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**The Effect of Operational Effectiveness on Global Competitiveness of the
Richards Bay Dry Bulk Terminal**

A Research Report

Presented to the

Graduate School of Business Leadership

University of South Africa

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By

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DECLARATION

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LIST OF ABBREVIATIONS AND ACRONYMS

DBT	Dry Bulk Terminal
RCB	Port of Richards Bay
SLA	Service Level Agreement
BSC	Balanced Score Card
MPT	Multi Purpose Terminal
DBT MIS	Dry Bulk Terminal Management Information Systems
RBT	Resource Based Theory
BU	Business Units
RBCT	Richards Bay Coal Terminal
TPT	Transnet Port Terminals
TFR	Transnet Freight Rail
TNPA	Transnet National Ports Authority
OEM	Original Equipment Manufacturers
OD	Organisational Divisions
SLA	Service Level Agreement
SOE	State Owned Enterprise
TE	Terminal Executive
TEA	Terminal Executive Assistant

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ABSTRACT

This study is an exposition of research into the effect of operational efficiency to global competitiveness, with the Richards Bay Dry Bulk Terminal (DBT) being the case study. The Richards Bay DBT is the main dry bulk terminal in the South African ports, operated by Transnet Ports Terminals (TPT), which is a division of the state-owned Transnet Ltd. Because of the strategic position of the DBT as the main dry bulk terminal of the country and also that it is a state owned entity, its competitiveness or otherwise is a reflection of South Africa the country as a trade destination. The research seeks to investigate the problem of the declining volumes handled by the DBT, which is traced to the possible operational inefficiencies and is likely to impede competitiveness of the DBT. While this study will not propose the ultimate solutions to the DBT's problems, it will identify the root causes and symptoms of the problems, which will ultimately guide what needs to be tested as a better solution. Based on this, it is argued that this topic should generate a lot of interest to the stakeholders both locally and internationally.

In Chapter One, the study demonstrates the contextual location of the research problem. In this regard, the chapter sets out the situation in the form of the background to the problem of the declining volumes handled by the DBT over the years, which depicts the reducing customer base and the lack of global competitiveness of the DBT. The management concern is the continuous decline in volumes over time, which it is argued, if it continues unabated, it could lead to serious problems to the business of the DBT. The problem has been rigorously reviewed resulting in the formulation of the problem statement followed by the research question. The research objectives which guide the investigative approach have also been articulated in this chapter.

Chapter Two provides an analysis of the research problem using theoretical perspectives and management models that are relevant to the practical problem of the declining customer base. The research hypothesis is that the lack of operational efficiency in the DBT leads to the gradual loss of customers, which is illustrated by the decline in volumes of bulk cargo handled by the Richards Bay DBT. This triangulation of theory, management models and the practical situation provided a rigorous review of the research problem from various dimensions to enrich the formulation of the research problem.

This formulation of the research problem has been followed by a review of the relevant literature which is set out in Chapter Three. The literature review has sought to establish, amongst others, whether there is a causal relationship between and among operational efficiency, global competitiveness, decline in customer satisfaction and loss of market share. The relationships in these concepts have been synthesised, leading to some conclusions that have enhanced the research objectives.

Chapter Four presented the research process followed to develop the theoretical model (research answer to the research question) using the research framework that was developed. It illustrated the research methodology that has been followed in diagnosing the problem and unearthing the underlying trends and patterns in the real situation. The underlying trends and patterns have been determined utilising data that has been collected through interviews with the role players at the DBT. The results of the research are analysed in Chapter Five and they are discussed in relation to the research objectives to test if the research results show that the research objectives have been met, and that the research questions have been answered.

The last chapter, Chapter Six, captures the conclusions that illustrate the causal relationships between operational efficiency, equipment, skilled resources and customer satisfaction. The conclusions are followed by recommendations that would help to reverse the deteriorating situation at the DBT. The usefulness of the research has also been discussed, with ethical considerations in mind.

CHAPTER 1 BACKGROUND TO THE PROBLEM

1.1 Introduction

1.1.1 Research Topic

This work is a research report on the study that has been conducted on the Richards Bay Dry Bulk Terminal (DBT). The purpose of this research is to investigate the effect of operational efficiency on global competitiveness of the ports, with particular reference to the Richards Bay DBT. The Richards Bay DBT is the third but main dry bulk port terminal in South African ports. The DBT is operated by Transnet Port Terminals (TPT), which is one of the operating divisions of Transnet Limited. The latter is an entity that is wholly owned by the South African government. Transnet is “the largest and most crucial part of the freight logistics chain that delivers goods to each and every South African. Every day Transnet delivers thousands of tons of goods around South Africa, through its pipelines and both to and from its ports. It moves that cargo on to ships for export while it unloads goods from overseas” (www.transnet.net).

While the espoused vision and mission of Transnet is “to be a focused freight transport company, delivering integrated, efficient, safe, reliable and cost-effective services to promote economic growth in South Africa” (www.transnet.net), there has been notable less than optimal capacity and also decline in volumes handled by the Richards Bay DBT. The research seeks to investigate the problem of the declining volumes handled by the DBT, which is traced to the possible operational inefficiencies and is likely to impede competitiveness of the DBT.

Because of the strategic position of the DBT as the main dry bulk terminal of the country and also that it is a state owned entity, its competitiveness or otherwise is a reflection of South Africa the country as a trade destination. While this study will not propose the ultimate solutions to the DBT's problems, it will identify the root causes and symptoms of the problems, which will ultimately guide what needs to be tested as a better solution. Based on this, it is argued that this topic should generate a lot of interest to the stakeholders both locally and internationally.

1.1.2 Research Problem Overview

For any organisation to achieve a competitive advantage in business, it has to capture and maintain a good market share. Market share is only gained when the organisation is providing a service that cannot be easily improved, copied or substituted by its competitors. The port sector has changed radically over the past two centuries. During the 19th century and first half of the 20th century, ports tended to be instruments of state powers, and port access and egress was regarded as means of controlling the markets. Competition between ports was minimal and port-related costs were relatively insignificant in comparison to the high cost of ocean transport and inland transport. Today, most ports are competing with one another on a global scale and, with tremendous gains in productivity in ocean transport achieved over the past several decades due primarily to containerisation, ports are now perceived to be the remaining controllable component in improving the efficiency of ocean transport logistics. (Port Reform Toolkit: Module 2)

The notion that monopolistic organizations are not seriously impacted by competition and the loss of customers to competitors is no longer valid, as competition challenges and customer churning is intensifying. Because it is operating in a monopolistic environment, the DBT has been experiencing a lot of operational challenges and customer churning. This study seeks to investigate the impact of operational efficiency in port systems with particular reference to the DBT. Whilst it is noted that there has to be a certain level of port efficiency for the port to be effective and therefore that internal issues must be carefully examined, the focus of this study is on the requires level of competitive advantage and operational efficiency to attract customers and remain the port of choice for coal and other dry bulk exports in Africa.

This study will identify the particular problems that impede operational efficiency in the DBT port systems, and propose strategies to address them, with a view to increasing the market share to the desired level for future sustainability.

1.2 Problem in Context

In the last few decades, the world has experienced rapid growth in global trade that has triggered the globalization of port logistics (UNCTAD 2007: 2008) to respond to the globalization of markets (Robison 2002). This has occurred because of the growth of the world population but more especially as a result of the growing economic strength and prosperity of China and India and the consequent demand for commodities. There have also been significant developments in maritime and shipping technologies. The global port industry has also gone through major restructuring in the past two decades. The most distinctive issues in restructuring currently are the forces of inter- port competition, that is competition amongst various ports. The underlying factors under investigation have not only been globalisation but also institutional reforms based on private sector participation in ports (Slack and Rodrique: 2006). These forces of change have compelled dominant incumbent ports to compete in their hinterlands, no longer allowing them to rely on limited competition. Many port operators now have to compete with others in their home port regions to attract cargoes and shippers. The operators and cargo handlers must improve their service and reduce costs to be competitive in the global maritime logistics market. The competitiveness of port operations is based purely on cost effectiveness through operational efficiency and reliability hence reducing customers' costs.

South Africa and Africa have grown as global players in trade (Daniel, Southall and Lutchman: 2005, pp367 – 387), and the demand placed on the transportation modes used for these traded goods has increased. This is especially evident in the ports as almost all of the cargo traded internationally is transported via the ports. With the tremendous productivity gains in ocean transport achieved over the past several decades, ports are now perceived to be the remaining controllable component for improving the efficiency of ocean transport logistics. South African ports are still lacking in this area. This has been the experience with the RCB, which is widely known as a DBT, as it is the most evident within South African ports. As is well known, the main reason for this lack of efficiency in its operations is the lack or shortage of quality equipment, poor management structure and inappropriate institutional frameworks and procedures.

Ports form an essential link in the overall chain of global trade and, consequently, their level of performance and efficiency determines to a large extent a nation's international competitiveness.

However, with globalization and regional competition, port operators are seen as having less and less control over their destinies.



Figure 1.1: Aerial Photo of Port of Richards Bay

Source: RCB Marketing Information System

The RCB, see Figure 1.1 above, is fortunate to have the following strengths and advantages that should make it a leading world class port:

- Deep-water port with permissible draft of 17.5m and an entrance channel width of 300m;

- World-class bulk terminals handling large volumes of bulk cargo such as coal, woodchips and ferro-chrome;
- Potential for greenfields developments;
- Excellent rail links with the hinterland;
- Strategically situated in relation to the mineral rich hinterland of northern Kwazulu Natal, Guateng and Mpumalanga; and
- Good infrastructure and modern high quality equipment enabling high capacity loading and fast vessel turnaround.

The above proposition has however not been sufficiently tested. In particular, it has not been determined whether the deficiencies identified earlier provide good and sufficient reasons for the DBT to lack performance according to global standards. The question this research seeks to answer, therefore, is whether failure by the DBT to perform according to global standards can be attributed only to lack of operational efficiency or whether there are other unrecognized constraints or shortcomings.

This research will seek to establish whether at the DBT, the management structures, business processes and operational procedures are reason enough for the lack of global competitiveness, operational inefficiencies and unattractiveness to the market. The reason why the DBT is used for this study is based on the fact that, currently, the DBT handles over 15 million tons of cargo annually, which represents approximately 60% of South African seaborne cargo. This makes it South Africa's leading bulk terminal in terms of volumes being handled (<http://www.transnet.net>), yet the DBT is performing well below its potential capacity taking into account its strengths and advantages as noted above.

1.3 Problem Review

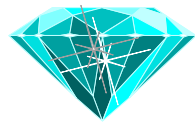
The RCB, one of South Africa's seven operational commercial ports under the control of Transnet, is a dynamic port with the great potential to play a key role in the future development of South Africa. The main function of a port authority is to own, manage, control and administer the Port to ensure efficient and economic functioning (National Ports Act No.12 of 2005).

Coupled with the current large handling capacity, in excess of 60 million tons per annum, the RCB has enormous development potential and is firmly poised to contribute significantly as a major catalyst for economic growth in South and Southern Africa.

The RCB, which operates two terminals, namely, the Dry Bulk Terminal (DBT) and the Multi Purpose Terminal (MPT), is operated by Transnet Port Terminals (TPT), a division of Transnet Limited. This port handles imports and exports of a variety of ferro-alloys, minerals and woodchips. The tonnages handled by the RCB have increased and a greater variety of commodities is being handled. The total throughput has increased at a rate of five percent per annum over the past five years. The increase in volumes is directly linked to the positive economic growth and political stability of South Africa. In addition, the increase has also been influenced by global demand primarily from China and India. Consequently, this has contributed to South Africa being recognised by existing and potential investors as the country of choice for doing business in Africa.

While above may sound positive, it comes with huge challenges to meet customer expectations in the case of the DBT. Currently, a vessel to be serviced by the DBT has to wait on the anchorage for an average of 7 to 10 days at the cost 30,000 US dollars per day. Under normal circumstances, a vessel should not have to wait for more than one hour before berthing if there are no delays at the terminal (*DBT Management Information Systems – DBT MIS*). The delays, due to berth availability/berth planning and equipment availability are the symptoms of the root cause. These are the issues that have been diagnosed as the causes of inefficiency at the DBT.

Figure 1.2 below, which shows the volumes handled by the DBT in the past 9 years, illustrates how the volumes have declined over the years from 2004. Unless there is decisive corrective action to a well diagnosed problem, this situation will continue and could seriously damage Transnet's reputation and business.



RCB DRY BULK TERMINAL VOLUMES



Millions

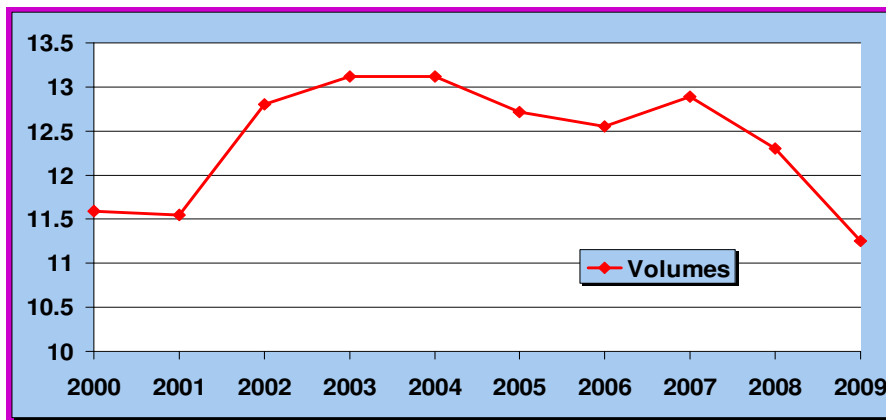


Figure 1.2: RCB Dry Bulk Terminal Volumes

Source: RCB Management Information System

In terms of Service Level Agreements (SLA), the port has to handle 3000 tons per hour. This is the industry norm that was agreed by both parties the DBT and Bulk commodity customers. Currently, the throughputs have been dwindling steadily year on year, with the terminal currently achieving an average of only 1 900 tons an hour when it should be achieving 3000 tons an hour. The operational inefficiency of the DBT has been common knowledge at Transnet Executive Management level and it has remained as a challenge for Transnet itself in terms capital budgeting and expenditure. Although Transnet has spent more than R360 Million in 2009/2010 alone, trying to ensure that the equipment is upgraded and maintained, the DBT is still running at a loss and is underperforming in terms of the agreed SLA. This has demonstrated that simply changing management frequently will not turn around

the business. The above statement fully supports the need to conduct a study that will identify the root causes not just the symptoms of the underlying problem.

1.4 Problem Statement

The problem, simply and starkly stated, is that the DBT is losing customers in the market. This is illustrated by the fact that, over the years, there has been a gradual decrease in volumes of customer cargo exported through the DBT so much so that at the moment the DBT handles an average of only 60% of seaborne bulk cargo through its port, when it is clearly the port of choice in handling bulk cargo in South Africa. In terms of handling rates, the DBT only manages 1900 tons per hour, against 3000 tons per hour that was originally envisaged in the SLA. As things stand, the DBT is not competitive enough to survive its competitors in the global market and it is clear that the DBT is no longer attractive to its target market, a situation requiring urgent attention.

