AN ASSESSMENT OF THE POTENTIAL USE OF EXCESS WAREHOUSING SPACE OF SPOORNET PROPERTY MANAGEMENT TO SUPPORT THE INDUSTRIAL DEVELOPMENT ZONES IN THE EASTERN CAPE REGION

By

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PROMOTER : **TIMOTHY STRATHEARN HUTTON**

DATE: **21 JANUARY 2004**

DECLARATION

"I, **Evert Philippus Pitout,** hereby declare that:

- the work in this paper is my own original work;
- all sources used or referred to, has been documented and recognized;
- this paper has not been previously submitted in full or partial fulfilment of the requirement for an equivalent or higher qualification at any other recognized educational institution."

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Evert Philippus Pitout **Date**

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ABSTRACT

The research problem addressed in this study was to analyse and report on the potential use of Spoornet's excess warehousing to support the Industrial

Development Zones (IDZs) in the Eastern Cape. In order to achieve this objective, a literature study was undertaken to ascertain the world-class practices for warehousing. A study was conducted on Spoornet strategy in order to determine whether the company can apply its existing strategy for warehouse operations.

The empirical results obtained, indicated that there would be a need for warehousing to support the IDZs in the Eastern Cape. There would be opportunities for storage of raw materials, distribution of parts for production, and finished goods to be delivered to consumers.

Spoornet has gained ground on its competitor with respect to logistics and has progressed with its “Freight Logistics Solution” initiative.

In conclusion it was recommended that Spoornet uses its existing strategy and convert their goods sheds into world-class warehousing. The warehouse space can be used as a trade-off to gain rail clients.

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CHAPTER 1

GENERAL INTRODUCTION AND PLANNING OF RESEARCH

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GENERAL INTRODUCTION AND PLANNING OF THE RESEARCH

1.1 INTRODUCTION

In order to encourage international competitiveness of the manufacturing sector, the Department of Trade and Industry has offered a national programme, which involves Industrial Development Zones (IDZs) as an incentive. The IDZs will include purpose-built industrial estates, all links to major transport facilities. Townsend (2002: 53) states that a typical example of the IDZs is the Coega project, which is seen as the vantage point of

international trade. This is the first step towards the country's macroeconomic development strategy to provide world-class, purpose-built infrastructure, which will act as a platform to attract foreign direct investment (FDI). The two interrelated components of this project are a deepwater port on the Coega River and an IDZ with the necessary infrastructure to accommodate the expansion of the industrial capacity. (Townsend 2002: 67)

1.2 MAIN PROBLEM

According to Townsend (2002: 9) the provision of appropriate infrastructure is ensured in order to improve the prospects for growth-generating investment by the private sector, with streamlined duty-free industrial environment incorporating regional and municipal incentives and lower services cost and factory rentals than other industrial areas in the country. With the industrial expansion in the Cape Province, particularly the Eastern Cape, and as a result of the new proposed IDZ together with the Coega project, which is part of the Support Programme for industrial innovation designed to promote technology development in the manufacturing industries, it is expected that many new factories will settle in these areas.

According to Harmon (1993: 35) suppliers will establish in close proximity to their customer factories, which in turn will be situated in the market region. Thus, the largest factories will have local clusters of supplier factories. This will greatly simplify logistics and reduce transport.

Fawcett, McLeish and Ogden (1992: 93) state that at the interface between materials supply production/processing and distribution, there is invariably some kind of handling operation and, in many cases, a storage facility. The extent to which this occurs is determined by the spatial relationship between raw materials sources, production/processing units, and the size, geographic spread and concentration of a company's markets. If it were a case of merely handling materials from supply vehicles to production processes, or

from production lines to distribution vehicles for final delivery, then only a need for handling operations would exist. However, as a continuous flow of goods and commodities along the supply chain, without resorting to any form of holding operation, is still a target to be achieved for a large percentage of companies, then some kind of storage option must remain as part of many logistics and distribution operations.

Harmon (1993: 15) says the pipeline of supply between producer and consumer would be shortest and least costly and would require the lowest investment if only it were feasible to deliver production directly to consumers, with fewer intervening tiers of warehouses. However, most products are burdened by market and production realities, which dictate warehousing.

According to Piet Olivier, Operations Manager at Spoornet Property Management (personal communication 11 November 2002) the company has many vacant bulk warehouses in the Cape region. These buildings became vacant as a result of strategic changes and transformation of Spoornet's core business. Mkwanazi (2001: 9) stated that business transformation is regarded as a key focus within Transnet, (Spoornet being a division of Transnet). With the mission and values of Transnet providing a shared strategic framework, which sets the scene for transformation strategies to support Transnet to exceed customer requirements through excellent service delivery and sound, trustworthy relationships with customers. In the process, Transnet should meet the demands of domestic and international customers.

In view of the above, the following problem for the study is:

How can Spoornet Property Management make effective use of existing, excess bulk warehousing facilities to support the Industrial Development Zones?

1.3 SUB-PROBLEMS

In order to develop a research strategy to deal with and solve the main problem, the following sub-problems have been identified:

- What are the world-class best practices for bulk warehousing facilities?

- What strategy is Spoornet adopting to utilise its excess bulk warehousing capacity and can the excess warehousing be adapted to comply with world-class standards?

- What do knowledgeable people believe needs to be done to improve the standards of existing bulk warehousing to world-class requirements?

1.4 DELIMITATIONS OF RESEARCH

Demarcating the research serves the purpose of making the research topic manageable from a research point of view. The omission of certain topics does not imply that there is no need to research them or that they are not important.

1.4.1 Demarcation of Research

The scope of this research is linked to the best practices of world-class warehousing in Industrial Development Zones in the world.

1.4.2 Geographic Location

The research will mainly be concentrated on the Industrial Development Zone of the Eastern Cape, as the proposed IDZs will be established at Coega near Port Elizabeth and at East London. The availability of excess goods sheds also dictates the area and scope of the research. According to Townsend (2002: 7) opportunities have been identified for resurgent economic activity centered on various industrial sectors in geographically defined areas.

The initiative involving the Coega Industrial Development Zone aims to position South Africa and particularly the Eastern Cape as a destination for investment in manufacturing infrastructure intended to produce goods for export. The designation of the East London Industrial Development Zone forms part of the government's macroeconomic policy to develop South Africa's manufacturing sector by encouraging investment in export-orientated industries, centred on benefiting of the country's mineral resources.

The IDZ is aimed at a crowding-in of three export-orientated industry clusters; textiles, hi-tech electronics and forestry products, representing sub sectors in which East London has a competitive advantage over other areas of South Africa.

1.4.3 Viability and Related Studies

Preliminary investigations have proved that no previous studies have been conducted on the availability and requirements for world-class warehousing in the Eastern Cape. According to Olivier, (personal communication, 11 November 2002), there have been no internal surveys for the use of excess goods sheds of Spoornet within the Cape Province. He added that various rail-freight-related projects in the past had failed or just lapsed.

1.4.4 World-Class Best Practice for Bulk Warehousing Facilities

It is important to identify the world-class best practices for bulk warehousing facilities and which of these practices can be applied to the redundant goods sheds in order to improve these buildings to world-class standards.

1.5 DEFINITIONS OF SELECTED CONCEPTS

1.5.1 Warehousing

According to Jenkins (1990: 2) many people still think of warehousing as simply storing material, that is, "Warehousing is inventories at rest and transportation is inventories in motion." Flow through warehouses where some inventories are there for only a few hours are rapidly replacing the "at-rest" concept. Modern warehousing concerns speed and efficiency; it concerns automation, computerisation, and exotic new means of communication.

1.5.2 Industrial Development Zone (IDZ)

There are more than 500 IDZs across the world, two thirds of which are situated in developing countries. They are most commonly defined as **territorial enclaves treated as being outside of the customs territory of the host state, where goods of foreign origin (imports) may be held without customs restrictions or payment of duties.** Although the IDZs vary in what they have to offer clients and in terms of their incentives, most IDZs target international trade and internationally mobile investments linked to:

Trans-shipment and storage functions usually associated with major ports or airports;

And/or manufacturing and assembly of products based on low cost skilled labour and/or low energy costs.
(Coastal and Environmental Services, 2000: 2)

1.5.3 Strategy

Johnson and Scholes (2002: 32) define strategy as the direction and scope of an organisation over the long term, which achieves advantage for the organisation through its configuration of resources within a changing environment and to fulfil stakeholder's expectations. So all organisations are faced with the challenge of managing strategy.

According to Hellriegel, Jackson, Slocum, Staude and associates (2001: 78), the major causes of action that an organisation takes to achieve its goals are called strategies. The key challenge is to develop strategies that are at least partially unique relative to competitors or to pursue strategies similar to those of competitors but in different ways.

Glueck (1980: 9) states that **strategy is the means used to achieve the company objectives** and that strategy is not just a plan but also a plan that ties all the parts of the enterprise together. Gleuck (1980: 9) further postulates that **a strategy is a unified, comprehensive, and integrated plan relating the strategic advantages of the firm to the challenges of the environment, which is designed to ensure that the basic objectives of the enterprise are achieved**

1.6 ASSUMPTIONS

It is assumed that the Spoornet's excess bulk warehousing facilities will be available and can suitably be converted to world-class standard.

1.7 SIGNIFICANCE OF RESEARCH

Fawcett, et al (1992: 113) approach the need for warehouses as follows: Why is it that many companies' logistics and distribution operations still require storage and warehousing facilities in order to function effectively? Why is so much, in terms of buildings, capital equipment, human resources

and management expertise, utilised in costly stockholding units such as depots and distributing centres?

Conventional wisdom justifies the existence of warehousing activities on the following grounds:

Optimising production cost savings by permitting long production runs, and minimising set-up and changeover costs. This will help keep manufacturing and processing costs down through economies of scale.

To provide a buffer between the rate of supply, manufacture, and demand. Supply of raw materials and production operations can be planned in advance, based on forecast demand for an item or commodity, whereas actual demand from customers and consumers can be unpredictable and will fluctuate. Some form of stockholding operation will add the flexibility required to overcome this problem. In the event of a sudden unexpected increase in sales demand, raw materials or components supply failure, or breakdown in production, inventory held in stores and warehouses can be used until the problem is resolved or an alternative source is found.

The creation of 'anticipation inventory'. Many products and commodities – particularly in the consumer goods markets – have a seasonal demand pattern, where the demands profile has a marked peak over a fairly short period of time. In order to make provision for such demands, and yet maintain consistency in levels of production, stocks to service such demand need to be built up over an extended period. Typical examples might be wines, spirits and beers for Christmas and New Year festivities, antifreeze for motorists' winter needs, sun-tan preparations for the summer holiday season – and of course all the raw materials required for these production processes.

Maintenance and improvement of customer service levels. The closer stocks are located to demand areas, the greater the availability of line items to fulfil individual orders, and the shorter lead times can be. Where the spatial relationship between points of supply and demand is more distant, providing

high levels of customer service is both more demanding on the distribution system and more costly. By creating trade-offs with the transport function – such as bulk transport and deliveries, giving noticeably lower unit transport costs – logistics and distribution management can use stockholding points to support customer service levels in a more cost-effective way.

To facilitate break-bulk and order assembly operations, where large bulk quantities are broken down into smaller individual orders before onward transit to customers. This aspect of storage and warehousing can also be readily linked to the need for accurate checking and recording of receipts, stocks and despatches, thereby monitoring progress of material along the supply chain.

Jenkins (1990: 2) emphasises that warehousing is a common term and most people have an image of what it is, but the field is far more complex than most observers would think. Moreover, it is rapidly becoming more complex as industry takes a harder look at how best to conduct business. Paralleling its growth in complexity is its growth in importance. This has resulted in a host of new opportunities to be grasped and problems to be solved. The art and science of warehousing is becoming a more vital part of commerce with a vitality and future greater than almost any other segments of modern industry. Why? Because of modern business, technology focuses on inventories, distribution and customer service. These are all components of modern warehousing.

According to Fawcett, et al (1992: 3) the basic aim of a broad-brush logistics strategy is to achieve the highest possible level of customer service at the lowest possible cost. This might seem rather simplistic and utopian, but framed more precisely, it should help to achieve corporate objective, which, in turn, should be largely customer-related. Such a strategy will normally consist of four main elements:

(a) Manufacturing locations

(b) Transport methods

(c) Stockholding policies

(d) Management systems

Effective planning and control of these elements is crucial to good supply chain management. But such management must be sufficiently flexible to detect the need for and implement changes in what are essentially areas of long-term business planning.

Continuous appraisal of markets, competitors and a company's own performance must be part of the strategy, so that the optimum balance can be achieved between these elements, often by trading off a distinct disadvantage in one area against a greater overall benefit in another.

Fawcett, et al (1992: 120) states that the kind of operation to be carried out in order to fulfil its role in the company network is one of the most influential factors in the design and layout of a storage or distribution unit. Such facilities take various forms, depending also on the nature of the materials to be handled and stored. For example, is it a bulk material handling and storage operation, or one dealing with unitised products? This then necessitates the matter to be researched. The results of this research may lead to the development of a strategy for the use of excess warehousing space of Spoornet Property Management countrywide.

1.8 RESEARCH DESIGN

In this section the broad methodology that will be followed in the research is described.

1.8.1 Literature Survey

A literature survey of best practices for warehouse facilities in the world to determine what the benefits such facilities have for the industrial development zones will be conducted.

A literature survey of existing warehouse facilities in South Africa to determine what benefits it had for the other industrial development zones will be conducted.

Literature will also be gathered from various worldwide websites to ascertain what is being done in respect of warehousing at other IDZs.

1.8.2 Empirical Study

Discussion interview with various role players, establish the need of warehousing facilities for the IDZs.

A survey in the form of a questionnaire, to establish the number of companies that will need warehousing, will also be done.

A survey will also be done of various strategies of world-class warehousing to determine, which strategy can suitably be adapted to Spoornet's existing strategy.

1.8.4 Assessment of the Potential Use of Excess Warehousing Space

The results of the literature survey and empirical survey will be integrated to develop for the use of excess warehousing space of Spoornet Property Management in the Eastern Cape Region.

1.9 STRUCTURE OF THE TEXT

The research includes the following chapters:

CHAPTER 1: Problem statement, demarcation of studies, significance and methodology.

CHAPTER 2: Assessment of the world-class best practice for bulk warehousing facilities.

CHAPTER 3: Spoornet's strategies and suitability and availability of it's excess bulk warehousing to support the IDZs

CHAPTER 4: Designing empirical study.

CHAPTER 5: Results of empirical study.

CHAPTER 6: An integration of the findings of the literature survey and the results of the empirical survey to adopt a suitable strategy for the use of excess warehousing space of Spoornet in the Eastern Cape Region, summary, recommendations and conclusion.

1.10 CONCLUSION

This chapter highlighted the main problem and the sub-problems. The key concepts were defined and all the terms used were broadly explained. The significance of the research was discussed and the broad methodology that will be followed was described. A proposed programme of study and chapters to be included in the research was outlined. In Chapter Two, a literate survey will be conducted and assessment of the world-class best practice for bulk warehousing facilities will be made and discussed.

CHAPTER 2

ASSESSMENT OF WORLD BEST PRACTICE FOR BULK WAREHOUSING FACILITIES

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ASSESSMENT OF WORLD BEST PRACTICE FOR BULK WAREHOUSING FACILITIES

2.1 INTRODUCTION

The advantage that a proper infrastructure holds for economic development has been well documented.

According to Johnson and Scholes (2002: 161), infrastructure is the systems of planning, finance, quality control and information management and is crucially important to an organisation's performance in its primary activities. Infrastructure also consists of the structures and routines of the organisation, which sustains its cultures.

According to Quayle and Jones (1999: 286) the provision of warehouses and depots will affect the planning of a distribution system. This first point to consider is whether warehouses are necessary. Two factors have, in recent years, altered the basis of providing warehouses. The first is the provision of the modern motorway system, which makes it possible to supply a very wide area from a central warehouse. Consider the area that is to be serviced from a central warehouse in West Bromwich, which is adjacent to the M5, M6 and M1. The second factor is the recent development of large vehicles, which make it economical to move large loads, via the motorway network. Nevertheless there may well be a case for warehouses to be provided, based upon:

- Types of goods being transported: Perishable goods may require local storage where goods are regional (only sold in some areas).

- Cost of vehicle operations: it may be that vehicle mileage is sufficiently reduced by providing a local warehouse to make it an economical proposition. Better vehicle utilization may also be possible.

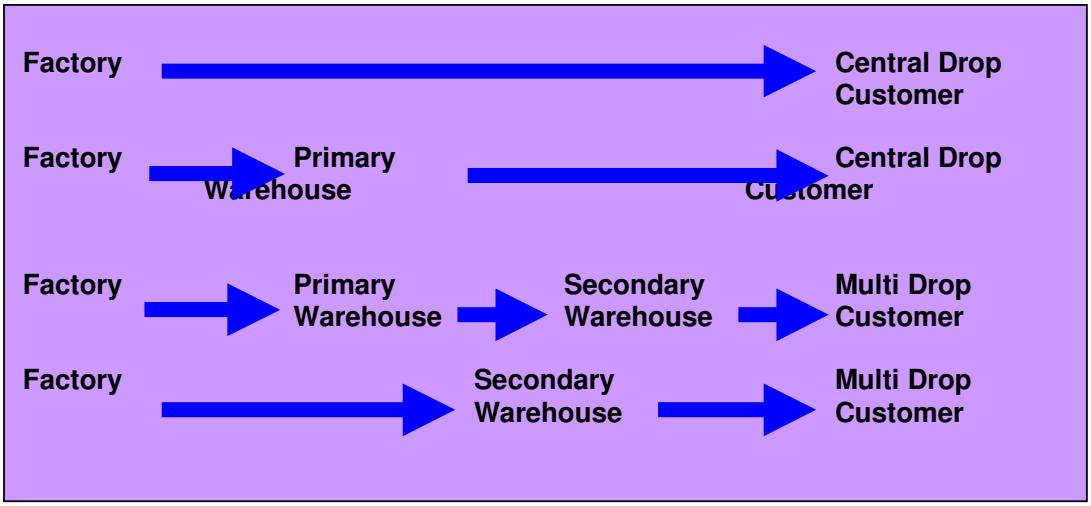
- Customer's needs: if customers can be better served by having a local warehouse, or they request such service, then there are reasonable grounds for such a facility.

Sussams (1992: 53) states that warehousing is the second major component in distribution systems. Just as transport can be classified as 'primary' and 'secondary', there are also two types of warehousing that can be provided between source (factory or port) and destination (retail outlet or consumer). These are:

- Primary warehousing – where goods are received from manufacturing (or from manufacturer's finished stock), in which those goods are stored and from which they are then dispatched to secondary depots and to full load or 'central drop' customers.

- Secondary warehousing – goods are received from primary warehouses (or, sometimes, direct from manufacturing), in which those goods are stored and from which they are then redistributed to part-load or multi-drop customers.

Figure 2.1: Four Possible Routes From Source To Destination



According Tyler (2001: 64), Mark Long of Tibbett & Britten stated that First World practices would not work in Third world environments. He believes that the skill is to encapsulate in the word translating. Companies tap into first world best practices and translate them into local reality.

A thorough literature research has revealed more factors, which should be included. In Chapter One from the brief literature survey it was already evident that there are key requirements for warehousing, which all the authors of logistics literature mention. It certainly is feasible that one will be able to ultimately develop a strategy for the use of Spoornet's excess bulk warehousing.

2.2 THE NEED FOR WAREHOUSING

As stated by Kotler (2000: 541) every company has to store goods until they are sold, because production and consumption cycles rarely match. The storage function helps to smooth discrepancies between production and quantities desired by the market. The company must decide on the number of stocking locations. More stocking locations means that goods can be delivered to customers more quickly. But it also means higher warehousing costs. Some inventory is kept at or near the plant and the rest is located in warehouses in other locations. The company might own private warehouses and also rent space in public warehouses.

Storage warehouses store goods for moderate-to-long periods of time. Distribution warehouses receive goods from company plants and suppliers and move them out as soon as possible.

According to Perreault and McCarthy (1996: 374) storing is the marketing function of holding goods. It provides time utility. Inventory is the amount of goods being stored.

Quayle & Jones (1999: 88-89) say storage and material handling covers the safe, secure and disciplined handling of materials as initial receipts, as parts awaiting processing, as work in progress during manufacture and subsequently finished products. On the other hand they say Distribution includes warehousing and inbound and outbound transportation, all strongly

influenced by demands for higher levels of customer service, JIT (just-in-time) requirements and the evolution of contract distribution.

