UNIVERSITY OF KWAZULU-NATAL

THE EFFECT OF THE GLOBAL ECONOMIC CRISIS ON STRATEGY IN THE ENGINEERING MANUFACTURING SECTOR IN KWAZULU-NATAL

By

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DECLARATION

I, Kezia Fitzsimmonds declare that

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ABSTRACT

The world was caught unprepared for the recent crisis that has gripped the globe. The engineering manufacturing sector is reported to have been one of the hardest hit and has been haemorrhaging jobs since the global economic crisis first reached South African shores. This study aimed first, to establish the presence of a global crisis and second, to determine whether this crisis is of an economic or financial nature. Objectives of the study included determining whether the engineering manufacturing sector has been impacted on by the crisis and whether the affects of this have been of a detrimental nature. This was done primarily to assess the extent to which strategies in the engineering manufacturing sector in KwaZulu-Natal have been affected and needed to be specifically adapted in order for SMEs to survive and grow beyond the current economic circumstances. Data was collected through the use of questionnaires, a typically quantitative research technique, as well as through the compilation of literature reviews. Questionnaires were circulated amongst thirty organisations within the identified sector in KwaZulu-Natal, of which twenty-two were completed and returned for analysis. Primary data was analysed in conjunction with the literature reviews. Typical responses confirmed the existence of a crisis and indicated that strategies had to be specifically adapted as a result. However, strategic alterations were often ill informed. This issue could be address through the application of the outlined models to optimise strategy. The use of these models would better enable respondents to make informed decisions when formulating their strategies and thereby assist the organisation in achieving a sustainable competitive advantage.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1.   Introduction

DiPiazza (2009, p.8) states that the world was "caught unprepared for a global financial crisis". Governments and business leaders' worldwide were caught off guard by the economic crisis that has gripped the globe. However, the enormity of this crisis was not the sole factor that surprised world and business leaders. The world markets are far more intimately connected than the majority of persons had previously believed (DiPiazza, 2009, p.9). The fact that economies of the world are more interconnected than anyone had realized prior to the start of the global economic crisis was surprising to a number of people. The quick spread of the economic crisis from the United States, where it originated, to the rest of the world may be attributed to the fact that the world's economies are so inextricably linked. DiPiazza (2009, p.9) attributes the quick spread of the economic crisis to the negative effects of globalisation, arguing that a crisis that began in the United States has spread throughout the major economies of the world. Affected economies are not limited to advanced or first world economies alone but include emerging markets such as South Africa.

The global economic crisis originated in the United States of America and was caused by a number of factors. "According to economists, the actual financial problems began in the 1980s when, under political pressure from the banking industry, the Reagan administration and congress stopped regulating American financial institutions" (Enterprise Risk, 2008, p.24). Kiptoo (2009, p.14) identifies the major cause of the global economic crisis as being the utilization of free market financial instruments that are, for the most part, unregulated. These typically consist of subprime lending, credit default swaps and other complicated derivative instruments.

Balchin (2009, p.12) states that world trade growth fell to just 4 percent in 2008, and he argues that this was triggered by the absolute decline in demand resulting from the economic crisis, together with the corresponding declines in manufacturing and industrial production, trade credit financing problems and low consumer confidence. At that time, the International Monetary Fund voiced their fears that 2009 may be the worst year for the industrial economies since the great depression during World War II (DiPiazza, 2009, p.8). Balchin (2009, p.12) agrees with this stating that

"world growth in 2009 [was] expected to decline to its lowest rate in 60 years" as a result of the current global financial crisis.

It was first believed that the economic crisis would not impact emerging or developing markets, particularly those in Africa. However, as DiPiazza (2009, p.9) points out, these economies are just as linked to the world markets as other more established markets. As a result of the interconnected relationship of the emerging markets with the world markets, it is evident that they will not continue to boom. Although many commentators argued that the impact of the economic crisis would be less for emerging markets it is apparent that these markets have been impacted on. Balchin (2009, p.12) points out that the effects of the financial insecurity and uncertainty in industrialized nations resulting from the global economic crisis are beginning to have an impact on the developing world.

Each country will be affected by the global economic crisis in different ways. Balchin (2009, p.12) argues that the impact of the crisis is expected to differ across African countries and that the ramifications of the crisis are dependent on the individual country's contact with the international financial system, the country's production and export structure, and their ability to use policy tools to lessen its undesirable effects. This means that the implications of the economic crisis on African countries may be minimized by the countries' contact with the global economy or by their limited dealings with the global economy. Balchin (2009, p.12) states in general terms that the immediate effects of the global economic crisis on numerous African countries are likely to be alleviated by the reality that the majority of the countries in Africa are considered to be somewhat separate from the global financial system. This does not mean that African countries will experience no negative effects as a result of the economic crisis. Any negative effects of the crisis may merely take longer to reach the African continent. Wiemar (2008, p.8) argues that South Africa is continuing to maintain its economic growth despite the global slowdown that it is facing. However, this statement was made prior to the full extent of the global economic crisis reaching the continent and the full effects had yet to be felt.

Kiptoo (2009, p.16) agrees with Balchin, stating that the effects of the global economic crisis will differ between countries. This is to say that not all countries will be affected by the crisis in the same way. Some countries may be more harshly affected than others and the implications of the crisis may vary between countries.

When apartheid ended in South Africa in 1994, many people held out hope that the injustices of the past would be rectified. However, this has proven harder to achieve than many expected and

"South Africa continues to have one of the highest rates of inequality in the world" (Buhlungu and Mtyingizana, 2009, p.24). Buhlungu and Mtyingizana (2009, p.24) state that when South Africa was hit by the global economic recession, they were still struggling with many of the inequalities left over by apartheid. Although the global economic recession is not expected to affect developing countries as harshly as it has affected the industrial nations, it is still likely that the crisis will exacerbate the problems that already exist in South Africa.

Figure 1-1 Impact of the Global Economic Crisis
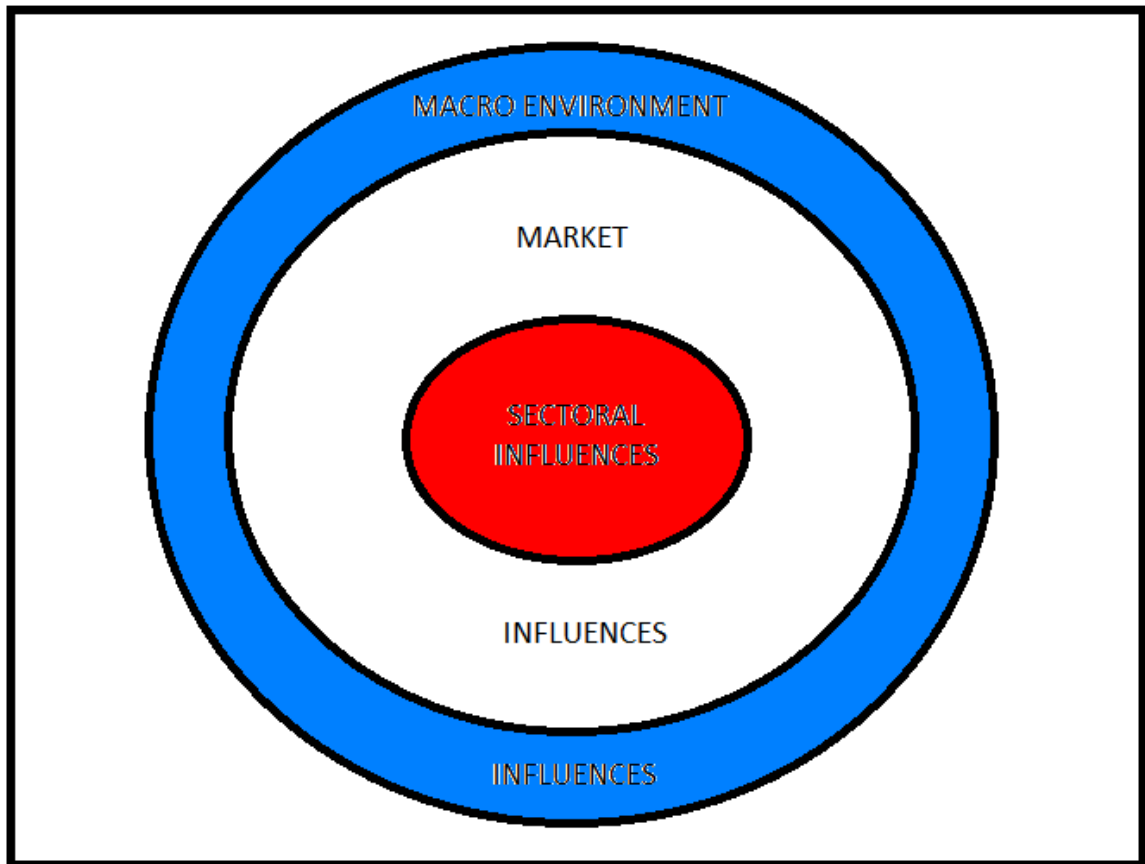
This study will examine the macroeconomic influences of the global economic crisis, the market influences and the influences of the engineering manufacturing sector. In this way the study will provide an overview of the macroeconomic influences of the global economic crisis on South Africa and then narrow these influences to finally focus on the chosen sector, this being the engineering manufacturing sector.

The engineering manufacturing sector has been one of the worst hit sectors in the South African economy. It has been haemorrhaging jobs since the start of the crisis, and this is a sign of how drastic the impact of the global economic crisis has been on this sector in particular. This study

also chose to focus on the engineering manufacturing sector due to the fact that the researcher's family has worked in this industry for a number of years and as such the researcher has developed an interest in the workings of this sector. Due to the existence of a relationship with a number of businesses in the engineering manufacturing sector, access to questionnaire respondents and organisations would be available. This input would be invaluable to the empirical research portion of this study.

This study aims to determine whether the strategies of SMEs in the engineering manufacturing sector have been affected by the global crisis to such an extent that they had to be specifically adapted in order to cope with the global crisis. This study thus aims to investigate what strategic options are available to SMEs in the engineering manufacturing sector, in order for these SMEs to survive and grow beyond the global crisis. In other words, this study aims to determine what strategies are available to SMEs that want to better focus on their target market or expand their businesses into other markets and countries in order to make their businesses more viable beyond the global economic crisis.

The study collected data through both primary and secondary sources of data. Primary data was collected through the use of questionnaires that were distributed to thirty respondents within the engineering manufacturing sector. This questionnaire consisted of a number of closed or pre-coded questions. A section for comments was included after each question to allow the respondents to expand on their answers. In this way more in-depth responses to the questions in the questionnaire were gained. A convenience sample was used when selecting the thirty respondents to participate in the study. This method of sampling allows those respondents that are most easily accessible to be selected to participate in the study. However, a convenience sample is limited in that it is not representative of the population. Secondary sources of data were also considered, including but not limited to publications such as journals, books, government publications, research reports, Internet and electronic articles. These secondary sources of data were then used to compose literature reviews of the global crisis and of strategy, attempting to link how the global crisis has impacted on strategy in the engineering manufacturing sector.

Once the data had been collected, the collected primary data was analysed through both qualitative and quantitative data analyse techniques. The closed or pre-coded questions were coded in order to prepare the data for quantitative statistical analysis. The comments section of the questionnaire was analysed using the qualitative data analysis techniques of identifying themes in the comments of the thirty respondents in the study. Secondary data was used to attempt to gain a better understanding of the collected primary data.

The study will then go on to discuss the findings of the research. Finally the limitations of the study and the recommendations for further research will be outlined.

1. 2. Need for the Study

The economic crisis that is facing the globe is unlike any economic crisis that the world has previously experienced. First, the crisis originated in a developed economy. Economic crises have typically, prior to the onslaught of this crisis, originated in developing economies. In other words, the world has never before experienced an economic crisis quite like the one that it is now experiencing. The seeds for the current global crisis were planted in the great depression of the 1930's and the current crisis is thus linked to that economic crash. This means that this study is likely to explore a novel area and may therefore add to the base of knowledge in the management field with specific reference to the manufacturing sector.

Second, the economic crisis spread with a ferocity and pace that was not expected. No one realised the degree to which the economies of the world were linked until the extent and speed with which the economic crisis was spreading was grasped. Studies that were performed prior to the current economic crisis did not take this into account. The present study has the benefit of hindsight and as such will be able to make valuable observations that could benefit economies and organisations in the future.

This study will also examine the impact of the economic crisis on strategy in a sector and region that has not previously been looked at in any depth. This will contribute to the base of knowledge in the field and if the research problems are comprehensively answered, then these will also provide invaluable knowledge to persons in the field and to businesses.

1.3. Definition of the Research Problem

1.3.1. Research Problem

This study aims to determine the extent to which strategies in the engineering manufacturing sector in KwaZulu-Natal have been affected by the global economic crisis and have needed to be specifically adapted in order for SMEs in this sector to be able to survive.

1.3.2. Secondary Problems

Is there a global crisis?

Is it a global economic crisis or a global financial crisis?

Has the engineering manufacturing sector been effected by the global economic crisis?

What types of strategies would be able to be specifically adapted?

What local, national and international strategies are available for SMEs in this sector to survive and grow?

1.3.3. Purpose of the Research

This study will determine the impacts of the global economic crisis on the engineering manufacturing sector. The study will then go on to establish whether these impacts were severe enough to cause the engineering manufacturing sector to adopt new strategies to cope with the pressure brought on by the global economic crisis. Subsequently, this study will look at the impact of the global economic crisis on strategy in the engineering manufacturing sector in KwaZulu-Natal. This study will investigate what strategic options are available to SMEs in the South African engineering manufacturing sector in order for these SMEs to survive and grow beyond the global economic crisis.

The SME sector forms an integral part of the South African economy however, it experiences high failure rates. This study aims to offer SMEs in the engineering manufacturing sector more strategic options in terms of growing the business. If these strategies prove to be viable then the study hopes to provide SMEs with a more sustainable approach to ensuring the success of SMEs in the local and global economies beyond the current crisis.

The study also aims to look at figures relating to labour, exports and sales within the organisations that form part of the primary research sample. This will be done to determine whether these have been impacted by the crisis and how effected organisations are using them as strategic tools to overcome the implications of the crisis.

1.3.4. Research Hypotheses

This study aims to determine the extent to which strategy in the engineering manufacturing sector in KwaZulu-Natal has been affected by the global economic crisis.

The objective of this study is to investigate whether the global economic crisis has impacted on the engineering manufacturing sector in KwaZulu-Natal. If the crisis has impacted on the engineering manufacturing sector, then this study aims to determine whether the impact is so extensive that strategies had to be specifically adapted in order for SMEs in this sector to be able to survive. This study offers the following hypotheses:

H_1, the independent variable, being the global economic crisis has negatively impacted on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

H_0, the independent variable, being the global economic crisis has not impacted negatively on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

H_2, there is a global crisis.

H_0, there is no global crisis.

H_3, the global crisis is economic in nature.

H_0, the global crisis is not an economic crisis.

H_4, the global crisis has impacted on the engineering manufacturing sector in KwaZulu-Natal.

H_0, the global crisis has not impacted on the engineering manufacturing sector in KwaZulu-Natal.

H_5, strategies had to be specifically adapted as a result of the global crisis.

H_0, strategies did not have to be specifically adapted as a result of the global crisis.

1.3.5. Delimitation of the Study Area

This study focused on SMEs in the engineering manufacturing in KwaZulu-Natal, South Africa. A number of organisations in this study area were used in order to determine the strategic options available to SMEs in this sector.

The study was performed in KwaZulu-Natal due to the fact that the researcher is located in this region and this allowed the researcher to correspond with questionnaire respondents more easily. The researcher thus also has greater exposure to the economic activity in this area. This makes the study more relevant and of more interest. As previously stated, the researcher has also developed a relationship with a number of organisations in the engineering manufacturing sector that are located in KwaZulu-Natal and by choosing to focus the study on this region, the researcher was able to exploit these relationships.

1.4. Structure of the Thesis

The structure of the thesis is as follows:

- Chapter One: Introduction and Background

This chapter provides a brief introduction to the global economic crisis that is being experienced across the globe. It summarizes the route that the study takes as well as outlining the background of the research, the research problems, the purpose of the research, and the research hypotheses. The study area is outlined and the structure of the thesis is provided.

- Chapter Two: A Literature Review of the Global Crisis

This chapter outlines what is meant by the term global crisis prior to determining whether the current crisis is a global economic or global financial crisis. This study explores the causes of the global crisis and looks at the potential macroeconomic and market impacts of the crisis while paying particular attention to the impact of the crisis on the engineering manufacturing sector. In so doing, the engineering manufacturing sector is defined and the Standard Industry Classification (SIC) codes of the respondents are identified and described.

- Chapter Three: Strategic Options in Dynamic Business Environments

This chapter defines what is meant by the term strategy. The chapter then goes on to look at the importance of strategy while exploring the need for strategy to evolve and adapt. The impact of the global crisis on strategy is briefly discussed. This chapter then moves on to identify a number of models to optimise strategy. This section outlines and discusses a variety of models that may be used to develop a suitable and successful strategy. Finally the chapter looks at the strategic options that are available to organisations that want to grow and survive beyond the global crisis.

- Chapter Four: Research Methodology

This chapter defines the research problems, hypotheses and the nature of the research. The chapter then discusses the different data collection methods and data analysis techniques that were used in the course of the study. This chapter looks at questionnaire design as well as anticipated methods analysing the findings. The advantages and disadvantages of these techniques are then reviewed. This chapter explains the usefulness of the study and lastly analyses the ethical principles of the research performed.

- Chapter Five: Discussion of Results

This chapter briefly goes through each of the results obtained through the use of the questionnaire distributed to respondents to the study. These are then dealt with in detail so as to enable a further exploration of the results in conjunction with the aforementioned literature reviews and thereby determine what the findings of the study are.

- Chapter Six: Findings

This chapter outlines the findings of the research before going on to give an in-depth discussion of each finding. The findings of the empirical study are analysed in comparison to the expected findings based on the literature review.

- Chapter Seven: Conclusion, Limitations and Recommendations for Further Study

This chapter summarises the entire study and links the findings of the various literature reviews to the findings of the primary research where possible. This chapter then discusses the limitations of the study prior to making the recommendations for further study.

1.5. Conclusion

The economic crisis originated in a developed economy and was thus unlike any crisis that the world has previously experienced. The world was caught unaware and ill-equipped for a global crisis that, due to world markets being far more intimately connected than it was previously believed, was able to sweep unchecked from one country to another. Affected economies were not limited to those of first world countries but included emerging markets such as South Africa. It was originally believed that emerging markets would not suffer the same level of setbacks experienced by established markets. The effect of the crisis on different economies was expected to vary and no country remained unaffected.

This study aims to determine whether the strategies of SMEs in the engineering manufacturing sector have been affected by the global crisis to such an extent that they had to be specifically adapted in order to cope with the global crisis. The engineering manufacturing sector was one of the worst hit sectors in the South African economy. Due to the size of this sector, it was determined that the sample population would be limited to engineering manufacturing businesses within KwaZulu-Natal. If these strategies prove to be viable then the study hopes to provide SMEs with a sustainable framework to increase the success rate of SMEs beyond the current crisis.

CHAPTER TWO

LITERATURE REVIEW OF THE GLOBAL CRISIS

2.1. Introduction

In the previous chapter, introduction and background, a brief introduction to the global economic crisis was provided. The research problems, purpose of the research and the research hypotheses were outlined. The study area was defined and a description of the structure of this study was included.

This chapter will move on to provide a detailed literature review of the current global crisis. This chapter will determine whether there is in fact a global crisis, whether this crisis is a global financial or a global economic crisis and what the causes of the crisis were. It will then explore what the potential impacts of the crisis are, while paying particular attention to the impacts of the crisis on the engineering manufacturing sector.

2.2. A Global Crisis

This section will determine whether there is in fact a global crisis. It is important to determine whether there is a global crisis before moving on to determine whether it is a global financial crisis or a global economic crisis and what the potential impacts of the crisis are and will be, if there are in fact any.

The current global situation originated in the United States of America. This world leader is suffering the consequences of an economic recession that has already caused financial and economic changes to the economies of the world (Roodt, 2009, p.24). Chorn (2010, p.11) argues that the crisis struck with such force that it is highly improbable that any organisation could have predicted it or survived completely unscathed. It is important to take note of the fact that the consequences of the problems faced by America are not isolated to that country or organisations within that country.

DiPiazza (2009, p.8) states that by mid-September 2008 "All of the major advanced economies were either in, about to enter, a serious recession". This in itself is proof that there is a crisis. However, it must be noted that the scope of the crisis was not to be limited to advanced or first-world countries.

Initially, first-world countries such as the US appeared to be more apprehensive than their emerging market counterparts regarding the threat of the global crisis however, this soon changed when these first-world countries began withdrawing their capital from the emerging markets. The advanced economies of the world were forced to withdraw their investments in emerging markets in order to put this money back into their own struggling economies. DiPiazza (2009, p.9) points out that emerging markets had reason to be alarmed.

Wiemar (2008, p.8) indicates that the South African economy was holding up rather well when facing the start of the onslaught of the global slowdown in 2007. Ramcharan (2009, paragraph 2) agrees with this, arguing that "Sound macroeconomic policies have helped cushion the impact of South Africa's first recession since 1992". The fact that the economies of the world are described as uniformly slowing down reveals the extent of the problem that the world has been facing. The implications of a global slowdown could be disastrous and the course of this global slowdown should thus be carefully navigated by economies and organisations of the world. Pereira (2009, p.4) points out that organisations in emerging and advanced economies are still struggling with progressive implications of the recession. As the crisis can be seen to be affecting both advanced and emerging economies, it can be said that there is a global crisis.

Calitz (2009, p.1) agrees with this, stating that the current crisis caused the largest economic downturn since the Great Depression. De Rato (2007, p.8) goes on to state that the ramifications of the crisis on the global economy could extend beyond the initial financial market disorder and credit related problems that were seen during the lead up to the current global economic situation. Kato (2009, p.5) concurs, stating that world growth could decline to its lowest rate since the great depression. This shows that there is a global crisis and that the degree of this predicament is cause for worldwide concern.

Chew and Horwitz (2002, p.25) state that an economic recession in a world leading economy such as America may lead to a domino effect, causing organisations world-wide to suffer. As Chew and Horwitz predicted, the economic recession experienced by the US caused a domino effect to become imminent. The ramifications of the economic downturn have already been felt in countries around the world, adding weight to the statement made by Chew and Horwitz. Thus it can be seen that the globe is in a crisis situation where the impacts of one economic recession have been able to move and spread to other economies.

Even and Feldman (2009, p.181) argue that some countries may be unable to deal with problems that they encounter in extreme cases of economic downturn, such as the one that is currently facing the globe. This could lead to the inability of countries to meet their objectives and maintain internal stability - a serious consequence of an economic downturn. The realization of these

potential outcomes must serve as a warning to countries that they are facing a crisis. Countries must thus respond quickly and effectively if they are to have any hope of survival. McWilliam (2009, p.28) states that organisations cannot hide their heads in the sand if they want to survive the economic crisis. Rather, they must face it head on.

It can be seen that there is a global crisis. This can in no way be denied as economies across the globe are feeling the effects of the downturn. Countries, and organisations within these countries, can no longer hide from this truth if they are to have any hope of surviving the crisis. This crisis does not discriminate. Advanced and emerging economies alike were not left unscarred. It will now be determined whether it is a global financial crisis or a global economic crisis.

2.3. Global Financial or Economic Crisis?

In order to establish whether the current global crisis is a global financial crisis or a global economic crisis, it must first be determined what is meant by these terms.

Figure 2-1: Nature and Types of Business Cycles
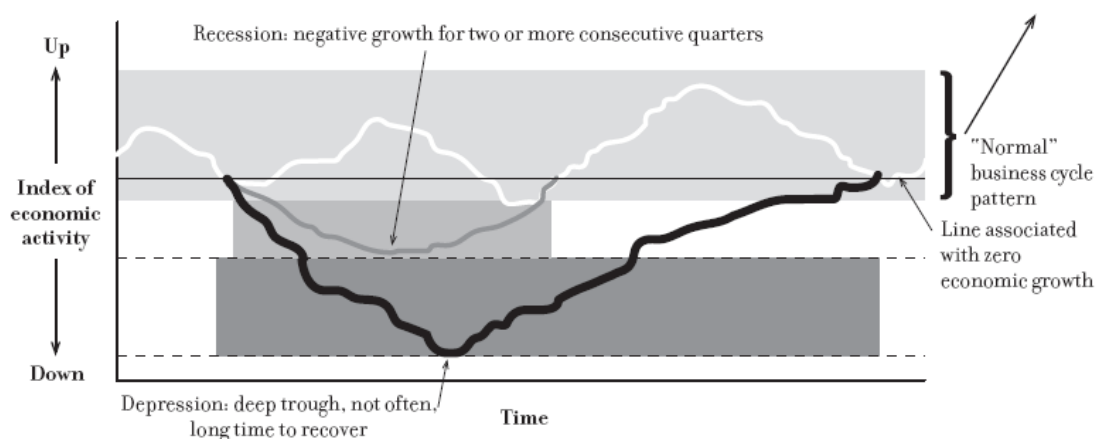
(Calitz, 2009, p.3)

A business cycle is the observable growth and decline of an economy (Calitz, 2009, p.3). All economies experience ups and downs. As can be seen in Figure 2-1 above, a "normal" business cycle is made up of a number of periods of growth and decline. These ups and downs or periods of growth and decline are repeated over time. It is impossible to determine in advance when these periods of growth and decline will occur, as they follow no predetermined pattern and their extent varies. Calitz (2009, p.3) defines a recession as the negative economic growth of a country, lasting two or more consecutive quarters. This means that a country will be regarded as being in a recession if the economy of that country experiences two or more quarters of uninterrupted negative growth.