1.4.1 Research Hypothesis

Based on the contextual background of the problem and the problem statement set out above, the initial research hypothesis to be investigated in this research is that the declining decrease in cargo volumes is a manifestation of the reducing customer base or market share of the DBT. It is suggested that this might be caused by the customer dissatisfaction with the operational inefficiencies in the business processes of the DBT, thus rendering the DBT uncompetitive in the global market. This hypothesis is based on the observations of the declining volumes, or the volumes handled that are less than the capacity of the DBT.

1.4.2 Research Question

Based on the problem statement and the research hypothesis set out above, the research question in this study is:

“Why is the Richards Bay DBT losing customers?”

1.5 Research Objectives

The objective of the study is to:

- investigate and understand why the business of the Richards Bay DBT declining to a point of handling an average of only 60% of seaborne cargo through its port when it is South Africa's main port in handling bulk cargo;
- understand why the Richards Bay DBT is not globally attractive or competitive to its customers given that it is the port of choice in dry bulk transport logistics;
- determine whether Richards Bay DBT is operationally efficient. In particular whether it has enough resources, adequate equipment and efficient processes to be operational efficient; and,
- develop and propose an ideal management model that t that would enhance operational efficiency, reliability and global competitiveness of the DBT.

1.6 Delineation of the Study

The researcher has ensured that attention will be paid to what needed to be done in order to avoid shifting the focus to unintended information that has become available whilst conducting interviews. This is mainly to avoid concentrating on unimportant or irrelevant information. Any irrelevant information has been excluded and peripheral problems have been eliminated.

1.7 Importance of the Study

The writer is a member of the management team at the RCB and is thus intimately involved with and could even be part of the problem. The writer considers that she has a professional responsibility to try and mine the root causes of the problems and propose to management effective solutions to those problems that inhibit the business of Transnet. Also, this study will assist Transnet management in its decision-making and its budgeting processes, as it will propose in definitive terms how to deal with the problems at the DBT. It will also provide the decision makers with findings backed up by data that should be useful for planning and control purposes. While this study will not propose the ultimate solutions to the DBT's problems, it will identify the root causes and symptoms of the problems, which will ultimately guide what needs to be tested as a better solution.

1.8 Ethical Considerations

The scope of this work is to develop a framework that will assist in solving the problems with the DBT but will also provide a tool to enrich the writer's management practices. The proposed solutions have taken into account the perspectives of various stakeholders that are involved in the current situation. Through stakeholder engagement, this work has enhanced the writer's understanding of the ethical implications of the model that has been developed. In particular, during the interview process, the researcher received the information from the respondents on the undertaking that the respondent's identity will not be revealed. The researcher therefore bears ethical responsibility not to divulge the identity of the sources and this responsibility is preserved.

Thus, the proposed actions in the model were crafted with the ethics in mind. However, this does not guarantee that the model is free of ethical challenges. It is therefore recommended that all users of this model remain mindful of ethical considerations when executing the recommended solutions.

1.9 Research Framework

The proposed research framework that has been applied in this work follows the research process model prescribed by the Unisa Graduate School of Business Leadership. This model is illustrated in the Research Lay out at Figure 1.3 below.

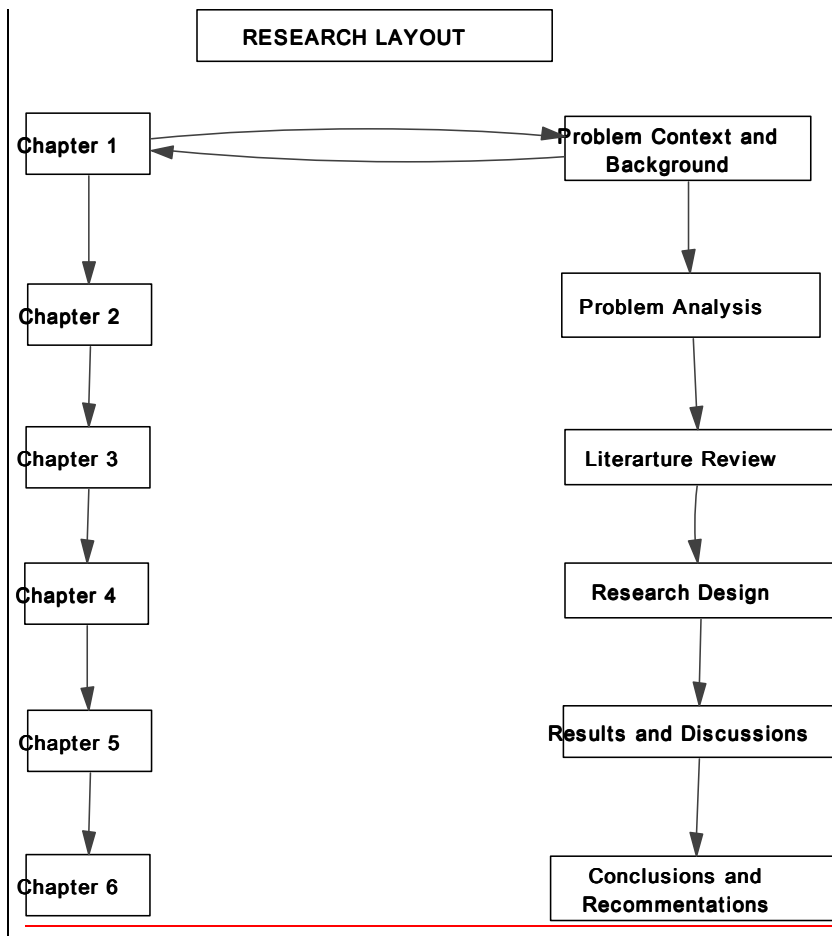


Figure 1.3: Research Layout

Source: Own/Self Developed Invention

In narrative terms, Chapter 1 demonstrates the contextual location of the research problem. In this regard, the chapter sets out the situation in the form of the background to the problem of the declining volumes handled by the DBT over the years, which depicts the reducing customer base and the lack of global competitiveness of the DBT. The problem has been rigorously reviewed resulting in the formulation of the problem statement followed by the research question. The research objectives which guide the investigative approach have also been articulated in this chapter.

Chapter 2 provides an analysis of the research problem using theoretical perspectives and management models that are relevant to the practical problem of the declining customer base. The research hypothesis is that the lack of operational efficiency in the DBT leads to the gradual loss of customers, which is illustrated by the decline in volumes of bulk cargo handled by the Richards Bay DBT. This triangulation of theory, management models and the practical situation provided a rigorous review of the research problem from various dimensions to enrich the formulation of the research problem.

Chapter 3 presents a review of the relevant literature which follows the formulation of the research problem. Essentially this is where the academic complexity of the problem is unpacked and analysed through reference to theoretical perspectives. The literature review will seek to establish, amongst others, whether there is a causal relationship between and among operational efficiency, global competitiveness, decline in customer satisfaction and loss of market share. The relationships in these concepts will then be synthesised, leading to some conclusions that will be reflected against the research objectives.

Chapter 4 presents the research process followed to develop the theoretical model (research answer to the research question) using the research framework that was developed. It will lay out the research methodology that has been followed in diagnosing the problem and unearthing the underlying trends and patterns in the real situation. The underlying trends and patterns have been determined utilising data that has been collected through interviews with the role players at the DBT.

In Chapter 5, an analysis of the results of the research will be conducted and discussed in relation to the research objectives to test if the research results meet the research objectives and thus answers the research question.

The last chapter, Chapter 6, will capture the conclusions that illustrate the causal relationships between operational efficiency, equipment, skilled resources and customer satisfaction. The conclusions are followed by recommendations that would help to reverse the deteriorating situation at the DBT. The usefulness of the research has also been discussed, with ethical considerations in mind.

1.10 Summary

This Chapter has set out the context within in which the problem is located. The problem statement has been articulated, with the research question and the research objectives well defined. The importance of this work has also been illustrated and the ethical considerations in conducting this study, as well as proposing the solutions, have been captured.

The following Chapter will focus on an analysis of the research problem in more depth, taking into account theoretical considerations with a view to ensuring that the problem is rigorously interrogated and properly formulated.

CHAPTER 2 THEORETICAL CONSIDERATIONS / PROBLEM ANALYSIS

2.1 Introduction

In the previous Chapter, a review of the challenges facing the DBT was conducted, and the research problem was formulated. In addition, the research question was defined and the research objectives were set out. In this Chapter, the problem analysis will focus on further unraveling the complexities of the challenges facing the DBT, by applying the appropriate theories and models to the practical problems. This triangulation of theory, management models and practice will assist in rigorously diagnosing the research problem from various angles, and thus provide an in depth understanding into the root causes of the declining volumes exported through the DBT.

2.2 Theory and Management Models

A continuous focus is always needed on strategy development and implementation as it gives future direction to an organization. This should ensure that the company is always appropriate actions to guard against losing market share to competitors. Strategic management by the leadership team is an ongoing process that evaluates and directs the business and the industries in which the company is involved. The leadership team needs to continuously assess its competitors, develop strategies and set goals to surpass its existing and potential competitors.

The team then re-assesses each strategy annually or quarterly to determine how it has been implemented and whether it has succeeded or a new strategy is needed to meet changed circumstances, new technology, new competitors or a new economic environment. (Lamb: 1984). Organizations need to manage their strategic goals and objectives, and there are systems and management tools that can be implemented in the beginning to evaluate and guard against strategic drift or refusal of staff to adapt to change.

Typically, these are the goals that management should set:

- Create a culture of accountability through regular assessments and continuous improvement;

- Encourage leadership to make use of existing assessment tools, integrated into all processes of the organization and link resources to specific goals;
- Enhance learning through improved instruction, support services, technology and facilities;
- Advance learning excellence and improve organizational focus;
- Align technology and facility improvements to strategic plans;
- Promote growth and learning opportunities for staff particularly the analysis of structures and processes;
- Develop a systematic process to assess the environment, analyze results and focus on the future;
- Align resources to reward and recognize learning-centered innovations, respect and encourage teamwork;
- Create a framework of organizational measures, integrated and aligned at all levels of the organization;
- Engage diverse stakeholders and strengthen enduring relationships;
- Develop a strategy to review and realign the work of advisory groups to provide more support and encourage inclusive thinking;
- Identify opportunities and leverage resources to better serve diverse stakeholders; and
- Develop a strategy to expand community-based learning opportunities and sustain and grow loyalty to the institution. (Lamb: 1984).

(a) *Competitive Advantage*

The DBT suffers from poor performance due to regular breakdowns of its equipment and continuing operational challenges. This can be attributed to the failure of TPT to recognise the importance of competitive advantage and then to fully utilize its resources to maintain that competitive stance in the market. Porter, (Competitive Advantage 2000), argues that competitive advantage exists when a firm is able to deliver the same benefits as competitors but a lower cost (cost advantage), or deliver benefits that exceed those of competing products (differentiation advantage). Thus, a competitive advantage enables a firm to create superior value for its customers and superior profits for itself. A

resource-based view emphasizes that a firm that is fully utilizing its resources and capabilities to create its competitive advantage will ultimate deliver superior value creation to its customers.

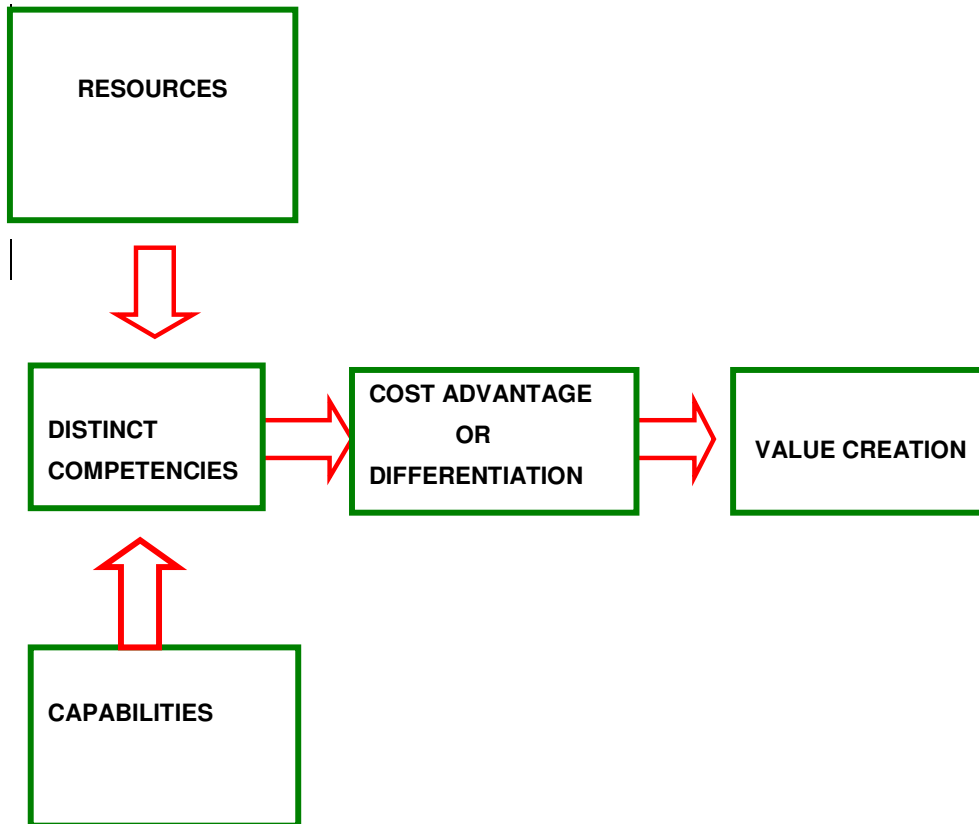


Figure 2.1: A Model of Competitive Advantage

Source: Porter M: Competitive Advantage: 2000

According to Porter (2000) and as shown schematically in figure 2.1 above, to achieve a competitive advantage, a firm must be able to undertake one or more value creating activities in a way that creates more benefits for customers than competitors create. Superior value is created through lower costs or superior benefits than competitors provide.

b) *Balanced Scorecard Theory*

According to the balanced scorecard theory by Norton and Kaplan (The Balanced Scorecard 2000), the balanced scorecard approach as shown schematically in Figure 4 below emphasises that financial and non-financial measures must be part of the information system for employees at all levels of the organisation. Operations employees must understand the financial consequences of their decisions and actions and executives must understand the drivers of long-term success both from a financial perspective as well from sustainability and employee satisfaction perspectives.