Perreault et al (1996: 375) state that storing allows producers and middlemen to keep stocks at convenient locations – ready to meet customer's needs. In fact, storing is one of the major activities of some middlemen. Most channel members provide the storing function for some length of time. Even final consumers store some things for their future needs. Since storing can be provided anywhere along the channel, the storing function offers several ways to vary a firm's marketing mix – and its channel system – by (1) adjusting the time goods are held, (2) sharing the storing costs, and (3) delegating the job to a specialised storing facility. Storing can increase the value of goods – and make them more available when customers want them. But a manager must remember that storing always involves cost too.

2.3 WAREHOUSE DESIGN AND LAYOUT

According to Sussams (1992: 65) a modern distribution centre comprises a site, some buildings and some equipment inside those buildings. The main building is the warehouse and most of the offices and most of the equipment relate to the warehousing function.

Throughput is a measure of volume of goods passing through ware in a given period, and it affects the design and layout. For example, a low throughput requires maximum space utilization for storage, while a high throughput must be capable of rapid information processing and materials handling. Trade-offs must balance the disadvantages against the advantages of providing more or less space, mechanisation and turnover of stocks.

Space may be an advantage at times, but not when long retrieval distances are involved; likewise, the choice between vertical and horizontal storage will also vary according to the throughput.

Layout must take into account the type of materials handling equipment to be used, whether order picking and stock replenishing have to occur at the same time, how arrivals and departures are organised, or whether operations are labour intensive or suitable for automation. In any case, a modern warehouse needs to be designed that it can benefit from computerised controls (Attwood and Attwood, 1992: 88)

According to Quayle and Jones (1999: 211) disjointed planning and layouts, where each section does not form part of an overall plan, is likely to result in poor service, inadequate control, costly administration, unnecessary duplication of equipment and facilities and frequent emergency re-arrangements to meet unforeseen circumstances. The factors, which will form the basis for our overall planning of storage facilities throughout the company are, therefore, vitally important and must be carefully considered:

- What types of service can we reasonably afford?
- What materials must be handled at each location?
- How will they be constructed?
- What kinds of equipment will be needed at each location?
- What provisions, if any, must be made for overall "work flow" throughout the company?

2.3 WAREHOUSING COSTS

Slack, Chambers and Johnston (2001: 382) defines storage costs as the costs associated with physically storing the goods. Renting, heating and lighting the warehouse can be expensive, especially when special conditions are required such as low-temperature or high-security storage.

According to Perreault et al (1996: 376) the cost of physical handling is a major storing cost. Goods must be handled once when put into storage – and again when removed to be sold. Further, especially in the typical old downtown warehouse districts, traffic congestion, crowded storage areas, and slow elevators delay the process – and increase the costs. Today, modern one-storey buildings away from downtown traffic are replacing the old multi-storey warehouses. They eliminate the need for elevators – and permit the use of power-operated lift trucks, battery-operated motor scooters, roller-skating order pickers, electric hoists for heavy items, and hydraulic ramps to speed loading and unloading. Most of these new warehouses use lift trucks and pallets (wooden trays that carry many cases) for vertical storage and better use of space.

Computers monitor inventory, order needed stock, and track storing and shipping costs. Some warehouses even have computer-controlled order picking systems that speed the process of locating and assembling the assortment required to fill an order.

Warehouse rents and rates are generally on a basis of so much per square metre or per square foot. This can be a misleading measure if one is comparing different kinds of warehousing since; evidently, the height of the building is also an important factor. A low-rise building costs less to build but holds a smaller volume of goods than a high-rise building of the same floor area. The cost per unit of effective storage space may be the same. In some cases more expensive building in terms of cost per square metre may be more efficient and therefore less expensive in terms of cost per unit handled.

If one took a standard module of warehousing (same size, same shape, same construction) the rent and rates per square metre would be found to vary from place to place in three ways:

a) According to region. For example in the United Kingdom, warehousing is more expensive in the Southeast, least expensive in the North.

b) According to motorway accessibility. Warehousing is most expensive when located within a short distance of a motorway junction.
c) According to availability of grants and subsidies. Some local authorities offer incentives such as ten years without any rates, in order to induce potential employers to move into the area (Sussams, 1992: 65).

2.4 PURPOSE AND REQUIREMENTS OF WAREHOUSING

As pointed out by Mulcahy (1994: 31) that the main purpose of a warehouse or a distribution facility is to provide the housing (shelter) for a company's design-year requirements. These requirements include material handling systems, Stock-Keeping Unit (SKU) pick and reserve positions to accommodate the projected inventory, and associated warehouse functions such as support and administrative activities.

According to Burton (1981: 6) the warehouse organisation exists to bridge the gap between the economic methods of production and the needs of the consumer. The task is to provide what is required, when it is required, in the condition in which it is required, and to do all these things economically.

Burton (1981: 6) further states that essentially, warehousing allows supply to be uncoupled from production thus allowing each to be undertaken in its own best way. Emphasis has been put upon the needs of the consumer, but this view should be qualified because urgency itself is relative and can vary from one consumer to another and from time to time for any one consumer.

According to Harmon (1993: 109), to design and implement new or revised warehouse layouts and operations requires careful attention to tens of thousands of details, all of which must be integrated into a single superb, operational organisation.

Christopher (1991: 64) claims that the logistics system of any business will usually be a heavy user of fixed assets. The plant, depots and warehouses, which form the logistics network, if valued realistically on a replacement basis, will represent a substantial part of total capacity employed (assuming that they are owned rather than rented or leased). Materials handling equipment, vehicles and other equipment involved in storage and transport can also add considerably to the total sum of fixed assets. Many companies fail to recognise the true significance of logistics fixed assets because they are valued for balance sheet purposes at historical cost. Warehouses, for example, with their associated storage and handling equipment represent a sizeable investment and the question should be asked: 'Is this the most effective way to deploy our assets?

Warman (1983: 25) postulates that unfortunately, we rarely have the pleasure of planning the layout of a new building. Instead, we have to make do with the old ones. Often the sites in which stores and warehouses are placed are normally a blending of separate buildings. Frequently, the rest of the site is made up of an unsuitable and unsightly yard.

Often this part of the site occupies large areas, which are improperly used, or even not used at all. For this reason, when starting to plan, and especially when the whole site is to be redeveloped, all existing facilities must be ignored. Look at the site as if no building existed there. The problem, then, will be not how to plan the site – that is relatively simple – but how the existing work can go on while the old buildings are being demolished and the new one put up.

Jenkins (1990: 150), however, maintains that during the process of determining the size of the facility and acquiring the land, consideration should be given to building a structure larger than is initially needed, The reason for this is to determine whether the additional space constitutes such a profitable investment that it is too good for the company to pass up. A golden opportunity may arise. It should at least be examined.

The opportunity exists to construct additional space at the same time as the initial requirements are being constructed, partition the extra space from existing space, and then lease it on relatively short-term leases until needed or long-term lease if and when expansion for the company is out of the question.

The emergence of e-commerce has changed the requirements of traditional warehouse packing operations to include higher volumes of envelopes, bags and smaller cartons, in addition, special services, such as gift-wrapping are required to meet customer demands. To support this demand the packing area in most warehouses must be upgraded from the standard, non-adjustable pack stations to more flexible modular workstations (Logistic News, 2002:14)

2.5 SIZE REQUIREMENT OF WAREHOUSING

> Burton (1981: 26) states that the size set for a new warehouse is only appropriate at one moment in time. If a new warehouse is required at all, it is a sign of change. The warehouse must be capable of holding more in the future than in the present. Buildings, which are too large for an existing function, represent capital, which is failing to yield a return.
>
> The aim should be at building a warehouse, which meets the needs of the immediate future.

According to Fernie and Sparks (1998: 72) warehousing for the Hong Kong supply chain operation is situated deeper in Kowloon at Kwai Chung. It is located in one of the world's largest buildings, ATL, which has over 4 million square feet of warehousing space. A remarkable building, bigger than the Pentagon, it features a six-lane highway in and out the warehouse.

2.6 LOCATION OF WAREHOUSING

Location is a prime consideration when selecting a site for a new distribution centre. The availability of utilities and transportation, access to the site location, the proximity to customers are merely some of the aspects of site selection that must be considered to determine the most appropriate location for a new facility

Burton (1981: 27) states that wherever it is decided to locate a warehouse, the requirements remain much the same as they spring from the basic objectives which have already been mentioned – to provide what is required when it is required to whoever requires it, in the condition in which it is required, and doing all things economically.

Besides deciding on the most cost-effective location for warehouses, a good deal of thought and planning must go into the selection of the actual site. Factors for consideration will be:

(a) Availability of suitable land not only for the warehouse itself, but also for vehicle parking and maneuvering, other ancillary facilities, and potential future expansion of the unit.

(b) Proximity of the site to the motorways and other transport links, as well as eases of access to delivery areas.

(c) Any existing funding or concessions from local or central government in connection with the development or running of the center.

(d) Access to suitable labour force to operate the distribution centre, preferably with relevant or related experience.

(e) The area of the proposed site must be considered from the point of view of environmental legislation relating to goods vehicle operation, and from a security viewpoint. (Fawcet et al, 1992: 117)

Attwood and Attwood, (1992: 85), however, state that warehouses may be established at each plant or located strategically near the markets. According to them the optimal site for a warehouse depends upon the number and locations of other warehouses in the distribution system, upon the locations of customers allocated to each warehouse and the total cost of handling goods. The practical approach allows each of these factors to be considered both singly and together for a number of different sites. It has the advantage of considering a number of known sites, and compares the ones that satisfy the cost and service limits feasibility. The chief disadvantage is the extra work involved in considering sites that may not be feasible. An alternative approach is the theoretical one which assumes that a warehouse can be sited anywhere within the distribution area under consideration. This is a flexible approach, but specific costs have to be examined. The best sites for warehouses, according to Attwood and Attwood, (1992: 87) provide the best service to customers in terms of delivery time and the least cost for delivering goods.

2.7 THE FUTURE OF WAREHOUSING

It is Brockmann's (1999: 36) view that over the past several years, many people have predicted the demise of warehousing because of the evolution of Just-in-Time,

quick response, direct store delivery, and continuous flow distribution. He also says that a number of uninformed individuals imagined a world without stockrooms, kitting operations, wholesalers, distributors, and distribution centers. According to Brockmann (1999: 36) warehouses will continue to play an important role in the logistics supply chain.

According to Quayle and Jones (1999: 9) logistics and warehousing are changing at a rapid and accelerating rate. It is changing for two sets of reasons. The first set is the pressure for change arising from managerial and technical development from within the logistics system itself. These include:

- The increase speed and intelligence of computing systems for control of information flows in logistics. This has given rise to what is called "time compression" in logistics high speed computing and data transmission can transmit and react to user demand almost instantaneously over any distance.

- Distributed data terminals coupled with "real time" data processing makes logistics planning and control both more flexible and accurate. When this is the case "intelligence" can replace "investment": for example, a computer system which can effectively plan inventory needs will reduce the necessity for holding contingency inventory levels. "Just-in-Time" logistics is also dependent on fast data-handling systems so that assets deployment outcomes can be improved.

- The availability of flexible computer facilities enables logistics companies to engage in dynamic simulation of problems. There are many variables in the majority of logistics problems. Real time interactive computer systems enable logistics undertakings to explore a variety of inventory level, transport

mode, warehouse location and other problems. This increases the accuracy of decisions.

- Lastly, the realization of the systems nature of logistics and of the potential importance of "trade offs" within the total system. These trade offs require an awareness of total cost measurement and sophisticated management accounting.

However, all these pressures for change will only take root with a sophisticated management process and, in particular, a willingness to manage across functional barriers in the organisation to meet particular organisational goals. This is sometimes described as a missions approach. The key to the introduction of this managerial culture in organisation lies in a strategic management informed on logistics issues.

The second set of pressures for change comes from the wider economy and these include the following factors:

- Trends in the economy suggest a future uncertainty in the growth of consumer markets. This will require manufacturing and retail organisations to deal with markets, which may vary in size at fairly short notice. The basis of effective business and logistic strategies in this context must be effective flexible options to enable organisations to compete in this tough global market.

- Market structures are changing with the expanding European and East European Market, a slowing rate of exports to the USA and fast growing global and high technology markets. There is increasing fragmentation and specialisation in markets and growth in specialised retailing. This puts pressure both on the marketing and in turn, the logistics function.

- Life cycles for products are shortening with more selective and critical customers. As a result, logistics systems are necessary to promote shorter lead-times and faster and more flexible distribution provisions.

- In the production function, a move is occurring away from mass production towards flexible manufacturing systems (FMS). These systems enable a company to switch production quickly from one product to another. In the marketing function a variety of changes in distribution channels, for example the growth in large, out of town supermarkets, has led to a concentration of buying power and the emphasis on improved distribution service levels especially Just-in-Time delivery. Producers and retailers are sharing information systems to promote Just-in-Time delivery. This philosophy continues to evolve. The principle of lean production was first promoted by the Massachusetts Institute of Technology. World class factories of the future will be lean producers and are characterised by teams of multi-skilled workers, lower batch volumes, greater product variety, a total quality ethic, production flexibility and a high responsiveness to customer needs. This principle obviously extended itself into the supply chain and created the concept of lean supply to support the whole process. The process demands continual review of the organisation, management, suppliers and the flow of information at every stage.

- Competitive pressures in the market are also growing. In static markets competition becomes more aggressive. The growth in international marketing has made such aggression more acute. This, in turn, places pressure on logistics systems to support production and marketing initiatives. It is especially true since so much competition in both consumer and industrial goods is now fought on dimensions of customer service.

2.8 AUTOMATION OF WAREHOUSES

According to Sussams (1992: 179) the reason for considering the possibility of automating a part or the whole of a warehouse operation are to reduce costs and to improve accuracy. As stated by Attwood and Attwood (1992: 88) the proliferation of computers into all walks of life has virtually revolutionized, and distribution is no exception. Programs have been written for both mainframe computers and small personal computers so that the costs of operating warehouses and transport vehicles can be analysed quickly with a view to improving their efficiency.

According to Fawcett et al. (1992: 159) information technology can be of enormous advantage in formulating strategic plans to cover periods of, typically, between one and five years. The making of important decisions such as the sitting of a new depot or provision of additional warehouse capacity is so much easier if the effects of different location strategies can be tested using simulations. Sussams (1992: 178) claims that models to simulate the operation of a warehouse may be used for two basic purposes. One is to provide the basis for design, for example, to provide input data for a CAD (computer aided design) application. The other is to provide an estimate of operating costs, which would be derived from the indicated amounts of storage space, equipment and numbers of staff.

2.9 SUMMARY

The objective of this chapter was to investigate what the world-class best practices for warehousing are which may be useful when a strategy is developed for the use of Spoornet's excess bulk warehousing.

It is clear from the content that there will always be a need for warehousing for various reasons as documented by a number of authors. These reasons include the smoothing of discrepancies between production and quantities desired by the market; increase the value of the goods and make them more available when the customer wants them and it provides time utility. Other

aspects such as warehouse design and layout, costs, purpose and requirements, size and location has also been investigated to be able to compare the standards of Spoornet's excess warehousing with the standards of the world-class warehousing facilities.

Lastly, a study of the future and the automation of warehousing were made to determine whether it would be viable to adapt Spoornet's excess goods sheds to distribution warehouses.

Chapter Three takes an in-depth look at Spoornet's existing strategy; it's competitors; competitive advantages and strategic planning for the use of excess warehousing.

CHAPTER 3

SPOORNET'S STRATEGY AND THE ASSESSMENT OF THE ABILITY TO USE IT'S EXCESS BULK WAREHOUSING FACILITIES FOR DISTRIBUTION

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3.1 INTRODUCTION

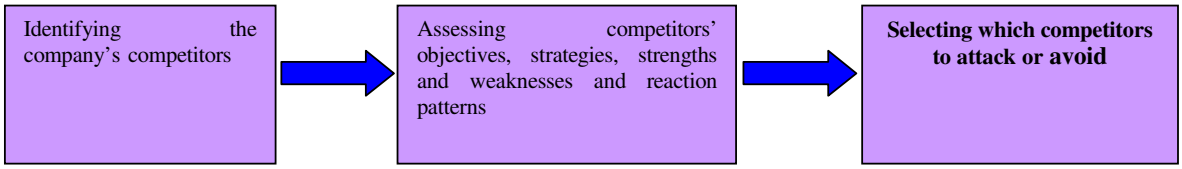
In today's fiercely competitive environment, companies need to thoroughly know and understand their competitors in order to be able to gain competitive advantage. Companies can only do this if they satisfy target consumer needs better than competitors do. Thus strategies must consider not only the needs of target consumer but also the strategies of competitors (Kotler and Armstrong, 1999: 556).

Most companies operate in one of two competitive situations: oligopoly and monopolistic competition (McCarthy and Perreault, 1990: 100). Oligopolies occur where competing companies, usually of similar size, offer products or services that are essentially homogeneous. Fairly inelastic industry demand curves are experienced.

Spoornet, however, operates under conditions of monopolistic competition. Competitors offer services that are differentiated in terms of flexibility, speed, and cost. In addition, while competitors have some control over their own market segments they are affected by the strategies of other competitors in other segments.

Kotler and Armstrong (1999: 557) describe a three-step process in a competitor analysis. These steps are depicted in Figure 3.1

Figure 3.1: Steps In Analysing Competition



Source: Adapted from Kotler and Armstrong, (1999: 557)

In this chapter, an assessment of Spoornet's ability to meet the requirements to provide world-class warehousing facilities, to support the IDZs is presented.
Figure 3.1 will broadly be followed and competitive strategies will be identified.

3.2 IDENTIFYING SPOORNET'S COMPETITORS

Normally it would seem an easy task to identify a company's competitors. At the narrowest level, competitors can be defined as companies offering similar products and services to the same customers at similar prices. In many cases there would be no such direct competitor in an industry. However, a more realistic view of competition is one that views all competitors satisfying the same generic need. Thus, a transport or logistic company has as competitor all other companies satisfying the need for transport or logistics.

Too narrow a view of competition may mean that the firm suffers from "competitor myopia" and may overlook a latent competitor. Firms need to constantly monitor the market place for new developments that might destroy the need for the product or service being offered.

While focussing on current competitors, the firm must be alert for the emergence of new competitors (Dalrymple and Parsons, 1995: 223). The possibility of newcomers to an industry depends on two facts: barriers to entry and expectations about competitive reactions.

The barriers to entry in the logistic industry include economies of scale, product differentiation, capital requirements, buyer switching costs, and government policy.

Potential entrants may be deterred if they expect a forceful competitive reaction. This may well occur in the logistic industry where competitors have established positions and significant resources to fight back. However, any competitor analysis would remiss in not anticipating and hunting for new competitors, no matter how stable the industry.

A cursory and superficial competitor analysis may conclude that Spoornet has no competitors, i.e. there are no other companies who have a rail service and warehousing facilities. However, a more thorough competitor analysis identifies transportation by road, air, or sea as competitors.

The broadest view of competition, that "consumer dollar spend", is not evident for Spoornet as goods transportation and storage is a necessity for the manufacturing industry and money must be spent on logistics i.e. the goods must be moved from point A to point B and goods must be stored for various reasons. These logistical costs are inevitable and cannot be spent on anything else.

As this research focuses on how Spoornet can use it's excess warehousing facilities to meet the needs of the IDZs in the Eastern Cape, the logical starting point is to identify the available service providers.

Some of the larger existing suppliers of logistics services in the Eastern Cape include:

- Rennies Distribution Services

- Cargo Management Solutions
- P & O Grindrod Logistics (PTY) LTD
- Freightmax (PTY) LTD

While these companies undoubtedly seek to differentiate between themselves, the differences between them are small in comparison to their differences with Spoornet. For this reason the discussion that follows will consider logistics collectively as Spoornet's main competitor.

3.3 DEFINING THE CUSTOMER'S REQUIREMENTS

One the most obvious objectives for any organisation are to satisfy the market it is attempting to serve. To satisfy this market, an organisation must achieve the right mix and level in its performance objectives, such as quality, speed and flexibility.

However, in determining these objectives, an organisation must understand the competitive factors that define customer requirements. Each performance objective is highly influenced by the competitive factors that are particularly valued by customers (Slack, Chambers & Johnson, 2001: 70).

As this research focuses on developing strategies for warehousing to support the IDZs within the Eastern Cape, it is necessary to define the requirements of this segment of the market. Manufacturers all work on a forty-eight hour Just-in-Time (JIT) system.

To assist the manufacturers in meeting these requirements, the following critical success factors must be met:

- Reliability;
- Flexibility; and
- Speed

The transporting and storing of raw materials to component manufacturers and completed products from the factories, involves transport into, and out of the province (and the country) as well as storage beyond the border of this province. These aspects of logistical support to the other IDZs fall outside the defined scope of this research and will therefore not be considered further.

