does have its complications it still can be an important vehicle in developing vibrant small business sectors within the South African business environment.

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APPENDIX A

PRELETTER

Technikon Natal
Entrepreneurial Studies Unit
Berea Campus
Durban

May 18, 1999

Dear Sir or Madam:

Subject: Request for co-operation-

The Technikon Natal is appealing to you for help. We ask a few minutes of your time.

The clothing industry is presently going through a particularly difficult period in its history and faces incredible challenges to ensure its future success. It is firmly believed that the clothing industry can play an important role in economic development and social upliftment through the promotion of small, medium and micro enterprises. It is therefore in this context, taking into consideration the high failure rate of small businesses and the importance of the SMME sector to the economy, that this research was initiated. The research aims to identify the impact of collaboration on the ability of small manufacturers in the clothing industry in Port Elizabeth to enhance their competitiveness.

We would like to ask you to give us your opinion of the problems currently experienced by small manufacturers in the clothing industry as well as possible solutions. We have a questionnaire, which we would like to send you, and which will take no more than fifteen minutes of your time to answer.

Thank you for the courtesy of your assistance.

Yours sincerely.

Karin van Laar

APPENDIX B

COVER LETTER

Technikon Natal
Entrepreneurial Studies Unit
Berea Campus
Durban

June 9, 1999

Dear Sir or Madam:

Subject: Request for completion of questionnaire

The Technikon Natal is appealing to you for help. We ask a few minutes of your time. All of the information you give me will be treated as completely confidential and it will not be possible for anyone to identify the information you give me.

The clothing industry is presently going through a particularly difficult period in its history and faces incredible challenges to ensure its future success. It is firmly believed that the clothing industry can play an important role in economic development and social upliftment through the promotion of small, medium and micro enterprises. It is therefore in this context, taking into consideration the high failure rate of small businesses and the importance of the SMME sector to the economy, that this research was initiated. The research aims to identify the impact of collaboration on the ability of small manufacturers in the clothing industry in Port Elizabeth to enhance their competitiveness.

We would like to ask you to give us your opinion of the problems currently experienced by small manufacturers in the clothing industry as well as possible solutions. Attached we have a questionnaire, which we would like you to complete as soon as possible, and which will take no more than fifteen minutes of your time to answer. Please return by facsimile or email.

For further information, please contact me at 082 449 8881, facsimile at (042) 2962341 or email at hvanlaar@intekom.co.za

Thank you for the courtesy of your assistance.

Yours sincerely.

Karin van Laar

APPENDIX C

QUESTIONNAIRE

The purpose of this questionnaire is to:

- Establish the key problems currently experienced by small manufacturers in the clothing industry.
- To identify potential solutions to theses problems
- To explore strategies for improving company performance

Please engage in individual brainstorming so as to generate as many responses to each question as possible. Please list each response in a brief, concise manner and email or fax your response to me. Your responses need not be fully developed. In fact, it is preferable to have each response expressed in one brief sentence or phrase. No attempt should be made to evaluate or justify these issues at this point in time. Your responses will be anonymously included in the report of results.

PART 1: Problems/solutions

Question 1

What problems do small manufacturers in the clothing industry currently experience?

Responses: Problem 1

Problem 2

Problem 3

Problem 4

Problem 5

Question 2

What possible solutions could be found to the above problems?

Responses: Solution 1

Solution 2

Solution 3

Solution 4

Solution 5

PART 2: Technology transfer

Question 3

In the context of small, medium and micro enterprise development, what does the term "Technology Transfer" means to you?

Responses: Definition 1

Definition 2

Definition 3

Definition 4

Definition 5

Question 4

There are many forms of sub contracting relationships between big firms and small, medium and micro enterprises e.g. cleaning services as non-core and components supply as core. Can you please identify as many different forms as you are able and describe each one as fully as possible?

Responses: Form of relationship

Form 1

Form 2

Form 3

Form 4

Form 5

PART 3:Strategies

Question 5

What management strategies (plans) do you know of that could be used to improve performance/profitability e.g. cost cutting, new markets, new products, new processes, etc.?

Responses: Typical strategy

Strategy 1

Strategy 2

Strategy 3

Strategy 4

Strategy 5

Question 6

What strategies (plans) can *small manufacturers* use to improve their own performance/profitability?

Responses: Small business strategy

Strategy 1

Strategy 2

Strategy 3

Strategy 4

Strategy 5

PART 4: Clusters

Question 7

In the context of small business development what does the term "clustering" mean to you?

Responses: Definition 1

Definition 2

Definition 3

Definition 4

Definition 5

Question 8

If we were to define clustering as business linkages between big and small firm (sub-contracting), what do you think would be some key problems preventing wide scale implementation in the clothing sector?

Responses: Problem 1

Problem 2

Problem 3

Problem 4

Problem 5

Question 9

In response to the problems you identified above, can you please suggest possible solutions?

Responses: Solution 1

Solution 2

Solution 3

Solution 4

Solution 5

Question 10

If we were to define clustering as inter-firm collaboration (pooling resources/partnerships) what do you think would be some key problems preventing wide scale implementation in the clothing sector?

Responses: Problem 1

Problem 2

Problem 3

Problem 4

Problem 5

Question 11

In response to the problems you identified in question 10, can you please suggest possible solutions?

Responses: Solution 1

Solution 2

Solution 3

Solution 4

Solution 5

APPENDIX D

RATING SHEET

PART 1: Problems/solutions

Question 1

The following problems have been identified as impacting negatively on small manufacturers in the clothing industry.

Please indicate how strongly you believe each of the problems impact on small firm's competitiveness where 1 = little impact on competitiveness and 7 = most impact on competitiveness.

Low productivity	(1, 2, 3, 4, 5, 6, 7)
Lack of entrepreneurship culture	(1, 2, 3, 4, 5, 6, 7)
High cost of finance	(1, 2, 3, 4, 5, 6, 7)
High labour costs	(1, 2, 3, 4, 5, 6, 7)
Labour problems and legislation	(1, 2, 3, 4, 5, 6, 7)
Over regulation of formal industry	(1, 2, 3, 4, 5, 6, 7)
Insufficient capital	(1, 2, 3, 4, 5, 6, 7)
Lack of business management skills	(1, 2, 3, 4, 5, 6, 7)
Limited access to markets	(1, 2, 3, 4, 5, 6, 7)
Competitiveness	(1, 2, 3, 4, 5, 6, 7)
Illegal and/or fraudulent imports	(1, 2, 3, 4, 5, 6, 7)
Raw material procurement	(1, 2, 3, 4, 5, 6, 7)
Market dominance of a small number of very large buyers	(1, 2, 3, 4, 5, 6, 7)
Lack of access to technology	(1, 2, 3, 4, 5, 6, 7)
Lack of access to finance	(1, 2, 3, 4, 5, 6, 7)
Lack of access to human resource development	(1, 2, 3, 4, 5, 6, 7)
Low profit margins	(1, 2, 3, 4, 5, 6, 7)

Please identify the five most important problems impacting on competitiveness and rank their importance of impact on competitiveness where 1 = most important to 5 = least important.

Question 2

A range of possible solutions to the above mentioned problems have been suggested

Please indicate how strongly you believe each solution is capable of dealing with the range of problems identified where 1 = little potential to deal with the range of problems and 7 = high potential to deal with the range of problems.

Development of entrepreneurship	(1, 2, 3, 4, 5, 6, 7)
Development of international mindset and exposing people to the international market	(1, 2, 3, 4, 5, 6, 7)

Training of workers (1, 2, 3, 4, 5, 6, 7)
Training of management (1, 2, 3, 4, 5, 6, 7)
Review of labour legislation (1, 2, 3, 4, 5, 6, 7)
Partially de-regulation of industry (1, 2, 3, 4, 5, 6, 7)
Provision of loan facilities (1, 2, 3, 4, 5, 6, 7)
Provide affordable finance (1, 2, 3, 4, 5, 6, 7)
Establishment of manufacturing advisory centres (1, 2, 3, 4, 5, 6, 7)
Action by government against illegal and/or fraudulent imports as well as the "dumping" of cheap imports. (1, 2, 3, 4, 5, 6, 7)
Finding niche markets. (1, 2, 3, 4, 5, 6, 7)
Linkages/partnerships between big and small firms (1, 2, 3, 4, 5, 6, 7)
Create export opportunities (1, 2, 3, 4, 5, 6, 7)
Produce high value products offering better margins (1, 2, 3, 4, 5, 6, 7)
Reduced variety of product type (1, 2, 3, 4, 5, 6, 7)
Promote productivity through effective methods applications and control monitoring systems (1, 2, 3, 4, 5, 6, 7)
Re-introducement of import duties and protection tariffs for a limited period in order to allow small manufacturers to get their house in order. (1, 2, 3, 4, 5, 6, 7)
Market research to determine markets that could be explored and developed (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important solutions capable of dealing with the range of solutions and rank their importance on competitiveness where 1 = high potential to deal with the problems to 5 = least potential to deal with the problems.

PART 2: Technology transfer

Question 3

In the context of small, medium and micro enterprise development, a range of definitions for the term "Technology Transfer" has been identified.

Please indicate how strongly you believe each definition is applicable ranging from 1 = not a suitable definition to 7 = most suitable definition.

Big companies nurture small, medium and micro enterprises and transfer their technology to these enterprises (1, 2, 3, 4, 5, 6, 7)
Create partnership and share resources (1, 2, 3, 4, 5, 6, 7)
Transfer of technical skills and the correct application thereof. (1, 2, 3, 4, 5, 6, 7)
Empowering small, medium and micro enterprises to improve production by technical means. (1, 2, 3, 4, 5, 6, 7)
Acquisition of appropriate technology matching capacity needs and market demands (1, 2, 3, 4, 5, 6, 7)

Switch from manual to technological advanced machines (1, 2, 3, 4, 5, 6, 7)
Capacity building and developing resource capability to facilitate replication in a cost-effective manner. (1, 2, 3, 4, 5, 6, 7)
New production methods and machines (1, 2, 3, 4, 5, 6, 7)
Computer designs, pattern making and grading (1, 2, 3, 4, 5, 6, 7)
Electronic transmission of patterns to and from customers; electronic banking and wages; and email and websites (1, 2, 3, 4, 5, 6, 7)
Invite small, medium and micro enterprises to observe and learn with factory visits (1, 2, 3, 4, 5, 6, 7)
Provision of technology demonstration and outreach (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important definitions and rank their importance of impact on competitiveness where 1 = most suitable definition to 5 = least suitable definition of "Technology Transfer".

Question 4

Detailed below is a range of different forms of sub contracting relationships between big firms and small, medium and micro enterprises.

In your opinion indicate which types of subcontracting relationships in the small clothing manufacturing industry have the greatest impact on the small, medium and micro enterprise's ability to improve on their competitiveness where 1 = little impact on the small firm's ability to improve on their competitiveness and 7 = most impact on the small firm's ability to improve on their competitiveness.

Privatization of production cells to current employees facilitating establishment of their own new enterprise. (1, 2, 3, 4, 5, 6, 7)
Manufacture under contract. (1, 2, 3, 4, 5, 6, 7)
Independent contractual customer/supplier agreement. (1, 2, 3, 4, 5, 6, 7)
Take-on of surplus orders from large manufacturers. (1, 2, 3, 4, 5, 6, 7)
Dissemination of market information and products. (1, 2, 3, 4, 5, 6, 7)
Cutting room services for cut make and trim operators. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of embroidery. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of training. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of quality control. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of packaging. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of distribution. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of making and grading of patterns. (1, 2, 3, 4, 5, 6, 7)
Outsourcing of financial management. (1, 2, 3, 4, 5, 6, 7)
Empowerment programs of big business where small, medium and micro enterprises are monitored to enable them to supply the required products/services at the right price and quality. (1, 2, 3, 4, 5, 6, 7)
Subcontracting by manufacturer directly to cut, make and trims (CMT) who only incurs labour and overhead costs and normally works on smaller margins. (1, 2, 3, 4, 5, 6, 7)
Subcontracting of CMT due to capacity constraints to cottage/home industry supplier. (1, 2, 3, 4, 5, 6, 7)

Please indicate which five forms of subcontracting relationships have the greatest impact on the small enterprise's ability to improve on their competitiveness and

rank them in order of preference where 1 = most important form of relationship to 5 = least form of relationship.