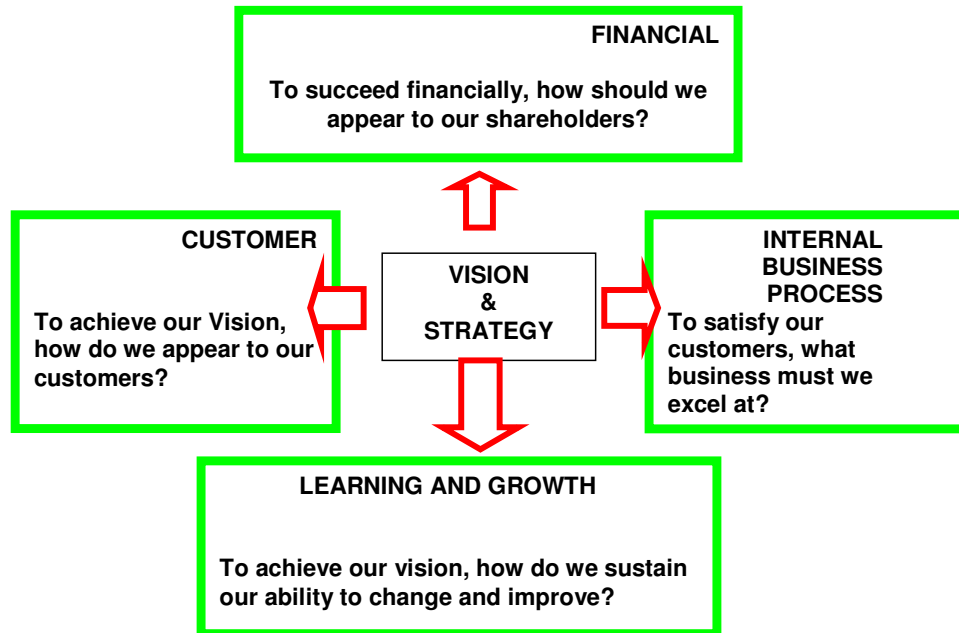


Figure 2.2: The Balanced Scorecard Framework to Translate a Strategy into Operational Terms

Source: Norton and Kaplan (The Balance Scorecard, 2000)

According to Kaplan et al Norton (2000), a properly constructed balanced scorecard should encapsulate the business's strategy through a sequence of cause and effect relationships. The measurements should make relationships (hypothesizes) among objectives (and measures) in the various perspectives explicit so that they can be managed and validated. They should also identify and make explicit the sequence of hypothesizes about the cause and effect relationships between outcome measures and the performance drivers of those outcomes. Every measure of the balanced scorecard should be an element of a chain of cause and effect relationships that communicate the substance of the business's strategy to all levels of the organization. This is necessary because one perspective can cause an effect on another or a number of perspectives. If an organization meets the

needs of its customers (under customer perspectives), the organization has satisfied the customers and therefore stands a good chance of retaining them, and attracting new customers. Customer retention leads to a sustainable business and profitability (under financial perspectives), which in turn gives the organization the ability to develop staff and have happy and productive employees. This causality continues as a function of the system, as illustrated in the causal loop diagram shown in Figure 2.3 below.

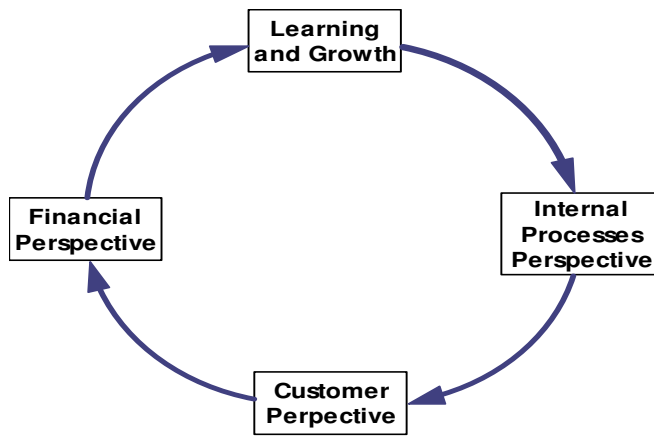


Figure 2.3: Causal Loop Diagram

Source: Norton and Kaplan (The Balance Scorecard, 2000)

(c) Resource Based Theory

The Resource Based (RB) Theory, by contrast, can be seen as an “inside-out” process of strategy formulation. A start is made by looking at what resources the firm possesses. Next, an assessment is made of the potential for value generation of those resources which then leads to the development of a strategy that will allow the firm to capture the maximum value in a sustainable way. The firm’s resources are identified through conducting a resources’ audit of the organization; the resources’ audit comprises tangible, intangible and human resources. Such an audit can also be achieved through the

analysis of the value chain of the organisation by focusing on the primary activities, which ensure that goods or services are delivered to the end customers timeously, and by focusing on support activities, which drive or permit the primary activities to take place. The firm's resources and capabilities together form distinct competencies. These competencies should enable innovation, efficiency, quality and customer responsiveness, all of which can be utilized to create a cost or differential advantage.

The measures of efficiency are concerned with how well an organisation uses its resources, rather than just concentrating on costs. The typical measures of efficiency look at productivity, such as the number of tons loaded or off-loaded per vessel within a given time period, and follow the formula of productivity (output/ input). The resource based approach, according to Magal (2004), suggests that the strategies that ports can pursue should focus on the use of resources such as better logistics, good transport networks and intermodal arrangements, available land for expansion, skilled labour, efficient cargo handling and storage facilities, effective configuration of supply chains, and managerial talents that are unique to the regional port and valuable to port customers. In this case, the DBT needs to look at its internal processes focusing on the resources that it has to do the job.

(d) *Systems Thinking*

According to Senge (1994), systems thinking is an approach to integration that is based on the belief that the component parts of a system will act differently when isolated from the system's environment or other parts of the system. Standing in contrast to positivist and reductionist thinking, systems thinking sets out to view systems in a holistic manner. Consistent with the systems thinking philosophy, systems thinking concerns an understanding of a system by examining the linkages and interactions between the elements that comprise the whole of the system. When complex situations are encountered then systems thinking can help in understanding the situation systemically. This helps in seeing the big picture and in identifying multiple advantage points that can be utilised to support constructive change. It also helps in seeing the connectivity between elements which supports joined-up actions. This approach is a holistic approach which requires a system to be examined as a whole and not a merely as a collection of parts and is essential to systems analysis. This means

looking at all aspects of an issue or a problem and trying to understand the context in which it occurs (Cole: 1996).

An open system is one which interacts with the environment, on which it relies for obtaining essential inputs and for receiving system outputs. Social systems (e.g. organizations) are always open systems, as are biological systems and information systems (OU; Block 1:35), and inputs include people, materials, information and finance. These inputs are organized and then utilised to convert human skills and raw materials into products, services and other outputs, which are then pass into the environment as shown in Figure 6 below.

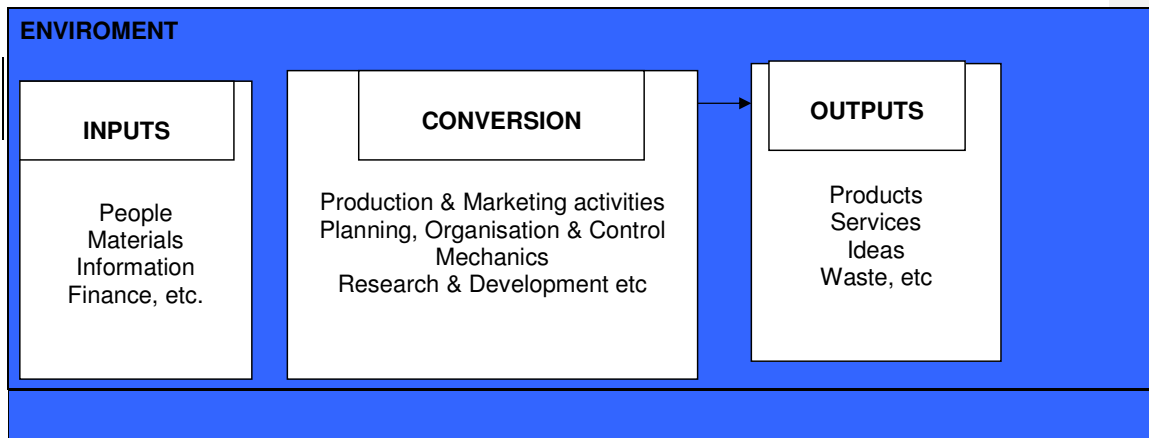


Figure 2.4: The Organisation as an Open System

Source: OU; Block 1:35

e) Motivation Theories

Herzberg (2003) believes that organisations have only limited power to motivate employees. He argues that even though unfair salaries may demotivate people. Herzberg further contendsthat this does not mean that fat pay checks will charge them up. Only interesting, challenging work can do that. Herzberg also suggests that if hygiene factors can be improved this might help to remove dissatisfaction although it would not increase satisfaction or motivation of people. This report seeks

to reflect on the analysis of motivation in the work context with particular reference to job satisfaction, motivation and job design. The report further suggests changes that need to be made on these areas of focus in order to increase motivation in the organisation. The suggested changes are based on the theories discussed below:

i) Theoretical Frameworks of Motivation

Different psychologists these theories include have argued different theories on motivation; five set of hierarchy of needs by Maslow (1954), The Herzberg et al (1959) Two Factor Theory and lastly Outcomes and Expectancy theory. The analysis of these three theories has been conducted, with specific focus on the impact or the role they play in structuring motivational tools in the work environment and also in identifying the need for job design. These theories are discussed in the following paragraphs below.

ii) Maslow's Hierarchy of Needs

Maslow believes that once the last level of needs has been satisfied, it only that satisfaction where we seek to achieve the next level. This theory clearly indicates that once the psychological needs are met the next higher order level of hierarchy becomes active. This theory has been popularly used by many organizations when setting up policies. It is believed to be influential although some other people argue that people have different priorities at different times in their life or career and have all the levels of need simultaneously. It is suggested that management should be concerned with enabling individual to find meaning in their work and develop to the best of their abilities.

iii) Herzberg Theory – Two – factor theory

Herzberg argues that, first things first before looking at the bigger picture, hygiene factors may be taken simple or obvious but they are important. By also focusing on the hygiene factors (improvement of some standard areas within the working environment) does not necessarily mean will increase motivation. This theory can increase by enabling people to take responsibility of what they do and give them responsibility to achieve and advance their roles. By implementing this theory dissatisfaction can be reduced by means of having effective organizational policies and procedures,

and paying well. This theory encourages be motivated and work better but the only disadvantage with this theory it is short lived.

(iv) Outcomes and Expectancy Theory

This theory argues that if the efforts are not related to the rewards, this is unlikely to be affective as motivators. It is believed that only directly linked rewards to the effort can have high motivational potential. Any attempt to improve motivation is doomed to failure if effort and performance are not related .It is believed that consciously or unconsciously people weigh costs or benefits when making choices about how to act. Working hard, less stress and leisure time may out weigh the benefits. If the link between outcomes, performance is clear and strong, a reward/ cost will have a powerful motivating effect If the need to improve motivation at work emphasis should be made on the factors that affect this link (Link between efforts and performance) i.e.

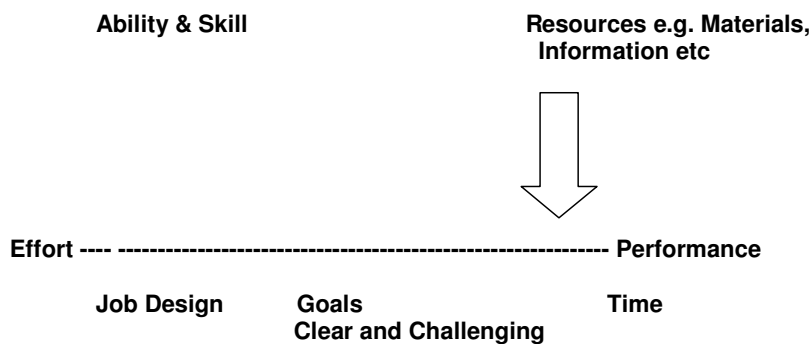


Figure 2.5: Ou Block 1
Source:

Before setting up the evaluation for performance, it is suggested that ability and skills are looked at so as to be able to perform the job. It must be agreed upon the employer and the employee when setting up goals for the job, the goals should clearly defined agreed upon and must be measurable and also a regular feedback on performance must be given. The resources required to do the job include

appropriate tools and materials. Enough time should be allocated and enough notice should be given, the tasks should be clearly defined. The expectancy theory is viewed as a theory that emphasizes on the need for outcome to be valued, perceived as fair more especially in comparison with efforts and rewards of others and it must be seen as likely as result to exert the effort.

Some of the rewards are associated with physiological, safety and social needs tend to be associated with holding on the job than to exert high levels of effort within it. Rewards that are associated with self esteem and self actualization are more closely associated with good performance. It is believed that people feel motivated when linkage between effort, performance and reward is clear.

Mostly; efforts are associated with several outcomes and also those outcomes have different values from person to person it can be positive/negative/strong/weak.

2.3 Summary

It is important for the full understanding of the problems with the DBT to look at the available resources from an insiders and an outsiders perspective so that there is a clear picture of what is happening internally and what is seen or expected from an external perspective and what needs to be changed so that stakeholders can again perceive the DBT as their port of choice. The systems thinking approach will help the DBT to look at the challenges holistically and this will be achieved through a systems analysis. The DBT will have to look at all aspects of an issue or operational problem in trying to understand the context in which it is occurring. This requires the DBT's management to step back and generate a broader and more abstract view of the situation rather than plunging straight into the details. This holistic approach tends to be eclectic or interdisciplinary, gathering insights from a range of different perspectives, and it will be particularly important when addressing issues of management control and strategic planning.

In this Chapter, theoretical perspectives and management models that are relevant to the research problem at hand have been discussed and applied, with a view to ensuring that a proper analysis of the research problem has been conducted. This has been done by relating it to the practical problem. This has assisted in enhancing the understanding of the problem from the different perspectives of theory and practice.

The next Chapter will focus on the review of the relevant literature relating to the business concepts that are applicable to the research problem.

CHAPTER 3 LITERATURE REVIEW

3.1 Introduction

In this chapter, a review of theoretical perspectives through literature is conducted. This step conducts an initial review of sources that are relevant to the practical problem, to determine relationships between the relevant concepts, namely, operational efficiency, customer satisfaction, market share and competitive advantage. The purpose of this exercise was to gather data, information and knowledge that could establish causality among these concepts and thus help answer the research question. The primary sources of data and information include books, journals and research reports.

While the previous Chapter provided theoretical considerations on the impact of organizational competitiveness, the literature review will give in depth knowledge of what has been done or established by studies in this area. Furthermore, the link between the DBT's competitiveness, operational efficiency and customer satisfaction and its target market was explored, as well as any controversial matters in the literature.

3.2 Operational Efficiency

Harris et al (2002:281) argue that, fundamentally, there are three different maintenance strategies when maintaining plant or equipment. Breakdown Maintenance is maintenance in response to a problem that has been detected during use of equipment. Preventive Maintenance is maintenance undertaken at specific intervals. These intervals may be determined by elapsed time or time of in-service use of equipment. Lastly, Predictive Maintenance is maintenance where equipment is routinely inspected based on the accumulated experience of time to failure so that items are replaced before failure occurs. The author suggests that these are methods of maintenance of equipment that require application to enhance operational efficiency. From this, the learned writers suggest that in

plant utilizing operations there is a causal relationship between plant maintenance and operational efficiency.

