The development of a strategic performance measurement tool for SMEs in the construction industry

BY

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Date Submitted: 30 November 2007
DECLARATION

I, Molefe Pooe, hereby declare that:

Development of strategic performance measuring tool for SMEs in the construction industry is the result of my own independent investigation and work, except where otherwise stated.

This dissertation is being submitted in partial fulfillment of the requirements for the degree of Magister in Business Administration.
This work has not previously been accepted in substance for any degree at any other university of institute of learning.
All sources used or quoted have been indicated and acknowledged by means of complete references. A reference list is attached.
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ABSTRACT

Research in strategic performance measurements has focused mostly on large organisations. In the last few years, there has been a widespread adoption and implementation of balanced strategic performance measurements that no longer narrowly focus on financial measurements but include other non-financial measures. Again, such improvements have focused on large organisations.

This study aims to assess strategic performance measurement practices in the Small and Medium Enterprises within the construction industry. The Balanced Scorecard is used as a generic measurement framework to ascertain the current strategic performance measurements within this sector. The four perspectives of measurement; namely, financial, customer, internal process and learning and growth are used to determine the generic measurements within the construction industry. These are then used to determine to what the extent Small and Medium Enterprises in the construction industry have adopted the measurements outlined in these four perspectives. The nature and extent of strategic planning and perceived relevance of various sets of balanced measurements were also assessed.

A survey was conducted in the form of a questionnaire in order to obtain primary data from a selected sample group. Using qualitative and quantitative techniques, the data was analysed to get a clear picture of current practice.

From the results obtained from the respondents in the sample group, it seemed that there was some strategic planning within this sector although the process was mostly unstructured. The results also showed that the owner-manager is still solely responsible for strategic planning with little or no inclusion of other managers or employees.
The survey further revealed that the financial control measures are still prominent within the sector even though the non-financial measures are regarded as important to the success of the organisation. Profit margins, balance sheets and cash flows rank high as key performance indicators or measurements of financial performance. Although respondents are favourably disposed towards customer measurements, the focus is usually on final quality of product while the relationship between client and supplier is not deemed important.

Further analysis of the data gathered showed that learning and growth measurements focused on employee absenteeism but there were not many training and development measurements adopted. Project management measurements practiced by the respondents focused on time and cost measures; namely, actual project duration versus planned duration, actual project cost versus planned costs.

Finally, the study revealed that the two primary hindrances to effective implementation of strategic performance measurement is lack of human resources and lack of managerial capacity. This will alleviate owner-manager dependability and thus help in making the businesses more sustainable.

It is recommended that customer measurements include relations between all stakeholders. This is mainly because, in the future, the development of loyal and inclusive stakeholder relationships will become one of the most important determinants of commercial viability and business success.
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4.4 ATTITUDES TOWARDS STRATEGIC PLANNING AND STRATEGIC PERFORMANCE MEASUREMENT .................................................................84

4.5 FINDINGS ON ADOPTED ORGANISATIONAL PERFORMANCE MEASUREMENTS .............................................................................88

4.5.1 FINANCIAL MEASUREMENTS ..................................................................................88
4.5.2 CUSTOMER MEASUREMENTS .................................................................................91
4.5.3 LEARNING AND GROWTH MEASUREMENTS .........................................................92
4.5.4 INTERNAL PROCESS MEASUREMENT ..................................................................94

4.6 HINDRANCES TO SUCCESSFUL IMPLEMENTATION OF STRATEGIC PERFORMANCE MEASUREMENT ..................................................95

4.7 BALANCED MEASUREMENTS AND LINK TO OBJECTIVES .................................96

CHAPTER FIVE ...........................................................................................................98

5 SUMMARY, CONCLUSION AND RECOMMENDATIONS ........................................98

5.1 RESEARCH SUMMARY ...........................................................................................98

5.2 CONCLUSION .........................................................................................................100

5.3 RECOMMENDATIONS ............................................................................................103

REFERENCES ............................................................................................................106

APPENDIX ..................................................................................................................122
LIST OF FIGURES

FIGURE 1: BASIC DESIGN OF BALANCED SCORECARD PERFORMANCE SYSTEM .................... 9
FIGURE 2: PROCESS OF DESIGNING STRATEGIC PERFORMANCE MEASUREMENT .................. 50
FIGURE 3: STRUCTURE OF THE SOUTH AFRICAN CONSTRUCTION EXCELLENCE MODEL.... 52
**LIST OF TABLES**

**Table 1:** Definitions of SMMEs given by the National Small Business Act

**Table 2:** Different levels of strategic planning process and management responsibilities

**Table 3:** Characteristics that differentiate SMEs from large organisations.

**Table 4:** Characteristics of an effective measurement system

**Table 5:** Steps in designing a performance measurement system

**Table 6:** Classification of SACEM model in balanced scorecard perspectives.

**Table 7:** Factors to consider in developing KPIs

**Table 8:** Generic measurement instrument for SMEs in construction

**Table 9:** Geographical distribution and classification of respondents by size of organisation

**Table 10:** Responses to closed questions

**Table 11:** Disposition of respondents towards the importance of listed used financial measurements

**Table 12:** Disposition of respondents towards the importance of used customer service measurements

**Table 13:** Disposition of respondents towards the importance of used learning and growth measurements

**Table 14:** Disposition of respondents towards the importance of listed used internal perspective/project management measurements

**Table 15:** Respondents’ view on hindrances to successful implementation of strategic performance measurement
CHAPTER ONE

1 BACKGROUND AND INTRODUCTION TO RESEARCH STUDY

1.1 INTRODUCTION

The importance of Small and Medium Enterprises (SMEs) for development of national economies and employment are widely recognised. In most African countries, SMEs account for a significant share of production and employment. (Wolf, 2001).