PART 3:Strategies

Question 5

The following management strategies (plans) have been suggested could be used to improve performance/profitability within a firm.

Please indicate the extent to which each of these has the potential to compact positively on a company's performance/profitability where 1 = little potential to improve performance/profitability to 7 = most potential to improve performance/profitability.

Market and product research. (1, 2, 3, 4, 5, 6, 7)
Collaborating and co-operation between businesses for example shared facilities and the sharing of knowledge. (1, 2, 3, 4, 5, 6, 7)
Improved technical training for machinists as well as supervisory skills. (1, 2, 3, 4, 5, 6, 7)
Establish new/niche markets. (1, 2, 3, 4, 5, 6, 7)
SWOT analysis to identify strengths, weaknesses, opportunities and threads and then implement a program to effectively overcome the constraints. (1, 2, 3, 4, 5, 6, 7)
Change the mindset of management from protectionism to global trade. (1, 2, 3, 4, 5, 6, 7)
Implement an effective management information system to measure performance against pre-determined goals. (1, 2, 3, 4, 5, 6, 7)
Interaction with buyers. (1, 2, 3, 4, 5, 6, 7)
Continuous technological innovation. (1, 2, 3, 4, 5, 6, 7)
Cost products effectively. (1, 2, 3, 4, 5, 6, 7)
Get "good" suppliers. (1, 2, 3, 4, 5, 6, 7)
Identify customer needs. (1, 2, 3, 4, 5, 6, 7)
Make productivity and quality improvement priority number one. (1, 2, 3, 4, 5, 6, 7)
Re-engineer production process. (1, 2, 3, 4, 5, 6, 7)
Develop administrative skills. (1, 2, 3, 4, 5, 6, 7)
Formulation and implementation of a business plan. (1, 2, 3, 4, 5, 6, 7)
Quick response to market conditions (1, 2, 3, 4, 5, 6, 7)
Keep workers informed on the successes achieved and display these successes openly to serve as motivators for further improvement. (1, 2, 3, 4, 5, 6, 7)

Select the top five strategies identified and rank them in order of preference where 1 = highest order of preference to 5 = lowest order of preference.

Question 6

The following strategies (plans) have been identified as appropriate for *small manufacturers* to improve their own performance/profitability.

Please indicate the potential of each to affect the performance of small firms where 1 = least potential to affect performance/profitability to 7 = most potential to affect performance/profitability.

Linkages with big business. (1, 2, 3, 4, 5, 6, 7)
New/niche markets. (1, 2, 3, 4, 5, 6, 7)
Better labour utilization. (1, 2, 3, 4, 5, 6, 7)
Development of workers skills. (1, 2, 3, 4, 5, 6, 7)
Training of management/owners (1, 2, 3, 4, 5, 6, 7)
Be marketing orientated instead of production orientated. (1, 2, 3, 4, 5, 6, 7)
Small business development program to assist and advice small, medium and micro enterprises. (1, 2, 3, 4, 5, 6, 7)
Collaboration and co-operation between small manufacturers (networking). (1, 2, 3, 4, 5, 6, 7)
SWOT analysis to identify strengths, weaknesses, opportunities and threads and then implement a program to effectively overcome the constraints. (1, 2, 3, 4, 5, 6, 7)
Continuous product and technology innovation. (1, 2, 3, 4, 5, 6, 7)
Assistance in marketing of products. (1, 2, 3, 4, 5, 6, 7)
Consultants to advise and assist. (1, 2, 3, 4, 5, 6, 7)
Exposure to international market (1, 2, 3, 4, 5, 6, 7)

Indicate the top five strategies in order of potential to improve performance of small firms, commencing with 1 = most potential to 5 = least potential to improve performance/profitability of small firms.

PART 4: CLUSTERS

Question 7

In the context of small business development the term "clustering" has been defined in many ways.

Please indicate how strongly you believe each definition is applicable ranging from 1 = not a suitable definition to 7 = most suitable definition.

Joining together of a group of small, medium and micro enterprises in the same sector to strive towards common objectives. (1, 2, 3, 4, 5, 6, 7)
Clustering means forming alliances/strategies to more effectively compete to benefit enterprises who would not have achieved success on their own. (1, 2, 3, 4, 5, 6, 7)
Creating of a hub that would provide specialist services like finance, accounting and marketing to a group of small manufacturers that have basic sewing skills. (1, 2, 3, 4, 5, 6, 7)
A group of individuals with basic assembly skills get together to complete a required garment for example a few with machining skills, cleaning skills, pressing skills and packaging and delivery. (1, 2, 3, 4, 5, 6, 7)
Inter-firm co-operation (1, 2, 3, 4, 5, 6, 7)

Industrial district of firms with a highly integrated backward and forward linkage (1, 2, 3, 4, 5, 6, 7)

Flexible specialization of small firms within a given sector with allied enterprises (1, 2, 3, 4, 5, 6, 7)

High level of division in production process facilitating subcontracting networks (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important definitions and rank their importance of impact on competitiveness where 1 = most suitable definition to 5 = least suitable definition of "Clustering"

Question 8

Where clustering is defined as business linkages between big and small firm (sub-contracting), problems preventing wide scale implementation in the clothing industry sector have been identified.

Please indicate how strongly you believe each of the problems impact on the implementation of "clustering" in the clothing sector where 1 = little impact and 7 = most impact on the implementation of "clustering".

Distrust. (1, 2, 3, 4, 5, 6, 7)

Lack of skills of small, medium and micro enterprises to meet big firm requirements in terms of delivery, quality etc. (1, 2, 3, 4, 5, 6, 7)

Big member dominance. (1, 2, 3, 4, 5, 6, 7)

Unwillingness of big business to cluster with small firms due to the added "pressure" of mentoring and development of this small firm. (1, 2, 3, 4, 5, 6, 7)

Infrastructure problems particularly urban and rural linkages (1, 2, 3, 4, 5, 6, 7)

Inflexible labour market (1, 2, 3, 4, 5, 6, 7)

Constraints in technology and specialization of small firms (1, 2, 3, 4, 5, 6, 7)

Historical baggage of lack of co-operation between big corporate business and informal small business. (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important problems impacting on the implementation of "clustering" in the clothing sector where 1 = most important to5 = least important.

Question 9

A range of possible solutions to the above mentioned problems have been suggested.

Please indicate how strongly you believe each solution is capable of dealing with the range of problems identified where 1 = little potential to deal with the range of problems and 7 = high potential to deal with the range of problems.

Build trust to address fears of both big and small business. (1, 2, 3, 4, 5, 6, 7)

Educate small as well as big business concerning the benefits of these linkages. (1, 2, 3, 4, 5, 6, 7)

Expanding the existing MAC (manufacturing advisory centers) program to develop small, medium and micro enterprises. (1, 2, 3, 4, 5, 6, 7)
Communication between the relevant firms. (1, 2, 3, 4, 5, 6, 7)
Traditional financial institutions implementing an innovative small, medium and micro enterprise lending program. (1, 2, 3, 4, 5, 6, 7)
Big business taking responsibility to mentor existing small businesses to facilitate them achieving big business requirements in terms of price quality and delivery. (1, 2, 3, 4, 5, 6, 7)
Big business committing to privatized initiative – outsourcing to employees. (1, 2, 3, 4, 5, 6, 7)
Review regulations for small business. (1, 2, 3, 4, 5, 6, 7)
Promote business incubation with central business support. (1, 2, 3, 4, 5, 6, 7)
Manufacturers should form a joint cluster working committee to investigate the possibility of cluster relationships and to advise on how it should be implemented. (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important solutions capable of dealing with the range of solutions and rank their importance of impact on competitiveness where 1= high potential to deal with the problems to 5 = least potential to deal with the problems.

Question 10

Where clustering is defined as inter-firm collaboration (pooling resources/partnerships) a range of problems preventing wide scale implementation in the clothing sector have been identified below.

Please indicate how strongly you believe each of the problems impact on the implementation of "clustering" in the clothing sector where 1 = little impact and 7 = most impact on the implementation of "clustering".

Lack of knowledge about clustering (1, 2, 3, 4, 5, 6, 7)
Lack of trust. (1, 2, 3, 4, 5, 6, 7)
Lack of skills of small, medium and micro enterprises to meet requirements in terms of delivery, quality etc. (1, 2, 3, 4, 5, 6, 7)
Facilitation of the operation of the cluster. (1, 2, 3, 4, 5, 6, 7)
Inter-company working relationship. (1, 2, 3, 4, 5, 6, 7)
The development of member companies to perform to a standard benchmark. (1, 2, 3, 4, 5, 6, 7)
Administration of the cluster. (1, 2, 3, 4, 5, 6, 7)
Membership of the cluster. (1, 2, 3, 4, 5, 6, 7)
Formal business dominance of relationship in terms of financial resources and unilateral decision making. (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important problems impacting on the implementation of "clustering" in the clothing sector where 1 = most important to 5 = least important.

Question 11

A range of possible solutions to the above mentioned problems have been suggested.

Please indicate how strongly you believe each solution is capable of dealing with the range of problems identified where 1 = little potential to deal with the range of problems and 7 = high potential to deal with the range of problems.

Build trust to address fears of small business. (1, 2, 3, 4, 5, 6, 7)
Educate small business concerning the benefits of these linkages. (1, 2, 3, 4, 5, 6, 7)
Proper structuring of the cluster with an agreed constitution to govern membership by full commitment of all partners. (1, 2, 3, 4, 5, 6, 7)
Support from government and big business. (1, 2, 3, 4, 5, 6, 7)
Appointment of full time cluster manager/ executive director. (1, 2, 3, 4, 5, 6, 7)
Collective decision making (1, 2, 3, 4, 5, 6, 7)
Build on synergies and commonalties in terms of market segment, technology etc. (1, 2, 3, 4, 5, 6, 7)

Please identify the five most important solutions capable of dealing with the range of problems and rank their importance of impact on competitiveness where 1 = high potential to deal with the problems to 5 = least potential to deal with the problems.

APPENDIX E

SAMPLE SELECTION

The following different groups of respondents were consulted:

Group 1

Small business owners:

- Mentone Clothing
- Something Different
- Billabong
- Elegant Manufacturers
- Nadkim Clothing
- Walkabout Clothing
- Threads Clothing Manufacturers
- Penmark Clothing
- Embroider Master

Group 2

Academics:

- University of Port Elizabeth Small Business Unit.
- Port Elizabeth Technikon.
- Bethelsdorp Technical College.
- Rhodes University
- Eastern Cape Technikon
- Uitenhage Technical College
- University of Fort Hare
- University of Transkei

Group 3

Professionals in small business development:

- Port Elizabeth Regional Manufacturing Advisory Centre
- Port Elizabeth Regional Chamber of Commerce and Industry
- Municipality of Port Elizabeth
- Business Partners
- Department of Trade and Industry:
- SMME Task Group
- TEXTEK (CSIR)
- Advisor to Industry
- Clothing Federation.
- Comsec

APPENDIX F

REMINDER

Technikon Natal
Entrepreneurial Study Unit

FAX: REMINDER

P.O. Box 1581
Jeffreys Bay
6330
Tel: 082 449 8881
Fax: 042 2962341
Email: hvanlaar@intekom.co.za

From: Karin van Laar

Pages: 1

Date: 2000-06-12

CC: ESU

☑ Urgent ☐ For Review ☐ Please Comment ☑ Please Reply ☐ Please Recycle

All of us are busier these days than we should be, and most of us have a hard time keeping abreast of those obligations, which are essential and required. From the rating sheet, which reached you a week ago - we hope, we have had no reply. We are sure you will try to find fifteen minutes somewhere in your busy schedule to co-operate. Most of them have been returned. We would like to get them all back. Will you help us?