A financial crisis occurs when the money supply is unable to meet the demand for money (Business Dictionary.com, 2010, paragraph 1). This leads to persons and businesses withdrawing their available funds from the bank so as to guarantee their individual cash flow. This causes banks to find other ways of increasing the supply of money to make up for their decreased liquidity. Even and Feldman (2009, p.181) argue that financial crises arise as a result of a breakdown in the operation of the financial system and that this is marked by "a slowdown in the flow of money".

An economic crisis occurs as a result of a financial crisis causing the economy of a country to experience an unexpected downturn (Business Dictionary.com, 2010, paragraph 1). Even and Feldman (2009, p.181) agree with this, stating that an economic crisis develops in the wake of a financial crisis. The symptoms of an economic crisis include declining GDP, decreased liquidity, and increases or decreases in the prices of goods as a result of inflation or deflation. An economic crisis can take the form of a recession or depression (Business Dictionary.com, 2010, paragraph 1).

Calitz (2009, p.3) notes that as a result of the fact that economic performance is measured with a time delay, it is often possible that a country can be in a recession without being aware that this is the case.

DiPiazza (2009, p.8) states that the crisis began as a global financial crisis but it has evolved into global economic deceleration. This global crisis should thus be considered to be a global economic crisis as it developed in the wake of a financial crisis. De Rato (2007, p.8) concurs, stating that a problem that started off as a financial credit-related problem has developed into a crisis with economic impacts. The global crisis can thus be said to have evolved into more than a disparity between the supply of money and the demand for money; in fact the implications of the crisis are so vast that it is impossible to determine what all of the consequences of the global economic crisis will be.

In the next section, the causes of the global economic crisis will be discussed.

2.4. Cause of the Global Crisis

The crisis that is impacting the globe originally started in the United States. The implications of this crisis were not isolated to its place of origin, but spread indiscriminately throughout the developed and developing nations of the world. It can be seen that each nation has not and will not be impacted in the same way or to the same extent.

The global economic crisis was set in motion by a number of interrelated factors. The first was the subprime mortgage crisis that was occurring in the United States. Kiptoo (2009, p.14) argues that the primary cause of the global economic crisis was the mostly unregulated, free market financial instruments being utilized in the United States. Calitz (2009, p.3) agrees with this and goes on to describe the US banking system as it was originally as a massive number of regional banks that experienced a number of difficulties as a result of transferring funds between regions with surplus savings to areas that had a shortage of funds. These regional banks encountered many problems when attempting to transfer funds from one bank that had more money than it needed to cover its financial obligations, to other regional banks that were unable to meet their financial obligations.

In an attempt to overcome the problems originating from the complex nature of the US banking system, Calitz (2009, p.3) states that the US government formulated a new system whereby they created two mortgage institutions that were able to issue housing bonds to persons in the United States and thereby acted as a nationwide financing instrument. Bonds issued by these two mortgage institutions were referred to as mortgage-backed securities (MBS) (Calitz, 2009, p.3). In other words, the government guaranteed these loans. This meant that the United States government would pay off any loans that were defaulted on. The two new mortgage institutions acted as intermediaries between those parties that had surplus funds and those that did not have enough funds and needed to borrow more; this was referred to as "securitisation of housing loans" (Calitz, 2009, p.3).

Calitz (2009, p.3) states that a market was created in which the "distance between the *de facto* lender and the underlying assets grew bigger and bigger, but the link with the home-owner and his/her ability to service the loan was not severed". The ability of the person who was responsible for lending funds, through these two new mortgage institutions, to repay the loans was not taken into account in this market. As a result of the fact that their ability to repay the loan was not considered when a person applied for a loan, loans were given to persons that were unable to afford the repayments. This resulted in an increasing number of defaults on the repayment of loans. Kiptoo (2009, p.15) states that this ultimately caused the sub-prime mortgage crisis to develop into a financial crisis, in which banks and other financial institutions were unable to meet their financial obligations resulting from their declining liquidity and cash flow.

Calitz (2009, p.3) states that in conjunction with this, an equivalent private mortgage-backed securities market was created; however, these mortgage backed securities were not government guaranteed. Private financial institutions protected themselves against the risk of lenders defaulting on their payments by taking out private insurance. These private financial institutions and their insurers thus also became involved in the creation of the global economic crisis.

Calitz (2009, p.3) identifies three major developments that allowed these housing finance practices in the United States to expand into the current global economic crisis. The first problem was that loans were extended to high-risk borrowers (Calitz, 2009, p.4). These high-risk borrowers suffered from low job and income security. Calitz (2009, p.4) states that these loans were extended to persons who were deemed to be high-risk borrowers as a result of governmental attempts to promote home ownership in the lower income groups of American society. These high-risk borrowers are the subprime clients referred to earlier.

The second problem that led to the global economic recession was the lenient monetary policy in the United States post 2000. The US government attempted to use this lenient monetary policy to counteract the effects of the recession in 2000 and to boost confidence in the market after September 11 2001 (Calitz, 2009, p.4). Calitz (2009, p.4) states that the American government later failed to tighten the monetary policy when inflationary pressure in the country increased and it was required. As a result of this, and the increasing amount of defaults in bond repayments, the balance sheets of banks and other financial institutions suffered.

Calitz (2009, p.4) states that the third development that ultimately led to the contamination of the global economy were the financial innovations, in the form of derivatives, that were created on the back of mortgage-backed securities. These were distributed globally through integrated financial markets. Basically, banks redistributed and reclassified mortgage loans into "derived financial instruments with different risk profiles" and sold them to investors all over the world. "This involved leveraging billions of dollars of debt to purchase companies and created hundreds of billions of dollars in wealth by simply shuffling paper, but not creating anything of value!" (Kiptoo, 2009, p.14). Investors later realised that these were worthless, as their worth was reliant on the ability of low-income households in the US to service their bonds and these were more and more frequently being defaulted on.

The global economic crisis that is confronting the globe is unlike other crises that have occurred in the recent past. This crisis did not originate in a developing market rather, it originated in one of the most powerful economies in the world, in America. As a result of the inextricably linked global financial markets, the economic crisis quickly spread to all corners of the globe and many countries have been thrown into a recession.

2.5. The Potential Impacts of the Global Crisis

In this section the potential impacts of the global economic crisis will be discussed under two headings: the potential macroeconomic and market impacts of the global crisis; and the potential sectoral influences of the global crisis.

2.5.1. The Potential Macroeconomic and Market Impacts of the Global Crisis

In this section an overview of the macroeconomic and market influences that have impacted the economy as a result of the global economic crisis will be provided, based on the economic impacts that Kiptoo has identified.

Boshoff (2006, p.62) identifies two types of crisis, namely contagious and non-contagious crises. Contagious crises originate in a specific country and then spread from there to markets in other countries. This is termed financial contagion and the crisis impacts quickly and significantly on the other markets. Non-contagious crises on the other hand do not spread quickly or impact other markets substantially at first (Boshoff, 2006, p.62). However, it is important to note that their impacts do eventually reach foreign shores, and these impacts, though delayed, are not necessarily guaranteed to be negligible. The current global economic crisis is most certainly of the first category as its impacts spread quickly and with a ferocity not seen before. This is in all likelihood due to the level to which the countries of the world are so inextricably linked.

Kiptoo (2009, p.16) identifies several economic impacts that may occur as a result of the global economic crisis. These will each be briefly discussed below.

1. Potential shortfall in Foreign Direct Investment (FDI) and other private capital flows

A decline in Foreign Direct Investment (FDI) and other private capital flows to countries that are heavily reliant on these sources of finance to tackle their current account shortages is likely to have dire consequences according to Kiptoo (2009, p.16). This means that countries that have a current account deficit and are reliant on FDI inflows into the country to help counteract or reduce their current account deficit may suffer as a result of decreased market confidence stemming from the global economic crisis. Balchin (2009, p.12) agrees with Kiptoo stating that one of the implications of the global economic crisis was a decline in the direct financial inflows into emerging or developing markets. A reduction in financial inflows including diminished foreign direct investment and portfolio flows. Balchin (2009 p.13) points out that the "effects of a decline in

foreign investment in Africa for countries [such as South Africa] that are currently financing large current account deficits could be particularly devastating".

Africa has been the recipient of major FDI and other private capital inflows over the past three or four years. Whether these inflows will continue to stream into the continent, in the light of the current global economic situation, is debatable. Kiptoo (2009, p.16) identifies two possible options; either there will be a substantial outflow of investment or households will tend to hold onto foreign currencies more than they have previously done due to dwindling confidence by the private sector. This will result in investments being withdrawn from the continent. The consequences of a slow down or decrease in private capital flows are likely to stretch beyond the short-term (Kiptoo, 2009, p.16). Although it is not clear what the exact consequences of a decrease in FDI will be, it can be seen that there will be far- reaching consequences.

The second option proposed by Kiptoo (2009, p.16) is that other countries may turn to Africa in search of attractive investment opportunities that they are unable to find elsewhere. Investors who lack confidence in developed markets, such as the United States and Europe, may turn to developing markets, such as those in Africa, to find more eligible sources of investment. Balchin (2009, p.14) argues that the reduction in the extension of credit in advanced economies may cause investors to look to emerging markets in search of more viable opportunities. The developed nations of the world have been amongst the hardest hit by the global economic recession. Many organisations, including banks, have been forced to close in first-world countries.

Harrilall (2010, p.23) states that confidence in the market is an important factor for investors to consider, he argues that "too strong" market confidence may pose a "major [threat] to overzealous investors this year". Maimbo (2008, p.1) notes that there has been an overall decline in the amount of risk that investors are willing to take on and that this is likely to result in a decrease in private investment flows. Market confidence plays an important role in capital investment flows. Investors should be cautious when making decisions with regard to where and when to invest, especially in terms of the current global economic crisis. Risk is a major factor that must be taken into account when making any decisions and investors must be sure that they are not making any hazardous choices.

2. Decline in tourism revenues

One of the economic impacts of the global economic recession could be a decline in tourism revenues. Kiptoo (2009, p.16) states that earnings from tourism will in all likelihood decrease as a result of the global economic crisis. This means that tourist hotspots, such as South Africa, are

likely to suffer from a downturn in the number of people coming to the country on holiday. The global economic recession may challenge countries that have been doing very well in growing and varying their sources of earnings through tourism (Kiptoo, 2009, p.16). The FIFA 2010 soccer world cup was held in South Africa and it was believed that this may help to curb the effects of the global economic crisis on tourism in South Africa.

3. Weaker export revenues

A likely impact of the global economic crisis is a decline in export revenues. Kiptoo (2009, p.16) states that countries that target developed nations such as the United States and the European Union to sell significant amounts of their commodities are likely to suffer as the global economic crisis causes these nations to decrease their level of demand. Balchin (2009, p.13) confirms this, stating that a "slowdown in global growth, coupled with a sharp decline in global industrial production, has [already] reduced demand for African exports". Wiemar (2008, p.10) stated that South African exporters were expected to struggle in 2008 and 2009 and that other developing nations would not avoid the same fate but would be likely to feel these effects as well. The United Nations Conference on Trade and Development (UNCTAD) (2009, paragraph 5) estimated that exports from the developing world could decline by as much as 9.2 percent in 2009.

A decrease in exports the world over was expected to be felt. This has major consequences for countries and businesses that generate income from exporting their products to other countries. Kiptoo (2009, p.16) points out that this would in all probability have a significant effect on the current account of countries that are heavily reliant on exports to generate income.

Kato (2009, p.12) writes that a decrease in export revenues was likely to have severe implications for countries that are heavily reliant on these inflows of funds. Many countries will have to survive with fewer resources and this may result in them being "unable to meet the heightened expectations of their populations for progress in reducing poverty and investing in infrastructure" (Kato, 2009, paragraph 12). The implications of a decline in export revenues are far-reaching and the corresponding reductions in governmental resources mean that populations of countries affected by the global economic crisis would be likely to feel the effects.

4. Financial contagion and spill overs for stock markets

Since the onslaught of the global economic crisis in March 2008, stock exchanges the world over have all suffered setbacks. Kiptoo (2009, p.16) indicates that "the MSCI emerging market index fell 23%"; this index includes countries such as South Africa.

The MSCI Emerging Market Index is an index that was developed by Morgan Stanley Capital International (MSCI) in 1987 (Bloomberg.com, 2010, paragraph 1). It is intended to determine equity performance in global emerging markets (Investopedia, 2010, paragraph 1). The MSCI Emerging Market Index is "a float-adjusted market capitalization index… [that consists] of indices in 26 emerging economies", South Africa being one of these (Investopedia, 2010, paragraph 2). South Africa falls under the MSCI EM (Emerging Markets) Europe, Middle East and Africa Index. This index measures the "equity market performance of the emerging market countries of Europe, the Middle East and Africa" and as of November 2008 consisted of nine emerging market country indices (MSCI Barra, 2010 paragraph 8). The Index is calculated in American Dollars on a real time basis and published every sixty seconds during trading hours (MSCI Barra, 2010, paragraph 4).

Kiptoo (2009, p.16) notes that "international investors are withdrawing in fear of what impact the crisis will have", and reports that South Africa showed a 27,49 percent decline in stock market indices in 2008. This poses a major threat to the growth levels in Africa, including South Africa.

5. Weaker fiscal revenues

Fiscal revenues are those revenues that are collected by the government through taxation. Kiptoo (2009, p.16) states that the decrease in demand for exports from the African continent and simultaneous decrease in Foreign Direct Investment (FDI) and other private capital flows will result in a slowdown in activity in the private sector. Kiptoo (2009, p.16) states that this in addition to a weakening exchange rate would result in weaker fiscal revenues. This is due to the fact that governments would have a declining tax base.

6. Inflationary pressure

Kiptoo (2009, p.17) states that inflationary pressure in Africa has been increasing due to the high prices of oil and food. Wiemar (2008, p.9) agrees with this, stating that surging inflation has severely decreased the disposable income of many households. The ever-increasing cost of goods and services is not being matched by increases in salaries and wages, resulting in financial strain being felt by many households. The high costs of importing oil and food has had massive negative impacts on the macroeconomic stability of the continent as a whole, and has contributed greatly to the current account deficits experienced by African countries, argues Kiptoo (2009, p.17). Enterprise Risk (2008, p.24) states that the South African Reserve Bank may have to increase interest rates if they are to curb the high inflation expectations. Inflationary pressure resulting from

the global economic crisis can thus be seen to be placing pressure on many households. This leads to households not being able to afford to live the same lifestyles that they have previously.

Contrary to this, the International Monetary Fund (2009, p.3) states that inflation pressures are subsiding in both advanced and emerging markets due to sluggish economic activity and declining commodity prices. The International Monetary Fund (2009, p.3) argues that commodity prices have been declining as a result of decreases in demand.

7. Slowdown in Real Sector Activity in Africa and Decline in Growth

The global economic was crisis is set to have a significant impact on real sector activity in Africa. The real sector "refers to the sector in which there are productions of goods and services through combined utilization of raw materials and other production factors such as labour force, land and capital or by means of production process" (Bank of Thailand, 2010, paragraph1).

The African Development Bank (ADB) (2008, p.4) points out that Africa's real sector activity was expected to be 5.5 percent for 2008 and 4.9 percent for 2009. When compared with previous predictions of 5.9 percent for both years it can be seen that the expected impact of the global economic crisis was serious.

The global economic crisis was expected to bring world growth to a virtual stop (Kato, 2009, paragraph 5). The current global economic crisis has resulted in the greatest decline in world growth since the great depression sixty years ago. Kato (2009, paragraph 5) states that the economies of the world continue to suffer due to the heightened financial pressure placed on them by the crisis but goes on to state that these economies should begin to expect the start of a recovery in terms of economic growth in 2010.

Figure 2-2 Recorded and Projected Real GDP Growth for World Economy and Groups of Countries (Percent Growth Rates on Right Axis, Quarter over Quarter, Annualised)
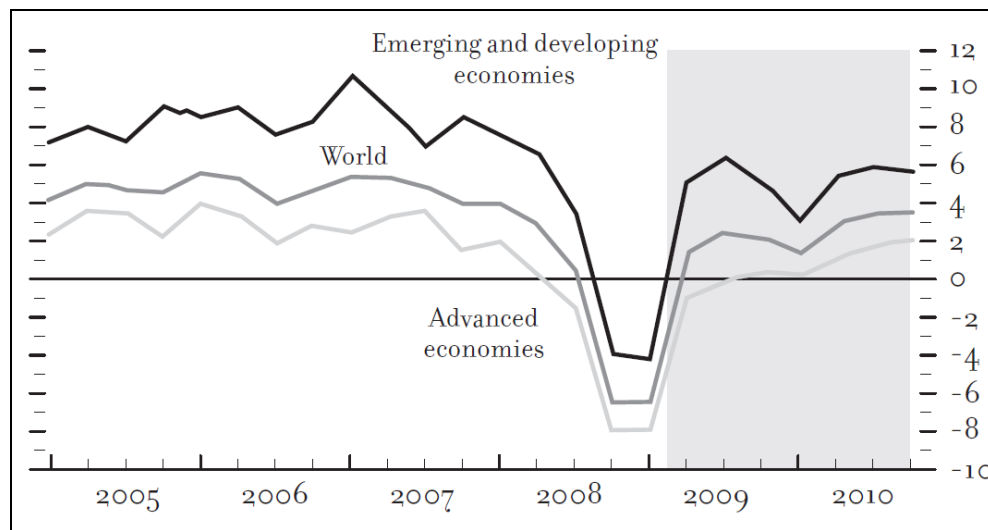
(Calitz, 2009, p.6)

As can be seen in Figure 2-2 above, the industrial nations of the world were the hardest hit by the global economic recession up until the end of 2010, whilst emerging markets were slower to feel the impact of the crisis. The developing market's growth was expected to suffer as a result of declining demand for export products and services, reduced capital inflows and an inferior commodity price states Kato (2009, paragraph 6).

8. Decline in Aid

Both the European and American economies are in a state of recession. This meant that these countries would be unlikely to afford to continue aid to African countries at the same levels that they had prior to the global economic crisis notes Kiptoo (2009, p.17). Kato (2009, paragraph 10) agrees with Kiptoo, arguing that the reduction of global credit has caused countries to reduce their investment into other countries. Roodt (2009, p.28) states that world leaders would be unable to continue their work in terms of contributing to poverty alleviation, as these countries would be focusing their attention inwards to their own country's problems. This would most likely mean a reduction in aid and this is certain to have dire consequences for the African continent.

9. Unemployment

Many businesses attempted to decrease their expenses in the light of the current global economic crisis. Kiptoo (2009, p.17) states that this would result in many businesses retrenching their employees. This trend became evident as soon as the effects of the global economic crisis reached South African shores. Buhlungu and Mtyingizana (2009, p.25) state that due to the number of

businesses being forced to reduce costs and even close their doors thousands of jobs have been lost.

It is speculated by the International Labour Organization (ILO) that as many as 51 000 000 jobs were predicted to be lost worldwide as a result of the current global economic crisis (BBC News, 2009, paragraph 1). This "would push up the world's unemployment rate to 7.1% by the end of 2009, compared with 6.0% in 2008 and 5.7% in 2007" (BBC News, 2009, paragraph 2). Buhlungu and Mtyingizana (2009, p.25) estimate that "anything between 500 000 and 1 million jobs have been lost so far" in South Africa.   Harrilall (2010, paragraph 1) states that "the KwaZulu-Natal economy lost 49 000 jobs during the fourth quarter of 2009", making it the worst hit province in terms of job losses in South Africa. Harrilall (2010, paragraph 11) states that the province as a whole lost 220 000 jobs this year, the manufacturing sector in KwaZulu-Natal constitutes 9 000 of these job losses.

Nieman and Nieuwenhuizen (2009, p.275) states that South Africa's unemployment rate is currently approximately 37 per cent, in real terms. This means that 6.9 million people out of a total of 18.8 million people that form the economically active population are unemployed. The effects of the global economic crisis on unemployment have the potential to be devastating in light of the fact that unemployment is already such a major problem in South Africa.

Buhlungu and Mtyingizana (2009, p.25) identify the mining, manufacturing and parts of the public sector as having been the worst hit in terms of job losses by the global economic crisis.

10. Effects on Poverty

The increase in unemployment levels is sure to have a massive effect on poverty. This combined with a drop in GDP will lead to an undoing of the progress made in African country's attempts at poverty reduction says Kiptoo (2009, p.17).

South Africa has a history of poverty that will only be intensified by the global economic crisis. Job creation is one of the major methods of counteracting poverty, and prior to the global economic crisis the economy has lacked the ability to create the number of jobs required to achieve this (Buhlungu and Mtyingizana, 2009, p.24). This problem has only been made worse by the number of jobs that have been lost as a result of the global economic crisis.

The prices of commodities and basic services have skyrocketed as a result of the global crisis. The price of basic foodstuffs, such as "bread, dairy products, meat, fish and fresh vegetables have

escalated out of the reach of thousands of households" and will have the greatest impact on the poor who were already struggling to make ends meet (Buhlungu and Mtyingizana, 2009, p.25). Buhlungu and Mtyingizana (2009, p.25) also mention the increases in other commodities such as fuel, energy, transport, health services and education as having a drastic impact on the population.

As can be seen from the potentially vast effects of the global economic crisis, most sectors in the economies of all countries would be affected to some extent. South Africa is no exception. As it will be impractical to attempt an in-depth analysis of all sectors in South Africa, this study will focus on one sector only.

2.5.2. The Potential Sectoral Influences of the Global Crisis

The potential sectoral influences of the global crisis will be discussed as the focus of the study is narrowed to focus on the engineering manufacturing sector.

Blake (2008, p.23) states that the current global crisis would impact all sectors of the economy. The engineering manufacturing sector is no exception. In order to determine what the impact of the global economic crisis on the engineering manufacturing sector in South Africa is, it is first important to define what is meant by the term the engineering manufacturing sector.

2.5.2.1 Defining the Engineering Manufacturing Sector

The engineering manufacturing sector is an extremely large sector that could include a wide array of organisations. For this reason, the Standard Industry Classification (SIC) codes will be used to define the parts of the engineering manufacturing sector that form the focal point of this study.

SIC codes are numerical codes designed by the United States government in order to create standardized descriptions of business establishments (Cipro, 2010, paragraph 1). These codes are used the world over. Each number in the SIC code is representative of something. The first number refers to a major economic division, for example manufacturing. The second number refers to a major economic group, for example crop production. The third number refers to the industry group, such as grains and fruits. The fourth number fine tunes the hierarchical structure into a specific industry.

This study has chosen to focus on the types of organisations as defined by their Standard Industry Classification (SIC) codes listed in Table 2-1 below.

Table 2-1 Standard Industry Classification (SIC) Codes of Respondents

SIC CODE	DESCRIPTION
3565	MANUFACTURE OF LIFTING AND HANDLING EQUIPMENT
3569	MANUFACTURE OF OTHER GENERAL PURPOSE MACHINERY
357	MANUFACTURE OF SPECIAL PURPOSE MACHINERY
3571	MANUFACTURE OF AGRICULTURAL AND FORESTRY MACHINERY
3574	MANUFACTURE OF MACHINERY FOR MINING, QUARRYING AND CONSTRUCTION
3537	MANUFACTURING OF INDUSTRIAL TRUCKS TRACTORS AND TRAILERS AND STACKERS

2.5.2.2 The Impact of the Global Economic Crisis on the Engineering Manufacturing Sector in South Africa

Now that the engineering manufacturing sector has been sufficiently defined and narrowed down to suit the purposes of this study, the impacts of the global economic crisis on the engineering manufacturing sector in South Africa can be looked at.

The majority of countries across the globe have been affected to some extent by the global economic crisis. South Africa has been no exception. Similarly, all sectors have been affected by the global economic crisis. This study has chosen to focus on the engineering manufacturing sector in South Africa in order to resolve the identified research problems.

The engineering manufacturing sector has been one of the hardest hit sectors and has been haemorrhaging jobs since the global economic crisis hit South African shores (Buhlungu and Mtyingizana, 2009, p.25). The massive loss of jobs is an indicator of the extent of the impact that the global economic crisis has had on the engineering manufacturing sector in South Africa so far. The number of jobs lost in the engineering manufacturing sector is alarming, with 9 000 of the 49

000 thousand people who lost jobs in KwaZulu-Natal in the last quarter of 2009 from in the manufacturing sector (Harrilall, 2010).

The Bureau for Economic Research and the University of Stellenbosch (2009, p.1) outline the performance of the manufacturing sector in the fourth quarter of 2009. In their executive summary, they identify and discuss a number of areas that have been impacted by the global economic crisis. These affected areas are mentioned briefly below.

Business conditions and confidence in the South African engineering manufacturing sector suffered a knock during the fourth quarter of 2009; however, 19% of producers expect business conditions to improve in a year's time. Domestic demand for manufacturers goods increased, albeit slightly, and the prices of goods were put under pressure to decrease by local consumers. Exports continued to decline however. Production volumes also continued to decline as a result of declining numbers of employees and export demand. The rate of increase in costs per unit increased for the first time since the start of the global economic crisis.