Abedian, Coovadia, Davel, Falkena, Mandungaba, Masilela, Rees and von Blottnitz (2001) assert that in South Africa, the total economic output of small and medium enterprises is some 50 per cent of Gross Domestic Product (GDP) and this sector employs in excess of 60 per cent of the total labour force. The level of unemployment in the local economy can be reduced meaningfully by the successful promotion of SME output. In this sense, SMEs play a far more important role in developing economies than in industrial countries since SMEs make a major contribution to socio-political stability.

According to Venter (2006) the construction industry is an important player in the economy of South Africa. The industry’s growth forecast for the year 2006 was 9.42 per cent, with the South African government being the single biggest client, making up between 40 per cent and 50 per cent of the entire domestic construction expenditure.
Ross (2006) observed that this sector is characterised by companies that lack management and business practice leading to high failure rates. A survey conducted by the Construction Industry Development Board (2004) revealed that local contractors operating at the local and metropolitan level have severe competition, which undermines sustainability. The report further notes that although some SMEs are providing high quality service, and products, many contractors are unable to provide acceptable quality and a large amount of customer dissatisfaction can be attributed to their performance.

Compounding these challenges has been the rapid globalisation of the South African economy. Both large and small contractors are increasingly seeking new markets to grow and survive. This has meant that South African contractors need to be more competitive to match the level of performance of their counterparts both domestically and internationally (Dlungwana, Noyana, Nxumalo, Rwelamila and van Huysteen, 2002).

Botchway, Cooper, McCafferty and Rayson (2005) state that the difference between organisational success and failure is often in performance measurement and benchmarking practised. Measuring performance is therefore vital to assess the health of the organisation, support managers in decision-making and to provide focused direction for operations. They allow the organisation to express its strategic intent and demonstrate how that strategy connects with everyday operations, thus enabling the creation of essential feedback to support overall organisational goals and sustainable growth in the face of current business pressure.

Ghobadian and O'Regan (2005) assert that the business environment has rarely been more challenging as increased change brings greater uncertainty. Accordingly, the approaches that small and medium enterprises take in making strategic choices need careful consideration if they are to become competitive and survive.
There has been a significant amount of literature written about performance measurement and its application in driving the vision and strategy of organisations. This literature focuses primarily on large organisations. (Halbach and Rohm, 2005).

The research undertaken in this paper investigates the challenges that SMEs in the construction sector are facing in implementing the Balanced Scorecard as a strategic performance measurement system. The focus is on the construction industry with special attention to SMEs in the Western Cape: George, Mossel Bay and Knysna.

1.2 MAIN PROBLEM AND OBJECTIVE

Research conducted by Bourne, Hudson and Smart (2001) revealed that SMEs that link operations to their business strategies outperform their competition. They further observed that general characteristics of SME suggest that an effective process for strategic performance measurement is imperative for the competitiveness of this sector.

Botchway et al, (2005) assert that the Balanced Scorecard as a strategic performance measurement framework is well appreciated in larger organisations unlike in SMEs. They conclude that a number of factors must be responsible for the limited or lack of adoption of strategic performance measurement and benchmarking for gaining competitiveness.

Aspinwall, Rodrigues and Sousa (2006) note that the Balanced Scorecard is relevant to both large and small organisations; however, neither a comprehensive literature review nor any empirical research exists on implementing the Balanced Scorecard in SMEs.
The main problem is to ascertain current SMEs practice in effective measurement of strategic performance and the associated key performance indicators influencing overall performance. The objective of this research is to develop a generic strategic performance measurement tool for SMEs in the construction.

1.3 SUB PROBLEMS

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

- What is the current state of strategic planning within the SME?
- What strategic performance measurements are currently in use within the SME?
- What is the current level of awareness among the SME management with regards to the Balanced Scorecard?
- What are the challenges within the SME in the construction industry in adopting and implementing a strategic performance measurement?

1.4 DEFINITION OF KEY CONCEPTS

1.4.1. Strategic Performance Measurement

In broad terms, Performance Management is the translation of plans into result execution. It is the process of managing an organisation’s strategy, which includes the following three major choices (Dorgan, Dowdy and Ripping, 2006):

- What products or service line should we offer or not?
- What markets and type of customers should we serve or not?
- How are we going to win?

Bailie and McAdam (2002) define performance measurement as the development of indicators and the collection of data to describe, report and analyse performance. Neely (1999) describes performance measurement as the
process of quantifying efficiency and effectiveness of action taken by the organisation.
For the purposes of this study, organisational performance measurement will be defined as: the process of developing, collecting and analysing key performance indicators to measure overall effectiveness of company’s strategic actions.

1.4.2 Balanced Scorecard

The Balanced Scorecard is a system that translates an organisation’s vision, mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system. (Kaplan and Norton, 1992)

More specifically, Bruggerman and Decoene (2006) report that the Balanced Scorecard was labelled as a comprehensive system of strategically aligned performance measures.

1.4.3 Strategy

Hitt, Hoskisson and Ireland (2005) define strategy as an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage.

An organisational strategy describes how it intends to create value for its shareholders, customers and citizens (Kaplan and Norton, 2004). These two definitions of strategy will be used in this research.

1.4.4 Small and Medium Enterprises

The most widely used framework in South Africa is the definition of the National Small Business Act (1996), which defines categories of business as follows:
**Small Enterprise**: The upper limit is 50 employees. Small enterprises are generally more established than very small enterprises and exhibit more complex business practised.

**Medium Enterprise**: The maximum number of employees is 100 or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are often characterised by the decentralisation of power to an additional management layer.

