ASSESSING THE USE OF INTERNATIONAL BUSINESS STRATEGIES AMONG AUTOMOTIVE WIRING HARNESS MANUFACTURERS IN THE NELSON MANDELA METROPOLE

By

MICHAEL MEARS

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Research Supervisor: Mr Bux Heather

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“All things came into existence through Him, and apart from Him nothing was made that was made”, (John 1:3)

This treatise is dedicated to the memory of my mother Violet and my sister Caroline, who provided encouragement and guidance in ways they never imagined.
DECLARATION BY STUDENT

NAME: MICHAEL MEARS

STUDENT NUMBER: 20529812

QUALIFICATION: MASTER’S DEGREE IN BUSINESS ADMINISTRATION

TITLE: ASSESSING THE USE OF INTERNATIONAL BUSINESS STRATEGIES AMONG AUTOMOTIVE WIRING HARNESS MANUFACTURERS IN THE NELSON MANDELA METROPOLE

DECLARATION:

In accordance with Rule G4.6.3, I hereby declare that the above-mentioned treatise is my own work and that it has not previously been submitted for assessment to another university or for another qualification.

SIGNATURE:

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Michael Mears, November 2007
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MICHAEL MEARS

DEGREE: MAGISTER IN BUSINESS ADMINISTRATION
FACULTY: MANAGEMENT
PROMOTER: MR BUX HEATHER

ABSTRACT
Since 1994, the opening up of the South African economy has presented South African companies with opportunities to exploit the bigger global market and also with challenges of competing with international companies. Companies must consider both external environmental forces and internal organizational factors before arriving at a suitable international strategy. This treatise explores the wiring harness industry in the Nelson Mandela Bay to determine whether the industry is adopting international strategies in line with globalization, thus ensuring sustained growth and profitability.

A literature survey was conducted to discover the main strategies that are used by companies in order to achieve global competitiveness. These strategies were used in conjunction with Porter’s (1990) theory of National Competitive Advantage to analyse the wiring harness industry in the Nelson Mandela Bay. Porter’s (1990) theory of National Competitive Advantage was used to analyse the competitiveness of the wiring harness industry in the Nelson Mandela Bay.

A questionnaire was developed to test the degree to which the wiring harness industry in the Nelson Mandela Bay is in agreement with the findings of the literature study. This information was used to determine whether the wiring harness industry in the Nelson Mandela Bay is following global trends to remain profitable.
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1.1 Introduction and background to the research
The Cru group (2003) a leading consultancy firm has produced the following perspective on the world automotive wiring harness industry according to the abstract of its survey conducted around the world in 2003:

Though the US $17 billion world automotive wiring harness market is large, no previous in-depth market study has focused on this specific sector. As the largest car-makers have expanded global operations, so many of the most successful suppliers of auto wiring harnesses have adopted a global approach. The auto harness industry is currently very dynamic: there has been a huge shift through relocation of production to low cost areas. Consolidation of the auto harness industry in more mature markets is continuing. Participants in the auto harness industry and their suppliers need more than ever to be fully aware of the implications of market and industry developments, including further likely shifts of harness production locations. In contrast to many other cable markets, demand for automotive cable is reasonably strong (www.crugroup.com, 2003).

1.1.1. South African organizations during the sanction years prior to 1994
During the sanction years of apartheid, South Africa was isolated and depended heavily on itself to provide its needs (Anstey, 1994). Economic growth stemmed largely from government intervention and subsidies. As a result of international boycotts, huge organizations were created and financed and subsidies were freely granted to ensure the economic survival of the minority government and its supporters (Denton & Vloeberghs, 2003:84-93). Examples of these are Armscor, Eskom, Iscor, Sasol, Telkom, Mossgas, Spoornet and the South African Broadcasting Corporation (SABC), to name a few. These monopolies were based on strong bureaucratic principles, ensuring that all of the decision-making power and control remained firmly with the top echelon (Munro, 1997:35-7).
1.1.2. The changing face of South African organizations after 1994
Since 1994, the post-election period has forced South African managers to learn rapidly and to handle situations differently. Organizations have been forced to become more competitive to retain and protect local markets against international competitors, as well as to ensure that they are able to compete internationally (Denton & Vloeberghs, 2003:84-93).

Munro (1997:35-7) maintains that businesses in South Africa have major opportunities, provided that organizations learn to adapt to changes in their business environment. He also states that re-entry into the global marketplace means that South African organizations will once again be able to export their products and skills.

1.1.3. The shift towards globalization
International competition forced many organizations towards re-engineering processes and the streamlining of operations to improve efficiency. South African organizations were suddenly thrust into the international competitive arena (Denton & Vloeberghs, 2003:84-93). “Organizations in South Africa are overhauling their businesses from top to bottom, others are merely tweaking a process or two, but nearly all are engaged in change of one kind or another” (Ryan, 1997: 34).

With globalization, national managerial concepts have had to follow those of the international arena and meet the same challenges. Globalization therefore underlies many of the changes in the current concepts of management and business functions (Buckingham, 1997 & Goodman, 1995). National boundaries are no longer important. The global context to business has created a borderless and boundary-free world (Goodman, 1995).

This leads to the following question which this research will attempt to answer: Do wiring harness manufacturers (in the Nelson Mandela Bay) use international business strategies to stay abreast of globalization?

1.2 Main problem
The research aims to test the following hypothesis:
Null hypothesis Ho: Automotive wiring harness manufacturers in the Nelson Mandela Bay are using strategies which enable them to stay abreast of globalization resulting in growing percentage foreign sales.

Alternative hypothesis Ha: Automotive wiring harness manufacturers are not using strategies which enable them to stay abreast of globalization resulting in stagnation or decline of percentage foreign sales.

1.3 Sub-problems or questions
In order to develop a research strategy to deal with and solve the main problem, the following sub-problems need to be addressed:

a) What strategies does the literature survey reveal that will enhance the management of organizations in the global arena?
b) What does the literature study reveal about the strategic importance of an industry cluster?

The research also seeks to provide evidence to prove or disprove the following hypotheses:

- H1: Wiring harness manufacturers are increasing their global markets.
- H2: Wiring harness manufacturers are using technology instruments such as the internet to conduct their business activities globally.
- H3: Wiring harness manufacturers are using internationally acceptable accounting systems.
- H4: Wiring harness manufacturers are sourcing employees globally.

1.4 Delimitation of research
Globalization is a very wide subject. This paper only focuses on issues relating to business strategies of automotive wiring harness manufacturers in the Nelson Mandela Bay.

1.4.1 Industry
The automotive wiring harness industry in the Nelson Mandela Bay is surveyed for the purpose of this research. The major manufacturers which will be researched are:
1.4.2 Size of organization
Globalization affects all organizations large or small. International business is conducted not only by large firms but also by medium size and small enterprises (Hill, 2005:22). Thus all registered wiring harness manufacturers in the Nelson Mandela Bay have been used for the purposes of this study. The enterprises investigated includes large multinational corporations and small family businesses, South African and foreign-owned concerns, producing both premium and down-market brands.

1.4.3 Geographic demarcation
The major wiring harness manufacturers in the Nelson Mandela Bay are researched. The Nelson Mandela Bay is made up of three towns which are Port Elizabeth, Despatch and Uitenhage.

1.4.4 Business strategies
Various strategies required to compete in the global market place are investigated and considered for wiring harness manufacturers situated in the Nelson Mandela Bay.

1.5 Definition of key concepts

1.5.1 The term globalization
Globalization is a very wide term which is used in many different contexts in the literature. The Oxford Dictionary (2000) defines globalization as: (a) process enabling investments in financial markets to be carried out on an international basis, largely as a result of deregulation and improvements in technology; (b) process by which a company et cetera expands to operate internationally.
Gill (2000:14) defines globalization as “the reduction of transaction cost of trans-border movements of capital and goods, thus of factors of production and goods”. From a general point of view, Redding (1999: 19) defines “globalization as the increasing integration between the markets for goods, services and capital and at the same time the breakdown of borders”.

Braibant (2002:35) states that the process of globalization not only includes the opening up of world trade, the development of advanced means of communication, the internationalization of financial markets, the growing importance of multinational corporations (MNCs), population migrations and more generally increased mobility of persons, goods, capital, data and ideas but also infections, diseases and pollution.

In most of the definitions, the process of globalization is seen as the breakdown of the following elements: borders between countries, governments, the economy and communities. It implies the increasing liberalization and openness of markets, particularly through the elimination of barriers to trade in goods and services and the development of an integrated international financial market. Although all the above are relevant, for the purpose of this paper, the definition given by (PRUS, 2001:10) will be accepted. “Thus, globalization can simply be defined as a process of increasing connectivity, where ideas, capital, goods, services and people are transferred across country borders” (PRUS, 2001:10).

More succinctly stated globalization refers to growing economic interdependence among countries as reflected in increasing cross-border flows of three types of entities: goods and services, capital, and expertise. The term globalization can relate to any of several levels of aggregation: the entire world, a specific country, a specific industry, a specific company, or even a specific line of business or functional activity within the company (Gupta & Govindarajan, 2004:1).

1.5.2 Strategy
The Oxford Dictionary (2000) defines “strategy as a long term plan or policy (economic strategy)” . “A firm’s strategy can be defined as the actions that managers take to attain the goals of the firm” (Hill, 2005:410).
Quinn, Mintzberg and James (1988:3) present the following as definition and purpose of strategy:

A strategy is the pattern or plan that integrates an organization’s major goals, policies, and action sequence into a cohesive whole. A well-formulated strategy helps to marshal and allocate an organization’s resources into a unique and a viable posture based on its relative internal competences and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents (Quinn, Mintzberg & James, 1988:3).

1.5.3 Location economies
Location economies can be defined as the location of facilities anywhere in the world that yield the lowest production or distribution costs or that best improve the quality of service offered to customers (Griffin & Pustay, 2005:311). According to Hill (2005:701) location economies are cost advantages from performing a value creation activity at the best location for that activity. The authors Daniels, Radebaugh and Sullivan (2004:107) talk of location-specific advantage as being a combination of factor (that is land, labour, capital and entrepreneurship) and demand conditions, along with other qualities, that a country has to offer domestic and foreign investors which are favourable to the production of a service or product.

1.5.4 Experience curve
The relationship between costs and experience was called the experience curve by the Boston Consulting Group (1972). The experience curve refers to the systematic decline of production costs that have been observed to happen over the life of a product as employees gain experience in the making of the product, thus experienced employees are able to make the product with less wastage of time and other material resources (Hill, 2005:418).

1.5.5 Learning effects
Learning effects refer to cost savings that come from learning an activity by doing it (Hill, 2005:419). Learning effects are improvements in the rate at which goods and services are produced. As workers repeat particular tasks, they...
become more dextrous and learn improvements and short cuts which increase their collective efficiency (Abell & Hammond, 1979).

1.5.6 Economies of scale
Economies of scale are “the marginal improvements in efficiency that a firm experiences as it incrementally increases in size” (Hitt, Ireland & Hoskisson, 2005:54). Therefore, as the quantity of a product produced during a given period increases; the cost of manufacturing each unit decreases due to the spreading of overhead costs over a larger amount of products (Hitt, Ireland & Hoskisson 2005:54). According to Griffin and Pustay (2005:158-59) economies of scale occur when a product’s average costs decrease as the number of units increase. Hill (2005:697) defines economies of scale as costs savings realised in large-scale production.

1.5.7 Core competencies
These are unique resources and capabilities that serve as a source of competitive advantage for a firm over its competitors (Hitt et al 2005:20). Hill (2005:421) defines core competencies as unique abilities within the firm that competitors cannot easily match or imitate. According to Griffin and Pustay (2005:12) a core competency is a distinctive strength or advantage that is possessed by a particular organization.

1.5.8 Global learning
Differences in operating environments cause the firm to operate differently in one country than in another. An astute organization may learn from those differences and transfer this knowledge to its operations in other countries (Griffin & Pustay, 2005:312).

Hill (2005:699) defines global learning as “the flow of skills and product offerings from foreign subsidiary to home country and from foreign subsidiary to foreign subsidiary” (Hill, 2005:699).

1.5.9 Competitive advantage
Porter (1986:20) views competitive advantage as a function of either providing comparable buyer value more efficiently than competitors (low cost) or performing activities at a comparable cost but in unique ways that create more
buyer value than competitors and, hence, have a premium price. In order to achieve this, the organization must perform activities in the value chain more cheaply or in a unique way relative to its competitors.

Porter (1990:37) goes on to say that a competitive advantage of lower cost and/or differentiation translates into higher productivity than that of competitors. The lower cost firm produces a given output using fewer inputs than competitors require, resulting in the differentiated firm achieving higher revenues per unit than competitors do.

1.5.10 Automotive wiring harnesses
Wiring harnesses are an array of insulated conductors bound together by lacing cord, metal bands, or other binding, in an arrangement suitable for use only in specific equipment for which the harness was designed; it may include terminations (McGraw-Hill, 2005). Wiring harnesses can simply be defined as a collection of electrical wires bunched together with special connectors for connecting the various electrical components of a vehicle’s electrical system such as the lights, the ignition system, the radio, the air conditioner, and the horn see Figure 1.1 below.

Figure 1.1 Photograph of wiring harnesses
1.5.10 Industry cluster
Porter (1990:33) defines an industry as a group of competitors producing products or services that compete directly with one another. Anderson (1994:27) defines an industry cluster as a group of companies that rely on an active set of relationships amongst themselves for individual efficiency and competitiveness.

According to Conard (2000:77) Michael Porter has convinced many influential people to see the world in terms of clusters: geographic concentrations of linked firms, suppliers, related industries and specialised institutions that occur in a particular field and can achieve unusual competitive success.

1.6 Significance of research
The research intends to discover whether Nelson Mandela Bay wiring harness manufacturers are using international strategies to keep abreast of globalization. The study intends to identify salient points that need to be considered. The research will gather insights from executives of the wiring harness industry in the Nelson Mandela Bay; these strategic approaches are bound to be valuable to organizational practice. Hopefully, this will reveal which business and manufacturing strategies work best in particular circumstances and the prognosis for related government policy. South Africa has not been able to globalize fast enough when compared to other developing countries; this is a cause for concern if South Africa is to develop at the same pace as other developing countries especially those in the East.

This research hopes to help wiring harness manufacturers identify their strengths and weaknesses in their business operations so that they can compete effectively in the global arena. This may help the industry survive in changing global economic conditions.

1.6.1 Measuring the level of globalization
Globalization is a process that erodes national boundaries, integrates national economies, cultures, technologies and governance, and produces complex relations of mutual interdependence (Norris 2000: 155). Keohane and Nye (2000: 4) highlight the following dimensions of globalization:
- economic globalization, characterized as long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges,
- political globalization, characterized by a diffusion of government policies and
- social globalization, expressed as the spread of ideas, information, images, and people.

According to Dreher (2006), to measure the degree of economic globalization, two indexes are constructed. One index measures actual flows: trade, foreign direct investment and portfolio investment all as percentages of Gross Domestic Product (GDP). Income payments to foreign nationals and capital employed (as a percentage of GDP) are included to proxy for the extent a country employs foreign people and capital in its production processes. The second index measures restrictions on trade and capital using hidden import barriers, mean tariff rates, taxes on international trade (as a share of current revenue) and an index of capital controls. Given a certain level of trade, a country with higher revenues from trade taxes is less globalized. All variables, their precise definitions and data sources are listed in Appendix 3 (Dreher, 2006).

To proxy the degree of political globalization, the number of embassies in a country, the number of international organizations to which the country is a member and the number of United Nations (UN) peace missions a country participated in are used (Dreher, 2006).

To measure social globalization, Dreher (2006) distinguishes between three categories: data on personal contacts, data on information flows and data on cultural proximity. To proxy flows of information and personal contacts he uses measures like international tourism, internet users, and number of radios, among others. Cultural proximity is measured by the number of McDonald’s restaurants, number of IKEA shops located in the country and the country’s level of trade in books (Dreher, 2006).
A list of the variables used in the ranking together with the full ranking list is contained in Appendix 3 and 4. In Figure 1.2 a few selected countries are ranked according to their respective levels of global competitiveness.

Figure 1.2 Globalization rankings

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2005</th>
<th>2004</th>
<th>2003</th>
</tr>
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<tbody>
<tr>
<td>Uganda</td>
<td>36</td>
<td>33</td>
<td>38</td>
<td>36</td>
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<tr>
<td>Tunisia</td>
<td>37</td>
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<tr>
<td>Botswana</td>
<td>38</td>
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<tr>
<td>Ukraine</td>
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<td>43</td>
<td>43</td>
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<tr>
<td>Morocco</td>
<td>40</td>
<td>40</td>
<td>47</td>
<td>29</td>
</tr>
<tr>
<td>Senegal</td>
<td>41</td>
<td>41</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>Mexico</td>
<td>42</td>
<td>42</td>
<td>45</td>
<td>51</td>
</tr>
<tr>
<td>Argentina</td>
<td>43</td>
<td>47</td>
<td>34</td>
<td>50</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>44</td>
<td>45</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Thailand</td>
<td>45</td>
<td>46</td>
<td>48</td>
<td>49</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>46</td>
<td>43</td>
<td>51</td>
<td>45</td>
</tr>
<tr>
<td>Russia</td>
<td>47</td>
<td>52</td>
<td>44</td>
<td>46</td>
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<tr>
<td>Nigeria</td>
<td>48</td>
<td>44</td>
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<td>37</td>
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<tr>
<td>South Africa</td>
<td>49</td>
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<tr>
<td>Kenya</td>
<td>53</td>
<td>49</td>
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</tbody>
</table>

Source: Adapted from A. T. Kearney, Inc. (2006)

South Africa is ranked at number 49 out of the 62 African countries surveyed in 2006. The global competitiveness of South Africa is declining from 38 in 2003 to 49 in 2006. The other African counties such as Uganda, Tunisia and Botswana are ranked as more competitive than South Africa in the table. This is a cause for concern if South Africa is to maintain its lead in Africa and the world.

1.7 Prior research on topic
An extensive literature search was conducted both internationally as well locally regarding the implication of globalization on business strategy. At the international level, the literature search entailed the usage of various library
facilities to acquire relevant and appropriate sources of information. A computer search using online databases such as Emerald insight, Sabinet, EBSCOhost, Dogpile and Google was conducted to obtain relevant indices and international dissertations abstracts. Simultaneously, an in-depth library search was undertaken for relevant information in South Africa. To assist in this regard, an internet search was conducted for relevant books, articles and other appropriate literature. The search established that extensive research has been done on the effects of globalization on various aspects of human endeavour both locally and internationally but no research was found on the effect of globalization on business strategies of wiring harness manufacturers after the demise of apartheid, which is after 1994.

1.8 Research design
In this section the broad methodology that will be followed in the study is described.

1.8.1 Research methodology
This section will describe the scientific approach used in order to be able to answer the research questions and the research problem. For Plato and other philosophers methodology was seen as the way to follow in order to reach knowledge (Jonasson & Johnsson, 2002).