Figure 2-3 Overview of the Manufacturing Sector (Machinery)
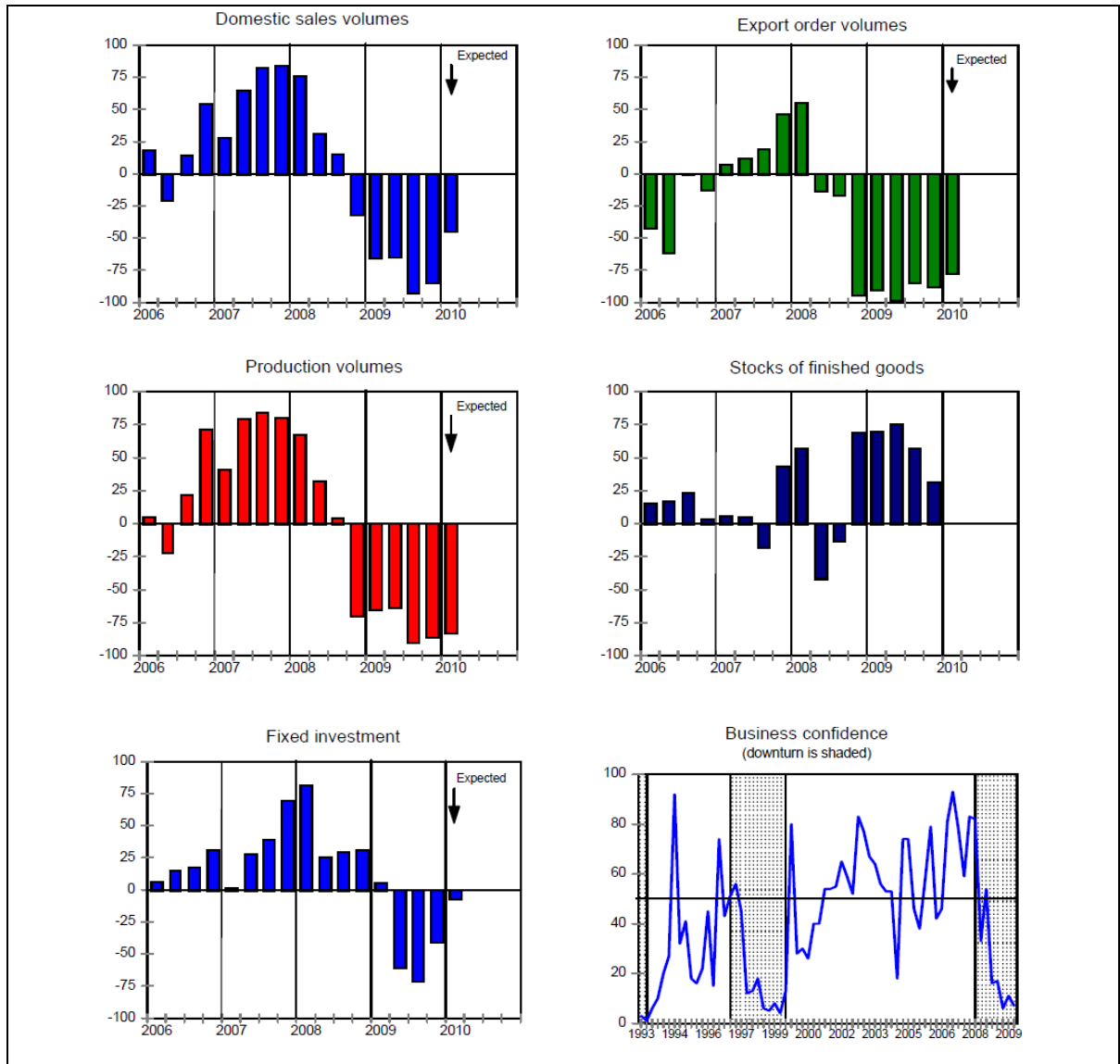
(The Bureau for Economic Research and the University of Stellenbosch, 2009, p.41)

Figure 2-3 above provides a graphical representation of the state of the manufacturing (machinery) sector over the past few years in South Africa, as well as representing the expected state of the sector in the first quarter of 2010.

As can be seen from the above figure, it was expected that domestic sales volumes, export order volumes, production volumes and fixed investment will all improve, with a resulting decline in the stocks of finished goods. Business confidence has been experiencing a downward trend following the effects of the global crisis. Although the expected results for the first quarter of 2010 show an improvement on the figures of the previous year, the outlook is bleak and the engineering manufacturing sector and organisations in this sector will have to look to formulating new strategies if they are to survive and grow.

The impacts of the global economic crisis on the engineering sector are outlined above. The subsequent section of this chapter will give a brief overview of what has been learnt through the literature reviewed in this chapter. Any conclusions that may have been reached will also be reiterated.

2.6. Conclusion

The crisis has been indiscriminate in its impact and has affected both emerging and advanced economies across the globe. It can thus be concluded that there is currently a global crisis.

All economies experience periods of growth and decline that are repeated over time however, the current crisis consists of more than two consecutive quarters of negative growth and must thus be considered as a recession. As it includes symptoms such as declining GDP, decreased liquidity, and increases or decreases in the prices of goods as a result of inflation or deflation, it must be considered a global economic crisis.

The potential impacts of the global economic crisis are vast and have been broken down into three subdivisions, starting with a broad macroeconomic view of the impacts of the global crisis and then narrowing the focus of these impacts to the sectoral influences of the global economic crisis on the engineering manufacturing sector.

The majority of countries across the globe have been affected to some extent by the global economic crisis. South Africa has been no exception. Similarly, all sectors have been, or are likely to be, effected by the global economic crisis.

The engineering manufacturing sector has been one of the hardest hit sectors and has been haemorrhaging jobs since the global economic crisis hit South African shores. Other impacts of the global crisis include declining business confidence, declining business conditions, and declines in demand. The impact of the crisis has been particularly harsh on the engineering manufacturing sector and it is essential that organisations look to new paths to improve their performance in the difficult months to come.

It is for this reason that strategy, in terms of its role in allowing organisations in the engineering manufacturing sector to survive and grow beyond the global economic crisis, will be defined and explored in the next chapter. The study will look at the impact of the crisis on strategy in terms of its need to be adapted and formulated by organisations in the engineering manufacturing sector in KwaZulu-Natal.

CHAPTER THREE

STRATEGIC OPTIONS IN DYNAMIC BUSINESS ENVIRONMENTS

3.1. Introduction

The previous chapter provided a detailed literature review of the current global crisis. Chapter two discussed whether there was a global crisis at this current time, whether the crisis is a global financial or a global economic crisis and what the causes of the crisis were. Chapter two also gave a detailed description of the potential impacts of the crisis, while paying particular attention to the impacts of the crisis on the engineering manufacturing sector in South Africa.

A detailed literature review of the strategic options in dynamic business environments will be provided. Strategy will be defined and the importance of strategy will then be discussed. The need for strategies to be specifically adapted as a result of the global crisis is also looked at in some detail, particularly with regard to the engineering manufacturing sector in KwaZulu-Natal, as this is the sector that will form the focal point of this study. This chapter will also look at some of the strategic options available to SMEs in order for these organisations to move forward in light of the global crisis.

3.2. Defining Strategy

This section will go on to determine what is meant by the term strategy, as in order to determine whether new strategies had to be specifically developed in order for SMEs in the engineering manufacturing sector to be able to grow and survive, it must first be determined what strategy is.

Ehlers and Lazenby (2004, p.2) define strategy as a premeditated action or series of actions that a business takes in order to best compete with its competitors (Ehlers and Lazenby, 2004, p.2). According to this definition, strategy is intentional, it is something that is thought out and planned. Strategy is depicted as an act or deed, something that is performed.

Thompson *et al* (2006, p.3) describe a company's strategy as "management's game plan for growing the business, staking out a market position, attracting and pleasing customers, competing successfully, conducting operations, and achieving targeted objectives". In terms of the aforementioned definitions, it may be determined that strategy is a deliberate plan for action that will result in positive outcomes for the organisation. These positive outcomes include attracting and pleasing customers in order to earn profitable benefits. Thus an organisation employing a

successful strategy can expect an inflow of money as a result of pleasing these customers. This definition though not exactly the same as Ehlers and Lazenby's has similar traits. For one, both definitions describe strategy as something deliberate. However these definitions do differ, Ehlers and Lazenby describe strategy as an action whereas Thompson *et al* describe strategy as a plan for action and where Ehlers and Lazenby state that strategy is used merely to best its competitors, Thompson *et al* describe strategy as a tool used to achieve a number of goals or positive outcomes.

The above definitions refer to the planned aspect of strategy. McGee *et al* (2005, p.6) on the other hand argues that definitions of strategy as a "plan or something equivalent…fails to recognize strategy as an emergent process, which is best seen as a pattern in a stream of decisions". Louw and Venter (2006, p.12) concur with McGee with the view that strategy is not merely a plan. McGee *et al* (2005, p.6) theorizes strategy in terms of strategic intent, which they describe as supplying a comprehensive strategic direction. McGee portrays strategic intent as being concerned with winning in a competitive game.

The most common definition of strategy may be credited to Alfred D. Chandler (1963 cited in McGee *et al*, 2005, p.7) who explains strategy as the determination of ways and setting aside of resources to achieve predetermined long-term goals and objectives.

These definitions of strategy may appear to be in disagreement with one another however, there are a few common elements that help to determine what strategy involves. McGee *et al* (2005, p.8) and Louw and Venter (2006, p.12) list these common elements of strategy as including:

- Strategies are able to help in the creation and development of organisational purposes.
- Strategy often occurs as a result of connections between the internal and external environments of an organisation in order to attain sustainable competitive advantage.
- Strategy determines the values and expectations of stakeholders and also describes the contributions that the organisation intends to make to its stakeholders.
- Strategy will in all probability effect operational decisions, while also defining tasks and processes of the organisation.
- Strategy is influenced by vision, it can be an expression of intent in terms of pushing the organisation to innovate, and move forward.
- Strategy is concerned with long-term direction and sustainable decisions.

For the purposes of this study a new definition of strategy was formulated using the definitions provided above. Strategy is the ever-evolving game plan of an organisation that determines what

resources and methods are required for the organisation to achieve its long-term goals and objectives, while still allowing for change to the strategy when and where it is required.

Heizer and Render (2006, p.32) state that strategies should take advantage of the strengths and opportunities in an organisation whilst steering clear of any threats and weaknesses. In terms of this it can be said that strategies should make the most of the opportunities that an organisation has and that organisations ought to look out for these opportunities. Organisations must also use their strengths to their best advantage and attempt to match their strengths to the opportunities that they are afforded. On the other hand, organisations should attempt to minimize their weaknesses where possible and if this is not at all possible then the organisation should try to circumvent their weaknesses to the best of their ability. Threats should also be dealt with swiftly and definitively.

Various definitions of strategy have been provided and discussed. These were then combined into one all-inclusive definition of strategy that looks at not only one aspect of strategy, but at many aspects of this multifaceted term.

3.3. The Importance of Strategy

Thompson *et al* (2006, p.2) state, "Without a strategy the organisation is like a ship without a rudder". Strategy provides an organisation with direction, it steers the organisation in the 'right' direction. A well thought-out and clearly defined strategy provides the management of an organisation with direction. Strategy provides an organisation with a clearly laid plan describing how to obtain the long-term goals and objectives of the firm. Without this guidance the organisation will have no direction and it is more than likely that it will fail. The quality of an organisations strategy determines how likely an organisation is to succeed and how well it will succeed.

Scarborough *et al* (2009, p.57) state that one of the purposes of a SMEs strategy is to build a competitive advantage. The reason for this may be determined by analysing some definitions of competitive advantage. Ehlers and Lazenby (2004, p.2) define competitive advantage as an advantage that a business has that its competitors are lacking. Competitive advantage may thus potentially be a strength or opportunity that an organisation has that other organisations do not have. McGee *et al* (2005, p.164) state that competitive advantage occurs as a result of the extra value that an organisation provides its customers with, thereby allowing the organisation to earn a greater sum of money for the product or service that the organisation provides. Competitive advantage can thus be said to result from providing the customers of an organisation with superior value. Porter (2001 cited in Louw and Venter, 2006, p.23) states that when "an organisation implements value-creating strategies that other competitors are unable to duplicate or are too costly

to imitate, it has achieved a competitive advantage". Through the analysis and combination of these definitions we are able to deduce that when an organisation provides its customers with greater value than its competitors, it is able to achieve an advantage over those competitors; as a result the organisation is able to earn a greater return. The key to maintaining this competitive advantage however, relies on the inability of competitors to duplicate or replicate the competitive advantage.

Scarborough *et al* (2009, p.57) argue that the key to an organisations' success lies in its ability to develop a distinctive core competitive advantage. An organisation's future survival is thus dependent on the ability of their strategy to develop such a competitive advantage. Strategy is therefore of some consequence and should be treated as such by all organisations both large and small.

An organisation that is focused on strategy is more likely to succeed than an organisation that does not do so. Uniting an organisation in one synchronized and consistent effort to execute a well-defined strategy helps to ensure that the organisation will achieve its targets (Thompson *et al*, 2006, p.35). An organisation is like a ship; if its strategy wants to lead the organisation in a specific direction, then all of the parts must be working together to achieve the end goal. It only hinders the progress if some of the parts are working in opposition to the other parts due to the fact that they are unsure of what the end goal is.

The subsequent section will cover the need for strategy to evolve and adapt.

3.4. The Need for Strategy to Evolve and Adapt

When defining strategy earlier in this chapter, it was stated that strategies should take advantage of an organisations strengths and opportunities whilst avoiding the weaknesses and threats. As the environment of an organisation is not constant and alters all the time, it is important that the strategy of an organisation changes to meet the changing environment.

Heizer and Render (2006, p.40) identify two motives for strategic alteration; the first results from shifts and changes within the business itself and the second results from transformations in the environment. Strategies must be adapted to suit the circumstances of the organisation and if their circumstances change, then so must their strategy. It is essential for an organisation to take the reason for the necessary change in strategy into consideration when formulating a new strategy or making alterations to an existing strategy. This is to ensure that the strategy positions the organisation to best utilize their strengths and opportunities in the internal and external

environments of the firm. Hill and Jones (2001, p.491) state that the first step toward change is for the manager or owner of the business to recognize that there is a need for change. This is often the most challenging step in the change process. Hill and Jones (2001, p.491) argue that the reason for this is that problems often develop little by little and the owner or manager of the firm is unable to pick them up. Other reasons for change may develop more quickly and these are usually easier to identify and thus deal with.

Strategy is an ever-changing thing; it is important that the strategy of an organisation is continuously evaluated. For example, if it is found that the strategy of a business is no longer working effectively, then the strategy must be altered so that it does work effectively. In some cases it may appear that there is nothing wrong with the strategy, but it has come to light that there are opportunities that are not being exploited through the current strategy. These opportunities must then be incorporated into a new strategy in order for the organisation to be better equipped to take advantage of them. A winning strategy from ten years ago is not necessarily going to be a winning strategy today. Environments change and so must strategy in order to ensure that it maintains a sustainable competitive advantage.

Porter (1998, p.165) states that innovation and change are intimately linked and an organisation that stops innovating and improving on their current business practices or product/service offering will be overtaken by their competitors. The key to achieving and maintaining a competitive advantage through innovation is for organisations to stay one step ahead of their competitors. Nieman and Nieuwenhuizen (2009, p.286) concur with Porter, stating that if an organisation does not continuously innovate and adapt then the organisation is likely to enter a state of decline.

It is important not to change merely for the sake of change. If an organisation is performing well and has a tight strategic fit then the organisation should focus on maintaining that performance through the use of their current strategy. Karn and Highfill (2009, p.73) state that the problem with organisations being preoccupied with constant improvement and change is that this causes faux change. Faux change occurs when there is no real need for change but when change is made either for the sake of change or for the sake of the changer.

Change is important in an organisation when that change is made for the best interest of the organisation. Changes and alterations to strategy are essential in the ever-changing environment that many, if not all, organisations find themselves in if they are to survive and grow. However, these changes must have an authentic reason to occur. Changes should not be made to organisations or their strategies if there is no real reason for the change. The impact of the global crisis on strategy will be looked at in the next section.

3.5. The Impact of the Global Crisis on Strategy

The preceding section looked at the need for strategy to change and adapt to the circumstances of an organisation. An organisation requires that its strategy be altered to suit its circumstances if and when the need arises. The global crisis has had major impacts on countries and organisations across the globe and thus provides a valid reason for the strategies of various effected organisations to be changed and adapted.

3.6. Models to Optimise Strategy

There are a number of tools that an organisation can use to help formulate a strategy with the best strategic fit for their specific organisation. These will be outlined and discussed under a number of subheadings in this section.

3.6.1. SWOT Analysis

This section will discuss the first of the tools that an organisation can use to formulate strategy, SWOT analysis.

McGee *et al* (2005, p.10) describe SWOT analysis as the starting point for strategy formulation. SWOT analysis should thus be seen as a foundation laying process whereby an organisation identifies its core competencies. If an organisation performs this process well at the start of their strategy formulation process then it will stand them in good stead for the future.

Stacey (2007, p.56) describes a SWOT analysis as the process of compiling a list of an organisation's strengths and weaknesses that can be identified by analysing the resources and capabilities of that organisation. Thompson *et al* (2006, p.85) define an organisational strength as something that an organisation does well or a feature of the business that improves on its competitiveness. In other words, strength is anything that allows an organisation to outperform its competitors. A weakness, on the other hand, is defined by Thompson *et al* (2006, p.90) as something that an organisation does not have or that an organisation is unable to do as well as their competitors. This in turn, prevents the organisation from competing effectively in the marketplace. A weakness may then be described as a disadvantage that an organisation has in relation to its competitors. This disadvantage leaves the business unable to compete effectively and should thus be dealt with quickly and efficiently.

Stacey (2007, p.56) goes on to state that a SWOT analysis also includes a list of the opportunities and threats facing the organisation. These opportunities and threats may be identified through an analysis of both the internal and external environments of the firm. Thompson *et al* (2006, p.90) point out that it is important to attempt to take advantage of those market opportunities that are most relevant to the business. Consequently, the opportunities that are most relevant to the business are those opportunities that "match up well with the company's financial and organisational resource capabilities, offer the best growth and profitability, and present the most potential for competitive advantage". The opportunity must therefore be available to the organisation and the organisation must have the required resources to take advantage of the opportunity. It should present a chance for growth and profit and the opportunity must be the best available in terms of the organisation acquiring a competitive advantage over its competitors.

A SWOT analysis is thus the compilation of a list of organisational strengths, weaknesses, opportunities and threats. The strengths and weaknesses of the business are identifiable through the performance of a thorough examination of the resources that are available to the firm, as well as of the capabilities of the firm, whilst the opportunities and threats may be revealed by closely evaluating the internal and external environments of the firm.

Stacey (2007, p.56) states that the strategy of firm should be formulated to take advantage of the strengths and opportunities of the organisation, whilst taking care to avoid the weaknesses and threats. Hill and Jones (2001, p.8) expand on this, stating that the core function of a SWOT analysis is to identify the strategies that "align, fit or match" the organisation's resources and capabilities to their external environment so as to ensure competent and successful performance.

A SWOT analysis can potentially generate a number of alternative strategies that an organisation must choose between, the choice that must be made is referred to as strategic choice (Hill and Jones, 2001, p.8). Strategic choice may thus be described as the second step in the SWOT analysis process. If an organisation performs a SWOT analysis but does not take the next step and choose the strategy that best encompasses their resources and capabilities then it can be said that the process was of no use. This is due to the fact that the organisation did not use the information that they had acquired. Hill and Jones (2001, p.8) state that purpose of strategic choice is for the organisation to adapt the strategies that would best facilitate the continued existence and affluence of the organisation in the ever-changing and competitive environment that is a distinguishing feature of most industries in this current age.

SWOT analysis is the first step that an organisation should take when creating or modifying their strategy. The following section will go on to outline the next model to optimise strategy, PEST analysis.

3.6.2. PEST Analysis

PEST is an acronym for political, economic, socio-cultural and technological. PEST analysis is used by organisations to evaluate their external environment and determine how the political, economic, socio-cultural and technological forces that the organisation is exposed to may effect the organisation. McGee *et al* (2005, p.13) explain that a PEST analysis involves assigning values to each possible event and that these values are calculated by multiplying the probability of the event occurring, by the potential outcome of that event occurring. A PEST analysis is thus the examination of the potential impact of possible political, economic, socio-cultural and technological events on an organisation.

The next section will discuss Porters five forces model. This model looks at the levels of competition that an organisation must contend with. The following section will discuss and define each of these levels of competition whilst looking at the enormous contribution that the use of the five forces model allows an organisation.

3.6.3. Porters Five Forces

Porter (1998, p.21) states that the core of strategy formulation is managing competition. Competition is thus a vital consideration when developing a strategy. Porter developed a model that enables an organisation to determine the state of competition that it is to face and contend with, known as the five forces model. The five forces model is represented in Figure 3-1 below.

Figure 3-1 Porters Five Forces Model

Threat of new entrants

Bargaining power of suppliers

The industry Jockeying for position among current competitors

Bargaining power of customers

Threat of substitute products or services
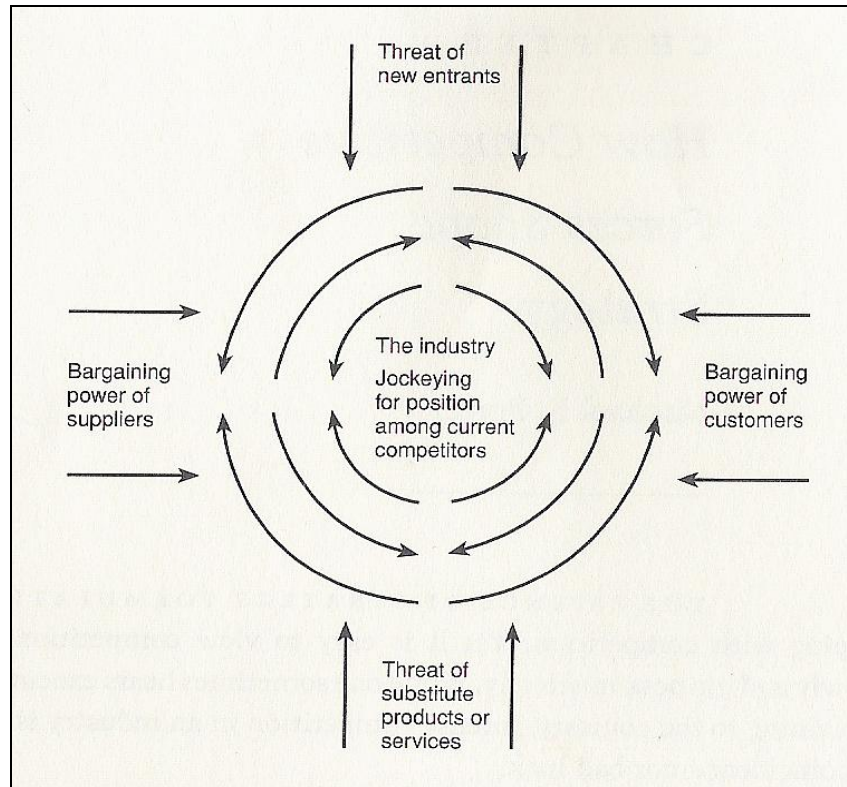
(Porter, 1998, p.22)

Porter (2008, p.25) states that organisations often view competition as too narrow a concept. As can be seen from the five forces model, competition can occur on five different fronts, one of which is that faced from the current direct competitors of a firm. The other four fronts that competition can occur on are the threat of new entrants; the threat of substitute products; the bargaining power of suppliers; and the bargaining power of customers. McGee *et al* (2005, p.149) states that these five forces ultimately determine industry profitability. The stronger or weaker each of these forces is, the more or less attractive the industry is as a whole and the smaller or greater is the profit available to be earned. Porter (2008, p.26) agrees with this, stating that industry structure, determined by the five competitive forces, decides the profitability of an industry in the medium and long term. If the competitive forces within a particular industry are high then the organizations competing in that industry are likely to experience similarly low profit margins, whereas if the competitive forces are relatively low then the organizations will achieve comparatively high profit margins.

"The extended rivalry that results from all five forces defines an industry's structure and shapes the nature of competitive interaction within an industry" (Porter, 2008, p.25). It is essential for an organization to understand the competitive forces that it is competing under as this knowledge allows an organization to effectively position itself whilst allowing the organization to defend itself

against the five forces, and even to shape the competitive environment to be of assistance to the organisation. Each of the five forces will be discussed in brief.

The first competitive force that Porter identifies is the threat of new entrants. Porter (2008, p.26) states that newcomers to an industry bring new capabilities and competencies. Newcomers to an industry often bring new ideas and methods of doing things with them into the industry. This forces organisations within the industry to adapt and innovate so as not to be outdone by their new competitors.

Entrants to an industry wish to gain market share (Porter, 2008, p.26). Organisations entering an industry not only want but also need to gain market share. It is essential that the newcomers to an industry succeed in this regard if they are to become successful in the field. The desire of the organisation to gain market share can put pressure on price structures and costs within the industry.

Porter (2008, p.26) states that the threat of entry is dependent on the level of the barriers to entry and size of the reaction by already established competitors in the market. Thompson *et al* (2005, p.51) agree with this, but argue that whether these barriers to entry are high enough is dependent on the resources and know-how available to the group of potential new entrants to a particular industry. It should thus be concluded that although new entrants can face high barriers to entry, this is not always enough to prevent the new entrants from entering the industry. If new entrants have enough resources and expertise under their control then those organisations may deem the barriers to entry to be surmountable.