The National Small Business Act’s (1996) definitions of the different categories of business are summarised in Table 1:

<table>
<thead>
<tr>
<th>Enterprise Size</th>
<th>Number of Employees</th>
<th>Annual turnover</th>
<th>Gross assets, excluding fixed property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Fewer than 100 to 200 depending on industry</td>
<td>Less than R 4 million to R 50 million depending on industry</td>
<td>Less than R 2 million to R 18 million depending on industry</td>
</tr>
<tr>
<td>Small</td>
<td>Fewer than 50</td>
<td>Less than R 2 million to R 25 million depending on industry</td>
<td>Less than R 2 million to R 4.5 million depending on industry</td>
</tr>
<tr>
<td>Very small</td>
<td>Fewer than 10 to 20 depending on industry</td>
<td>Less than R 200 000 to R 500 000 depending on industry</td>
<td>Less than R 150 000 to R 500 000 depending on industry</td>
</tr>
<tr>
<td>Micro</td>
<td>Fewer than 5</td>
<td>Less than R 150 000</td>
<td>Less than R 100 000</td>
</tr>
</tbody>
</table>


The focus of this research will be on SMEs as per the definition in Table 1
1.5 DELIMITATION OF THE RESEARCH

The study will be confined to SME in the construction industry operating around Mossel Bay, George and Knysna, within the Western Cape. Very Small and Micro Enterprises are thus excluded from the study.

1.6 SIGNIFICANCE OF THE RESEARCH

There is a scarcity of studies on issues of strategic performance measures in South African SMEs. A great number of existing studies on performance measurement and the Balanced Scorecard as a strategic tool are primarily focused on larger organisations. The assumption is that the application of the models can be scaled down and applied to SMEs in order to improve their competitiveness. (Halbach and Rohm, 2005)

Due to the highlighted importance of the SMEs sector in the national economy, the survival and sustainability of such companies should be of utmost importance. There is, therefore, a need for studies to determine the current strategic performance measurements within the SMEs sector and how best practices in large organisations can be used to enhance strategic performance and competitiveness within the SMEs sector.

The results of the research could lead to the development and improvement of current strategic performance measurement practices and techniques within the SMEs sector.

The Balanced Scorecard model can be applied by the SME sector as a strategic performance measurement tool to enhance competitiveness and improve survival and sustainability. Wider application of this model could facilitate and ease the process of company performance comparison.
1.7 OVERVIEW OF RELATED LITERATURE AND RESEARCH

1. 7.1 The Balanced Scorecard as a performance measurement system.

The past ten years have witnessed an explosion in the use of management tools and measurement techniques. The techniques range from broad processes such as strategic planning and benchmarking to highly statistical initiatives such as use of price optimisation models. One of the strategic areas of improvement is in the area of performance measurement. The first reason for this improvement was the realisation that the drivers of value creation in businesses shifted from tangible assets to intangible assets. (Hough, 2004)

According to Anderson and McAdam (2004) the reformation has also been driven by changes in the business environment, which have led to the recognition that conventional measures of performance do not present a complete picture of the organisational performance. In the early 1990s Kaplan and Norton (2004) began to measure organisational performance. They believed that knowledge based assets were increasingly becoming important for companies' competitive success. Although their original work makes no specific observations concerning how company performance improve with implementation of performance measurement, the implication is that provision of relevant measurement data itself triggers improved organisational performance. There is therefore significance in the application of performance measurement within a organisation.

The Balanced Scorecard was first introduced in the early 1990’s through the work of Robert Kaplan and David Norton of the Harvard Business School. Since then, the concept has become well known and its various forms widely adopted across the world (Cobbold and Lawrie, 2003). The Balanced Scorecard concept was developed as an innovative business performance measurement system in the belief that existing performance measurement approaches, primarily relying
on financial accounting measures, were becoming obsolete (Kaplan and Norton, 1996).

According to Bailie and McAdam (2002) the Balanced Scorecard is a tool that achieves the alignment of measures and strategy in a dynamic manner. This model can be used to monitor and control the characteristics essential for the future success of the organisation. The Balanced Scorecard is, effectively, a framework to measure both financial and non-financial performance of organisations. It offers the opportunity to manage tangible and intangible assets and creates sustained and high performance business cultures (Kaplan and Norton, 1992).

By combining financial measures and non-financial measures in a single report, the Balanced Scorecard aims to provide managers with richer and more relevant information about activities they are managing than financial measures alone. Measure selection should focus on information relevant to the implementation of strategic plans (Kaplan and Norton, 1993). The four perspectives that the Balanced Scorecard focuses on are shown in figure 1.

**Figure 1: Basic design of Balanced Scorecard performance system**

![Figure 1: Basic design of Balanced Scorecard performance system](source: Kaplan and Norton, 1993)
According to Figure 1 there are four scorecards in the Balanced Scorecard system:

**Learning and Growth:**
This describes how the people, technology and organisational climate combine to support the strategy. Improvements in learning and growth measures are lead indicators for internal process, customer and financial performance.

**Internal Business Processes:**
These create and deliver the value proposition for customers. The performance of internal processes is a leading indicator of subsequent improvements in customer and financial outcome.

**Customers:**
Defines the value proposition to customers and is central to strategy. This is the central element of strategy.

**Financial:**
This is a lag indicator, providing the ultimate definition of organisational success. Success with targeted customers provides a principal component for improved financial performance.

Kaplan and Norton (1992) think of the three additional categories as the drivers of future performance whereas the category of financial measures emphasises past performance. By using all four categories, the Balanced Scorecard draws together a wide variety of disparate yet important competitive strategic priorities (Dinesh and Palmer, 1998). Objectives in the four perspectives link together in a chain of cause-and-effect relationships. Enhancing and aligning intangible assets leads to improved process performance, which, in turn, drives success for customers and shareholders (Kaplan and Norton, 2004).
From the above literature, it is evident that implementation of balanced performance measurement will enhance future performance.