We are looking forward to your speedy response.

Sincerely Yours

Karin van Laar

APPENDIX G

COVER LETTER

Technikon Natal
Entrepreneurial Studies Unit
Berea Campus
Durban
Cell: 082 449 8881
Fax: 042 2962341
Email: hvanlaar@intekom.co.za

October 05, 1999

Dear Sir or Madam:

Subject: Request for co-operation-

The Technikon Natal is appealing to you for help. We again ask a few minutes of your time.

The purpose of this rating sheet is:

- To report back to you with responses to the questionnaire concerning the research study in the clothing industry
- To ask your assistance in ranking these responses.

Firstly, please indicate your level of agreement with each suggestion on a scale of 1 (no potential for dealing with the issue) through7 (very high potential for dealing with the issue). Secondly, rank the suggestions in order of importance. Please email or fax your evaluation to me. It will be appreciated if the rating sheet could be returned within two weeks. After all rating forms have been returned, I will compile the information, rank-order the ideas based on the evaluations, and send you the results.

Thank you for the courtesy of your assistance.

Yours sincerely.

Karin van Laar

APPENDIX H

QUESTIONNAIRE

The purpose of this questionnaire is to:

- Establish the awareness of, and the interest in clustering to enhance competitiveness;
- To identify the constraints to clustering; and
- To determine how these constraints can be overcome.

Instructions:

- Your answers to the questions in this questionnaire will be regarded as strictly confidential and will be used for research purposes only. Please answer the questions as objectively as possible.
- Make sure that you answer all the questions and do not skip any accidentally.
- Please read every question carefully before you answer it.
- Please indicate the degree to which you agree or disagree with the statements by circling the appropriate number on a scale of 1 – 5. (Circle one response only per row)
- Your responses will be anonymously included in the report of results.

General information

- Business name:_____
- Principal activity/sector:_____
- Area/s of specialisation:_____

Personal Background

- Gender:
  - ☐ Male
  - ☐ Female
- Age: ____

- Highest educational qualification:
  - Primary School complete
  - Secondary school
  - Matric
  - Post Matric, Specify

- Any formal management training:
  - Marketing/selling
  - Production
  - Clothing/Textile
  - Other, specify

- Occupation:_____

Business Details

- Year commenced: _____

- Type of entity:
  - Sole proprietorship
  - Partnership
  - Private Company
  - Close Corporation
  - Other, specify_____

- Number of employees: _____

PART 1 - COMPETITIVENESS

1. A range of problems impacting negatively on the competitiveness of small manufacturers in the clothing industry has been identified. Could you please indicate your level of agreement or disagreement with each of the following problems?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
High labour costs have a negative impact on the competitiveness of small firms.	1	2	3	4	5
Low productivity impacts negatively on the performance of small firms.	1	2	3	4	5
Lack of entrepreneurship culture contributes towards small firms not being competitive.	1	2	3	4	5
Labour problems and labour legislation are problems that have a negative impact on the	1	2	3	4	5

performance of small firms.					
Lack of business management skills have an impact on the competitiveness of small firms'	1	2	3	4	5

2. A range of solutions to the above-mentioned problems has been suggested. Could you please indicate your level of agreement or disagreement with each of the following solutions?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Action by government against illegal and/or fraudulent imports as well as the "dumping" of cheap imports.	1	2	3	4	5
Training of workers as a solution to the above-mentioned problems.	1	2	3	4	5
Development of entrepreneurship as a possible solution.	1	2	3	4	5
Market research to determine markets that could be explored and developed.	1	2	3	4	5
The capability of finding niche markets to deal with the range of problems.	1	2	3	4	5

PART 2 – INTER-FIRM COLLABORATION (pooling of resources/partnerships)

3. Has your company entered into any inter-firm collaboration (pooling of resources/partnerships) relationships with other small clothing manufacturers during the last five years?

- ☐ Yes
- ☐ No

4. Are you currently involved in any inter-firm collaboration relationship with any other small clothing manufacturer?

- ☐ Yes
- ☐ No

5. If yes, could you please explain the nature of the inter-firm collaboration relationship?

==========

6. Could you please indicate your overall level of satisfaction in regards to your inter-firm collaboration relationship with your partners?

Very satisfied	Satisfied	Neutral	Unsatisfied	Very unsatisfied
1	2	3	4	5

7. What problems have been encountered in your inter-firm collaboration relationships?

Problems:

1 _____

2 _____

3 _____

4 _____

5 _____

8. What do you think are possible solutions to overcome the above-mentioned problems?

Solutions:

1 _____

2 _____

3 _____

4 _____

5 _____

PART 3 – ATTITUDES

9. There are several benefits to clustering. Could you please indicate your level of agreement or disagreement with each of the following statements when considering inter-firm collaboration /working alliances?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
It allows firms to take advantage of opportunities, which might otherwise have to be passed up due to inadequate resources.	1	2	3	4	5
It reduces costs and improves the price competitiveness of the participating firms.	1	2	3	4	5
It allows the participating firms to adapt more readily to industry or market trends.	1	2	3	4	5
It allows participating firms to refocus the bulk of their energies on their core business.	1	2	3	4	5
Firms can gain access to services such as Research and Development and quality control, which might otherwise be unaffordable.	1	2	3	4	5
Firms are able to innovate on a grander scale.	1	2	3	4	5
Firms can achieve economies of scale equal to that of larger firms	1	2	3	4	5

PART 4 – THE MODEL

10. There are different forms of inter-firm relationships. Could you please indicate which form of inter-firm relationship you are currently engaged in with other small clothing manufacturers?

- ☐ Sharing assets, services or products, e.g. a number of firms collectively own and use the same packaging warehouse, a single cutting room used by a number of firms, shared facilities like a canteen, a single design department used by a number of firms.
- ☐ Collaborating by working together towards the same objectives through one or more of the following: group purchasing of raw materials etc., group marketing of products, group market research, group product sales.

- ☐ Co-operating through combined action to achieve the same goals: joint reception, typing etc, joint management of a research and development center, joint quality control systems.

11. For those forms of relationships you are not currently engaged in, could you please indicate the ones you would be willing to consider?

- ☐ Relationship 1
- ☐ Relationship 2
- ☐ Relationship 3

12. If unwilling, could you please explain briefly the reasons for your unwillingness?

Reasons:

1_____

2_____

3_____

4_____

5_____

PART 5 - CLUSTERING

13. Have you heard of the term "Clustering"?

- ☐ Yes
- ☐ No

14. In the context of small business development the term "Clustering" has been defined in many ways. To what extent do you agree or disagree with the following statements describing the term "clustering"?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Joining together of a group of small, medium and micro enterprises in the same sector to strive towards common objectives.	1	2	3	4	5
Creating of a hub that would provide specialist services like finance, accounting and marketing to a group of small manufacturers that have basic sewing skills.	1	2	3	4	5

Clustering means forming alliances/strategies to more effectively compete to benefit enterprises that would not have achieved success on their own.	1	2	3	4	5
A group of individuals with basic assembly skills get together to complete a required garment for example a few with machining skills, cleaning skills, pressing skills and packaging and delivery.	1	2	3	4	5
Flexible specialization between small firms within a given sector.	1	2	3	4	5

15. Clustering can be defined as small businesses forming linkages/partnerships with each other, e.g. pooling resources, sharing labour. In the context of small, medium and micro enterprise development, to what extent do you agree or disagree that clustering can contribute to the "Transfer of Technology"

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

16. To what extent do you agree or disagree that clustering can be employed as a management strategy (plans) to improve performance/profitability within a firm?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

17. To what extent do you agree or disagree that clustering can be employed as a strategy (plan) for *small manufacturers* to improve their own performance/profitability?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

18. Training institutions often provide various programs to improve skills. To what extent do you agree or disagree that these programs are helpful in promoting clustering?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

19. In your opinion should government intervene in the development of clustering?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

20. Intermediaries such as service providers e.g. TEXTEK (CSIR) and PERMAC are sometimes used as an intermediary to link businesses together. To what extent do you agree or disagree that intermediaries are effective in facilitating linkages?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

PART 6 – PROBLEMS/SOLUTIONS

21. Clustering does not seem to be commonplace. Where clustering is defined as inter-firm collaboration (pooling resources/partnerships) a range of problems preventing wide scale implementation in the clothing sector has been identified. To what extent do you agree or disagree with the following statements describing the problems preventing wide scale implementation in the clothing sector?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Lack of knowledge about clustering is a problem that can prevent wide scale implementation.	1	2	3	4	5
Lack of skills of small, medium and micro enterprises to meet requirements in terms of delivery, quality etc	1	2	3	4	5
Lack of trust between collaborating firms.	1	2	3	4	5
Facilitation of the operation of the cluster.	1	2	3	4	5
Administration of the cluster as a problem.	1	2	3	4	5

22. A range of possible solutions to the above-mentioned problems has been suggested. To what extent do you agree or disagree with the following statements describing the possible solutions to the above-mentioned problems.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Educate small business concerning the benefits of these linkages.	1	2	3	4	5
Build on synergies and commonalties in terms of market segment, technology etc.	1	2	3	4	5
Build trust to address fears of small business.	1	2	3	4	5
Proper structuring of the cluster with an agreed constitution to govern membership by full commitment of all partners.	1	2	3	4	5
Support from government and big business.	1	2	3	4	5

23. To what extent do you agree or disagree that clustering can improve the competitiveness of small manufacturers in the clothing industry?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

Thank you for your time. It is highly appreciated.

APPENDIX I

Census Survey

Small business owners:

Designer Collections
Fudge Clothing
Anmarks
Mentone
Symara Knitwear
Tradelink
Billabong Clothing
Handy Creations
Nadkim Clothing
Penmark Clothing
Vanree
Threads Clothing Manufacturers
Sports Access
Charisma Creations
Elegant Manufacturers
Association for the Physically Disabled
Caira Manufacturers
Embroidery Master
Walkabout Clothing
Baywear Clothing
Valley Textiles
Squarehouse Clothing
Babalina
Spikes Studio
Designer Threads
Marbella
Belladonna
M. L. Leisurewear
Embroider Wise
Status Promotion
Lady Africa
Pheteco Clothing
C & L Marketing
Bean bags for Africa
Doo-littles Baby Gear
Harem Manufacturers
Jo-Fai-Chan
La Gardi Clothing Manufacturers
Lukhanye Sewing Centre

Small Business Development:

PERMAC
TEXTEK
Consultant: Richard Raglend
Consultant: Dawid Jordaan
Clothing Federation
COMSEC
Dept. of Economic Affairs
Dept. of Trade & Industry

Academics:

University Fort Hare
University Port Elizabeth
Technikon Port Elizabeth
Rhodes University
Eastern Cape Technikon

APPENDIX J

RESEARCH ANALYSIS

Qualitative analysis

Question 1: Mean level of agreement for each problem impacting on small firm's competitiveness.

Academics	Small business owners	Small business development	Agreement
6	7	5	6
6	4	4	5
4	7	6	6
5	7	5	6
5	7	3	5
4	6	5	5
5	7	7	6
6	6	6	6
5	7	6	6
6	7	5	6
5	7	6	6
4	6	6	5
4	6	5	5
3	6	5	5
3	7	6	5
4	5	4	4
4	7	4	5
79	109	88	
66%	92%	74%	

Question 2: Mean level of agreement for each solution to the above mentioned problems

Academics	Small business owners	Small business development	Agreement
7	5	6	6
6	5	5	5
6	6	7	6
7	6	6	6
6	6	4	5
3	5	5	4
3	6	6	5

4	7	6	6
4	5	7	5
6	6	4	5
6	7	7	7
5	5	6	5
5	5	5	5
5	7	6	6
5	6	5	5
6	5	5	5
4	3	3	3
6	6	5	6
94	101	98	
75%	80%	78%	

Question 3: Mean level of agreement for each definition for the term "Technology Transfer".