McGee *et al* (2005, p.151) explain that organisations wanting to enter a new industry make an entry calculation. If the organisation finds that they face lower profit margins than competitors already established in the industry, then the new entrant is facing a barrier to entry. There are a variety of possible barriers to entry; however, these will not be discussed.

The second competitive force that Porter (2008, p.29) identifies is the power of suppliers. Porter (2008, p.29) states that dominant suppliers are able to keep a great deal of the value in an industry for themselves. This means that suppliers are able to limit or reduce the profitability of an organisation and in so doing increase their own profit potential if they are powerful.

McGee *et al* (2005, p.151) explains that suppliers can become powerful if there are a few large suppliers for the industry or if the supplier offers a product or provides a service that is essential to the production of the product or provision of service that the organisation provides. Suppliers can also become powerful if there are costs involved in switching suppliers. In other words, suppliers

are able to exert power over the organisations that they supply if those organisations are limited in sourcing the goods or services that they receive from other suppliers. Powerful suppliers are able to apply pressure on the organisations that they supply by charging high prices, limiting quality and/or services, or shifting costs to industry participants.

The third competitive force that Porter (2008, p.30) identifies in his five forces model is the power of buyers. Buyer power is the reverse of supplier power. Buyer power is thus explained by McGee *et al* (2005, p.151) as occurring as a result of having a few large buyers in an industry and having many small suppliers to that industry. The more options available to a supplier to source a product or service, the easier it is for buyers to switch between suppliers and exert power over their suppliers. Powerful buyers are able to contain more of the value in an industry for themselves by lowering prices, demanding greater value from their suppliers, or playing their suppliers up against one another (Porter, 2008, p.30).

McGee *et al* (2005, p.152) states that it essential for an organisation to find an equilibrium between buyer and supplier power as the greatest threat to industry profitability often originates from the supply chain of an organisation.

The fourth competitive force identified by Porter (2008, p.31) is the threat of substitutes. Thompson *et al* (2006, p.52) state that the threat of substitutes becomes evident in an industry when buyers believe goods or services provided by two or more adjoining industries serve as substitutes or alternatives to each other. A substitute product or service is thus one that provides the user with the same or a similar function as that provided by the industry. Examples of substitute products include sweetener as a substitute for sugar, and email as a substitute for conventional 'snail mail'.

McGee *et al* (2005, p.152) explains that unlike the threat of new entrants, the threat of substitutes is concerned with new methods of competing. The threat of substitutes involves coming up with new ways of providing the same outcome and thereby replacing the previous good or service with an alternative one. Organisations could miss identifying the threat of substitutes if they are not vigilant in their performance of the five forces analysis. Substitutes do not compete on a head-to-head basis and could therefore go undetected. Porter (2008, p.31) argues that profitability is at risk when the threat of substitute products or services is great.

The fifth and final competitive force identified by Porter (2008, p.32) is rivalry among existing competitors. Thompson *et al* (2006, p.44) argue that this is the strongest of the five forces. This is the easiest competitive force for organisations in an industry to identify, as it is the force that

organisations are most familiar with. Rivalry amongst existing competitors can take many shapes and forms such as discounting prices and having special promotions. Porter (2008, p.32) states that high degrees of rivalry amongst competitors limit profitability. Thompson *et al* (2006, p.44) concur with this, adding that organisations within an industry continuously evolve and adapt the landscape within which they compete.

The following section will explain the Boston Consulting Group Matrix in terms of its use as a model to optimise strategy.

3.6.4. Boston Consulting Group Matrix

The BCG growth-share matrix, depicted in Figure 6 below, was originally designed and made popular by the Boston Consulting Group. Kotler and Andreasen (1991, p.108) describe the Boston Consulting Group Matrix and the General Electric Model, which will be discussed in the subsequent section, as the most common portfolio management approaches. Prior to performing any portfolio management analysis, an organisation must divide the company being analysed into business units. These units can be categorised into groups by grouping same or similar types of products and/or services together.

Kotler (1997, p.72) explains that the size and position of each business unit in a company can be represented on a diagram such as Figure 3-2 below. The size of the circle representing the business symbolizes the monetary-volume size of that business unit, whilst the location of the circles on the figures signifies the market share and market growth rate of each business unit. Kotler (1997, p.74) explains that the purpose of consulting the BCG Matrix is that each business unit in a company is different and has its own potential. Thus each business unit must be addressed as an individual unit with its own needs and goals if it is to have any chance at success.

Figure 3-2 Boston Consulting Group Matrix
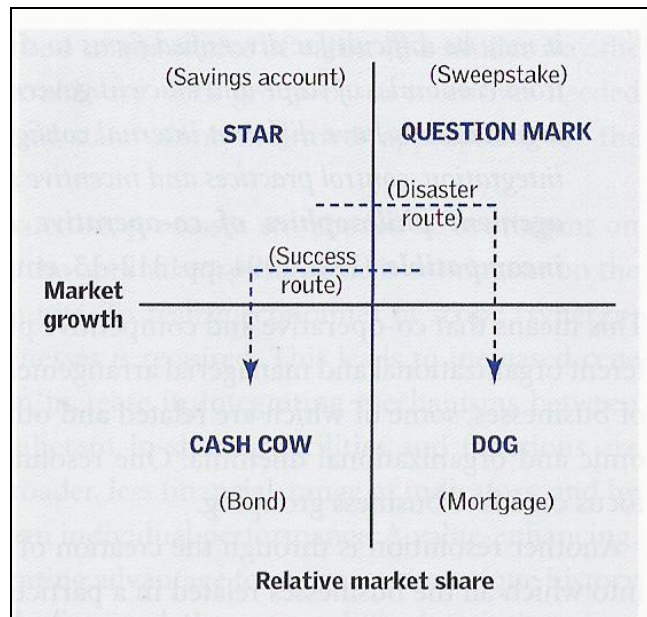
(McGee *et al*, 2005, p.356)

Kotler (1997, p.72) states that the market growth rate represented by the Y-axis depicts the "annual growth rate of the market in which the business operates". The relative market share of the business is represented by the X-axis and depicts the market share of the business unit in relation to the market share held by the unit's biggest competitor (Kotler, 1997, p.72).

As can be seen from Figure 6 above, the BCG Matrix is divided into four cells or blocks. Each of these blocks represents a different kind of business, namely: question marks; stars; cash cows and dogs. McGee *et al* (2006, p.356) describe cash cows as large organisations that produce more profit than is needed by the organisation. The excess money generated by these organisations is then able to be reinvested by the owners of the organisation into other organisations such as stars or question marks. Cash cows are typically perceived to be organisations that generate excess income that can be used to build other organisations or business units in a company to enable them to become better bottom line performers. Question marks are rather self-explanatory and are organisations that have an uncertain future. McGee *et al* (2006, p.356) describe stars as organisations that hold a strong position, in that they have a relatively large market share and high growth potential. Stars are organisations that have huge potential and if nurtured have the potential to turn into cash cows. Dogs on the other hand are business units that have a relatively low market share and low market growth rate. McGee *et al* (2006, p.356) state that dogs are often targets for divestment or acquisition by organisations wanting to merge them with other similar organisations in order to gain a larger market share.

Kotler (1997, p.73) states that once a company has plotted where each of its respective business units lies on the BCG Matrix, then it must be determined whether or not the portfolio of businesses is healthy. Once this has been determined, the organisation must determine what the goals and objectives of each business unit are, formulate strategies for each business to achieve these goals and objectives, and finally, assign a budget to each unit. Kotler (1997, p.73) identifies four strategies that can be used. They are to build, hold, harvest and divest.

The subsequent section will move on to discuss the General Electric Model.

3.6.5. General Electric Model

The General Electric Model, or strategic business planning grid as it is sometimes referred to, is used to plot the business strength and market attractiveness of business units within an organisation. Thompson *et al* (2006, p.214) state that organisations are able to plot the strategic locations of the business units of a diversified company using this model. A diagrammatical representation of the model is depicted below in Figure 3-3. As can be seen from the diagram, the business strength is represented by the X-axis and the market attractiveness is represented by the Y-axis.

The General Electric model allows organisations to plot each and every business unit in their organisation on a grid. As previously stated, this grid can be used to represent the business strength and market attractiveness of each unit within a company. Kotler and Andreasen (1991, p.110) state that market attractiveness can be determined by analysing the size of the market, the market growth rate, the profit margin of organisations operating in the market, competitive intensity, cyclicality and seasonality, scale economies, and the learning curve being experienced in the market. The strength of the business unit on the other hand can be determined by looking at factors such as program quality, efficiency level, market knowledge and, market effectiveness (Kotler and Andreasen, 1991, p.111).

Kotler (1997, p.74) explains that in the case of the General Electric model, (a) classification, the size of each of the seven circles represents the size of the market that each business unit participates in and the shaded part of each circle represents the part of the market that the business unit controls. Kotler (1997, p.76) goes on to explain that the nine cells making up the grid represent three different performance levels along both the X- and Y-axes. In the case of business strength, these performance levels are strong, medium and weak whereas, in the case of market attractiveness, the performance levels are high, medium and low. Kotler (1997, p.74) states that an organisation must perform well in both criteria if it is to succeed. Kotler and Andreasen (1991, p.111) agree with this, stating that organisations that find themselves in the upper left segments of

the grid are in an attractive situation. This is to say that an organisation that enters a highly attractive market must have the necessary strong business skills if they wish to have any hope of success and vice versa. Thompson *et al* (2006, p.215) state that a market is deemed to be highly attractive if it scores 6.7 or more, where the maximum potential score is ten and the minimum score is one. This is also true of business strength ratings.

Figure 3-3 General Electric Model
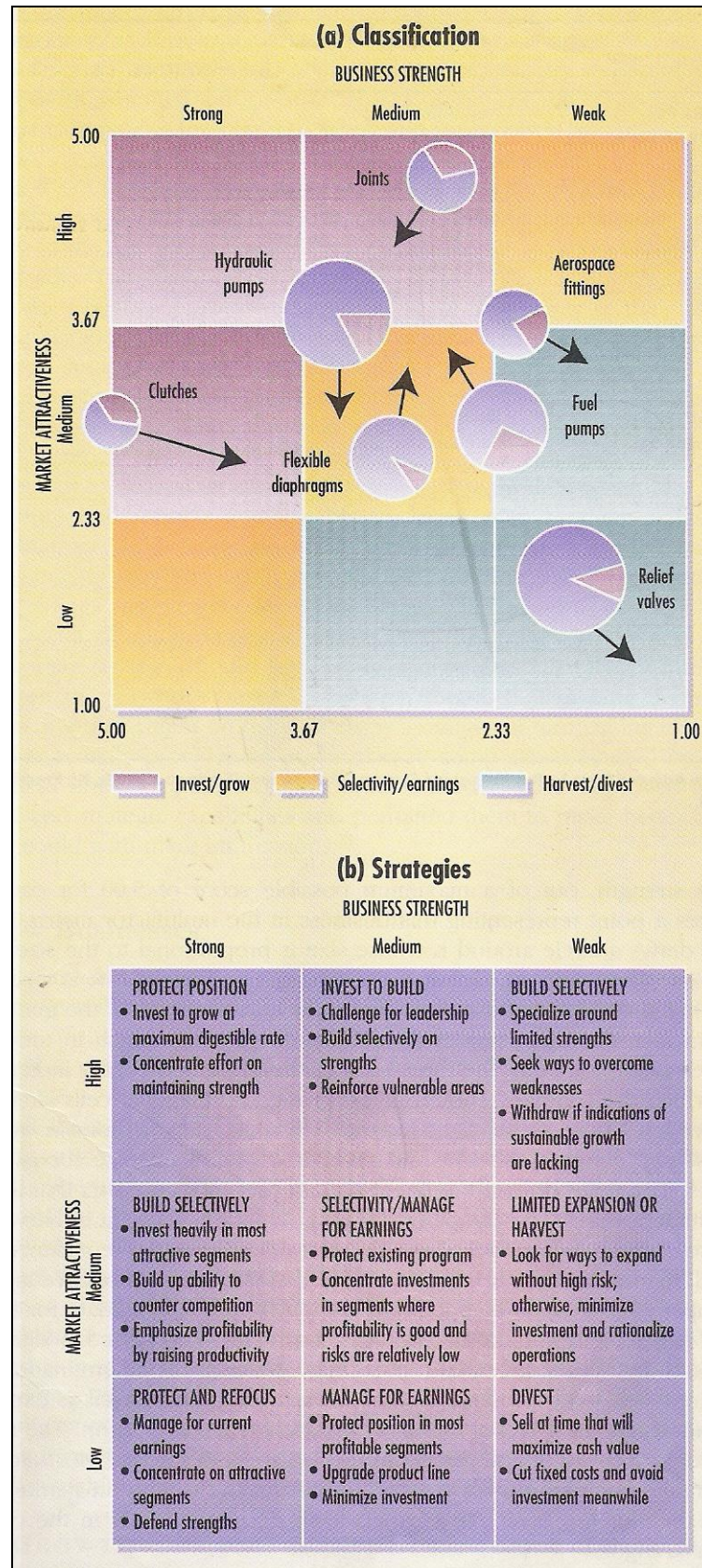
(Kotler, 1997, p.75)

There are two diagrams in Figure 3-3. The first of these, (a) classification, has been explained in brief above. It can be determined that this diagram allows organisations to plot the performance in

the two key areas of each business unit in a company. Once this has been done the organisation is able to use the second diagram, (b) strategies, as a guideline for what their future strategies should entail. The strategic suggestions made in (b) strategies vary according to the location of the business unit on the General Electric model. It can be seen that the suggested strategy for an organisation situated at the top left hand corner of the grid is far different to the suggested strategy for an organisation located at the bottom right hand corner.

The next section will discuss the life cycle model.

3.6.6. Life Cycle Model

There are two life cycle models that will be discussed and integrated in this section. These are the industry life cycle and product life cycle models. The industry life cycle model refers to an industry or organisation as a whole, whereas the product life cycle refers to the life cycle of one product offering of an organisation. McGee *et al* (2005, p.292) state that the difference between the life cycles of products and industries is their time scale. For example, the product life cycle of a computer game may be a few years, whereas the computer game industry's life cycle is far longer than that of an individual game.

Figure 3-4 Life Cycle Model

| Introductory | Growth | Maturity | Decline \ Rejuvenation |
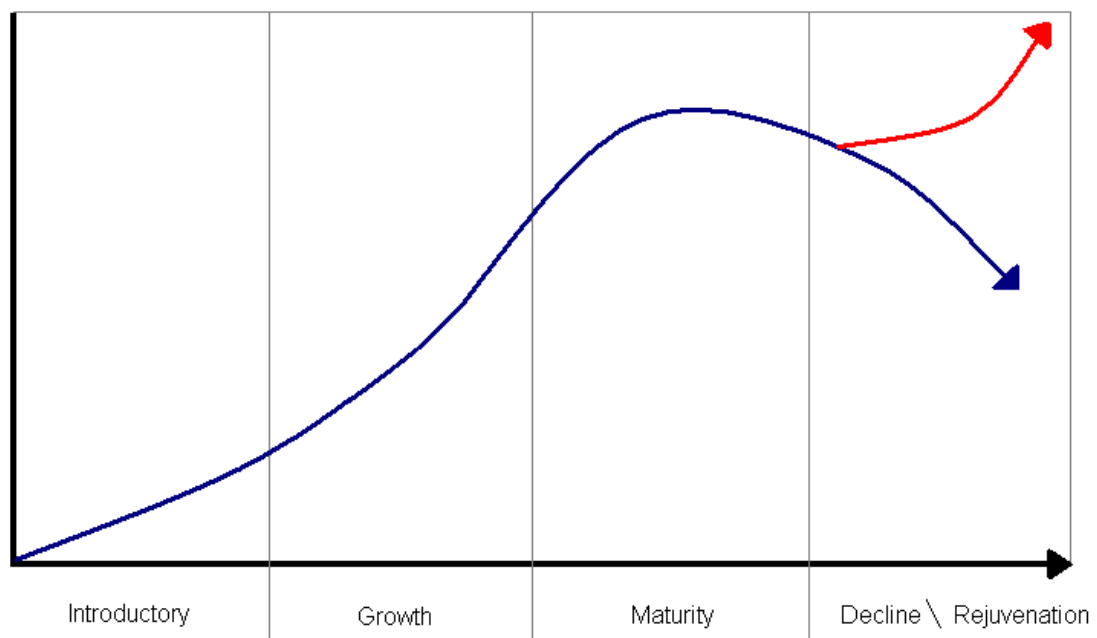
(Adapted from Nieman and Nieuwenhuizen, 2009, p.282)

As can be seen in Figure 3-4 above, the life cycle is typically separated into four stages. These are (1) Introduction; (2) Growth; (3) Maturity and; (4) Rejuvenation or Decline. These four stages of a

life cycle are not the same for all products, industries and organisations. Some stages may last longer than others and in some cases, the product, industry, or organisation may not move through all of the stages.

In the introductory stage of a product or industry, it is unlikely that an organisation will make much or any money, as it has to present its product or service to potential customers that may not be as enthusiastic about the product as the organisation is (Scarborough *et al*, 2009, p.331). The often-lacklustre performance of many organisations at this time is due to the fact that organisations are still trying to build a market for their product(s) and have yet to target their clientele effectively. Potential clients may obtain similar products or services from established competitors in the market or they may feel that they have no need for the product. McGee *et al* (2005, p.293) concur with Scarborough *et al* and state that the high costs at this stage of the life cycle are due to organisations having to overcome "customer resistance and inertia" as a contributing factor to the small or non-existent profit that most firms earn at this stage. Heizer and Render (2006, p.160) agree with this, adding that high expenditure is warranted due to research requirements, product development, process modification and enhancement, and supplier development.

The second stage of the life cycle model is known as the growth stage. This stage is often associated with high levels of acceptance and growth, hence its name. Scarborough *et al* (2009, p. 331) state that an organisation that reaches this stage is not guaranteed success. The organisation must continue to perform well and meet the needs of their market if they are to move out onto the maturity stage. Heizer and Render (2006, p.160) state that at this stage the organisation must look at production capacity forecasting and should ensure that they are able to accommodate the increasing demand that goes hand in hand with growth.

During the maturity stage, sales and the resulting profits continue to rise. Heizer and Render (2006, p.160) state that improved cost control would contribute greatly to maintaining profits at this time. It is essential that organisations at this stage look toward their future and plan for rejuvenation. An organisation that does not continue to innovate and change will find that their competitors have left them behind. As previously stated, an organisation that stops innovating and improving on their current business practices or product/service offering will be overtaken by their competitors. Nieman and Nieuwenhuizen (2009, p.286) concur with this, stating that decline is not unavoidable. Once the maturity stage of the life cycle is complete, an organisation that has not innovated will slowly start to show signs of decline and the organisation will see sales reduce drastically. Scarborough *et al* (2009, p.331) state that businesses in the decline stage suffer from severely reduced profit margins. However, Heizer and Render (2006, p.160) state that organisations need to be ruthless when changing processes and taking products off the market that

are no longer working. In this way organisations are able to contribute to their innovation processes.

Organisations must consider where their products or businesses are situated in the life cycle when determining what strategies are best suited to the organisation. Heizer and Render (2006, p.160) state that the reason for this is that strategies change as industries, organisations and/or products move through their life cycles.

Stacey (2007, p.56) states that the greater the volume of production of a certain product in an organisation, the more efficient the organisation becomes at the production of that product. This theory is known as experience curves. As an organisation becomes more practised or experienced at producing a product they become more experienced and thereby more efficient. As an organisation becomes more efficient, so their costs decline. Stacey (2007, p.57) links this theory to the life cycle model, arguing that as an organisation moves along their life cycle, they gain efficiency and their costs are reduced. Thus, the organisation is able to reduce their selling price. This process continues until finally a strong competitor moves beyond the reach of their weaker counterparts' production capacity.

This section discussed the life cycle model, outlining each of the phases and discussing in brief what is to be expected in these stages. As strategies must change to adapt to the changing circumstances of a business, it can be seen that the life cycle model would contribute to the selection process of a suitable strategy. The subsequent section will look at strategic options available to SMEs.

3.7. Strategic Options Available to SMEs

Thompson *et al* (2006, p.4) state that an organisation stands a strong chance of succeeding in a market and achieving better than standard profitability if they have a sustainable competitive advantage. Without a sustainable competitive advantage, the risk of being crushed by rival firms and/or becoming trapped into second-rate financial performance becomes increased. Ehlers and Lazenby (2004, p.2) add to this by recognizing that competitive advantage may be attained by implementing strategies such as low costs, a wide product or services offering (differentiation), or a focus on a specific market segment (niche marketing). Each of these strategic options will be discussed.

3.7.1. Low Cost Provider

The first strategic option that will be discussed is that of being the low cost provider in a particular industry. This section will outline what it means to be a low cost provider and describe how this strategy works.

Low cost providers aim to sell their products or services to customers at the lowest possible price. An organisation would have to be number one or number two in a market in order to adopt this strategy. Organisations that adopt the low cost provider technique as an approach generally sell a highly standardised product or service which appeals to a broad target market (Ehlers and Lazenby, 2004, p.123). This means that in order for a business to compete on this basis, it is necessary for them to sell a product that is easily produced and replicated by that organisation. The target market should also be of a significant size.

A cost leader competes on the basis that they are the most efficient producer of a product in a market and are thereby enabled to sell their products at a price that their competitors are unable to beat (Nieman and Nieuwenhuizen, 2009, p.292). The cost leader in a particular industry or market needs to be well organised and must make the most of any price advantages that they are able to.

Coca-Cola is an example of an organisation that is positioned correctly to use low cost as a strategy to gain competitive advantage, as they are number one in the market. It is unlikely that many of their competitors would start a price war with them as they have achieved a high level of profitability and have been able to accumulate large reserves of capital to ensure that they will be able to defend or expand their market share (Ehlers and Lazenby, 2004, p.125).

The following section will move on to discuss the second strategic option available to organisations, differentiation.

3.7.2. Differentiation

Differentiation occurs when an organisation tries to make their products or services appear to be different to those of other organisations. McGee *et al* (2005, p.201) describe how differentiation may entail physical details such as quality, reliability, performance, or design features or other non-physical elements such as reputation or branding.

An example of differentiation as a strategy to obtain competitive advantage is a convenience store that stays open twenty-four hours a day, seven days a week. These longer hours provide the

customer with better service, as they are able to purchase the items that they need at any time of day or night. Staying open longer hours allows the organisation to charge a premium, as customers who value this service will be willing to pay that premium.

Ehlers and Lazenby (2004, p.100) state that an organisation must differentiate itself from its competitors in ways that its customer base will observe as value. In other words, it is important that an organisation intending to use this strategy as their basis for achieving competitive advantage distinguish their organisation, product and/or service from that of their competitors. "The basing of business success on marketing, advertising, and image-building activities, the purpose of which is to set the product apart from others in the sector and maintaining the ability to sell at a premium price" is a result of using differentiation as a business strategy (Nieman and Nieuwenhuizen, 2009, p.292).

The consequent section will move onto the third strategic option available to firms wanting to gain a competitive advantage, niche marketing.

3.7.3. Niche Marketing

Niche marketing occurs when an organisation narrows their target market and then gains a competitive edge over its competitors by producing a more desirable product than its competitors and thereby serving the special requirements and preferences of consumers constituting that niche (Thompson *et al*, 2006, p.4). In order to make use of this strategy it is essential that the organisation provides their target market with a product that the consumer wants or needs but is unable to or unlikely to find anywhere else.

An example of an organisation that uses this strategy would be a hairdresser who specialises in cutting children's hair. This type of organisation would be offering a distinctive and narrow range of products and/or services to their clients, who make up a narrow niche in the market. Nieman and Nieuwenhuizen (2009, p.292) state that a focus or niche basis for strategy does exactly this when determining what part of the market they would like to serve.

The following section will move on to discuss the fourth and final strategic possibility for organisations wanting to gain a competitive edge over its rivals, expertise and resource strengths.

3.7.4. Expertise and Resources Strengths

Thompson *et al* (2006, p.4) identifies one other frequently used strategic approach to gaining sustainable competitive advantage. This is the development of "expertise and resource strengths that give the company competitive capabilities that rivals can't easily imitate or trump with capabilities of their own" (Thompson *et al*, 2006, p.4). Expertise and resource strengths involve developing competencies and resources that make it difficult for rival businesses to duplicate their business practices. This includes, but is not limited to, the way in which the organisation is run, as well as the production techniques employed and services that are offered.

For instance FedEx has superior capabilities in next-day delivery of small packages.

3.7.5. Maintaining the Competitive Advantage Gained Through the Selection of One of the Aforementioned Strategic Options

The previous section briefly described the fourth strategy available to organisations wanting to compete effectively in a market. This section will discuss how an organisation that has successfully implemented one of the abovementioned strategies can maintain the competitive advantage that they have gained.

Ehlers and Lazenby (2004, p.231) point out that in order to facilitate and sustain a competitive advantage in an ever-changing and uncertain environment, a business must seek to constantly improve the organisation through their strategic management process. Once an organisation has gained a competitive advantage it is imperative that the organisation continues to evaluate that competitive advantage and improve on it wherever and whenever possible. This is not to say that an organisation should alter a strong, sustainable competitive advantage; the key to success lies in knowing when something needs to be improved on or altered and knowing when something should remain unchanged.

McGee *et al*, (2005, p.207) identifies five key points that the sustainability of competitive advantage is dependent on:
- Power – maintaining the levels of commitments in resource terms relative to competitors.
- Catching up – the ease of copying any advances, and thereby nullifying them. The easier it is to copy advances, the less sustainable the competitive advantage.
- Keeping ahead – this describes how fruitful an organisation is in their search for superior or new competitive advantages. The more productive they are the greater the sustainability of their competitive advantage.