It is also suggested by other writers that facilities and hardware make the “hard ware” of any ports and terminals. Although, they cannot be an actual judgment as to productivity and utilisation indicators, it is argued that they are still important factors to evaluate suitability and capacity of the ports and terminals in response to customer requirements (**Asian Pacific Journal of Marketing and Logistics; 2005; 17, 1**)

The World Bank Port Reform Toolkit (2001: Module 2) emphasizes that many ports have become bottlenecks to efficient distribution chains, of which they are essential components, mainly because of three main problems. The first problem is that, to a greater or lesser extent, there are restrictive labour practices, where unions lack understanding of the need for optimization of resources. The second one is the lack of ability to control operations. There are situations where entities operating in the port are outside the control of the port manager or service provider, effectively limiting the ability of the port to compete with other ports for market share, i.e. rivalry between port of Maputo and Richards Bay Port. The third one is because of the willingness of governments to subsidize operations and this is often influenced by the availability of public funds to offset losses, blurring the role of commercial forces. This includes blaming governments for their unwillingness to invest in expensive port infrastructure as the reason for lack of port service quality. Harrington (1991:13) argues that a horizontal work flow combined with a vertical organization results in many voids and overlaps and encourages sub optimization, negatively impacting the efficiency and effectiveness of the port processes. (Harrington: 1991:13)

A survey that was conducted by UNCTAD in four African countries (Cote d'Ivoire, Ethiopia, Kenya and Senegal) concluded that the high costs, poor services, low efficiency and poor productivity that are now synonymous with African ports are not all due to poor infrastructure or lack of capacity but rather to constraining institutional frameworks (<http://www.uneca.org/search.htm>). The study revealed that the interfaces between these ports and their respective governments were too cumbersome, and the managers of these ports were unable to manage the ports commercially, mainly because of lengthy bureaucratic procedures and unnecessary state interventions. Because of this dysfunctional

structural relationship, decisions were made too late to respond to the market's requirements and often this was just a response to a political or administrative hierarchy rather than to customer and market needs. Thus, it is argued in most of the literature, that poor equipment, inefficient business processes are exactly what results in most institutions and companies not being globally competitive. This therefore illustrates a causal link between operational efficiency and global competitiveness.

The World Bank Port Reform Toolkit (2007: Module 2) identifies that the limits that ports set on the number of eligible service providers impact on the degree of competition. Many port authorities have policies limiting the number of stevedores and tug companies. Healthy competition between ports is sometimes influenced by the availability of public funds to offset losses, blurring the role of commercial forces. Lastly, healthy competition is also impacted by the ability of port authorities and port service providers to control the efficiency of port services. An imbalance of port capacity within a region will influence the level of competition between ports. This impliedly means that in the vent of there being stewed capacity in the region this inhibits competition amongst ports. Where there is no competition operational efficiency ceases to be a business imperative.

Currency is another factor that has an influence on global competitiveness of ports. In his research paper, Mapoma, (2007:25) suggests that, if the view is taken that the rand will maintain its current level for the foreseeable future, this impacts directly on the competitiveness of South African businesses. He goes on to say that, this must be viewed in the context that South Africa has never enjoyed attractiveness in the global export industry.

3.3 Global Competitiveness

Attempts have been made in the existing literature to analyse the fierce competition for market share among ports located within the same region and servicing approximately the same hinterland, using wide range of approaches and key determinants in measuring port performance and efficiency. According to Fleming and Hayuth (1994), geographical location is vital to explaining a port's competitive success.

Smith (1995: pp36-40) argues that the world class companies, which gain this accolade for being globally competitive, have to master three attributes, namely, market impact, lean operations and balanced culture. He further explains that market impact as the ability to not only satisfy customers by meeting their needs but having the ability to anticipate their needs and then make offerings to them faster than their competitors.

Norman Gaither & Greg Frazier (2002:35-227) cite that, to succeed in global competition in the twenty-first century, some companies are particularly vulnerable because of product quality, customer service and production costs. Companies must develop innovative products and respond quickly to customers' needs. Scarcity of funds and experienced and competent employees, and other operational resources will always be a challenge for operations managers. Total Quality Management requires the dedication of all employees but begins with senior management support; building superior product quality into the business strategy forms the basis for building an organization to achieve TQM. Fundamental changes must occur in the culture of an organization if TQM is to succeed. Thus quality and customer responsiveness are affect competitiveness.

The World Bank Port Reform Toolkit (2008: Module 3) identifies that competition within and between ports has a bearing on the management structure of the port and the relationships between the port authority and the terminal operators and cargo handling companies. These dynamic relationships are often cited as an important reason for changing the port management structure.

Cost Engineering (vol 48 no6 2006) cites that the organisation's long-term success depends on the ability of the organization to sustain the delivery of quality products and service. However, it goes further to illustrate the three key deterrents to sustaining high performance, namely:

- The senior management of an organization could have inaccurate understanding of the market place in which organization has to compete. Should this be the case, undoubtedly, the mission, vision and strategies are also inappropriate.

- The behavior that is required to successfully implement the business strategy could be misaligned with the customer and marketplace requirements. This is usually true leadership or employee behavior.
- Organisational systems and processes often the organisational strategy, vision and mission. As a result thereof, the focus of the organization is incorrect in that the wrong things are being focused on and measured

Grimsey & Lewis (2004) support this by noting that there is preliminary evidence that indicates private sector inclusion in the management models offers one solution to the public procurement problems. However, they argue that it is still too early to determine whether private projects perform better than public projects

In the light of the above, the role of ownership model of a port on its competitiveness is a matter that still needs to be interrogated. This is so especially in view of the inference that privatization will lead to better efficiencies and cost savings. Zhang (2005) however warns by stressing that, although inclusion of the private sector in the port ownership does seem to result in better efficiencies, it is not the ultimate solution. He also believes that the cost saving is attained where there is shared ownership between the private and the public sector; this is achieved mainly by the transfer of risk from the public to the private sector as the private sector would be best positioned to accept and control the risk.

3.4 Loss of Market Share

When customers begin to encounter consistent quality defects in the products of the manufacturer, they turn to the products of other manufactures. Precisely the same thing happens when customers encounter quality defects in the performance of a service company (NPN, National Petroleum News:1992).

Supporting this view, Harvard Business Review (p 142) argues that, even in markets with relatively little competition, providing customers with outstanding value may be the only reliable way to achieve sustained customer satisfaction and loyalty. It goes on to state that there are two types of loyalty, i.e. true long-term loyalty and false loyalty. A variety of factors can generate false loyalty or make customers seem deeply loyal when they are not. The company that tries to retain a difficult to serve, chronically unhappy customer is making an expensive long-term mistake. Such customers will continually utilize a disproportionate amount of the company's resources, will undermine the morale of the frontline employees and will quietly disparege the company to the potential customers.

3.5 Conclusions

In conclusion, it would be short sighted of the RCB to focus only on the above highlighted issues in isolation to other considerations that require investigation. This is so because huge sums of money have recently been spent on maintenance and the refurbishment of operating equipment, and therefore a return on that investment is critical, especially in the light of the continued customer complaints about the unreliability of the DBT. Thus the relationship between port efficiency and competitiveness requires more investigation, hence this research proposal.

3.6 Synthesis

From the above literature, the lessons learnt are the following:

- *Operational Efficiency*: there are underlying factors that positively influence the concept of operational efficiency, namely maintenance and servicing of equipment, culture, staff attitude, business processes, and presence of competition. If these are lacking, operational efficiency is missing;
- *Operational Efficiency and Customer Satisfaction* are interrelated in that operational efficiency has a positive influence on customer satisfaction. Customers cannot be pleased with inefficient business processes, because these result in cost and delays in meeting their own needs.

Needless to say, dissatisfied customers are more inclined to look for alternatives elsewhere and that results in loss of market share.

- *Operational Efficiency* and *Global Competitiveness* of the ports are interrelated in that efficient processes lead to competitiveness. This is so because efficient operational processes are more responsive to customer needs and would thus pitch the business at a competitive edge. The above literature confirms that efficient processes lead to global competitiveness in port industry.
- *Customer Satisfaction* has a positive influence to *Market Share*. Conversely where there is poor or no customer satisfaction, market share decline is inevitable;

This means that while on analysis of each of the above concepts of operational efficiency, customer satisfaction, market share and global competitiveness there are underlying factors that influence them, upon synthesis of them there are interrelationship among them. In particular, literature review suggests that these interrelationships are influenced by causality amongst them, in that operational inefficiency causes lack of customer satisfaction. Lack of customer satisfaction leads to decline in market share because customers are not impressed. At the same time, operational inefficiency renders the global player uncompetitive.

Based on the above theoretical considerations, it is fair to say that there are some explanations to the problems experienced by the DBT.

Productivity targeting should take into account industry averages whilst cognizance must be taken to allow for increases in productivity, which should be achieved through continuous improvement programmes. Productivity improvements are achieved by a combination of enhancing labour performance, technical improvements, having enough related skills and ensuring modern reliable equipment.

3.7 Summary

This chapter has presented a theoretical review of literature into the relevant concepts that are at play in the research problem. The review reflects that there are interrelationships between these concepts. These interrelationships that have since been revealed have to some extent offered some insights to the research objectives, in that they do provide some answers to the research question.

The following chapter will deal with the research methodology that will be followed to collect the necessary data, and to conduct the actual research.

CHAPTER 4 RESEARCH DESIGN

4.1 Introduction

This Chapter presents the research process followed to develop the theoretical model (research answer to the research question) using the research framework that was developed. The research, carried out in accordance with the research framework, explores the concepts that are derived from the research to develop the research answer that is given in this paper. The research answer will address the research question that describes the impact of operational efficiency on the Richards Bay DBT, thereby dealing with the concern of the declining operational efficiency of the Richards Bay DBT as the port of choice.

4.2 Research Methodology

The appropriateness of the research methodology chosen is dependent on the nature of the phenomenon under investigation, as well as the underlying assumptions to the research design and data collection methods required. Myers (1997) suggests that the choice of the research methods influences the manner in which the researcher collects the required data. There is a variety of methodologies that could be employed, but the nature of the phenomenon under investigation is key to the choice. In the context of this research, the most applicable paradigms to the RCB DBT relate to customer satisfaction, competitors in particular and operational efficiency and attractiveness.

Quantitative and qualitative research methodologies are fundamentally different but not fundamentally opposed, and as such, they can be used in conjunction to achieve the desired results. This would be more so when researchers use quantitative methods as measurement and qualitative methods for evaluation purposes (Forster–Pedley: 2006). Quantitative research is a numeric representation and manipulation of observations for the purpose of presenting and explaining what the observations reflect. This approach is usually associated with the positivist philosophy for it is usually used

(Forster–Pedley: 2006) to prove a given hypothesis. While it was developed from the natural sciences to study natural phenomena, quantitative research today is used in the social sciences.

Contrary to quantitative research, qualitative research is multi-method in focus, involving interpretive, naturalistic approaches to the phenomenon under investigation. It is a research method that studies things in natural settings, attempting to make sense of, or interpret phenomena in terms of the meaning people bring to them (Foster – Pedley: 2006). Since this research is aimed at understanding people in their work place whilst they undertake their duties and in the context of operational efficiency, a qualitative approach is required in this study.

This Chapter therefore provides the rationale for the research work that was performed to validate the research answer. The research process followed how the concepts developed and how they were used to build the research answer will be illustrated. The structured face-to-face interviews were used to generate the concepts. This methodology ensures the triangulation of the concepts with a view to enhancing the understanding of the underlying causes of the phenomenon.

The insights obtained will then be sorted, analyzed and synthesised using questionnaires and qualitative method interviews.

a) Sampling

Sample is defined as the act of, process or technique of selecting a representative part of the population for the purposes of determining the parameters or characteristics of the whole populations. (Coldwell and Herbst, 2004:74)

When deciding on the sample frame, the following four steps will be considered:

- Identification of suitable sampling frame based on the research question;
- Decision on the sample size;
- The most appropriate sampling technique was then chosen and the sample was decided; and

- The sample was checked to see whether it was representative of the population.

Sampling techniques are classified as either probability or non-probability. The probability samples the chance, or probability, that each case being selected from the population is known and is usually equal for all cases. This means that it is possible to answer research questions and to achieve objectives that require the reporter to estimate statistically the characteristics of the population of the sample. Consequently, a probability sample is always associated with surveys and experimental research strategies. For non-probability samples, the probability of each case being selected from the total population is not known and it is impossible to answer research questions or to address the objectives required for the reporter to make statistical inferences about the characteristics of the population. (Research Methods: 2007:207)

b) Population

Four sub-groups were solicited for participation. The first group represented the heads of departments; the second group represented technical and operations managers; the third group represented the junior staff and the forth group represented the top five customers. The majority of the participants are directly involved in the port and vessel operations in the DBT. A selected number of employees in the RCB DBT were chosen. These are the employees that are directly involved in the day - day running of the port operations. Key departments were also chosen. The individuals that were identified include people from technical teams, supervisors, ordinary workers, operations managers and a few heads of departments.

The sample includes both men and women as the researcher wanted to ensure that the sample is representative and it gives an equal chance to the workers involved in the work of the DBT. All the participants are based in Richards Bay and work at the RCB DBT. The chosen candidates are currently working in all different export departments that directly affect port and vessel performance in terms of loading and offloading cargo, as they are the ones who handle the operating equipment.

The below table shows the candidates that were chosen as a sample frame. In order to achieve the minimum participant requirement for each group, involvement from more than one department was necessary. The breakdown of participants interviewed is given in Table 4.1 below.

Table 4.1: Population Groups Samples

	African	White	Indian
Heads Of Departments	4	2	1
Technical Managers	3	2	3
Operations Managers	2	2	2
Technical Staff	7	6	5
Junior Technical staff	5	5	5
Top 5 Customers	0	3	3
Total Number of Candidates	60		

c) Technique

The main technique that has been used for this research survey is a questionnaire prepared particularly for the purpose of the study.

The questionnaire has been developed in a format that will make logical sense to the respondents and the format is such that all the respondents answer the questions in the same sequence. A qualitative process has been followed. The reason why questionnaires were chosen as the method of interview is that it provides the distinct advantage of enabling the researcher to establish a rapport with potential participants and therefore gain their co-operation so that the researcher can achieve the highest response rate. In addition, the demographic questions were optional on the actual questionnaire as participants tend to be more truthful when they know that the answers given will be treated anonymous as they will be giving the true reflection of the situation. Yet questionnaires have their drawbacks in that people tend to not return the papers and those people who do return them do not necessarily represent the sample.

The below is the format that has been followed when preparing the questionnaires.

Table 4.2: Questionnaire Layout

Questionnaire Layout	Interviewees
Question 1	Junior Staff Members
Question 2	Management
Question 3	Customers

d) Survey

The technique that has been used to conduct this survey is by means of the questionnaire. Because the questionnaire determines the type of information the research will generate, the researcher must establish three parameters before a questionnaire can be developed (Barker & Blankeship 1975:235). The first is to state the problem that initiated the research and so as to determine the information needed to solve it. The second is to define the population to be surveyed, that is who has the information. In addition, the third is to choose the best means of collecting the required information.