Academics	Small business owners	Small business development	Agreement
3	3	5	4
5	4	6	5
5	5	6	5
6	5	6	6
6	5	6	6
5	3	5	4
5	5	6	5
4	6	6	5
4	5	5	5
4	4	6	5
4	4	4	4
4	5	5	5
55	54	66	
65%	64%	79%	

Question 4: Mean level of agreement for each type of sub contracting relationship

Academics	Small business owners	Small business development	Agreement
4	5	6	5
5	6	5	5
5	6	4	5
4	4	4	4
4	5	5	5
4	5	6	5

3	5	3	4
4	6	5	5
2	4	5	4
3	4	5	4
3	4	5	4
4	6	5	5
2	7	6	5
4	6	5	5
4	6	6	5
5	5	4	5
60	84	79	
54%	75%	71%	

Question 5: Mean level of agreement for each management strategy to improve performance.

Academics	Small business owners	Small business development	Agreement
6	7	5	6
6	5	5	5
6	6	6	6
5	7	5	6
4	5	6	5
6	7	6	6
5	7	6	6
4	6	5	5
6	7	5	6
5	7	5	6
4	7	5	5
6	7	6	6
6	6	6	6
6	6	5	6
5	5	5	5
4	7	5	5
7	7	6	7
7	6	5	6
98	115	97	
78%	91%	77%	

Question 6: Mean level of agreement for each strategy for small manufacturers to improve their performance.

Academics	Small business owners	Small business development	Agreement
5	4	6	5
6	7	6	6
5	7	5	6
6	7	5	6
7	6	6	6
6	6	6	6
6	5	5	5
6	4	4	5
4	5	6	5
6	6	5	6
5	5	6	5
5	5	6	5
6	5	5	5
73	72	71	
80%	79%	78%	

Question 7: Mean level of agreement for each definition of the term " Clustering".

Academics	Small business owners	Small business development	Agreement
6	5	5	5
6	6	5	6
5	7	5	6
5	5	5	5
5	5	5	5
5	5	5	5
4	6	5	5
4	6	5	5
40	45	40	
71%	80%	71%	

Question 8: Mean level of agreement for each problem preventing wide scale implementation of vertical clustering.

Academics	Small business owners	Small business development	Agreement
5	5	6	5
7	7	6	7
5	7	5	6
6	6	5	6

5	6	6	6
6	6	5	6
6	7	7	7
6	6	5	6
46	50	45	
82%	89%	80%	

Question 9: Mean level of agreement for each solution to the above-mentioned problems.

Academics	Small business owners	Small business development	Agreement
4	6	5	5
5	7	6	6
3	7	5	5
5	6	6	6
5	6	5	4
7	6	6	6
6	6	5	6
5	7	5	6
6	6	5	6
4	6	5	5
50	63	53	
71%	90%	76%	

Question 10: Mean level of agreement for each problem preventing wide scale implementation of horizontal clustering.

Academics	Small business owners	Small business development	Agreement
7	7	5	6
6	7	6	6
7	7	7	7
5	6	5	5
4	5	4	4
5	6	5	5
5	5	5	5
3	6	5	5
3	7	6	5
45	56	48	
71%	89%	76%	

Question 11: Mean of level of agreement for each solution to the above-mentioned problems.

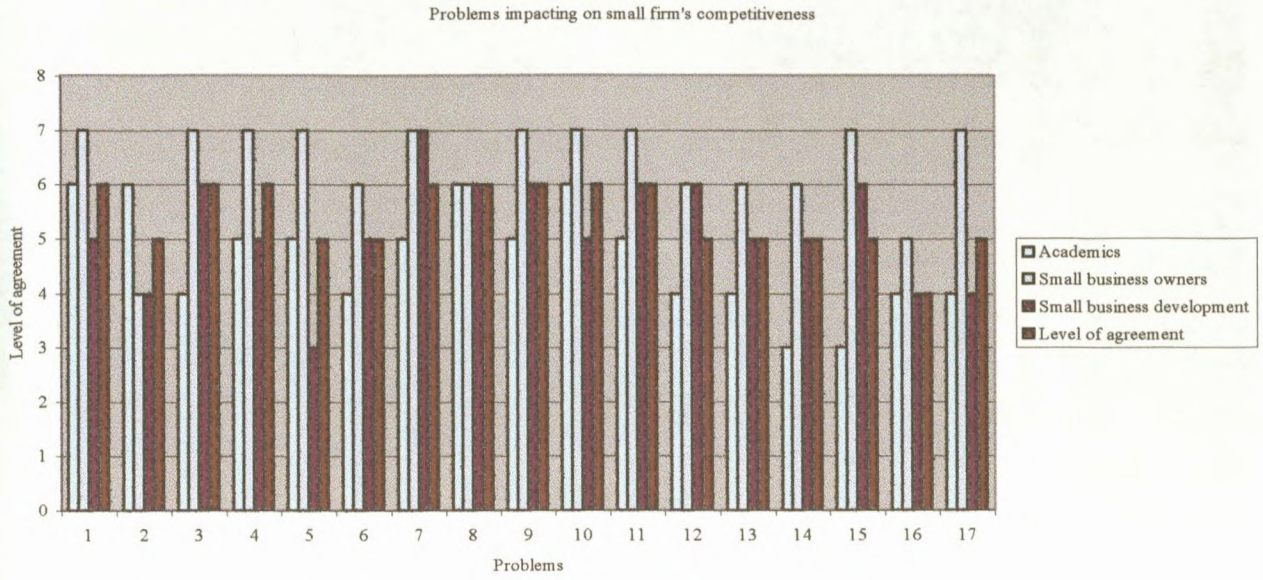
Academics	Small business owners	Small business development	Agreement
5	7	5	6
6	6	6	6
6	6	6	6
5	6	6	6
4	6	6	5
4	6	6	5
7	6	6	6
37	43	41	
76%	88%	84%	

Table1 Mean level of agreement for each problem impacting negatively on small manufacturers in the clothing industry

No	Problems	Level of agreement
1	Low productivity	6
2	Lack of entrepreneurship culture	5
3	High cost of finance	6
4	High labour costs	6
5	Labour problems and legislation	5
6	Over regulation of formal industry	5
7	Insufficient capital	6
8	Lack of business management skills	6
9	Limited access to markets	6
10	Competitiveness	6
11	Illegal and/or fraudulent imports	6
12	Raw material procurement	5
13	Market dominance of a small number of very large buyers	5
14	Lack of access to technology	5
15	Lack of access to finance	5
16	Lack of access to human resource development	4
17	Low profit margins	5

Source: analysis of survey data

Fig. 5.1 Comparison of the mean level of agreement of the three groups of respondents



Source: analysis of survey data (Appendix J)

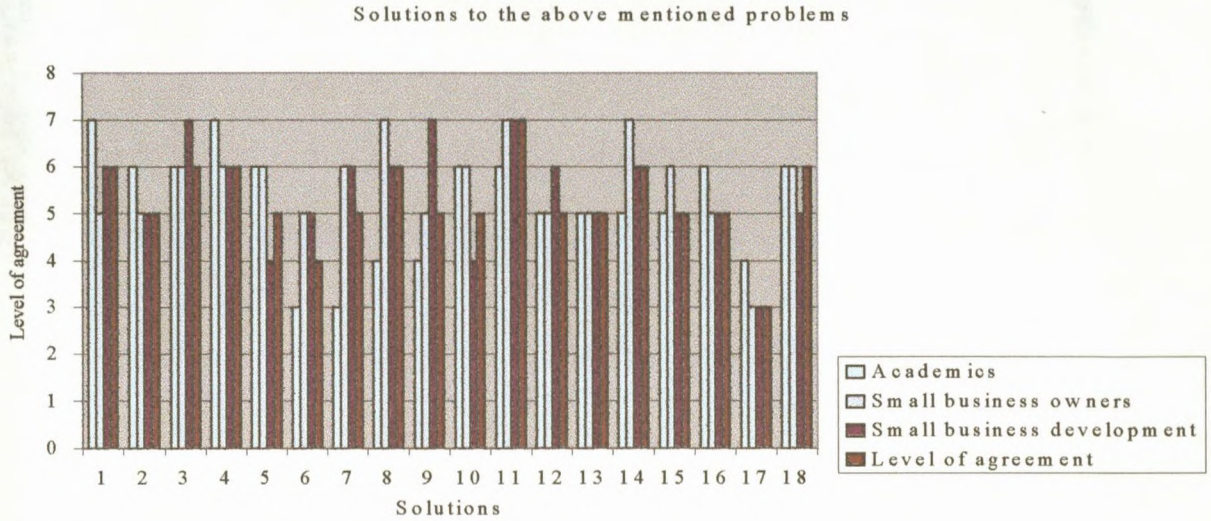
Table 2 Mean level of agreement for each solution to the above-mentioned problems

No	Solutions	Level of agreement
1	Development of entrepreneurship	6
2	Development of international mindset and exposing people to the international market	5
3	Training of workers	6
4	Training of management	6
5	Review of labour legislation	5
6	Partially de-regulation of industry	4
7	Provision of loan facilities	5
8	Provide affordable finance	6
9	Establishment of manufacturing advisory centers	5
10	Action by government against illegal and/or fraudulent imports as well as the "dumping" of cheap imports.	5
11	Finding niche markets	7
12	Linkages/partnerships between big and small firms	5
13	Create export opportunities	5
14	Produce high value products offering better margins	6
15	Reduced variety of product type	5
16	Promote productivity through effective methods applications and control monitoring systems	5
17	Re-introducement of import duties and protection tariffs for a limited period in order to allow small manufacturers to get their house in order.	3
18	Market research to determine markets that could be explored	6

	and developed	

Source: analysis of survey data.

Fig.5.2 Comparison of the mean level of agreement of the three groups of respondents



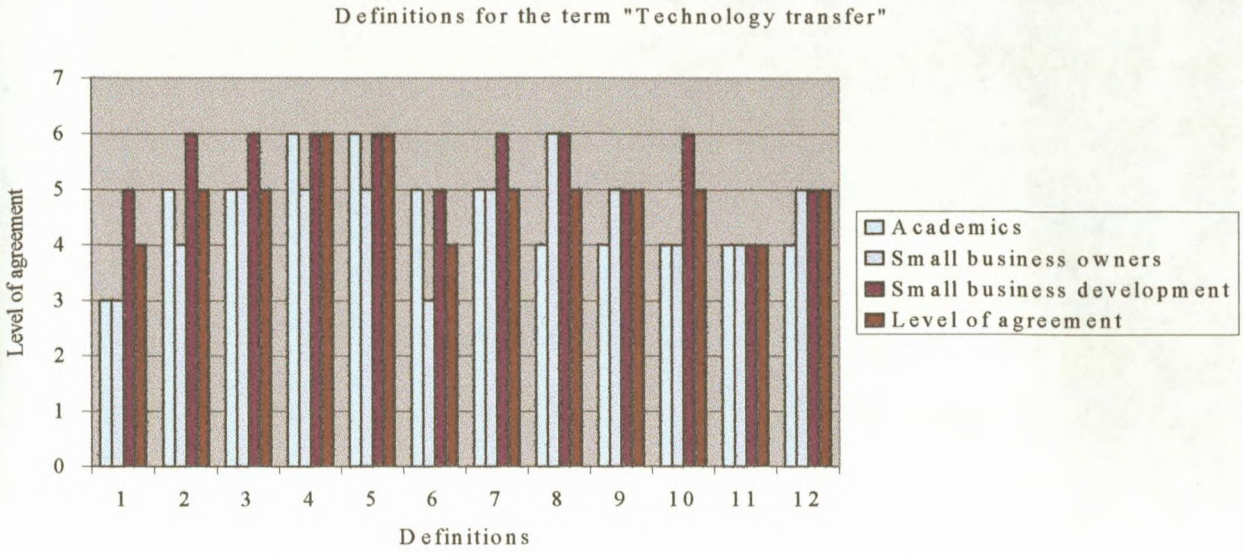
Source: analysis of survey data (Appendix J)