3.4 SPOORNET'S EXISTING STRATEGY

The development of rail in South Africa has progressed uninterruptedly for almost 140 years. It is a story of resolution of skill and enterprise in the planning and execution of endurance in the face of topographical, climatic and financial obstacles, of human achievement of a high order, and of faith in the country and its destiny. The country's wealth in gold and diamonds had a great role in establishing the rail network. The administration of rail and associated services in terms of business principles is laid down as an obligation to management in the South African Act (1909), which forms the charter of the South African Railways. The South African Railways & Harbours, as it was then known, developed into the biggest single business enterprise in South Africa, with the operation of trains being but one of many activities.

During 1981 all the major transport services were unified under the auspices of the South African Transport Services. This included rail, road, air and pipeline (petroleum) and harbour operations.

After 80 years as a government service organisation, Transnet became a public Company on 1 April 1990 and today functions as a private company. Spoornet is responsible for the rail transport component of Transnet's portfolio.

Spoornet is recognised as the leader in rail technology and is the largest rail company in Southern Africa. Spoornet is committed to a vision (Spoornet

Philosophy, 2002) of being a leader in freight logistics solutions whilst simultaneously contributing to the ideals of South Africa.

During 1997, Spoornet restructured the company into a customer driven business. The Two Stream Spoornet is a process-driven business, which now focuses on freight logistics solutions (FLS) to customers (About Spoornet, 2002). This means that Spoornet can deliver a holistic product, leveraging their core competency from freight transport and their core investment from rail. Through joint ventures, alliances and clans with customers and other service providers, Spoornet further more aims to towards transforming the freight sector into an effective and efficient logistics management industry for customers (About Spoornet, 2002).

The Sales and Marketing division of Spoornet divided into 15 industry based freight transport sectors, which form mining, heavy and light manufacturing divisions.

Spoornet have identified the critical success factors for the FLS as customers (About Spoornet, 2002):

- Absolute predictability;
- Consignment care;
- Responsive customer service;
- Quality commercial processes; and
- Enhanced value

Predictable service can only be provided if a system of freight reservation is available, which makes arrival time management possible. The need of customers drives everything Spoornet does and the entire planning and execution process is based on a proactive understanding of how the specific

customer service requirements can be met. Spoornet is continuously and actively developing tools that will harness customer knowledge and contact.

Relationship marketing is seen as a basis for marketing initiatives and the development of culture of the service excellence customers (About Spoornet, 2002).

The protection of freight is another core requirement of the customer and a fundamental part of the FLS process. This is addressed through the Freight Protection Facility, which provides a unique, one-premium customer service (About Spoornet, 2002).

Spoornet has invested in information technology and systems that enable proactive changes to train schedules (About Spoornet, 2002) within a one-week window to adapt resources allocation to the customers' needs for the following week. Superior information leveraging capabilities are seen as key to supremacy in the freight logistic industry. The internal and external factors that Spoornet must excel at in order to be competitive are discussed next.

3.5 INTERNAL PERFORMANCE OBJECTIVES

Spoornet's vision statement has been adapted to focus on customer satisfaction as their primary concern.

In order to satisfy the competitive factors, Spoornet have recognised five internal performance objectives, namely:

- Quality;
- Speed;
- Price;
- Flexibility; and

- Dependability.

Spoornet has identified two key strategic drivers that encompass these performance objectives to enable it to transform into a modern, efficient rail company. The first is to become an efficient world-class service provider. The second is an attempt at becoming a South African icon (The repositioning of rail, 2002).

The focus placed by Spoornet to improve these internal performance objectives is evidenced by the following strategic action that have occurred:

- It has grown from rail competencies into warehousing, transport, including long-haul, trans-shipment and feeder services, inventory management, freight forwarding, clearing and other logistics services (Spoornet corporate profile, 2002);

- Spoornet has embarked on a Customer Relationship Marketing program with the intent on delivering the strategic focus;
- New technologies has been used by Spoornet that include an automatic vehicle identification system to accurately track the movement of trains and improve operational control, state of the art GSM cellular phone communications for trains and global positioning system to continuously monitor the condition of rolling stock. (Technology, 2002);

- Spoornet's commercial process has been improved with the conversion of the container order taking process and accounts receivable processes to SAP R/3m, which has enabled a more integrated solution. It has also moved into e-banking to improve the handling of cash between customers and banks (Introducing open item accounting, 2002);

- It is working on an Internet based procurement solution in order to accommodate customers, suppliers, partners as well as employees (Spoornet looks into freight exchanges, 2002); and

- Spoornet has outsourced catering, cleaning and training and development in order to improve internal efficiencies and cost (Nature of business, 2002).

3.6 ASSESSMENT OF COMPETITORS

Although it is not always easy or even possible, the firm should try to determine what the objectives are of competitor firms, i.e. the relative importance that a competitor places on profitability, cash flow, technological leadership and other measures of performance. The competitor's strategies must also be monitored. If the competitor has similar strategies to one's own, competition will be more direct than when strategies are totally different.

Firms need to carefully assess each competitor's strengths and weaknesses in order to be able to identify where they are better and where they are worse (Kotler & Armstrong, 1999: 559). This comparison can be investigated informally through researching customers, suppliers and dealers.

A more recent tool to assess competitive strengths and weakness is through benchmarking, whereby the company's operations are compared to competitors or leading firms in other industries to find ways to improve quality and performance. The strengths and weaknesses will categorise competitors as market leaders, challengers, followers or 'nichers'. This classification can assist the firm in developing a competitive strategy to deal with each competitor.

The market leader would be the firm with the largest market share. It is usually first with price changes, new product introductions and promotion spending. Other firms need to decide whether they wish to challenge, imitate or avoid market leaders.

Market challengers are firms who are fighting hard to increase their market share while market followers are content to hold their share without disrupting the market. Market challengers would be the type of competitor to watch most closely.

They could challenge the market leader to seize the leadership position but are more likely to challenge firms their own size or smaller. Market followers are unlikely to present too large a threat to firms as they will not attempt to upset the industry but will be content to play a smaller role.

Market nichers serve small segments not being pursued by other firms.

They become very powerful in their selected segments as they get to know their markets very well and build loyalty by satisfying their needs. They will be difficult to challenge but do not threaten other players in an industry.

A final area of assessment of identified competitors is to try to predict what they will do in response to strategic move on the firm's part. Thus it would be necessary to forecast the reaction of competitors to a change in target market selection or any other strategic decision.

Information collected during the competitor assessment should be recorded in a competitor profile that will put the firm in a position to formulate a competitive strategy (Dalrymple and Parsons, 1995: 228). The firm is then able to decide where to compete, when to compete and how to compete.

3.7 TARGETING COMPETITORS

Once the firm has identified and analysed its competitors, it must decide which of these to compete against most vigorously (Kotler and Armstrong, 1999: 559). Some firms will choose to target efforts at weak competitors. Although this strategy requires fewer resources and less time, the firm may gain little.

On the other hand, it may be attractive to compete with strong competitors in order to gain much. The danger is that strong competitors may retaliate so viciously that the firm will not be able to compete.

The best way for a firm to avoid head-on competition is to find new or better ways to satisfy customers' needs. The search for a breakthrough opportunity or some sort of competitive advantage requires an understanding not only of customers but also of competitors. That is why firms turn to competitor analysis, an organised approach for evaluating the strengths and weaknesses of current or potential competitors' strategies. Usually, however, firms quickly narrow the focus of their competitor analysis to set off competitive rivals, firms that will be the closest competitors (Perrealt and McCarthy, 1996: 126)

Rivals offering similar products are usually easy to identify. However, with a really new and different concept, there may not be a current competitor with a similar product. In that case, the closest competitor may be a firm that is currently serving similar needs with a different product. Although such firms may not appear to be close competitors, they are likely to fight back perhaps with a directly competitive product if another firm starts to take away customers. Even if no specific competitors can be identified, firms must consider how long it might take for potential competitors to appear and what they might do (Perrealt and McCarthy, 1996: 126).

It is easy to make the mistake of assuming that there would not be competition in the future or have discounted how aggressive competition may become. But a successful strategy attracts others who are eager to jump in for a share of the profit even if profits only hold up for a short time. That is why it is important for a firm to find opportunities where they can sustain a competitive advantage over the longer run (Perrealt and McCarthy, 1996: 126).

Finding a sustainable competitive advantage requires special attention to competitor strengths and weaknesses. For example, it is very difficult to

dislodge a competitor who is already a market leader simply by attacking with strategy that has similar strengths. An established leader can usually defend its position by quickly copying the best parts of what a new competitor is trying to do. On the other hand where it is weak (Perrealt and McCarthy, 1996: 126)

3.8 COMPETITIVE STRATEGIES

Having identified and evaluated the major competitors and possible strategies, the firm must design broad competitive strategies by which to gain competitive advantage. Porter suggested three basic winning competitive strategies that companies could follow (Kotler and Armstrong, 1999: 561). These strategies are:

- Overall cost leadership, whereby the company works hard to achieve the lowest costs of production and distribution so that it can price lower than its competitors and win a large market share;

- Differentiation, where the company concentrates on creating a highly differentiated product line and marketing program so that it comes across as the class leader in the industry; and

- Focus, where the company focuses its efforts on serving a few market segments well rather than going after the whole market (Kotler and Armstrong, 1999: 561) and (De Kluyver, 2000:63).

A firm needs to stand out as the lowest in cost, highest in perceived value or best in serving some market segment or they will stand out at nothing and ultimately fail. Kasper, van Helsdingen and de Vries (1999: 325) describe the following ways in which firms can accomplish the strategic goal of low cost products or services. The firm can seek out low cost clients, or it can standardise customised services and eliminate personal contacts while rending the service. In order to differentiate services they suggest making the intangible services tangible, customising standard services, exercising

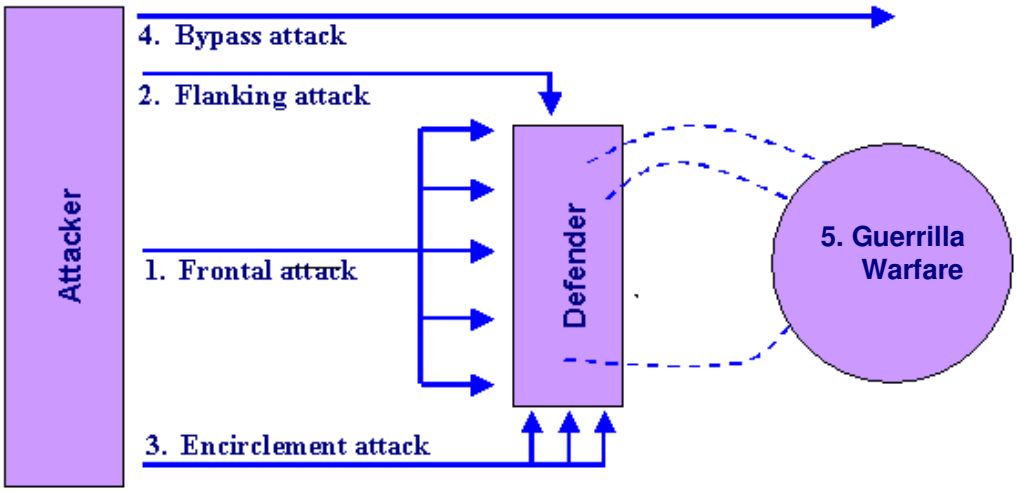
quality control, training employees and managing customers' quality expectations.

Kasper et al, (1999: 324) suggest a fourth strategy that can be added to Porter's three strategies.

The authors call this "a low level service delivery with high costs". It obviously is not a strategy that would intentionally be pursued but is very common in many public service organisations around the world, of which Spoornet is an example. It is conceivable that the service organisation and its staff have a different opinion on the quality of a service than the client.

Many firms use a war analogy when planning their competitive strategies. They develop attack strategies to challenge competitors (Dalrymple and Parsons, 1995:235). Attack strategies are depicted in the following figure.

Figure 3.2: Attack strategies



Source: Adapted from Kotler and Singh, (1981: 62)

The most difficult of all attack strategies is the full frontal attack that challenges a competitor head on. It will be successful for only the largest and financially strongest firms in an industry. A flanking strategy entails addressing gaps in the

existing market coverage of the competition. An encirclement attack also requires superior resources as it entails probing in many areas at the same time and forcing the competitor to spread its resources thin. A bypass attack is unlikely to meet with resistance as it involves diversifying into unrelated products or new markets for existing products. Guerrilla warfare refers to small, intermittent attacks on a competitor.

An attempt by Spoornet to enter the logistics market would amount to a frontal attack on the existing service providers. A more prudent strategy would be a flanking or circling strategy. Options available to Spoornet are discussed in the following section.

It is clear from the previous chapter that for Spoornet to compete in the logistics sector it will have to improve its performance in three of the four identified critical success factors. In addition, the gap that exists between Spoornet and competitors is so large that this improvement may take significant investment and time. In addition, Spoornet will be moving into an established market and taking market share from existing operators. The strategy should therefore involve improving the perceived value of the service (in terms of speed, reliability and flexibility) while at the same time maintaining a cost advantage, or preferably improving its cost advantage, i.e. differentiation or hybrid strategies should be pursued.

3.9 COMPETITIVE ADVANTAGE

Christopher (1991: 3) states that seeking a sustainable and defensible competitive advantage has become the concern of every firm who is alert to realities of the market place. It is no longer acceptable to assume that good products will sell themselves, neither is it advisable to imagine that success today will carry forward.

Let us consider the bases of success in any competitive context. At its most elemental, commercial success derives either from a cost advantage or a value advantage or, ideally, both. It is as simple as that the most profitable competitor in any industry sector tends to be the lowest cost producer or supplier proving a product with the greatest perceived differentiated values.

According to Johnson and Scholes (2002: 160) the value chain concept can be helpful in understanding how value is created or lost. The value chain describes the activities within and around an organisation, which together create a product or service, mentioned above. It is the cost of these value activities and the value that they deliver that determines whether or not the best value products or services are developed. In turn this underpins competitiveness, as discussed above.

Christopher (1992: 8) made it clear that of the many changes that have taken place in management thinking over the last 10 years or so perhaps the most significant has been the emphasis placed upon the search for strategies that will provide superior value in the eyes of the customer. According to Christopher (1992: 8) one concept that Micheal Porter has brought to a wider audience is the value chain:

> ‘Competitive advantage cannot be understood by looking at a firm as a whole. It stems from the many discrete activities a firm performs in designing, producing, marketing, delivering, and supporting its product. Each of these activities can contribute to a firm’s relative cost position and create a basis for differentiation. The value chain disaggregates a firm into its strategically relevant activities in order to understand the behaviour of costs and existing and potential sources of differentiation. A firm gains competitive advantage by performing these strategically important activities more cheaply or better than its competitors’.

3.10 STRATEGIC PLANNING

The key steps in warehouse and inventory planning process as proposed by Quayle and Jones (1999: 152) is as follows:

- The organisation sets up a corporate strategic plan and mission statement.
- The supply chain warehouse and inventory management element of the corporate plan identify the broad logistics strategy and improvement targets.
- The warehousing and inventory management, management team accepts the challenge of developing and managing the project and process.
- Warehouse and inventory management, strategic management team developing and improve on relevant management information; developing state of the art communications within the supply chain.
- Set demanding targets for each mapping element within the total warehouse and inventory management service profile and plan.
- Manage the project: individual and group element within the team plan.
- Manage performance outputs and the process of continuous improvement at every level.

3.11 IMPORTANCE OF RESOURCES

According to Johnson and Scholes (2002: 152) strategic capability is underpinned by the resources available to an organisation since resources that are deployed into the activities of the organisation to create competences. From a strategic perspective an organisation's resources include both those that are owned by the organisation and those that can be accessed to support its strategies.

In this study reference will only be made to physical resources such as machines, building or production capacity. The other resources such as finance-, intellectual- and human resources falls out of the scope of this research and will not be further discussed.

3.11.1 Availability of Resources

To carry out processes, a company needs resources – labour, materials, machines, buildings, information, energy, and so on. Resources can be owned, leased, or rented. Traditionally, companies owned and controlled most of the resources that entered their business. But this situation is changing. Companies are finding that some resources under their control are not performing as well as those they could obtain from outside the company. Many companies today have decided to outsource less critical resources if they can be obtained at better quality lower cost from outside the organisation. The key then, is to own and nurture the core resources and competences that make up the essence of the business (Kotler 2000: 41-42).

According to Piet Olivier, Operations Manager at Spoornet Property Management (personal communication 18 November 2003) the company still has many vacant bulk warehouses in the Cape region. As stated in Chapter One these buildings became vacant as a result of strategic changes and transformation of Spoornet's core business. Piet Olivier also pointed out that at Deal Party large Goods sheds are currently not fully utilised and may be available for warehousing purposes. These buildings are indicated on a site plan **(Appendix 1 & 2)**.

CHAPTER 4

DESIGNING THE EMPIRICAL STUDY

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4.1 INTRODUCTION

The main objective of this research is to assess and report on the potential use of warehousing space in the Eastern Cape region. Furthermore to determine whether Spoornet can adapt its strategy and convert the excess buildings into warehousing facilities to support the Industrial Development Zones (IDZs).

In Chapter Two, a literature study was conducted to ascertain what the world best practices for bulk warehouse facilities are in order to recommend options for the conversion of Spoornet's existing excess warehousing facilities to support the IDZs. A literature study was used to obtain an answer to the second sub-problem namely, what strategy is Spoornet adopting to utilise its excess bulk warehousing and whether the excess warehouses can be suitably converted to comply with world-class standards.

To assist in solving the third sub-problem, namely, what do knowledgeable people believe needs to be done to improve the standards of existing bulk warehousing to world-class standards? The method by which this problem will be addressed is explained in this chapter. A survey of various requirements and strategies of world-class warehousing to determine, which strategy can suitably be adapted to Spoornet's existing strategy was also conducted.

4.2 RESEARCH DESIGN

Leedy and Ormrod (2001: 4,5) define research as the systematic process of collecting and analysing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested. They continue by stating that research is not a blind excursion into the unknown, with the hope that the data necessary to answer the questions at hand will somehow fortuitously turn up. It is, instead, a carefully planned attack, a search-and-discover mission mapped out in advance. In view of this, the research design for this study has been divided into a main problem, with three sub-problems.

4.3 THE EMPIRICAL STUDY

4.3.1 Planning of the Survey

The researcher has opted to use the e-mail to conduct the survey, as this method is relatively inexpensive, easy to monitor in terms of feedback.

To prepare an e-mail survey, a researcher can draw a sample of e-mail addresses from its database, purchase a list, or gather addresses from the Web or Usenet newsgroups. The researcher wants to exercise control over who gets the electronic questionnaire, so he will select a specialized and representative group to research. After sending a questionnaire, the researcher can easily and inexpensively send e-mail reminders to participants who have not yet responded. Perhaps because of this capability, response rates are just as high for e-mail surveys as for traditional contact methods (Strauss, El-Ansary and Frost, 2003: 176).

4.3.2 The Questionnaire

According to Wegner (1995: 17) the questionnaire is the data collection instrument used to gather data in all interview situations. The design of a questionnaire is critical to ensure that the correct research questions are

addressed and that accurate and appropriate data for statistical analysis is collected. Questions have been formulated to address the potential use of Spoornet's excess warehousing to support the Industrial Development Zones in the Eastern Cape, with specific reference to world-class standards of warehousing and more specifically the needs, requirements, location and future of such warehousing facilities.

Instructions: The instructions to a questionnaire must ensure that all respondents are treated equally. Two principles form the foundation for good instructions clarity and courtesy. These two principles were used in the development of the questionnaire.

Types of questions: As gathered from Leedy and Ormrod (2001: 200) there are certain guidelines for questions used for quantitative research. These are as follows:

When writing the questions it should be considered how the responses can be quantified and modify the question accordingly. To some extent the people will have to be coded as numbers allowing statistical analysis to be conducted thereon. To be able to assign numerical codes to responses more easily it is wise to identify an appropriate coding scheme ahead of time.

Consider asking questions that will elicit qualitative information as well. It is not necessary to quantify everything. People's responses to open-ended questions may support or provide additional insights into the numerical data obtained from the more structured questions.

Pilot-test the questions. Try to develop questions that are clear and concise. Despite best intentions questions may be written that are ambiguous or misleading or that yield un-interpretable or otherwise useless responses. A great deal of time can be saved over the long run if you fine-tune your questions before beginning to collect data. Check for weak spots in the questions by asking a few volunteers to answer them in a pilot study.