Below are twelve guidelines outlined by Leedy and Omrod (2005:190), for developing a questionnaire that encourages people to be co-operative and yields responses that can be used and interpreted to extract meaning. The guidelines that have been applied are the following:

- i) Keep it short
- ii) Use simple clear, unambiguous language
- iii) Check unwarranted assumptions implicit in the questions
- iv) Word the questions in a way that does not give clues about preferred or more desirable responses
- v) Check consistency
- vi) Determine in advance how to code the responses
- vii) Keep the respondent's task simple
- viii) Provide clear Instructions
- ix) Give a rationale for any items whose purpose may be unclear
- x) Make the questionnaire attractive and professional looking
- xi) Conduct a pilot test
- xii) Scrutinise the almost final product carefully to make sure it truly addresses the research problem.

Table 4.3: Questionnaire development Table

	Objective 1	Objective 2	Sources
Survey questions	The Impact of operational efficiency of the Richards Bay Dry Bulk Port terminal on its global competitiveness	Determine what are the possible strategies in order to be competitive enough in the port industry Demographic information is needed so that an analysis and a clear picture on trends in the occurring events, this analysis can be achieved through the clear distinction in terms of race, level occupied, years of experience and gender.	
SECTION 1			
SECTION 2	Section 2 questions focus by DBT management on the current situation on both internal and external environment that is surrounding DBT.		Balanced Score card ,Resource Based Theory
SECTION 3	Section 3 focuses on the views and the voices of the employees that are currently working at Richards bay Dry Bulk port Terminal.		
SECTION 4	This section provides details on customer perception and view on Richards Bay bulk Terminal on it current service		Information on market share

performance and quality

e) Data Collection

Sixty questionnaires were handed out to the participants with the intention to get information that will enhance answers to the research question. Out of the sixty questionnaires issued, fifty questionnaires were returned, three was discarded as they were wrongly filled in and the other seven were never returned. Participants were contacted in their respective working areas. The participants were advised that all the information provided would be treated as confidential.

f) Validity

The study has been structured in such way that it will allow the researcher to draw accurate conclusions about the cause and effect relationships within the data. A triangulation process has been followed in trying to compare the data sources in search for common themes. This supports the validity of the findings. Also, the researcher spent a period of two weeks in the field, studying particular behaviours and methods when loading and offloading vessels so as to be in a position to look for the evidence of operational deficiencies.

g) Ethical Considerations

All the participants were informed why they were chosen as part of the sample and the reasons why the study was being conducted. Participants were assured of the confidentiality of the information supplied as part of the study. Participants were requested to give a true reflection of the situation when answering the questions. The researcher also spent some time on the job making observations so that the answers given by the respondents could be aligned to what was observed, as a further check on the reliability of the data.

h) Reliability

The researcher has ensured that the research findings have been obtained in a way that is both methodologically sound and morally defensible to all those that are involved. Inevitable, what is morally defensible behaviour as a researcher will be affected by broader social norms of behaviour (Zikmund, 2000).

The researcher is aware of the fact that there may be situations where some bias may be necessary but, for ethical and reliability reasons, the researcher has ensured that she guards against that temptation.

4.3 Summary

The above chapter reflected on how research was conducted and how the samples were chosen. Each sample is representative enough to make conclusions. After consideration of research objectives it was important that the research instrumentation enabled of valid and reliable data on the perception of the effect of operational effectiveness on global competitiveness of the Richards Bay DBT. The questionnaire table was developed so as to guide on how the questionnaires can be developed to create a flow and understand that will to answer the objectives of the study.

The next chapter will be discussing the data interpretation, findings and conclusions

CHAPTER 5 RESULTS AND DISCUSSIONS

5.1 Introduction

Chapters 2 and 3 provide an exposition of theoretical models and literature reviews on the business concepts of port operational efficiency and global competitiveness. Based on this background, the previous Chapter focused on testing the current situation at the RCB DBT through research methodology with a view to gathering empirical data that relates to the operational efficiency and global competitiveness of the RCB DBT. This Chapter will discuss the results of the data which was obtained from the surveys and other relevant data collected through the research methods adopted in the previous Chapter. This discussion will show how the research objectives were achieved, and how the research question was answered.

As discussed in Chapter 1 of this Report, the objective of this research is to:

- investigate and understand why the business of the Richards Bay DBT declining to a point of handling an average of only 60% of seaborne cargo through its port when it is South Africa's main port in handling bulk cargo;
- understand why the Richards Bay DBT is not globally attractive or competitive to its customers given that it is the port of choice in dry bulk transport logistics;
- determine whether Richards Bay DBT is operationally efficient. In particular whether it has enough resources, adequate equipment and efficient processes to be operational efficient; and,
- develop and propose an ideal management model that t that would enhance operational efficiency, reliability and global competitiveness of the DBT.

This Chapter commences with some descriptive results indicating the views of the respondents and these results are reported by objective. In order to ascertain the problem context, a terminal survey

had to be conducted as there was no reliable information that currently exists in this regard. This paper has therefore included a practical field study, undertaken by means of the questionnaire survey.

5.2 Descriptive Results

The data was collected through a questionnaire survey and on the job observation. Sixty individuals representing the DBT operations department participated in this study. Fifty questionnaires were returned but only forty seven were used for analysis as the other three were discarded due wrongly filled in information. The participants represented various levels within the DBT's staff complement from senior management, to middle management to customers with the majority of respondents being semi-skilled. The composition of the group of respondents by sex and race is illustrated in Figures 5.1 and 5.2 below.

The below graph reflect the number of participants and the number of the response received from the survey. Figure 5.1 below reflects the number of respondents in a percentage format and by sex. The pie chart reflects that fifty five percent (55%) of the sample population were males and forty five percent (45%) females.

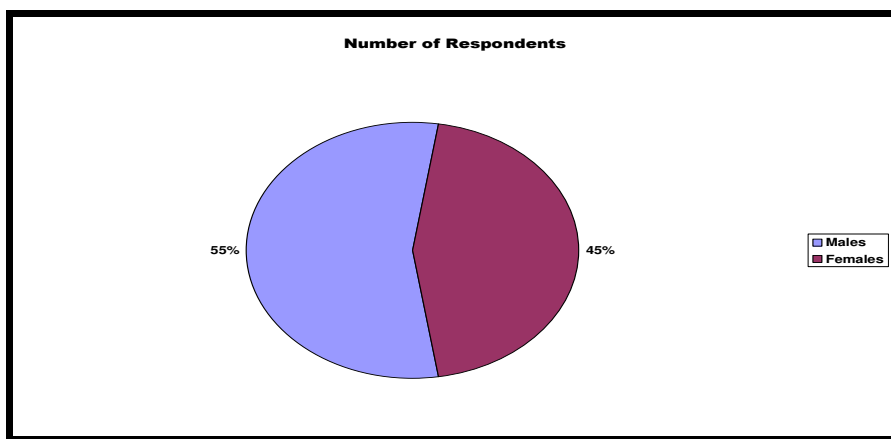


Figure 5.1: Representing the number and sex of participants in the survey

Figure 5.2 below represents the demographic factors of the sample population by reflecting the racial composition in the form of percentages. It reflects that fifty five percent (55%) of the sample population are black participants, twenty nine percent (29%) are white participants and sixteen percent (16%) are Indians.

In the light of the above, it can be concluded that the sample population chosen is representative enough of the other employees and that decision making conclusions can be made based on the number of employees interviewed and the responses received.

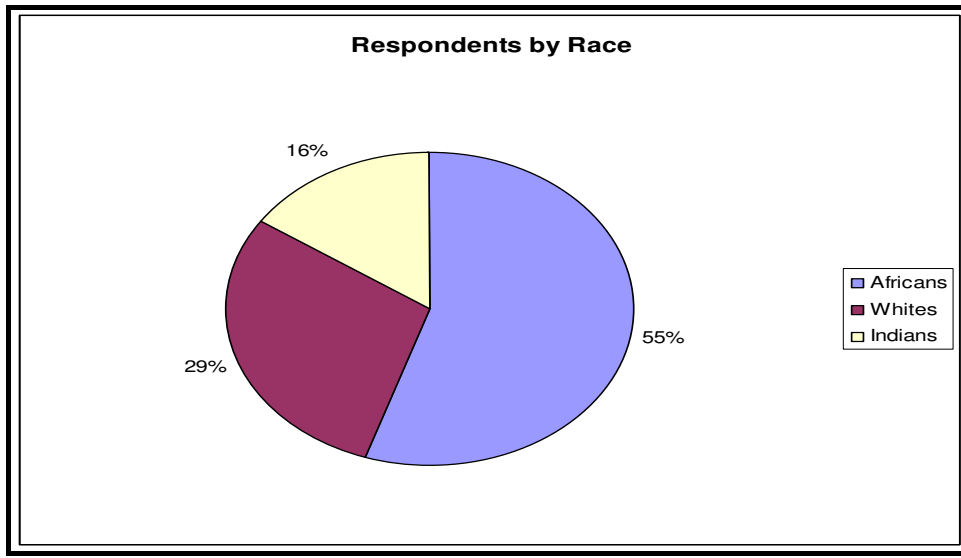


Figure 5.2: Respondents by Race

5.3 Findings/ Major Trends

Section A

From a gender point of view, both males and females participated in the survey. Figure 5.1 above is a graph that indicates the number of respondents on the survey. It will be noted that 55% and 45% are males and female respondents respectively, and it can safely be assumed that there was relatively a gender balance in the responses..

5.3.1 Question 1 Findings (ordinary staff interviewed)

a) Training on Equipment Utilised

As shown in Figure 5.3 below, of the ordinary staff interviewed, eighty two percent (82%) indicated that the DBT provides no training on the equipment that they have to use when conducting their duties. Twelve percent (12%) of the respondents agreed that training is provided on the equipment used and six percent (6%) could not agree or disagree whether training is provided on the equipment used. This indicates that most of the staff at the DBT only get to know how to operate the equipment that they use through their own efforts, as there is no formal induction on the equipment.

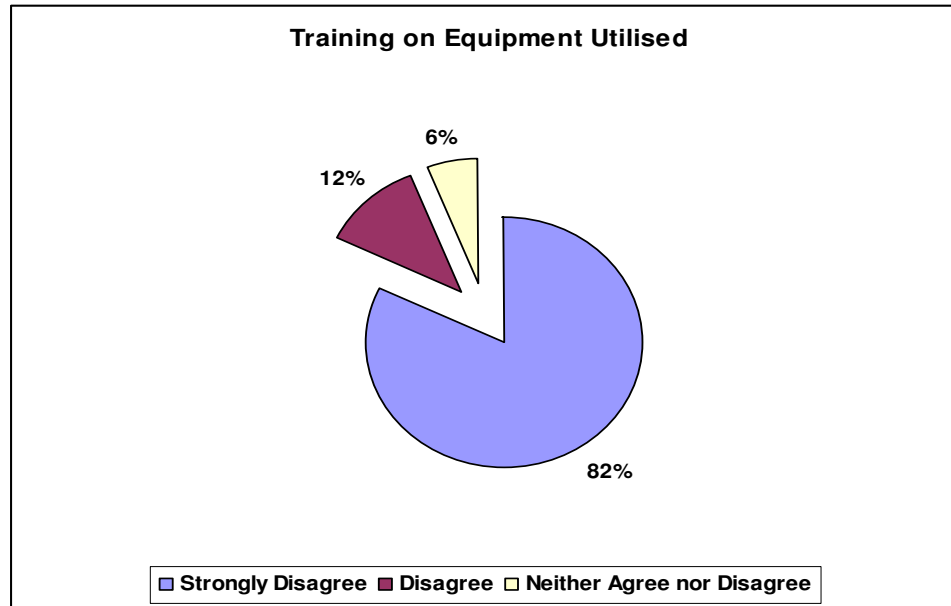


Figure 5.3: Responses on Training on DBT Equipment

b) Communication on Port Performance

In Figure 5.4 below, seventy six percent (76%) of the respondents strongly disagreed that the DBT management do advise them on the performance of the terminal, twenty-one percent (21%) agreed that they are advised on the terminal's performance on a monthly basis and three percent (3%) of the respondents indicated that they are not advised on the terminal's performance. It was subsequently realised that the twenty three percent (23%) that agreed there was communication were mainly supervisory level staff who happen (incidentally) to get the information from their immediate superiors but the information does get not communicated to the levels below the supervisors.

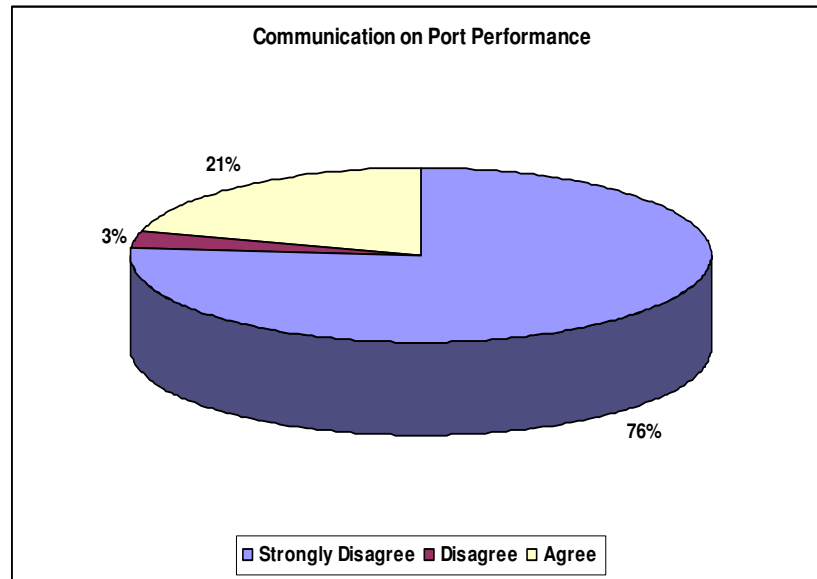


Figure 5.4: Response on Communication on Port Performance

c) Staff Motivation

Figure 5.5 below shows that ninety seven percent (97%) of the staff surveyed indicated that they are de-motivated as there is nothing encouraging them to work for the DBT. Only three percent (3%) of the staff considered that they were motivated. The DBT management will have to take this matter seriously.