1.7.2 Industry Application

Research conducted by McKinsey and the Centre of Economic Performance at the London School of Economics in 2005, looked at the relationship between management best practices and performance of the company. Over 700 midsized manufacturing companies in France, Germany, the United Kingdom and the United States were surveyed. A solid link was found between how well managers adopt proven best practices such as lean-production, Balanced Scorecards and other techniques of setting targets and tracking outcomes and how well a company performs (Dorgan et al, 2006). Further research by Marr and Schiuma (2003) suggests that 60 per cent of Fortune 100 companies have experimented with the Balanced Scorecard.

There seems to be some adoption of performance measurement frameworks by oversees-based SMEs. The dearth of research within the South African contexts makes this study imperative.

1.8 RESEARCH METHODOLOGY

The research presented in this paper is quantitative in nature and is specifically concerned with the investigation of the following question: What strategic performance measurements do SMEs in the construction industry use in order to monitor and improve organisational performance? The Balanced Scorecard is used as a framework to classify the various types of measurements possible.

The three phases followed in this research are discussed below.
1.8.1 Literature Study

The study will use secondary data, in the form of books, published and unpublished reports, the Internet and academic journals. The focus area of the literature review will be on the Balanced Scorecard as a strategic performance measurement system within SMEs. The construction industry will also be reviewed to understand general dynamics at play within this sector and how they influence the set of key performance indicators (KPIs) or measurements adopted.

1.8.2 Sample group and Data Collection

The sample group constituted 20 companies situated in Mossel Bay, George and Knysna, within the Western Cape Province. Only companies that fit the definition of SMEs were considered. The contact details of these companies were obtained from a company called Matrix Marketing, which specialised in South African SMEs data collection and analyses. A structured questionnaire consisting of three main sections was used as a means to collect primary data from the sample group.

The owner(s) and or manager(s) of the SMEs within the defined sample group were contacted telephonically to inform them about the survey and its purpose prior to sending a questionnaire. Once they accepted participation in the survey, the questionnaire was sent by mail or hand delivered.

1.8.3 Data Analysis and results

The collected data was analysed and results presented in the form of tables and percentages. The results were used to draw conclusions and formulate recommendations.
1.9 KEY ASSUMPTION

The main assumption in this research is that the application of the balanced set of strategic performance measurements can provide major benefits for SMEs. The most significant benefit is the improvement in the overall performance of the organisation, thereby enhancing competitiveness and sustainability.

1.10 LIST OF INTENDED CHAPTERS

10.1 Intended Chapters

The research has provisionally been planned to include the following chapters:
Chapter 1: Background and Objectives of the study.
Chapter 2. Literature Review
Chapter 3: Research Methodology.
Chapter 4: Discussion of Research Findings.
Chapter 5: Summary, Conclusion and Recommendations.

1.11 CONCLUSION

This Chapter outlined the background of the study by highlighting the importance organisational performance measurement in both large and small organisations. While the concept of organisational performance is well adopted in large organisations, there is a dearth of research within the SME sector that highlights current practices.

The importance of the SMEs sector and construction industry in the South African economy were outlined as well as some of the challenges faced by this sector with implementation of strategic performance measurements.

The Balanced Scorecard is the appropriate strategic organisational performance measurement framework that will be used to determine the measurement
practices within the construction industry.

The scope of the study is limited to construction companies located in the Western Province, specifically in the Mossel Bay, George and Knysna region.

The next Chapter will cover the findings from the literature review.
CHAPTER TWO

2. LITERATURE REVIEW

2.1 INTRODUCTION

Strategic performance measurement systems have grown in use and popularity over the last 20 years. Organisations adopted performance measurement systems for a variety of reasons, but mainly to achieve control over the organisation in ways that traditional accounting systems do not allow (Kellen, 2003).

The need for businesses to be competitive and sustain profitability in the face of today’s global challenges has never being greater. According to research undertaken by Botchway et al (2005), the difference between organisational success and failure is often in strategic performance measurement and benchmarking practised. They further stress that organisational performance measures are vital to assess the health of an organisation, support managers in their decision-making processes, and provide focused direction for operations.

According to Al-Ghassani, Anumba, Carrillo and Robinson (2005) strategic performance measurements allow organisations to express their strategic intent and demonstrate how that strategy connects with everyday operations, thus enabling organisational systems to create essential feedback and learning mechanism to support overall organisational goals and sustainable growth in the face of current business pressures of globalisation and profitability. This is certainly a need within the SME sector.

There is also growing evidence that non-financial measures are becoming important to organisations, their clients, investors, and stakeholders. Demand for
changes in corporate reporting are also likely to force organisations to adopt a more balanced approach to performance measurement (Egan, 1998). This is true for large organisations. There is little empirical evidence within the SME sector, which highlights current practice on strategic performance measurement. Latham (1994) notes that increased reliance on industry-specific KPIs, particularly in large organisations, is a reflection of the growing importance of strategic performance measurement. It is also recognition that industry performance should be judged not only on financial information, as this is no longer sufficient for understanding the dynamic business environment.

SMEs development and growth has been the focus of policy makers in developed and developing countries. The ability to assist this important sector to manage growth has been inhibited by a lack of appropriate performance measurement instruments for the sector.

Hudson, Smart and Bourne (2001) sought to develop and apply a strategic performance measurement system that is suitable for the SME sector. They concluded that there are substantial barriers to development and implementation of strategic performance measurement systems in SMEs.

Within the construction industry, van Huysteen, Ndungwa, Noyana, Nxumalo and Rwelamila (2002) argue that to raise the levels of competitiveness, contractors need to increase the use of strategic performance measurement tools as a means of supporting performance improvement programmes.

This chapter analyses current literature on strategic performance measurements and their application in SMEs. It also discusses the strategic planning process within SMEs, the Balanced Scorecards and the success factors within the construction industry. The ultimate aim is to gather sufficient information from literature in order to design a generic performance measurement instrument for the SMEs in the construction industry.
2.2 STRATEGIC PLANNING

2.2.1 Definition of Strategic Planning

Strategic planning is a process undertaken by organisations to develop strategies that might contribute to performance. Key aspects of strategic planning are a long time horizon, formality, the use of planning instruments and frequent control of plans (Harms, Kraus and Schwarz, 2006).