The following procedure will be adopted to answer the sub-problems in order to solve the main problem:

(a) Literature survey
A literature search will be conducted to determine which strategies are required to compete effectively in the global market place.

(b) Empirical study
The empirical study will be done based on an e-mail survey. A preliminary survey to get general information about the industry was conducted before the actual survey (see Appendix 1).
(c) **Mail survey**
The research will be based on a descriptive survey conducted on six senior level executives of wiring harness manufacturers in the Nelson Mandela Bay. The direct-mailed questionnaires of six will be addressed to senior executives or managing directors or directors of companies. The directors or senior executives are chosen for this study because they are the people who are responsible for formulating strategy or at least they are aware of what the strategies are.

(i) **Measuring instrument**
As stated previously the research will develop a comprehensive questionnaire for this research project to determine if the Nelson Mandela Bay automotive wiring harness manufacturers are using international strategies in line with globalization. A comparison of the results of the empirical study and the results of the literature study will help to measure the performance of the Nelson Mandela Bay wiring harness industry.

(ii) **Sample**
The six companies listed in Section 1.4.1 will be researched representing the major manufacturers of automotive wiring harnesses in the Nelson Mandela Bay.

(d) **Statistical analysis of data**
The statistical analysis of the data will be processed using Microsoft Excel® to produce graphs and charts which will be analysed for trends and salient features. The researcher will collect data regarding the respondents’ perceptions on the potential impact of globalization on business, communication, accounting and finance, technology, and individual psyche.

(e) **The conclusion**
The results of the literature study will be analysed together with the results of the empirical study to determine if the strategies being used by the wiring harness industry are in line with globalization theory.

1.9 **Key assumptions**
- Globalization cannot be reversed (Gupta & Govindarajan, 2004:9);
The strategic approaches of contemporary business are far different when compared to the period before 1994 (Denton & Vloeberghs, 2003:84-93);

Modalities for communication have expanded and changed (Hill, 2005:12);

There are evolving investment approaches worldwide (Griffin & Pustay, 2005:539-41); and

Technology has paved the way for changes in the business environment (Hill, 2005:12).

1.10 List of intended chapters

The research has provisionally been planned to include the following:

Chapters:

Chapter 1: Problem statement and definition of concepts.

Chapter 2: Literature survey on globalization issues and how they are affecting business organizations.

Chapter 3: A study of international business strategies for competing in the global market place as described in the literature.

Chapter 4: The empirical study, methods used and analysis of data.

Chapter 5: Integration of the findings from the literature survey and the results of the empirical survey.
1.11 Proposed research schedule

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Proposed completion date</th>
</tr>
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<tbody>
<tr>
<td>CHAPTER 1</td>
<td>30 March 2006</td>
</tr>
<tr>
<td>CHAPTER 2</td>
<td>30 May 2006</td>
</tr>
<tr>
<td>CHAPTER 3</td>
<td>30 July 2007</td>
</tr>
<tr>
<td>CHAPTER 4</td>
<td>30 September 2007</td>
</tr>
<tr>
<td>CHAPTER 5</td>
<td>30 November 2007</td>
</tr>
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1.12 Summary
In this chapter the importance of the research project was set out. The wiring harness industry was operating in a closed market setting before 1994 and since then the industry has had to adapt to a competitive open market environment. In order to assist in the resolution of the main problem, sub-problems have been identified. These sub-problems will involve a literature survey of international business strategy, national competitive advantage and a survey of senior executives in the wiring harness industry.

The study has been limited to the Nelson Mandela Bay because the wiring harness industry is mainly concentrated in this area and this has also made the research more manageable and focussed.

In addition to this, key technical terms and phrases have been defined to provide the reader with an understanding of these in the context of the study.

Finally, a proposed outline of the methodology to be used in resolving the main problems and sub-problems posed, together with a list of chapter contents, has been set out in order to give the reader an insight into the process followed in writing up the study. In Chapter Two, the theory on international business strategy is discussed.
CHAPTER TWO
A LITERATURE SURVEY OF STRATEGIES USED BY INTERNATIONAL BUSINESSES IN PURSUIT OF GLOBALISATION

2.1 Introduction
Various strategies are used by organizations to compete in the international arena and these depend on the size of the organizations, the position of the organization in the world market and the amount of resources it has to exploit the opportunities offered by globalization. Global presence in various world markets, for example, being a multinational corporation, does not necessarily imply global competitiveness (Gupta & Govindarajan, 2004:55).

Thus global competitiveness can only be achieved by organizations who view themselves as citizens of the world and not particular countries, provinces or towns. This idea of having a global mindset enables organizations to exploit the various opportunities which are presented in their value chain in the optimal way possible, which is unhindered by man-made political boundaries (Gupta & Govindarajan, 2004). This Chapter will help to answer the research question: What strategies does the literature survey reveal will enhance the management organizations in the global arena?

2.2 What is a global company?
The concept of a global company should be viewed as a four–dimensional construct based on the principle that an enterprise can be more or less global along each of four major characteristics. These are globalization of market presence, globalization of supply chain, globalization of capital base and globalization of corporate mindset as shown in the diagram overleaf (Gupta & Govindarajan, 2004:3).
Figure 2.1 Assessing the global company

The first dimension, globalization of market presence, refers to the extent to which the company is targeting customers in all major markets for its industry throughout the world. Even within the same industry, globalization of market presence can range from relatively low to very high. Thus this dimension defines how much of the total global market for a product or a service which a company owns, with regard to its product or service (Gupta & Govindarajan, 2004:4).

The second dimension, globalization of supply chain, refers to the extent which the company is accessing the most optimal locations for the performance of various activities in its supply chain. For example plants can be established in Southeast Asia to take advantage of low labour rates, while call centres can be established in Ireland due to the combination of an inexpensive, educated workforce and the existing technology infrastructure (Davies & Heineke, 2005:28).
The third dimension, globalization of capital base, refers to the extent to which the company is tapping into the most optimal sources of capital on a worldwide basis. A global capital market benefits both borrowers and investors. It benefits borrowers by increasing the supply of funds available for borrowing and by lowering the cost of capital. It benefits investors by providing a wider range of investment opportunities, thereby allowing them to build portfolios of international investments that diversify their risks. Thus a company should source its investment funds at the most optimal locations wherever that may be in the world (Hill, 2005:417).

The last but not least, fourth dimension, globalization of corporate mindset refers to the extent to which the corporation as a collective reflects an understanding of diversity across cultures and markets coupled with an ability to integrate across diversity. This essentially entails an organization becoming a world citizen rather than being a citizen of a particular town. An effective global mindset can help exploit both the diversity and the similarities in the world market (Gupta & Govindarajan, 2004:3).

2.3 Role of small business
International business is not limited to huge multinationals enterprises. Many small and medium–sized enterprises are also involved in this arena. Today the world operates in a globally integrated business system. The information technology revolution and the advances in transportation mean that knowledge, skilled people, goods, and services are extremely mobile. The world is now a global village, where the producers of goods and services often compete both domestically and internationally. Today small businesses account for the majority of jobs; while university graduates, are more likely to work in a service industry or small business than in a large multinational (Rugman & Hodgetts 1995:6). Although most international trade and investment are still conducted by large firms, many medium size and small businesses are becoming increasingly involved in international trade and investment (Hill, 2005:22).

2.4 What is driving globalization?
Irrespective of the level of aggregation, be it the entire world, an individual country, a specific industry, or a particular company, globalization occurs
because specific managers in specific companies make decisions that results in increased cross-border flows of capital, goods, or expertise (Gupta & Govindarajan, 2004:6). Two intertwined considerations are driving managers to make such decisions on an increasing basis: one, globalization is becoming increasingly feasible; two, globalization is becoming increasingly attractive. The following trends explain why (Hill, 2005:5-32).

- An ever-increasing number of countries are embracing the free market ideology. Barriers to trade and investment among countries continue to decline rapidly and are making globalization increasingly more practicable and less expensive (Daniels, Radebaugh & Sullivan, 2004:125).

- Technological advances continue their onward march (Hill, 2005:12).

- Third the economic centre of gravity is shifting from the developed countries to the developing countries. Assuming certain infrastructural conditions, economic liberalizations promotes competition, increase efficiency, fuels innovation, attracts new capital investment, and generally bears fruit in the form of faster economic growth for example, China and India (Gupta & Govindarajan, 2005:8).

- The opening of borders to trade, investment, and technology transfers is seldom a one-way street. While opening borders creates new and much larger market opportunities for companies, it also opens up their home markets to foreign competition (Gupta & Govindarajan, 2004:8). In other words, economic liberalization brings about not only access to a much larger global market but also a race among competitors to seek a first mover advantage in serving globalizing customers, capturing economies of global scale, exploiting the cost reducing or quality-enhancing potential of optimal locations, and taping technological advancements wherever they occur in the world. The net result of this competitive dynamic is that the pursuit of economies of global scale and scope has
now become a self-reinforcing whirlpool, be it in the automobiles, aluminium, pharmaceuticals, tyres, wiring harnesses, retailing, or internet commerce (Gupta & Govindarajan, 2004:6).

2.5 Business areas affected by globalization
In reviewing of related literature, the researcher postulates that globalization affects business management in at least five areas:

- Evolution of business practices (Rosenzweig, Morrison, Inkpen & Beamish, 2000);
- Changes in communication patterns (Hill, 2005:12);
- Broadening of accounting and finance approaches (Hill, 2005:652);
- Technological enhancements (Griffin & Pustay, 2005:14); and
- Impact on individual and organizational psyche, that is mindset (Gupta & Govindarajan, 2004:13).

2.5.1 Business practices
There exist certain business pressures brought about by greater market integration. Rosenzweig et al (2000) indicated that for the past 50 years, declining tariffs and the emergence of regional trading blocs had an enormous impact on world trade and investment and encouraged companies to look at business in a global perspective. Haynes, Lackman and Guskey (1999) noted the shortening of product life cycles in an information age, while Cateora and Graham (1999) emphasized the need to provide heightened attention to culture especially in the realm of international marketing and the segmentation of markets.

2.5.2 Communication patterns
Breakthroughs in communication technologies have facilitated international communication. Kotler and Armstrong (1999) argued the need to utilize global communication adaptation strategies when communicating across borders, while Lussier (1996) alluded to the relevance of non-verbal communication in international business. Friedman (2000) observed the ‘democratization of information’ in a global environment that allows individuals to reach out to others in a faster, deeper, and cheaper manner.
E-commerce is changing the shape of competition, the speed of action, and the streamlining of interactions, products, and payments from customers to companies and from companies to suppliers (O’Brien, 2005).

### 2.5.3 Accounting and finance approaches

The internet has made the search for financial information and international transactions easier than before. Malone and Laubacher (1998) referred to the emergence of ‘electronically connected freelancers’ (e-lancers) that operate virtual organizations that facilitate the flow of financial transactions from anywhere in the world.

Friedman (2000) highlighted that the whole world operates like Wall Street because global investing has become more convenient and accessible to many individuals. Substantial efforts have been made to harmonise accounting standards across countries. The International Accounting Standards Board (IASB) is a major proponent of standardization. In a move that indicates that the trend toward the adoption of acceptable accounting standards is accelerating, the IASB has developed accounting standards for firms seeking stock listings in global markets (Hill, 2005:652-54).

### 2.5.4 Technological enhancements

However, the global environment may require technological adaptation and adjustments. Bishop (1999) recommended undertaking international expansions assessments pertaining to telecommunication infrastructure, digital capabilities, and online resources. Collating from Buss (1982), the challenge of management of information and technology across borders is due to:

- divergence of equipment, software and procedures from one venue to another;
- changing costs of personnel, hardware, and data communication within and between different countries;
- increasing interdependence of firms’ affiliates;
- fast-changing regulatory environments;
- unionizing of data processing department personnel; and
- the increasing rate of change of information technologies.
2.5.5. Global mindset
A global mindset is a way of approaching the world, a tendency to scan the world from a broad perspective. Persons who think globally tend to be open to themselves and others by rethinking boundaries and changing their behaviour (Rhinesmith, 1992). Global mindset is the foundation for business competences such as managing competitiveness and managing uncertainty. It is an orientation to the world; representing a certain curiosity about the world, to see goals and objectives against larger backdrops and time frames. Furthermore, it provides an explanation and meaning for events and provides guidance for one’s behaviour (Rhinesmith, 1992).

The global mindset has sometimes been thought of as an inherent personality trait that is open, interested in others, with positive regard, self-confident, flexible and professionally competent (Kealy & Rubin, 1983). Many multinationals have sought to recruit rather than develop such skills but there has not been any empirical validation of the existence of this alleged ‘overseas type’ personality. However, there is a considerable degree of agreement among many practising managers and management consultants in the conception and description of what is coming to be referred to as ‘global mindset’ (De Wilde, 1991).

In addition, the global environment has the ability to affect the mindsets of individuals. Fan and Mak (1998) observed that it is possible that international participants who lack social skills and aptitude may decide to withdraw from the process and prefer to stay within their comfort zones and interact with co-ethnic or like-minded members.

Gudykunst and Hammer (1988) alluded to the fact that individuals exposed to cross-cultural environments and are unfamiliar with varying cultural codes may experience a high level of stress in social encounters, and suffer from interpersonal anxiety and self-doubt. In addition a global mindset is one that integrates an openness to and awareness of diversity across cultures and markets, with a propensity and ability to synthesize across this diversity (Gudykunst & Hammer, 1988).
Global managers have exceptionally open minds. They respect how different countries do things, and they have the imagination to appreciate why they do them that way. Nevertheless, they are also incisive; they push the limits of the culture. They sort through the debris of cultural excuses and find opportunities to innovate in an environment where others see chaos (Gupta & Govindarajan, 2004:82-102).

Does the global mindset translate into organizational consequences? It certainly does according to Srinivas (1995:32). Figure 2.3 shows how the mindset leads to action consequences.

Figure 2.2 How global mindset impacts on the organization

The mindset surfaces in terms of three strategic leadership thrusts which may be different in detail and scope at different levels of the organization, but nevertheless are there (Srinivas, 1995:30-2). These are:

- formulation and evocation of vision;
- crafting of a strategy to realize the vision;
- focus on mobilization of the human resources and their capacities through such approaches as empowerment and team development (Srinivas, 1995:30-2).
These leadership thrusts in turn result in business-goal outcomes (that is, production, marketing), and attitudinal outcomes (that is, employee focus on service, quality). These in turn ensure continued customer goodwill, long-term survival and company progress towards true globalization. Such consequences in turn help to reinforce the global mindset (Srinivas, 1995:30-2).

2.6 Road map for smart globalization

International management gurus Gupta and Govindarajan (2004: VI) prescribe the following road map for smart globalization:

- You must ensure that your company leads the industry in identifying market opportunities worldwide and in pursuing these opportunities by establishing the necessary presence in all key markets.

- You must work relentlessly to convert global presence into global competitive advantage. Presence in the strategically important markets gives you the right to play the game. However, it says nothing about whether and how you will win the game. Doing so requires identifying and exploiting the opportunities for value creation that global presence offers. Thus being a multinational company does not necessarily mean that you are competitive and also being a small company does not mean that you cannot successfully exploit the opportunities being offered by globalization.

- You can cultivate a global mindset. You must view cultural and geographic diversity as opportunities to exploit and be prepared to adopt successful practices and good ideas wherever they come from.

- You must constantly strive to reinvent the rules of the global game. This process is captured in continually revisiting answers to three perennial questions: Who are our target customers? What value do we want to deliver to these customers? How will we create this value? (Gupta & Govindarajan, 2004: VI).
2.7 Innovative leaders in globalization
In 1998, Deloitte Touche Tohmatsu, one of the world's leading professional services firms, formed a partnership with the World Economic Forum to establish the Innovative Leaders in Globalization Programme. In 1999, the Innovative Leaders in Globalization Programme developed a globalization framework, which provides a structure for the concept of globalization. The six capabilities are Governance and Responsibility; Strategy and Finance; Marketing; Sales and Service; Operations and Technology; Research and Development; and Human Resources Management (see Figure below), (Manardo, 2000:22).

Figure 2.3 Globalization Framework

Source: Adapted from Manardo (2000:23)

2.7.1 Governance and responsibility
Governance and responsibility defines the objectives, accountability, and stewardship for a global organization. It sets the tone for the company’s code of conduct for internal and external relationships as well as for business development around the world. Governance is concerned with oversight (Manardo, 2000:24).
From his research, Manardo (2000:25) has ascertained three key issues about governance. First, there is a growing consensus that effective governance is a competitive tool in the global company's arsenal. Second, there is a broad recognition that the boards of directors of global companies should be comprised of leaders with worldwide experience and geographic diversity. Third, the complexities of international legal and business issues are exponentially greater as a company operates in more and more countries.

Manardo (2000:25) further emphasises that establishing effective global governance is a much more complex task than establishing domestic governance practices. It requires analyzing more information, some of which may be difficult to obtain or interpret, and understanding local business practices in each country. As the number of regions in which it operates increases, the global company will need to determine if its standards of ethics and environmental responsibility will be fixed for all operations or adjustable, depending on the practices of local business and governments. Global companies will need to design strategies for establishing goodwill internationally and locally. Over time, an organization will be required to provide more information in a more readily understandable manner for an increasing number of global investors. Global governance demands that board members establish investor protections and worldwide managerial accountability (Manardo, 2000:25).

2.7.2 Strategy and finance
The Internet is creating one global marketplace with specialized sub-markets that are organized without regard to geography. E-businesses are just a mouse-click away no matter where they are physically located, allowing buyers to comparison-shop globally. Related technologies enable dramatically different distribution and supply-chain practices, create openings for new entrants to the industry, and increase the threat of substitute products and services through global procurement opportunities (Manardo, 2000:25).

As the balance of power shifts and the pace of business change increases, planning cycles must become increasingly dynamic, occurring not once a year but virtually moment by moment as conditions change. Internet-related
technologies have also changed the formulation, execution, and evaluation of global strategy’s key elements that is, vision and planning, measurement, and the utilization of partnerships. New technologies enable a real-time dynamic strategic process that breaks from traditional planning cycles. They facilitate greater input into the strategy process by everyone in the organization, challenging established decision-making norms (Manardo, 2000:26).

2.7.3 Marketing, sales and service
Successfully globalizing the marketing, sales, and service aspects of an organization remains one of the main challenges for all companies. A fundamental concern is balancing the need for strong global brands versus a need for local customization for diverse markets (Manardo, 2000:26).

According to Manardo (2000:26) successful companies realize that whatever the venue, product, or channel, success is increasingly about treating the customer whether in a business-to-business or a business-to-consumer context as an individual, regardless of geography. The Internet gives businesses a global presence, and a presence in cyberspace is just like having a store or office that can be visited instantly by anyone. It changes the dynamics of interactions with customers, suppliers, stakeholders, prospective employees, and the public at large (Manardo, 2000:26).