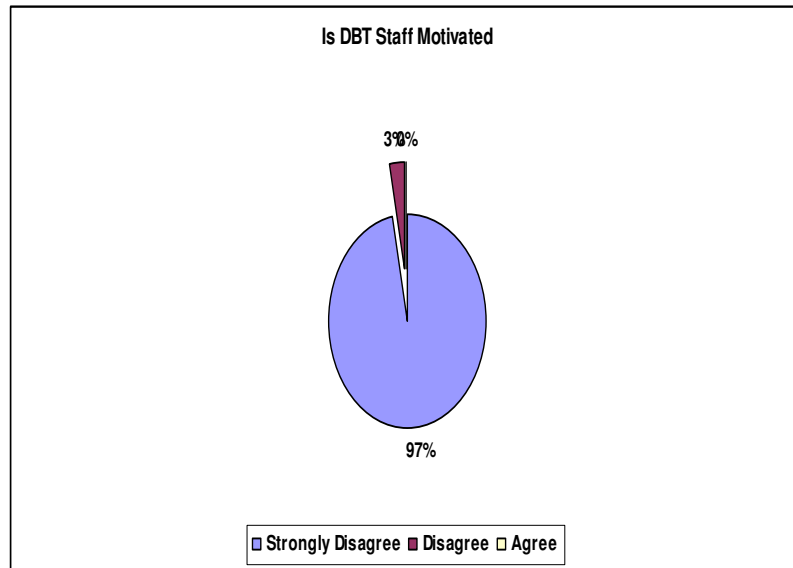


Figure 5.5: Response on Staff Motivation

d) Overtime Work

Figure 5.6 below shows that of the responses given on overtime working, fifty five percent (55%) of the respondents indicated that they are happy to work overtime and forty five percent (45%) of the respondents indicated that they are not happy to work overtime. It has been noticed that most of the respondents represented by the forty five percent (45%) are senior supervisors who do not actually work overtime or are not required to do so.

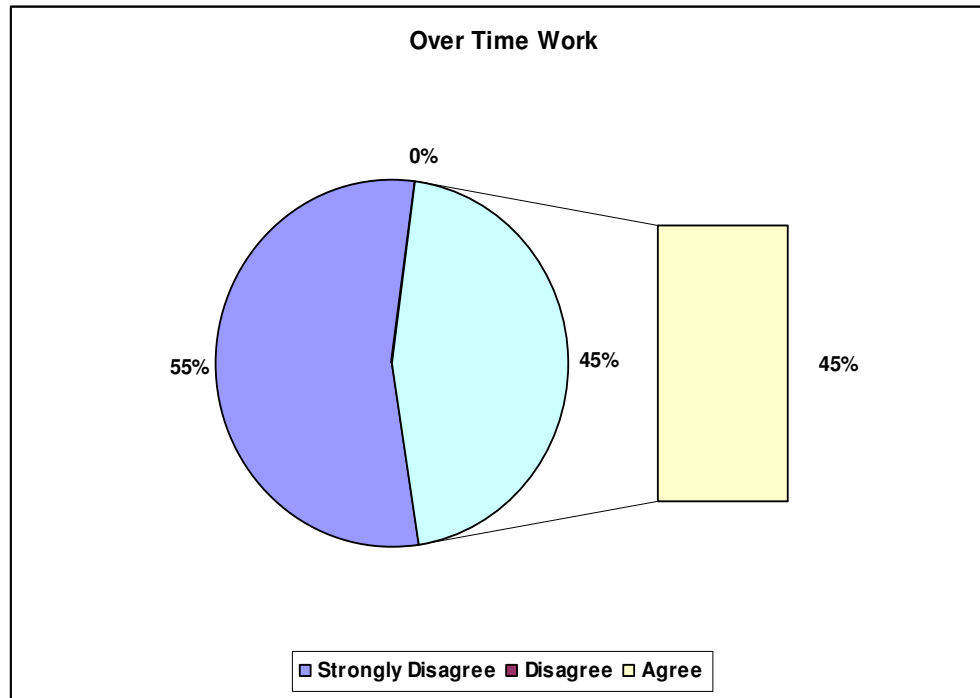


Figure 5.6: Response on Overtime Work

e) Staff Honesty

Figure 5.7 below shows the responses on the honesty of DBT's staff. Sixty one percent (61%) of the staff indicated that they are not honest at work, twenty one percent (21%) of the respondents indicated that they honest but not all of the time and lastly, eighteen percent (18%) of the staff indicated that they are honest at work at all times.

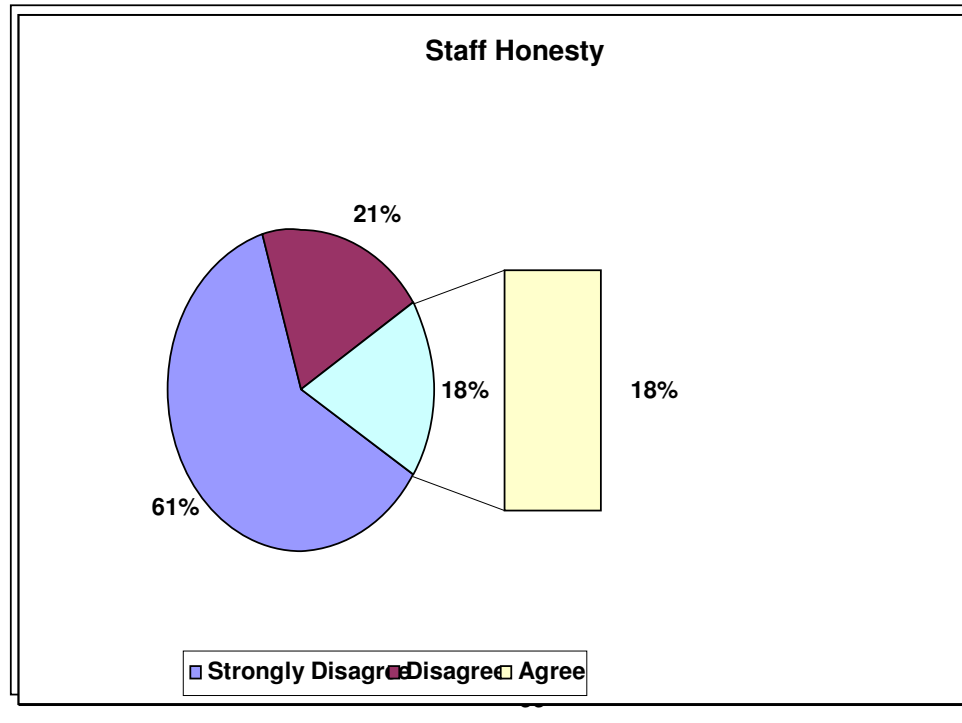


Figure 5.7: Response on Staff Honesty

5.3.2 Question 2 Findings (Management Questionnaire)

a) Age of Current Equipment

Figure 5.8 below shows that sixty two percent (62%) of the respondents, who are part of management, indicated that they do not know the age of the equipment that is currently used in their respective sections and thirty eight percent (38%) of the respondents indicated that they do have an idea of the age of the equipment that is used in their respective sections.

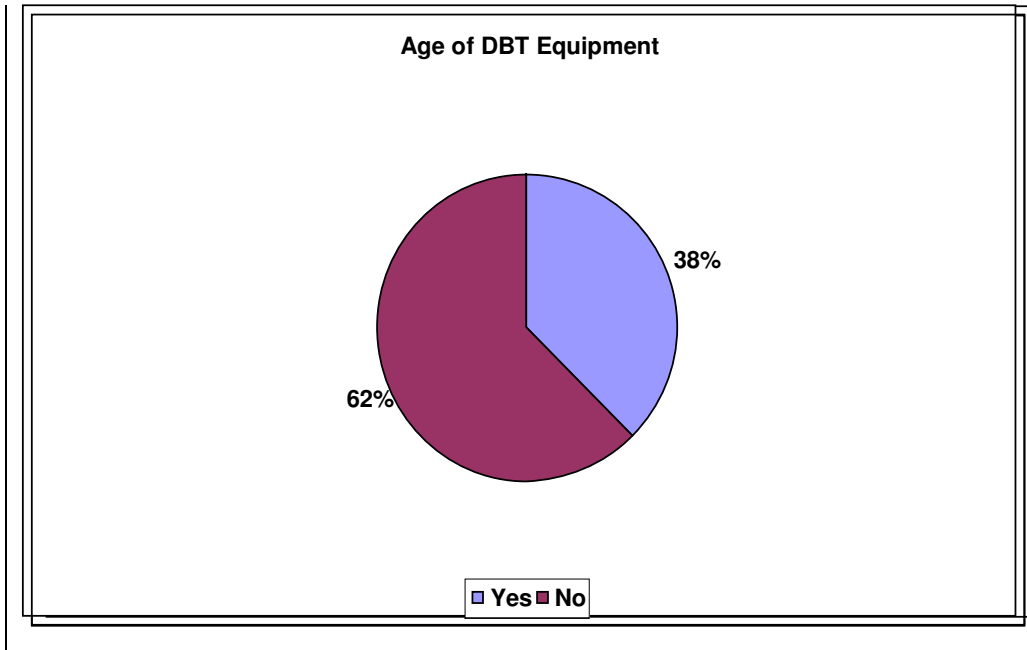


Figure 5.8: Response on Age of Equipment

Figure 5.8: Knowledge of Age of Equipment

b) Enough Resources to do the Job

Figure 5.9 below shows that all the managers interviewed confirmed that they do not have enough resources to conduct their jobs effectively. This shows that this is an endemic problem at the DBT; there are not enough resources as all the managers interviewed had come to the same conclusion.

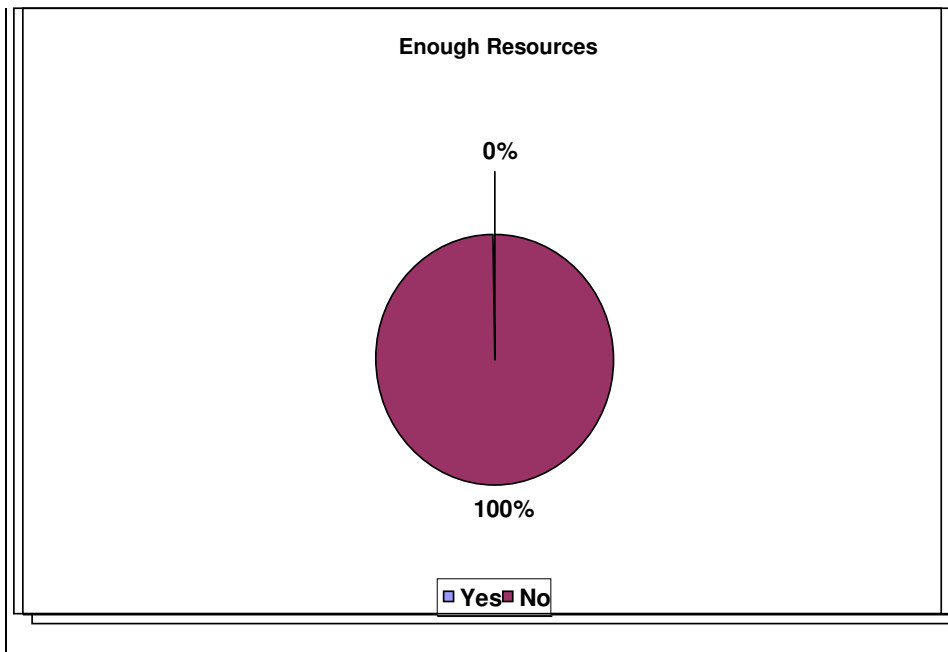


Figure 5.9: Response on Enough Resources

c) Staff Turnover

Staff turnover is one of the least controlled factors that affect productivity in an organisation. This can create a situation where there is lack of staff to complete the tasks allocated to a certain function or project which will ultimately lead to customer dissatisfaction. Figure 5.10 below indicates that the DBT management is not minimising staff turnover.

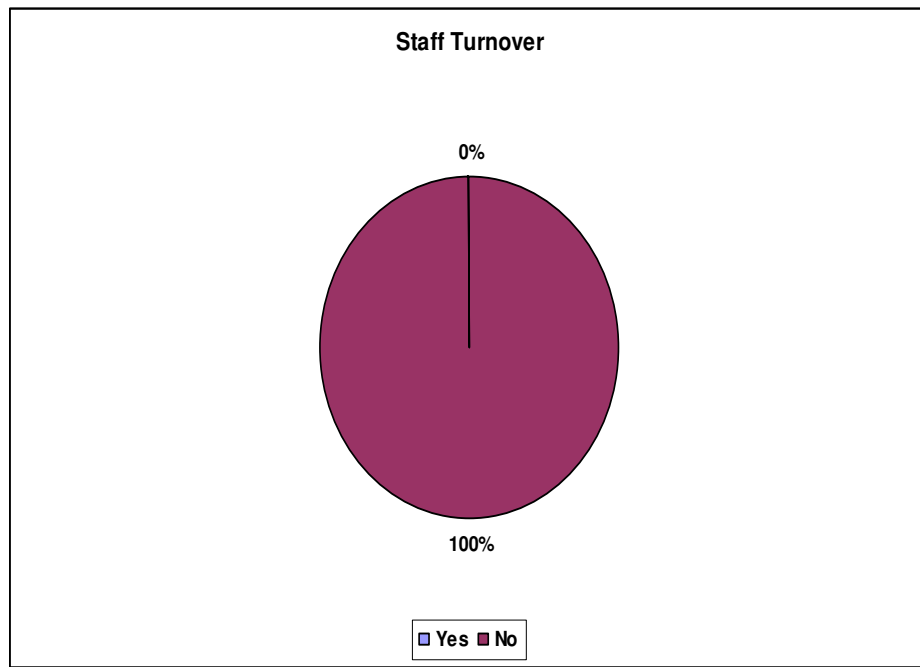


Figure 5.10: Response on Staff Turnover

d) Experienced Staff

Figure 5.11 below indicates that seventy five percent (75%) of DBT management do not have enough experienced staff to do the job with their respective sections. The trend at the DBT is that almost all of the operations departments have a problem keeping experienced staff. This poses a serious risk to the organisation and it a fundamental problem that is contributing to the current situation at the DBT.

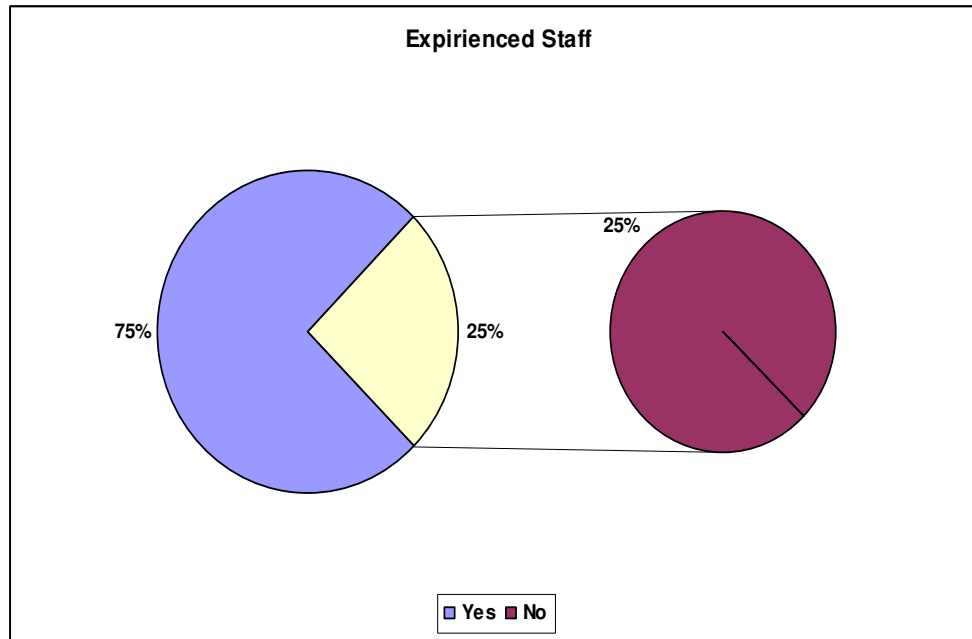


Figure 5.11: Response on Experienced Staff

5.3.3 Question 3 Findings (Customer Responses)

a) Current Service Levels

The end goal of any service organisation is to provide a level of service that keeps customers happy. The involvement of customers in organisational plans or service offerings is vital as their preferences, needs and wants must be understood by management. Figure 5.12 below reflects on the current perspectives of the DBT's customers. All the customers interviewed indicated that they are not happy with the current levels of service provided by the DBT.