Restrict each question to a single idea. Do not try to get too much information in any single question; in doing so, one may get multiple kinds of data, “mixed messages” that are difficult to interpret.

Seek clarifying information when necessary. Be alert for responses that could be vague or otherwise difficult to interpret. Simple probes such as “can you tell me more about that may produce the additional information needed.
With these guidelines in mind a questionnaire was developed for the empirical study **(Appendix 3)**.

4.3.3 Contents of the questionnaire

The questionnaire was purposely divided into four distinctive sections with questions to cover information of separate aspects of the study conducted. The sections are:

Section A: **Demographic Data**
This section contained biographical questions where the respondents were required select and mark in the block appropriate in their situations.

Section B: **Importance of Industrial Development Zones**
This section on the other hand has questions pertaining to the IDZs.

Section C: **World-Class Warehousing Facilities**
While this section probed for data on aspects and requirements for world-class warehousing facilities

Section D: **Strategy**
This section concentrates on strategic issues in respect of warehouse operations.

These sections were all made up of some closed and some open-ended questions and has been coded for ease of analysis. According to Wegner

(1995: 7) the type of data gathered determines the type of analysis, which can be performed on that data. Certain statistical methods are valid for certain data types only. An incorrect application of a statistical method to a particular data type can render the findings invalid.

4.3.4 Research Response

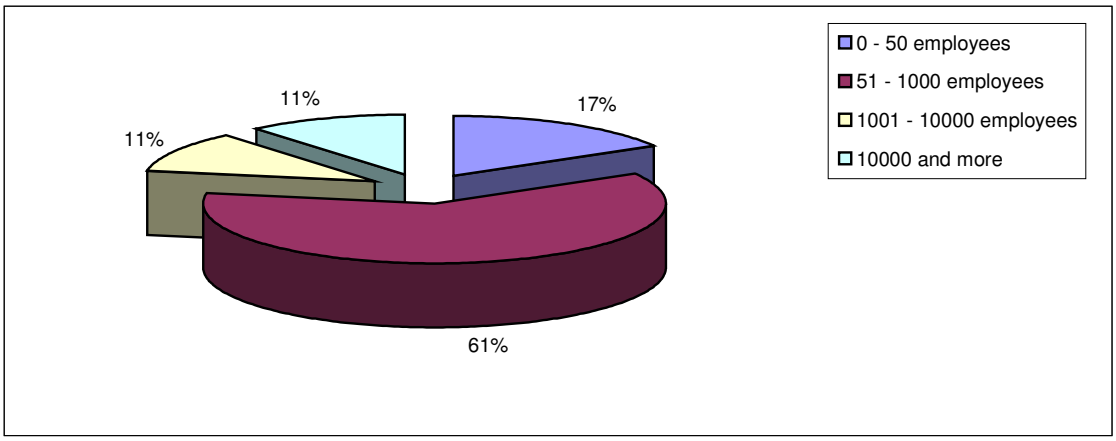
The questionnaire was e-mailed on 10 November 2003 and the response rate of 40 percent was attained by the due date 18 November 2003. Due to time constraints, a follow-up of all the recipients who had not yet replied was conducted on 14 November 2003 with a request to complete the questionnaire by 20 November 2003. A further two questionnaires were received and this brought the response rate to 42 percent.

4.3.5 Analysis of demographic information

Section A of the questionnaire required respondents to complete general information about their positions and their organisations. These questions were designed to highlight independent variables that could then be used to facilitate comparisons to the other sections of the questionnaire.

The results of the questions posed in Section A are provided in Figures 4.1 to 4.5 set out below:

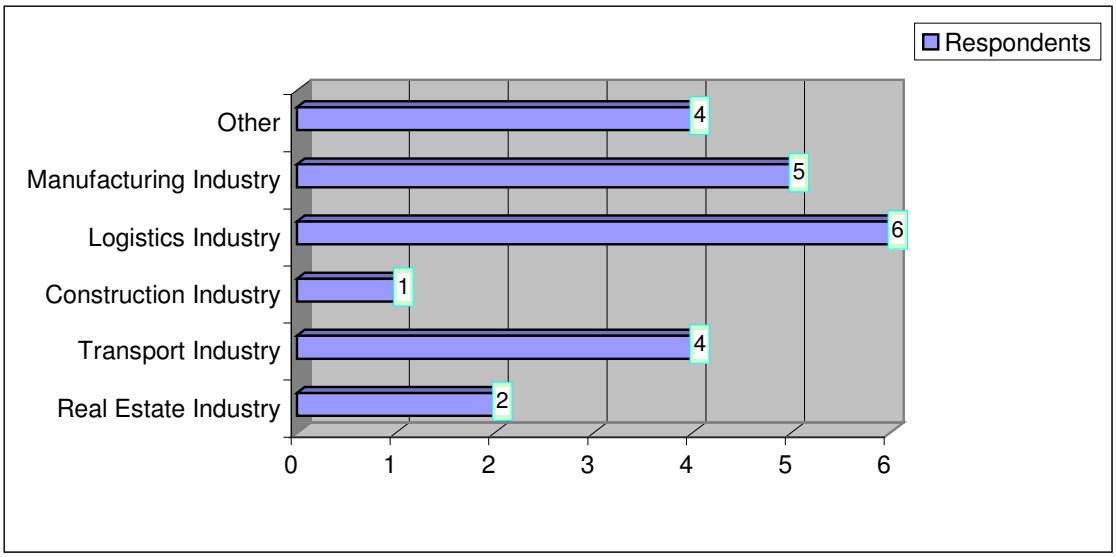
Figure 4.1: Respondents by company size



Source: Results obtained from analysis of company size

Figure 4.1 shows that companies with 51 – 1000 employees made up the greatest percentage of respondents (61%). An interesting observation was that rest of companies were either by between 0 – 50 employees (17%) or larger than 1000 employees and 10000 employees (each 11% respectively), which means that almost to thirds of the participating companies are small to medium in size.

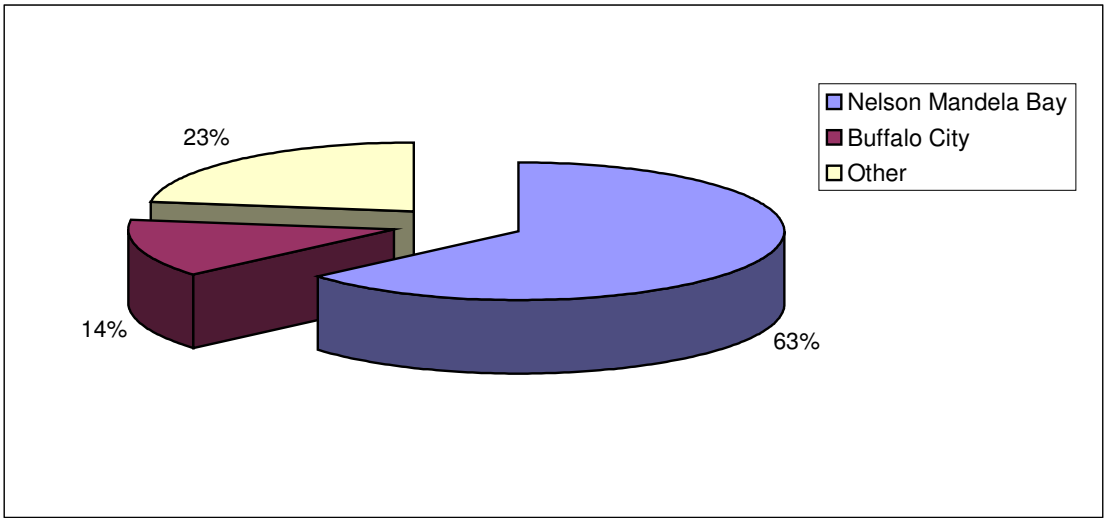
Figure 4.2: Respondents by sector in which the company operated



Source: Results of analysis sectors in which companies operate

Figure 4.2 shows that the Logistics Industry made up the greatest number of respondents (six). The second largest is of the Manufacturing Industry (five) and then the Transport Industry (four) followed by Real Estate (two) and Construction (one only). The four under other were from the Medical Field, Cold Storage, Supply Chain Management and Education respectively. The other respondents are in the Medical Field and Education had opted not to complete the questionnaire as they were of the opinion that they had nothing to offer.

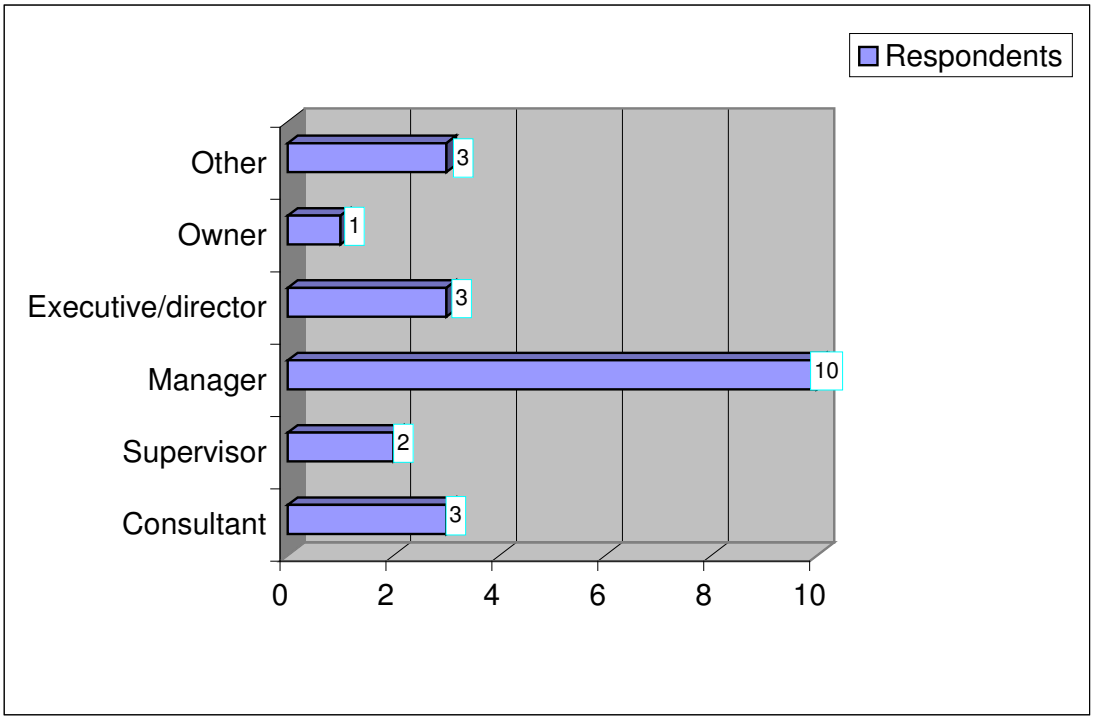
Figure 4.3: Respondents by metropolitan municipal area in which they operate



Source: Results of analysis of metropolitan area in which companies operate

Figure 4.3 shows that 63 percent of the respondents operate within the Nelson Mandela Metropolitan area and 23 percent in the Buffalo city area. Included in the 14 percent indicating the respondents in other areas are two respondents who operate in both of the abovementioned metropolitan areas. The study is limited to the Nelson Mandela Metropolitan area and sufficient response was received out of this area to be able to obtain a valid result.

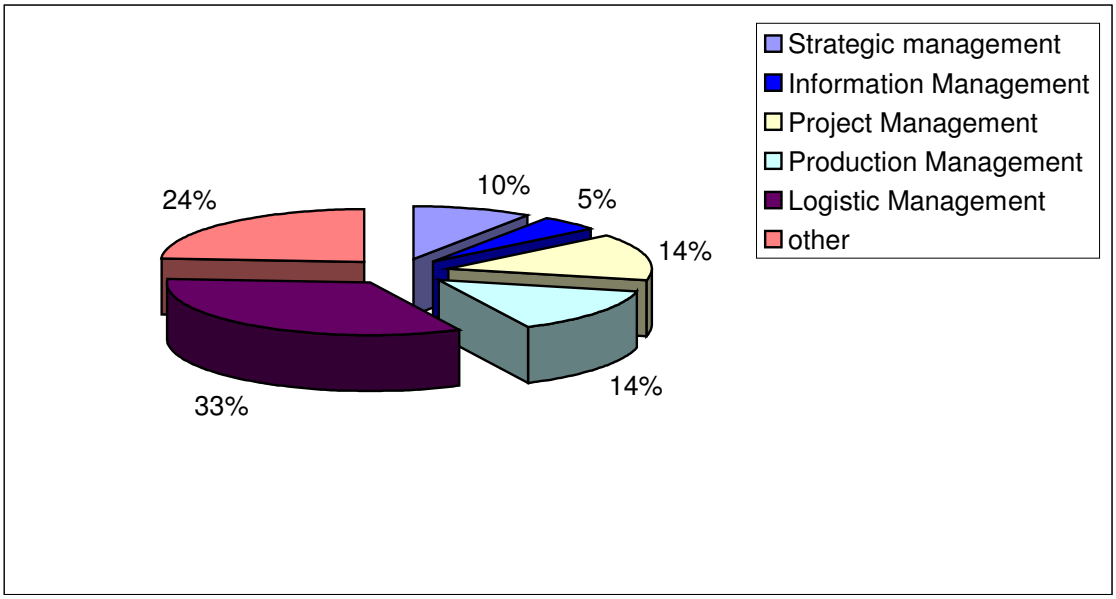
Figure 4.4: The position of respondents in the company



Resource: Results obtained from an analysis of the position held by respondents

Figure 4.4 shows that 10 of the respondents held managerial positions while the rest varied between one and three. According Hellriegel, Jackson, Slocum, Staude and associates (2001: 7) a manager is a person who plans, organises, directs, and controls the allocation of human, material, financial, and information resources in pursuit of the organisation's goals. It is then no surprise that a larger response was received from managers.

Figure 4.5: Area of responsibility of respondents



Source: Results obtained from an analysis of nature of the position held by the respondents

Figure 4.5 shows that responses received reflected a greater response from the Logistics fraternity (33%). Also included in the 24 percent of other nature of position are respondents who are multi tasked.

4.3.6 Reliability and validity of the measuring instrument

Validity and reliability are terms, which according to Leedy (1997: 32) are encountered repeatedly in research methodology. They are primarily concerned with the measuring instrument and contribute to the integrity of the research. Each term is discussed below.

a) Validity

Validity is concerned with the soundness and effectiveness of the measuring instrument (Leedy, 1997: 32). It must be asked whether the measuring instrument measures what it is intended to measure or not, and the degree of accuracy of that measurement? In this study, the question asked was, does the questionnaire measure what it intended to measure?

According to Leedy (1997: 33), there are several types of validity. These are:

- **Face validity:** This is a subjective validity where the questions are scrutinised to establish their relation to the subject under discussion. Face validity refers to whether the questions seem appropriate or not in the context of the study.

- **Criterion validity:** This is where validity is determined by relating a performance measure to another measure that may be used as a standard against which results are measured.

- **Content validity:** This is related to face validity. Content validity is where the accuracy of the instrument in measuring the factors of concern to the study is scrutinized.
- **Construct validity:** This is the degree to which the content of the study is measured by the questionnaire. In the case of this study "How can Spoornet Property Management make effective use of existing excess bulk warehousing facilities to support the IDZs?"

- **Internal validity:** This is concerned with the formulation of conclusions based on the actual results gleaned from the study and not based on any opinion that is influenced by researcher bias.

- **External validity:** This is the degree to which the conclusions reached in the study may be applied to the broader population and not merely the sample studied.

In this study great care was taken to assure validity of the measuring instrument, by consulting knowledgeable people through the medium of a pilot study. The pilot

study was conducted amongst colleagues in Spoornet that are knowledgeable on the subject of Spoornet warehouses and logistics. The aim of the pilot study was specifically to ensure that the questionnaire was presented in a logical manner as well as was designed to measure what it was meant to.

b) Reliability

Reliability is the consistency with which the measuring instrument performs (Leedy, 1997: 35). This means that apart from delivering accurate results, the measuring instrument must deliver similar results consistently. Riley et al (2000: 126) feel that reliability refers to whether the measuring instrument, in this case the questionnaire, consistently measures what it was intended to measure. Singleton, Straits and Straits (1993: 121) feel that reliability may be improved through conducting exploratory studies in the area of interest, or by conducting pre-tests on a small sample of persons similar in characteristics to the target group. In this study, both of the above activities were conducted by the researcher – in the form of a comprehensive literature study (see Chapters 2, and 3) and a pilot survey conducted on colleagues with similar profiles to the recipients of the questionnaire and who were knowledgeable on the topic.

4.4 SUMMARY

The aim of this chapter was to document the planning and the process used in the empirical study as well as a quantitative analysis of the demographic details of respondents.

This was conducted through a brief overview of literature relevant to the research methodology as well as detailed documentation of the process used to glean information from the respondents. The demographic details of the respondents reported in Section A of the questionnaire were presented in figures. The chapter concluded with a brief discussion of the validity and reliability of the data gathered through the use of the questionnaire.

Chapter Five deals with an analysis of the data gathered in the other sections of the questionnaire.

CHAPTER 5

THE INTERPRETATION OF THE STUDY AND RESULTS

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5.1 INTRODUCTION

In Chapter Four the research design and the methods used for the empirical study were discussed. This includes the planning of the survey, the development of the questionnaire, the research approach adopted and the establishment of reliability and validity of the survey instrument. The results obtained from Section A of the questionnaire were also discussed in the previous chapter. These results will be used as the independent variables.

The purpose of Chapter Five is to assist in solving the sub-problem:

- What are the world-class best practices for bulk warehousing?

- What strategy should be adopted by Spoornet to utilise its excess bulk warehouse capacity and can the excess warehousing be adapted to comply with world-class standards?

- What do knowledgeable people believe needs to be done to improve the standards of the existing bulk warehousing to world-class requirements?

5.2 RESULTS OF ANALYSIS OF DATA OF SECTION B: IMPORTANCE OF INDUSTRIAL DEVELOPMENT ZONES

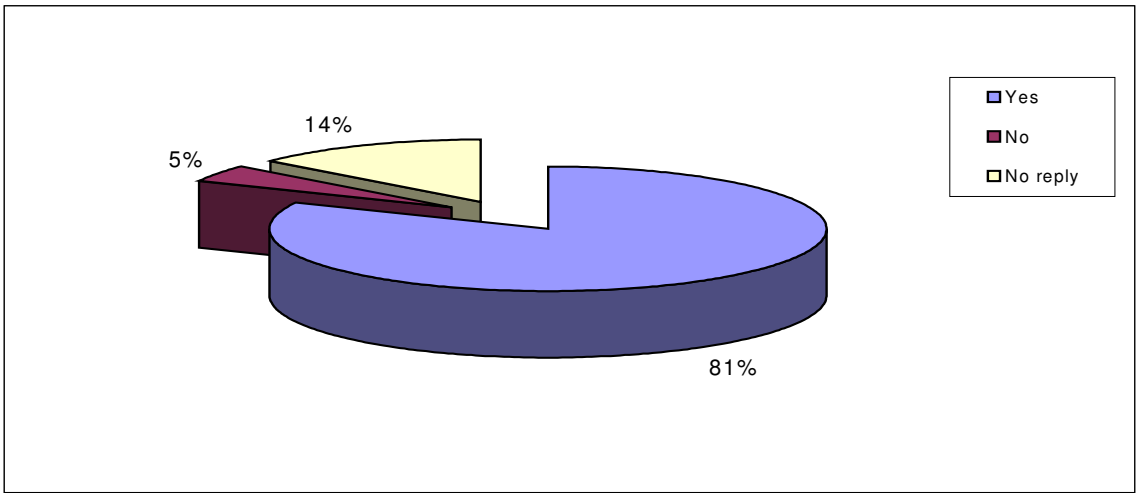
The results of analysis of data for Sections B, were as follows:

5.2.1 Question 2.1

Do you believe that the Department of Trade and Industry's programme of providing Industrial Development Zones (IDZs) are important for growth in South Africa?

Figure 5.1 represents the responses to question 2.1 that required the respondents to indicate whether they believed that the IDZs is important for growth in South Africa.

Figure 5.1: Analysis of responses to Question 2.1 of the questionnaire



In order to encourage international competitiveness of the manufacturing sector, the Department of Trade and Industry has offered a national programme, which involves Industrial Development Zones (IDZs) as an incentive. The IDZs will include purpose-built industrial estates, all links to major transport facilities. (Townsend, 2002: 53)

The results show that 81% of the respondents believed that the Industrial Development Zones would bring growth to South Africa. Only 5% of the respondents did not feel confident about the IDZs and 14% percent did not reply at all. This overwhelming positive result may have been expected as the Eastern Cape is believed to be one of the poorest provinces and respondents would like to see economic investment in this province.