2.7.4 Operations and technology
Integrated technology networks have become the ‘central nervous system’ of the global company and its associated business partners. In particular, Internet-related technologies are enabling unprecedented levels of coordination, both within and across organizational boundaries and around the globe, all the while delivering significant improvements in operational efficiency and flexibility. From managing global inventory, fine-tuning discrete plant operations, to business models in which customers design their own products and receive them within days, the Internet is an increasingly important enabler for companies seeking to optimize their global operations (Manardo, 2000:26).
2.7.5 Research and development (R&D)
It is becoming increasingly important to make R&D operations truly global in nature and cross-cultural in composition. By utilizing the ‘best brains’ from around the world, all regions will feel they have been properly consulted in the creation of products and/or services they must sell in their local markets. By enabling richer, more effective collaboration across geographic and organizational boundaries, the Internet allows companies, or even consortia of companies, to speed up product development cycles while boosting the overall return on their R&D investments (Manardo, 2000:27).

2.7.6 Human resources management
For advanced global companies, employee development is a pillar of the enterprise-value framework, equal in importance to shareholder support or customer loyalty. This is primarily due to rapid changes in the business world, where knowledge and customer relationships increasingly form the basis of a company's competitive advantage (Manardo, 2000:27).

The globally connected business environment, combined with shrinking labour and talent markets, is creating a new mindset among employees. Because employees have more options than ever before, members of a ‘free-agent’ workforce can expect and demand more from the employer in exchange for their loyalty. This has profound repercussions for global employers, as it is increasingly important to motivate workforces by treating employee loyalty as you treat customer loyalty. New Internet-related technologies also facilitate the recruitment of quality employees from around the world and enable increasingly creative work arrangements that balance work demands and family responsibilities (Manardo, 2000:27).

Globalization is forcing companies to recognize the need to change from creating value for one stakeholder group to an expanded strategy of creating value across the enterprise for four key stakeholder entities: Providers of capital in the financial markets; Customers in the products and services markets; Employees in the labour market and the most complementary business partners (Manardo, 2000:22-27). It is only by effectively competing in all four areas that companies can deliver sustainable, superior returns for all stakeholders. This is
managing for enterprise value which is the central concept of the project’s globalization framework (Manardo, 2000:22-27). Elements of this framework are adapted into the survey of the wiring harness industry in the Nelson Mandela Bay in Chapter 4.

2.8 Globalization of the business environment
There has been a conceptual shrinking of the world as a marketplace and a globalization of the business environment, due to:

- Information technology, internet, and other communication technology advances (Childe, Mauill & Mills, 1996; Storey, 1994);
- Homogenization of global branding and manufacturing (Kotler, Armstrong, Saunter & Wong, 1996:5);
- Increased normality of cross-country and cross-continent trade goods (Towill, 1992:23);
- Governmental encouragement and subsidies for industrial investment;
- The proliferation of free-trade zones and trade-blocks (Niblett, 1995:56);
- Changes in political boundaries (for example, China and Hong-Kong, the break-up of Eastern Europe, USSR).

2.9 The imperatives to globalise
There are five imperatives that drive any firm to pursue global expansion. Because of differences in industry structure and the firm’s strategic position, the intensity of these factors can be expected to vary across firms and for the same firm over time (Griffin & Pustay, 2005:12-16).

2.9.1 The growth imperative
Where local markets are mature or saturated such as in the developed countries, the growth imperative generally requires companies to look to emerging markets for fresh opportunities (Griffin & Pustay, 2005:12-16).

2.9.2 The efficiency imperative
Wherever there are one or more activities in the value chain (research and development, production, marketing and so on) where the minimum efficient scale exceeds the sales volume feasible in that country, a company with global...
presence will have the potential to create a cost advantage relative to a domestic company within that industry (Gupta & Govindarajan, 2004:16).

2.9.3 The knowledge imperative
No two countries are alike. Therefore, when a company expands its presence to more than one country, it must adapt some features of its products and processes to the local environment. This adaptation requires the creation of local expertise. Some of this knowledge may be too idiosyncratic to be relevant outside the particular market. However, in many cases, local product or process innovations emerge as world-leading innovations and thus have the potential to generate global competitive advantage (Gupta & Govindarajan, 2004:16).

2.9.4 Globalization of customers
The phrase ‘globalization of customers’ refers to customers who are global corporations (such as soft drink companies served by advertising agencies) as well as those who are globally mobile (corporate executives served by American express or global travellers served by hotels such as Sheraton). When customers of a domestic firm start to globalize, the firm must keep pace with them. These customers may prefer worldwide consistency and coordination in the sourcing of products and services or they may prefer to deal with a small number of supply partners on a long-term basis. Further, allowing customers to deal with different suppliers in other countries puts a firm at risk of losing them to one of these suppliers even in the domestic market (Yip, 1989:29-41).

2.9.5 Globalization of competitors
If your competitors start to globalize and you do not, you become vulnerable to a two-pronged attack. First, they can develop a first mover advantage in capturing market growth, pursuing global scale efficiencies, profiting from knowledge arbitrage, and providing a coordinated source of supply to global customers. Second, they can use multimarket presence to cross subsidize and wage a more intense attack in your own home markets (Griffin & Pustay 2005:12-16).

2.10 Profiting from global expansion
According to Hill (2005:16) firms that operate internationally are able to:
Realize location economies by dispersing individual value creation activities to those locations around the globe where they can be performed most efficiently and effectively.

Realise greater cost economies from experience effects by serving an expanded global market from a central location, thereby reducing the costs of value creation.

Earn a greater return from the firm’s distinctive skills or core competencies by leveraging those skills and applying them to new geographic markets.

Earn a greater return by leveraging any valuable skills developed in foreign operations and transferring them to other entities within the firm’s global network of operations (Hill, 2005:16).

A firm’s ability to increase its profitability by pursuing these strategies is to some extent constrained by the need to customise its product offering, marketing strategies, and business strategy to differing national conditions (Hill, 2005:422).

2.11 Sources of global competitiveness
To convert global presence into global competitive advantage, a company must explore six value creation opportunities, each of which encounters specific strategic and organizational obstacles (Gupta & Govindarajan, 2004:56):

- Adapting to local market differences.
- Exploiting economies of global scale.
- Exploiting economies of global scope.
- Tapping the most optimal locations for activities and resources.
- Maximising knowledge transfer across locations.
- Playing the global chase game (Gupta & Govindarajan, 2004:56).

2.11.1 Adapting to local market differences
A direct implication of being present in multiple countries is that the company must respond to the inevitable diversity it will encounter in these foreign markets. Differences in language, culture, income levels, customer preferences, and distribution systems are only some of the factors to be considered when designing products and services (Hill, 2005:422).
2.11.2 Exploiting economies of global scale
Building global presence automatically expands a company’s scale of operations (larger revenues, larger asset base and so on). However, larger scale will create competitive advantage if and only if the company systemically undertakes the tough actions needed to convert ‘scale’ into ‘economies of scale’. The potential benefits of economies of scale can appear in various ways, spreading fixed costs, reducing capital and operating costs, pooling purchasing power, creating critical mass for activities which would otherwise be too costly to carry out for small market for example, research and development (Griffin & Pustay, 2005:158-59).

2.11.3 Exploiting economies of global scope
Global scope, as distinct from global scale, refers to the diversity of regions and countries in which a company markets its products and services. Global scope is rarely a strategic imperative when vendors are serving customers who operate in just one country or customers who are global but who engage in centralized sourcing from one location and do their own internal distribution. In contrast, the economic value of global scope can be immense when vendors are serving customers who, in spite of being global, need local delivery of identical or similar products and services across many markets. In fulfilling the needs of such multi-location global customers, companies have two potential avenues through which to turn global scope into global competitive advantage by providing coordinated services, and leveraging their market power (Griffin & Pustay, 2005:158-59).

2.11.4 Tapping the most optimal locations for activities and resources
Differences across countries reveal themselves in the form of differences in cost structures, skills levels, and resource endowments. If a company can exploit these inter-country differences better than its competitors can, a company has the potential to create significant competitive advantage. “Tapping the most optimal location for each activity in the value chain can yield one or more of three strategic benefits: performance enhancement, cost reduction, and risk reduction” (Hill, 2005:417).
2.11.5 Maximising knowledge transfer across locations
Naturally, not all locally created knowledge is relevant outside the local environment. However, other types of locally created knowledge may be relevant across multiple countries and, if leveraged effectively, can produce various strategic benefits to the global enterprise ranging from faster product and processes innovation to lower cost of innovation and reduced risk of competitive pre-emption (Bartlett & Goshen, 1987:43-53).

2.11.6 Playing the global chess game
The global war of business is analogous to a chess game, as in chess, you continually identify specific target markets for attack and, when you do attack, you would do so through coordinated action of all your available resources. A central challenge in playing the global chess game and capturing the consequent benefits is to ensure strategic coordination across countries, that is a strategy adopted in one particular market may have ripple effects in other markets were the company competes (Gupta & Govindarajan, 2004:67).

2.12 Organizational structure
No matter how good a strategy is, it will achieve little unless there is an appropriate means of implementing it. International companies try to set up organizational structures (the formal patterns of their lines of communication and responsibilities) that group individuals and operational units in strategic ways. The structure depends on many factors, including:

- The degree of multi-domestic, global, and transnational policies that are employed (see Section 2.18).
- The location and type of foreign facilities.
- The impact of international operations on total corporate performance (Daniels, Radebaugh & Sullivan, 2004:449).

The form, method, and location of operational units at home and abroad will affect taxes, expenses and control. Accordingly, organizational structure has an important effect on the fulfilment of corporate objectives (Daniels et al, 2004:449).
Now the major structures of companies’ international operations will be examined in order to understand the implications of organizational structure on global competitiveness.

2.12.1 Separate versus integrated international structures
In a multinational organization all of a company’s foreign subsidiaries may report to the same department or division of headquarters because that department or division is responsible for all of the company’s international business. This is an international division structure. However, different subsidiaries may report to different departments or divisions of headquarters because responsibility is split at headquarters by function (such as production and marketing), by product lines (such as consumer products and industrial products), or by geographic area (such as Asia and Europe). These are functional, product, and geographic structures, respectively (Daniels et al., 2004:449). Figure 2.4–2.8 shows simplified organizational structures of international businesses. Most companies basically use one of these structures. Note that no structure is without drawbacks (Daniels et al., 2004:449).

2.12.2 International Division Structure
If international operations continue to grow, subsidiaries are commonly grouped into an international division structure, which handles all international operations out of a division that is created for this purpose. This structural arrangement is useful as it takes a great deal of the burden off the chief executive officer for monitoring the operations of a series of overseas subsidiaries as well as domestic operations. The overseas activities are coordinated and monitored by the Head of the International Division and then he or she reports directly to the Chief Executive on these matters (Rugman & Hodgetts, 1995:242). Figure 2.4 overleaf demonstrates this structure.
Companies still in the developmental stages of international business involvement are most likely to adopt the international division structure. Others that use this structural arrangement include those with small international sales, limited geographic diversity, or few executives with international expertise (Rugman & Hodgetts, 1995:242).

A number of advantages are associated with use of an international division structure. The grouping of international activities under one senior executive ensures that the international focus receives top management attention. The structural arrangement allows the company to develop an overall, unified approach to international operations, and the arrangement helps the firm to develop a cadre of internationally experienced managers. Use of this structure does have a number of drawbacks, however. The structure separates the domestic and international managers, which can result in two different camps with divergent objectives. In addition, as the international operation grows larger, the home office may find it difficult to think and act strategically and to allocate resources on a global basis; thus, the international division is penalized. Finally, most research and development efforts are domestically oriented, so ideas for new products or processes in the international market often are given low priority (Hodgetts, Luthans & Doh, 2006:270).
2.12.3 Functional Division Structure

The functional structure is a structure consisting of a chief executive officer and a limited corporate staff, with functional line managers in dominant organizational areas, such as production, accounting, marketing, research and development (R&D), engineering, and human resources. This structure allows for functional specialization, thereby facilitating active sharing of knowledge within each functional area. Knowledge sharing facilitates career paths as well as the professional development of functional specialists. However, a functional orientation can have a negative effect on communication and coordination among those representing different organizational functions. Because of this, the chief executive officer (CEO) must work hard to verify that the decisions and actions of individual business functions promote the entire firm rather than a single function. The functional structure supports implementation of business-level strategies and some corporate-level strategies (for example, single or dominant business) with low levels of diversification (Hitt et al., 2005:346).

Figure 2.5

![Functional Division Structure](image)

Source: Adapted from Daniels et al (2004:448)

2.12.4 Product Division Structure

Product divisions, as Figure 2.6 illustrates, are probably the most popular among international companies today, because most companies' businesses involve a variety of diverse products. Because these divisions may have little in
common, they may be highly independent of each other. As is true for the functional structure, the product division structure is well suited for a global strategy because both the foreign and domestic operations for a given product report to the same manager, who can find synergies between the two (for example, by sharing information on the successes and failures of each one). Furthermore, a separate product group structure enhances a company’s ability to sell or spin off certain product lines because they are not as interwoven with its other lines (Daniels et al, 2004:449).

Most likely, there will be duplicated functions and international activities among the product divisions. Moreover, there is no formal means by which one product division can learn from another’s international experience. Finally, different subsidiaries from different product divisions within the same foreign country will report to different groups at headquarters. As a result synergy could be lost within countries, if different subsidiaries do not communicate with each other or with a common manager (Daniels et al, 2004:449).

Figure 2.6

![Product Division Structure Diagram]

Source: Adapted from Daniels et al (2004:448)
2.12.5 Geographic (Area) Division Structure

A global area structure is one in which primary operational responsibility is delegated to area managers, each of whom is responsible for a specific geographic region. This is a polycentric (host country oriented) structure. Figure 2.7 below provides an example. Under this arrangement each regional division is responsible for all functions within its area, that is, production, marketing, personnel, and finance (Hill, 2005:449).

There appears to be some structural similarity between a global area and a global product arrangement; however, they operate in very different ways. With a global product arrangement, each product division is responsible for its output throughout the world. With a global area structure, on the other hand, the individual product lines are subsumed within each of the geographic areas. Therefore, the manager in charge of Belgian operations, for example, will be responsible for each of the product lines sold in that region. A global area structure is commonly used by multinational enterprises (MNEs) that are in mature businesses and have narrow product lines that are not differentiated by geographic area (Hill, 2005:449).

Figure 2.7

Geographic (Area) Division Structure

Source: Adapted from Daniels et al (2004:448)

The global area structure provides division managers with the autonomy to make rapid decisions that depend on local tastes and regulations; because of this, the firm can become more ‘nationally responsive’. In addition, the
A company gains a wealth of experience regarding how to satisfy these local tastes and, in the process, often builds a strong competitive advantage. The global area structure works well where economies of scale in production require a region-sized unit for basic production. For example, by setting up operations in the China, a South African company is able to achieve production cost advantages that would not otherwise be possible. Finally, under this structure the company can eliminate costly transportation associated with importing goods produced overseas (Griffin & Pustay, 2005:39).

If a product sells well in South Africa, a company is likely to try to market it worldwide without making any modifications for local taste. Under the area structure the opposite viewpoint holds; the product must be adapted to the local tastes. However, this means that the usual product emphasis in a company must be subsumed to the company's geographic orientation and the authority of the area managers. Another shortcoming with this organization structure is the expense associated with duplicating facilities. Each division has its own functional areas and is responsible for both production and marketing. Since production efficiency is often based on the amount of output, small plants are usually less efficient than large ones. Companies using a global area division structure also find it difficult to coordinate geographically dispersed divisions into an overall strategic plan. This often results in the international cooperation and synergy among divisions ending up being sacrificed (Rugman & Richards, 1995:245).

Finally, companies that rely heavily on research and development (R&D) to develop new products often find that these offerings are not readily accepted by the global area divisions. This is because each group is trying to cater to the specific needs of its current market, and new products often require modification to meet the needs of these local customers. Research shows that division managers prefer to sell products that have already been accepted by the market and are reluctant to take on new, untried products. Unfortunately, since most products have fairly short life cycles, this mindset is potentially dangerous to the long-run success of the MNEs and the home office must continually fight this 'anti-new product' drift (Rugman & Hodgetts, 1995:245).
2.12.6 Global Matrix Structure
The most complex form of international organization design is the global matrix design. This design is the result of superimposing one form of organization design on top of an existing, different form. The resulting design is usually quite fluid, with new matrix dimensions being created, downscaled, and eliminated as needed. For example, the global matrix design shown in Figure 2.8 was created by superimposing a global product division structure on an existing geographic division structure (Griffin & Pustay, 2005:400).

Using a global matrix design, a firm can form specific product groups comprising members from existing functional departments. These product groups can then plan, design, develop, produce, and market new products with appropriate input from each functional area. In this way the firm can draw on both the functional and the product expertise of its employees. After a given product development task is completed, the product group may be disbanded; its members will then move on to new assignments. Of course, other matrix arrangements are possible (Griffin & Pustay, 2005:400).

Figure 2.8

Matrix Division Structure

Source: Adapted from Daniels et al (2004:448)
For example, an area design could be overlaid on a functional design, thereby allowing area specialists to coordinate activities with functional experts. An advantage of the global matrix design is that it helps bring together the functional, area, and product expertise of the firm into teams to develop new products or respond to new challenges in the global marketplace. The global matrix design thus promotes organizational flexibility. It allows firms to take advantage of functional, area, customer, and product organization designs as needed while simultaneously minimizing the disadvantages of each. Members of a product development team can be included or dropped from the team, as the firm's needs change. The global matrix design also promotes coordination and communication among managers from different divisions (Hill, 2005:451-53).

The global matrix design has limitations, however. First of all, it is not appropriate for a firm that has few products and that operates in relatively stable markets. Second, it often puts employees in the position of being accountable to more than one manager. For example, at any given time an employee may be a member of his or her functional, area, or product group as well as of two or three product development groups. As a result, the individual may have split loyalties, being caught between competing sets of demands and pressures, as both the area manager to whom the employee reports wants one thing and the product line manager wants another. Similarly, the global matrix design creates a paradox regarding authority. On the one hand, part of the design's purpose is to put decision-making authority in the hands of those managers most able to use it quickly. On the other hand, because reporting relationships are so complex and vague, getting approval for major decisions may actually take longer. Finally, the global matrix design tends to promote compromises, or decisions based on the relative political influence of the managers involved (Griffin & Pustay, 2005:400).

2.13 Strategy
According to Henry Mintzberg (1994) strategy can be defined using one or more of the following terms:

- Plan
- Pattern
2.13.1 Plan
Considering strategy as a plan stresses a deliberate approach in which an organization seeks to take the future into account by explicitly or implicitly having direction which it is attempting to follow in order to achieve its objectives (Mintzberg, 1994).

2.13.2 Pattern
Considering strategy as a consistent pattern of behaviour over time permits assessment and evaluation of how a firm operates, and the processes by which different strategies take shape (Mintzberg, 1994).

2.13.3 Position
Position is selling particular products/services in particular markets (Mintzberg, 1994).

2.13.4 Perspective
Taking strategy as perspective tends to take an internal view, emphasizing the organization’s way of doing things, particularly about people and processes (Mintzberg, 1994).