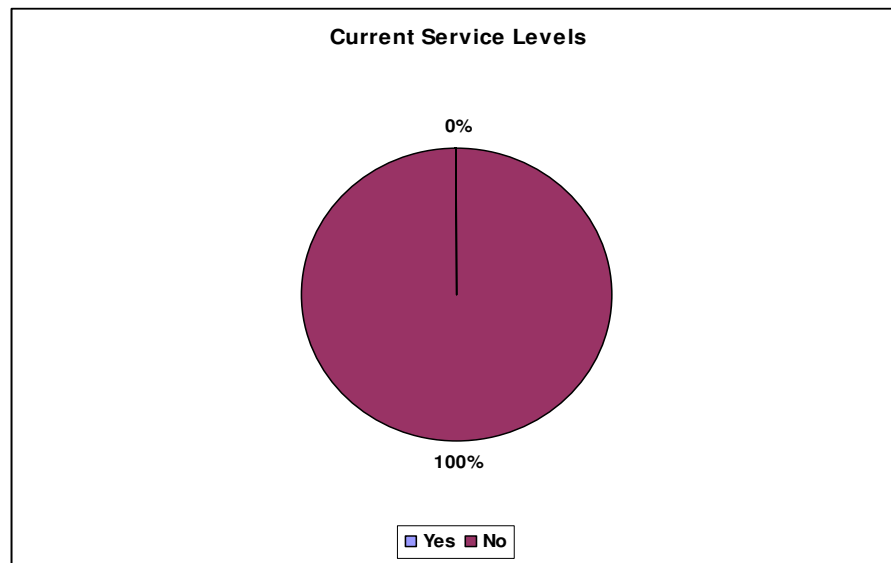


Figure 5.12: Response on Current Service Levels

b) Enough Communication

Communication is the most fundamental management tool and it is the most important way of making customers and employees aware of what is happening in their working environments. Open communication is the most advisable system for both customers and service providers so as to ensure that the needs for both customer and service provider are met. Figure 5.12 below reflects that sixty percent (60%) of the customers indicated that the DBT does not inform them of the problems that occur at the terminal.

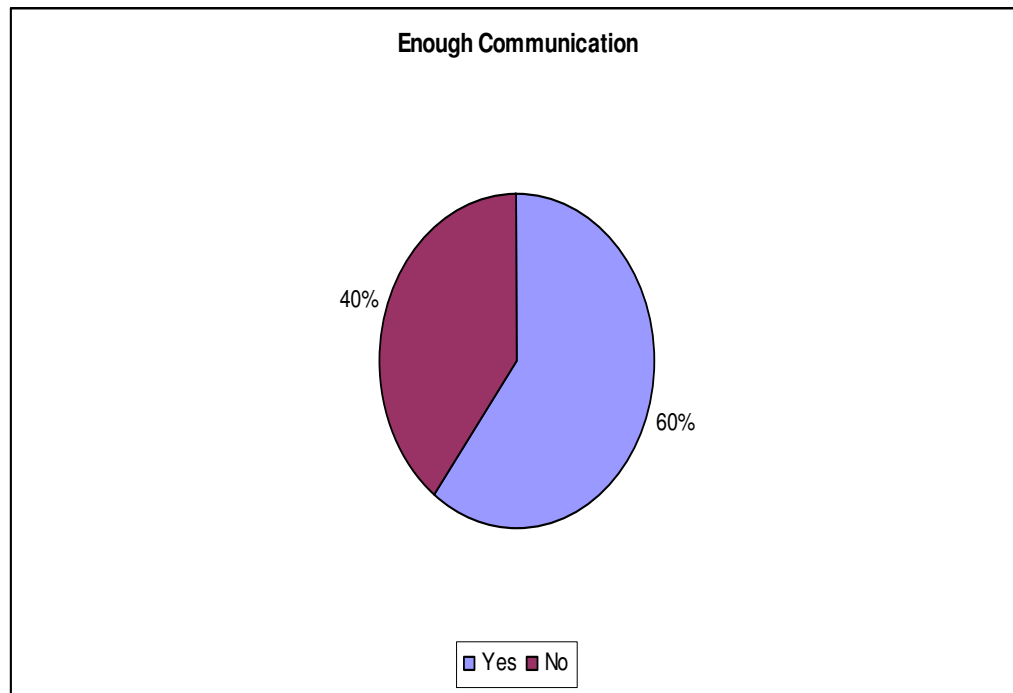


Figure 5.13: Response on Enough Communication

c) Handling Costs

The customers were further asked to indicate whether they are satisfied with the current costs versus the current service levels. Figure 5.14 below clearly indicates that not one customer is happy with the costs that are being charged the RCB DBT.

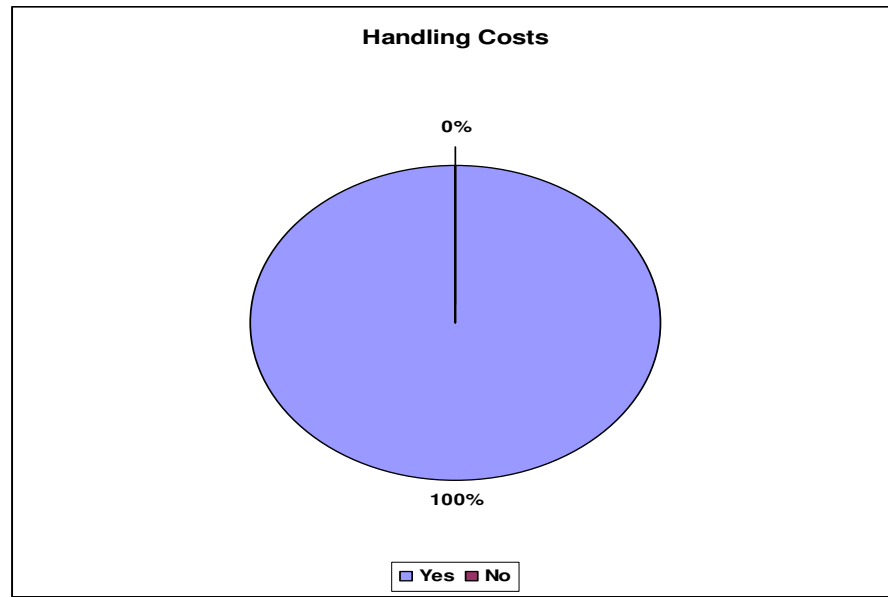


Figure 5.14: Response on Handling Costs

5.4 Analysis of the Findings

The above data has produced some results that have a bearing on the research objectives in that they provide some valuable answers to the research question. The paragraphs below will highlight these findings and how they relate to the research objectives.

i) Why DBT Is only Handling Sixty percent (60%) of Seaborne Bulk Cargo

Looking at the above interpretations of the results, which have been obtained from the respondents, most of the trends that have been highlighted clearly show that the respondents representing customers are not happy with the service that is currently offered by the DBT. In Chapter 3 of this report, where the literature review is discussed, it was highlighted that The

World Bank Port Reform Toolkit (2001: Module 2) emphasizes that many ports have become bottlenecks to efficient distribution chains, of which they are essential components, mainly because of three main problems. The first problem is that, to a greater or lesser extent, there are restrictive labour practices, where unions lack an understanding of the need for optimization of resources. The second one is the lack of authority to control operations; there are situations where entities operating in the port are outside the control of the port manager or service provider. This effectively limits the ability of the port to compete with other ports for market share, i.e. rivalry between the Port of Maputo and Richards Bay Port.

The service that the DBT offers has deteriorating greatly more especially when it is compared with other ports. This trend directly addresses the first objective which is trying to ascertain why the DBT is only handling sixty percent (60%) of the bulk cargo. This means that the DBT is not competitive enough when compared to other dry bulk ports but Porter (Competitive advantage: 2000) argues that competitive advantage exists when a firm is able to deliver the same benefits as competitors but a lower cost (cost advantage), or deliver benefits that exceed those of competing products (differentiation advantage). Thus, a competitive advantage enables the firm to create a superior value for its customers and superior profits for itself.

Customers believe that the DBT has not created a differentiation advantage, which will encourage them to rely on their services. Reliability is the most fundamental aspect to leverage when in the logistics or port operations business as it encourages the “just in time” concept. Judging from the above, the DBT’s current situation is that it is stuck in the middle. According to Porter, an organization that is stuck in the middle still has an opportunity to turn itself around as long as the industry is still attractive. He argues that, once the organization reaches this stage, this is a recipe for below average profitability compared to the rest of the industry, which is manifested in lack of choice. The trend is also showing that the DBT has lost its focus in terms of competitive advantage because of many challenges that it is faced with and the outcome is unhappy and disgruntled customers.

Harvard Business Review, (p142) argues that, even in markets with relatively little competition, providing customers with outstanding value may be the only reliable way to achieve sustained

customer satisfaction and loyalty. It goes on to state that there are two types of loyalty, i.e. true long-term loyalty and false loyalty. A variety of factors can generate false loyalty or make customers seem deeply loyal when they are not. The company that retains difficult to serve and chronically unhappy customers is making an expensive long-term mistake.

In Chapter 3 of the literature review, it was highlighted that Smith (1995:36-40) argues that world class companies, which gain this accolade by being globally competitive, have to master three attributes, namely, market impact, lean operations and balanced culture. He further explains market impact as the ability to not only satisfy customers by meeting their needs but having the ability to anticipate their needs and then make offerings to them faster than their competitors.

The three generic stages of competitive advantage according to Porter are as shown in Figure 5.15 below.

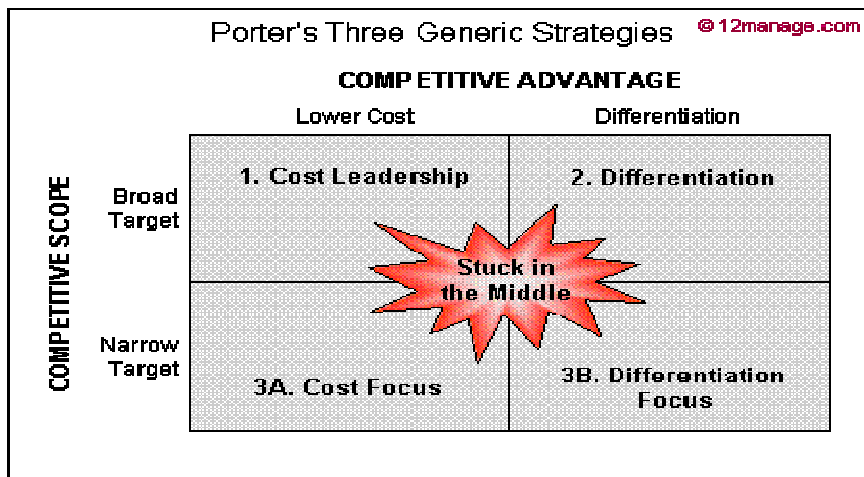


Figure 5.15: Porter's three Generic Strategies

ii) To Reflect Whether DBT has enough Resources

It is also clear from the survey results that the DBT does not have enough resources to conduct the business successfully. Resource-based theory encourages the interrogation of the inside out process of strategy formulation and analysis of resources, this is achieved through an audit of resources. The DBT should audit its resources. This can be done by looking at both tangible (equipment) and intangible (Human Resources) resources and the potential of each resource to try to identify the value that each can create so that management can develop a strategy that will capture a sustainable value for its customers. This process encourages the organisation to keep abreast of current trends, technology and equipment. It is clear that the DBT does have enough equipment but that the equipment it has is not reliable enough as it is out of commission for most of the times. There are also shortages of skilled staff to operate and maintain the equipment as experienced staff gets poached by other competing organisations.

Peter Senge (1990), proposes a holistic approach which requires a system to be examined as a whole and not a merely as a collection of parts, essentially this is systems analysis. He emphasises that systems thinking is the holistic approach where, if all the sub- systems or components of the system act in isolation, they will act differently. That is why it is important for the RCB DBT to look into the whole systems process of DBT operations and other departments and make it one system but a system that has input from the other departments. The inclusion of other departments will facilitate the open communication process that is lacking between management, customer and ordinary staff. Once this approach of systems thinking is implemented, the employees will know everything that they should about that is happening at the terminal including port performance and the challenges that are faced by management of the DBT.

Norman Gaither and Greg Frazier (2002) also noted that, to succeed in global competition in the twenty first century, some companies are particularly vulnerable because of product quality, customer service or production costs. Companies must develop innovative products and respond quickly to customers' changing needs. Scarcity of funds, experienced employees and other operations resources will always cause problems for operations managers. Total Quality Management begins with top management support, building superior product quality into

business strategy forms the basis for building an organization to achieve TQM. Fundamental changes must occur in the culture of organization if TQM is to succeed (2002:35-227). The above highlights that the DBT is challenged because the poor service that it offers and the operations costs that it charges are not aligned with customer expectations. The lack of good service is influenced by various challenges including the lack of experienced employees and problems with equipment and this can only be addressed by the implementation of Total Quality Management with the full support of management. Ultimately this will create a culture change in the RCB DBT.

5.5 Summary

This Chapter has discussed the research objectives and linked them with the empirical data that has been gathered through interviews with the relevant personnel at the RCB DBT. From this discussion, it has been shown that the research objectives have been met in that the research questions have been answered.

The next Chapter will reflect on the value of the study and the limitations in the research process. It will also make recommendations on the ideal business model that should solve the research problem and effectively change the current situation for the better.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In the previous Chapter, the research results were analysed and interpreted in line with the literature review and objectives set out in Chapters 1 and 3 respectively. This final Chapter will summarize the findings in relation to the main research problems and the sub problems articulated in Chapter 1. It will also highlight the value of the study, the limitations and the problems encountered during the research process. Lastly, the recommendations and opportunities for further research will be presented.