Table 3 Mean level of agreement for each definition for the term "Technology transfer"

No	Definitions	Level of agreement
1	Big companies nurture small, medium and micro enterprises and transfer their technology to these enterprises	4
2	Create partnership and share resources	5
3	Transfer of technical skills and the correct application thereof	5
4	Empowering small, medium and micro enterprises to improve production by technical means.	6
5	Acquisition of appropriate technology matching capacity needs and market demands	6
6	Switch from manual to technological advanced machines	4
7	Capacity building and developing resource capability to facilitate replication in a cost-effective manner.	5
8	New production methods and machines	5
9	Computer designs, pattern making and grading	5
10	Electronic transmission of patterns to and from customers; electronic banking and wages; and email and websites	5
11	Invite small, medium and micro enterprises to observe and learn with factory visits	4
12	Provision of technology demonstration and outreach	5

Source: analysis of survey data

Fig. 5.3 Comparison of the mean level of agreement of the three groups of respondents



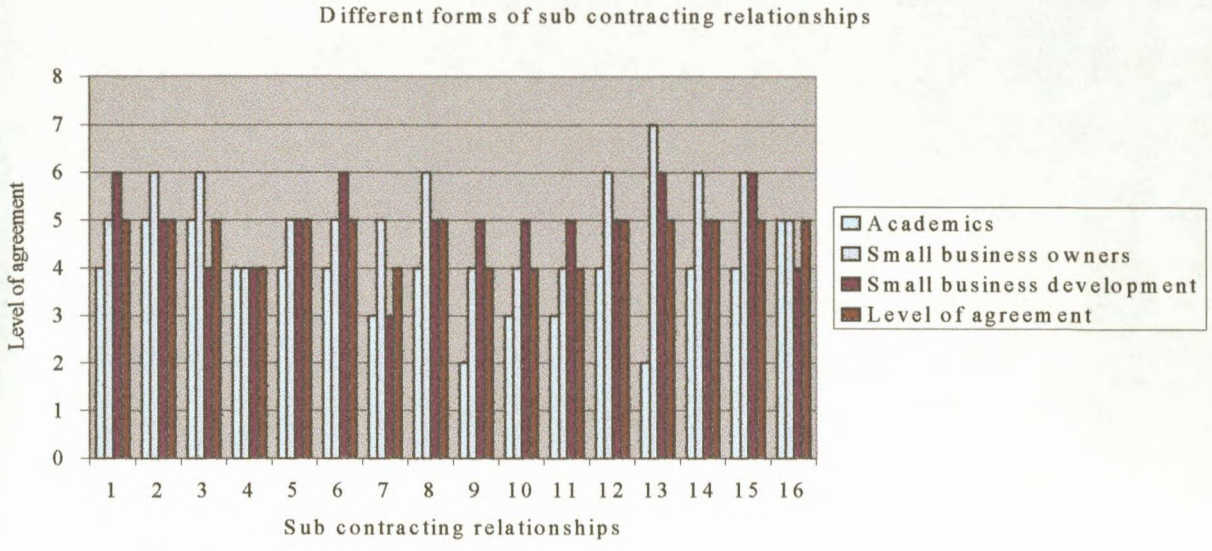
Source: analysis of survey data (Appendix J)

Table 4 Mean level of agreement for each different form of sub contracting relationship

No	Sub contracting relationships	Level of agreement
1	Privatisation of production cells to current employees facilitating establishment of their own new enterprise.	5
2	Manufacture under contract	5
3	Independent contractual customer/supplier agreement	5
4	Take-on of surplus orders from large manufacturers	4
5	Dissemination of market information and products	5
6	Cutting room services for cut, make and trim operators	5
7	Outsourcing of embroidery	4
8	Outsourcing of training	5
9	Outsourcing of quality control.	4
10	Outsourcing of packaging	4
11	Outsourcing of distribution.	4
12	Outsourcing of making and grading of patterns	5
13	Outsourcing of financial management	5
14	Empowerment programs of big business where small, medium and micro enterprises are monitored to enable them to supply the required products/services at the right price and quality.	5
15	Subcontracting by manufacturer directly to cut, make and trim (CMT) who only incurs labour and overhead costs and normally works on smaller margins.	5
16	Subcontracting of CMT due to capacity constraints to cottage/home industry supplier	5

Source: analysis of survey data.

Fig. 4 Comparison of the mean level of agreement of the three groups of respondents



Source: analysis of survey data. (Appendix J)

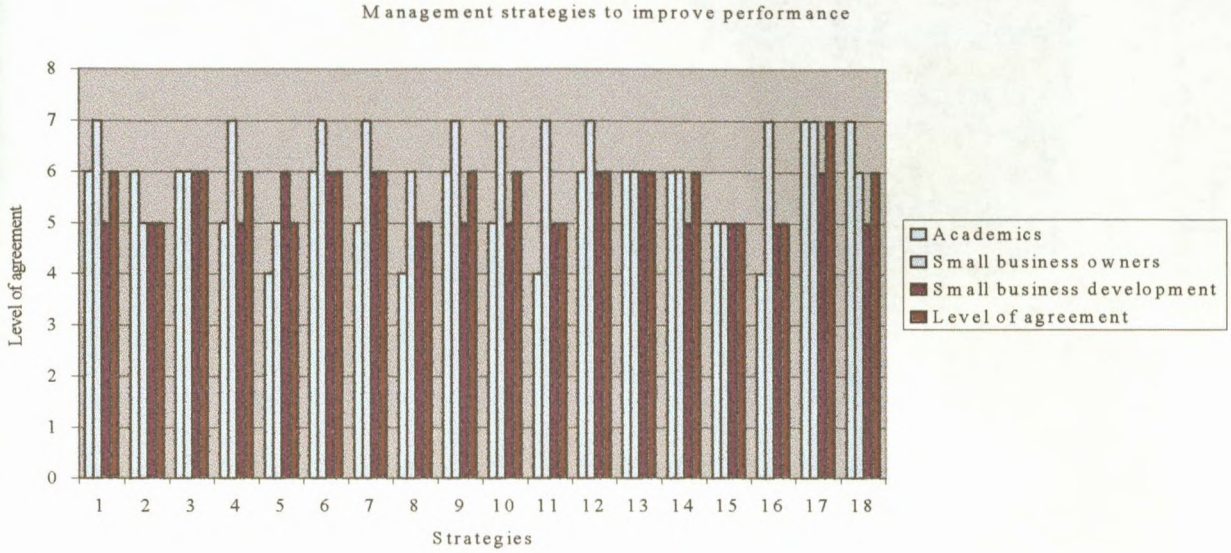
Table.5 Mean level of agreement for each management strategy to improve performance/profitability

	Strategies	Level of agreement
1	Market and product research.	6
2	Collaborating and co-operation between businesses for example shared facilities and the sharing of knowledge	5
3	Improved technical training for machinists as well as supervisory skills	6
4	Establish new/niche markets	6
5	SWOT analysis to identify strengths, weaknesses, opportunities and threats and then implement a program to effectively overcome the constraints.	5
6	Change the mindset of management from protectionism to global trade.	6
7	Implement an effective management information system to measure performance against pre-determined goals	6
8	Interaction with buyers	5
9	Continuous technological innovation	6
10	Cost products effectively	6
11	Get "good" suppliers.	5
12	Identify customer needs.	6
13	Make productivity and quality improvement priority number one	6
14	Re-engineer production process	6
15	Develop administrative skills	5
16	Formulation and implementation of a business plan	5
17	Quick response to market conditions	7
18	Keep workers informed on the successes achieved and display these successes openly to serve as motivators for	6

	further improvement.	

Source: analysis of survey data.

Fig. 5 Comparison of the mean level of agreement of the three groups of respondents



Source: analysis of survey data (Appendix J)

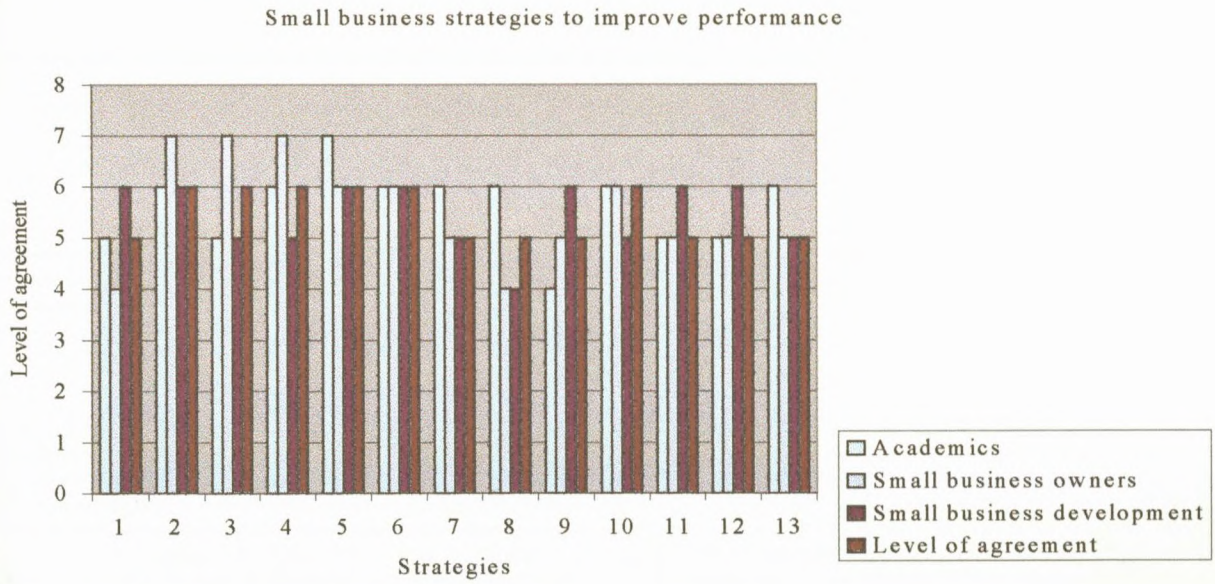
Table 6 Mean level of agreement for each strategy's appropriateness for small manufacturers to improve their own performance

No	Strategies	Level of agreement
1	Linkages with big business	5
2	New/niche markets	6
3	Better labour utilization	6
4	Development of workers skills	6
5	Training of management/owners	6
6	Be marketing orientated instead of production orientated	6
7	Small business development program to assist and advice small, medium and micro enterprises.	5

8	Collaboration and co-operation between small manufacturers (networking).	5
9	SWOT analysis to identify strengths, weaknesses, opportunities and threats and then implement a program to effectively overcome the constraints.	5
10	Continuous product and technology innovation	6
11	Assistance in marketing of products	5
12	Consultants to advice and assist.	5
13	Exposure to international market	5

Source: analysis of survey data

Fig. 6 Comparison of the mean level of agreement of the three groups of respondents



Source: analysis of survey data (Appendix J)