2.13.5 Ploy
Strategy as a ploy is really a specific ‘manoeuvre’ intended to outwit an opponent or competitor (Mintzberg, 1994).

2.14 Functional strategy
A functional strategy is defined by (Davies &., 2005:34) as a strategy developed by a function within an organization to support the business strategy. The successful implementation of an organization’s international business strategy requires the key functional areas of the business – marketing, finance, logistics, operations and human resource management – to be effectively and efficiently organised in order to implement the strategy.
2.15 Business strategy
Business strategy or competitive strategy relates to how a business seeks to compete in its chosen product-markets (Ellis & Williams, 1995:7).

2.16 International business strategy
International business strategy is concerned with the strategic management processes by which firms of all sizes evaluate their changing international business environment and shape an appropriate organizational response that involves the crossing of international borders (Ellis & Williams, 1995:7).

Figure 2.9 Linking key functional drivers to international business performance.

![Diagram of International Business Strategy](image)

Source: Adapted from Ellis & Williams (1995:67)

2.17 Strategic choices for globalization
From literature, firms use four strategies to enter and compete in the international environment: an international strategy, a multi-domestic strategy, a global strategy, and a transnational strategy (Hill, 2005:427-33).

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2.17.1 International strategy/home replication
According to Hill (2005:428) firms that pursue an international strategy try to create value by transferring valuable skills and products to foreign markets where indigenous competitors lack those skills and products. Most international firms have created value by transferring differentiated product offerings developed at home to new markets overseas. Consequently, they tend to centralize product development functions at home for example, research and development. However, they also tend to establish manufacturing and marketing functions in each major country in which they do business. Nevertheless, while they may undertake some local customization of product offering and marketing strategy, this tends to be limited. In most international firms, the head office retains tight control over marketing and product strategy (Hill, 2005:428).

An international strategy makes sense if a firm has a valuable core competence that indigenous competitors in foreign markets lack and if the firm faces relatively weak pressures for local responsiveness and cost reductions. In such circumstances, an international strategy can be very profitable. However, when pressures for local responsiveness are high, firms pursuing this strategy lose to firms that emphasize customizing the product offering and market strategy to local conditions (Hill, 2005:428).

2.17.2 Multi-domestic
Firms pursuing a multi-domestic strategy orient themselves toward achieving maximum local responsiveness. A multi-domestic corporation views itself as a collection of relatively independent operating subsidiaries, each of which focuses on a specific domestic market. In addition, each of these subsidiaries is free to customize its products, its marketing campaigns, and its operating techniques to best meet the needs of its local customers (Hitt, et al, 2005:242-43).

The multi-domestic approach is particularly effective when they are clear differences among national markets; when economies of scale for production, distribution, and marketing are low; and when the cost of coordination between the parent company and its various foreign
subsidiaries is high. Because each subsidiary in multi-domestic corporation must be responsive to the local market, the parent company usually delegates considerable power and authority to managers of its subsidiaries in various host countries. MNCs operating in the years prior to World War II often adopted this approach because of the difficulties in controlling distant foreign subsidiaries, given the communication and transportation technologies of those times (Griffin & Pustay, 2005:429).

2.17.3 Global Strategy
Firms that pursue a global strategy focus on increasing profitability by reaping the cost reductions that come from experience curve effects and location economies. That is, they are pursuing a low cost strategy. The production, marketing, and R&D activities of firms pursuing a global strategy are concentrated in a few favourable locations. Global firms tend not to customize their product offering and marketing strategy to local conditions because customization raises costs (it involves shorter production runs and the duplication of functions). Instead, global firms prefer to market a standardized product worldwide so they can reap the maximum benefits from the economies of scale that underlie the experience curve. They may also use their cost advantage to support aggressive pricing in world markets. This strategy makes most sense where there are strong pressures for cost reductions and where demands for local responsiveness are minimal. The strategy is inappropriate when demands for local responsiveness are high (Hill, 2005:429).

2.17.4 Transnational strategy
A transnational strategy is an international strategy through which the firm seeks to achieve both global efficiency and local responsiveness. Realising these goals is difficult: one requires close global coordination while the other requires local flexibility. Flexible coordination (building a shared vision and individual commitment through an integrated network) is required to implement the transnational strategy. In reality, it is difficult to successfully use the transnational strategy because of the conflicting goals (Hitt, Ireland & Hoskisson, 2005: 245).
A transnational strategy makes sense when a firm faces high pressures for cost reductions, high pressures for local responsiveness, and where there are significant opportunities for leveraging valuable skills within a multinational's global network of operations. In some ways, firms that pursue a transnational strategy are trying to simultaneously achieve cost and differentiation advantages. As attractive as this may sound, the strategy is not easy to pursue. Pressures for local responsiveness and cost reductions place conflicting demands on a firm; being locally responsive raises costs (Hill, 2005:430).

2.18 Foreign market entry strategies
The focus now turns to the 'how' question. Entry strategies can be regarded as recipes or guided plans for the company's establishment of businesses abroad. They vary from simply exporting excessive goods produced mainly for home market to so-called green-field subsidiaries, which is company subsidiaries built up from scratch. With the varieties in range and ambition, there will also be differences according to financial resources necessary for the establishment,
organizational capabilities, staff training and expected return on investment (Hill, 2005:86). Different motivations give different reasons for an international entry, and hence, different choice of entry strategy.

According to the Hierarchical Model of Market Entry Modes, Pan and Tse (2000), Kotabe and Helsen (2001) and Zhan (1999) the main criterion for the choice of entry strategy is whether the firm engages in equity or non-equity modes. The same classification is supported by Rodriguez, Uhlenbruck and Eden (2005). Pan and Tse (2000) argue that the choice of entry strategies depends on two different types of factors: firm-specific factors and industry-specific and country-specific factors (macro level factors). They continue to stress the importance of the macro level factors as decisive for the differentiation between equity modes and non-equity modes.

2.18.1 Exports
Export is a low commitment entry mode, and the mode that companies typically choose by the start of an international expansion. Both Kotabe and Helsen (2001) and Peng (2006) support this view, stating that an international expansion usually starts with an exporting strategy, moving towards contractual agreements and then foreign direct investment (FDI) modes as complexity and organizational resource demands evolve. For many small firms exporting is the only real entry mode alternative. It is common to distinguish between two types of exporting: direct and indirect exporting.

(a) Direct exports
Direct exports means that the company sets up its own export organization within the company and relies on a middleman (Kotabe & Helsen, 2001). This middleman is often an agent who sells products made in the home-market to customers in other countries.

The advantage of direct exporting is that control of international operations is kept within the firm organization than what is the case with indirect exporting. Hence, direct exporting facilitates a good opportunity for the company to build a business network with potential local partners. Zhan (1999) supports this view emphasizing the advantages of direct exports when it comes to control over
product distribution, price and sales efforts. The disadvantage with this entry strategy is that the firms may not have enough resources to pursue international opportunities which can be turned into sales and profits. Furthermore, they may also be unfamiliar with how to turn opportunities abroad into sales profit. Other disadvantages with direct exports are high transportation costs for bulky products and marketing distance from customers. In addition, it may provoke protectionism because of trade barriers (Hill, 2005:87).

(b) Indirect exports
Indirect exports means that the company uses a middleman based in the company’s home market, to do the exporting (Kotabe & Helsen, 2001). This middleman can be a trading house, a broker or an export management company. The major advantage is access to a foreign market, using minimal company resources. Hence, very little risk is involved. Other advantages with indirect exports are the concentration of resources on production and that there is no need to directly handle export processes (Kotabe & Helsen, 2001).

The major disadvantage is the little or no control the firm has over the way its products is handled in the foreign country. If the middleman has little or no experience or does not meet the company’s requirements for an appropriate way of doing business, the company cannot take control of the process itself (Zhan, 1999).

According to Zhan (1999) it may be a problem that the middleman also is the agent of the competitors’ products. This may happen if the firm does not engage in exclusive contracts with its middlemen, securing that the distributor only deals with the particular firm’s products or products from non-competing firms. The only possible option will be to replace the middleman. Other disadvantages are less control over distribution (relative to direct export), and the inability to learn how to operate overseas (Kotabe & Helsen, 2001).

2.18.2 Licensing/franchising
Licensing refers to a business arrangement in which the manufacturer (the licensor) of a product or a firm with proprietary rights over certain technology, trademarks or brand grants permission to some other group or individual
(licensee) to manufacture that product (or make use of that proprietary material) in return for specified royalties or other payment (http://www.eaca.com/docs/pg/11222).

Franchising is a specialized form of licensing in which the franchiser sells intangible property to the franchisee and insists on rules to conduct the business (http://enbv.narod.ru/text/Econom/ib/str/261.html). It represents essentially the same idea as licensing, but it is typically used in service industries. “Whereas licensing is pursued primarily by manufacturing firms, franchising is employed primarily by service firms” (Hill, 2005:488-92).

Hill (2005:488-92) continues to argue that the advantage for licensors and franchisors is that they can expand abroad with relatively little capital of their own. For small to medium enterprises (SMEs) this can be advantageous as these can be resource constrained. Licensing/franchising is also advantageous when it comes to low development costs and the low risk in overseas expansion.

A disadvantage with this form of entry strategy is that the licensors/franchisors can lose control over how their technology and brand are being used. Franchising is similar to licensing, although franchising tends to involve longer-term commitments than licensing. The little control over technology and marketing may create competitors, and the inability to engage in global coordination may also be a factor. One way for the licensor/franchisor to protect the company’s business model and core competencies, is to seek patent or trademark protection abroad (Hill, 2005:488-92).

2.18.3 Turnkey projects
A turnkey project is when a separate entity is responsible for setting up a plant or equipment (for example, trains or infrastructure) and putting it into operations before handing back the project to the company which has asked for the consulting practice. It can include contractual actions at least through the system, subsystem, or equipment installation phase and may include follow-on contractual actions, such as testing, training, logistical, and operational support. It is often given to the best bidder in a procurement process.
Turnkey projects may give the possibility to earn returns from process technology in countries where foreign direct investment (FDI) is restricted. Disadvantages are that if foreign clients are competitors, selling them state-of-the-art technology through turnkey projects may turn them into efficient competitors. In addition, turnkey projects do not allow for a long-term presence after the key is handled to clients (Peng, 2006).

2.18.4 Research and Development (R&D) Contracts
According to Peng (2006), R&D contracts refer to outsourcing agreements in R&D between firms. An advantage is that these contracts give firms the ability to tap into the best locations for certain innovations at low costs. However, disadvantages are that it is difficult to negotiate and enforce contracts given the R&D’s uncertain and multidimensional nature. Other disadvantages are that R&D may foster innovative competitors, and the firms may lose core innovation capabilities in the end (Peng, 2006).

2.18.5 Co-marketing
Co-marketing refers to agreements among a number of firms to jointly market their products and services. The advantage with this agreement is the capability to reach more customers, while the disadvantage is limited control and coordination because everything has to be negotiated between the firms that are co-marketing (Peng, 2006).

2.18.6 Joint Ventures
A Joint Venture (JV) is a strategic alliance between two or more parties to undertake economic activity together. The parties agree to create a new entity together by both contributing equity, and they then share in the profits, losses, and control of the enterprise. The venture can be for one specific project only, or a continuing business relationship such as the Sony Ericsson joint venture (http://en.wikipedia.org/wiki/Joint_ventures). A JV can have three principal forms; Minority JVs (less than 50 per cent equity), 50/50 JVs, and majority JVs (more than 50 per cent equity).

JVs have many advantages. They can share costs and risks with a local partner and gain access to the partner’s knowledge about the host country. In return,
the local firm benefits from the MNE’s expertise in technology, capital and management. Additionally, JVs can be politically more acceptable than wholly owned subsidiaries (WOS). Disadvantages may be that it can be difficult to involve partners from different backgrounds, divergent goals and incompatible capabilities. It may also be difficult to achieve effective equity and operational control because everything must be shared and negotiated, and it can be difficult to coordinate globally (Peng, 2006).

2.18.7 Wholly Owned Subsidiaries (WOS)
What separates WOSs from the other entry modes is that the company now enters the new market with a 100 per cent ownership. There are two primary ways to set up WOSs: acquisitions and green-field operations. Although, the Hierarchical Model only deals with acquisitions, it is useful to also include mergers as many of the drawbacks with acquisitions also have some validity to mergers (Hill, 2005:494).

(a) Green-field operations
Green-field operations refer to building factories and offices from scratch. A green-field WOS gives an MNE complete equity and management control. This control leads to a better protection of proprietary technology and expertise. In addition, a WOS allows for centrally coordinated global actions. Further, green-fields do not have to deal with problems of integrating different corporate cultures of parent companies, as is the case partially in JVs and particularly in acquisitions (Gooderham and Nordhaug, 2003). Hence, green-field operations give the company more freedom and flexibility. Drawbacks with a green-field WOS are the costs and risks involved (both politically and financially) and the slow entry speed as it takes at least two or more years to start up a company (Peng, 2006).

(b) Mergers and acquisitions
Gooderham and Nordhaug (2003) define mergers and acquisitions as usually the result of a friendly arrangement between companies of roughly equal size, whereas acquisitions are unequal partnerships, often the product of a hard-fought battle between acquiring and target companies. An acquisition is probably the most important entry mode given the amount of capital involved; it represents approximately 60 per cent of global FDI, which are JVs and WOSs.
Advantages with acquisitions are faster entry speed and the same benefits that green-field WOS take hold of (Gooderham & Nordhaug, 2003).

Acquisitions share all the disadvantages of green-field WOS (except slow entry speed) and post-acquisition integration problems (Peng, 2006). Kotabe and Helsen (2001) mention three major disadvantages. The first is linked to the differences in the corporate culture of the two merging/acquiring companies, and a new unified identity may be hard to establish. Second, the result of the acquisition does not always accomplish the expectations; consequently, disappointment and dissatisfaction will influence the corporate culture. Finally, an acquisition can turn out to be a very expensive entry mode. Attractive partners are scarce and are usually not willing to be acquired, and if so, they set a high price on themselves (Kotabe & Helson, 2001).

2.19 Summary
In this chapter the global company was defined. The role of small businesses was explained to show that it is not only multinational companies which are involved in international business but also small to medium enterprises. The forces driving globalization and the areas of business affected were identified. A roadmap to smart globalization and a globalization framework by the innovative leaders in globalization was also discussed. The imperatives to globalization which help companies profit from globalization were highlighted.

The chapter also emphasized the need to develop a global mindset in achieving global competitiveness. Organizational structure was identified as an important control mechanism for implementing different strategies of an organization. Strategic choices of companies at various levels of globalization were identified. Finally foreign market strategies used in international business were highlighted. Thus this chapter helped identify the strategies used by various companies to achieve global competitiveness. In the next chapter Porter’s theory of National Competitive Advantage is explored.
CHAPTER 3
WHAT THE LITERATURE SAYS ABOUT THE FACTORS WHICH AFFECT THE COMPETITIVE ADVANTAGE OF AN INDUSTRY

3.1 Introduction
Porter (1990) emphasized the importance of related industry clusters in certain regions for achieving global competitiveness. This is exemplified by the automotive industry in the Nelson Mandela Bay where automakers and their various suppliers are in close proximity to each other (www.autoindustry.co.za). Deducing from Porter (1990), the implication is that organizations which want to excel in the automotive wiring harness industry would tend to establish a branch in the Nelson Mandela Bay so as to be close to the automakers and also enjoy the knowledge spill over's which occur in this region. This chapter will help answer the research question: What does a literature study reveal about the strategic importance of an industry cluster.

3.2 International competitiveness
Why are some firms able to innovate consistently while others cannot? According to Porter (1990) the answer rests in four broad attributes that individually and interactively determine national competitive advantage: factor conditions, demand conditions, related and supporting industries, and the environment in which the firms compete.

3.3 The Nelson Mandela Bay wiring harness industry cluster and Porter's Diamond
The wiring harness industry is clustered in the Nelson Mandela Bay together with other various automotive component makers, this make it suitable for analysis using Porter's Diamond.

3.4 The Competitive Advantage of Nations (Porter, 1990)
The task of this chapter is to give a thorough presentation of Porter's work on competitive advantage of nations and the Diamond framework. The Diamond framework and the theory of the competitive advantage of nations are important contributions to the theoretical foundation of the treatise, and hence, a great deal effort has been put into this presentation, drawing upon the work of Porter
himself. Central in Porter’s research on the competitive advantage of nations, is his statement that national prosperity is created, and not inherited (Porter, 1990). By saying this, he rejects the traditional economic theory which teaches that variables like labour costs, interest rates and economy of scale are of utmost importance for the competitive advantages of a nation. These are often a result of historical events and traditions, that is inherited (Rugman & Hodgetts, 1995:14-17).

In order to do so, several premises for understanding national advantage are given. First, the reason why some firms are better at differentiating between products and sources of competitive advantage needs to be explored. Second, an explanation of why the nation appears to be the desirable home base for competing in an industry should be given (Porter, 1990).

Porter defines the home base as the location where strategy is set, core product and process development takes place, and the essential and proprietary skills reside (Porter, 1998b). The home base then constitutes the platform for a global strategy in which advantages drawn from the home nation are supplemented by those of the firm. Third, firms gain and sustain competitive advantage in international competition through improvement, innovation and upgrading. Porter (1990) defines innovation very broadly to include both product improvement and development of entirely new products and production methods.

Furthermore, he stresses the importance of innovation as an accumulation of small steps and extended efforts, as much as the dramatic breakthrough. Advantages are gained through altering the basis of competition, and sustained by improvement which is fast enough to stay ahead. Today’s advantages are soon superseded or nullified. At the core of explaining national advantage in an industry must be the role of the home nation stimulating competitive improvement and innovation. Finally, the firms gaining competitive advantage are not necessarily those which discover new market needs or the potential of new technologies, but the early-movers and those most aggressive towards exploring new opportunities. Such new discoveries may alter the competitive
structure of an industry, making previous leaders laggards behind the more adapting firms (Porter, 1990).

3.5 The Diamond of National Advantage
The Diamond framework is an industry-level framework focusing on the nations as its core unit of analysis. It is a tool for determining whether the industry (in a given nation) can provide firms with such favourable conditions allowing them to compete internationally. In other words, the Diamond framework says whether or not a firm has the competitive advantages necessary for an international launching (Porter, 1990).

The Diamond framework consists of four country-specific determinants, which describe characteristics of a nation’s competitive advantage, and two external variables. The determinants are factor conditions, demand conditions, related and supporting industries, firm strategy, structure and rivalry, chance and government. The determinants as a system constitute the Diamond framework, which is a mutually reinforced system meaning that the effect of one determinant depends on the state of the others (Rugman & Hodgetts, 1995:14-17). Porter (1990) points out two elements of particular importance for the diamond as a system: domestic rivalry and geographic concentration. Domestic rivalry can be seen as the main motivator for improvement in all the other determinants, whereas geographic concentration is important because it expands and promotes the interaction among the determinants (Porter, 1990).