- The changing game – the rate at which the requirements of the customer change. If the customers' requirements change faster than the organisation is able to satisfy the requirements, then the organisation will be unable to achieve a sustainable competitive advantage.
- The virtuous circle – this refers to the self-sustainability and mutual reinforcing of existing advantages.

It is through the fulfilment of these key points that an organisation will be able to maintain their competitive advantage once they have achieved it.

3.8. Conclusion

An organisation that is focused on strategy is more likely to succeed than an organisation that does not focus on strategy. Strategies should make the most of the opportunities that an organisation has whilst taking care to avoid the threats that the organisation will face.

A strategy that is effective today may not work as well in few months or years' time, thus a strategy must change to best enable the organisation to take advantage of the opportunities that they come across and evade the threats that they are confronted with. Another motivation for change is competition. Competitors are likely to overtake an organisation that stops innovating and improving on their current business practices or product/service offering. It is important to remember however, not merely to change for the sake of change alone.

There are a number of tools that an organisation can use to help formulate a strategy with the best strategic fit for their specific organisation that were included in this chapter, namely: SWOT analysis; PEST analysis; Porters Five Forces; Boston Consulting Group (BCG) Matrix; General Electric Model; and the Life Cycle Model. If used correctly, these models better enable organisations to analyse their internal and external environments and thereby select and implement the strategy that is best suited to them.

The key objective of strategy is to attain a sustainable competitive advantage so as to out compete the competitors that an organisation faces. Once an organisation has analysed their internal and external environments suitably, they typically have four generic strategies to choose from. These four strategies are: low cost provider, differentiation, niche marketing, and expertise and resource strengths.

To facilitate and maintain a competitive advantage in an ever-changing business environment, an organisation must constantly seek to improve itself through the revaluation of its strategy. The key to success lies in knowing when to change and when to maintain the existing method of operation.

This chapter detailed the key points of strategy that are important to organisations wanting to adapt and thereby survive the global economic crisis. The subsequent chapter will discuss the research methodology that was used in this study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. Introduction

The previous chapter consisted of a detailed literature review of the strategic options available to organisations in dynamic business environments. The term strategy was defined before discussing the importance of strategy and detailing the need for strategy to continuously evolve and adapt to its ever-changing environment. A variety of models were explained. These included: SWOT analysis; PEST analysis; Porters five forces model; BCG matrix; General Electric Model; and the Life Cycle Model. The chapter then moved on to identify four strategic options available to SMEs. The four strategies discussed were limited to: low cost provider; differentiation; niche marketing; and expertise and resource strengths. Once these strategic options were introduced and outlined, the importance and means of maintaining any competitive advantage achieved through their application was explored.

The current chapter discusses the research methodology employed by this study. The research problems, hypotheses and objectives of the study will be revisited and discussed in greater detail than they were covered in chapter one. The nature of the research will be outlined. The sampling frame, sample methods and limitations of these sampling techniques will then be described. Following this, the design of the questionnaire will be explained thoroughly. Finally the data capturing techniques and analysis of findings methods will be looked at critically.

4.2. Research Problems

This section will look at the research problems. There are both primary and secondary research problems. The primary research problem will be dealt with first. It will be identified and discussed prior to outlining the secondary research problems

4.2.1. Primary Research Problem

This study aimed to determine the extent to which strategies in the engineering manufacturing sector in KwaZulu-Natal have been affected and needed to be specifically adapted in order for SMEs in this sector to be able to survive and grow beyond the crisis.

The degree to which the global economic crisis has affected the strategies of organisations falling within the identified sector is to be determined if in fact they have been affected at all. Once it has

been determined whether the strategies of these organisations have been affected by the crisis, the manner in which the strategies have been affected will be identified and discussed.

4.2.2. Secondary Research Problems

Five secondary problems have been included for consideration. These problems, though not the main issues that are to be resolved through this study, add a great deal of insight and if sufficiently resolved contribute a substantial amount of knowledge around the primary problem. Knowledge gained through the resolution of these secondary problems would greatly contribute to the final findings of the study.

The first secondary research problem that must be resolved is whether there is a global crisis. It is essential to determine whether or not there is in fact a global crisis prior to attempting to determine what the implications of such a crisis are on the strategies of organisations in the aforementioned engineering manufacturing sector.

The second problem that will be looked at is whether the crisis is a global economic crisis or a global financial crisis. It is important to know which type of crisis an organisation is facing, as the implications of each are different. Knowing what an organisation is up against allows the organisation to more accurately put steps in place to deal with the situation more effectively and efficiently.

The third problem is whether or not the engineering manufacturing sector has been affected by the global economic crisis. This is an essential component of the study as it relates directly to the primary research problem. For example, if the engineering manufacturing sector has not been affected by the global crisis then what reasons would the organisations in this sector have for altering their strategies, or is it due to their strategies that the sector managed to escape unscathed? If, however, the organisations in the engineering manufacturing sector have been affected by the global economic crisis, then how did they adapt their strategies to effectively manage the situation that they were confronted with?

The fourth secondary research problem relates to the types of strategies that would be able to be specifically adapted in order to deal with the global economic crisis. The resolution of this problem aims to determine what types of strategies organisations would be able to put in place in order to protect them from and take advantage of the crisis situation.

The fifth and final secondary research problem aims to determine what local, national and international strategies there are available for SMEs in this sector to enable them to survive and grow beyond the crisis.

The research hypotheses will be discussed.

4.3. Research Hypotheses

The extent to which strategy in the engineering manufacturing sector in KwaZulu-Natal has been affected by the global economic crisis is to be determined through the two literature reviews, and primary research conducted within organisations falling into the identified sector.

The objective of this study is to investigate whether the global economic crisis has had an impact on the engineering manufacturing sector in KwaZulu-Natal. If the crisis has had an impact on the engineering manufacturing sector, then this study aims to determine whether the impact is so extensive that strategies had to be specifically adapted in order for SMEs in this sector to be able to survive. This study offers the following hypotheses:

H_1, the independent variable, being the global economic crisis has negatively impacted on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.
H_0, the independent variable, being the global economic crisis has not impacted negatively on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

H_2, there is a global crisis.
H_0, there is no global crisis.

H_3, the global crisis is economic in nature.
H_0, the global crisis is not an economic crisis.

H_4, the global crisis has impacted on the engineering manufacturing sector in KwaZulu-Natal.
H_0, the global crisis has not impacted on the engineering manufacturing sector in KwaZulu-Natal.

H_5, strategies had to be specifically adapted as a result of the global crisis
H_0, strategies did not have to be specifically adapted as a result of the global crisis.

4.4. Research Objectives

The research objectives are listed below. These research objectives attempt not only to provide answers to the research problems but also to offer organisations participating in this study with solutions and information relating to the global crisis. In so doing, the answers or solutions to these problems will better equip organisations to deal with similar situations in the future.

- Provide answers to the research problems identified earlier in this chapter.
- Determine what caused the global crisis.
- Determine what strategies could be used to protect organisations from similar situations as well as allowing organisations to grow.
- Provide organisations with information that will better equip them to deal with similar situations in the future.

This section outlines the research objectives, the following section will move on to discuss the nature of the research.

4.5. Nature of the Research

The research to be included is both quantitative and qualitative in nature and these aspects will be discussed under subheadings within this section.

4.5.1. Quantitative Research

Welman *et al* (2008, p. 6) states that quantitative research, also referred to as the positivist approach, is limited to that observable data that can me measured objectively. Thus quantitative research must not include the opinions or feelings of respondents. Quantitative research typically evaluates objective data consisting of numbers.

A typically quantitative research method, in the form of questionnaires, was used to obtain primary data from respondents. These questionnaires aimed to collect data and thereby establish whether there is a relationship between the independent and dependent variables identified earlier in this chapter. Hopkins (2008, paragraph 2) states that quantitative research aims to establish the relationship between two variables, namely the independent and dependent variables. This is referred to as hypothesis testing. The questionnaire included a number of pre-coded questions that respondents must answer. These questions provided respondents with a choice of answers that they were able to select from.

The respondents' responses were analysed using statistical technology. This forms the basis of the quantitative aspect of the research. Although the nature of the research is primarily quantitative, qualitative research methods were also included. The qualitative nature of the research will be discussed below.

4.5.2. Qualitative Research

Quantitative research is said to exclude the human experience. Welman (2008, p.6) explains that qualitative, or anti-positivist research holds that it is "inappropriate to follow strict natural-scientific methods when collecting and interpreting data". Qualitative data allows for the researcher and respondents to delve deeper into the problems being experienced by allowing respondents to explain how and why they perceive situations occurred and what could possibly be done to rectify them. For this reason a qualitative aspect has been included in the research methodology.

While the questionnaire was still used to collect data from respondents, the questionnaire left a space after each question where respondents were asked to elaborate on and explain their answers. This allowed for a greater understanding of the answers provided by respondents.

The next section will move on to look at the sample frame of the study.

4.6. Sample Frame

As it is impractical to investigate the entire engineering manufacturing sector as a whole, a sample of this sector has to be selected. However, in order to draw a sample of the population it is essential that the population as a whole is defined first. In terms of this study, the population is identified as all organisations falling within the previously provided Standard Industry Classification (SIC) Codes in the engineering manufacturing sector in KwaZulu-Natal.

Hopkins (2008, paragraph 15) states that in order to be able to make generalizations as a result of the research, the sample must be representative of the entire population. In order to obtain a representative sample, the sample should be chosen at random and should be large enough to represent a broad spectrum of the organisations within the specified sector. A selection of thirty organisations falling within the specified sector were chosen as possible respondents to the questionnaire. The respondents were then contacted and the questionnaire distributed amongst them. A minimum response of twenty organisations was anticipated.

Hopkins (2008, p.16) states that selection bias may occur as a result of the sample not being fully representative of the population.

The sample frame has been identified. It consisted of thirty questionnaire respondents that form a sample of the entire identified population. The sampling method will be described below.

4.7. Sampling Method

The sampling method refers to the manner in which the sample will be carefully selected to represent the population as a whole.

A convenience sample was used to perform the study. Convenience sampling requires that those cases or organisations that are easiest to obtain are selected to form the sample population (Welman, Kruger and Mitchell, 2008, p.149). A convenience sample was used as it is the method of sampling that was most suitable. This is due to the fact that there were limited funds available to perform the study and as such it was not possible for the researcher to travel throughout KwaZulu-Natal in order to gain access to a representative sample of organisations in the engineering manufacturing sector. Time constraints were also an area of concern. There was insufficient time available to perform research with enough organisations in the specified sector to gather a representative sample. The researcher has a relationship with a few organisations in the engineering manufacturing sector through her family and this enabled the researcher to gain access to these organisations more easily. It is for these reasons that the convenience sampling method was used during the process of this study.

Selection criteria were used when selecting firms for the convenience sample. These selection criteria were used to ensure that the convenience sample comprised of SMEs that were able to contribute data that is relevant to the study. Respondents were chosen based on the following four criteria. First, the respondents had to be willing to participate in the study. Second, the chosen respondents were only selected if they fell within the specified geographical area, i.e. KwaZulu-Natal. Third, the SMEs must have been in existence for five years or more. This was to ensure that the organisations had sufficient working knowledge of their environment so as to act as reliable sources of data. Last, the organisations must form a part of the engineering manufacturing sector that is, the sector that is the focus of the study.

The sampling methods have been discussed in detail in this section. Selection criteria were included to limit the respondents to those who are believed to be able to contribute the most

valuable data in terms of the nature of the research. The limitations of these sampling techniques will be discussed below.

4.8. Limitations of Sampling Techniques

There are a number of limitations to the use of the convenience sampling method. Convenience sampling "is prone to bias and influences beyond [the] control [of the researcher] due to the fact that cases appear in the sample because they were easy to obtain" (Welman, Kruger and Mitchell, 2008, p.69). Convenience sampling is not representative of the population. This is another limitation to the convenience sampling method, as the findings of the study may not be true for all firms in the sector.

There are a number of limitations to the sampling method used when collecting primary data. In an attempt to overcome these, the limitations were addressed prior to the commencement of the primary research so as best to avoid these potential threats to the findings. The design of the questionnaire will be explained below.

4.9. Questionnaire Design

Welman, Kruger and Mitchell (2008, p.149) define primary data as original data obtained first-hand by the researcher in order to gain invaluable information for the study. This study made use of a sample of thirty businesses in the engineering manufacturing sector in KwaZulu-Natal in the course of the primary research. Primary data in the case of this study thus refers to data that was collected from these thirty organisations.

Data was collected through the use of questionnaires. Questionnaires are a typically quantitative method of data collection. Blumberg, Cooper and Schindler (2005, p.191) describe quantitative research as research that relies on quantitative information such as numbers and figures.

The researcher formulated a list of questions and these were then posed to the respondents in the form of a written questionnaire. The researcher distributed the questionnaire to the thirty respondents. The questionnaire consisted of a number of closed or pre-coded questions. Welman, Kruger and Mitchell (2008, p.175) define a closed or pre-coded question as one which provides the respondents with a variety of possible answers to choose from. However, the questionnaire that was used during the course of this research included a space for comments after each question. This added a qualitative aspect to an essentially quantitative data collection technique. Qualitative data typically consists of words, sentences and narratives (Blumberg, Cooper and Schindler, 2005,

p.192). In this way the researcher was able to gain a more in-depth and comprehensive response from each respondent. The advantage of this is that the respondents were able to provide a data-rich source of information that might have otherwise remained undiscovered or explored by the predetermined answers on offer for selection (Welman, Kruger and Mitchell, 2005, p.175).

There are some disadvantages to using close-ended questions. Welman, Kruger and Mitchell (2005, p.175) state that some respondents may feel limited by the available responses as they may not feel that these meet their unique situations.   As the questionnaire used in the case of this study included a space for comments below each question, this problem was unlikely to have extreme negative implications for the collected data. The comments section of the questionnaire is not without its disadvantages, as this required respondents to be able to express themselves succinctly.

The questionnaire also contained comprehensive instructions, not only at the start of the questionnaire but throughout the entire data collection process. This was done in an attempt to assist respondents as they navigated their way through the questionnaire.

The questionnaire comprised of four sections, namely:
    A. Biographical Details
    B. Operating History
    C. The Organisation and the Crisis
    D. The Organisation and Strategy

Section A determined the biographical details of respondents. It asked questions such as the name of the organisation, type of organisation, area of operation, size, and product and/or service offering.

Section B of the questionnaire looked at the operating history of the organisation. This section determined when the organisation first opened and then looked at how it has performed from its conception until the time at which the questionnaire was completed. The questionnaire then attempted to determine whether the global economic crisis had altered the pattern of growth and decline that the organisation had been experiencing since they opened. Section B also attempted to determine how the organisation had previously dealt with circumstances similar to the ones that they currently found themselves in.

Section C explored the dynamic between the organisation and the crisis. This section questioned the respondents about how they believed their organisation had been impacted by the crisis and asked them to provide examples from their own experiences.

Section D relates to the organisation and strategy. This section asked respondents whether they analyse and adapt their strategy to their environment and how they do this. Section D asked respondents which, if any, models to optimize strategy they use when formulating their strategy. Section D also asked the organisations completing the questionnaire to explain if and how the global crisis had caused them to alter their strategy.

A cover letter was sent along with the questionnaire basically informing the respondents what the purpose of the research was and ensuring them that confidentiality will be maintained throughout. This was done to promote confidence in the study and thereby encourage respondents to be forthcoming in terms of the information that they were to provide. Respondents were required to sign an informed letter of consent stating that they understood the nature of the research and consent, on behalf of the organisation, to their participation in the project.

The subsequent section will go on to discuss the capturing of data.

4.10. Capturing of Data

Both primary and secondary data were collected in order to resolve the identified primary and secondary research problems.

Secondary Sources are defined by Welman, Kruger and Mitchell (2008, p.149) as data that has been collected by persons other than the researcher conducting the study at hand. The secondary sources that were considered included publications such as journals, books, government publications, research reports, Internet and electronic articles.

In order to ensure the accuracy of the data obtained from the secondary sources, the most current publications, where possible, were given preference. All information was carefully analysed in order to ensure accuracy, consistency and credibility prior to being included in the study. Secondary data that was thought to contribute value was sorted according to subject and relevancy. These were then read and notes were made on each topic. Once this had been sorted, it was transcribed and discussed in the relevant literature reviews.

Primary data was also collected. Primary data refers to data that is collected by the researcher performing the study. In terms of this study, the primary data that was collected refers to data collected by means of the questionnaires that were distributed amongst thirty organisations falling within the engineering manufacturing sector. Data that was collected by means of the

questionnaires were recorded by means of Excel into tables where appropriate. The Excel tables contained all of the logged data relating to the closed ended questions. Responses to the open-ended portion of each question were transcribed and recorded for analysis at a later stage.

Once the capturing of primary data from all thirty respondents that form the primary research sample and secondary data that has been collected from various sources had been completed, the analysis of findings began. The techniques employed in the analysis of the collected data will be elaborated on below.

4.11. Analysis of Findings

As this study will be making use of both quantitative and qualitative data collection methods, it follows that both quantitative and qualitative data analysis techniques must be used.

4.11.1. Quantitative Data Analysis Techniques

Quantitative data analysis techniques were used to analyse the responses to the closed or pre-coded portion of the questionnaire. The quantitative data analysis techniques aimed not only to find the answers to the research questions and prove which of the offered hypotheses held true, but also to bring other valuable information regarding the study to light.

Once all of the questionnaires had been completed and returned, the researcher organised and coded the data in order to prepare the data for statistical analysis. Coding means that the variable under analysis must be identified and then coded according to different values (Welman, Kruger and Mitchell, 2008, p.227). Once all of the coding was complete, the researcher had to, as outlined by Welman, Kruger and Mitchell (2008, p.228), Count, Describe, Compare, and Categorise the responses.

The qualitative data analysis techniques to be used will be discussed below.

4.11.2. Qualitative Data Analysis Techniques

The comments section of the questionnaire was analysed by the researcher through the identification of themes.

The researcher aimed to do this through the use of various techniques identified by Welman, Kruger and Mitchell (2005, p.211):

- The words used, as well as the repetitions of these words in the transcripts were counted so as to identify recurring ideas and thereby establish patterns.
- Missing information was identified. This was done in an attempt to determine whether any information had been purposefully left out. Left out information was carefully analysed by the researcher in order to determine the reasons for the non-disclosure.
- Secondary sources of data, such as books and journal articles were read in conjunction with the analysing of the primary data. This method allowed the researcher to consult other information on the topic of study and thereby gain greater insight into the topic. Secondary sources of information were compared and contrasted to the findings of the primary research.

The statistical techniques to be employed will be outlined below.

4.12. Statistical Techniques

Statistical techniques to be employed focus on hypotheses testing. A hypotheses is defined by Mason *et al* (2000, p.305) as a statement made about a population. This statement is designed with the intention of being tested. Lind *et al* (2006, p.277) states that data must be used to test the accuracy of a hypothesis. As the population of a study is generally too large to be studied as a whole, a sample of the population must be taken and then the hypothesis is tested to determine whether the observations made concerning the sample support the statement. Mason *et al* (2000, p.306) describe hypothesis testing as the process of determining whether a hypothesis is a reasonable statement based on "sample evidence and probability theory".

All primary data was recorded in Excel. This data was then be statistically analysed so as to transform the data into numbers and figures that were valuable in terms of the data that they represent. Williams (2003, p.251) states that it is essential that the researcher spend time cleaning the data once it has been captured so as to establish what the inconsistencies in the responses are.

Responses to the questions included in the questionnaire were pre-coded. In the case of the pre-coded questions, this increased the ease with which the responses were recorded for analysis purposes. In the case of the open-ended questions, all responses to the open-ended questions were examined prior to the categorising of these responses. Once the potential responses were categorised, these responses were able to be coded in much the same way as the pre-coded questions and these were then recorded for analysis.

The issue of ethical clearance will be discussed below.

4.13. Ethical Clearance

Participation by respondents in this study was completely voluntary and respondents must have done so willingly. Terreblanche and Durrheim (2002, p.66) explain that it is essential that a researcher respect the autonomy of all participants in the process of carrying out their research. It was mandatory for participants to maintain their independence during the research process and thereby maintain independent and unbiased responses throughout the process. Respondents were also free to withdraw from the research process at any time. All information acquired from respondents has been kept confidential in an attempt to maintain anonymity.

Ethical clearance was applied for from the Research Office at the University of KwaZulu-Natal. This application was approved and ethical clearance was granted to the researcher on the 26th of April 2011. The ethical clearance number is HSS/0169/011M and the letter is attached as Appendix D. The researcher followed the guidelines provided in the letter of informed consent in terms of explaining the nature of the research and research procedures to the participants.

The subsequent section will discuss the issues of validity and reliability.

4.14. Validity and Reliability

The validity and reliability of research was carefully considered. Cherry (2010, paragraph 2) states that validity is the degree to which the study succeeds in measuring that which it initially set out to measure. It is essential that any research that was conducted is relevant to the study and measures what it is intended to measure. If this is not the case, then the data will not be valid and may be incorrectly interpreted when determining the findings of the research. The two major types of validity that were considered were face validity and content validity. Shuttleworth (2009, paragraph 1) states that face validity relates to whether the study will be of value, and measures at face value whether the research project is representative. Content validity on the other hand appears to have more substance than face validity. Cherry (2010, paragraph 4) states that content validity is apparent when the research covers every possible aspect that should be included. Content validity thus requires a researcher to delve deeply into all available information surrounding the topic of the study.

Reliability on the other hand refers to the ability of the research to produce consistent results over time. If the research was able to provide consistent results, then it is reliable and the more consistent the results, the more reliable the research. In order to measure the reliability of data

collected, Cronbach's Alpha will be used. Santos (1999, paragraph 7) describes Cronbach's Alpha as an indicator of reliability. UCLA Academic Technology Services (2010, paragraph 1) concur with this, describing Cronbach's alpha as a measure of consistency.

The subsequent section will summarise the content included in this research methodology chapter.

4.15. Conclusion

The research methodology chapter outlines the techniques that will be used for the duration of the study in order to resolve the identified research problems, determine which hypotheses are true and obtain the outlined objectives. In order to determine the best-suited methodology to be employed and develop the model that will be put in place to resolve these issues, it is first important to outline the goals of the research process.

The primary research problem identified is to determine the extent to which strategy in the engineering manufacturing sector in KwaZulu-Natal has been affected and has needed to be specifically adapted in order for SMEs in this sector to be able to grow and survive.

Five secondary research problems have been included. The resolution of these problems is believed to have the potential to add value to the findings of the study. These secondary problems were to determine: whether there is a global crisis; whether it is a global economic or global financial crisis; whether the engineering manufacturing sector has been affected by the crisis; what types of strategies would be able to be specifically adapted in order to deal with the global crisis; and what local, national and international strategies there are available for SMEs in this sector to survive and grow beyond the global economic crisis.

In relation to these research problems this study offered the subsequent hypotheses:

H_1, the independent variable, being the global economic crisis has negatively impacted on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

H_0, the independent variable, being the global economic crisis has not impacted negatively on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

H_2, there is a global crisis.

H_0, there is no global crisis.

H_3, the global crisis is economic in nature.

H_0, the global crisis is not an economic crisis.

H_4, the global crisis has impacted on the engineering manufacturing sector in KwaZulu-Natal.

H_0, the global crisis has not impacted on the engineering manufacturing sector in KwaZulu-Natal.

H_5, strategies had to be specifically adapted as a result of the global economic crisis.

H_0, strategies did not have to be specifically adapted as a result of the global economic crisis.

The research objectives of the study related to the solving of the identified research problems and research hypotheses. The research employed during the course of this study in order to obtain these objectives was both quantitative and qualitative in nature.

Quantitative research typically evaluates objective data consisting of numbers, whereas qualitative research involves feelings and/or opinions. A questionnaire was used to gather data from thirty respondents. The questionnaire was composed of a series of closed ended questions that were analysed through quantitative methods. However, a space was left following each question where respondents were asked to elaborate on their answers. This portion of the questionnaire added a decidedly qualitative aspect to a typically quantitative data collection technique.

The thirty respondents were selected based on the convenience thereof. This is referred to as convenience sampling. Selection criteria were included to ensure that respondents contributed data that was of relevance and value. Respondents were chosen based on the following four criteria: first, the respondents must have been willing to participate in the study. Second, the chosen respondents were only selected if they fell within the specified geographical area, i.e. KwaZulu-Natal. Third, the SMEs must have been in existence for five years or more. This was to ensure that the organisations have sufficient working knowledge of their environment and thereby act as reliable sources of data. Last, the organisations must form a part of the engineering manufacturing sector, that is, the sector that was the focus of the study. However, there are a number of limitations to this technique. As the researcher was aware of these limitations, precautions were taken to steer clear of them.

Both primary and secondary data were collected in order to resolve the identified primary and secondary research problems.

Secondary sources included publications such as journals, books, government publications, research reports, and Internet and electronic articles. Current publications were preferred where possible.

Primary data was also collected. This was done through the use of questionnaires. The quantitative data portion of the questionnaires was recorded and analysed through the use of Excel. The researcher organised and coded the data in order to prepare the data for statistical analysis. The qualitative portion was transcribed and then analysed by means of counting words and repetitions of words, searching for missing information, and using secondary data to add insight to these documented responses.

Ethical Clearance was applied for and obtained on the 26th April 2011.