Pemberton and Stonehouse (2002) define strategic planning as the devising and formulation of organisational level plans which set broad and flexible objectives, strategies and policies of a business driving the organisation towards its vision of the future.

From the perspective of classic strategic management theory, strategy is considered a deliberate planning process initiated by management based on elaborate industry analysis and aimed at designing a cohesive strategy for the organisation (Volderberda, 2004).

The three definitions stress different aspects of strategic planning and can be combined to give the following definition: A deliberate planning process initiated by management, which seeks to formulate and set broad, yet flexible objectives which ultimately contribute to organisational performance. This will be the definition adopted in this study. It is important to note that according to this definition, strategic planning contributes to company performance, which should therefore be measured.
2.2.2 History of Strategic Planning

Strategic planning has been around for centuries in the form of military strategies. In terms of strategic planning for business, it can probably be tracked back to the 1920s when Harvard Business School developed the Harvard Policy Model, one of the first strategic planning methodologies for commercial business (Carter, 1999).

Pemberton and Stonehouse (2002) observe that the maturity of an academic discipline is often judged by the extent to which its theories and techniques are employed in everyday practice. For example, theoretical principles governing engineering are employed daily in construction. In comparison, the field of strategic planning is still in its early stages of development. Its adolescence, relative to other more established areas of business and management theory, is evidenced by inconsistent and conflicting viewpoints. Practical research in this field is in short supply.

Carter (1999) further points out that a strategy is a common thread or underlying logic that holds a business together and determines the structure of the organisation and activities employed. In the 1950s the focus of strategic planning moved from organisational policy and structure towards the management of risk, the promotion of growth and the gaining of market share. By the 1960s virtually every large organisation had a strategic planning department and a strategic plan.

2.2.3 The Importance of Strategic Planning

Strategic management gives direction to the whole organisation, and specifically, to what the organisation wishes to achieve. It makes management more aware of change, new opportunities and possible threats. It also serves as a rational basis for managing the allocation of resources (Groenewald, Rossouw and le Roux, 2003). When strategic planning is performed well, it unifies the entire
organisation behind a single set of marching orders designed to accomplish clear objectives (Carter, 1999). Strategic planning can contribute to organisational performance by generating relevant information, creating a better understanding of the environment and reducing uncertainty (Harms, Kraus and Schwarz, 2006).

It is therefore clear that the importance of strategic planning is to give the organisation direction unify the organisation and contribute to organisation performance. All these elements are necessary in SMEs as well as large organisations.

2.3 STRATEGIC PLANNING PROCESS

The development of strategy is an on-going requirement for practitioners. Strategic planning, at its most basic level, involves an undertaking of a set of processes that are used to develop a range of strategies that will contribute to achieve organisational direction (Dyson, Meadows and Tapinos, 2005).

Pemberton and Stonehouse (2002) note that the theories and frameworks of strategic planning are well documented in academic circles but the practical application is in relatively short supply. The author believes that this is more so in SMEs. Carter (1999) purports that although strategic planning involves a systematic planning process, successful planning is people oriented. The planning process must both involve people and recognize the contribution each person must make to the ultimate strategy.

2.3.1 Strategic Planning Steps

According to Dyson et al, (2005), there are five general steps in the strategic planning process: goal/objective setting, situation analysis, alternative consideration, implementation and evaluation.
A number of strategic planning tools and techniques such as SWOT (Strength, Weaknesses, Opportunities and Threats) analysis, Porter’s five forces industry analysis, the BCG growth-share matrix and McKinsey’s 7’S model are noted by Dincer, Glaister and Tatoglu (2006) as helpful in undertaking such a process. From Groenewald et al (2003) viewpoint, the strategic planning process can be divided into three levels shown in Table 2.

Table 2: Different levels of strategic planning process and management responsibilities.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Strategic level</td>
<td>Includes the responsibility of top management in the strategic management process</td>
</tr>
<tr>
<td>The tactical level:</td>
<td>It is also known as the functional level, includes the responsibilities of senior and middle management. They are responsible for the implementation of the strategic level (top management), strategic goals and strategy.</td>
</tr>
<tr>
<td>The operational level:</td>
<td>Includes the responsibilities of first-line and supervisory management. Their responsibility is the implementation of the tactical levels, tactical objectives and strategies.</td>
</tr>
</tbody>
</table>


This process clearly indicates the need for various levels or a hierarchical structure within an organisation. The possibility exists that SMEs management, due to typical flat structures that characterise this sector, may not differentiate these levels of the strategic planning process. In fact, for owner-managed organisations, strategic planning may be the sole responsibility of the owner or in some instances, no more than three people, depending on the size of the organisation.

It can therefore be asserted that the degree of success of the strategic planning process is directly linked to the awareness of practitioners of the various strategic
planning frameworks. It is important that SME management be aware of at least one such framework that best suits their organisation.

### 2.3.2 Strategic Planning in SMEs

Research conducted by Andersen, Cobbold and Lawrie, (2001), has indicated that the degree of strategic planning in an organisation is likely to have a direct impact on business performance and business evaluation. However, these findings leave SMEs with the challenge of matching the requirements of an improved strategic planning process, with the competitive advantage associated with being a simple and highly responsive organisation.

Harms et al, (2006) note that, while analysis of the organisation's performance impact of strategic planning is largely conorganisationed in the context of larger organisations, its relationship in the context of smaller enterprises has not been given much attention in existing research. However, there is some evidence in support of a positive relationship between strategic planning and performance in smaller enterprises. Seventy nine per cent of the studies conducted by Harms et al, (2006) in small enterprises revealed a positive correlation between strategic planning and organisational performance. This tends to suggest that there is broad support for the performance impact of strategic planning within SMEs.