Nations succeed in particular industries because their home environment is the most dynamic and the most challenging. This environment stimulates firms to upgrade and widen their advantages over time, for instance where the national diamond is the most favourable. The companies that emerge from such an environment will prosper in international competition (Porter, 1998b).
To achieve and sustain competitive success in the knowledge-intensive industries of advanced economies, it is necessary that advantages are sourced throughout the diamond. Although, advantage in every determinant is not a prerequisite for competitive advantage in an industry, nevertheless competitive advantage should be based on more than only one or two determinants. The interaction of advantage in many determinants creates self-reinforcing benefits that are extremely hard for foreign rivals to nullify or replicate (Porter, 1990).

The Diamond framework states that firms gain competitive advantage under three conditions:

- If home base allows accumulation of assets and skills
- In industries where home base affords better information and insight into product and process needs
- If goals of the owners, managers and employees support intense commitment and sustained investment (Porter, 1990).
3.5.1 Factor conditions
According to Hill (2005:166) factor conditions relates to the nation’s position in factors of production, such as skilled labour or infrastructure, necessary to compete in a given industry. Factors of production can be arranged in a hierarchy where basic and generalized factors (such as local raw materials, unskilled labour or good climate) constitute the lowest level, and advanced and specialized factors (highly educated and specialized labour and other factors that in particular meet the needs of the industry) are on the higher level (Hill, 2005:166).

Porter (1990) stresses the advanced and specialized factors as those critical for sustained and heavy investment. He even argues that having general high school or college/university education does not necessarily represent competitive advantage in the modern international competition. What is important to create competitive advantages, are factors highly specialized to an industry’s particular needs. For example, venture capital in Silicon Valley and scientific research facilities in the aircraft-industry. These factors are scarce and hard to imitate, and they require sustained investment to be created (Porter, 1990).

In other words, what is important in sophisticated industries and advanced economies is not the stock of factors itself, but how it most efficiently can be created, upgraded and deployed into particular industries. Usually, competitive advantage results from the presence of leading institutions that first create specialized factors and then continually work to upgrade them (Hill, 2005). The driving force behind this innovative process is active domestic rivals which create pressure and company goals leading towards constant commitment to the industry. It is essential for companies to position themselves in the market, to innovate and upgrade before foreign rivals. In order to do this, favourable conditions must be present elsewhere in the diamond (Porter, 1990).

3.5.2 Demand conditions
Demand conditions relates to the nature of home-market demand for the industry’s products or services. Porter (1998b) states that nations gain competitive advantage in industries where the home demand gives their
companies a clearer and/or earlier picture of emerging buyer needs. Such home bases are often characterized by having some of the world’s most sophisticated and demanding buyers for the product or service. This is the reason why sophisticated demand conditions provide advantages, because firms are forced to respond to tough challenges by innovating and upgrading sooner than their foreign competitors do. However, the size of the home demand proves less significant than the ‘character’ of home demand (Porter, 1990).

However, sophisticated demand conditions in the home market are of little value if domestic preferences are not transferable to other nations. A nation’s companies can anticipate global trends only if the nation’s values are spreading. Nations export their values and tastes through media, through training foreigners, through political influence, and through the foreign activities of their citizens and companies. Transferring domestic preferences to foreign markets, do not only benefit market growth in general, but is most important for small, open economies whose home market is too small to secure a high growth rate (Porter, 1990).

**3.5.3 Related and supporting industries**
Related and supporting industries relate to the presence or absence in the nation of supplier industries and other related industries that are internationally competitive. Internationally competitive home-based suppliers create advantages in downstream industries in several ways, such as the ability to offer the most cost-effective input delivery and close working relationships. Short lines of communication can improve the information flow and the exchange of ideas and innovations due to a quick and constant process (Porter, 1990).

The nation’s companies benefit most when the suppliers themselves are global competitors. It is ineffective for a company to create suppliers that are very dependent on the domestic industry and in the worst case, also prevented from serving foreign competitors. The same principle applies to suppliers and their recipient firms. As for firms and their customers, suppliers also need rivalry and the constant pressure for product innovation and better logistics to perform better. Besides, serving only one industry or one market, makes them very
vulnerable to economic fluctuations, meaning that the risk involved is much higher than would be the case with a broader customer base (Porter, 1990). Home-based competitiveness in related industries provides similar benefits as with suppliers, where information flows and technical interchange speed the rate of innovation and upgrading (Porter, 1990).

3.5.4 Firm strategy, structure and rivalry
Firm strategy, structure and rivalry constitutes the context in which firms are created, organized and managed as well as the nature of domestic rivalry. Goals of the owners, management and employees also play a significant role. The business context varies widely among nations, and national advantage arises from good match between choices regarding the context and the sources of competitive advantage in a particular industry (Porter, 1990).

No managerial style can be completely linked to a nation, but national preferences are often of such a character that it is noticeable by any observer. Porter (1998b) uses Germany to illustrate how the engineering and technical background of many senior executives has produced a strong fascination toward methodical product and process improvement. Likewise, their organizations are often hierarchical and impersonal. This has led to a great success in industries with a high technical or engineering content, whereas German successful firms in consumer goods and services are rarer.

Nations also differ remarkably in the types of goals that firms and individuals seek to achieve. Company goals reflect the national characteristics of capital markets and the shareholder/stakeholder issue. They also reflect how managers are being compensated. The characteristics of the appraisal systems most commonly accepted, are also important to competitive advantage as it influences individual motivation to work and expand skills (Porter, 1990).

Individuals, no matter what level or position, should be encouraged to maintain and expand their skills and competencies. Outstanding talent is a scarce resource in any nation, and it is up to each nation to catch those talented individuals before someone else does. This is important because a nation’s success largely depends on which type of education these talents pursue,
where they choose to work and their commitment and effort in their vacancies. Other important nation-variables are attitude towards individualism, equality, inherited status versus achieved status *et cetera* (Porter, 1990).

Finally, domestic rivalry is a powerful stimulus to the creation and persistence of competitive advantage. Domestic rivalry is so important because of the mutual pressure for improvement and innovation. Porter (1998b) argues that the rivalry among domestic firms often go beyond a pure price-war, they push each other for better quality and services and the creation of new products and processes. The competition may reach a point where the incumbent firms might not preserve advantages for long periods, nevertheless the active pressure from competitors and the fear of falling behind stimulates new thinking and innovation (Porter, 1990, 1998a, 1998b).

### 3.5.5 The two external determinants: chance and government

The two external variables in the Diamond framework are chance and government. Chance events are developments outside the control of firms (and usually also the nation’s government), such as pure inventions, wars, external political developments, major shifts in foreign market demand or breakthroughs in basic technologies. They create discontinuities that can reshape industry structure and provide the opportunity for one nation’s firms to supplant another’s. The final determinant to complete the Diamond-framework is Government. Government, at all levels, can make decisions which either can improve or worsen the national advantage (Porter, 1990).

This is most clearly seen by examining how policies can influence each of the determinants. Antitrust policy, black economic empowerment (BEE), company regulations, government investment, attitudes towards education and government purchases all influences the diamond in one way or another. If such governmental policies are implemented without careful consideration of how they influence the diamond, the result may undermine the competitive advantage of the nation (Porter, 1990).
3.6 Cluster discussion
As stated above, domestic rivalry and innovation is crucial for a good business performance, and clusters are special locations which can offer some of the best suitable business environments for their incumbent firms. As a continuation of the Diamond introduction, a brief presentation of cluster follows.

Porter (1998a) defines clusters as geographic concentrations of interconnected companies and institutions in a particular field. It encompasses an array of linked industries and other entities important to competition, and affects competitiveness within countries as well as across national borders. Often clusters also extend downstream to channels and customers, to manufacturers of complementary products and to companies in industries related by skills, technologies, or common inputs. Many clusters also include governmental and other institutions (Porter, 1998a).

Most important of all, clusters promote both competition and cooperation (Porter, 1998a). Rivals compete intensely to win and retain customers. Without such dynamic competition, a cluster will fail. There is also cooperation, much of it vertical, involving companies in related industries and local institutions. Clusters represent a kind of new organizational form in between geographical close markets on the one hand and hierarchies, or vertical integration, on the other. A cluster, then, is an alternative way of organizing the value chain (Porter, 1998a).

3.7 Clusters and motivations
Clusters in the meaning of vertical integration apply in particular to co-ordination, since logistics within the cluster area become a way of achieving competitive advantage. It is essential to plan how the set of bases for global and regional development should be, including the establishment of logistic centres. A set up base close to financing institutions will facilitate the coordination of cluster members, where speed and control will be improved (Porter, 1990, 1998, 1998b).

However, clusters may be critical to competition for several reasons because productivity rests on how companies compete, and not on the particular fields
they compete in. Companies can be highly productive in any industry if they employ sophisticated methods, use advanced technology, and offer unique products and services. All industries can employ advanced technology and all industries can be knowledge intensive. The sophistication with which companies compete in a particular location, however, is strongly influenced by the quality of the local business environment. The Diamond framework stresses how the relations among the determinants create business formation, where clusters affect competition in three broad ways (Porter, 1998a):

- By increasing the productivity of companies based in the area
- By driving the direction and speed of innovation, which underpins future productivity growth
- By stimulating the formation of new business, which expands and strengthens the cluster itself (Porter, 1998a).

The cluster-advantages can be summarized broadly as influencing productivity in a positive manner. Being part of a cluster allows companies to operate more productively in sourcing inputs; accessing information, technology, and needed institutions; coordinating with related companies; and measuring and motivating improvement (Porter, 1990, 1998a, 1998b).

3.7.1 Better access to employees and suppliers

Companies in vibrant clusters can tap into an existing pool of specialized and experienced employees, thereby lowering their search and transaction costs in recruiting. Because a cluster signals opportunity and reduces the risk of relocation for employees, it can also be easier to attract talented people from other locations, a decisive advantage in some industries. Sourcing locally instead of from distant suppliers will lower transaction costs, whereas formal alliances with distant suppliers can moderate some of the disadvantages of distant outsourcing. Even when some inputs are best sourced from a distance, clusters offer advantages. Suppliers trying to enter a large, concentrated market will price more aggressively (Porter, 1998a).

The access to critical resources will therefore be a crucial motivation for firms to be a part of a cluster because it will secure the steady supply of the critical
resources, including the advantages of better access to skilled low-cost labour, natural resources and suppliers (Porter, 1990, 1998a, 1998b).

3.7.2 Access to specialized information
In the extensive market, technical and competitive information accumulates within a cluster, and members have preferential access to it. Additionally, personal relationships and communities within the cluster will contribute to further trust and facilitate the flow of information, resulting in a more transferable information flow. To achieve this goal, firms will be very dependent on being present in the host country. This view is also supported by Ellis (2000), where he states that social ties will be an important factor when entering a foreign market. It signals the firm’s intent to keep key competitors and determines the basis for future battles. How decision-makers identify potential exchange partners in foreign markets and thus initiate international exchange relationships is essential (Porter, 1990, 1998, 1998b).

3.7.3 Access to institutions and public goods
Investments made by government or other public institutions can enhance a company’s productivity (public spending for specialized infrastructure or educational programs). In addition, investments done by companies contribute to increased productivity (training programs, infrastructure, and quality centres) (Porter, 1990, 1998, 1998b).

3.7.4 Better motivation and measurement
Local rivalry is highly motivating and clusters can also make it easier to measure and compare performances because local rivals share general conditions. Companies within clusters have intimate knowledge of their suppliers’ costs, and managers will have the opportunity to compare costs and employee performance. Clusters are conducive to new business formations for many different reasons. Individuals working within a cluster can more easily distinguish gaps in products or services around which they can build businesses. Barriers to entry are usually lower than outside clusters (Porter, 1990, 1998, 1998b).
Clusters may play a crucial role in a company’s ongoing ability to innovate. Because sophisticated buyers are often part of a cluster, companies inside clusters usually have a better insight in the market than isolated competitors do. In addition to enhanced innovation, clusters provide the capacity and the flexibility to act rapidly. A company relying on distant suppliers faces greater challenges in every activity it coordinates with other organizations, and innovation can be even harder in vertically integrated companies. Reinforcing the other advantages for innovation is the vertical pressure, competitive pressure and the constant assessment that occurs in a cluster (Porter, 1998a).

The market development motivation will help firms through innovation to find new markets with growth potential and good customer base. Because members of the cluster are mutually dependent, good performance by one can boost the success of the others. The most obvious example is when products complement one another in meeting customer’s needs. Another example is the coordination of activities across companies to optimize their collective productivity. A cluster frequently enhances the reputation of a location in a particular field, making it more likely that buyers will turn to a seller based there. Beyond reputation cluster members often profit from a variety of joint marketing mechanisms, such as company referrals, trade fairs, trade magazines, and marketing delegations. In addition, buying from a cluster is more attractive for customers because it allows them to ‘multi-source’ or to switch sellers if there is a need for it (Porter, 1990, 1998, 1998b).

3.8 Criticism of the Diamond Framework
As the title suggests, this part will deal with the criticism of the Diamond framework and some major challenges it faces as the world economy has changed since it was first published in 1990. The major academic objections have been Porter’s choice of the nation as the unit of analysis. This view is shared by Rugman and D’Cruz (1993), Cartwright (1991), Rasmussen and Madsen (2002) and others. There has been a development from Porter’s focus on nations, via Rugman and D’Cruz’ emphasis on regions to Rasmussen and Madsen’s (2002) world perspective.
3.9 The Double Diamond Framework
A major drawback with the diamond framework; is according to Rugman and D'Cruz (1993), that the framework is developed with MNEs originating in one of the triad blocks in mind, leaving MNEs in small economies without a proper analyzing-tool. However, it is only a small number of firms that has the financial and organizational capabilities and resources to choose location by the criteria mentioned by Porter (1998a), that is the MNEs. More specifically, it is the MNEs of the US, Japan and the EU.

Bartlett and Ghoshal's (2004) proposition of the transnational firm suggests that MNEs are becoming increasingly independent from single nations, instead they use selective parts of many nations' diamonds to gain international advantage. Rugman and D'Cruz (1993) argue that MNEs originating from small, open economies, to a large extent are guided by the requirement for market access to, and hence, also competitiveness in, at least one of the triad blocks. For firms competing in one or more triad blocks, both the home nation diamond and the diamond of the particular triad block may be of high relevance. MNEs in both the small country and in the triad block(s) may turn to all the national diamonds elements such as factor conditions, supporting industries and customers. What is important to notice is that such behaviour merges the national diamonds into one, big regional diamond (Rugman & D'Cruz, 1993).

This paragraph has shown that Porter’s Diamond, as originally formulated, has most explanatory effect on MNEs originating from one of the triad-blocks. For MNEs in small, open economies and to some extent, also SMEs, their number one task when going international is to secure access to and compete in one or more of the triad blocks. Determinants in other nations’ diamonds can therefore influence the core competencies of these firms as much as the ones of the home base.

3.10 The Born Global Concept
When explaining international business and international expansion in particular, scholars have often referred to the well-known stage models (Rasmussen & Madsen, 2002). According to these models, firms first establish a solid home base, then expand stepwise starting with the neighbouring
countries and continue expanding to areas farther away from home. Adopting such evolutionary approach to international expansion is though very time consuming, often several years, or even decades, are required until firms are ready to go international (Rasmussen & Madsen, 2002).

The ‘Born Global concept’ in many ways constitutes a fundamentally different view. According to McKinsey (1993) this type of firm typically starts exporting less than two years after the firm’s foundation, and the characteristics of the firms are the following: “These firms view the world as a market place from the outset and see the domestic market as a support for their international business” (McKinsey, 1993: 9).

According to Rasmussen and Madsen (2002), the explanation for this new picture of internationalization of firms is claimed to be more global market conditions, new developments in transportation and communication technologies, and the rising number of people with international experience. The ‘Born Globals’ are often high-tech firms, or companies that use well-known technology. A major factor in the explanation of the phenomenon of ‘born global’ is the management’s commitment to internationalization. The manager’s and the founder’s personal experience, relations, and knowledge are thought to have a great importance for the existence of ‘born global’ firms. In addition, the firm’s ability to standardize for instance production and marketing in a global niche instead of developing customized products is important. The idea is that even the smallest firm can have access to information about the export markets and can begin to export right from the birth (Rasmussen & Madsen, 2002).

3.11 Porter's Diamond and e-commerce
So far, the conceptual critics of the diamond framework have been discussed. The discussion on the validity of the diamond continues, focusing on the impact of the internet and new ways of doing business and reaching customers. According to scholars like Laudon and Laudon (2003) and Parsons and Oja (2006) e-commerce includes internet activities like online shopping, electronic auctions, online travel-ticket ordering, online banking and stock trading and online education. The unique feature of purchasing digital products like news, music, videos, databases, software, and all types of knowledge-based items, is
that they can be transformed into bits and delivered over the web. Consumers can get them immediately upon completing their orders, and no one pays shipping costs.

Typical e-commerce activities are B2C, C2C, B2B and B2G (where B is business, C is customer and G is government). The issue with e-commerce and the Diamond-framework is the assumption that online businesses make country borders less significant. Parsons and Oja (2006) go on arguing that as long as the customers have internet-access, a credit card for payment possibilities and access web pages written in a language understandable to them, all requirements needed for a successful e-commerce transaction are evident. For online orders of physical products, some countries may suffer from shipping limitations, but otherwise, countries and home country markets are of lesser significance than what is the case for bricks and mortars businesses (the traditional physical stores) (Parsons & Oja, 2006).

If the assumption of country borders having less importance for e-commerce business is credible, then some of the very foundation of the Diamond framework falls apart. Porter’s starting point, as described above, is that a firm’s home base is considered to be the nation where it retains effective strategic, creative and technical control that is, it is the source of the MNE’s core competencies (Rugman, 1993). As internet-firms work with the entire world as their market, they do not have a specific home market to turn to. Hence, the location of the home base is no longer of any significance.

Instead, e-commerce businesses source their advantages elsewhere. From a customer’s view, e-commerce offers some unique advantages over brick-and-mortar stores. They can easily search through large catalogues, compare prices between multiple vendors, arrange products online, and not least, shop whenever they feel like independent of opening hours.

Porter (2001), on the other hand, does not agree with the assertion of internet and e-commerce as a new economy. His main arguments for this is that e-commerce so far has failed to produce high profitability for the firms involved.
and thereby has not been strong enough as an influencing force to be able to create any industry structure of its own. According to Porter (2001), internet technology provides better opportunities for companies to establish distinctive strategic positioning than did previous generations of information technology. By this he means that internet in itself is not a competitive advantage, but that it can be used as a tool to compete. By doing so, it may seem as he defends the old position regarding online shopping just as a supplement to the traditional bricks-and-mortars, and not as the independent corporate structure it has become.

3.12 The Automotive Industrial Development Centre (AIDC)
The Automotive Industry Development Centre (AIDC) has been established to assist in increasing the global competitiveness of the South African automotive industry to world-class levels by addressing the following challenges:
The SA automotive industry requires qualified people to sustain existing growth and create new jobs. To compete internationally, skilled personnel are critical in promoting global competitiveness. SA component manufacturers, especially the lower tier levels are not yet globally competitive with reference to cost, quality and delivery requirements; and high logistical costs result from large distances to export and import markets and a sub-optimal logistics infrastructure within South Africa (www.aidc.co.za).