Issues relating to validity and reliability were discussed briefly. Validity refers to the degree to which the study measures that which it intended to. Reliability on the other hand, refers to the ability of the research to produce consistent results over time. The more consistent the results, the more reliable they are.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1. Introduction

The previous chapter detailed the research methodology to be employed during the course of the research. This included outlining the research problems and hypotheses to be addressed as well as discussing the objectives of the research in increased depth than when they were first introduced in chapter one. The previous chapter described the nature of the research and included details regarding the sampling frame, sample method and limitations of these sampling techniques. Chapter four explained the design of the measuring instrument, the questionnaire, employed to capture primary data. Finally the data capturing techniques and analysis of findings methods to be used were discussed.

The current chapter will briefly outline the results obtained through means of the questionnaire. The chapter will then go on to discuss the results.

5.2. Results

This section will show the results of the primary research. The results will be categorised according to the subsections of the questionnaire used to collect the primary data.

5.2.1. Section A: Biographical Details

This section outlines the results of Section A of the questionnaire and thus provides a brief overview of the biographical details of the respondents.

Out of the thirty possible respondents that were initially contacted and asked to participate, twenty-two organisations were actually willing to participate in the study. These respondents have completed the questionnaire, signed the letter of informed consent and returned these for analysis.

As previously stated, selection criteria were employed whilst selecting the respondents. Section A of the questionnaire attempted to ensure that the respondents met all four of the criteria. This criterion stated, first, that the respondents must be willing to participate in the study. Second, the respondents had to fall within the specified geographical location, namely KwaZulu-Natal. Third, the respondents had to have been operating for a minimum period of five years. Last, the

respondents had to form a part of the engineering manufacturing sector as outlined by the selected SIC codes previously indicated. Respondents meet all four of the criteria.

Table 5-1 summarizes the biographical details of respondents. All of the twenty-two respondents are located in KwaZulu-Natal. Five of the organisations are located within Pietermaritzburg, ten organisations are located in Durban and seven are located in Richards Bay.

Although these organisations are all based in KwaZulu-Natal, it is important to note that some of them do business in other parts of South Africa. In some cases, the respondents do business in Europe, the United Kingdom and the rest of Africa. Respondents include organisations that range from the very small, two or three-man operations, to the large, with several hundred employees.

The respondents have all been in existence for a period of more than five years. The youngest organisation opened in June 2002 and the oldest two organisations opened their doors for business in 1954.

Table 5-1 Summary of the Biographical Details of Respondents

	KZN	SA	Africa	UK	EU
Area of Operation	22	12	8	5	1
	Durban	Pietermaritzburg	Richards Bay		
Location of Office	10	5	7		
	<10 employees	<50 employees	<100 employees	<500 employees	>500 employees
Size of Organisation	3	8	4	5	2
	5-10 years	10-20 years	20-50 years	>50 years	
Age of Organisation	9	6	5	2	

All of the respondents fall within the engineering manufacturing sector as outlined by the SIC codes identified in chapter two. Table 5-2 identifies the Standard Industry Classification codes of the respondents selected to participate in the research. Table 5-2 is included below. Of the twenty-two respondents, three respondents manufacture lifting and handling equipment; ten respondents manufacture other general purpose machinery; seven respondents manufacture special purpose machinery; one organisation manufactures agricultural and forestry machinery; two respondents manufacture machinery for mining, quarrying and construction; and one organisation manufactures industrial trucks, tractors, trailers and stackers. One of the respondents meets three of the classification code requirements as the respondent manufactures agricultural and forestry machinery, manufactures machinery for mining and quarrying, as well as manufacturing industrial trucks. This organisation has thus been listed under each of the three SIC codes that they may be

classified as. This explains why, although there are only twenty-two respondents, the total number of respondents listed according to the SIC codes in Table 5-2 equals 24.

Table 5-2 Standard Industry Classification Codes of Respondents

SIC Code	Description	Number of Respondents
3565	Manufacture of Lifting and Handling Equipment	3
3569	Manufacture of Other General Purpose Machinery	10
357	Manufacture of Special Purpose Machinery	7
3571	Manufacture of Agricultural and Forestry Machinery	1
3574	Manufacture of Machinery for Mining, Quarrying and Construction	2
3537	Manufacture of Industrial Trucks, Tractors and Trailers and Stackers	1

5.2.2. Section B: Operating History

This section details the operating history of the respondents as covered in Section B of the questionnaire. Section B of the questionnaire attempted to obtain a brief working history of the respondents operations.

All of the respondents summarized the performance of their respective organisations since their first opening as growing steadily, with only five of the organisations mentioning fluctuations in their performance history. Two of the organisations stated that they had enjoyed strong rapid growth, although it must be noted that these organisations were relatively young, having both only opened in 2002.

When asked directly if the organisation had experienced any negative changes in their performance prior to the start of the 2008 crisis, fifteen of the respondents indicated that they had. It is interesting to note that of the seven organisations that had not experienced negative changes in their performance prior to the start of the 2008 economic downturn, all of them have been operating for a period less than ten years.

The fifteen respondents that had experienced negative changes in their performance prior to 2008 attributed these negative changes in their performance to a variety of factors. These ranged from economic uncertainty to a cyclic market. Several respondents stated that their organisations are sensitive to the global economy and are dependent on demand in order to achieve profitable results. Reduced demand resulting from increased competition is said to be a major factor in the negative effects felt by respondents prior to 2008. Five of the organisations stated that theirs is a cyclic

market and that they have thus experienced several fluctuations in their performance but that these are seen to be part of the norm. One organisation stated that they experience decreased demand for their product every March and April.

Other reasons given for the negative changes in the previous performance of the organisations included agency agreement changes and corporate dealings, Chinese influence in the market since 2004, lower productivity, a strong rand, and government policies. A lack of government support or understanding of economy and business were amongst the reasons listed for the negative changes experienced by respondents.

Periods of downturn that seem to be common to many respondents include 1984, 1998, 2002 and 2004.

Respondents were asked to indicate, by marking a list of possible techniques, how they had dealt with these changes in the past. Figure 5-1 illustrates the techniques employed by respondents to deal with negative changes to their performance prior to the 2008 crisis. Respondents identified Environmental Scanning (0), Retrenchment (5), Marketing and Sales Promotions (5), Changes to Strategy (12), Waited for the Performance of the Organisation to Stabilise (5), and Other (9). The nine respondents that marked that they had used other techniques to deal with the negative changes in their performance only identified three other techniques that they had used. Four organisations used short time, two were required to resort to additional capital investment, and three organisations reduced their fixed costs.

Figure 5-1 How did the organisations deal with negative changes in their performance prior to 2008?
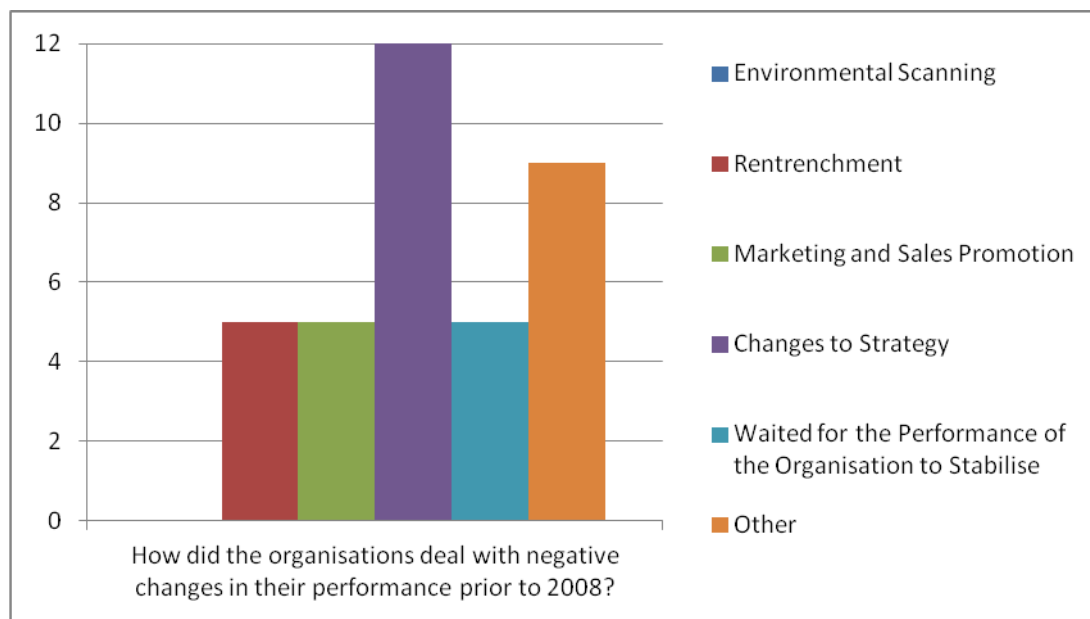
Of the fifteen respondents that indicated that they had undergone negative changes in their operating history, only ten of these stated that this experience had impacted on the manner in which the organisation dealt with the current economic climate. Respondents stated that the previous experience they gained through similarly stressful situations has taught them not to make panic decisions, to reduce their costs, to maintain strict control over their expenses, as well as to maintain stricter controls over their cash flow management. Respondents also stated that they had learnt that it was essential to keep key staff members, focus on training and keep their technology up to date.

5.2.3. Section C: The Organisation and the Crisis

This section discusses the results obtained by Section C of the questionnaire. Section C covered the organisation and the crisis.

This section of the questionnaire attempted to discover how the respondents have been affected and influenced by the crisis.

The engineering manufacturing sector is reported to be one of the worst hit sectors by the crisis. Seventeen of the twenty-two respondents agree with this statement.

Respondents were asked to mark the statements that accurately described occurrences within the organisation since the start of the crisis in 2008. The symptoms of the crisis experienced by the respondents are illustrated in Figure 5-2 below. Nine of the organisations indicated that they have experienced weaker export revenues. Weaker domestic revenues (20), declining production volumes (19), declining turnover (22), reduced profits (22), inflationary pressure (8), and reduction in number of employees (retrenchment) (11) were some of the symptoms experience by respondents. Of the four organisations that indicated they have experienced other effects of the crisis, three organisations stated that they have experienced severe cash flow problems. One organisation stated that they have had to employ short time. A number of their employees then took part in an illegal strike to show their discontent. As a consequence of this action these employees were then dismissed.

Figure 5-2 Symptoms experienced by respondents in the 2008 crisis
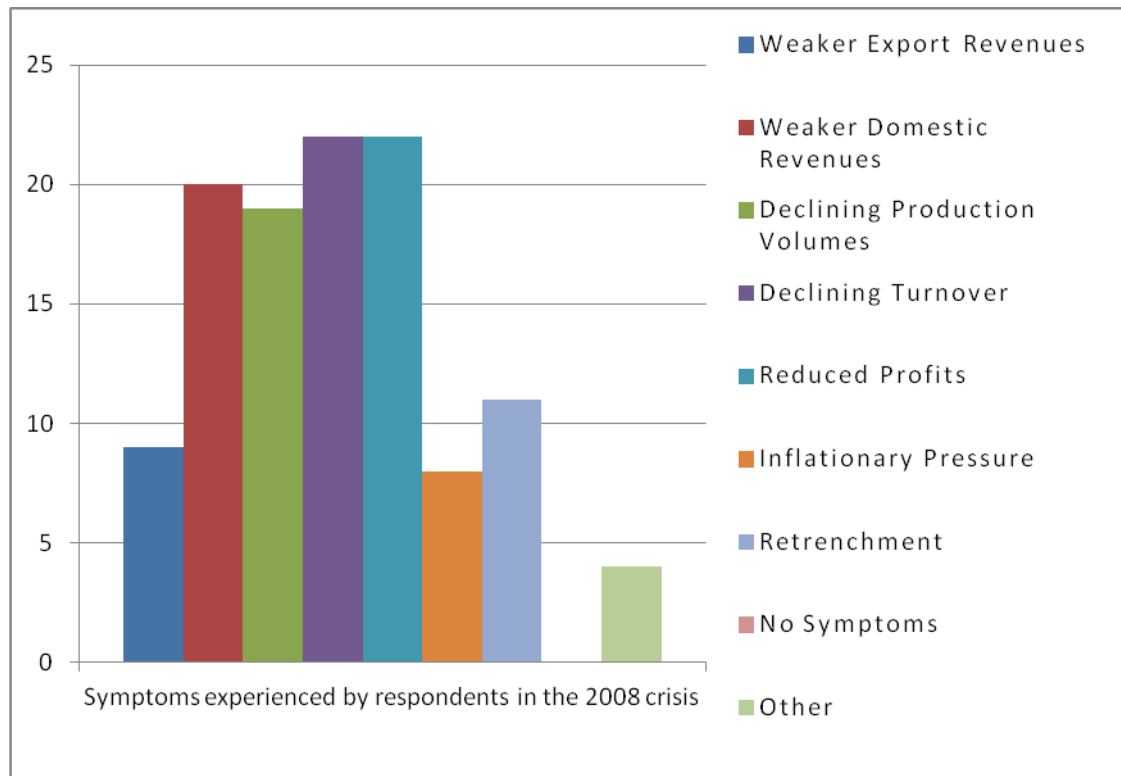
Fourteen of the respondents stated that they viewed the global crisis as a threat to the organisation. These respondents explained their viewpoint by stating that the organisation was reliant on demand in order to be successful. As the demand for their products has decreased as a result of the global crisis, the respondents are fearful that their organisations will not be able to recover sufficiently from the crisis in order to maintain the levels of growth that they have previously enjoyed. Some organisations stated that they felt that the crisis has increased their exposure to foreign competition and they are unsure as to whether the demand for their products would be damaged by this increased foreign competition. One respondent explained that they have had to reduce their profit costs and profit margins and this has placed enormous pressure on the organisation. Another respondent stated that they are experiencing less opportunity to export and went on to state that the government is unwilling to assist SMEs. One respondent cryptically stated, as per means of explanation for their perception of the global crisis as a threat, that a "minority control the destiny of the world".

5.2.4. Section D: The Organisation and Strategy

This was the last section included in the questionnaire and looked at whether the respondents have strategies in place, how these strategies are formulated, how the strategies are assessed and what basis for competition the respondents are currently competing on.

Nineteen out of the twenty-two respondents stated that they have a strategy or strategies in place. Respondents mostly analyse whether their strategies are effective every month, with more in-depth analysis taking place once a year. Four organisations stated that they are continuously assessing whether their strategies are effective or not and two organisations stated that they assess the effectiveness of their strategies only bi-annually. Methods to determine the effectiveness of the strategies employed by the respondents included: how profitable the organisation is; assessment of turnover; whether the organisation is achieving the targets and goals that they set; ratio of quotes to accepted offers; growth of the organisation; and whether potential customers are showing preference for the competitors of the respondents.

The majority of the nineteen respondents that have strategies in place do not make use of any models to optimise their strategy. Five organisations make use of SWOT analysis and a mere three organisations use PEST Analysis. No organisations indicated that they use Porters Five Forces, BCG Matrix, General Electric Model, Life Cycle Model, or any other models that they may use that were not listed as an option for the respondents to mark.

Seventeen of the respondents altered their strategies in some way to allow for their changing circumstances resulting from the crisis. Changes in strategy varied, and included focusing on generating sustainable profit, increased marketing, reducing profit margins, research and design, concentrating on technical excellence, reducing overheads, reduced stock holding, tighter debtors' control, structuring contracts with key clients, and broadening the customer base.

Respondents were asked to indicate the basis on which they are currently competing. The options that the respondents were provided with included:

1. Low Cost Provider
2. Differentiation
3. Niche Marketing
4. Experience and Resource Strengths
5. Other, Please Specify

Figure 5-3 On what basis is the organisation currently competing?
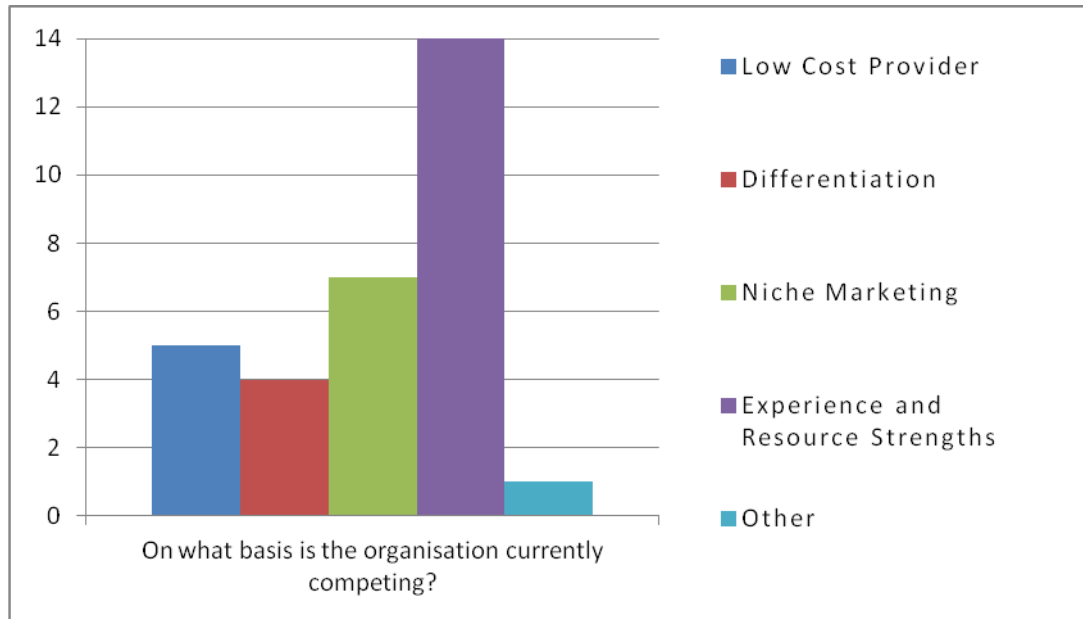
Figure 5-3 above illustrates the basis for competition currently employed by respondents. Five respondents indicated that they are competing on the basis of low cost provider; four respondents indicated that they are competing on the basis of differentiation; seven respondents indicated that they are competing on the basis of niche marketing; and fourteen respondents indicated that are competing on the basis of experience and resource strengths. Only one respondent indicated that they are competing on another basis. This respondent stated that they are competing on the basis that they provide quality products on time at a fair price and that they aim to maintain any competitive advantage that they have by continuing to do so, as well as by continuously improving their production techniques in order to maintain and/or reduce their costs.

It must be noted that some organisations marked more than one of the options that they were provided with, as the basis on which they compete. There were twenty-two respondents to the questionnaire and yet a total of thirty-one responses were provided to this question. One respondent marked all four of the bases for completion provided by the questionnaire.

When respondents were asked how they intended to maintain any competitive advantage that they had, respondents provided very similar responses. These included catch phrases such as "supplying a reasonable product at a reasonable price", "competitive pricing", "research and development", "excellent customer service", "fast turnaround times", "marketing", "quality of workmanship", "reducing costs", and "maintaining and developing relationships with customers". One organisation stated that they would ensure that they held the "right" stock.

5.3. Discussion of Results

The previous section outlined the results obtained through the use of the questionnaire. The results were presented according to the four different sections of the questionnaire, namely Section A: Biographical Details, Section B: Operating History, Section C: The Organisation and the Crisis and, Section D: The Organisation and Strategy. This section will go on to discuss these results. This will again be done according to the different sections of the questionnaire. The biographical details of the respondents will not be discussed in any depth, but will rather be mentioned as is relevant to any of the other results. The biographical details will thus only be introduced into the discussion where it is believed that they add depth of value to the information obtained through the other three sections of the questionnaire.

5.3.1. Discussion of Section B: Operating History

It is important to note that only five organisations mentioned fluctuations in their performance history prior to being asked specifically whether they had experienced any negative changes in their performance history prior to the 2008 crisis. This may indicate a number of things including, but not limited to the fact that though fifteen of the organisations later admitted to having experienced negative changes in the performance in the past, the respondents may not have wanted to appear as having performed poorly. The respondents may not have perceived prior negative experiences as a threat and may not have indicated these negative changes for this reason. This may also explain why only fifteen organisations admitted to experiencing negative changes in their performance.

The seven organisations that stated that they had experienced no negative changes to their performance prior to the 2008 crisis may be fearful of how any negative changes in their earlier performance would reflect on the organisation.

It is also interesting to note that of the seven organisations that had not experienced negative changes in their performance prior to 2008, all seven of the organisations had been operating for a period of ten years or less. These organisations are thus relatively young. The respondents may not have been operating for long enough to experience any negative impacts on their performance, or the long term tendency of growth experienced by these organisations may have disguised any minor glitches in their operating history.

All of the reasons given for the negative fluctuations in the performance history of the respondents were attributed to external forces, or forces beyond the control of the respondents. When asked to indicate how the respondents had dealt with these negative changes previously, an alarming

number of respondents (thirty-three percent) indicated that they had waited for the performance of the organisation to stabilise. This may indicate that organisations did nothing but wait for their tough circumstances to change. This shows that the respondents were unsure of how to deal with these circumstances. Retrenchment, though sometimes necessary, was surprisingly high. Respondents revealed a tendency to reduce costs through retrenching their employees while increasing their expenditure on marketing and sales promotion.

It is essential that organisations maintain key skills in times of economic turmoil. Employees are often the holders of key skills and knowledge and it is thus important that these key skills and knowledge are maintained and developed. Organisations must then work on identifying who these key employees are, and strive to hold onto them, rather than cutting costs in the short term by retrenching employees with no consideration for their potential future roles in the success of the organisation. Key employees are essential to the rebuilding and strengthening of the organisation.

Of the fifteen respondents that had experienced negative changes to their performance, only sixty-seven percent stated that these experiences had impacted on the manner in which they dealt with the global economic crisis of 2008. This is a surprisingly low figure as their prior experience would certainly be a tool in and of itself.

The previous experience of the fifteen respondents in times of organisational decline should have meant that respondents put steps in place as to how they would deal with similar economic circumstances of decline. For example, if the organisation begins to experience negative changes to their performance, then the organisation should immediately begin to determine the causes for these negative changes so that they may begin to equip the organisation to either guard against further decline or take action towards renewed performance. Organisations should have formulated, through their previous experience, a step-by-step process of how they would deal with negative changes if and when they should arise in the future. Rather, respondents indicated that they had learnt to reinstate blanket measure such as reducing costs instead of tailoring their corrective or protective measure to the individual circumstance. Other measures that respondents had learnt to use through their previous experience included not making panic decisions, cash flow management and holding on to key employees.

5.3.2. Discussion of Section C: The Organisation and the Crisis

The previous section deliberated over the results obtained through Section B of the questionnaire. This section will go on to look at the results obtained through Section C of the questionnaire.

Seventeen of the twenty-two respondents agreed with the statement that the engineering manufacturing sector has been one of the sectors worst hit by the crisis. This indicates that these respondents may well have been severely impacted by the crisis, that they are aware of other organisations within this sector that have been severely impacted, or their awareness of the severe impact of the crisis on the engineering manufacturing sector may stem from the media or word of mouth. The five organisations that did not agree with this statement may not yet have felt the severity of the impacts of the global crisis or may not associate these impacts with the crisis. Three of the organisations that did not agree with the statement did not perceive the crisis as a threat.

Three of the organisations that did agree with the statement stated that they did not perceive the global crisis as a threat while fourteen of the respondents stated that they perceived the crisis as a threat.

All of the respondents had experienced negative circumstances since the start of the crisis, with weaker domestic revenues, declining production volumes, declining turnover and reduced profits being cited as the most common symptoms experienced.

5.3.3. Discussion of Section D: The Organisation and Strategy

The previous section detailed the results obtained through the third section of the questionnaire and analysed the responses of respondents relating to the organisation and the crisis. This section will discuss the results obtained through Section D of the questionnaire.

The majority of the respondents have strategies in place, with nineteen of the twenty-two respondents stating that they do have a strategy or strategies in place. It is interesting to note that all of these nineteen respondents, although using different techniques, analyse the effectiveness of their strategies and modify their strategies to meet their changing circumstances. This is a promising sign for organisations as it is important to periodically reassess the goals and objectives of the organisation in order to keep these in line with not only the organisation itself, but also within the market that the organisation is operating in.

It is disappointing to note that of the nineteen organisations that have strategies in place, only five of the respondents use SWOT analysis and a mere three respondents make use of PEST analysis. None of the respondents make use of Porters Five Forces Model, the BCG Matrix, the General Electric Model, the Life Cycle Model, or any other model that might be used to optimise strategy but was not listed as an option for respondents to mark in the questionnaire.

Respondents could benefit from incorporating one or all of these optimisation techniques whilst formulating their strategies. These optimisation techniques could provide key insight into the performance of the organisation and thereby broaden the respondents' understanding of their performance, as well as highlighting strategic options that might otherwise remain unidentified.

Seventeen of the nineteen respondents that have strategies in place altered their strategies in some way to allow for their changing circumstances resulting from the crisis. This shows that the respondents do analyse the performance of their organisations and the effectiveness of their strategies.

Respondents were asked to indicate on which of five possible bases for competition they were currently competing. Five respondents stated that they were competing on the basis of low cost provider, four respondents indicated differentiation, seven respondents indicated niche marketing, fourteen respondents indicated experience and resource strengths and, one respondent indicated other.

A number of organisations indicated more than one basis that they were currently competing on, with one organisation indicating four bases for competition. This is indicative of the respondents not being clear of what is meant by a basis for competition and may be a sign that organisations are not as clear as they ought to be on what is needed in a successful strategy overall.