To support these findings, research conducted by Pemberton and Stonehouse (2002) on SMEs strategic planning revealed that ninety two per cent of organisations surveyed undertake strategic planning. This could be either highly structured or of a general nature. Seventy two per cent of the SMEs surveyed have a planning horizon of one to three years, while two thirds of all the businesses had vision and mission statements, indicating a degree of strategic thinking.
However, as Pemberton and Stonehouse (2002) further observed, there was low usage among SMEs of the strategic techniques coupled with a general lack of awareness of the need for a longer-term strategy. Short-term orientation is common with lack of belief in the value of strategic frameworks in the planning process.

The lack of use of such frameworks could be as a result of ignorance among SME managers of such frameworks or negative disposition towards their benefits. This is not likely when considering further research as noted by Beaver and Jennings (1997) showing that clear links exist between an organisational approach to strategic planning and its business performance in both small and large organisations. They further note that the root cause of either small business failure or poor performance is almost invariably a lack of management attention to strategic issues.

These findings highlight the fact that in those SMEs that do use such techniques, the amount of time and effort is not sufficient to prove that this planning process is vital to the survival and sustainability of the organisation. A possible reason for this may be due to seemingly conflicting priorities between strategic planning with the long-term view and the need for flexibility, which focuses on quick responsiveness and adaptation to short term changes.

For this reason, Dyson et al, (2005) state that at the core of the academic debate about whether strategic planning in its current form should be practiced in small and medium enterprises, the argument is around whether it is appropriate to formalise activities involved in strategy making.

Interestingly, Harms et al, (2006) concluded their study by stating that strategic planning developed in the context of larger organisations might not apply to their smaller and medium counterparts. In future, specifically tailored concepts and processes of strategic planning in small and medium enterprises may emerge.
In the absence of such a strategic planning process designed for SMEs it will be assumed that the frameworks used in large organisations will be applicable to SMEs. These frameworks stress the need for an organisation to have a vision, mission and a set of long-term and short-term objectives. These will be used to determine the extent of strategic planning that takes place in this sector.

2.4. THE NEED FOR STRATEGIC PERFORMANCE MEASUREMENT

Strategic performance measurement is defined by Moullin (2004) as evaluating how well organisations are managed and the value they deliver for customers and other stakeholders. The interesting implication is that since performance measurement is part of how an organisation is managed, it also needs to be cost effective and deliver value.

Bourne, Mills, Neely, Platts and Richards (2000) describe strategic performance measurement as the process of quantifying action, where measurement is the process of quantification and action correlates with performance. They further propose that performance should be defined as the efficiency and effectiveness of action. Bitichi (1994) suggests that a major objective of strategic performance measurement is to encourage proactive rather than reactive management.

Measurements provide a basis for an organisation to assess how well it is progressing towards its pre-determined objectives, help to identify areas of strength and weaknesses and decide on future initiatives with the goal of improving organisational performance. However, results on strategic performance measurement indicate what happened, not why it happened, or what to do about it. In order for organisations to make effective use of strategic performance measurement, they must be able to make the transition to management. They must also be able to anticipate needed changes in the
strategic direction of the organisation and have a methodology in place for effecting strategic change (Amaratunga and Baldry, 2002).

It is further suggested that strategic performance measurement is the key agent of change. The development of strategic performance measurement has followed a path that has been influenced by the general push to improve quality and service, in addition to meeting cost parameters. They further note that in many organisations, both large and small, the justification has been acknowledged by senior management that a lack of appropriate strategic performance measurement can act as a barrier to change and improvement.

Anumba et al, (2004) assert that performance measurement must therefore be part of a system which reviews performance, decides on actions and changes the way in which the business operates.

It is clear from the above literature that there is general consensus among researchers on the need for strategic performance measurement as a primary means of assessing how well the organisation is doing in achieving its stated objectives. Bourne et al. (2000b) state that, unless action is taken based on the results attained, the measures are meaningless, costing money to obtain and not adding value to business.

2.4.1 Performance Measurement as a Strategic Control Tool

It is the view of the researcher that performance measurement can be used as a strategic tool with an organisation. This is supported by Goold and Quinn (1990), who note that strategic planning as a control system will: co-ordinate the efforts of employees; motivate individual managers; and alter direction dependent on circumstances. Another view expressed by Bungay and Goold, (1991) is that strategic controls can be used as a means of:

- clarifying what good performance is;
- making explicit the trade-offs between profit and investment;
- introducing individual stretch targets; and
- ensuring that corporate management knows when to intervene because
- business performance is deteriorating

Bourne and Neely (2000) surmise that strategic control systems have multiple roles to play and, given that many authors argue that performance measurement is part of the strategic control process, then it follows that performance measures also have different roles to play. According to Neely (1998) these reasons can fall into one of four distinct categories:

**Checking position**
Establishment of current status and monitoring of progress over time and against benchmarks. This is important especially in a competitive environment. A organisation needs to constantly check where it is in relation to its objectives and also with competitors.

**Communicating position**
This can be a requirement. Organisations must release annual reports and safety statistics must be submitted in construction as they may be expected by customers or employees, and also as a means of marketing strategy.

**Conorganisationing priorities**
Performance data provide insights into what is important to a business, expose shortfalls and allow for rationalization and focus on the priorities.

**Compel progress**
The measures can help the organisation focus on specific issues and encourage people to search for ways to change and improve performance. The measures communicate the priorities and can form the basis for reward.
2.4.2 Relevance in Construction

According to Bassioni, Hassan and Price (2004) the strategic performance measurement revolution has spread to many industries, including the construction industry. Reports on the performance of the industry have identified many areas of improvement and emphasised the need for strategic performance measurement.