The AIDC works in partnership with business, Local, Provincial and National Government, Tertiary and Further Education Institutions and other national and international organizations to provide technical services to the automotive industry across all tiers of suppliers and assemblers. As a project-driven organization with a focus on technical excellence and delivery, the AIDC provides accessible and affordable world-class services in the areas of skills development and training, supplier development and supply chain development. The AIDC’s activities and presence continue to be focused in Gauteng and the Eastern Cape, where ongoing support from Provincial and Local Governments has resulted in significant collaborative projects aimed at supporting the local industry (www.aidc.co.za).
3.12.1 Vision
The AIDC is the preferred provider of strategic solutions and government projects to the South African automotive industry (www.aidc.co.za).

3.12.2 Mission statement
The AIDC is a government-owned private service provider company that provides best practice solutions in facilitating government and industry strategic initiatives; and implementing related projects. The AIDC serves the South African automotive industry, government departments and government agencies on a national basis with the aim (www.aidc.co.za):

- To grow the SA automotive industry’s global competitiveness;
- To support the government’s automotive-related objectives;
- To contribute to the government’s and industry’s goals of continuous growth and sustainable job creation;

To achieve this, the AIDC has:

- A dedicated and professional team;
- Government, industry and union support;
- Access to local and international partnering networks (www.aidc.co.za).

3.12.3 Strategic objectives

- To provide accessible and affordable world-class technical and project-focused resources aimed at addressing the needs of the automotive industry in South Africa.
- To harness the collective expertise of numerous local and international organizations with world-class automotive competencies.
- To build a network of Government and technical service providers aimed at addressing the technology needs of the automotive industry in South Africa (www.aidc.co.za).

3.13 The Automotive Industry in South Africa

3.13.1 Description of the local industry
The local automotive industry is guided by a common vision formulated jointly by all stakeholders. This is used as a platform for Government, Business and Labour to determine the future direction of policy (www.aidc.co.za).
3.13.2 The Vision
To establish a viable, competitive industry domestically and internationally, capable of achieving both continuous growth and sustainable job creation.

The SA automotive industry incorporates the manufacturing, distribution, servicing and maintenance of motor vehicles and components. The automotive industry represents the third largest sector in the SA economy, after mining and financial services, and accounts for approximately 30 per cent of the country’s manufacturing output (www.aidc.co.za).

The SA automotive industry is comprised of eight assemblers, a number of substantially smaller, specialist medium and heavy commercial vehicle assemblers, and approximately 400 automotive component manufacturers. In the early 1990s, the majority of SA based original equipment manufacturers (OEMs) were South African owned capacity under license from MNCs and manufacturing exclusively for the domestic and small Sub-Saharan African market. By early 2004 all of the OEMs were either fully or majority owned by parent companies (www.aidc.co.za).

A good domestic market is seen as a powerful support basis for a successful export programme. The automotive industry in general is reliant on economies of scale in order to export products as part of a global value chain, hence the majority of SA exporting firms is currently partly or foreign owned. A principal reason for the shift in ownership relates to the manner in which exporting contracts are secured, as well as the need to access global design capabilities (www.autoindustry.co.za).

Whilst employment in the automotive industry is higher than is often recognised, this does not mean that the sector offers great potential for employment growth. Whilst certain subsectors (for example wiring harnesses and stitched leather component manufacture) are very labour intensive, the bulk of the motor vehicle, parts and accessories sector is relatively capital intensive. Furthermore, the skill requirements of the sector are quite high. Only 50.3 per cent of total employment in the sector is semiskilled or unskilled while 31.4 per cent of the workforce is in high level Skills (www.aidc.co.za).
3.14 The Motor Industry Development Programme (MIDP)
The automotive industry’s strong performance, especially in regard to exports post 1995 suggests a strong link to promulgation of the Motor Industry Development Programme in 1995. It is thus necessary to outline the basic parameters of the MIDP. This is important as the vehicle and automotive components sector policy environment stretches back to 1961, when the first of a series of six local content programmes were introduced. The MIDP succeeded the local content programmes in September 1995 (www.aidc.co.za).

3.14.1 Objectives
- improve the international competitiveness of firms in the industry,
- enhance its growth through exporting,
- improve vehicle affordability,
- improve the industry’s highly skewed trade balance and
- stabilise employment levels (www.aidc.co.za).

These objectives were to be achieved in part through encouraging a high degree of specialisation and greater economies of scale in the industry.

3.15 The Automotive Industry in Gauteng, Eastern Cape and KZN
The SA automotive industry is concentrated in only three regions, highlighting the importance of external economies and customer proximity to the supply chain. The most important region covers the Gauteng (mainly the Pretoria and East Rand) and a portion of the North West (Garankuwa and Brits). This region is home to four of the OEMs (BMW, Nissan, Fiat and Ford), and approximately 50 per cent of the SA automotive components industry. The second most important region is the Eastern Cape, covering Port Elizabeth/Uitenhage (General Motors and Volkswagen) and East London (DaimlerChrysler). This region is thus home to three OEMs and about 30 per cent of the national automotive components industry. The third major region is Durban/Pietermaritzburg, which has one OEM (Toyota) and about 15 per cent of the components industry (www.aidc.co.za).

3.16 Challenges and opportunities facing the automotive industry
The SA automotive industry possesses unique qualities and a natural ability to add value to global strategies of parent companies and multinationals. Some of the key advantages present include (www.aidc.co.za):
- Infrastructure
- First world production testing
- Emerging market cost advantages
- Flexible production ability
- Raw material availability
- Government support

However, the implications of the international trends are potentially severe, particularly given that SA is only the world’s 20th most important producer, manufacturing 0.7 per cent of the world’s passenger vehicles and 0.76 per cent of its light commercial vehicles. For SA vehicle and component manufacturers to succeed, they will need to meet global requirements in respect of their quality, cost, flexibility, reliability, adaptability and innovative capabilities (www.aidc.co.za).

Whilst domestic market conditions are presently positive for the automotive industry, the clearest long-term opportunities are still in the export market. In the short term these pertain to existing, secured export contracts. Key opportunities here relate to increasing the local content of vehicles assembled in South Africa for export. Local content is presently well below historical levels, with this needing to be corrected if the local manufacturing industry is to secure the full benefits of local vehicle assembly (www.aidc.co.za).

Although the country’s unique qualities are more suited as a source of niche products globally, export contracts for several million units of a single component have successfully been awarded to domestic suppliers amidst strong competition from other emerging markets. Combined with the strong export growth, this will support the industry’s sustainable growth and increasing profit performance (www.aidc.co.za).

3.18 Summary
This Chapter discussed the theory of national competitive advantage by Michael Porter. Information on the automotive industry in South Africa as obtained from the automotive industry development centre (AIDC) was also presented in this chapter. The importance of industry clusters has been established from Porter’s
theory. The efforts of government in helping to improve the global competitiveness of the industry were also outlined. Thus this chapter has helped to confirm the strategic importance of industry clusters in helping organizations to achieve global competitiveness. The next chapter reviews the results of the empirical study. Then in Chapter 5, the wiring harness industry in the Nelson Mandela Bay will be evaluated as to whether the factors influencing global competitiveness are being applied and utilised.
CHAPTER 4
THE EMPIRICAL STUDY, METHODS USED AND ANALYSIS OF DATA

4.1 Introduction
Chapter Two of the literature study analysed the strategy of international business and globalization. Strategies to achieve global competitiveness were analysed and various foreign market entry strategies were introduced. Chapter Three analysed the fundamental attributes of a region which are necessary for an industry to achieve global competitiveness. These two chapters helped to answer two of the sub-problems namely:

- a) What strategies does the research literature reveal will enhance the management of organizations in the global arena?
- b) What does a literature study reveal about the strategic importance of an industry cluster?

Information gathered from the empirical study will help to determine whether the Nelson Mandela Bay’s wiring harness industry is adopting international strategies to increase global market share.
The method and design of the empirical study will be addressed in this chapter.

4.2 The empirical study
Data from the empirical study will help resolve the main problem and the other sub-problems namely:

Main problem:

- Null hypothesis Ho: Automotive wiring harness manufacturers in the Nelson Mandela Bay are using strategies which enable them to stay abreast of globalization resulting in growing percentage foreign sales.
- Alternative hypothesis Ha: Automotive wiring harness manufacturers are not using strategies which enable them to stay abreast of globalization resulting in stagnation or decline of percentage foreign sales.

Sub- Problems or Questions

- H1: Wiring harness manufacturers are increasing their global markets.
H 2: Wiring harness manufacturers are using technology instruments such as internet to conduct their business activities globally.

H3: Wiring harness manufactures are using internationally accepted accounting practices in order to be globally effective.

H4: Wiring harness manufacturers are sourcing employees globally.

The empirical study used a questionnaire developed from the theoretical analysis in Chapter Two. The process of the empirical study was as follows:

4.2.1 The questionnaire
Primary research in the form of a questionnaire survey was chosen. Questionnaire surveys are highly structured data collection techniques whereby each respondent is asked much the same set of questions. The questionnaire was developed from the theoretical analysis derived from the literature study, as well as ensuring that the responses answered the research questions (see Appendix 2).

The questionnaire is divided into eight sections. Section one comprises background questions. Sections two to eight comprises quantitative data on various strategies used in international business.

4.2.1 Background data: Section one
(a) Section one of the questionnaire is made up of general background questions and respondents were asked to choose between alternatives. The questions in this section surveyed information on age of organization, location of organization and management structure. The information in this section may be classified as independent variables and is used to facilitate comparisons with the dependent variables from section two to eight.

4.2.1 Quantitative analysis: Section two to eight
(b) The questions in section two to eight were designed to research the various strategies managers use in the various operations of the business. The question were intended to infer whether the strategies adopted by the wiring harness industry were in tandem with globalization theory as articulated in Chapter Two of the treatise.
Section two of the questionnaire is made of questions on marketing strategies. The questions offered the respondent choices to tick and also an extra row was provided for the respondent to state his or her views if he or she did not agree with the alternatives given. The respondents were asked to substantiate their answers. Thus this section was designed to investigate whether the wiring harness industry is identifying market opportunities worldwide and establishing the necessary presence to exploit these opportunities. That is, foreign market entry strategies.

Section three dealt with questions on operational strategies. This section was designed to investigate whether organizations were tapping the optimum locations for their activities and resources.

Section four focussed on learning and growth strategies. This section was designed to survey whether organizations were actively developing their staff and also learning new technologies.

Section five dealt with human resources strategies. The purpose of the section was to investigate if the wiring harness industry was adopting international human resources strategies, namely sourcing the best human skills wherever they may be in the world at a reasonable cost.

Section six of the questionnaire probed questions on international finance strategies. This section was designed to investigate whether the organizations were using optimal financial strategies in managing their financial resources. Namely sourcing investment funds in optimal global markets and using hedging strategies to guard against foreign exchange risk.

Section seven was designed to investigate the various communication technology strategies in use in the wiring harness industry. According to the literature study in Chapter Two, technology is one of the critical drivers of globalization.
Section eight required respondents to choose the various inventory control strategies in their organization. Inventory control essentially entails the shrewd management of the organization’s resources, that is raw materials and finished goods and this is essential for global competitiveness according to Chapter Two.

4.2.2 Administering the questionnaire
The supplier information was obtained from the website www.autoindustry.co.za which lists all the manufacturers of the automotive industry in the Eastern Cape, by also using search engines such as Google, Yahoo, Dogpile et cetera and also by asking industry executives. The wiring harness industry in the Eastern Cape consists of six manufacturers all of which are located in the Nelson Mandela Bay. The researcher established rapport with the industry executives by first talking to them telephonically and explaining the purpose of the research, before sending the research questionnaire. Because of the smallness of the population (six manufacturers) the researcher felt that it was necessary to obtain 100 per cent response rate for the research to be conclusive about the industry. Thus some effort through follow-ups using the telephone was done.

The questionnaire was sent through e-mail, with a covering letter to senior executives of the wiring harness industry. The covering letter was to provide the respondent with the aim of the research, the time it would take to complete the questionnaire and the response cut-off date. The advantages of using e-mail are the low cost, the quickness, the accessibility anywhere in the world and the fact that the respondents can complete at their leisure. The covering letter and questionnaire were sent on the 11th of September 2007, and respondents were asked to return the questionnaire by 20th of September 2007.

4.2.3 The research response
Six questionnaires were sent to senior industry executives of each of the six wiring harness manufacturers in the Nelson Mandela Bay and all were returned answered representing a response rate of 100 per cent. The results of the questionnaires have been aggregated so as to analyse the industry as a whole rather than each company.
4.3 Questionnaire results

4.3.1 Section one background questions

Q1. Place where main office/global HQ resides: (Tick one)
Four out of six organizations were located in South Africa and two were headquartered in Europe.

Q2. Age of organization: (tick one)

Figure 4.1 Main office/global HQ residence

Figure 4.2 Age of organization
Four of the organizations were less than twenty years old. One organization was less than fifty years and another organization was 103 years old. See Figure 4.2 on previous page.

**Q3. Present site is: (tick all applicable)**
Three companies were a division of a multinational company, two companies were operating on just one site each and one company chose the alternative (e) ‘other’ because it was operating on more than one site nationally, see Figure 4.3 below.

![Figure 4.3 Present site is:](image)

**Q4. Management structures within organization (indicate percentage of organization for each):**
90 per cent of the organizations had functional structures, 5 per cent had product division structures and 5 per cent had geographic division structures. See Figure 4.4 overleaf.
4.3.2 Section two marketing strategies

Q5. Annual sales revenue/or percentages South Africa and worldwide where applicable: (millions rands), (Please state for each year)

From the graphs it is clear that the increase in worldwide sales as a percentage for the industry was largely being driven by the small local companies.

The worldwide sales of the multinationals were steady at 32 per cent; this suggests that the large multinationals might have reached maturity in their
worldwide sales. The local South African sales were declining this was due to the growing importance of worldwide sales. Thus the local companies were growing their worldwide sales. The Eastern Cape sales as a percentage for the local companies were falling from about 34 per cent in 2002 to about 22 per cent in 2006. The rest of South Africa sales as a percentage for the local companies were also falling from about 72 per cent in 2003 to about 64 per cent in 2003. The Eastern cape and rest of South Africa graphs show a declining trend in percentage sales. However the worldwide sales of the local companies were growing from 0 per cent in 2002 to about 15 per cent in 2006.

Figure 4.5(b) Percentage sales for multinational companies

![Multinational Companies](image)

The multinationals had a steady percentage worldwide sales of 32 per cent. The multinational Eastern Cape percentage sales rose to a high of 34 per cent in 2003 and then declined to a steady 33 per cent from year 2004 to year 2006. The rest of South Africa sales for the multinationals dipped to a low of 34 per cent in 2003 to a steady 35 per cent from 2004 onwards.
The graph above shows some interesting trends about the aggregate sales of the wiring harness industry as percentages. The aggregate Eastern Cape sales as a percentage were falling from 35 per cent in 2002 to about 28 per cent in 2006. The aggregate sales for the rest of South Africa as a percentage were also falling from a high of about 55 per cent in 2003 to about 49 per cent in 2006. On the other hand worldwide sales were steadily increasing from about 15 per cent in 2002 to about 23 per cent in 2006.

**Q6. Is there scope to increase turnover by supplying globally (Select one):**
Four respondents stated that there was great opportunity to increase turnover, one respondent said somewhat and one respondent said not at all because: “A majority of parts which make up the bulk of the costs, such as terminals and connectors are imported, wire uses the ‘international PVC price’ and copper uses the ‘London Copper Exchange’ price (both are rip-offs as PVC is made here and copper is mined and refined here)”, (Ward, 2007). Thus this makes the finished products expensive and hence the exports are not very competitive on the international markets. See Figure 4.6 overleaf.
Q7. Strategic growth plan: budgeted percentage growth per year
(Please state for each year, if any)

One respondent budgeted zero growth by arguing that: in the harness business no one can give a ‘growth plan’ (Ward, 2007). Most of the respondents gave a percentage growth of between 10 and 30 per cent.
The industry annual growth rate was projected by industry executives to be from 9 per cent per annum in 2007 to about 14 per cent of sales in 2010.

Q8. What is the main product strategy which gives your company a strategic advantage? (Select one):
50 per cent of the respondents chose a low cost strategy, 12 per cent of the respondents chose a high performance strategy, 13 per cent of the respondents chose a high dependability strategy, and 25 per cent of the respondents chose a high flexibility strategy. No respondent chose a high innovation strategy.

Figure 4.8 Main product strategies
Q9. Number of customers (Tick one for each area if applicable):
Six respondents had less than 10 customers in the Eastern Cape, four respondents had less than 10 customers in South Africa and another three had less than 10 customers worldwide. One respondent had greater than 10 customers in South Africa and another respondent had more than 10 customers worldwide.

Figure 4.9

Q10. Number of competitors: (select one for each area)
Six respondents had less than ten competitors in the Eastern Cape, Four respondents had less than ten competitors in South Africa and two respondents had less than ten competitors worldwide. Two respondents had greater than ten competitors in South Africa, one respondent had greater than ten competitors worldwide and finally three respondents had greater than twenty competitors worldwide. See Figure 4.10 overleaf.
Q11. Is your organization involved in any one or more of the following in order to expand your business? (Tick all applicable)

Three respondents were involved in exporting and importing, one respondent was involved in international franchising and two respondents were involved in international licensing agreements. Three respondents were involved in joint ventures and one respondent was involved in international strategic alliances.

No respondents were involved in international turnkey projects or foreign direct investments (FDI). See Figure 4.11 above.
4.3.3 Section three: operational strategies

Q12. Number of suppliers (select one for each area where applicable):
Five respondents had less than ten suppliers in the Eastern Cape, two respondents had less than ten suppliers in South Africa and two respondents had less than ten suppliers worldwide. One respondent had more than ten suppliers in the Eastern Cape, four respondents had more than ten suppliers in South Africa and two respondents had more than ten suppliers worldwide. Two respondents had greater than 100 suppliers worldwide.

Figure 4.12

Q13. Methods of freight transport: (Indicate percentage for each applicable)
Three respondents used air transport for raw materials and two respondents used air transport for finished goods. Four respondents used sea transport for raw materials and two respondents used sea transport for finished goods. Four respondents used road transport for raw materials and five respondents used road transport for finished goods. The industry used neither rail transport nor multimodal transport. See Figure 4.13 overleaf.
4.3.4. Section four: learning and growth strategies

Q14. Does your organization have a documented program for continual staff development? (Tick one)
All respondents answered yes. See Figure 4.14 below.

Q15. Where does your organization seek new knowledge/technology? (Select all applicable financially or verbally supported activities):
Three respondents chose internal sources, four respondents chose trade exhibition attendance and one respondent chose visit to other sites. Three respondents chose research and development with customer. No respondents chose external sources (consultants/experts).