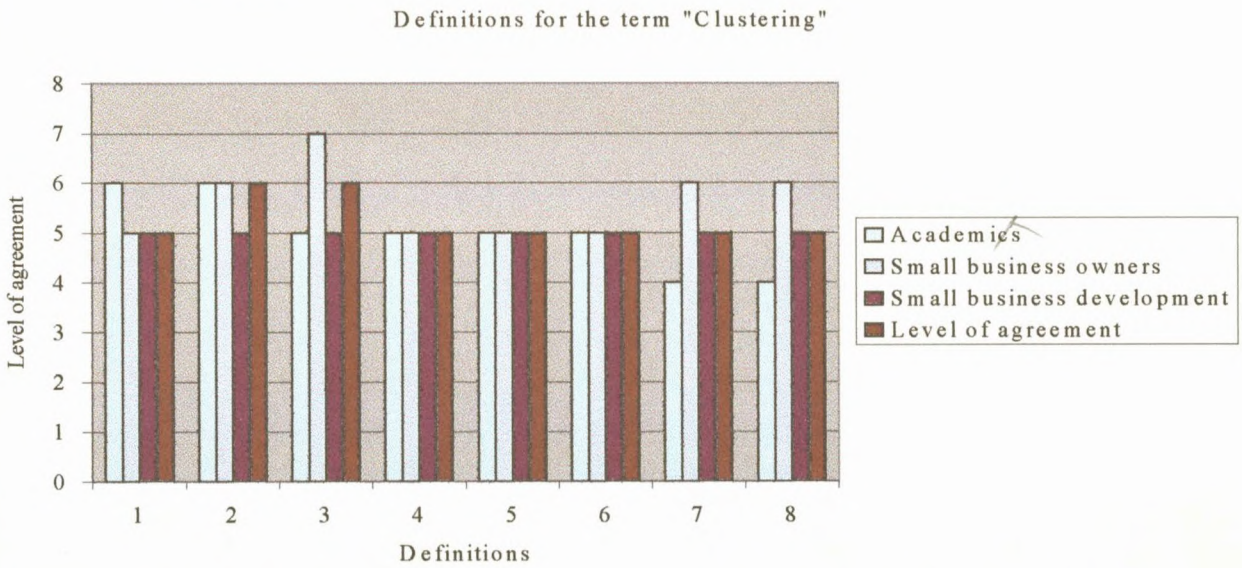
Table 7 Mean level of agreement for each definition for the term "Clustering"

No	Definitions	Level of agreement
1	Joining together of a group of small, medium and micro enterprises in the same sector to strive towards common objectives.	5
2	Clustering means forming alliances/strategies to more effectively compete to benefit enterprises who would not have achieved success on their own.	6
3	Creation of a hub that would provide specialist services like	6

	finance, accounting and marketing to a group of small manufacturers that have basic sewing skills.	
4	A group of individuals with basic assembly skills get together to complete a required garment for example a few with machining skills, cleaning skills, pressing skills and packaging and delivery.	5
5	Inter-firm co-operation	5
6	Industrial district of firms with a highly integrated backward and forward linkage	5
7	Flexible specialization of small firms within a given sector with allied enterprises	5
8	High level of division in production process facilitating subcontracting networks	5

Source: analysis of survey data

Fig. 7 Comparison of the mean level of agreement of the three groups of respondents



Source: analysis of survey data (Appendix J)

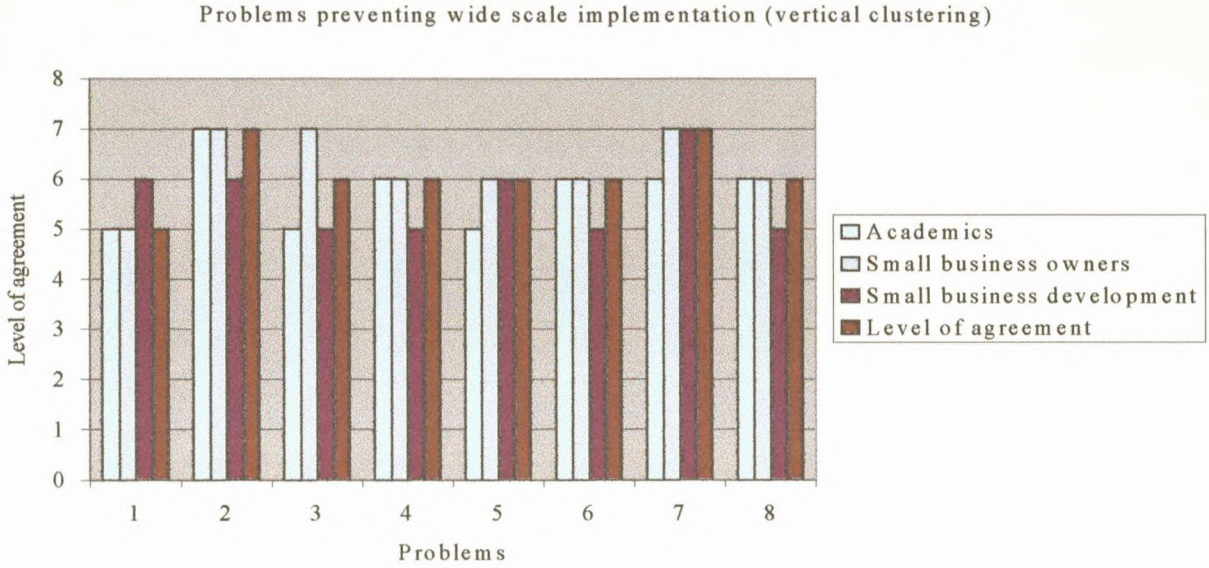
Table 8 Mean level of agreement for each problem preventing wide scale implementation where clustering is defined as linkages between big and small firms

No	Problems	Level of agreement
1	Distrust.	5
2	Lack of skills of small, medium and micro enterprises to meet big firm requirements in terms of delivery, quality, etc	7
3	Big member dominance	6
4	Unwillingness of big business to cluster with small firms due to the added "pressure" of mentoring and development of this small firm.	6

5	Infrastructure problems particularly urban and rural linkages	6
6	Inflexible labour market	6
7	Constraints in technology and specialization of small firms	7
8	Historical baggage of lack of co-operation between big corporate business and informal small business.	6

Source: analysis of survey data

Fig. 8 Comparison of the mean level of agreement for the three groups of respondents



Source: analysis of survey data (Appendix J)

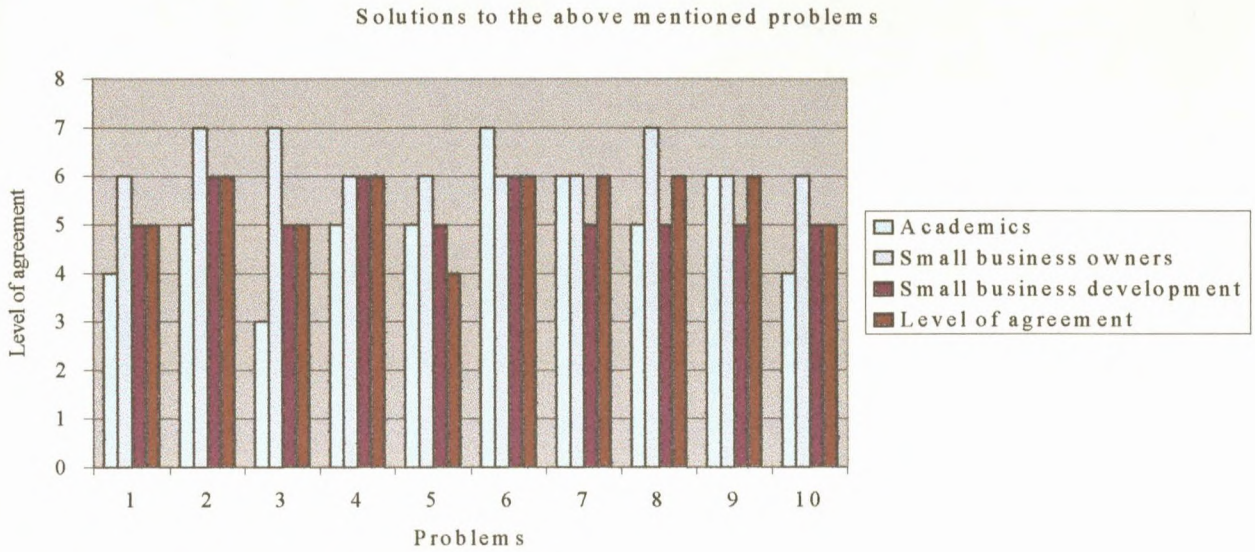
Table 9 Mean level of agreement for each solution to the above-mentioned problems

No	Solutions	Level of agreement
1	Build trust to address fears of both big and small business	5
2	Educate small as well as big business concerning the benefits of these linkages	6
3	Expanding the existing MAC (manufacturing advisory centers) program to develop small, medium and micro enterprises.	5
4	Communication between the relevant firms	6
5	Traditional financial institutions implementing an innovative small, medium and micro enterprise lending program.	4
6	Big business taking responsibility to mentor existing small businesses to facilitate them achieving big business requirements in terms of price quality and delivery	6
7	Big business committing to privatized initiative –	6

	outsourcing to employees	
8	Review regulations for small business	6
9	Promote business incubation with central business support	6
10	Manufacturers should form a joint cluster working committee to investigate the possibility of cluster relationships and to advise on how it should be implemented	5

Source: analysis of survey data

Fig. 9 Comparison of the mean level of agreement of the three groups of respondents



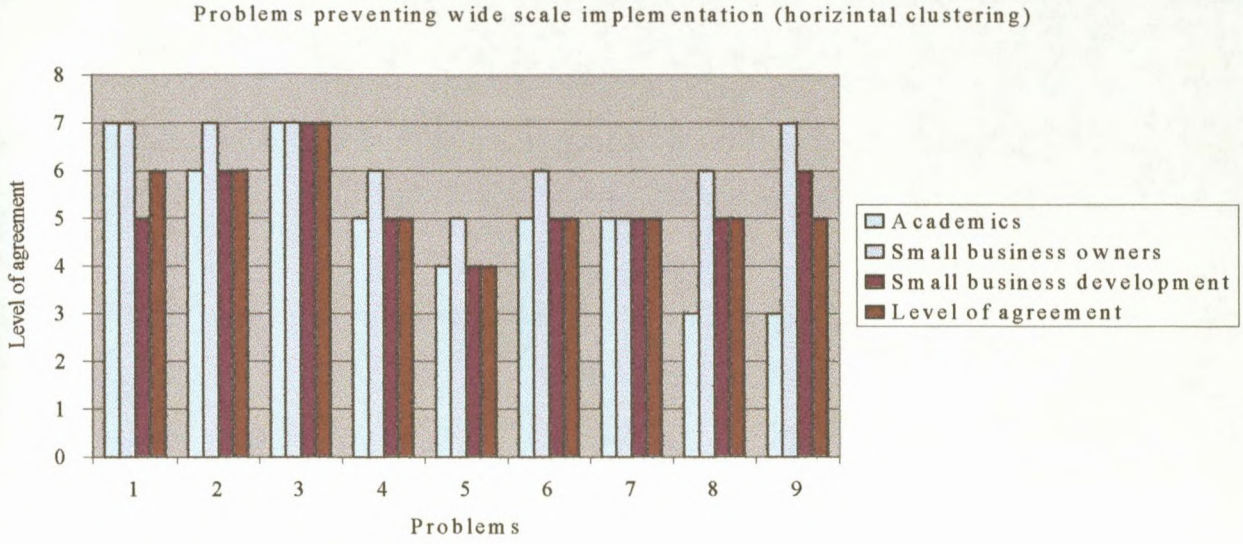
Source: analysis of survey data (Appendix J)

Table 10 Mean level of agreement for each problem preventing wide scale implementation where clustering is defined as inter-firm collaboration

No	Problems	Level of agreement
1	Lack of knowledge about clustering	6
2	Lack of trust	6
3	Lack of skills of small, medium and micro enterprises to meet requirements in terms of delivery, quality, etc.	7
4	Facilitation of the operation of the cluster	5
5	Inter-company working relationship	4
6	The development of member companies to perform to a standard benchmark.	5
7	Administration of the cluster.	5
8	Membership of the cluster.	5
9	Formal business dominance of relationship in terms of financial resources and unilateral decision-making.	5