5.2.2 Question 2.2

In your opinion would the IDZs bring the following aspects into the Eastern Cape?

- Economic growth
- Infrastructure
- Foreign investment

- Sustainability

- New industries

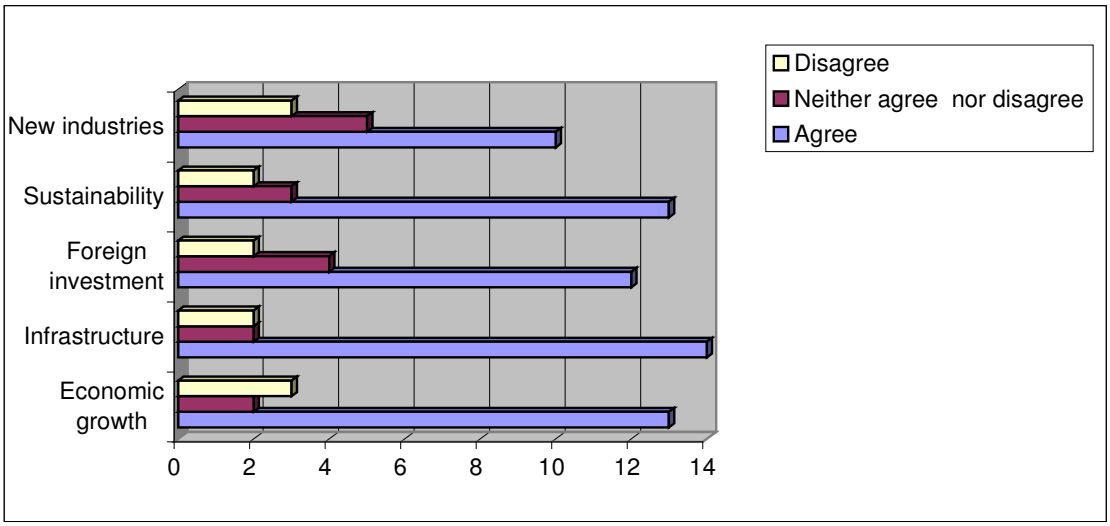
The respondents were to indicate by means of a five point Likert-type scale their response to the questions. Due to the relatively small sample used it was decided that for the ease of analysis to reduce it to a three point scale The amendment was as follows:

- **Agree and strongly agree (1 and 2)** were combined as **Agree (1)**

- **Neither agree nor disagree** remained the same but was amended to **(2)**
- **Disagree and strongly disagree (4 and 5)** were combined as **Disagree (3)**

Figure 5.2 represents the responses to question 2.2 that required the respondents to indicate whether they believed that the IDZs would bring new industries, sustainability, foreign investment, infrastructure, and economic growth to the Eastern Cape.

Figure 5.2: Analysis of responses to Question 2.2 of the questionnaire



Townsend (2002: 53) states that a typical example of the IDZs is the Coega project, which is seen as the vantage point of international trade. This is the first step towards the country's macroeconomic development strategy to provide world-class, purpose-built infrastructure, which will act as a platform to attract foreign direct investment (FDI).

The two interrelated components of this project are a deepwater port on the Coega River and an IDZ with the necessary infrastructure to accommodate the expansion of the industrial capacity. (Townsend 2002: 67)

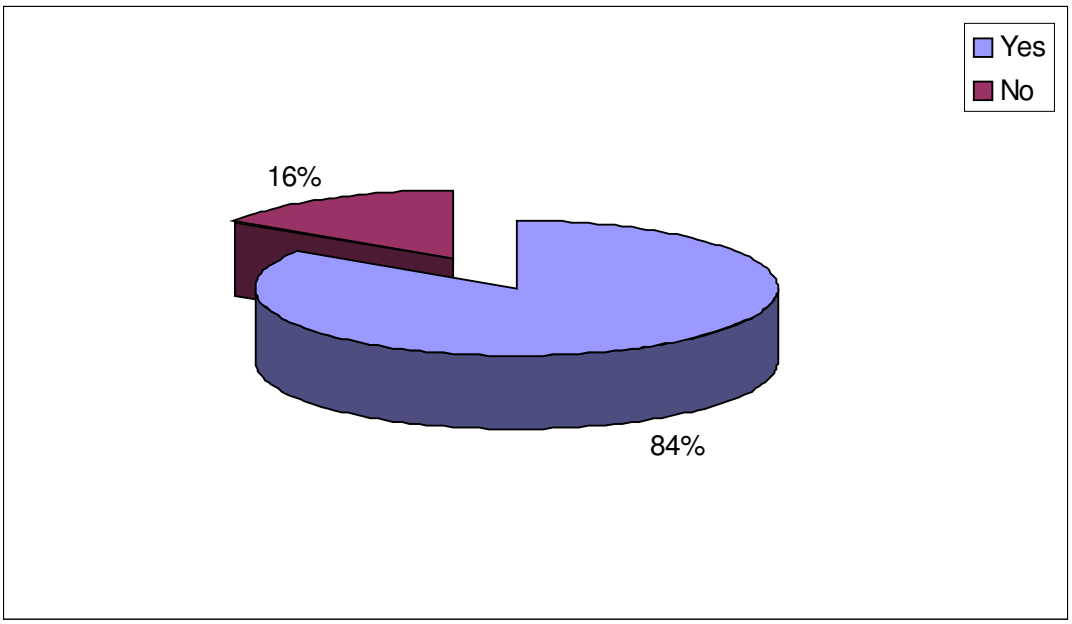
Figure 5.2 shows that the majority of the respondents agreed that the IDZs would bring new industries, sustainability, foreign investment, infrastructure, and economic growth to the Eastern Cape. This is an indication that the business in the East Cape is optimistic about development in this province. For the purpose of this study it significant to note that fourteen of the respondents agreed that the IDZs would bring new infrastructure to this region.

5.2.3 Question 2.3

Would you say that warehousing is important to industries who will be settling in the IDZs if so, why?

Figure 5.3 represents the responses to question 2.3 that required the respondents to indicate whether warehousing would be important to the industries who will be settling in the IDZs and why?

Figure 5.3: Analysis of responses to Question 2.3 of the questionnaire



As stated by Kotler (2000: 541) every company has to store goods until they are sold, because production and consumption cycles rarely match. The storage function helps to smooth discrepancies between production and quantities desired by the market. Perreault and McCarthy (1996: 375) state that storing allows producers and middlemen to keep stocks at convenient locations – ready to meet customer's needs. In fact, storing is one of the major activities of some middlemen. Most channel members provide the storing function for some length of time. Even final consumers store some things for their future needs.

From Figure 5.3 it is clear that the greater number of respondents (84%) indicated that warehousing would be important to the industries settling in the IDZs.

One respondent's reply on the "why" portion revealed that movement of goods between destinations need storage. Another respondent replied that industries in an IDZ are likely to have a significant import/export component and thus need to store goods at some point. A third respondent stated that it depends on which industries are attracted to the IDZ. Bulk materials probably would not need warehousing for example bauxite. On the other hand assembly/manufacturers would need storage facilities for components and

products, particularly if Just-in-Time processes were applied. This coincides with authors' statements above that endorse the need for warehousing. One respondent however indicated that warehousing would not be needed, as firms should be using lean manufacturing practices, which limit the use of storage facilities. The last respondent's comment will not have a serious impact on this study as the majority of the respondents indicated that there is a need for warehousing to support the IDZs.

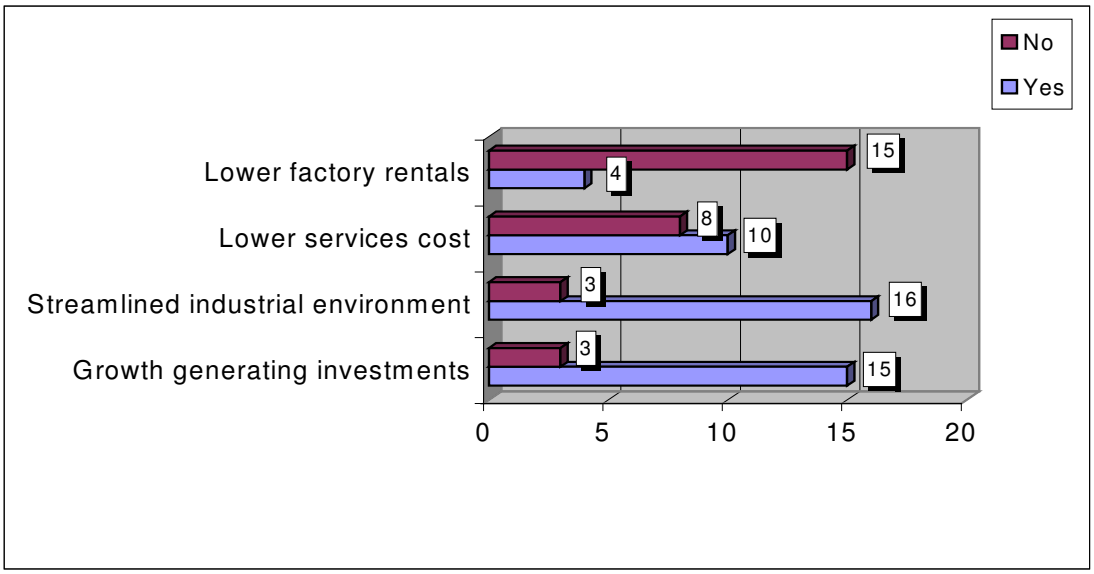
5.2.4 Question 2.4

Do you believe that the provision of appropriate infrastructure within the IDZs will improve the following prospects?

Figure 5.4 represents the responses to question 2.4 that required the respondents to indicate by "yes" or "no" whether they believe that the provision of appropriate infrastructure within the IDZs would improve the following prospects:

- Growth generating investments
- Streamlined industrial environment
- Lower services cost
- Lower factory rentals

Figure 5.4: Analysis of responses to Question 2.4 of the questionnaire



According to Townsend (2002: 9) the provision of appropriate infrastructure is ensured in order to improve the prospects for growth-generating investment by the private sector, with streamlined duty-free industrial environment incorporating regional and municipal incentives and lower services costs and factory rentals than other industrial areas in the country. With the industrial expansion in the Cape Province, particularly the Eastern Cape, and as a result of the new proposed IDZs together with the Coega project, which is part of the Support Programme for industrial innovation designed to promote technology development in the manufacturing industries, it is expected that many new factories will settle in these areas.

Figure 5.4 shows that the majority of the respondents felt that the provision of appropriate infrastructure within the IDZs would improve prospects for growth generating investments and streamlined industrial environment. From the result it became clear that most of the respondents are of the opinion that factory rental will not be lower while there was 55.6% of the respondents who thought that services cost would be lower while the others did not. Some respondents did not reply to all the questions.

5.3 RESULTS OF ANALYSIS OF DATA OF SECTION C: WORLD-CLASS WAREHOUSING FACILITIES

The results of analysis of data for Section C were as follows:

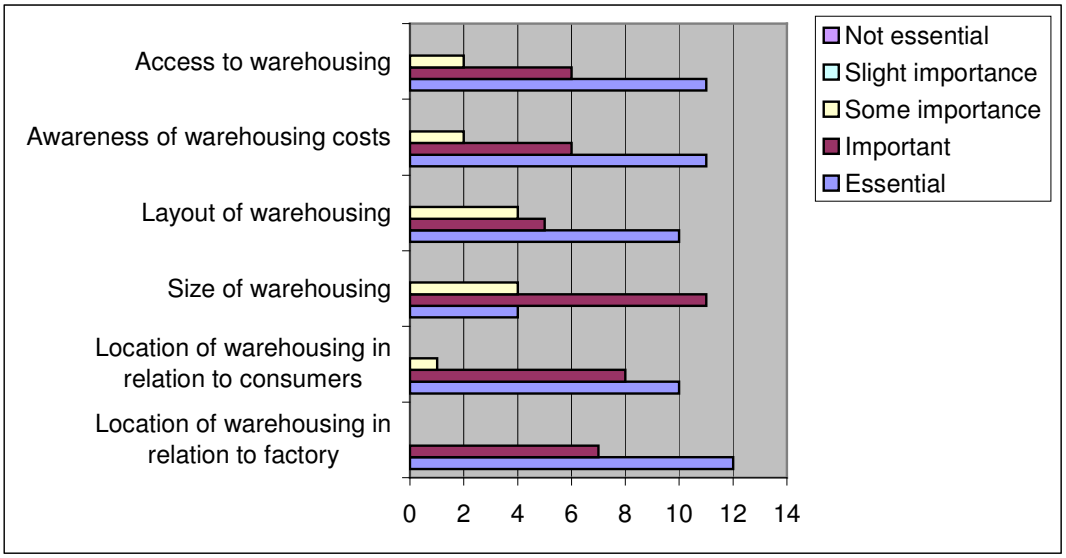
5.3.1 Question 3.1

Rate the following aspects and requirements in respect of world class warehousing.

- Location of warehousing in relation to factory
- Location of warehousing in relation to customers
- Layout of warehousing awareness of warehousing
- Access to warehousing

Figure 5.5 represents the responses to question 3.1 that required the respondents to rate by means of a five point Likert-type scale to importance these aspects and requirements are in respect of world-class warehousing.

Figure 5.5: Analysis of responses to Question 3.1 of the questionnaire



From Figure 5.5 it can be seen that the respondents considered most of aspect and requirements either essential or important. This coincides with what the literature study in Chapter 2 has already confirmed, namely access to warehousing, awareness of costs and location of warehousing in relation to factories. Location is a prime consideration when selecting a site for a new distribution centre. The availability of utilities and transportation, access to the site location, the proximity to customers are merely some of the aspects of selection of a site that must be considered to determine the most appropriate location for a new facility.

Burton (1981: 27) states that wherever it is decided to locate a warehouse, the requirements remain much the same as they spring from the basic objectives which have already been mentioned – to provide what is required when it is required to whoever requires it, in the condition in which it is required, and doing all things economically. Attwood and Attwood, (1992: 85) however state that warehouses may be established at each plant or located strategically near the markets. The best sites for warehouses, according to Attwood and Attwood, (1992: 87) provide the best service to customers in terms of delivery time and the least cost for delivering goods. The results in Figure 5.5 shows that the respondents consider it more

essential that warehouses should be located closer to the factories while the literature study revealed that warehouses should be strategically near markets or at each plant.

Burton (1981: 26) states that the size set for a new warehouse is only appropriate at one moment in time. If a new warehouse is required at all, it is a sign of change. The warehouse must be capable of holding more in the future than in the present. Buildings, which are too large for an existing function, represent capital, which is failing to yield a return. A large number of respondents considered size as important but not essential.

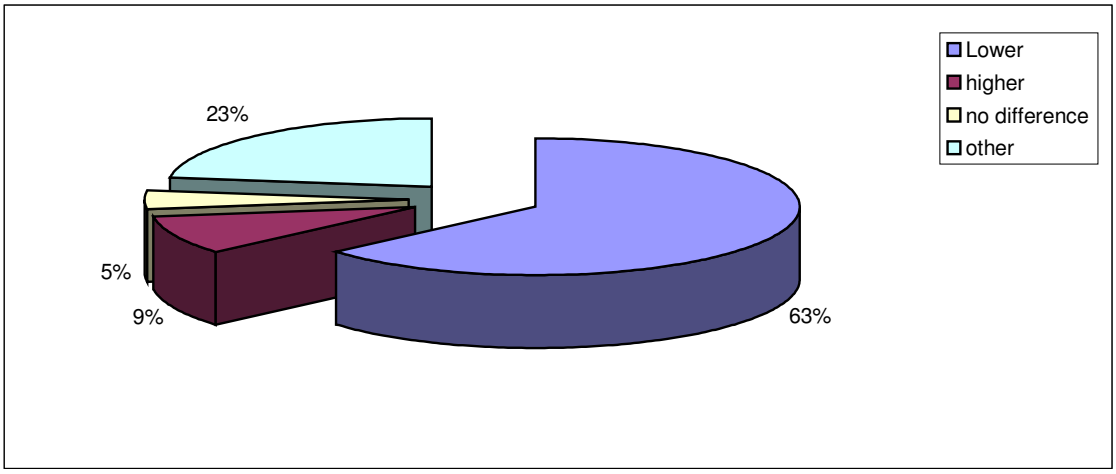
According to Quayle and Jones (1999: 211) disjointed planning and layouts, where each section does not form part of an overall plan, is likely to result in poor service, inadequate control, costly administration, unnecessary duplication of equipment and facilities and frequent emergency re-arrangements to meet unforeseen circumstances. The response on the requirements of the layout of warehouses, awareness of warehousing costs and access to warehousing all varied in steps from some importance to essential.

5.3.2 Question 3.2

In your opinion would the cost to upgrade existing warehousing facilities be lower, higher or no different than the costs of providing new facilities.

Figure 5.6 represents the responses to question 3.2 that required the respondents to indicate by “lower”, “higher”, “no difference” or “other” of costs between upgrading existing facilities and providing new facilities.

Figure 5.6: Analysis of responses to Question 3.2 of the questionnaire



According to Christopher (1991: 64) many companies fail to recognise the true significance of logistics fixed assets because they are valued for balance sheet purposes at historical cost. Warehouses, for example, with their associated storage and handling equipment represent a sizeable investment and the question should be asked: "Is this the most effective way to deploy our assets?"

Warman (1983: 25) postulates that unfortunately, we rarely have the pleasure of planning the layout of a new building. Instead, we have to make do with the old ones. Often the sites in which stores and warehouses are placed are normally a blending of separate buildings. Frequently, the rest of the site is made up of an unsuitable and unsightly yard. Often this part of the site occupies large areas, which are improperly used, or even not used at all. For this reason, when starting to plan, and especially when the whole site is to be redeveloped, all existing facilities must be ignored. Look at the site as if no building existed there. The problem, then, will be not how to plan the site – that is relatively simple – but how the existing work can go on while the old buildings are being demolished and the new one put up. Figure 5.6 shows that 63% of the respondents indicated that the cost would be lower to upgrade existing warehouses than the costs of providing new facilities. The "why" portion of the revealed that the respondents all felt that the cost of obtaining suitable land and erecting a warehouse would be far more expensive and that renovation of existing facilities does not require capital outlay.

It was found that 23% of the respondents indicated that it depended on the condition of the existing warehousing. They also felt that if the existing building were in a state of disrepair it would be more viable to build new structures. Only nine percent of respondents were of the opinion that the costs would be higher to upgrade existing facilities. No obvious reasons were given as to why they held this opinion. The result shows that five percent of the respondents indicated that there would be no difference because it depended on what the desired end result was.

From the above results the conclusion can then be made that it would be more feasible to upgrade Spoornet's existing warehouses than to provide new buildings.

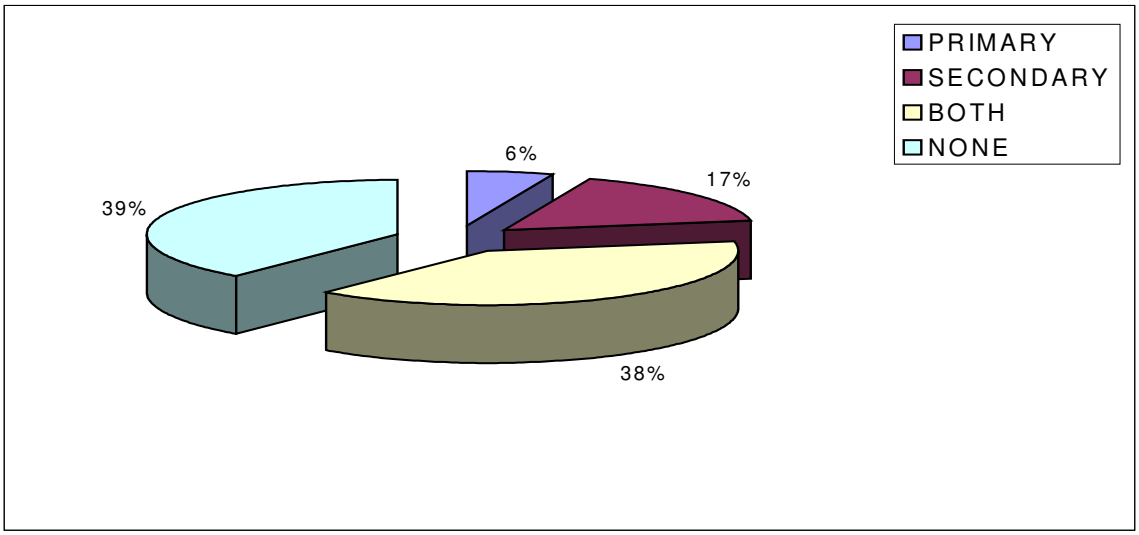
5.3.3 Question 3.3

Does your company make use of following type of warehousing facilities?