Neely (1999) gives seven reasons why strategic performance measurement is now on the management agenda and its relevance to the construction industry. These are: the changing nature of work; increasing competition; specific improvement initiatives; national and international quality awards; changing organisational roles; changing external demands; and the power of information technology.

As one of the key contributors to the South African economy, the construction sector needs to improve its performance and measurement practice in order to comply with the external demands made by various institutions and clients.

2.5 BALANCED STRATEGIC PERFORMANCE MEASUREMENT IN SME

Now that the importance of strategic performance measurement has been established, it is critical to discuss the nature and type of performance measurements that will yield desired results. It is not only important that an organisation measures organisational performance but also that it measures the right things.
2.5.1 The Need for Balance in Organisational Performance Measures

Financial performance measurement has long been criticised for failing to help managers cope with the pressures of today's competitive environment (Ghalayini and Noble, 1996). This dissatisfaction has led to the development of a number of new approaches to strategic performance measurement, which integrate financial measures, operational measures, incorporate the needs of various stakeholders, and align these with company strategy (Fitzgerald, Johnson, Brignall, Silvestro and Voss, 1991; Cross and Lynch, 1991; Kaplan and Norton, 1992).

It is widely recognised that business performance can be enhanced by developing and implementing a balanced set of measures (Kaplan and Norton, 1992; Neely, 1998; Formoso and Lantelem, 1999). This is backed by a survey of more than 200 executives in the United States of America, which concluded that balanced-measurement-managed companies exhibit better performance compared to other companies that do not use strategic performance measurement as a key management tool (Lingle and Schiemann, 1999). The translation of the results into action is crucial in achieving improved performance.

2.5.2 Strategic performance measurement in SMEs

Biazzo, Bititci and Garengo, (2005) note that very little empirical and theoretical research has been carried out on strategic performance measurement in SMEs. This view is supported by Cross and Lynch (1991) stating that the various strategic performance measurement approaches have been designed for, and tested in, large companies. Relatively little research has been carried out to assess the needs of SMEs in this area. Countries where a lot of research has been carried out on strategic performance measurement for SMEs are: Australia (Barnes, Coulton, Dickinson, Dransfield, Field, Fisher, Saunders and Shaw,
1998), where a specific organisation has been created to support the development of PMSs for SMEs (called the Commonwealth Scientific and Industrial Research Organisation – CSIRO); Finland (Laitinen, 2002; Holtari and Rantanen 2000); the United Kingdom (Bhimani 1994; Bititci, Turner and Begemann, 2000), and Denmark (Hvolby and Thorstenson 2000).

Hudson, Lean and Smart (2001) highlight the fact that although there has been much research carried out into the needs and use of strategic performance measurement in large organisations, this is not reflected in the SMEs sector, where there is a distinct lack of published research on these issues. From the literature that is available, however, a broad picture of the way OPM is used in SMEs can be obtained.

This broad picture is observed by Barnes et al. (1998) stating that SMEs predominantly focus their organisational performance measures on cash flow. Bhimani (1994), carried out a study on the type of measures typically in use in manufacturing SMEs and concurs with this point. Both further note that this contrasts with the accepted wisdom in larger organisations that the primary performance indicators should be focused on profit maximisation.

However, a study carried out by CIMA (1993) found that there were no significant differences between the way large and small companies measure organisational performance. In addition, Masalla (1994) concluded that Italian SMEs paid little attention to management accounting information, instead confining their measurements almost exclusively to financial figures about income and sales. This leaves a confused picture about how SMEs typically measure business performance. Based on this, one can conclude that SMEs are biased towards financial measures with possible measures being cash flow, sales, income and return on investment (profit maximisation).
Although business level PM in SMEs is typically minimal and financially focused, Hynes (1998) points out that SMEs cannot effectively manage organisational performance on this basis. CIMA (1993) states that there is an increasing realisation of the importance of non-financial measurement among SMEs, although it concedes that there is still a disparity between practice and theory, which emphasises non-financial measures. This disparity can be explained by the indistinct understanding of the importance of key performance indicators in general, particularly operational indicators.

Very few models have been developed for SMEs, and those that do exist have been developed only in the last few years. Strategic performance measurement implemented in SMEs rarely has a ‘holistic approach’. The studies by Barnes et al, (1998) and Holtari and Rantanen (2000) highlight the fact that SMEs do not usually implement integrated performance measurement, and that they are not aware of the existence of integrated strategic performance measurement models. Furthermore, since SMEs focus on operational and financial performance, balanced models are seldom used. In fact, innovation, human resources, work atmosphere, Research and Development (R and D) and training are rarely measured (Addy, Bennet and Pearce, 1994; Chennell, Dransfield, Field, Fisher, Saunders and Shaw, 2000; Hudson, Bennett, Smart and Bourne, 1999). The study by Neely (1999) shows that SMEs still do not perceive the need for balanced models, as proposed by Kaplan and Norton (1996), even if some SMEs do use indicators of customer satisfaction, internal processes and training (Biazzo et al, 2005).

It can be concluded that SMEs are still primarily reliant on financial measures; specifically, KPIs at operational level are not yet widely adopted within this sector. This challenge can partly be solved by an awareness or use of a balanced strategic performance measurement model or framework, which compels practitioners to go beyond just financial measures.
Studies conducted by Biazzo et al. (2005) indicate that SMEs either do not use any strategic performance measurement models or they use models incorrectly and that many companies often implement only some parts of a general model, while others modify the models without carefully considering the changes made.

It will be critical in this study to establish the level of understanding of strategic performance measurement frameworks among SME practitioners and the general disposition towards them. As stated earlier, management’s knowledge of performance measurement frameworks seems to have an effect on the outcome of the strategic planning process and in this case, the measurement framework adopted. There could be an underlying reason such as time and management constraints for partial application of performance measurements in cases where models are known.