Source: analysis of survey data

Fig. 10 Comparison of the mean level of agreement of the three groups of respondents



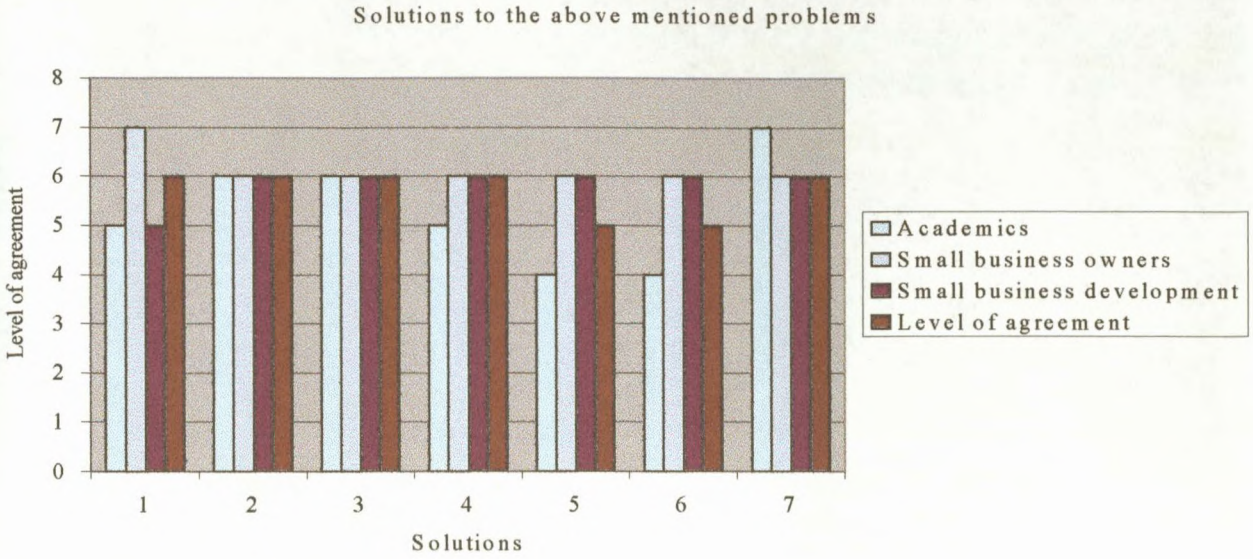
Source: analysis of survey data (Appendix J)

Table 11 Mean level of agreement for each solution to the above-mentioned problems

No	Solutions	Level of agreement
1	Build trust to address fears of small business.	6
2	Educate small business concerning the benefits of these linkages	6
3	Proper structuring of the cluster with an agreed constitution to govern membership by full commitment of all partners.	6
4	Support from government and big business	6
5	Appointment of full time cluster manager/ executive director.	5
6	Collective decision making	5
7	Build on synergies and commonalties in terms of market segment, technology etc	6

Source: analysis of survey data

Fig. 11 Comparison of the mean level of agreement of the three groups of respondents



Source: analysis of survey data (Appendix J)

THE QUANTITATIVE STUDY

Table 12 High labour costs have a negative impact on the competitiveness of small firms.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	8	2	1	11
	Percent	72.7%	18.2%	9.1%	100.0%
Experts	Frequency	2	5	1	8
	Percent	25.0%	62.5%	12.5%	100.0%
Total	Frequency	10	7	2	19
	Percent	52.6%	36.8%	10.5%	100.0%

Mean = 1.58 Standard Deviation = .69 p = .073 for n = 19
Source: analysis of survey data

Table 13 Low productivity impacts negatively on the performance of small firms.

		Strongly agree	Agree	Total
Small business owner	Frequency	9	2	11
	Percent	81.8%	18.2%	100.0%
Experts	Frequency	6	2	8
	Percent	75.0%	25.0%	100.0%
Total	Frequency	15	4	19
	Percent	78.9%	21.1%	100.0%

Mean = 1.21 Standard deviation = .42 p = .726 for n = 19
Source: analysis of survey data

Table 14 Lack of entrepreneurship culture contributes towards small firms not being competitive

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	1	6	3	1	11
	Percent	9.1%	54.5%	27.3%	9.1%	100.0%
Experts	Frequency	3	3	2		8
	Percent	37.5%	37.5%	25.0%		100.0%
Total	Frequency	4	9	5	1	19
	Percent	21.1%	47.4%	26.3%	5.3%	100.0%

Mean = 2.16 Standard Deviation = .83 p = .232 for n = 19
Source: analysis of survey data

Table 15 Labour problems and labour legislation are problems that have a negative impact on the performance of small firms

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	4	6	1		11
	Percent	36.45%	54.5%	9.1%		100.0%
Experts	Frequency	2	3	1	2	8
	Percent	25.05%	37.5%	12.5%	25.0%	100.0%
Total	Frequency	6	9	2	2	19
	Percent	31.6%	47.4%	10.5%	10.5%	100.0%

Mean = 2.00 Standard Deviation = .94 p = .230 for n = 19
Source: analysis of survey data

Table 16 Lack of business management skills have an impact on the competitiveness of small firms.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	2	5	3	1	11
	Percent	18.2%	45.5%	27.3%	9.1%	100.0%
Experts	Frequency	8				8
	Percent	100.0%				100.0%
Total	Frequency	10	5	3	1	19
	Percent	52.6%	26.3%	15.8%	5.3%	100.0%

Mean = 1.74 Standard Deviation = .93 p = .001 for n = 19
Source: analysis of survey data

Discriminant analysis – 89.5% of original grouped cases were correctly classified

Table 17 Action by government against illegal and/or fraudulent imports as well as the dumping of "cheap" imports.

		Strongly agree	Agree	Total
Small business owner	Frequency	11		11
	Percent	100.0%		100.0%
Experts	Frequency	4	4	8
	Percent	50.0%	50.0%	100.0%
Total	Frequency	15	4	19
	Percent	78.9%	21.1%	100.0%

Mean = 1.21 Standard deviation = .42 p = .010 for n = 19
Source: analysis of survey data

Discriminant analysis – 78.9% of original grouped cases were correctly classified

Table 18 Training of workers as a solution to the above-mentioned problems.

		Strongly agree	Agree	Total
Small business owner	Frequency	6	5	11
	Percent	54.5%	45.5%	100.0%
Experts	Frequency	3	5	8
	Percent	37.5%	62.5%	100.0%
Total	Frequency	9	10	19
	Percent	47.5%	52.6%	100.0%

Mean = 1.53 Standard deviation = .51 p = .475 for n = 19
Source: analysis of survey data

Table 19 Development of entrepreneurship as a possible solution.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	3	7	1	11
	Percent	27.3%	63.6%	9.1%	100.0%
Experts	Frequency	5	2	1	8
	Percent	62.5%	25.0%	12.5%	100.0%
Total	Frequency	8	9	2	19
	Percent	42.1%	47.4%	10.5%	100.0%

Mean = 1.68 Standard Deviation = .67 p = .236 for n = 19
Source: analysis of survey data

Table 20 Market research to determine markets that could be explored and developed.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	8	2	1	11
	Percent	72.7%	18.2%	9.1%	100.0%
Experts	Frequency	4	4		8
	Percent	50.0%	50.0%		100.0%
Total	Frequency	12	6	1	19
	Percent	63.2%	31.6%	5.3%	100.0%

Mean = 1.42 Standard Deviation = .61 p = .436 for n = 19
Source: analysis of survey data

Table 21 The capability of finding niche markets to deal with the range of problems.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	7	3	1	11
	Percent	63.6%	27.3%	9.1%	100.0%
Experts	Frequency	5	3		8
	Percent	62.5%	37.5%		100.0%
Total	Frequency	12	6	1	19
	Percent	63.2%	31.6%	5.3%	100.0%

Mean = 1.42 Standard Deviation = .61 p = .922 for n = 19
Source: analysis of survey data

Table 22 Inter-firm collaboration relationships with other small clothing manufacturers during the last five years.

	Frequency	Percent	Cumulative Percent
Yes	4	36.4%	36.4%
No	7	63.6%	100.0%
Total	11	100.0%	

n = 11
Source: analysis of survey data

Table 23 Inter-firm collaboration relationships currently with other small clothing manufacturers.

	Frequency	Percent	Cumulative Percent
Yes	4	36.4%	36.4%
No	7	63.6%	100.0%
Total	11	100.0%	

n = 11
Source: analysis of survey data

Table 24 The level of satisfaction in regards to the inter-firm collaboration relationships.

		Very satisfied	Satisfied	Neutral	Total
Small business owner	Frequency	2	1	1	4
	Percent	50.0%	25.0%	25.0%	100.0%

n = 4
Source: analysis of survey data

Table 25 It allows firms to take advantage of opportunities, which might otherwise have to be passed up due to inadequate resources.

		Strongly agree	Agree	Total
Small business owner	Frequency	6	5	11
	Percent	54.5%	45.5%	100.0%
Experts	Frequency	3	5	8
	Percent	37.5%	62.5%	100.0%
Total	Frequency	9	10	19
	Percent	47.5%	52.6%	100.0%

Mean = 1.53 Standard deviation = .51 p = .475 for n = 19
Source: analysis of survey data

Table 26 It reduces costs and improves the price competitiveness of the participating firms.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	1	9	1	11
	Percent	9.1%	81.8%	9.1%	100.0%
Experts	Frequency	3	3	2	8
	Percent	37.5%	37.5%	25.0%	100.0%
Total	Frequency	4	12	3	19
	Percent	21.1%	63.2%	15.8%	100.0%

Mean = 1.95 Standard deviation = .62 p = .631 for n = 19
Source: analysis of survey data

Table 27 It allows the participating firms to adapt more readily to industry or market trends.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	3	6	1	1	11
	Percent	27.3%	54.5%	9.1%	9.1%	100.0%
Experts	Frequency	2	4	2		8
	Percent	25.0%	50.0%	25.0%		100.0%
Total	Frequency	5	10	3	1	19
	Percent	26.3%	52.6%	15.8%	5.3%	100.0%

Mean = 2.00 Standard deviation = .82 p = .857 for n = 19
Source: analysis of survey data

Table 28 It allows participating firms to refocus the bulk of their energies on their core business.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	4	6	1	11
	Percent	36.4%	54.5%	9.1%	100.0%
Experts	Frequency		6	2	8
	Percent		75.0%	25.0%	100.0%
Total	Frequency	4	12	3	19
	Percent	21.1%	63.2%	15.8%	100.0%

Mean = 1.95 Standard deviation = .62 p = .068 for n = 19
Source: analysis of survey data

Table 29 Firms can gain access to services such as Research and Development and quality control, which might otherwise be unaffordable.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	1	9	1	11
	Percent	9.1%	81.8%	9.1%	100.0%
Experts	Frequency	6	2		8
	Percent	75.0%	25.0%		100.0%
Total	Frequency	7	11	1	19
	Percent	36.8%	57.9%	5.3%	100.0%

Mean = 1.68 Standard deviation = .58 p = .004 for n = 19
Source: analysis of survey data

Discriminant analysis – 100% of original grouped cases were correctly clasified

Table 30 Firms are able to innovate on a grander scale.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	2	7	2	11
	Percent	18.2%	63.6%	18.2%	100.0%
Experts	Frequency	2	4	2	8
	Percent	25.0%	50.0%	25.0%	100.0%
Total	Frequency	4	11	4	19
	Percent	21.1%	57.9%	21.1%	100.0%

Mean = 2.00 Standard deviation = .67 p = 1.000 for n = 19
Source: analysis of survey data

Table 31 Firms can achieve economies of scale equal to that of larger firms.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	1	6	3	1	11
	Percent	9.1%	54.5%	27.3%	9.1%	100.0%
Experts	Frequency	1	5	1	1	8
	Percent	12.5%	62.5%	12.5%	12.5%	100.0%
Total	Frequency	2	11	4	2	19
	Percent	10.5%	57.9%	21.1%	10.5%	100.0%

Mean = 2.32 Standard deviation = .82 p = .677 for n = 19
Source: analysis of survey data

Table 32 Forms of relationships firms would be willing to consider.