When asked as to how respondents intended to maintain any competitive advantage that they may have, respondents indicated tools such as competitive pricing, customer service, marketing, and research and development. While these may be seen as part of a successful strategy, they are not all that is required. This may emphasise that organisations need to focus more on what is meant by a successful strategy and what is needed to outline a successful strategy. Once an organisation is clear on these aspects, they are better equipped to achieve success. A great product does not always guarantee success, rather it is the sound business principles that will do so.

5.4. Conclusion

This chapter discussed and illustrated the results obtained through the use of a questionnaire. The results were first outlined under the same headings as those used in the questionnaire, namely: Section A: Biographical Details; Section B: Operating History; Section C: The Organisation and the Crisis; and, Section D: The Organisation and Strategy. Once the results had been defined, chapter five went on to look at and discuss the results obtained in more detail.

Thirty organisations were initially approached to participate in the study and complete the questionnaire. Of these thirty organisations, twenty-two organisations were willing to participate. All of the twenty-two respondents met the selection criteria as defined earlier. All of the respondents are based in KwaZulu-Natal and have been in operation for a period of five years or more. The respondents are all currently competing in the engineering manufacturing sector. Most importantly, the respondents were all willing to be a part of the study.

All of the respondents stated that their organisations had experienced steady growth since first opening their doors for business, with only a small percentage of respondents stating that they had experienced any period(s) of decline in their operating history. When asked to indicate whether they had experienced any negative changes to their performance in the past, the percentage of organisation that admitted to experiencing periods of reduced performance rose dramatically from twenty-three percent to seventy-eight percent. A number of reasons were given for these negative changes to the respondents' performance, ranging from reduced demand to a lack of governmental support. The most common periods of downturn identified by respondents were 1984, 1998, 2002, and 2004. Changes to strategy were cited as the most common method incorporated to deal with these periods of decline.

Of the fifteen respondents that had experienced negative changes in their performance history, ten respondents stated that their previous experience in similarly stressful economic times had impacted on the manner in which they dealt with the 2008 economic climate.

The vast majority of respondents agreed with the statement that the engineering manufacturing sector was one of the worst hit sectors by the crisis. The most common symptoms of the crisis experienced by respondents included weaker domestic revenues, declining turnover, and reduced profits. However, only fourteen respondents stated that they viewed the 2008 crisis as a threat to their operations.

Nineteen of the twenty-two respondents stated that they currently have a strategy or strategies in place. The majority of these respondents are not making use of the variety of tools and techniques available to them to optimise their strategy. Seventeen of these nineteen respondents made alterations to their strategies to deal with the 2008 global crisis. Changes in strategy ranged from increased marketing to reducing overheads.

When asked to indicate on what basis they were currently competing, respondents identified experience and resource strengths as the most common basis for competition.

It is possible that respondents did not answer all of the questions as honestly as they could have as a result of their fear of how these answers may impact on the image of the organisation. A tendency for respondent bias must be taken into account whilst reviewing the data collected from respondents.

CHAPTER SIX

FINDINGS

6.1. Introduction

The previous chapter discussed the results obtained through the use of the primary research tool, the questionnaire.

This chapter will go on to discuss the findings of the research. Findings will be made by comparing the data obtained through the primary research tool of the questionnaire with the data outlined in the literature review. The findings will be outlined briefly prior to the discussion of each finding being made in detail.

6.2. Outline of Findings

Several findings were made in the process of collecting primary data, through the questionnaires completed by the twenty-two respondents, and secondary data, through the compilation of the literature reviews. These findings related to the research objectives, research problems and hypotheses first set out in Chapter Four: Research Methodology.

The research objectives, research problems and hypotheses were all considered while collecting the primary and secondary data. When comparisons of the primary data and the secondary data in the form of the two literature reviews were performed, a number of findings relating to the topic of study were made. Thus the findings related to the impact of the global crisis on strategy in the engineering manufacturing sector in KwaZulu-Natal. The findings focused not only on the impact of the global crisis on strategy, but also attempted to gain a greater understanding of these impacts by looking at the crisis, strategy and the engineering manufacturing separately. These were then linked to determine the relationship that these facets shared since the start of the crisis in 2008.

The findings of the study determined that:
- There is a global crisis;
- The crisis is economic in nature;
- The engineering manufacturing crisis has been effected by the crisis;
- The global economic crisis has impacted negatively on the engineering sector;
- Strategies had to be specifically adapted as a result of the crisis.

These findings will be discussed in greater depth.

6.3. Detailed Findings

In the current section, the secondary data reflected by the two literature reviews will be discussed in conjunction with the data collected from respondents through the use of the questionnaire. This will be done in such a way as to come to conclusions that achieve the objectives and answer the questions set out at the start of this study. In this way, it will be shown how the conclusions relating to the findings outlined in the previous section were reached.

The current global crisis originated in the United States of America and quickly spread to the rest of the globe. The crisis struck with such a force that it is unlikely that any organisation could have predicted or been sufficiently prepared for its impact.

The crisis that originated in America was caused by a number of factors. First, the US subprime mortgage crisis caused their government to formulate a new system whereby the government backed loans issued by two newly created financial institutions. The ability of the persons being granted debt to make payments on the loans issued by these two financial institutions was not taken into account. This resulted in increasing defaults on the debts incurred by home loaners. A number of privately owned financial institutions followed this trend and began issuing their own high-risk loans. These private institutions obtained private insurance on the loans that they were issuing. Thus, the United States government, the private banking institutions and the insurance brokers to these private banking institutions became involved in the creation of a crisis that quickly spread to all economies in the world.

The three contributing factors that allowed the US subprime mortgage crisis to develop into the current global economic crisis are, first, that the loans were issued to high-risk borrowers who were unable to meet their payments. The second contributing factor was the lenient monetary policy employed by the United States of America's government in an attempt to strengthen their economy after the crisis in 2000. This monetary policy was not adjusted when inflationary pressures required that it should be. Last, the mortgage loans were reclassified and sold off as "derived financial instruments with different risk profiles" to investors the world over. These investments were worthless as they were reliant on the ability of the high-risk borrowers to repay their mortgage bonds.

At first it appeared that the impact of the crisis would be limited to first-world countries. However, as the crisis grew, it emerged that no country would go unscathed and the emerging economies of

the world soon began to feel the effects of the crisis. First-world economies were forced to withdraw their investments from emerging markets as they struggled to maintain stability in terms of their own economic welfare.

The crisis that originated in the United States has led to a domino effect in which organisations the world over have been left reeling in the face of the crisis. South Africa has been no exception and all twenty-two questionnaire respondents admitted to experiencing symptoms that may be linked to the crisis. It may thus be stated that there is a global crisis.

All economies experience periods of growth and decline; this is referred to as a business cycle. It is impossible for economies to experience unlimited uninterrupted positive growth and it is impossible to determine when these periods of growth and decline will occur as they follow no predetermined pattern. Environmental scanning may be used to determine what state an economy is in or whether a period of growth or decline is likely to follow, however, it is by no means a fool-proof forecasting technique. Economies are dynamic and as such, change is the only constant that is to be expected.

A recession is a period of two or more consecutive quarters of negative growth. The current global crisis has lasted for longer than two consecutive quarters and can be deemed a recession.

A financial crisis occurs when the money supply is unable to meet the demand for money. An economic crisis, on the other hand, stems from and often evolves in the wake of a financial crisis, thereby resulting in an unexpected economic downturn. The current 2008 crisis has far wider repercussions than the money supply not meeting the demand for money. The identification by respondents of symptoms such as weaker domestic revenues, declining production volumes, declining turnover, reduced profits, inflationary pressure, and retrenchments are testament to this. The current crisis may thus be described as a global economic crisis.

As previously stated, South Africa has been no exception and implications of the crisis have been felt by organisations throughout South Africa. Similarly, it would be expected that no sector would go unscathed by the crisis, including the engineering manufacturing sector.

Buhlungu and Mtyingizana (2009, p.25) described the engineering manufacturing sector as being one of the hardest hit sectors since the global economic crisis hit South African shores. When asked whether or not they agreed with this statement, seventeen out of the twenty-two respondents stated that they found this statement to be accurate.

The engineering manufacturing sector has been haemorrhaging jobs since the effects of the crisis were first felt in South Africa. This along with other impacts cited by the Bureau for Economic Research and the University of Stellenbosch (2009, p.1) such as declining exports, declining production volumes, and declining business confidence are all symptoms of the crisis. Respondents confirmed the presence of the crisis in South Africa by identifying weaker domestic revenues, declining production volumes, declining turnover, and reduced profits as some of the more prominent symptoms being experienced locally. From the literature, as well as from this primary data, it can be concluded that the engineering manufacturing sector has been affected by the crisis. As all of the symptoms of the crisis cited in the literature and identified by the respondents have been of a detrimental nature, it can be said that the global economic crisis has negatively impacted on the engineering manufacturing sector.

Fourteen of twenty-two respondents to the questionnaire view the global economic crisis as a threat to their current business operations. This perception by respondents is indicative of the negative nature of the impact of the crisis. No respondents indicated a view of the crisis as an opportunity or identified any positive impacts of the crisis to their respective organisations.

The presence of the economic crisis in KwaZulu-Natal is an undeniable fact. All twenty-two respondents testified to their being negatively impacted by the crisis. As such, it may be reasoned that most, if not all organisations country-wide have already been impacted by the crisis. Organisations that have as yet endured and remained unaffected are unlikely to remain so for very long.

It is critical that organisations fortify themselves in an attempt to brace themselves for the full frontal force of the crisis. It is their best chance of survival and, if executed correctly, a chance for prolonged recovery and growth. The means for such a fortification of the business is strategy.

Strategy, as previously defined, is the ever-evolving game plan of an organisation that determines the resources and methods that are required for the organisation to achieve its long term goals and objectives, while still allowing for change to the strategy when and where it is required. Organisations should match their strengths to the opportunities that are present in their environment, whilst attempting to minimise their weaknesses and steer clear of any threats that they may be confronted with. As is the case with the current global economic crisis, it is not always possible to avoid the implications of a threat. An organisation must, where possible, adjust their strategy so as to best equip the organisation to deal with or at the very least survive the threat. A well thought-out and clearly defined strategy provides the management of an organisation with tools that they need to succeed.

An organisation, like the environment that it operates in, is not stagnant. . The circumstances of the organisation are constantly changing and it is for this reason that the strategies of an organisation must periodically be revisited and revised. Strategy needs to remain current if it is to be effective. In order to achieve this, it is essential that organisations continuously evaluate not only their circumstances, but also their strategy in order that the two remain married.

Nineteen respondents stated that they currently have a strategy in place. The effectiveness of their strategy is periodically evaluated using a variety of techniques. Most respondents analyse the effectiveness of their strategies monthly, with more in-depth analysis being done once a year. Respondents stated that they are currently using several techniques to determine the effectiveness of their strategy. These include: profitability analysis; assessment of turnover; and whether the targets and goals of the organisation are being met.

It is a positive sign that the majority of respondents do have a strategy in place. However, very few of the nineteen respondents that do have a strategy in place are making use of any models to optimise their strategy. This includes the models to optimise strategy identified earlier, but is not limited to these. Five respondents make use of SWOT analysis, a mere three respondents make use of PEST analysis and no organisations make use of either Porters Five Forces model, the BCG Matrix, the General Electric Model, the Life Cycle Model, or any other model not specified by the questionnaire.

Seventeen respondents altered their strategy in some way to allow for their changing circumstances resulting from the global economic crisis. Accordingly, it may be stated that strategies had to be specifically adapted as a result of the crisis. However, it remains unclear as to how the respondents are determining in what way to alter or better their strategies as few respondents make use of the available models to optimise strategy.

Strategies were altered to include increased marketing, reduced profit margins, reduced stock holding, and tighter debtors' control. This allowed for extended repayment plans, though these had to be carefully monitored.

Organisations are able to increase their chances of attaining success in the market place by having a sustainable competitive advantage. A clearly defined strategy is the best means of attaining a sustainable competitive advantage. Ehlers and Lazenby (2004, p.2) identify three strategic options available to organisations trying to achieve such an advantage over their competitors. These are: Low Cost Provider; Differentiation; and Niche Marketing. Another strategic option identified by

Thompson *et al* (2006, p.4) is the development of "expertise and resource strengths that give the company competitive capabilities that rivals can't easily imitate or trump with capabilities of their own".

Five respondents indicated that they are currently competing on the basis of being a low cost provider. Low cost providers aim to sell their products and/or services at the lowest possible price. This is only possible if the organisation is number one or two in the market in which they are competing. This strategy relies on the ability of an organisation to produce their products more efficiently than their competitors and thereby sell their products at a price that their competitors are unable to meet or beat.

This strategic option is not easily able to be adapted for organisations to use in times of economic turmoil. It is best suited to organisations that are already well established as leaders in their current market when a crisis hits. Organisations employing this strategy must then rely on the buying power that they already have to ensure their continued low costs of production. These organisations must also continue to rely on the expertise and resource strengths that they have gained to see them through any periods of economic turmoil. Specials and reduced prices may be employed by organisations not making use of the low cost provider strategic option in times of crisis as a means of attracting new customers and seeing the organisation through a difficult time. However, this is not sustainable and should only be seen as a short term measure to maintain cash flow.

Four respondents indicated that they are currently competing on the basis of differentiation. Differentiation relies on the ability of an organisation to make their products and/or services appear to be different to those of their competitors. It is essential that the organisation do this in ways that its customers perceive as having value in order that they are willing to pay a premium.

This strategic option is then also not easily able to be adapted for organisations taking strain in dire economic circumstances. It is suited to organisations that are established and respected in the marketplace. These organisations must rely on the superior value that they are perceived to offer and exploit their strong brand image to maintain and grow their loyal customer base. Differentiation may be developed during periods of crisis in order that an organisation may benefit from increased support whilst trying to overcome the uncertain economic climate. Although it would not help to protect an organisation at the time, if this strategic technique was not in place prior to the onslaught of the crisis, it would benefit the organisation in any similar future circumstances.

Seven respondents indicated that they are currently competing on the basis of niche marketing. Niche marketing occurs when an organisation narrows their target market to service the special requirements or preferences of their consumer base. In this way, the organisation is able to achieve a competitive advantage over their rivals by producing a product or offering a service that is more in line with their customers' needs and therefore more desirable to the customer. As a consequence, the organisation is able to charge a premium that is acceptable to their customers.

Niche marketing is not able to be easily adapted by a large organisation that was not making use of this strategy prior to the onslaught of a crisis. This is due to the fact that large organisations not employing niche marketing often make use of production lines to issue highly standardised products. It is thus unlikely that they would be able to easily alter their production techniques to focus on more specialised products that cater to the needs of individual customers. This strategic option would be more easily available for adaptation by small organisations that do not issue large amounts of standardised products. These smaller organisations would more easily be able to tailor their products or services to a changing customer base in economically uncertain times. One respondent who is currently competing on the basis of niche marketing is a two-man operation that upon being confronted by the dire circumstances faced by the organisation in the light of the current economic crisis, took on new customers with smaller more specific needs as a means of seeing the organisation through the difficult times. Although the organisation suffered from decreasing turnover during this period, taking on new customers meant that the organisation did not have to close their doors.

Fourteen respondents stated that they are currently competing on the basis of expertise and resource strengths. This technique involves developing competencies and resources that make it difficult for rival organisations to duplicate or better them with their own capabilities.

Though organisations are unable to adapt this strategy to better equip them to deal with an uncertain economic climate, it is in and of itself the best strategic option available to firms to deal with changing economic conditions. Experience teaches the organisation invaluable lessons that they might rely on time and time again. The organisation may thus employ the expertise that they have gained through their experience in similar economic circumstances to their best advantage and make use of this experience to see them through any difficulties that they are currently facing. The same is true for future crises that they may be confronted with, as any experience that the organisation gains through the current crisis will be of use to them in the future.

As previously stated, it is essential that an organisation adapt their strategy to meet their changing circumstances. As can be seen from the four strategic options available to organisations listed previously, it not always possible to merely switch from one strategic option to another. Rather, it

is best that organisations select one of the aforementioned strategies and then tailor this to their specific requirements. In this way, the organisation can match their specific circumstances and strengths to their specific needs.

Once an organisation has attained a competitive advantage over its competitors, it is important that the organisation maintain that competitive advantage in order that they may maintain or improve on their performance. As the environment of an organisation is dynamic, the organisation must ensure that their strategy remains dynamic also. The organisation must thus strive to constantly improve upon their current strategy as well as their business practices where possible.

When asked how they intended to maintain any competitive advantage that they may already have over their competitors, respondents provided responses such as: "supplying a reasonable product at a reasonable price"; "marketing"; and, "maintaining and developing relationships with customers". These responses tended to be rather standardised as many respondents repeated the same catch phrases. None of the respondents implied that they would be making use of any unique methods or approaches to maintain a sustainable competitive advantage.

This section discussed the findings made through the comparison of the literature reviews with the results obtained through the use of the completed questionnaire. The subsequent section will go on to summarise the findings made and to draw conclusions from these findings.

6.4. Conclusion

Chapter Six detailed the findings of the study by outlining and comparing the literature reviews with the results obtained through the questionnaire. The research objectives, research problems and research hypotheses were all addressed. The findings related not only to the impact of the global crisis on strategy in the engineering manufacturing sector in KwaZulu-Natal, but also attempted to answer other questions relating to the crisis in order to gain a greater understanding thereof.

The current crisis originated in the United States of America and was allowed to spread to first world and emerging markets alike. South Africa has merely been another victim of the crisis. Consequently it was established that there is a global crisis.

Economies world-wide recently suffered two or more consecutive quarters of negative growth and therefore met the definition of an economic recession. It was thus concluded that the current crisis is in fact a global economic crisis.

The engineering manufacturing sector has not escaped unaffected either with respondents to the questionnaire confirming the negative impacts felt as a result of the crisis. As all of the impacts cited in the literature review and identified by respondents have been of a negative nature, it may be established that the global economic crisis has negatively impacted on the engineering manufacturing sector in KwaZulu-Natal.

It is essential that organisations protect themselves against the negative impacts of the crisis. The best means of doing so is implementing a strong and conducive strategy. There are a number of tools, which have already been discussed in detail, that are available to organisations to assist them in enhancing their strategies.

Nineteen of the twenty-two respondents currently have strategies in place. Seventeen of these have had to alter their strategy during the course of the global crisis to allow for their changing circumstances. Therefore it can be concluded that strategies have had to be specifically adapted as a result of the global economic crisis. However, few respondents make use of the available models to optimise strategy.

There are four basic strategic options, these are: Low Cost Provider; Differentiation; Niche Marketing and; the development of expertise and resource strengths. There is no one-size-fits-all solution. Rather, organisations must make use of tools available to them to determine the option that has the best strategic fit and then adapt this to their individual circumstances.

The same may be said to be true of the local, national and international strategies available for SMEs to survive and grow beyond the crisis. Organisations must make use of the tools to optimise strategy to analyse not only the market in which they operate, but also the life cycle of the product and/or service which they offer. In this way, they would be better equipped when determining whether they should compete locally, nationally, internationally, or a combination of these.

CHAPTER SEVEN

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS FOR FURTHER STUDY

7.1. Introduction

The previous chapter outlined the findings made during the course of the research prior to delving into each finding separately. Each finding was looked at separately and in some depth by comparing and contrasting the primary research, in the form of data collected through the questionnaire, with the data collected through the secondary sources of data, namely, that data collected through the literature reviews.

This chapter will move on to summarize the study and make conclusions based on all of the collected data. The limitations of the research will then be discussed and the recommendations for further study will be made.

7.2. Conclusions

Economies around the world were caught off guard by a crisis that, contrary to the norm, originated in the United States of America. The crisis was able to spread quickly from an established economy to markets worldwide due to the fact that world markets are inextricably linked. The current crisis may be deemed a global crisis as the effects were not limited to its country of origin or even the organisations therein; no country was left unscathed.

The current crisis has existed for more than two consecutive quarters and developed in the wake of a financial crisis. Though it began as a financial crisis, it has developed into more than the demand for money not meeting the supply. There are a variety of devastating consequences that have been previously explored. These include, but are not limited to, a potential shortfall in foreign direct investment, weaker export revenues, declines in growth, and increases in unemployment.

The crisis arose as a result of the subprime mortgage crisis occurring in America. It was then allowed to spread as a result of a number of factors. First, loans were issued to high-risk borrowers who were unable to make the repayments due on their loans. Second, in an attempt to counteract the economic difficulties being experienced in the United States in 2000 and post September 11 2001, the government had put an extremely lenient monetary policy in place. This was not rectified as and when required. Third, with severe consequences, were the financial innovations

created, in the form of derivatives, on the back of mortgage-backed securities. These were then distributed globally through integrated financial markets. Basically the mortgage-backed loans were reclassified as investments with different risk profiles and these were then sold off to investors throughout the globe. These investments were worthless as they were reliant on the ability of the high-risk borrowers to meet their payments on the loans that they were more and more frequently defaulting on.

The engineering manufacturing sector has been one of the hardest hit sectors and is reported to have been haemorrhaging jobs since the crisis first reached South African shores. This was a contributing factor when selecting the focus area of the study. The engineering manufacturing sector is an extremely large sector and for this reason the Standard Industry Classification (SIC) codes were used to limit the types of organisations which would be selected to form a part sample used to collect primary data. 3565, 3569, 357, 3571, 3574, 3537 were the SIC codes selected to limit the sample.

Organisations need to formulate strategies to take advantage of their opportunities and avoid any threats that they are faced with. Organisations confronted by the global economic crisis would have had to adapt their strategies to best deal with their changing circumstances. Strategy provides an organisation with a plan for success. It is able to guide an organisation in the 'right' direction. Strategy was previously defined as the ever-evolving game plan of an organisation that determines what resources and methods are required for the organisation to achieve its long-term goals and objectives, while still allowing for change to the strategy when and where required.

Strategy is described as ever-evolving. This is due to the dynamic environment in which an organisation operates. The strategy of an organisation must adapt to its environment and as the environment of the organisation is dynamic then the strategy must be dynamic as well, changing when and where required. Organisations must thus continuously assess their circumstances as well as their strategies to determine whether these are well married or whether alterations need to be made. There are a number of tools available to organisations which have been specifically designed to assist the organisations during strategy formulation. These include, but are not limited to: SWOT Analysis; PEST Analysis; Porters Five Forces; Boston Consulting Group Matrix; General Electric Model; and the Life Cycle Model. These models to optimize strategy have been discussed in some detail previously.

Once an organisation has used these tools to develop a unique and well-formed strategy, they will be better able to identify which of the four basic strategic options the organisation should choose. An organisation must choose between: Low Cost provider, Differentiation, Niche Marketing, and Expertise and Resource Strengths.

A low cost provider aims to sell their products or services at the lowest possible price. An organisation wanting to successfully implement this strategic option would have to be number one or two in a market. Differentiation, on the other hand, occurs when an organisation attempts to make their products or services different to those of their competitors in a way that will be perceived as having worth. Niche marketing occurs when an organisation narrows their target market and then offers their customers a more specialised product or service. The fourth, and final, strategic option available to organisations is expertise and resource strengths. Organisations making use of this strategic option rely on the expertise and resource strengths that they have developed over years spent operating in the field. These expertise and resource strengths often give the organisation capabilities that their competitors find difficult to replicate or trump with capabilities of their own.

Once an organisation has achieved a sustainable competitive advantage through the successful implementation of one of the aforementioned strategic options, the organisation must seek to constantly improve on their competitive advantage.

A number of primary and secondary research problems were previously identified and discussed. The primary research problem aimed to determine the extent to which strategies in the engineering manufacturing sector in KwaZulu-Natal have been affected and needed to be specifically adapted in order for SMEs in this sector to be able to survive and grow beyond the crisis.

Five secondary research problems were included for the added insight which it was believed they would contribute to the study. The first secondary research problem to be resolved was whether or not there is a global crisis. The second problem was whether the crisis is a global financial or global economic crisis. The third problem was whether or not the engineering manufacturing sector has been affected by the crisis. The fourth problem aimed to determine the types of strategies that could be specifically adapted in order to deal with the global economic crisis. The fifth and final, secondary research problem aimed to determine what local, national and international strategies there are available to for SMEs in the engineering manufacturing sector to survive and grow beyond the crisis.

A number of research hypothesis were offered for analysis:

H_1, the independent variable, being the global economic crisis has negatively impacted on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

Ho, the independent variable, being the global economic crisis has not impacted negatively on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal.

H_2, there is a global crisis.
H_0, there is no global crisis.

H_3, the global crisis is economic in nature.
H_0, the global crisis is not an economic crisis.

H_4, the global crisis has impacted on the engineering manufacturing sector in KwaZulu-Natal.
H_0, the global crisis has not impacted on the engineering manufacturing sector in KwaZulu-Natal.

H_5, strategies had to be specifically adapted as a result of the global crisis
H_0, strategies did not have to be specifically adapted as a result of the global crisis.

In addition to the primary and secondary research objectives, as well as to the offered research hypotheses identified above, four research objectives were also included. These research objectives attempted not only to answer the research problems laid out earlier, but also attempted to provide additional information surrounding the impact of the crisis on the engineering manufacturing sector, in addition to providing organisations participating in this study with solutions and information relating to the crisis. The gathered data can be compiled into one easily available source of information that may better equip organisations to deal with similar situations in the future. The research objectives were to:

- Provide answers to the research problems identified earlier in this chapter
- Determine what caused the global crisis
- Determine what strategies could be used to protect organisations from similar situations as well as allowing organisations to grow
- Provide organisations with information that will better equip them to deal with similar situations in the future

The research was both quantitative and qualitative in nature. A typically quantitative research technique, in the form of questionnaires, has been used to obtain the primary data from respondents. The questionnaire included a space after each question, asking respondents to elaborate on and provide details of their experiences. This added a qualitative aspect to a typically quantitative research technique.