6.2 Limitations and Value of the Study

During the research study, there were no major problems experienced. There was however limited readily available data on operational efficiency of bulk port terminals. The research survey was successful because more than fifty percent (50%) of the questionnaires sent out were returned so the return rate was achieved. A fair representation of all the group categories was also achieved. The analysis of data was straight forward with qualitative in depth findings giving detailed information to support the conclusions and recommendations.

6.3 Conclusions

The above analysis indicates that there is a cause and effect relationship between operational efficiency and customer satisfaction. It has also been shown that this causality between operational efficiency and customer effectiveness translates to the market share, in that where there is poor customer satisfaction caused by operational inefficiencies there is a good chance of loss of customers. This leads to a shrink of market share. It is argued that market share is a manifestation of competitiveness of the business, in that a competitive business is demonstrated by the market share it enjoys.

Based on the above conclusions, it is argued that the research question has been answered in that it has been discovered that operational efficiency has an effect on global competitiveness of the Richards Bay DBT. This conclusion has been enriched by the perspectives of the internal and external stakeholders of the Richards Bay DBT.

From the above, it is argued that the Richards Bay DBT has a fundamental problem that needs an urgent management intervention. TPT management needs to understand that high performing organization does not only focus on its leadership, structures, culture and processes but also on external structures that include external stakeholders and the marketplace trends

6.4 Recommendations

Derived from the findings highlighted using the literature review and the empirical survey are the recommendations that can be implemented at Transnet, from Group level down to the port terminal management level. These recommendations are set out below.

a) Port Systems need to be Partially Privatised

Currently, South African ports are run using a monopolistic approach where there is no direct competition within South Africa's borders. Therefore, some portions of the ports system need to be privatized so as to encourage competition. This will improve efficiencies and increase competition among port operators and thus improve customer service levels.

b) Retention Strategy must be Developed

In order to a proper focus on operational efficiency, the RCB DBT needs to develop a strategy on retention of its core competences. Thus skilled staff needs to be adequately incentivized, not necessarily in purely monetary terms, to ensure that they are motivated and achieve job satisfaction. This will improve productivity and thus achieve operational efficiency through the effective deployment of skilled human resources.

c) Lease Option instead of Purchase of Equipment needs to be Explored

Transnet needs to consider leasing the equipment that it is currently using to load or offload cargo or to conduct its operations, Purchasing equipment is costing Transnet a lot of money and the equipment also needs to be maintained and subsequently refurbished. In addition, the company that leases the equipment should also provide training on a six monthly basis to Transnet staff who operate the machines. Refresher courses should also be introduced and champions for equipment maintenance should be appointed

d) Customer Focused Business Processes must be Streamlined

Customer focus should also be a priority. Accordingly, lines of communication should be developed to understand the needs and wants of customers. In order to offer a better service, these needs should be understood by both Transnet and its customers.

Cost engineering Vol 6 also suggests that for an organization to perform it needs to look at the following:

i) Constant Learning

Special significance is given to constant learning in making a culture amenable to change. This is primarily because an organization has to actively listen, understand and align with the issues and feeling of both internal and external stakeholders in order to adapt to current trends and tastes. Constant learning will be part of Transnet culture when

- Continuous improvement is valued,
- Innovation is prized,
- Proper knowledge management systems are in place and quality failure is accepted.

ii) Business Excellence

The Richards Bay DBT should learn that for a business to reach business excellence stage, the following should be implemented:

- The concept of teamwork is apparent throughout the organization.

- The Terminal Executive, senior management should communicate and support the idea of business excellence.
- Internal, as well as external, outstanding service is provided.
- Open communication is practiced with the freedom to voice opinions, share ideas, and make decisions.
- Appropriated discipline is exhibited by all employees in the organization.
- Creative thinking is encouraged throughout the organization.
- The workforce comprises the dedicated and high performing individuals who believe in continuous improvement, thus setting higher goals once initial goals are met.
- Ongoing education is encouraged.

iii) Beyond Business Excellence

- Excellence is viewed not only not as destination , but as continuous journey.
- There is constant learning from “best practices” of top performing companies but organization formulates its own “best practices “ and organization continuously builds on them.
- A simple consistent system of checks and balances, guidelines, principles, performance standards and appraisals exists.
- Dynamic leadership is constantly enforced
- People are solution focused

In the view of the above Richards Bay DBT needs to focus on creating stability amid chaos, this can be achieved by creating stable transformation guides for the system. This ,may be followed by creating organizational forms for change instead of looking on focusing on order.

5 Suggestions for Future Research

This report has conclusively demonstrated that there is a lack of operational efficiency in the Richards Bay Dry Bulk Terminal. Ideal business models have been suggested for efficient and effective

management of the Richards Bay Dry Bulk Terminal. The models focus on continuous improvements in customer services which will enhance the competitive advantage of the Richards Bay Dry Bulk Terminal. The identified models are subject to re-evaluation and revision as the market and external forces are dynamic.

The six monthly measurement, analysis and improvement of the models is also suggested so as to align with developing trends. These models will ensure consistent measurement and evaluation of progress and assist future situation analysis.

6.6 Summary

The aim of this Chapter was to revisit the problem identified in Chapter 1 and ascertain if the problem has been resolved. The findings of the study assisted in resolving the problem. The possible opportunity for further research was identified, and the possible business models have been highlighted.

LIST OF REFERENCES

Asian Pacific Journal of Marketing & Logistics (2005).17.1

Bloemer, J. and de Ruyter, K, 1999 *Customer Loyalty in High and Low Involvement Service Setting: The Moderation Impact of Positive Emotions*. Journal of Marketing Management, Vol.15

Cameron S (2005) *The MBA Handbook: Skills for Mastering Management, 5ed*, Pearson Education, Essex, England

Cameron S (2005) OU Study Guides Block 1: Session 3

Cameron S (2005) OU Study Guides, Block: Session 4-6

Coldwell D, Herbst F 2004 *Business Research: 1st ed*, Juta and Co, Cape Town.

Cole, G A 1996 *Organisation as Systems*, London, Letts Educational.

De Wit, B, Meyer, R, 2005 *Strategy Synthesis: , 2nd ed*, Thomson Publishing

Fenton-O'Creevey, M, Mee, J, 2007, *The Practice of Management*, Block 2, Session 14, The Open University, Walton Hall, Milton Keynes

Foster-Pedley, J.2006, *Research Methodologies*, Power Point Presentation (Electronic), Available instructor, Graduate School of Business, University of Cape Town, Cape Town

Gadjah Mada, 2008. *Analysing Growth Opportunity of Port From the Resource-Based Perspective*: International Journal of Business Sept – Dec 2008, Vol.10, No2, pp 353-373.

Gaither N, Frazier G. 2002, *Operations Management*, 9th ed, Thomson Learning, China.

Gerb, S 2005, *An overview of the South African economy*. In Daniel, Roger and Lutchman (ed.), "State of the Nation – South Africa (2004 – 2005)", South Africa: Human Resource Research Council Press, 268 – 387

Grimsey, Darrin and Lewis, 2004 *The Governance of Contractual Relationships In Public Partnership*:. Journal of Corporate Citizenship, Issue 15, 19.

Harrington H.James.199 *Business Processes Improvement* (ed), Mc Graw- Hill Inc, New York.

Harrison DK, Petty DJ.2002, *Systems Planning for Planning and Control in Manufacturing*, 1st ed, Newness, Woburn MA

Holloway, J, 2007, *The Practice of Management*, Block 2, Session 17, The Open University, Walton Hall, Milton Keynes

Kaplan RS, Norton, DP 1989 *The Balanced Scorecards*: Library of Congress Cataloging in Publication Data, USA;

- Kaplan RS, Norton D** 2004 *Strategy Maps*, Harvard Business School Publishing, Boston
- Leedy Paul D, Omrod Jaenne Ellis**, 2005, *Practical Research: Planning & Design*, 8th ed, Pearson
Prentice Hall, New Jersey
- Lewis A.** 2000, *Lean Production and Sustainable Competitive Advantage*: International Journal of Operations & Production Management, Vol 20, 155:8, pp 959-978.
- Mapoma, ZL**, 2007, *The Impact of Regulators in Attracting Foreign Direct Investment*, Research Report, University of Cape Town Graduate School of Business, Cape Town
- Maritime Economics & Logistics**, 2003, 5 (199 -218) *Journal of Port Efficiency and International Trade as a Determinant of Maritime Transport Costs*
- Myers, MD.** 1997 *Qualitative Research in Information Systems*, MIS Quarterly, Vol,no 2,pp.241 – 242. MISQ Discovery, June 1997. <http://misg.org/discovery/MISQRD> is world.
- National Ports Act, (2005)**
- Nohria, N, Groysberg, B, Lee, L**, 2008, *Employee Motivation*, Harvard Business Review, Vol 86, Issue 7/8, pp78-84
- NPN, National Petroleum News.** Aug 1992, 84 -9. ABI/Inform Global pg 48
- Oxford Advanced Dictionary of English**, 1996, *The Concise Oxford Dictionary*, 9th ed, Oxford University Press, Oxford
- Saunders, Lewis and Thornhill**, 2003, *Research Methods for Business Students*: 3rd Edition; Pitman Publishing Imprint
- Senge, P.M.** 1990 *The Fifth Discipline: The Art and Practice and Learning Organisation*, Random House Business Books, London
- Smith, S.** 1995, *World Class Competition Management Service Quality Journal*, Vol.5, no. 5, 3642
- Stevenson WJ.** 2002 *Operations Management* 7th ed, McGraw – Hill Irwin, New York
- Transport Reviews**, Vol 25, No.1, 117-130, January 2005. Transformation of Port Terminal Operations from the Local to the Global
- Zhang, X.** 2005a, *Paving the way for Public–Private Partnerships in infrastructure Development* Journal of Construction Engineering and Management, vol. 131, issue 1, 3 – 4.
- Zhang, X.** 2005b, *Critical Success Factors for Public-Private Partnerships in Infrastructure Development*, Journal of Construction Engineering and Management, vol.131, 1 Issue 1, 71-27
- Transnet Port Terminals Retrieved** Jan 24, 2010 from www.transnet.net

United Nations Conference on Trade and Development, 1996,. Retrieved April 8 2010 Report on strengthening supply capacity for Africa to benefit from trade liberalization from <http://www.unctad.org>

Worldbank 2001 World Bank Port Reform Toolkit Retrieved Jan 24, 2011, from <http://www.worldbank.org/html>

Worldbank 2007 World Bank Port Reform Toolkit Retrieved Jan 24, 2011 from <http://www.worldbank.org/html>

Worldbank 2008 World Bank Port Reform Toolkit Retrieved Jan 24, 2011 from <http://www.worldbank.org/html>

APPENDIX 1 Covering Letter

RESEARCH QUESTIONNAIRE

Dear Respondent

I am currently in the final stage of completing my Masters in Business Administration (MBA) with School of Business leadership (Unisa). As part of the requirements for me to graduate it is expected of me to write a thesis on any topic that interests me. I have therefore to focus my thesis on Richards Bay Dry Bulk Terminal Operational problems with the following topic:

“The Impact of Operational Efficiency of the Richards Bay Dry Bulk Port Terminal on its Global Competitiveness”

For me to do justice to this research question, I would need your in responding to the attached questionnaire, the answers to these questions will help me to gain greater understanding and develop meaningful recommendations that could help towards successful implementation operational solutions challenges facing the company.

All information will be treated confidentially; the information gathered will be used for nothing else but for academic purposes.

The research results will be made available to you on request once ratified by both Transnet and UNISA.

Yours faithfully

Unathi Mapoma

MBA Student

unathi.mapoma@transnet.net

Cell phone number: 083 289 4312

APPENDIX 2

Section 1: DEMOGRAPHIC INFORMATION

Age	Below 21	21-25	26-30	31-35	36-40	Above 40	
Gender	Males			Females			
Position in the Company / Title	Terminal Executive	Manager		Quay Worker	Side	Operations Dept	Customer
Qualification							
Department in Company	Export Technical	Import Technical	Storage	Human Resources	Finance	Engineering	Customer Service
Number of subordinates (if applicable)							
Total years of work experience	Below 5 Yrs	5 – 10 Yrs	11 – 15 Yrs	16 -20 Yrs	20 -25 Yrs	26 – 30 Yrs	

Section 2 1: GENERAL PERCEPTION

In the list below, please respond by selecting the relevant answer with a **cross (x)**:

15 STATEMENTS (A1)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. It is easy to work with the current equipment, systems and policies of the Dry Bulk Terminal (DBT) at Richards Bay.					
2. I have full understanding of what is expected of my department so as to enhance productivity of the terminal					
3. I understand the link between my department to customer satisfaction and the terminal objectives					
4. I can operate with all the equipments and the machines dedicated to me to perform my duties.					
5. DBT provides thorough training on how to utilise the equipments					
6. There is clear protocol on how to respond or what to do when there is an equipment or system failure while working					
7. I know why DBT is no longer attractive to some customers that used to call their vessel at DBT					
8. I believe in the quality of the current equipment and its reliability enough to do the expected job					
9. I do have an idea of when should these equipments					

The Effect of Operational Effectiveness on Global Competitiveness of The Richards Bay Dry Bulk Terminal

should be serviced and who to contact in case of emergency					
10. I understand why there should be norms to be achieved for each vessel that DBT works on.					
11. I understand the impact of delays caused to the customers when working the vessels					
12. I enjoy working over time					
13. Change management is a waste of time and money					
14. There is always sufficient communication about the port performance and customer complaints					
15. Port provides proper training to all relevant port employees on each equipment that is used for operational performance					

APPENDIX 3:

Section 3 – MANAGEMENT

In the list below, please respond by selecting the relevant answer with a **cross (x)**:

13 Statements (A2)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Yes	No
1. I know the age of DBT's equipment					
2. I have enough skilled work force					
3. My staff is properly trained to operate the equipment					
4. I can control the staff turnover problem in my department					
5. The staff are experienced enough to do the job					
6. The current frameworks and policies make it easier for staff to do the job					
7. The non – productivity has an impact on customer satisfaction					
8. Staff members understand why the port performance has gone down					
9. People should have enough resources and equipment to be operationally efficient					
10. The current policies and operational frameworks have impact on productivity					
11. Refresher training on equipment should be conducted every 6 months					
12. All the staff are motivated regarding current state of affairs					
13. all members of staff at DBT are honest and reliable					

APPENDIX 4:

Section 4 – CUSTOMER SERVICE

Please respond by selecting the relevant answer with a **cross (x)**:

10 Statements (A3)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Yes	No
1. Customers are happy with current customer service level at DBT					
2. People understand the challenges that DBT is experiencing					
3.Challenges facing DBT are always communicated to customers					
4.Clients always choose to berth their vessels at DBT					
5. The senior management of DBT is open for discussions if there is a problem affecting customers					
6. The handling costs at DBT does complement with the service provided to customers					
7. The quality of material being utilised to service customers needs are in good order					
8. The equipment at DBT is strong and reliable					
9. Some clients have lost customers through the bad working with DBT					
10.Everyone is updated all the time when there is a problem at DBT					

THANK YOU FOR YOUR VALUABLE TIME TO PARTICIPATE IN THIS SURVEY