	Frequency	Percent	Cumulative Percent
Relationship 1	1	9.1%	9.1%
Relationship 2	4	36.4%	45.5%
Relationship 3	1	9.1%	54.6%
Not willing	5	45.4%	100.0%
Total	11	100.0%	

n = 11
Source: analysis of survey data

Table 33 The term "Clustering".

		Yes	No	Total
Small business owner	Frequency	10	1	11
	Percent	90.9%	9.1%	100.0%
Experts	Frequency	8		8
	Percent	100.0%		100.0%
Total	Frequency	18	1	19
	Percent	94.7%	5.3%	100.0%

n = 19
Source: analysis of survey data

Table 34 Joining together of a group of small, medium and micro enterprises in the same sector to strive towards common objectives.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	5	4	1	1	11
	Percent	45.5%	36.4%	9.1%	9.1%	100.0%
Experts	Frequency	6	2			8
	Percent	75.0%	25.0%			100.0%
Total	Frequency	11	6	1	1	19
	Percent	57.9%	31.6%	5.3%	5.3%	100.0%

Mean = 1.58 Standard deviation = .84 p = .160 for n = 19
Source: analysis of survey data

Table 35 Creating a hub that would provide specialist services like finance, accounting etc.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	2	6	1	2	11
	Percent	18.2%	54.5%	9.1%	18.2%	100.0%
Experts	Frequency	3	1	2	2	8
	Percent	37.5%	12.5%	25.0%	25.0%	100.0%
Total	Frequency	5	7	3	4	19
	Percent	26.3%	36.8%	15.8%	21.2%	100.0%

Mean = 2.32 Standard deviation = 1.11 p = .931 for n = 19
Source: analysis of survey data

Table 36 Clustering means forming alliances to more effectively compete to benefit enterprises that would not have achieved success on their own.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	4	3	4	11
	Percent	36.4%	27.3%	36.4%	100.0%
Experts	Frequency	4	4		8
	Percent	50.0%	50.0%		100.0%
Total	Frequency	8	7	4	19
	Percent	42.1%	36.8%	21.1%	100.0%

Mean = 1.79 Standard deviation = .79 p = .215 for n = 19
Source: analysis of survey data

Table 37 A group of individuals with basic assembly skills get together.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	1	1	3	6	11
	Percent	9.1%	9.1%	27.3%	54.5%	100.0%
Experts	Frequency	2	3		3	8
	Percent	25.0%	37.5%		37.5%	100.0%
Total	Frequency	3	4	3	9	19
	Percent	15.8%	21.1%	15.8%	47.4%	100.0%

Mean = 2.95 Standard deviation = 1.18 p = .202 for n = 19
Source: analysis of survey data

Table 38 Flexible specialization between small firms within a given sector.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency		6	3	2	11
	Percent		54.5%	27.3%	18.2%	100.0%
Experts	Frequency	2	3	1	2	8
	Percent	25.0%	37.5%	12.5%	25.0%	100.0%
Total	Frequency	2	9	4	4	19
	Percent	10.5%	47.4%	21.1%	21.1%	100.0%

Mean = 2.53 Standard deviation = .96 p = .508 for n = 19
Source: analysis of survey data

Table 39 Clustering can contribute to the "Transfer of Technology".

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	4	3	3	1	11
	Percent	36.4%	27.3%	27.3%	9.1%	100.0%
Experts	Frequency	3	5			8
	Percent	37.5%	62.5%			100.0%
Total	Frequency	7	8	3	1	19
	Percent	36.8%	42.1%	15.8%	5.3%	100.0%

Mean = 1.89 Standard deviation = .88 p = .354 for n = 19
Source: analysis of survey data

Table 40 Clustering as a management strategy.

		Strongly agree	Agree	Neutral	Strongly disagree	Total
Small business owner	Frequency	2	5	4		11
	Percent	18.2%	45.5%	36.4%		100.0%
Experts	Frequency	3	4		1	8
	Percent	37.5%	50.0%		12.5%	100.0%
Total	Frequency	5	9	4	1	19
	Percent	26.3%	47.4%	21.1%	5.3%	100.0%

Mean = 2.11 Standard deviation = .99 p = .288 for n = 19
Source: analysis of survey data

Table 41 Clustering as a strategy for small manufacturers.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	3	6	2	11
	Percent	27.3%	54.5%	18.2%	100.0%
Experts	Frequency	3	4	1	8
	Percent	37.5%	50.0%	12.5%	100.0%
Total	Frequency	6	10	3	19
	Percent	31.6%	52.6%	15.8%	100.0%

Mean = 1.84 Standard deviation = .69 p = .616 for n = 19
Source: analysis of survey data

Table 42 Training institution's programs are helpful in promoting clustering.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	2	3	4	2	11
	Percent	18.2%	27.3%	36.4%	18.2%	100.0%
Experts	Frequency	1	4	2	1	8
	Percent	12.5%	50.0%	25.0%	12.5%	100.0%
Total	Frequency	3	7	6	3	19
	Percent	15.8%	36.8%	31.6%	15.8%	100.0%

Mean = 2.47 Standard deviation = .96 p = .666 for n = 19
Source: analysis of survey data

Table 43 Government interference in the development of clustering.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Small business owners	Frequency	2	1	3	3	2	11
	Percent	18.2%	9.1%	27.3%	27.3%	18.2%	100.0 %
Experts	Frequency	3	2	1	1	1	8
	Percent	37.5%	25.0%	12.5%	12.5%	12.5%	100.0 %
Total	Frequency	5	3	4	4	3	19
	Percent	26.3%	15.8%	21.1%	21.1%	15.8%	100.0 %

Mean = 2.84 Standard deviation =1.46 p = .238 for n = 19
Source: analysis of survey data

Table 44 Intermediaries are effective in facilitating linkages.

		Strongly agree	Agree	Neutral	Strongly Disagree	Total
Small business owner	Frequency	1	4	6		11
	Percent	9.1%	36.4%	54.5%		100.0%
Experts	Frequency	3	3	1	1	8
	Percent	37.5%	37.5%	12.55	12.5%	100.0%
Total	Frequency	4	7	7	1	19
	Percent	21.1%	36.8%	36.8%	5.3%	100.0%

Mean = 2.32 Standard deviation = 1.00 p = .205 for n = 19
Source: analysis of survey data

Table 45 Lack of knowledge about clustering is a problem that can prevent wide scale implementation.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	1	9	1		11
	Percent	9.1%	81.8%	9.1%		100.0%
Experts	Frequency	5	1		2	8
	Percent	62.5%	12.5%		25.0%	100.0%
Total	Frequency	6	10	1	2	19
	Percent	31.6%	52.6%	5.3%	10.5%	100.0%

Mean = 1.95 Standard deviation = .91 p = .203 for n = 19
Source: analysis of survey data

Table 46 Lack of skills of small, medium and micro enterprises to meet requirements in terms of delivery, quality, etc.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	1	6	3	1	11
	Percent	9.1%	54.5%	27.3%	9.1%	100.0%
Experts	Frequency	1	6	1		8
	Percent	12.5%	75.0%	12.5%		100.0%
Total	Frequency	2	12	4	1	19
	Percent	10.5%	63.2%	21.2%	5.3%	100.0%

Mean = 2.21 Standard deviation = .71 p = .291 for n = 19
Source: analysis of survey data

Table 47 Lack of trust between collaborating firms.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	4	6	1	11
	Percent	36.4%	54.5%	9.1%	100.0%
Experts	Frequency	6	1	1	8
	Percent	75.0%	12.5%	12.5%	100.0%
Total	Frequency	10	7	2	19
	Percent	52.6%	36.8%	10.5%	100.0%

Mean = 1.58 Standard deviation = .69 p = .182 for n = 19
Source: analysis of survey data

Table 48 Facilitation of the operation of the cluster.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	1	8	2	11
	Percent	9.1%	72.7%	18.2%	100.0%
Experts	Frequency	5	3		8
	Percent	62.5%	37.5%		100.0%
Total	Frequency	6	11	2	19
	Percent	31.6%	57.9%	10.5%	100.0%

Mean = 1.79 Standard deviation = .63 p = .013 for n = 19
Source: analysis of survey data

Discriminant analysis – 84.2% of original grouped cases were correctly classified.

Table 49 Administration of the cluster as a problem.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	2	5	4		11
	Percent	18.2%	45.5%	36.4%		100.0%
Experts	Frequency	3	4		1	8
	Percent	37.5%	50.0%		12.5%	100.0%
Total	Frequency	5	9	4	1	19
	Percent	26.3%	47.4%	21.2%	5.3%	100.0%

Mean = 2.05 Standard deviation = .85 p = .288 for n = 19
Source: analysis of survey data

Table 50 Educate small business concerning the benefits of these linkages.

		Strongly agree	Agree	Total
Small business owner	Frequency	4	7	11
	Percent	36.4%	63.6%	100.0%
Experts	Frequency	5	3	8
	Percent	62.5%	37.5%	100.0%
Total	Frequency	9	10	19
	Percent	47.4%	52.6%	100.0%

Mean = 1.53 Standard deviation = .51 p = .273 for n = 19
Source: analysis of survey data

Table 51 Build on synergies and commonalities in terms of market segment, technology, etc.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	5	6		11
	Percent	45.5%	54.5%		100.0%
Experts	Frequency	5	2	1	8
	Percent	62.5%	25.0%	12.5%	100.0%
Total	Frequency	10	8	1	19
	Percent	52.6%	42.1%	5.3%	100.0%

Mean = 1.53 Standard deviation = .61 p = .674 for n = 19
Source: analysis of survey data

Table 52 Build trust to address fears of small business.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	5	5	1	11
	Percent	45.5%	45.5%	9.1%	100.0%
Experts	Frequency	5	1	2	8
	Percent	62.5%	12.5%	25.0%	100.0%
Total	Frequency	10	6	3	19
	Percent	52.6%	31.6%	15.8%	100.0%

Mean = 1.63 Standard deviation = .76 p = .785 for n = 19
Source: analysis of survey data

Table 53 Proper structuring of the cluster with an agreed constitution to govern membership by full commitment of all partners.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	4	5	2	11
	Percent	36.4%	45.5%	18.2%	100.0%
Experts	Frequency	5	3		8
	Percent	62.5%	37.5%		100.0%
Total	Frequency	9	8	2	19
	Percent	47.4%	42.1%	10.5%	100.0%

Mean = 1.63 Standard deviation = .68 p = .186 for n = 19
Source: analysis of survey data

Table 54 Support from government and big business.

		Strongly agree	Agree	Neutral	Disagree	Total
Small business owner	Frequency	4	5	2		11
	Percent	36.4%	45.5%	18.2%		100.0%
Experts	Frequency	5	2		1	8
	Percent	62.5%	25.0%		12.5%	100.0%
Total	Frequency	9	7	2	1	19
	Percent	47.4%	36.8%	10.5%	5.3%	100.0%

Mean = 1.74 Standard deviation = .87 p = .369 for n = 19
Source: analysis of survey data

Table 55 Clustering can improve the competitiveness of small manufacturers in the clothing industry.

		Strongly agree	Agree	Neutral	Total
Small business owner	Frequency	4	5	2	11
	Percent	36.4%	45.5%	18.2%	100.0%
Experts	Frequency	6	2		8
	Percent	75.0%	25.0%		100.0%
Total	Frequency	10	7	2	19
	Percent	52.6%	36.8%	10.5%	100.0%

Mean = 1.58 Standard deviation = .69 p = .080 for n = 19
Source: analysis of survey data

Reliability analysis

N of Cases = 19
N of Items = 39
Alpha = .8423