Primary and secondary data were collected in order to resolve the research problems, hypotheses and research objectives. Primary data consisted of the data collected from respondents through the use of the questionnaire. Secondary sources of data included publications such as journals, books, government publications, research reports and Internet and electronic articles.

A convenience sample was used to select thirty respondents. Respondents that have proved to be most easily accessible and willing to participate in the study were selected. The respondents were required to meet a set of selection criteria. First, the respondents had to be willing to participate in the study. Second, the chosen respondents were only selected if they fell within the specified geographical area, i.e. KwaZulu-Natal. Third, the SMEs must have been in existence for five years or more. Last, the organisations must form a part of the engineering manufacturing sector. This was done so as to ensure that the sample population consisted of only those respondents that would contribute data of value.

The questionnaire comprised of four sections:
- E. Biographical Details
- F. Operating History
- G. The Organisation and the Crisis
- H. The Organisation and Strategy

Once all of the primary and secondary data had been collected, the data analysis could begin. Quantitative analysis techniques were used to analyse the quantitative data and qualitative analysis techniques were used to analyse the qualitative data.

Quantitative techniques included organising the data, entering it onto Excel and then statistically analysing the data so as to transform the data into numbers and figures that was valuable in terms of the data that they represented. In terms of the qualitative techniques used to analyse the qualitative data, themes and recurring ideas and/or problems were identified by analysing the words used by respondents and counting the repetitions of these words. Secondary data was also used in conjunction with the primary data in an attempt to gain further insight into the data.

Ethical clearance was applied for and obtained 26th April 2011. The ethical clearance number is HSS/0169/011M and the letter is attached as APPENDIX D.

Of the possible thirty respondents that were originally approached to participate in the study, twenty-two organisations were willing to participate. The respondents have completed the questionnaire and the letter of informed consent. Section A of the questionnaire dealt with the

biographical details of the respondents and in this way attempted to ensure that the respondents met the selection criteria originally stipulated. All twenty-two respondents were found to meet the selection criteria, namely they are all based in KwaZulu-Natal; they have all been in existence for a period of more than five years; and they all fell within the engineering manufacturing sector as outlined by the SIC codes previously identified. Most importantly, the respondents were willing to participate in the study.

Section B of the questionnaire attempted to obtain a brief operating history from the respondents. All of the respondents described their operating history in a positive light, stating that they had been growing steadily since the date of their inception. Few respondents indicated any period(s) of decline in their operating history. When specifically asked to indicate whether they had experienced any negative changes to their performance in the past, the number of organisations that responded in the affirmative increased dramatically. The most prevalent periods of downturn were 1984, 1998, 2002, and 2004. Changes to strategy were cited as the most common method incorporated to deal with these periods of decline. The majority of respondents that had experienced negative changes in their performance history stated that their previous experience in similarly stressful economic times had impacted on the manner in which they dealt with the 2008 economic climate.

The bulk of respondents agreed with the statement that the engineering manufacturing sector was one of the worst hit sectors by the crisis. The most common symptoms of the crisis experienced by respondents included weaker domestic revenues, declining turnover, and reduced profits.

The vast majority of respondents indicated that they currently have a strategy in place. Experience and resource strengths were cited as the most common basis for competition. However, few of these respondents are making use of the tools and techniques available to them to optimise their strategy. Respondents made alterations to their strategies to deal with the current global crisis but it is not clear how the respondents are determining how to change their strategies.

As a consequence of the primary and secondary data collected and analysed as discussed above, it may be concluded that the following offered hypotheses hold true:

H_1, the independent variable, being the global economic crisis has impacted on the dependent variable, the engineering manufacturing sector in KwaZulu-Natal;

H_2, there is a global crisis;

H_3, the global crisis is economic in nature;

H_4, the global crisis has impacted on the engineering manufacturing sector;

H_5, strategies had to be specifically adapted as a result of the global crisis.

As previously stipulated, there are four strategic options available to organisations that are able to be specifically adapted in order to deal with the global economic crisis. These are: Low Cost Provider; Differentiation; Niche Marketing and; Expertise and Resource Strengths. Organisations are able to choose one of these strategies and then use the models to optimise strategy to mould the strategic option of their choice to their specific needs. These strategic options may be moulded to suit organisations operating at all different levels, whether they are operating in a local, national or international market.

In the face of this data, it is evident that the global economic crisis has impacted on organisations falling within the engineering manufacturing sector. It can also be seen that the strategies of the organisations within this sector have also been affected. Respondents have had to adapt their strategies to deal with their changing circumstances. This, in and of itself, is evidence that the global economic crisis has affected the strategies of organisations falling within the engineering manufacturing sector. The effect has been so severe that organisations have had to alter their strategies. Many organisations have been left reeling in the face of this unexpected crisis and in some cases their attempts at strategic fortification have not been enough to protect them from the full effects of the crisis. Thousands of people have lost their jobs and a number of businesses have had to close their doors. This could be due to the fact that organisations are not fully equipped to deal with the threats that are arising in a dynamic and unpredictable environment. Through the use of the aforementioned models to optimise strategy, organisations may be able to fortify themselves and protect against similar circumstances in the future. It is essential that organisations aim for greater awareness of their operations and their environments and that they aim to marry the two together through a well formulated and then executed strategy.

7.2. Limitations of the Study

This research was performed at a master's level. Due to this, the researcher did not have access to a large amount of funds. This meant that the researcher was unable to travel extensively to spend more time with and thereby gain greater insight into the operations of the various respondents. The researcher was also ethically and financially unable to offer the financial contribution that some potential respondents requested in return for their participation in the study.

The study made use of twenty-two respondents falling within the engineering manufacturing sector as outlined through the use of the identified SIC codes in KwaZulu-Natal. The respondents were selected based on convenience. Although this assisted in obtaining timeous and willing respondents, it may also be considered a limiting factor as the respondents form part of a smaller population that may thus not be entirely representative of the engineering manufacturing sector.

The sample size of the respondents was also rather small when contrasted with the entire population of the engineering manufacturing sector and consequently may not be considered to be a representative sample.

Another limitation to the study was the relocation of the researcher's supervisor one year into the study. Professor O'Neil was always available to communicate via email. However, this method of communication is not as effective as one-on-one consultations with regards to the supervisor-student relationship.

The final limiting factor was the full-time employment of the researcher mid-2011. This reduced the amount of time available to the researcher to perform research and analysis. The researcher was thus unable to focus entirely on the task at hand, but had to rather allocate time every day to the research being performed.

7.3. Recommendations for Further Study

Further studies in this line would benefit from a more intensive approach where the researcher is able to perform the research on a full-time basis or where the researcher is able to perform a more in-depth study as would be the case in a doctoral research study.

It is recommended that for future research, the researcher has a greater period of time to complete the study, to be able to spend more time with the respondents. It is also recommended that the researcher obtain data through interviews and observations so as to allow for greater clarification of the data being collected.

It is recommended that a larger and more representative sample be used to collect data, to ensure that the findings of the research are more representative. The findings of such research would thus greatly contribute to the knowledge held by SMEs in the field, thereby better enabling them to deal with similar situations in the future.

REFERENCES

Balchin, N. (2009) The Impact of the Global Financial Crisis in Africa. *Africagrowth Agenda*, July-September, p.12-15.

Bank of Thailand. (2010) Real Sector. [Online]. Available: http://www.bot.or.th/English/Statistics/EconomicAndFinancial/RealSector/Pages/Index.aspx Last accessed: 18 February 2010.

BBC News. (2009) Global job losses 'could hit 51m' [Online]. 22 paragraphs. Available: http://news.bbc.co.uk/2/hi/7855661.stm Last accessed: 14 April 2010.

Blake, B. (2008) Global economic crisis brings risk exposure challenges. *Tax Talk*, 13 Nov/Dec, p.23.

Bloomberg.com. (2010) MXEF: IND MSCI EM [Online]. 1 paragraph. Available: http://www.bloomberg.com/apps/quote?ticker=MXEF%3AIND Last accessed: 13 April 2010.

Blumberg, Cooper and Schindler. (2005*) Business Research Methods*. 2nd European edition. Berkshire, McGraw-Hill Education.

Buhlungu, S. and Mtyingizana, B. (2009) The Global Economic Crisis: a sociological perspective. *Discourse: Recession: and in-depth look into the realities behind the news*, 37(2) Dec, p.22-27.

Boshoff, W.H. (2006) The Transmission of Foreign Financial Crises to South Africa: a firm-level study. *Studies in Economics & Econometrics*, 30(2) Aug, p.61-p.85.

Bureau of Economic Research and University of Stellenbosch. (2009) Executive Summary. *Manufacturing Survey Fourth Quarter 2009*, 24(4), p.1-5.

Bureau of Economic Research and University of Stellenbosch. (2009) Quarterly analysis of manufacturing activity. *Manufacturing Survey Fourth Quarter 2009*, 24(4), p.1-66.

Business Dictionary. (2010) Economic Crisis. *Business Dictionary* [Online]. Available: http://www.businessdictionary.com/definition/economic-crisis.html Last accessed: 15 February 2010.

Business Dictionary. (2010) Financial Crisis. *Business Dictionary* [Online]. Available: http://wwwbusinessdictionary.com/definition/financial-crisis.html Last accessed: 15 February 2010.

Calitz, E. (2009) Recession: An Economic Perspective. *Discourse: Recession: an in-depth look into the realities behind the news*, 37(2) Dec, p.0-7.

Cherry, K. (2010) Validity. *About.com* [Online]. 9 Paragraphs. Available: http://psychology.about.com/od/researchmethods/f/validity.htm Last Accessed: 10 December 2010.

Chew, I.K.H. and Horwitz, F.M. (2002) Downsizing the Downside of Downsizing: A Revised Planning Model. South African Journal of Public Relations, 26(2), p.25-41.

Chorn, N. (2010) Key Signposts on the Road to Corporate Resilience. Management Today, 28(3) Apr, p.11-17.

Cipro. (2010) Standard Industrial Classification Codes [Online]. 10 paragraphs. Available: http://www.cipro.gov.za/info_library/sic_codes.asp Last accessed: 27 April 2010

De Rato, R. (2007) The Implications of Recent Financial Market Turbulence for the Global Economy. *Professional Accountant*, Sep/Oct, p.8-10.

DiPiazza, S. A. (2009) An historic moment: one world united in crisis. *Management Today*, 25(4), p.8-12.

Ehlers, M.B. and Lazenby, J.A.A. (2004) *Strategic Management: Southern African Concepts and Cases.* Pretoria, Van Schaik.

Even, S. and Feldman, N. (2009) Implications of the Global Economic Crisis. p.181-200.

Hill, C.W. and Jones, G.R. (2001) *Strategic Management: An Integrated Approach*. Boston, Houghton Mifflin Company.

Harrilall, K. (2010) Beware the 'four Cs' investors warned. *The Weekend Witness*, February 6 2010, p.23.

Harrilall, K. (2010) KZN worst hit by job losses. *The Witness* [Online]. 19 paragraphs. Available: http://www.witness.co.za/index.php?showcontent&global[_id]=35619 Last accessed: 15 April 2010.

Hopkins, W. G. (2008) Quantitative Research Design. Sportscience [Online]. 40 Paragraphs. Available: http://www.sportsci.org/jour/0001/wghdesign.html Last accessed: 23 November 2010.

International Monetary Fund (IMF). (2009). World Economic Outlook Update [Online]. 6 pages. Available: http://www.imf.org/external/pubs/ft/weo/2009/update/ol/pdf/0109.pdf Last accessed: 27 February 2010

Investopedia. (2010) MSCI Emerging Market Index [Online]. 4 paragraphs. Available: http://www.investopedia.com/terms/e/emergingmarkets index.asp Last accessed: 14 April 2010.

Kato, T. (2009) What The Global Financial Crisis Means for Sub-Saharan Africa. *International Monetary Fund* [Online]. 24 paragraphs. Available: http://www.imf.org/external/np/speeches/2009/020309.htm Last accessed: 27 February 2010

Kiptoo, C. K. (2009) The Potential Impact of the Global Financial Crisis on African Economies. *Africagrowth Agenda*, April – June, p.14-18.

Kotler, P. (1997) *Marketing Management: Analysis, Planning, Implementation, and Control*. 9th edition. New Jersey, Prentice Hall.

Kotler, P. and Andreasen, A. (1991) *Strategic Marketing for Non-profit Organizations*. 4th Edition. New Jersey, Prentice Hall.

Lind, D.A., Marchal, W.G., and Wathen, S.A. (2006) Business Statistics for Business and Economics. 5th Edition. International Edition. New York, McGraw-Hill/Irwin.

Louw, L. and Venter, P. (2006) *Strategic Management: Winning in the Southern African Workplace.* Cape Town, Oxford University Press.

Maimbo, S. M. (2008) The Impact of the Financial Crisis on African Financial Systems. *AccessFinance*, November 2008(25), p.1-3.

Mason, R.D., Lind, D.A., and Marchal, W.G. (2000) Statistical Techniques in Business and Economics. 10th Edition. International Edition. Singapore, McGraw-Hill/Irwin.

McGee, J., Thomas, H. and Wilson, D. (2005) *Strategy: Analysis and Practice.* Berkshire, McGraw-Hill.

McWilliam, D. (2009) You can't hide during hard times. *Professional Accountant*, Mar/Apr, p.22.

MSCI Barra. (2010) Index Definitions [Online] 38 paragraphs. Available: http://www.mscibarra.com/products/indices/international_equity_indices/definitions.html Last accessed: 13 April 2010.

MSCI Barra (2010) MSCI Emerging Markets [Online]. 5 paragraphs. Available: http://www.mscibarra.com/products/indices/lica/msci_emerging_markets/ Last accessed: 13 April 2010.

Nieman, G. and Nieuwenhuizen, C. (2009) *Entrepreneurship: A South African Perspective*. 2nd edition. Pretoria, Van Schaik Publishers.

Pereira, J. (2009) Getting Ready for the Economic Upturn: Finance. *Emergency Services SA/Occupational Risk*, 1(4) Oct, p.4-5.

Porter, M. (2007) Strategy competitiveness for the third millennium. *Management Today* 23(7), Aug, p.6- 8.

Porter, M.E. (1998) On Competition. HBR's Must-Reads on Strategy [Online]. Available: http://www.mktgsensei.com/AMAE/Strategy/HBR%20on%20Strategy.pdf#page=25 Last accessed: 16 August 2010.

Ramcharan, R. (2009) Sound Policies Shield South Africa from Worst of Recession. International Monetary Fund [Online]. 17 Paragraphs. Available: http://www.imf.org/external/pubs1ft/survey/so/2009/car092509ahtm Accessed: 26 February 2009

Roodt, D. (2009) Power and prosperity in a changing world. *Discourse: Unforseen consequences of globalisation*, 37(1), Jul, p.24-28.

(2008) SA – a sinking ship? Economic forecast for 2009. *Enterprise Risk*, 2(10), p.24-26.

Santos, J.R.A. (1999) Cronbach's Alpha: A Tool for Assessing the Reliability of Scales Tools of Trade. *Tools of Trade*, 37(2), April 1999, 14 Paragaphs. Available: http://www/joe.org/joe/1999april/tt3.php?ref=Klasistanbul.com Last Accessed: 10 December 2010

Shuttleworth, M. (2009) Face Validity. *Experiment Resources* [Online]. 19 Paragraphs. Available: http://www.experimentresources.com/face-validity.html Last Accessed: 10 December 2010

Stacey, R.D. (2007) *Strategic Management and Organisational Dynamics: The Dynamics of Complexity*. 5th edition. Edinborough Gate, Prentice Hall.

Terreblanche, M. and Durrheim, K. (2002) *Research in Practice: Applied Methods for Social Sciences*. Cape Town, University of Cape Town Press.

Thompson, A.A., Gamble, J.E. and Strickland, A.J. (2006) *Strategy: Winning in the Marketplace.* 2nd edition. New York, McGraw-Hill Irwin.

UCLA Academic Technology Service (2010) SPSS FAQ What does Cronbach's Alpha Mean. UCLA [Online]. 10 Paragraphs. Available: http://www/ats/ucla.edu/stat/spss/faq/alpha.html Last Accessed: 10 December 2010

UNCTAD United Nations Conference on Trade and Development (2009) As financial and economic crisis begin to bite, developing countries ponder ways to support each other [Online]. 12 paragraphs. Available: http://www.unctad.org/Templates/webflyer.asp?docid=10995&intltemlD=5226&lang=1 Last Accessed: 15 April 2010.

Varejes, K. (2009) Look at international opportunities in a time of global economic recession. *Journal of Marketing*, Jan, p.43.

Welman, Kruger and Mitchell. (2008) *Research Methodology*. 3rd edition. Cape town, Oxford University Press.

Wiemar, N. (2008) Is South Africa in a Financial Crisis? You Decide. *IMFO: Official Journal of the Institute of Municipal Finance Officers*, 9(2), p.8-11.

Williams, A. (2003) How to write and analyse a questionnaire. *Journal of Orthodontics,* 30, p.245-252.

APPENDIX A

Letter of Introduction

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Dear Sir and/or Madam

I am a student at the Pietermaritzburg Campus of the University of KwaZulu-Natal. I am currently studying towards a Master of Commerce degree in Management. I am required to complete a thesis as a part of this degree. I have chosen the following topic:

<u>"A Critical Investigation of the Effect of the Global Economic Crisis on Strategy in the Engineering Manufacturing Sector in KwaZulu-Natal".</u>

The world was caught unprepared for the crisis that gripped the globe. The crisis originated in the United States, but it quickly spread, contaminating economies worldwide. Not every country was impacted in the same way; however there is one common feature and that is that not one country would escape unscathed.

This study will focus on the engineering manufacturing sector in KwaZulu-Natal. The purpose of the research is to determine what the implications of the crisis were, what type of crisis it was, and whether or not the engineering manufacturing sector was impacted by this crisis. The study then aims to determine what strategies would be able to be specifically adapted in response to the crisis and what local, national and international strategies there are available for SMEs to survive and grow beyond the crisis.

The research will comprise of primary and secondary research. In terms of the primary research, a sample of thirty respondents falling within the sector has been selected to participate in the study. It is entirely up to each respondent to decide whether or not they

would like to participate and each respondent is free to withdraw from the research process at any time. All information collected from respondents will be confidential and anonymity will be maintained throughout. Respondents will all be presented with a questionnaire that they will be asked to complete and submit to the researcher. The questionnaire will consist of a variety of questions, ranging from pre-coded questions (where the respondent must choose from a selection of responses) and open-ended questions (where respondents are asked to elaborate on the experiences of the organisation).

The questionnaire will be made up of four sections, namely:

A. Biographical Details
B. Operating History
C. The Organisation and the Crisis
D. The Organisation and Strategy

Each respondent that chooses to participate in the study will receive a summary of the findings. If the respondents wish for more information, then an electronic version of the completed thesis can be requested at that time. In this way I hope to provide organisations with valuable information that will stand the organisation in good stead for the future.

Thanking you in advance,
Kezia Fitzsimmonds

APPENDIX B

Informed Consent

I, Kezia Marie Fitzsimmonds, am a student currently registered for a Masters of Commerce (Management) Degree on the Pietermaritzburg Campus of the University Of KwaZulu-Natal (UKZN). A requirement of the degree is that I complete a thesis. I have chosen the following topic:

<u>"A Critical Investigation of the Effect of the Global Economic Crisis on Strategy in the Engineering Manufacturing Sector in KwaZulu-Natal".</u>

Please note that this investigation is being conducted in my personal capacity. I can be reached on Kezia.fitzsimmonds@gmail.com or 074 132 7491.

My academic supervisor is Professor Charles O'Neill, based at the British University in Egypt. He can be contacted on Charles.Oneill@bue.edu.eg or 002 0107 806 288.

The purpose of this research is to determine what the impact of the global economic crisis was on the strategies of organisations operating in the engineering manufacturing sector in KwaZulu-Natal. This study aims to determine what strategic options there are available to organisations operating in this sector that may be used as a means of growth. Information gathered in this study will include data reviewed from primary research performed at a number of organisations operating in the aforementioned sector. Please note that the names of respondents will not be included in the final report as only summary data will be included. The anonymity and confidentiality of all respondents is of the utmost importance and will be maintained throughout the study.

The participation of respondents is completely voluntary and respondents have the right to withdraw from this study at any time.

Please complete the section below:

I ………………………………………………………… (Full names of Participant) hereby confirm that I understand the contents of this document and the nature of the project, and I consent to participating in the research project.
I understand that I am at liberty to withdraw from this project at any time, should I so desire.

Signature of participant   **Date**

………………………………….   **…………………………..**

APPENDIX C

A CRITICAL INVESTIGATION OF THE EFFECT OF THE GLOBAL ECONOMIC CRISIS ON STRATEGY IN THE ENGINEERING MANUFACTURING SECTOR IN KWAZULU-NATAL

Questionnaire

A. <u>Biographical Details</u>

Section A is designed to find out the basic details of the organization. This is needed so as to group organizations of similar circumstances together and thereby compare and contrast organizations against one another in order to determine whether there are patterns.

1. Area of Operation: _____

2. Location of Office: _____

3. Size of Organization (no. of employees): _____

4. Product/Service Offering: _____
   _____

5. Business Start Date: _____

B. <u>Operation History</u>

Section B of the questionnaire aims to determine what the operating history of the organization is prior to the start of the global crisis. It is essential to formulate a broad picture of the performance of the organization prior to the crisis so as to determine how the crisis has impacted on the organization.

6. How would you summarize the performance of the organization since it first opened?
   _____
   _____
   _____

7. Has the organization experienced any negative changes in its performance prior to start of the crisis in 2008? (Please tick yes or no).
   ☐ Yes
   ☐ No

   What would you attribute these changes in performance to?

_____

_____

_____

When did these changes occur?

_____

How did the organization deal with these changes? (Tick appropriate boxes)

- ☐ Environmental Scanning

- ☐ Retrenchment

- ☐ Marketing and Sales promotions

- ☐ Changes to strategy

- ☐ Waited for the performance of the organisation to stabilise

- ☐ Other, Please specify _____

8. If you answered YES to the previous question, did this experience in any way impact the manner in which the organization dealt with the current (2008-present) economic climate? (Please tick yes or no).

- ☐ Yes

- ☐ No

If yes, please elaborate on how this previous experience impacted on the manner in which the organization has dealt with the current economic crisis:

_____

_____

_____

_____

_____

C. The Organization and the Crisis

Section C is concerned with how the global crisis has impacted on the organization since 2008. This section is the most important section in the questionnaire.

9. The engineering manufacturing sector is said to have been one of the hardest hit sectors by the crisis. Drawing from your own experiences of the crisis, does the organization agree or disagree with this statement? (Please tick agree or disagree).

- ☐ Agree

- ☐ Disagree

10. Please mark with a tick all of the statements that accurately describe occurrences within the organization since 2008: (Tick appropriate boxes).

- ☐ Weaker export revenues

- ☐ Weaker domestic revenues

- ☐ Declining production volumes

- ☐ Declining turnover

- ☐ Reduced profits

- ☐ Inflationary Pressure

- ☐ Reduction in number of employees (Retrenchment)

- ☐ No symptoms

- ☐ Other, please specify _____

11. Does the organization regard the global crisis as a threat? (Tick yes or no).

- ☐ Yes

- ☐ No

Please explain your answer:

_____

_____

_____

_____

D. The Organization and Strategy

Section D is concerned with the organization and strategy. This section is also a very important section of the questionnaire as it attempts to determine whether strategies have been impacted by the crisis.

12. Does the organization have a strategy/strategies in place? (Tick yes or no)

- ☐ Yes

- ☐ No

How is it determined if the strategies are effective or not?

_____

_____

How often does this occur?

_____

13. Does the organization make use of any of the following models to optimize strategy, (tick the appropriate ones).

- ☐ SWOT analysis

- ☐ PEST analysis

- ☐ Porters Five Forces

      ☐   Boston Consulting Group Matrix

      ☐   General Electric Model

      ☐   Life Cycle Model

      ☐   Other, please specify _____

14. Did the organization alter their strategies in any way to allow for their changing circumstances resulting from the crisis? (Tick yes or no).

      ☐   Yes

      ☐   No

If yes, what did the organization do?

_____
_____
_____
_____
_____
_____

15. On what basis is the organization currently competing? (tick the strategy which best describes the basis).

      ☐   Low Cost Provider

      ☐   Differentiation

      ☐   Niche Marketing

      ☐   Experience and Resource Strengths

      ☐   Other, please specify_____

16. How does the organization intend to maintain any competitive advantage it has?

_____
_____
_____
_____
_____

APPENDIX D

Ethical Clearance Letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

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10 April 2012

Ms Kezia Marie Fitzsimmonds (204511748)
School of Management, IT and Governance

Dear Ms Fitzsimmonds

PROTOCOL REFERENCE NUMBER: HSS/0169/011M
NEW PROJECT TITLE: "The Effect of the Global Economic Crisis on Strategy in the Engineering Manufacturing Sector in KwaZulu-Natal."

__APPROVAL AND CHANGE OF DISSERTATION TITLE__
I wish to confirm that ethical clearance has been granted full approval for the above mentioned project:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Best wishes for the successful completion of your research protocol.

Yours faithfully

Professor Steven Collings (Chair)
Humanities & Social Sciences Research Ethics Committee

cc Supervisor Professor Charles O'Neill
cc Ms Deborah Cunynghame

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