- Primary warehousing – Where goods are received from manufacturing
- Secondary warehousing – Where goods are received from primary warehousing and stored for distribution.
- Both of above
- None of these

Figure 5.7 represents the responses to question 3.3 that required the respondents to indicate what warehousing their company uses.

Figure 5.7: Analysis of responses to Question 3.3 of the questionnaire



Sussams (1992: 53) states that warehousing is the second major component in distribution system. Just as transport can be classified as 'primary' and 'secondary', there are also two types of warehousing that can be provided between source (factory or port) and destination (retail outlet or consumer). These are:

- Primary warehousing – where goods are received from manufacturing (or from manufacturers' finished stock), in which those goods are stored and from which they are then dispatched to secondary depots and to full load or 'central drop' customers.

- Secondary warehousing – goods are received from primary warehouses (or, sometimes, direct from manufacturing), in which those goods are stored and from which they are then redistributed to part-load or multi-drop customers.

In Figure 5.7 an interesting observation was that almost an equal amount of the companies that did not make use of warehousing (39%) and those that made use of both types of warehousing (38%). This may be as a result of the company sizes or the nature of business conducted in which the respondents operate. Six percent only made use of primary warehousing while 17% only use secondary warehousing. The results however revealed that 61% of the companies do make use of some sort of warehousing.

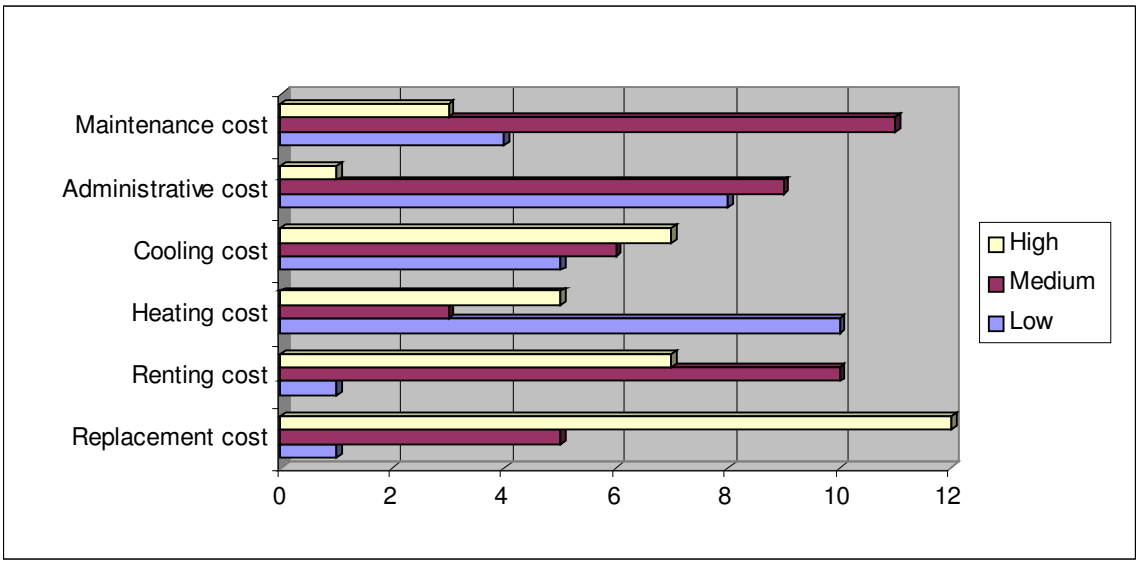
5.3.4 Question 3.4

Rate the following cost aspects in respect of world class warehousing facilities.

- Replacement cost
- Renting cost
- Heating cost
- Cooling cost
- Administration cost
- Maintenance cost

Figure 5.8 represents the responses to question 3.4 that required the respondents to rate by means of a three point Likert-type scale in respect of the level of costs pertaining to warehousing operations

Figure 5.8: Analysis of responses to Question 3.4 of the questionnaire



Slack, Chambers and Johnston (2001: 382) defines storage costs as the costs associated with physically storing the goods. Renting, heating and lighting the warehouse can be expensive, especially when special conditions are required such as low-temperature or high-security storage. According to Perreault et al (1996: 376) the cost of physical handling is a major storing cost. Today, modern one-storey buildings away from downtown traffic are replacing the old multi-storey warehouses. They eliminate the need for elevators – and permit the use of power-operated lift trucks, battery-operated motor scooters, roller-skating order pickers, electric hoists for heavy items, and hydraulic ramps to speed loading and unloading. According to Sussams (1992: 65) warehouse rents and rates are generally on a basis of so much per square metre or per square foot. This can be a misleading measure if one is comparing different kinds of warehousing since; evidently, the height of the building is also an important factor. A low-rise building costs less to build but holds smaller volume of goods than a high-rise building of the same floor area. The cost per unit of effective storage space may be the same. In some cases more expensive building in terms of cost per square metre may be more efficient and therefore less expensive in terms of cost per unit handled.

Figure 5.8 shows that the greater number of respondents indicated that the replacement cost of warehousing would be high. This was also revealed in Question 3.2. The result shows that most of the respondents indicated that rental cost is considered to be moderate. An interesting observation is that the respondents felt that heating cost would be low while there was relative equal responses between low, medium and high for cooling cost. Both cooling and heating are energy consuming and the cost of energy resource is costly but the reason for this result does not fall in the ambit of this study and will therefore not be discussed any further.

Figure 5.8 also indicated that respondents felt that warehouse administration cost varied between moderate to low.

According to Burton (1981: 52 – 53) permanent buildings require less attention than temporary ones; any house owner will confirm that even the best constructed building needs constant maintenance. If the attention is delayed, what started, as being something minor is liable to run quickly into an expensive operation? With this in mind it is certain that most of the respondents were of the opinion that warehouse maintenance cost is considered to be reasonable.

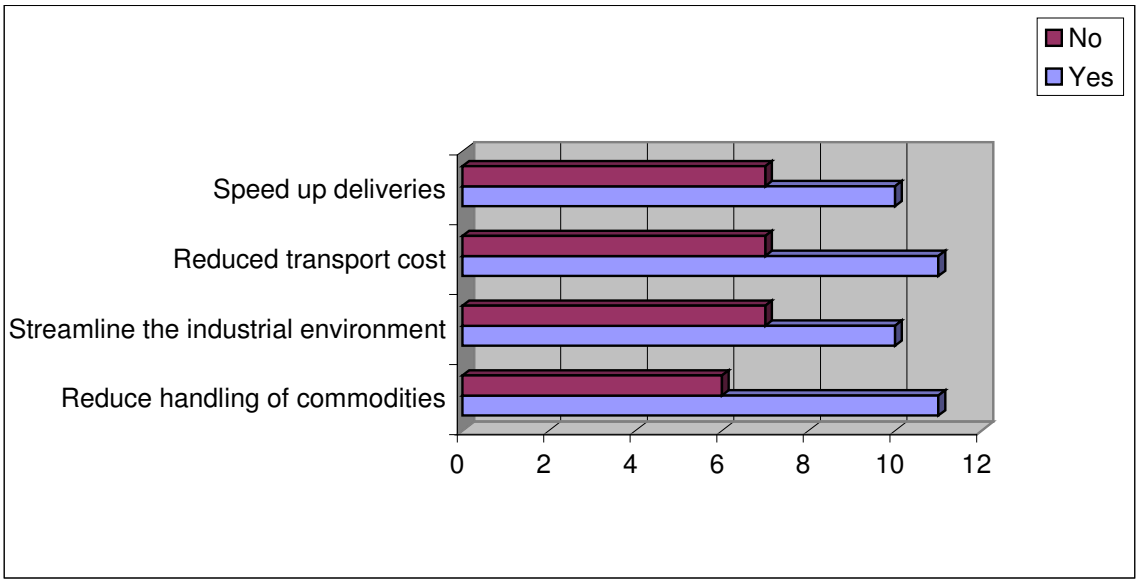
5.3.5 Question 3.5

Do you believe that the provision of multi modal warehouse facilities will:

- Reduce handling of commodities
- Streamline the industrial environment
- Reduce transport cost
- Speed up deliveries

Figure 5.9 represents the responses to question 3.5 that required the respondents to indicate what benefits multi modal warehouse facilities would have.

Figure 5.9: Analysis of responses to Question 3.5 of the questionnaire



From figure 5.9 it can be seen that most of the respondents agreed that multi modal would reduce handling of commodities, streamline the industrial environment, reduce transport cost, and speed up deliveries.

5.4 RESULTS OF ANALYSIS OF DATA OF SECTION D: STRATEGY

The results of analysis of data for Section D were as follows:

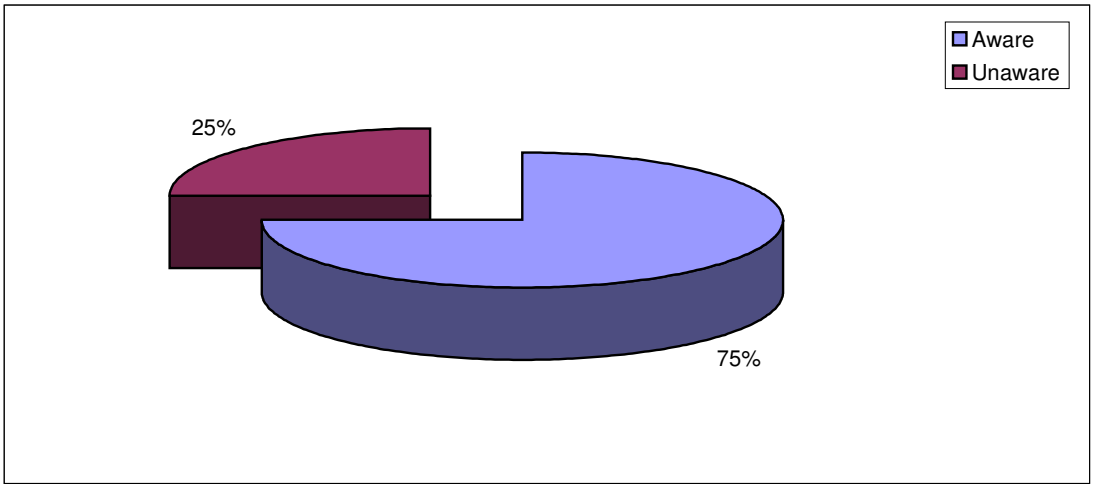
5.4.1 Question 4.1

Did you know that Spoornet strives to be the leader in freight logistics solutions?

Originally the Question 4.1 required the respondents to indicate by “yes”, “no” or Unaware that Spoornet offers freight logistics solutions.

Only one respondent replied that he was unaware of this and therefore format of the results was changed to **Aware (1)** and **Unaware (2)** and the result of the analysis is reflected in Figure 5.10 which, represents the responses to question 4.1 that required the respondents to indicate whether they were aware that Spoornet strives to be the leader in freight logistics solutions.

Figure 5.10: Analysis of responses to Question 4.1 of the questionnaire



Spoornet is recognised as the leader in rail technology and is the largest rail company in Southern Africa. Spoornet is committed to a vision (Spoornet Philosophy, 2002) of being a leader in freight logistics solutions whilst simultaneously contributing to the ideals of South Africa.

During 1997, Spoornet restructured the company into a customer driven business. The Two Stream Spoornet is a process-driven business, which now focuses on freight logistics solutions (FLS) to customers (About Spoornet, 2002). This means that Spoornet can deliver a holistic product, leveraging their core competency from freight transport and their core investment from rail. Through joint ventures, alliances and clans with customers and other service providers, Spoornet further more aims towards transforming the freight sector into an effective and efficient logistics management industry for customers (About Spoornet, 2002).

Figure 5.10 shows an overwhelming response, 75% of the respondents that are aware of Spoornet vision and mission to be the leader in freight logistics solutions. This is a positive sign as it indicates that Spoornet is a major role player in logistics solutions in South Africa and for purpose of this study in the Eastern Cape.

5.4.2 Question 4.2

In your opinion a business should always:

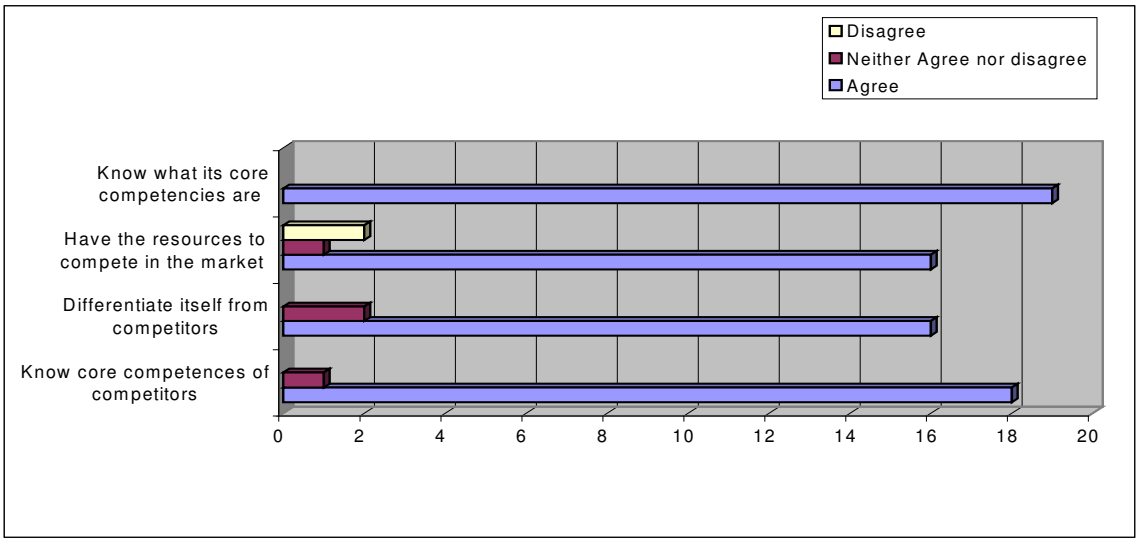
- Know the core competences of competitors
- Differentiate itself from competitors
- Have the resources to compete in the market
- Know its core competences

The respondents were to indicate by means of a five point Likert-type scale whether they agreed with the researcher. Due to the relatively small sample used it was decided that for the ease of analysis to reduce it to a three point scale.
The amendment was as follows:

- **Agree and strongly agree (1 and 2)** were combined as **Agree (1)**
- **Neither agree nor disagree** remained the same but was amended to **(2)**
- **Disagree and strongly disagree (4 and 5)** were combined as **Disagree (3)**

Figure 5.11 represents the responses to question 4.2 that required the respondents to indicate their thinking of certain aspects of strategy.

Figure 5.11: Analysis of responses to Question 4.2 of the questionnaire



In Chapter 3 it was cited from Kotler and Armstrong (1999: 556) that in today's fiercely competitive environment, companies need to thoroughly know and understand their competitors in order to be able to gain competitive advantage. Companies can only do this if they satisfy target consumer needs better than competitors do. Thus strategies must consider not only the needs of target consumers but also the strategies of competitors. According to Johnson and Scholes (2002: 322) differentiation seeks to provide products or services unique or different from those of competitors in terms of dimensions widely valued by customers.

Johnson and Scholes (2002: 152) state that strategic capability is underpinned by the resources available to an organisation since resources that are deployed into the activities of the organisation to create competences. Kotler (2000: 42) describes core competence as having three characteristics:

(1) It is a source of competitive advantage in that it makes a significant contribution to perceived customer benefits, (2) it has a potential breadth of applications to a wide variety of markets, and (3) it is difficult for competitors to imitate. Competitive advantage also accrues to companies that possess distinctive capabilities. Whereas core competences tend to refer to areas of special technical and production expertise, capabilities tend to describe excellence in broader business processes.

From Figure 5.11 it is interesting to note that almost all the respondents agreed that businesses should consider all aspects of strategy to gain competitive advantage. This then ties in with what was observed from the literature study conducted in the previous chapters.

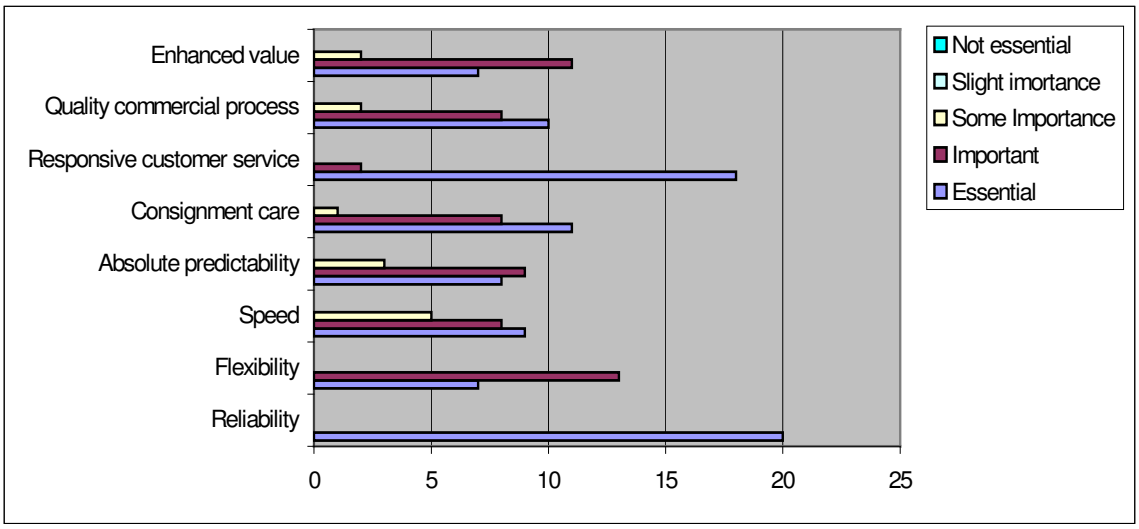
5.4.3 Question 4.3

Rate the importance of critical success factors for logistics.

- Reliability
- Flexibility
- Speed
- Absolute predictability
- Consignment care
- Responsive customer service
- Quality commercial processes
- Enhanced value

Figure 5.12 represents the responses to question 4.3 that required the respondents to rate by means of a five point Likert-type scale in respect of the level of costs pertaining to warehousing operations.

Figure 5.12: Analysis of responses to Question 4.3 of the questionnaire



Johnson and Scholes (2002: 151) describe critical success factors as those product features that are particularly valued by a group of customers and, therefore, where the organisation must excel to outperform competition.

Spoornet have identified the critical success factors for the FLS as customers (About Spoornet, 2002):

- Absolute predictability;
- Consignment care;
- Responsive customer service;
- Quality commercial processes; and
- Enhanced value

For the purpose of the survey reliability, flexibility and speed were included in the questionnaire although Spoornet consider these to be competitive factors as set out in Chapter 3. As shown in Figure 5.12 the respondents indicate that reliability and responsive customer service is most essential. All the other factors were considered from important to essential while speed seems to be the least important.

5.4.4 Question 4.4

Please consider each of the following statements and state your level of agreement with each, use the following semantic differential scale to rate each statement.

When choosing to use third party warehousing it is essential to:

4.4.1 consider the quality of service provided.
4.4.2 rely on a Just-in-Time process and speedy delivery.
4.4.3 always consider price.
4.4.4 ensure that the warehouse operator is flexible.
4.4.5 ensure that the warehouse operator is dependable.

The respondents were to indicate by means of a five point Likert-type scale whether they agreed with the researcher. Due to the relatively small sample used it was decided that for the ease of analysis to reduce it to a three point scale.

The amendment was as follows:

- **Agree and strongly agree (1 and 2)** were combined as **Agree (1)**
- **Neither agree nor disagree** remained the same but was amended to **(2)**
- **Disagree and strongly disagree (4 and 5)** were combined as **Disagree (3)**

Figure 5.13 to 5.18 represents the responses to question 4.4 that required the respondents to indicate their level of agreement with the researcher on essential issues regarding the use of third party warehousing.

Figure 5.13 illustrate the responses to Question 4.4.1 where respondents were required to indicate the degree of with the statement "When choosing to use third party warehousing it is essential to consider the quality of service provided".