Figure 4.15

4.3.5 Section five: human resource strategies

Q16. How does your organization ensure the availability of adequate skills to remain internationally competitive? (Indicate percentages were applicable)

Five respondents trained locally and two sourced nationally. No respondents were sourcing human skills internationally. See Figure 4.16 overleaf.
4.3.6 Section six: international finance strategies

Q17. Is the accounting system in your company internationally accepted? (Tick one)

All respondents had internationally accepted accounting systems. See figure 4.17 below.

Q18. Where does your organization source investment funds? (Tick all applicable)
Five companies sourced investment funds from local banks and one company used its own funds. The companies used neither local capital markets nor global capital markets.

**Figure 4.18**

![Source of investment funds](image)

**Q19. How does your company manage currency risks?**  
(Hedging strategies) (Tick all applicable)

Three respondents used forward contracts, one respondent used currency swaps and two respondents chose ‘other’ that is, hedging on exports and contract prices with quarterly adjustments.

**Figure 4.19**

![Hedging strategies](image)
All respondents used neither options nor currency swaps. See Figure 4.19 on previous page.

4.3.7 Section seven: Technology strategies

Q20. Does your organization make extensive use of? (Tick all applicable)

All respondents used the internet; four respondents used corporate intranet, LAN, Ethernet, *et cetera* and two respondents used video conferencing. Three respondents used telephone conferencing.

Figure 4.20(a) Communication technology use in each organization

![Communication technology use in each organization](image)

Figure 4.20(b) Industry Communication Technology use

![Industry Communication Technology use](image)
4.3.8 Section eight: Inventory control strategies

Q21. How does your organization control inventory-holding cost?  
(Tick all applicable)

Five respondents used Kanban, two respondents used JIT and two respondents used JIS. One respondent chose ‘other’ with the following explanation: with harness manufacture a company has to buy in ‘minimum pack quantities’ so inventory is often excessive at the beginning of a contract (Ward, 2007).

Figure 4.21(a)

![Inventory control in each company](image)

Figure 4.21(b)

![Industry inventory control use](image)
4.4 Summary
The purpose of this chapter was to outline the planning, the execution and the results of the empirical component of the study. The empirical study was designed in an attempt to persuade respondents to supply information that would assist the author in answering the main problem and the sub-problems.

The questionnaire was designed after an analysis of the literature study in Chapter Two. An excellent response rate was obtained as all of the companies involved in the wiring harness industry in the Nelson Mandela Bay responded positively to the research questionnaire.

The results of the questionnaire were analysed and charted using Microsoft Excel®. It can be said that the information obtained were to a large extent in concurrence with the literature study, although there were a few discrepancies, which is to be expected. The result of the empirical study will form the basis of the following chapter, which integrates the two studies. The responses from the manufacturers in the Nelson Mandela Bay will be weighed/compared against the findings in the literature study in Chapter Two and Three to establish how extensively global strategies are being applied.
CHAPTER FIVE
AN INTEGRATION OF THE FINDINGS OF THE EMPIRICAL SURVEY WITH THE THEORETICAL SURVEY DEVELOPED FOR THE STUDY, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction
The aim of this chapter is to integrate the results of the literature study with those of the empirical survey to uncover similarities between the two, in an effort to resolve the main problem and the sub-problems which are restated for convenience:

Main problem:
- Null hypothesis Ho: Automotive wiring harness manufacturers in the Nelson Mandela Bay are using strategies which enable them to stay abreast of globalization resulting in growing percentage foreign sales.
- Alternative Hypothesis Ha: Automotive wiring harness manufacturers are not using strategies which enable them to stay abreast of globalization resulting in stagnation or decline of percentage foreign sales.

Sub-Problems or Questions:
- H1: Wiring harness manufacturers are increasing their global markets.
- H2: Wiring harness manufacturers are using technology instruments such as internet to conduct their business activities globally.
- H3: Wiring harness manufacturers are using internationally acceptable accounting systems.
- H4: Wiring harness manufacturers are sourcing employees globally.

After the integration of the results of the literature study with the results of the empirical study, recommendations as to other areas of research and potential problems encountered in this study will be discussed. A conclusion will close the chapter with comments on the overall position of the wiring harness industry when compared with the theoretical models described in the literature study.
5.2 An integration of the findings of the empirical survey with the theoretical survey developed for the study

Chapter Two discussed globalization and international business strategies. Porter’s (1990) theoretical model of National Competitive Advantage was discussed in Chapter Three. Chapter Three also discussed the automotive industry in South Africa. Chapter Four presented the results of the empirical study.

5.2.1 Globalization

(a) Assessing the globalization of the wiring harness industry in the Nelson Mandela Bay

According to Figure 4.3 of the empirical study in Chapter Four, three of the six companies surveyed are a division of a multinational. Thus these three companies are global companies in the traditional dimension of globalization, which is market presence. All the organizations surveyed were involved in foreign markets using one or more of the following market entry strategies: exporting/importing, international franchising, international licensing agreements, joint ventures and international strategic alliances, see Figure 4.11. Thus the Nelson Mandela Bay wiring harness industry has global market presence.

All the organizations surveyed were also involved in sourcing some of their supplies internationally (see Figure 4.12). Thus the organizations have a global presence in terms of the dimension of globalization of the supply chain. In terms of the globalization dimension of capital base, the companies surveyed were not global as they were using the local banks and their own funds instead of sourcing funds from the most optimal locations around the world (see Figure 4.12). The globalization of corporate mindset was relatively good, as most of the executives surveyed believed there were more opportunities for growth in the world market (see Figure 4.6).

(b) The role of small business

Three of the organizations (that is half the population) are local small businesses which are involved in international markets and are sourcing supplies internationally (see Figure 4.3). Thus these organizations prove the
fact that it's not only multinationals which are involved in global trade but also small and medium enterprises.

(c) What is driving the globalization of the wiring harness industry?

- Business practices: South African organizations have had to adapt their business practices from a closed economy prior to 1994 to an open economy after 1994, see Section 1.1, in Chapter One.

- Communication patterns: Wiring harness manufacturers are adopting modern communication systems this is shown in Figure 4.20. This in line with the globalization of the business environment.

- Accounting and financing approaches: The Nelson Mandela wiring harness industry reported that it is using internationally accepted accounting standards in line with globalization (see Figure 4.17). However their financing strategies are still not yet global as they are only sourcing their investment funds from local banks, see Figure 4.18. This is unfortunate because the cost of capital tends to be cheaper on international markets than domestic markets. In a purely domestic market the limited pool of investors implies than borrowers must pay a higher return to persuade investors to lend them their money. On the other hand the larger pool of investors in an international market implies that borrowers are able to negotiate a lower rate of interest (Hill, 2005:382).

- Technological enhancements: The wiring harness manufacturers are involved in various strategies to improve their knowledge/technology as shown in Figure 4.15. These strategies are research and development, trade exhibition attendance, consultants/experts and inter-organizational learning. These strategies are in line with international management theory in Chapter Two.

- Global mindset: Most of the organizations surveyed viewed the world market as a source of greater market opportunities (see Figure 4.6). Thus
the industry views the world market as a way to grow and improve their businesses.

(d) Roadmap for smart globalization applied to the wiring harness industry

- You must ensure that your company leads the industry in identifying market opportunities worldwide and in pursuing these opportunities by establishing the necessary presence in all key markets. The wiring harness industry is actively pursuing opportunities worldwide, this is shown by the various foreign market entry strategies they are using, see Figure 4.11. These are exporting/importing, international franchising, international licensing agreements, joint ventures and international strategic alliances. By looking also at Figure 4.9 it is clear that wiring harness manufacturers have customers worldwide. However it is not clear whether the Nelson Mandela wiring harness industry is more proactive than the other wiring harness manufacturers in the other world markets and hence further research still needs to be done on the global wiring harness industry.

- You must work relentlessly to convert global presence into global competitiveness. It is not clear whether the Nelson Mandela wiring harness manufacturers who are multinationals are converting global presence into competitive advantage when compared to other wiring harness manufacturers worldwide. Thus a broader research still needs to be done which will look at the wiring harness industry internationally.

- You must cultivate a global mindset. Most of the organizations surveyed encourage continual staff development and most of the executives viewed the world market as offering more opportunities for growth than the home market, see Figures 4.6 and 4.14.

- You must constantly strive to reinvent the rules of the game. The main product strategy of the Nelson Mandela bay wiring harness industry is price or low cost since wiring harnesses are no-frills standardised products (see Figure 4.8). However a strategy based only on cost
reductions is ineffective (Hitt et al, 2005). A strategy based solely on low cost is not in line with the idea of constantly reinventing the rules of the game as competitors will always find ways of matching the price and the company might end up producing low quality products which customers do not want. A proactive strategy based on both cost and innovation or technology is needed in the global market.

(e) The innovative leaders in globalization framework
The globalization framework developed by the innovative leaders in globalization was adapted to the empirical study and also in the analysis of the wiring harness industry in the Nelson Mandela Bay.

(f) The globalization of the business environment of the wiring harness industry
- Information technology, the worldwide web (www) and other communication technologies are widely available to the wiring harness industry (see Figure 4.20).
- Homogenization of global branding and manufacturing due to standardization of products around the world as a result of the emergence of a few successful multinational automakers.
- Increased normality of cross-country and cross-continent trade in goods in the Nelson Mandela Bay due to the availability of excellent transportation systems, the deep-water harbour and the international airport.
- Government encouragement and subsidies for industrial investment such as the Automotive Development Centre (AIDC) initiative.
- The proliferation of free trade zones and trade-blocs such as the European Union (EU), The Southern African Development Community (SADC) and others.
- Changes in political boundaries providing the wiring harness industry with opportunities to access previously protected markets such as China, Eastern Europe, Russia et cetera.
(g) The imperatives to globalize in the Nelson Mandela Bay wiring harness industry

- **The growth imperative:** Four of the organizations surveyed believed there were great opportunities for growth by supplying globally and hence these organizations are more likely to pursue global markets in order to grow their businesses, see Figure 4.6.

- **The efficiency imperative:** The empirical study did not produce evidence to suggest that the Nelson Mandela Bay wiring harness industry is pursuing global markets to improve efficiency.

- **The knowledge imperative:** Most of the organizations surveyed were involved in one or more of the following foreign market entry strategies: international licensing agreements, joint ventures and international strategic alliances. These foreign market entry strategies involve the sharing of knowledge with foreign partners and also the sharing of costs and risks. Thus the wiring harness industry is exploring foreign markets to acquire knowledge to a certain extent.

- **Globalization of customers:** The customers of the wiring harness industry are mostly big multinational automakers. Thus the industry follows these multinational companies wherever they set up operations. The globalisation of customers is probably one of the strongest imperatives for the wiring harness industry (see Chapter Two).

- **Globalization of competitors:** Three of the wiring harness manufacturers are divisions of multinational companies and three of the companies are local South African companies. To a certain extent the South African companies are pursuing foreign markets to follow the lead set by these multinational companies so that they can grow their business and become more competitive, see Figure 4.3.

(h) Sources of global competitiveness

- **Adapting to local market differences:** The wiring harness manufacturers in the Nelson Mandela Bay supply established multinational vehicle manufacturers and these automakers usually dictate the specifications of the products of the wiring harness industry. Thus adapting to the market is a basic condition to enter the business and hence no competitive advantage can be gained by adapting to market differences, as this is a basic industry condition.
Exploiting the economies of global scale: The wiring harness industry uses inventory control strategies such as Just-In-Time (JIT), Just-In-Sequence (JIS), and Kanban, see Figure 4.21. Thus the manufacturers cannot fully exploit the economies of global scale for their products. The level of production is also determined by the level of demand from the auto-manufacturers.

Exploiting economies of global scope: From the empirical survey there is no evidence that the Nelson Mandela Bay wiring harness manufacturers are supplying the same auto-manufacturers at various locations around the world. Hence this source of global competitive advantage cannot be validated and further research needs to be done on the operations of the wiring harness industry around the world.

Tapping the optimum locations for activities and resources: The Nelson Mandela wiring harness industry manufactures its products in the Nelson Mandela Bay and there is no evidence from the empirical study that the wiring harness industry is locating its activities in the optimum locations in the world. However the industry sources its raw materials from various locations this is illustrated by the use of air and sea transport for its raw materials (see Figure 4.13). The majority of the manufacturers train their local staff (see Figure 4.16). Thus the industry does not source human skills internationally at the most optimum locations as suggested in theory.

Maximising knowledge transfers across locations: From the empirical study there is no evidence to suggest that the wiring harness manufacturers are maximising knowledge transfers across locations. Most organizations considered trade exhibitions, internal research and development, and external research and development with customer as their main source of knowledge. Only one company mentioned visits to other locations as a source of knowledge (see Figure 4.15).
- **Playing the global chess game:** Three of the organizations surveyed are local South African organizations and thus are not able to play the global chess game because they do not have the necessary presence in various locations around the world. The other organizations are divisions of multinational companies and these are able to play the global chess game. However further research still needs to be done on their global operations and their competitors to see how they coordinate their strategies across locations.

5.2.2 **National competitive advantage: Porter’s Diamond**
All attributes of Porter’s Diamond are discussed in this section as applied to the wiring harness industry in the Nelson Mandela Bay.

**(a) Factor endowments**
According to Porter (1990) the advanced factors are the most significant for national competitive advantage. Unlike the naturally endowed basic factors, advanced factors are products of investment by individuals, companies, and governments. All of the companies surveyed are involved in some kind of staff development to develop sophisticated and skilled labour this is in line with Porter’s theory, see Figure 4.14.

About half of the respondents are involved in research and development (R&D); this is essential for developing competitive advantage according to Porter’s Diamond, see Figure 4.15. The wiring harness industry is using the latest communication technology such as internet, corporate intranet, video conferencing, telephone conferencing et cetera, as shown in Figure 4.20. The lowering of wireless internet tariffs by up to 60 per cent in 2007 by the two leading service providers in South Africa (Vodacom and MTN) has made internet access more affordable and more accessible to people without telephone lines. This puts the wiring harness industry in good stead as postulated by international management theory. Thus on the ‘factor endowment’ attribute the wiring harness industry has a global competitive advantage in line with globalization.
(b) Demand conditions
Most of the respondents have less than ten customers in their various markets (see Figure 4.9). However according to chapter three the South African automotive industry is composed of the world’s leading multi-national automakers such as General Motors (GM), Toyota, Ford, Daimler-Chrysler, BMW and Volkswagen (VW). These automakers have standardised operations all over the world. Thus the demands imposed by these automakers on the wiring harness industry are up to international standards. This implies that the wiring harness industry is supplying these automakers at competitive rates otherwise the automakers could have sourced the wiring harnesses elsewhere in their global networks. Thus the need for demanding and large customers as required by Porter’s Diamond in order to spur the competitiveness of an industry is well satisfied in this attribute for the wiring harness industry.

(c) Related and supporting industries
The Nelson Mandela Metropolitan Municipality has the largest single concentration of motor manufacturers and component suppliers in South Africa combined with a unique transport infrastructure consisting of two harbours (including South Africa’s only deep-water port), an airport, plus excellent road and rail connections (www.autoindustry.co.za). The Nelson Mandela Bay is mainly based on the automotive industry. Various cable manufacturers such as Aberdare, BGG Cable, Cableman, and Accesslan EC supply the wiring harness industry (www.sabusiness.com). There is also various plastic manufactures such as StudioPlastics, Specialised Plastics Engineering, Trek Thermoforming et cetera which supply the wiring harness manufacturers (www.autoindustry.co.za). Thus the Nelson Mandela Bay is the ‘Silicon Valley’ equivalent of the automotive industry in the Eastern Cape. Thus the requirement for related and supporting industries is well supported by practice in the Nelson Mandela Bay as required by Porter’s Diamond. Therefore in this regard the wiring harness industry is very competitive.

(d) International business strategy

(i) Strategic choices for globalization and market entry strategies
As stated in earlier sections the Nelson Mandela Bay wiring harness industry consists of three South African companies and three companies which are
divisions of multinational companies, see Figure 4.3. The divisions of multinationals are using a multi-domestic strategy since they supply products which are customised to the automakers in their country of operation. The wiring harness industry is also using the following methods for foreign market entry: exporting and importing, international franchising, international licensing agreements, joint ventures and international strategic alliances, see Figure 4.11. These entry modes do not require major commitment, as would foreign direct investment on the part of the company entering foreign markets. These foreign market entry modes are part of an international strategy of the wiring harness industry in the Nelson Mandela Bay. That is, the wiring harness manufacturers are transferring products and valuable skills from home to foreign markets where indigenous competitors lack these skills and products.

In order for firms in the wiring harness industry to achieve global competitiveness, the strategies they pursue must help the firm achieve at least one of the following value creation opportunities as discussed in the literature survey in Chapter Two:

- Adapting to local market differences
- Exploiting economies of global scale
- Exploiting economies of global scope
- Tapping the most optimal locations for activities and resources wherever that maybe in the world.
- Maximising knowledge transfer across locations
- Playing the global chess game

According to Figure 4.5 wiring harness manufacturers are taking advantage of market opportunities outside of South Africa as shown by the growth of worldwide sales as a percentage and the decline of local sales as a percentage. This is in agreement with theory as discussed in Chapter Two. Also according to Figure 4.6 most executives were confident that there is great opportunities in the global market, this illustrates their global mindsets which is in line with literature.

According to Figure 4.7 most of the executives gave an incremental average growth plan from about 9 per cent of sales in year 2007 to about 14 per cent of
sales in year 2010. Increasing turnover increases shareholder value and hence improves the industry’s competitiveness. This is in line with international business strategy theory. For their product strategy many executives picked a low cost or price strategy see Figure 4.8. A low cost or price advantage is difficult to sustain in the long run as competitors will find ways to emulate the price and thus this not a viable strategy. According to literature the better source of competitive advantage is innovation or technology (Hitt et al, 2005). Thus on this research question the respondents produced contrasting results to literature.

The most popular international market entry strategies according to the empirical survey were exporting/importing and joint ventures. These strategies involve fewer risks than international turnkey projects or foreign direct investments and are usually pursued by small firms, this in agreement with the literature study, see Figure 4.11. Most of the firms are relatively young, that is less than twenty years and hence have not accumulated enough resources to establish risky and capital intensive foreign direct investments, see Figure 4.2.

Most of the organizations surveyed train their own employees locally (see Figure 4.16). This is in contrast with theory which suggest that organizations should source the most skilled employees at the most economical rate wherever that maybe in the world because people are the only source of true competitive advantage. However, the researcher believes that the organizations are encumbered by strict government regulations.

The accounting systems of all the organizations surveyed are internationally acceptable, Figure 4.17. This is in line with international strategies and can help the companies raise investment funds at international stock exchanges by listing their shares at these stock exchanges.

Most of the organizations surveyed source their investment funds from local banks, Figure 4.18. Banks offer an inflexible source of investment funds because the agreed upon rate of repayment has to be made whether the company makes a profit or not. This is in contrast to equity investment funds
which are more flexible because the company can elect whether to pay a
dividend or not to pay. However the rate of return on equity is usually higher
than banks. Thus it is more prudent to diversify the source of investment funds.
Consequently, the survey results are in contrast with good practices.