Figure 5.13: Analysis of responses to Question 4.4.1 of the questionnaire

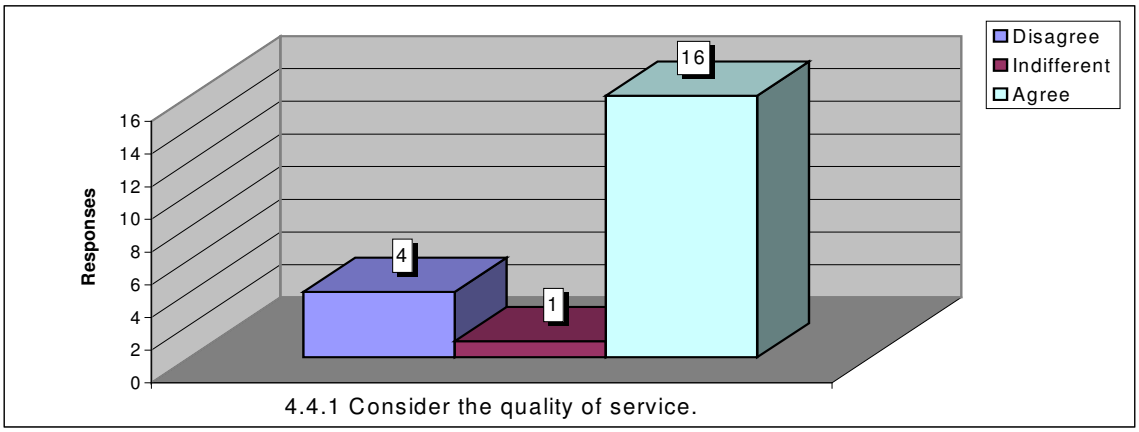


Figure 5.14 illustrates the responses to Question 4.4.2 where respondents were required to indicate whether they agree with the statement "When choosing to use third party warehousing it is essential to rely on a Just-in-Time process and speedy delivery".

Figure 5.14: Analysis of responses to Question 4.4.2 of the questionnaire

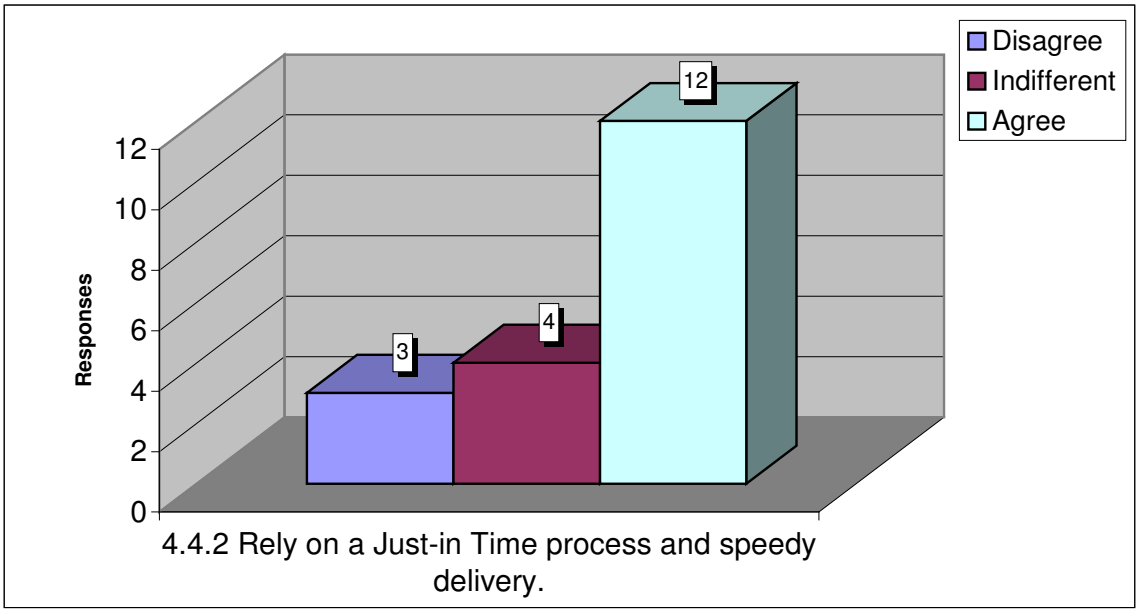


Figure 5.15 illustrates the responses to Question 4.4.3 where respondents were required to indicate the degree of with the statement "When choosing to use third party warehousing it is essential to always consider price".

Figure 5.15: Analysis of responses to Question 4.4.3 of the questionnaire

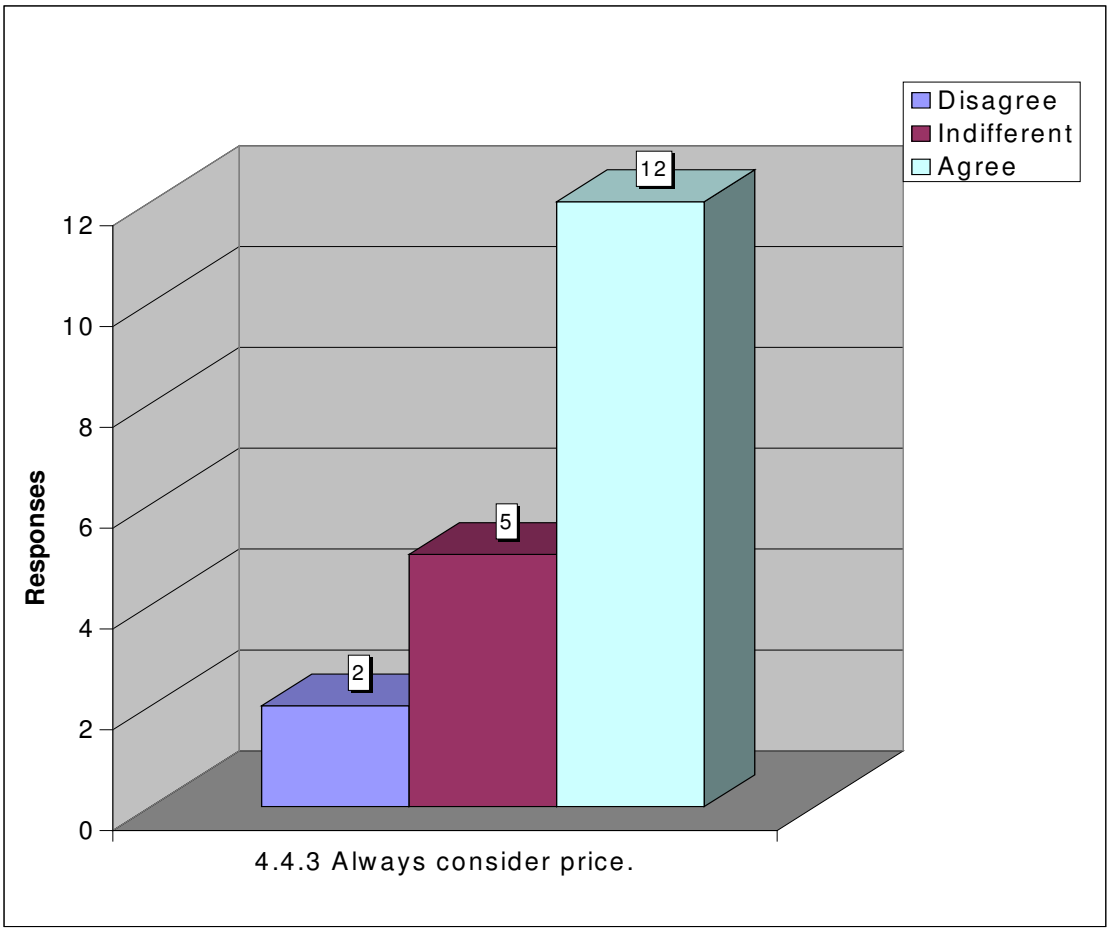


Figure 5.16 illustrates the responses to Question 4.4.4 where respondents were required to indicate the degree of with the statement "When choosing to use third party warehousing it is essential to ensure that the warehouse operator is flexible".

Figure 5.16: Analysis of responses to Question 4.4.4 of the questionnaire

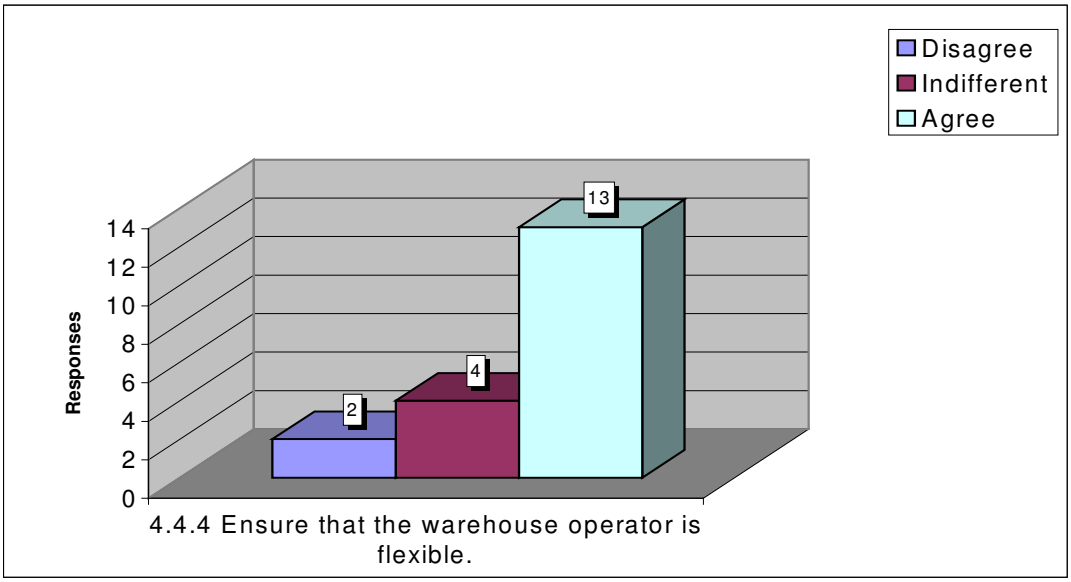
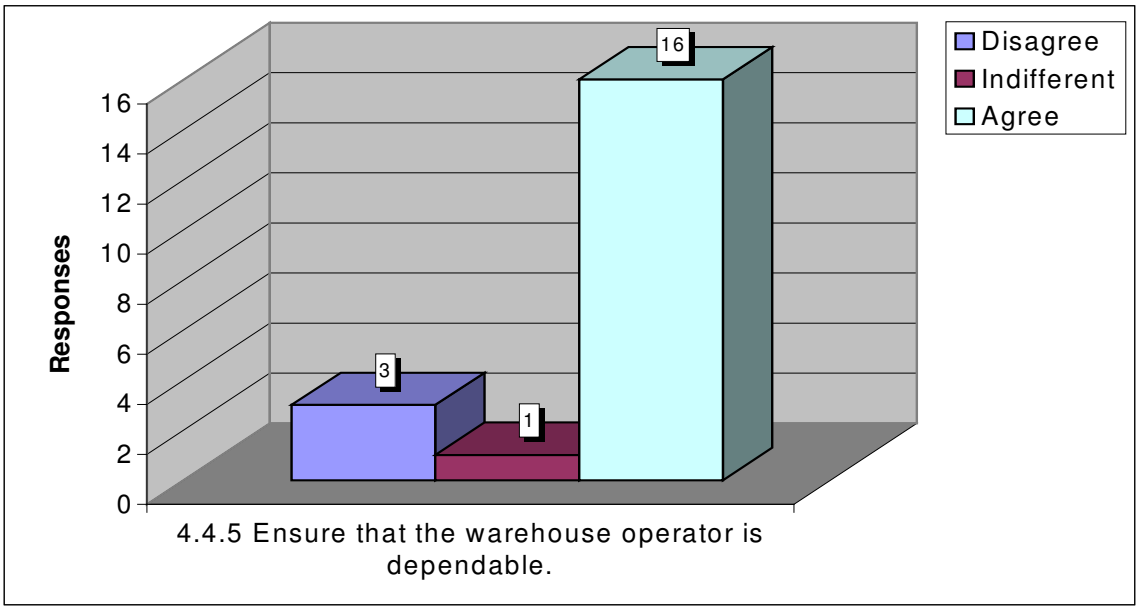


Figure 5.17 illustrates the responses to Question 4.4.5 where respondents were required to indicate the degree of with the statement "When choosing to use third party warehousing it is essential to ensure that the warehouse operator is dependable".

Figure 5.17: Analysis of responses to Question 4.4.5 of the questionnaire



From the above figures it is evident that each statement had a high degree of acceptance from respondents. The statement of when choosing to use third party warehousing it is essential to always consider price, illustrated in figure 5.15, shows the highest degree of indifference among the statements. This indifference may support the fact that the respondents have indicated in question 3.4 that rental cost would be moderate. Another reason may be that many of the respondents had not had any experience with third party warehousing and therefore felt that they could not express an opinion in agreement or disagreement with the statement.

On the other hand, the degree of acceptance indicates that there is a strong feeling from the industry to consider the aspects stated when using third party warehousing is essential.

5.4.5 Question 4.5

Do you believe that the provision of additional warehousing facilities in the Eastern Cape will?

Figure 5.18 represents the responses to question 4.5 that required the respondents to indicate by “yes” or “no” whether they believe that the provision of additional warehousing facilities in the Eastern Cape will:

- Create competitive pricing for storage
- Streamline the industrial environment
- Reduce services cost
- Reduce transport cost

Figure 5.18: Analysis of responses to Question 4.5 of the questionnaire

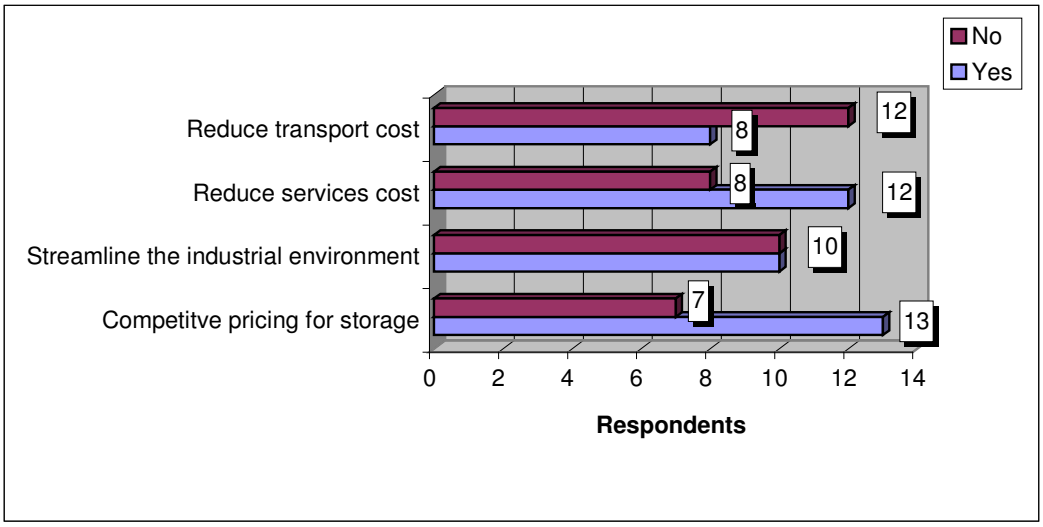


Figure 5.18 shows that most of the respondents indicated that they are certain that the provision of additional warehousing facilities would not reduce transport cost while on the other hand most have indicated that it would reduce services cost. This may be due to the fact that transport cost is a variable cost and services are considered as fixed cost. An equal number of respondents have indicated that additional would or will not streamline the industrial environment. A large number of respondents did, however indicate that additional warehousing would create competitive pricing for storage.

5.4.6 Question 4.6

In your opinion would the nature of warehousing change dramatically in the future.

Figure 5.19 represents the responses to question 4.6 that required the respondents to indicate by "yes" or "no" whether they believe that the nature of warehousing will change dramatically in future and why?

Figure 5.19: Analysis of responses to Question 4.6 of the questionnaire

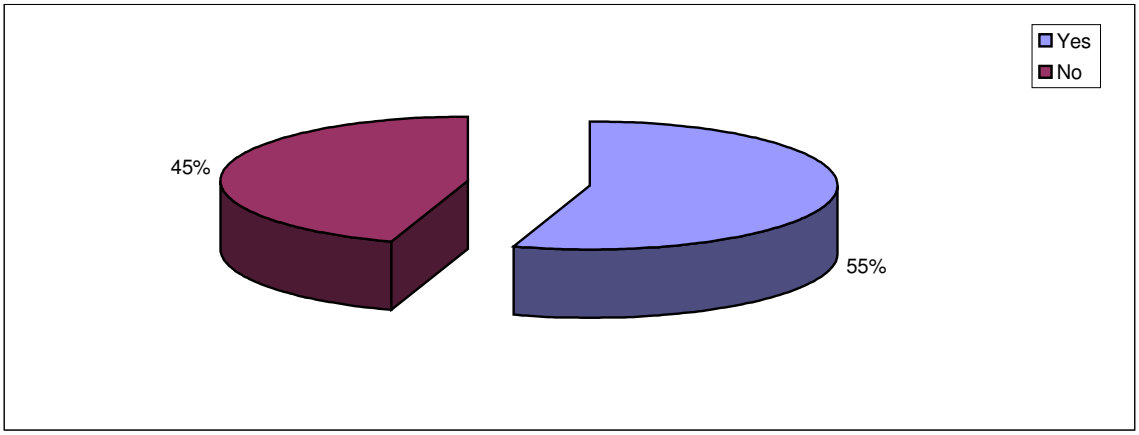


Figure 5.19 shows that 55% of the respondents were of the opinion that the nature of warehousing would change dramatically in the future. In the "why" portion of the question some interesting comments were received from the respondents.

The opinion of one respondent was that new concepts of logistics, Just-in-Time and process flow would have an impact on the nature of warehousing. As cost competitiveness intensifies continuously, industry will have to become more innovative in finding the optimal balance between improved service levels (which drive stocks up) and reduce cost (which would drive stocks down). Traditionally industry has focussed on optimising

manufacturing. Only in recent years have the focus started to move towards the supply chain. Services and Technology will definitely impact heavily on the nature of warehousing. Warehouses will also change as a result of competition, customer and consumer demands, profitability, and space restraints. Warehousing in South Africa will have to adapt to world- class standards. Another respondent stated that new business practices would be applied where warehousing will be seen as a waste and will add no value to the process. On the other hand although trade is embracing an e-commerce model, it will still be necessary to hold goods in transitional periods, i.e. between manufacturing and consumption. Essentially the e-commerce model will demand a more rapid response from warehousing the core competence of warehouses will remain the same, i.e. to stockpile, to break-bulk, to be a distribution centre.

It is Brockmann's (1999: 36) view that over the past several years, many people have predicted the demise of warehousing because of the evolution of just-in-time, quick response, direct store delivery, and continuous flow distribution. He also says that a number of uninformed individuals imagined a world without stockrooms, kitting operations, wholesalers, distributors, and distribution centres. Brockmann adds that warehouses will continue to play an important role in the logistics supply chain. According to Quayle and Jones (1999: 9) logistics and warehousing are changing at a rapid and accelerating rate. It is changing for two sets of reasons. The first set is the pressure for change arising from managerial and technical development from within the logistics system itself. According to Sussams (1992: 179) the reason for considering the possibility of automating a part or the whole of a warehouse operation are to reduce costs and to improve accuracy.

CHAPTER 6

AN INTEGRATION OF THE FINDINGS OF THE LITERATURE SURVEY WITH THE THEORETICAL SURVEY DETERMINED FOR THE STUDY, SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

6.1 INTRODUCTION

The researcher has realised that excess warehousing in Spoornet's portfolio had become available due the change in strategy and therefore embarked on the process of research to assess the potential use of these structures to support the Industrial Development Zones programmes proposed by the Department of Trade and Industry for the Eastern Cape of South Africa.

The researcher conducted a literature study to ascertain the best practice for warehousing in order to obtain knowledge and understanding of the subject under research. These best practices included opinions and statements made by authors and experts in the Logistics Industry. An empirical study in the form of a questionnaire was undertaken to analyse and report on what knowledgeable people believe the need and requirements are for warehousing within the IDZs of the Eastern Cape.

The intention of this chapter is to integrate the results obtain from the empirical study with the observations from the literature study by means of a summary of each chapter from which ultimate conclusions and recommendations can be made.

6.2 THE INTEGRATION OF THE RESULTS OF THE EMPIRICAL STUDY WITH THE LITERATURE STUDY

During the literature study information from secondary sources was collected in order to resolve the first and second sub-problems:

1. What are the world-class best practices for bulk warehousing facilities?

2. What strategy is Spoornet adopting to utilise its excess bulk warehousing capacity and can the excess warehousing be adapted to comply with world-class standards?

To resolve the third sub-problem: " What do knowledgeable people believe needs to be done to improve the standards of existing bulk warehousing to world-class requirements?" A questionnaire was developed to obtain the opinion of the business community in the Eastern Cape.

The results of the empirical study will be integrated with the findings in the literature study in order to resolve the main problem: "How can Spoornet Property Management make effective use of existing, excess bulk warehousing facilities to support the Industrial Development Zones?"

6.3 SUMMARY

The main objective of this chapter is to integrate the findings of the literature study with the results obtained from the survey and draw conclusions to ultimately give recommendations. The results of the literature study will be briefly discussed.

6.3.1 Chapter 2: Assessment of world best practice for warehousing facilities

In Chapter two the importance of warehousing and the world best practices were outlined. From the literature study it was determined that some kind warehousing will always be needed for the storage of goods at some point. The layout and design although not considered to be an important factor must still be taken into account. These factors will differ from warehouse to warehouse as the different companies store different commodities.

Although a brief study has been made of the various costs that are involved in warehouse operations, this aspect would need an in-depth study to make proper conclusions of what implications it will hold for the use of Spoornet's excess warehousing. The study however pointed out that these costs are real and will have to be considered when a strategy is developed for warehousing.

It appears from the study that the main purpose of warehousing is to provide shelter and protection for goods. Warehousing also bridges the gap between the economic methods of production and the needs of customers. It ultimately allows supply to be uncoupled from production thus allowing each to be undertaken in its own best way.

Warehousing operations rely heavily on fixed assets and represent a sizeable investment. The layout requires careful attention to details, all integrated into a single and superb operation. From the literature study it was also discovered that the emergence of e-commerce has changed the requirements of traditional warehouses. The size set for new warehousing is only appropriate at one moment in time and the aim should be that a warehouse should meet the needs of the immediate future.

Another prime requirement is the location of warehousing. Some authors indicated that warehouses should be close to factories or strategically near markets. Location of warehouses also on depends on the availability of suitable land not just for the warehouse itself but also for a vehicle park and ancillary facilities. The proximity of highway, rail links and access are also

important factors. Other issues to consider for location are services from the local authority, suitable labour, and environmental legislation. According to Attwood and Attwood, (1992: 85) warehouses may be strategically near markets but the best sites are those, which provide the best service in terms of delivery time and the least cost for delivery of goods.

The future of warehousing will depend on the evolution of Just-in-Time, quick response, direct store delivery, and continuous flow distribution. Apart from these processes warehouses will remain to play an important role in the logistics supply chain. Change in warehousing is due to pressures from management and technical development from within the logistics system itself. Lastly competitive pressures will also have an impact on warehousing in the future since so much competition in both consumer and industrial goods is now fought on dimensions of customers service. From the literature study it is quite evident that automation of part or the whole of warehouse operation will reduce cost and improve accuracy. Information technology plays a major role in warehouse operations and can be of enormous advantage in formulating strategic planning for warehouse facilities.

6.3.2 Chapter 3: Spoornet's strategy and the assessment of the ability to use its excess bulk warehousing facilities for distribution

Chapter Three takes an in-depth look at Spoornet's existing strategies and that of competitors. The requirements of customers were discussed and compared with Spoornet's internal objectives. Once the exiting strategies were known and having identified possible competitors, the best way to target competitors were discussed.

The competitive strategies suggested by Porter were outlined and also compared with strategies of other authors in the chapter. In the study it was established how a firm would obtain competitive advantage and how it could apply core competences to ensure the leading edge is maintained.

Strategic planning is essential and the key steps in warehouse and inventory planning processes were outlined in Chapter 3. The importance of availability of resources for strategic capability is underpinned.

As previously mentioned Piet Olivier, Operation Manager at Spoornet Property Management (personal communication 18 November 2003) has indicated that the Spoornet still has many vacant bulk warehouses in the Cape region. As stated in Chapter One these buildings became vacant as a result of strategic changes and transformation of Spoornet's core business. Piet Olivier also pointed out that at Deal Party large goods sheds are currently not fully utilised and may be available for warehousing purposes.

6.3.3 Chapter 4: Designing the empirical study

The main objective of the research was outlined in the chapter, being to assess and report on the potential use of warehousing space in the Eastern Cape region and to determine whether Spoornet can adapt its strategy and convert its excess buildings into warehousing facilities to support the Industrial development Zones.

The research methodology used in this study is discussed in chapter and is followed by the results of section A, the demographic data.

The aim of this chapter was to document the planning and the process used in the empirical study as well as a quantitative analysis of the demographic details of respondents.

This was conducted through a brief overview of literature relevant to the research methodology as well as detailed documentation of the process used to glean information from the respondents. The demographic details of the respondents reported in Section A of the questionnaire were presented in figures. The chapter concluded with a brief discussion of the validity and reliability of the data gathered through the use of the questionnaire.

A statistical check of relationship was performed in order to ensure that associations between variables were not overlooked. For the purpose of this study a chi squared test was performed with regard to warehousing requirements in Nelson Mandela Bay and Buffalo City Metropoles.

Statistically, the significance was not noticeable at a level of ten percent and it can thus be accepted that, from the samples used from the questionnaire for the abovementioned areas were proportionately similar. The calculate chi squared statistic of 7.04 is below the acceptance limit.

6.3.4 Chapter 5: The interpretation of the study and results

The purpose of Chapter Five is to assist in solving the sub-problem:

- What are the world-class best practices for bulk warehousing?

- What strategy should be adopted by Spoornet to utilise its excess bulk warehouse capacity and can the excess warehousing be adapted to comply with world-class standards?

- What do knowledgeable people believe needs to be done to improve the standards of the existing bulk warehousing to world-class requirements?

This was done by an integration of the findings of the literature survey with the theoretical and empirical survey obtained from the questionnaire.

An interesting result was that 81% of the respondents believed that the Industrial Development Zones (IDZs) would bring growth to the Eastern Cape. Many respondents felt that infrastructure is an important aspect for this development. An astounding result of 84% of respondents indicated that warehousing would be a prerequisite for the IDZs and this coincide with what was obtained from the literature study.

The results of the questions relating to the requirements of warehousing had mixed responses, however all positive and in line with what were found in the literature survey. For the purpose of this survey it would be important to note that 63% were of the opinion that it would be less expensive to upgrade existing warehousing than to construct new facilities. Almost 61% of the respondent's companies used some sort of warehousing.

The strategic portion of the survey also revealed interesting results. 75% of the respondents are already aware of Spoornet's drive to become the leader in freight logistic solutions. What is important to note that most of the respondents are in the managerial position and have a wide knowledge of strategy this was revealed in the responses to the other strategic questions, which included the question regarding the change of the nature of future warehousing, where 55% had indicate that it would change and 45% had indicated that it would not.

6.4 CONCLUSION AND RECOMMENDATIONS

In conclusion a recommendation of these findings is that there is a need for this kind of study as Spoornet are not optimising the excess goods shed and the IDZs would most likely require the additional space. The Eastern Cape is considered one of the poorest provinces in South Africa, the envisaged IDZs will bring growth to this province and as new industries settle in these zones, more opportunities will arise. Some of these opportunities include the storage of raw materials, distribution of parts for production, and finished goods to consumers.

Spoornet has already progressed with their "Freight Logistic Solution" initiative and it is recommended, based on the results of this survey that they pursue supply of warehousing as a trade-off for obtaining rail clients.

The exiting strategy used by Spoornet would suitably apply for warehousing and the current goods shed can also suitably adapted to world-class standards.

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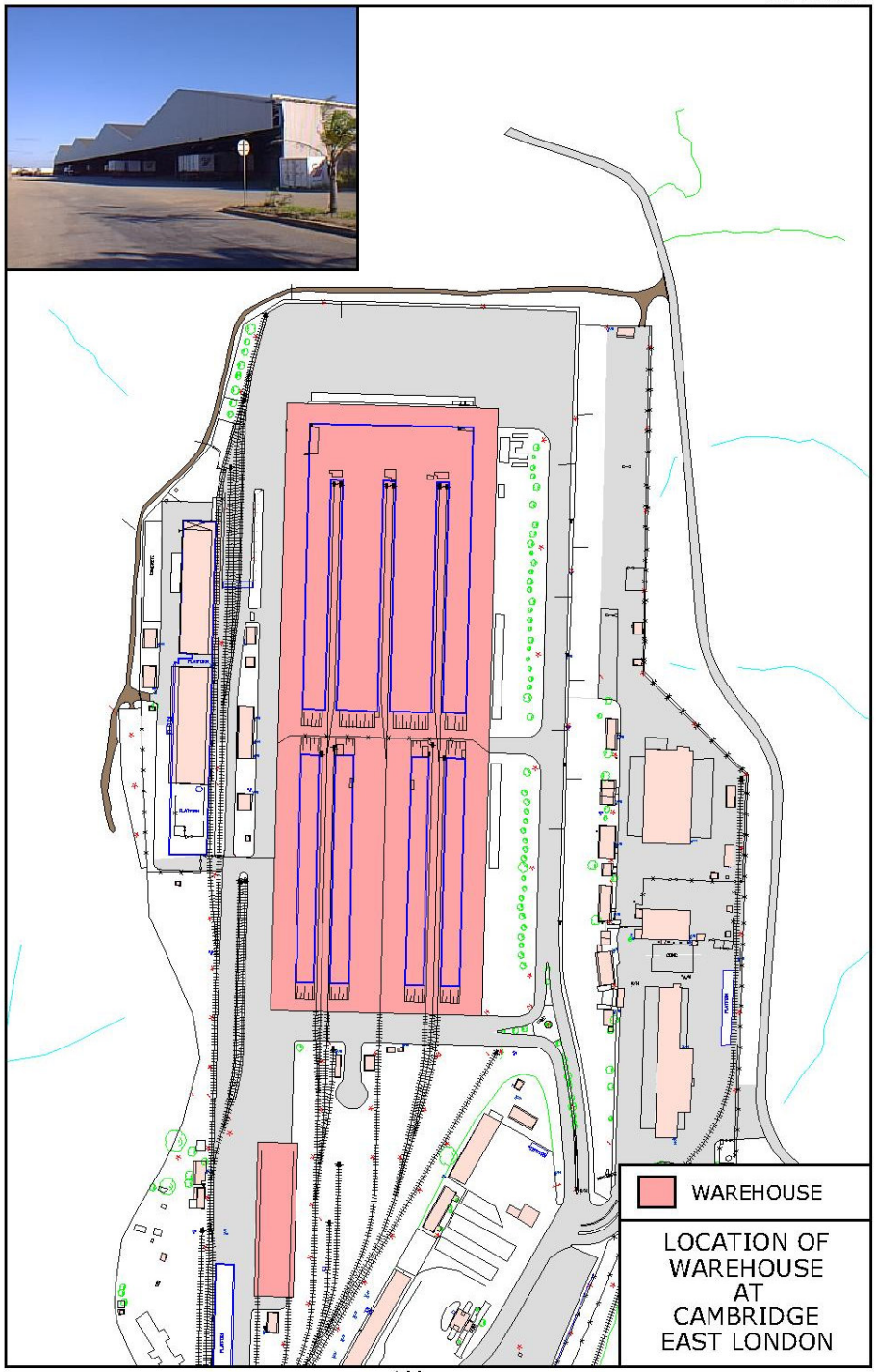
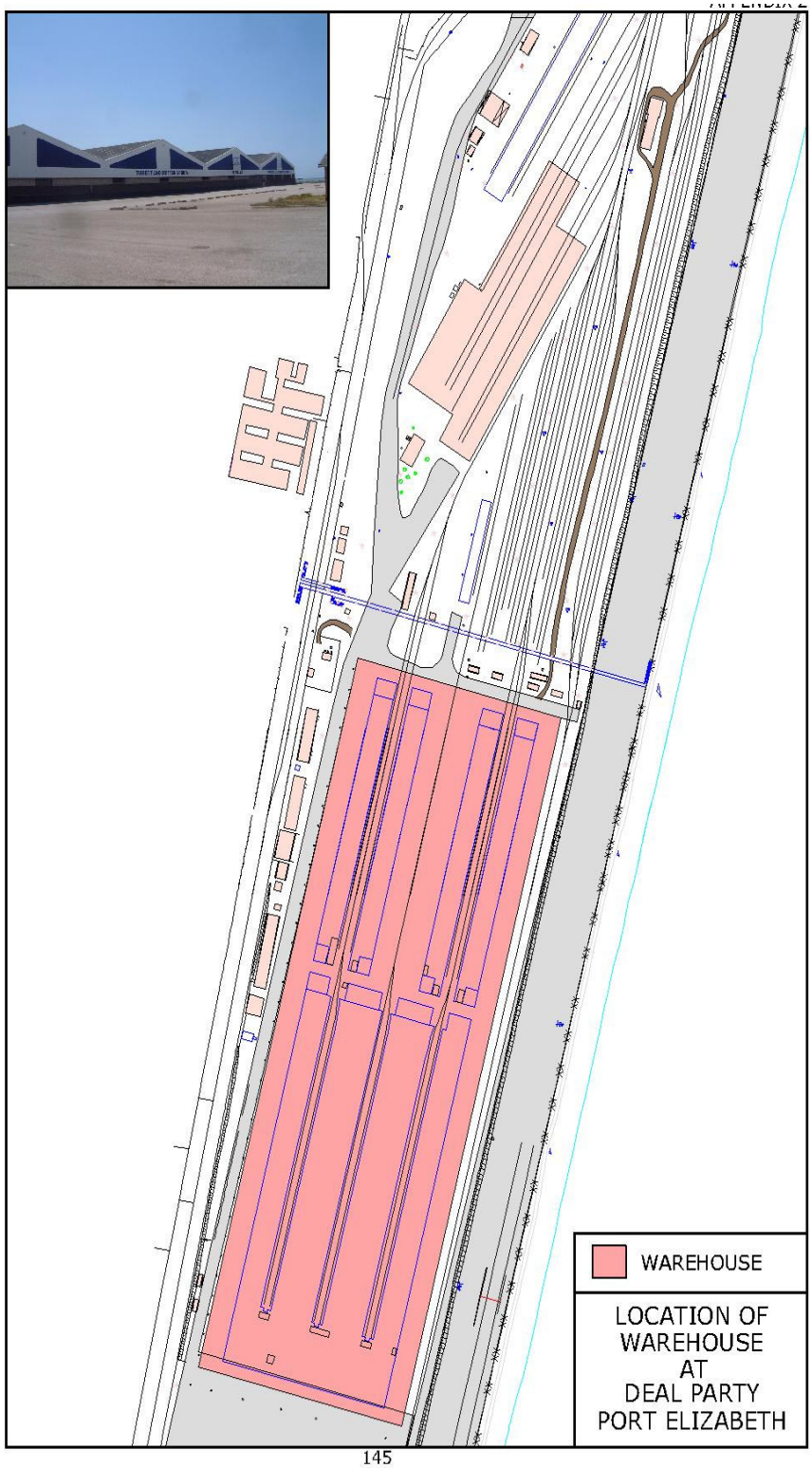

WAREHOUSE
LOCATION OF
WAREHOUSE
AT
CAMBRIDGE
EAST LONDON

APPENDIX 2



Appendix 3

SURVEY OF THE POTENTIAL USE OF EXCESS WAREHOUSING SPACE OF SPOORNET PROPERTY MANAGEMENT TO SUPPORT THE IDZ'S IN THE EASTERN CAPE REGION

Researcher: Evert Pitout

Promoter: Dr. Timothy Strathearn Hutton

SECTION A: DEMOGRAPHIC DATA

This part of the questionnaire is exclusively for statistical purposes.

Please follow the instructions.

Indicate in the correct block with "X", which is applicable to your situation.

1.1 What do you consider the size of your company to be?

	Code	
Small < 50 employees	1	
Small – medium 51 – 1000 employees	2	
Medium – large 1001 – 10000 employees	3	
Large > 10000 employees	4	

1.2 In which sector is your company operating?

	Code	
Real Estate Industry	1	
Transport Industry	2	
Construction Industry	3	
Logistics Industry	4	
Manufacturing Industry	5	
Other (please specify)	6	

1.3 In which metropolitan municipal area does your company operate?

Code

Nelson Mandela Bay (P.E.)	1	
Buffalo City (East London)	2	
Other (Please specify)	3	

1.4 What position do you hold in the company?

Code

Consultant	1	

Supervisor	2	
Manager	3	
Executive / Director	4	
Owner	5	
Other (Please specify)	6	

1.5 What is the nature of your position you hold in your company?

	Code	
Strategic Management	1	
Information Provision	2	
Project Management	3	
Production Management	4	
Logistics Management	5	
Other (Please specify)	6	

SECTION B: IMPORTANCE OF INDUSTRIAL DEVELOPMENT ZONES

2.1 Do you believe that the Department of Trade and Industry's programme of providing Industrial Development Zones (IDZs) are important for growth in the South Africa?

	Code	
Yes	1	
No	2	

2.2 In your opinion would the IDZs bring the following aspects into the Eastern Cape?

1 = Strongly agree

2 = Agree
3 = Neither agree nor disagree
4 = Disagree
5 = Strongly disagree

Code	1	2	3	4	5
Economic growth					
Infrastructure					
Foreign Investment					
Sustainability					
New Industries					

2.3 Would you say that warehousing is important to the industries who will be setting in the IDZs and why?

	Code	
Yes	1	
No	2	

2.4 Do you believe that the provision appropriate infrastructure within in the IDZs will improve the following prospects?

	Yes	No
Code	1	2
Growth generating investments		
Streamlined industrial environment		
Lower services cost		
Lower factory rentals		

SECTION C: WORLD – CLASS WAREHOUSING FACILITIES

3.1 Rate the following aspects and requirements in respect of world – class warehousing facilities.

1 = Essential
2 = Important
3 = Some importance
4 = Slight importance
6 = Not essential

	1	2	3	4	5
Location of warehousing in relation to factory					
Location of warehousing					
Size of warehousing					
Layout of warehousing					
Awareness of warehousing costs					
Access to warehousing					

3.2 In your opinion would the cost to upgrading existing warehousing facilities be lower than the costs of providing new facilities.

Code

Lower	1	
Higher	2	
No difference	3	
Other (please state)	4	

and why : _____

_____

_____

3.3 Does your company make use of the following types of warehousing facilities?

Code

Primary warehousing – where goods are received from manufacturing	1	
Secondary warehousing – where goods are received from primary warehousing and stored for distribution	2	
Both of above	3	
None of these	4	

3.4 Rate the following cost aspects in respect to world – class warehousing facilities.

1 = Low
2 = Medium
3 = High

Code	1	2	3
Replacement cost			
Renting cost			
Heating cost			
Cooling cost			
Administrative cost			
Maintenance cost			

3.5 Do you believe that the provision of a multi modal warehouse facility will:

	Yes	No
Code	1	2
Reduce handling of commodities		
Streamlined industrial environment		
Reduce transport cost		
Speed up deliveries		

SECTION D: STRATEGY

4.1 Did you know that Spoornet strives to be the leader in freight logistics solutions?

	Code	
Yes	1	
No	2	
Unaware that Spoornet offers freight logistics solutions	3	

4.2 In your opinion a business should always?

1 = Strongly agree
2 = Agree
3 = Neither agree nor disagree
4 = Disagree
5 = Strongly disagree

Code	1	2	3	4	5
Know core competencies of competitors					
Differentiate itself from competitors					
Have the resources to compete in the market					
Know what its core competencies are					

4.3 Please rate the importance of critical success factors for logistics.

1 = Essential
2 = Important
3 = Some importance
4 = Slight importance
5 = Not essential

	1	2	3	4	5
Reliability					
Flexibility					
Speed					
Absolute predictability					
Consignment care					
Responsive customer service					
Quality commercial processes					
Enhanced value					

4.4 Please consider each of the following statements and state your level of agreement with each, use the following semantic differential scale to rate each statement.

1 = Strongly disagree
2 = Disagree
3 = Indifferent
4 = Agree
5 = Strongly agree

When choosing to use third party warehousing it is essential to:

4.4.1 consider the quality of service provided.	
4.4.2 rely on a Just-in Time process and speedy deliver.	
4.4.3 always consider price.	
4.4.4 ensure that the warehouse operator is flexible.	
4.4.5 ensure that the warehouse operator is dependable.	

5. Do you believe that the provision of additional warehousing facilities in the Eastern Cape will?

	Yes	No
Code	1	2
Create competitive pricing for storage		
Streamline the industrial environment		
Reduce services cost		
Reduce transport cost		

6. In your opinion would the nature of warehousing change dramatically in the future

	Code	
Yes	1	
No	2	

and why?

_____

_____

_____

7. Would you like to give any further comments?

_____

_____

_____

Thank you for your early response to this questionnaire.