The survey results on hedging strategies show that the majority of firms use
forward contracts and hedging on exports/imports as their main strategies, see
Figure 4.19. This is in line with the literature survey, according to theory; firms
involved in international trade should chose optimum methods to counter the
effects of exchange rate risk. The optimum utilisation of all of the firm’s
resources is essential to successfully play the ‘global chess game’.

According to Figure 4.20 most of the respondents are keeping abreast of
modern communication technology. This is in line with globalization theory since
the world is being ‘shrunk’ by improvement in communication technology,
relative availability and affordability of this technology as compared to a few
years ago.

Most of the organizations are aware of the need to control inventory, see Figure
4.21. This is in line with theory which emphasises the optimisation of the
company’s resources. Inventory ties up the company’s financial resources and if
kept for long periods can result in losses due to obsolescence, pilferage,
breakages, warehousing costs and the interest lost on the money tied up in
inventory.

(e) Organizational structure as an aid for implementing strategy
90 per cent of the organizations surveyed use a functional structure, 5 per cent
of the industry is using a geographic structure and 5 per cent of the industry
uses a divisional structure. According to Hill (2005) functional structure is
appropriate when the organization is small and has a few lines of products
which is the case in the wiring harness industry see Figure 4.4. This structure is
also appropriate when a firm is using a multi-domestic or an international
strategy.
This may be due to the fact that most of the organizations are relatively young, that is less than twenty years, see Figure 4.2. Thus the survey result are in line with international business theory.

(f) Rivalry
There are six wiring harness manufacturers in the Eastern Cape. This is shown as less than ten in Figure 4.10. Competition is relatively tense considering the fact that there are only three major automakers in the province that is General Motors South Africa (GMSA), Volkswagen South Africa (VWSA) and Daimler-Chrysler South Africa. There is also the high risk of international competitors coming into the area or flooding the market with cheaper imports especially from countries like China, India and South Korea. Thus the competition in the wiring harness industry is tense enough to spur the wiring harness manufacturers to improve their processes, services and products leading to global competitiveness.

5.3 Recommendations
No potential problems were encountered in this study. The researcher feels the following recommendations should be stated:

5.3.1 The global wiring harness industry
The researcher feels that a broader global research of all wiring harness manufacturers worldwide would give a clearer picture of the global competitiveness of the wiring harness industry in the Nelson Mandela Bay.

5.3.2 Web based survey software
The author felt that the questionnaire could have been more effectively designed and distributed using web based software, this would have made it easier to collect the results and analyse them automatically without having to manually enter the results into Microsoft excel®, this could have saved time.

5.3.3 The Application of the Study
It can be recommended that the strategy for the wiring harness industry cluster in the Nelson Mandela bay to achieve global competitiveness, be used for other automotive component industry clusters in the Eastern Cape. The analysis can help to identify the strengths and weaknesses of an industry and hence also
help to make recommendations for overcoming the weaknesses and reinforcing the strengths to ensure the survival of any industry. For example, some strategies suggested by respondents in Chapter Four were in contrast to established theory. However, further research need to be done to see whether these strategies are helping the industry or hurting the industry. It is important that the strategists take heed of the complex workings of Porter’s Diamond and be cognisant of the different factors within that specific industry cluster.

5.4 Conclusion
The aim of the research has been to assess the use of international business strategies among automotive wiring harness manufacturers in the Nelson Mandela Metropole. To this end the researcher set out to test the following main hypotheses:

- **Null hypothesis Ho:** Automotive wiring harness manufacturers in the Nelson Mandela Bay are using strategies which enable them to stay abreast of globalization resulting in growing percentage foreign sales.
- **Alternative hypothesis Ha:** Automotive wiring harness manufacturers are not using strategies which enable them to stay abreast of globalization resulting in stagnation or decline of percentage foreign sales.

In order to solve the main problem, the following sub-problems and sub-hypotheses were developed:

- **a) What strategies does the literature survey reveal that will enhance the management of organizations in the global arena?**
  
The strategies to enhance the management of organizations in the global arena were revealed and fully discussed in Chapter Two. The strategies involved first looking for an ideal source of competitive advantage and then identifying a suitable structure to implement the strategy. After implementing the appropriate structure, a firm then had to find a suitable foreign market strategy which is in line with its structure and source of competitive advantage.
b) What does the literature study reveal about the strategic importance of an industry cluster?

The importance of industry clusters was clarified in Porter’s (1990) theory of National Competitive Advantage discussed in Chapter Three and the fact that all the wiring harness manufacturers in the Eastern Cape are located in close proximity to each in the Nelson Mandela Metropole helped to reinforce the concept.

H1: Wiring harness manufacturers are increasing their global markets.

Prospects in the industry to increase turnover by supplying globally are relatively high, see Figure 4.6, implying the industry is excited by international expansion. Industry growth prospects are very positive with projected annual growth rates of between 9-14 per cent of sales, see Figure 4.7b. The wiring harness industry is also actively pursuing foreign market entry strategies see Figure 4.11. Aggregate foreign sales for the wiring harness industry as a percentage are steadily increasing when compared to local sales as a percentage; this clearly shows the growing importance of international sales, see Figure 4.5c.

H2: Wiring harness manufacturers are using technology instruments such as the internet to conduct their business activities globally.

Wiring harness manufacturers are using technology instruments such as the internet to conduct their business activities globally; this is proved by the results in Figure 4.20. Figure 4.20 shows that all the organisations surveyed at least use the internet which is a critical and cost effective technology instrument for international businesses.

H3: Wiring harness manufacturers are using internationally acceptable accounting systems.

All the companies surveyed have internationally acceptable accounting systems see Figure 4.17.
H4: Wiring harness manufacturers are sourcing employees globally.

Wiring harness manufacturers are not taking advantage of the global source of employees, see Figure 4.16. Most of the companies (71 per cent) are sourcing locally and 29 per cent are sourcing nationally. This is not in line with international business strategies in Chapter Two which emphasizes the sourcing of the best talent wherever there may be in the world. This may be due to the high unemployment rate in the country which hovers at over 20 per cent and the resultant government and trade union pressure.

The empirical study results in Chapter Four revealed that the wiring harness manufacturers in the Nelson Mandela Bay were:

- Increasing their global sales;
- Using communication technology instruments;
- Using internationally accepted accounting practices;
- Encouraging continual staff development. However there was no evidence to suggest that the industry was sourcing employees globally.

The globalization of the wiring harness industry is reasonably good. The wiring harness industry is reasonably global in terms of the following globalization dimensions, market presence, supply chain and corporate mindset. However on the globalization of capital base, the industry is not global because it is sourcing its investment funds from local banks instead of exploiting global capital markets. The wiring harness industry is actively pursuing foreign markets in line with globalization theory from survey results in Chapter Four.

The wiring harness industry is using a price/cost product strategy. This is a difficult strategy to use in order to maintain global competitive advantage. A better and more sustainable product strategy would be a strategy based on innovation or technology. An ideal strategy would be a combination of low cost and innovation.

The main sources of knowledge of the wiring harness industry are attending trade exhibitions and performing research and development. A recent Motor Industry Expo was held in October 2007 in Port Elizabeth. Thus the wiring
harness industry is following international trends in developing technologies and exhibiting them at trade expos.

The industry infrastructure is well developed to achieve global competitiveness. Government support for suppliers is readily available as discussed in chapter Three and the close proximity of the wiring harness industry to the harbour makes it easier to import and export raw materials and finished goods.

Of the 21 questions asked in the survey only three questions were answered in a way which is contrary to international business theory. This is a good performance by the wiring harness industry. Thus the wiring harness industry is actively pursuing international strategies in line with globalisation. In conclusion the null hypothesis (Ho): Automotive wiring harness manufacturers in the Nelson Mandela Bay are using strategies which enable them to stay abreast of globalization resulting in growing percentage foreign sales is proved to be reasonably true and the alternative hypothesis Ha: Automotive wiring harness manufacturers are not using strategies which enable them to stay abreast of globalization resulting in stagnation or decline of percentage foreign sales is rejected as false.
REFERENCES


Childe, S; Maull, R & Mills, B. 1996. *UK experiences in business process re-engineering*. A scoping study produced for the Innovative Manufacturing Initiative and funded by the Engineering and Physical Sciences Research Council, UK.


Appendix: 1
Preliminary Research Questionnaire

Subject: Wiring harness manufacturers, from: mears@webmail.co.za

Dear Sir/Madam,
I am a Master of Business Administration (MBA) student at Nelson Mandela Metropolitan University (NMMU), (formerly University of Port Elizabeth). I am doing research on wiring harness manufacturers. Would you kindly provide me with the following information?

1. The names and number of your customers for wiring harnesses.
2. Are you an original equipment manufacturer OEM?
3. The number of your employees.
4. Company history.
5. Management structure.
6. Turnover (wiring harness business).
7. Amount exported (wiring harness).
8. Main competitors (wiring harness manufacturers).

Your prompt reply will be greatly appreciated.
Thanking you in advance.

Kind regards,
Michael Mears
Appendix: 2
The research questionnaire

11 September 2007

Dear Sir/madam,

I am currently studying for the Masters in Business Administration degree (MBA) at the Nelson Mandela Metropolitan University (formerly known as UPE). I am conducting research on wiring harness manufacturers for my dissertation as required by the university. The research topic is "Assessing the use of international business strategies among automotive wiring harness manufacturers in the Nelson Mandela Metropole"

The purpose of the research is to investigate whether wiring harness manufacturers are taking full advantage of the opportunities being offered by globalization since the opening up of the South African economy, which is after 1994. For us to achieve global competitiveness, research is very important, as it is the source of innovation. South Africa currently lags behind other developing countries such as India, Singapore and South Korea. This is very important to note, if we are to develop at the same rate as the countries in the East.

The questionnaire consists of 21 questions. These should take about 30 minutes of your time to complete.

Please return the completed questionnaire before **September 20, 2007**. Your prompt reply will be greatly appreciated and acknowledged in the dissertation.

Thanking you for your assistance.

Michael Mears
Contact details:
Cell: 0727142989
Fax: 0866655750
e-mail: mears@webmail.co.za
Research Dissertation Questionnaire:

Title: ASSESSING THE USE OF INTERNATIONAL BUSINESS STRATEGIES AMONG AUTOMOTIVE WIRING HARNESS MANUFACTURERS IN THE NELSON MANDELA METROPOLE

This Questionnaire consist of 21 questions

Background Questions:

Q1. Place where main office/global HQ resides:  
(Tick one)

   a) South Africa

   b) Africa

   c) Europe

   d) America

   e) Asia

   f) Other (state)

Q2. Age of organization:  
(Tick one)

   a) Less than 5 years

   b) More than 5 and less than or equal to 20 years

   c) More than 20 and less than or equal to 50 years

   d) If more than 50 (state age)
Q3. Present site is:
(Tick all applicable)

a) Entire organization (single site) 

b) Division of multinational organization 

c) Sales office 

d) Just-in-sequence (JIS) site/non-manufacturing 
i.e. logistics only 

e) Other (specify) 

Q4. Management structures within organization
(Indicate percentage of organization for each):

a) Functional 

b) Divisional 

c) Geographic 

d) Matrix 

e) Other (please state) 

Marketing strategies:

Q5. Annual sales revenue/or percentages South Africa & worldwide
where applicable: (millions rands)

(Please state for each year)

<table>
<thead>
<tr>
<th>Year</th>
<th>Eastern Cape</th>
<th>South Africa</th>
<th>Worldwide</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) 2002</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) 2003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) 2004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) 2005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) 2006</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q6. Is there scope to increase turnover by supplying globally? (Select one):

a) Great

b) Somewhat

c) Little

d) Not at all

If ‘not at all’ please give short explanation

Q7. Strategic growth plan: budgeted percentage growth per year
(Please state for each year, if any)

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage Budgeted</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) 2007</td>
<td></td>
</tr>
<tr>
<td>b) 2008</td>
<td></td>
</tr>
<tr>
<td>c) 2009</td>
<td></td>
</tr>
<tr>
<td>d) 2010</td>
<td></td>
</tr>
</tbody>
</table>

Q8. What is the main product strategy which gives your company a strategic advantage? (Select one):

a) Low cost or price

b) High performance

c) Dependability or reliability

d) Flexibility or customization

e) Innovation or technology

f) Other (specify)

________________________________________________________________________
**Q9. Number of customers**
(Tick one for each area if applicable):

<table>
<thead>
<tr>
<th>Number of customers</th>
<th>Eastern Cape</th>
<th>South Africa</th>
<th>Worldwide</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) &lt;10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) &gt;10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) &gt;20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q10. Number of competitors: (select one for each area )**

<table>
<thead>
<tr>
<th>Number of competitors</th>
<th>Eastern Cape</th>
<th>South Africa</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) &lt;10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) &gt;10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) &gt;20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q11. Is your organization involved in any one or more of the following in order to expand your business? (Tick all applicable)**

a) Exporting and importing
b) International franchising
c) International turnkey projects
e) Foreign direct investments.
f) International licensing agreements
g) Joint ventures
h) International strategic alliances
Operational strategies:

Q12. Number of suppliers
(select one for each area where applicable):

<table>
<thead>
<tr>
<th>Number of suppliers</th>
<th>Eastern Cape</th>
<th>South Africa</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) &lt;10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) &gt;10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) &gt;100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q13. Methods of freight transport
(Indicate percentage for each applicable):

<table>
<thead>
<tr>
<th></th>
<th>Raw materials</th>
<th>Finished goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Sea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Rail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Multi-modal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Learning and growth strategies:

Q14. Does your organization have a documented programme for continual staff development?
(Tick one)

a) Yes
b) No
Q15. Where does your organization seek new knowledge/technology? (Select all applicable financially or verbally supported activities):

a) Internal source (Research & Development R&D)

b) External source (consultants/experts)

c) Trade exhibition attendance

d) Visit to other site within organization

e) Research & Development with customer

Human resource strategies:

Q16. How does your organization ensure the availability of adequate skills to remain internationally competitive? (Indicate percentages were applicable)

a) Train Locally

b) Source nationally

c) Source internationally

International finance Strategies:

Q17. Is the accounting system in your company internationally accepted (Tick one)

a) Yes

b) No

Q18. Where does your organization source investment funds? (Tick all applicable)

a) Local banks

b) Local capital markets

c) Global capital markets
Q19. How does your company manage currency risks? (Hedging strategies) (Tick all applicable)

a) Borrowing or lending in different currencies
b) Forward contracts
c) Options
d) Interests rate swaps
e) Currency swaps
f) Other (state)

Technology strategies:

Q20. Does your organization make extensive use of? (Tick all applicable)

a) www/internet
b) Corporate intranet, LAN, Ethernet, et cetera
c) Video conferencing
d) Telephone conferencing
e) Other (specify)
Operations strategies:

Q21. How does your organization control inventory cost? (Tick all applicable)

a) Kanban

b) JIT (Just In Time)

c) JIS (Just In Sequence)

d) Other (please state)

________________________________________

________________________________________

________________________________________
Appendix: 3
Globalization index variables

<table>
<thead>
<tr>
<th>Indices and Variables</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Economic Globalization</td>
<td>[36%]</td>
</tr>
<tr>
<td>i) Actual Flows</td>
<td></td>
</tr>
<tr>
<td>➤ Trade (per cent of GDP)</td>
<td>(50%)</td>
</tr>
<tr>
<td>➤ Foreign Direct Investment flows (per cent of GDP)</td>
<td>(16%)</td>
</tr>
<tr>
<td>➤ Foreign Direct Investment, stocks (per cent of GDP)</td>
<td>(21%)</td>
</tr>
<tr>
<td>➤ Portfolio Investment (per cent of GDP)</td>
<td>(23%)</td>
</tr>
<tr>
<td>➤ Income Payments to Foreign Nationals (per cent of GDP)</td>
<td>(19%)</td>
</tr>
<tr>
<td>ii) Restrictions</td>
<td></td>
</tr>
<tr>
<td>➤ Hidden Import Barriers</td>
<td>(24%)</td>
</tr>
<tr>
<td>➤ Mean Tariff Rate</td>
<td>(28%)</td>
</tr>
<tr>
<td>➤ Taxes on International Trade (per cent of current revenue)</td>
<td>(28%)</td>
</tr>
<tr>
<td>➤ Capital Account Restrictions</td>
<td>(20%)</td>
</tr>
</tbody>
</table>

| B. Social Globalization | [38%] |
| i) Data on Personal Contact |         |
|    ➤ Outgoing Telephone Traffic | (14%) |
|    ➤ Transfers (per cent of GDP) | (8%) |
|    ➤ International Tourism | (27%) |
|    ➤ Foreign Population (per cent of total population) | (25%) |
|    ➤ International letters (per capita) | (27%) |
| ii) Data on Information Flows | (35%) |
|    ➤ Internet Hosts (per 1000 people) | (20%) |
|    ➤ Internet Users (per 1000 people) | (24%) |
|    ➤ Cable Television (per 1000 people) | (20%) |
|    ➤ Trade in Newspapers (per cent of GDP) | (14%) |
|    ➤ Radios (per 1000 people) | (23%) |

| iii) Data on Cultural Proximity | (37%) |
|    ➤ Number of McDonald's Restaurants (per capita) | (40%) |
|    ➤ Number of IKEA (per capita) | (40%) |
|    ➤ Trade in books (per cent of GDP) | (20%) |

| C. Political Globalization | [26%] |
|    ➤ Embassies in Country | (35%) |
|    ➤ Membership in International Organizations | (36%) |
|    ➤ Participation in U.N. Security Council Missions | (29%) |


<table>
<thead>
<tr>
<th>Country</th>
<th>Economic Integration</th>
<th>Political Contact</th>
<th>Technological Connectivity</th>
<th>Political Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Singapore</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2. Switzerland</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3. United States</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>4. Ireland</td>
<td>1</td>
<td>1</td>
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<tr>
<td>5. Denmark</td>
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<tr>
<td>6. Canada</td>
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<tr>
<td>7. Netherlands</td>
<td>1</td>
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<tr>
<td>8. Australia</td>
<td>1</td>
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<tr>
<td>9. Austria</td>
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<td>10. Sweden</td>
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<tr>
<td>11. New Zealand</td>
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<td>12. United Kingdom</td>
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<td>13. Poland</td>
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<tr>
<td>14. Norway</td>
<td>1</td>
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<tr>
<td>15. Israel</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>16. Czech Republic</td>
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<td>17. Slovenia</td>
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<td>18. Germany</td>
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<td>1</td>
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<tr>
<td>19. Malaysia</td>
<td>1</td>
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<tr>
<td>20. Hungary</td>
<td>1</td>
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<tr>
<td>21. Panama</td>
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<tr>
<td>22. Croatia</td>
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<td>1</td>
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<td>1</td>
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<tr>
<td>23. France</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>24. Portugal</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>25. Spain</td>
<td>1</td>
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<td>26. S洛里卡</td>
<td>1</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>27. Italy</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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