The other challenge could be what Hough (2004) has observed. He points out that, even if general models were applied correctly, they would be inadequate for the particular characteristics of SMEs:

“the small enterprise is different from the big company; you cannot simply look at the needs of SMEs by turning your binoculars upside down and making small what was big.”

Furthermore, Barnes et al. (1998) observed that in some cases, SMEs’ approach to performance measurement is informal, not planned and not based on a predefined model; performance measurement is introduced to solve specific problems and the strategic performance measurement system grows out of this process spontaneously rather than as a result of planning. Consequently, performance measurement in SMEs is characterised by a poor alignment between strategy and measures (Addy et al, 1994; Chennell et al. 2000; CIMA 1993; Hudson et al, 1999), with the exception of SMEs with quality management experiences.
In SMEs, planning is usually absent or limited only to the operation levels where performance is measured. Consequently, SMEs do not take advantage of the implementation of the performance measurements to introduce strategic planning. Moreover, performance measures usually focus on past activities. In other words, the aim is to gather information to support the control activities rather than the forecasting and planning processes.

Based on these findings in literature, the general approach to organisational performance, whether structured or unstructured, formal or informal, will need to be ascertained. Reasons for the adopted approach and the perceived impact on organisational performance will be investigated to further ascertain the existence of any hurdles in holistic implementation of strategic organisation performance measurement.

To this point, no research has shown the influence of a formalised or informal approach to strategic performance measurement. The assumption is that the informal approach has potential drawbacks, the most important of which is that these organisational performance measures are more likely to inhibit, rather than to facilitate, the achievement of strategic objectives. The structured, formal approach is assumed to lead to continuous data collection and reporting of measurements, which helps in incorporating measurement into the organisational culture and thus achieving strategic objectives.

### 2.5.3 Factors Influencing Organisational Performance Measurement Implementation in SMEs

From the literature in section 2.5.2, there is clearly a lack of widespread adaptation of strategic performance measurement practices within SME sectors. One needs to dig deep and establish possible reasons for this lack of adaptation in the face of evidence espousing the benefits of such a practice. Biazzo et al,
(2005) list the specific characteristics of SMEs that can become obstacles to the implementation and use of a strategic performance measurement. These characteristics are:

Lack of human resources.
SMEs have limited human resources. All the staff is involved in the activities of managing daily work, and have no extra time for additional activities, such as implementing a strategic performance measurement system. (Barnes et al, 1998; Hudson et al, 2001; Hvolby and Thorstenson 2000; Noci 1995).

Managerial capacity.
Technical excellence in products and operational processes is often perceived as the only key critical factor in SMEs. A managerial culture is often lacking in these companies and therefore managerial tools and techniques are perceived as being of little benefit to the company. Very often, employees occupy different positions at the same time, the organisations are flat, and though the entrepreneur is in charge of both operational and managerial functions, s/he usually neglects the managerial activities (Noci, 1995).

Limited capital resources
The impact of the resources needed to implement a PMS is proportionally more onerous in SMEs than in large companies (Barnes et al. 1998; Hudson et al. 2000; Hvolby and Thorstenson 2000; Noci 1995). Moreover, the absence of affordable software platforms that focus on the specific needs of SMEs further obstructs the introduction of PMSs in these companies (Bititci et al., 2002).

Reactive approach
SMEs are characterised by poor strategic planning and their decision-making processes are not formalised. The lack of explicit strategies and methodologies to support the control process promotes both a short-term orientation and a
reactive approach to managing the company’s activities (Bititci et al, 2002; Noci, 1995).

Tacit knowledge and little attention given to the formalization of processes.

One of the main barriers to organisational development in SMEs is the lack of a managerial system and formalised management of the processes. Furthermore, since knowledge is mainly tacit and context-specific, the information required to implement and use a strategic performance measurement is difficult to gather (Beaver and Jennings, 1997; Martins and Salerno, 1999).

Misconception of performance measurement

Bourne, Kennerley and Neely (2000) underline that a strategic performance measurement system can only be effectively implemented and used when the company perceives its benefits. SMEs often do not understand the potential advantages of implementing a strategic performance measurement system. These systems are perceived as a cause of bureaucratisation and an obstacle to the flexibility of SMEs (Hvolby and Thorstenson, 2000; Biazzo, Bititci and Garengo, 2005).

It is expected that some or all of these potential influences may be impediments to strategic performance measurement depending on the specific environment and unique circumstances facing the organisation. More likely, there may be one or two common reasons that can be established from research.

Bourne, Hudson and Smart (2001) note that current literature suggests that SMEs may be differentiated from larger companies by a number of key characteristics. These are generally described as:
Table 3: Characteristics that differentiate SMEs from large organisations.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description of differentiating characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>personalised management, with little devolution of authority;</td>
</tr>
<tr>
<td>2</td>
<td>severe resource limitations in terms of management and manpower, as well as finance;</td>
</tr>
<tr>
<td>3</td>
<td>reliance on a small number of customers, and operating in limited markets;</td>
</tr>
<tr>
<td>4</td>
<td>flat, flexible structures;</td>
</tr>
<tr>
<td>5</td>
<td>high innovatory potential;</td>
</tr>
<tr>
<td>6</td>
<td>reactive, fire-fighting mentality;</td>
</tr>
<tr>
<td>7</td>
<td>informal, dynamic strategies.</td>
</tr>
</tbody>
</table>

Source: Bourne, Hudson and Smart, 2001

Table 3 shows the various characteristics that differentiate SMEs from large organisations. The seven differences can contribute to understanding the challenges in strategic performance measurement practices within this industry.

From this list, characteristic numbers 1, 2 and 6 may act as potential impediments, while characteristic numbers 4, 5 and 7 may contribute to effective implementation.

### 2.6 THE BALANCED SCORECARD

#### 2.6.1 Definition of Balanced Scorecard

What is the Balanced Scorecard (BSC)? The BSC is a management model which is used to translate an organisation's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system (Kaplan and Norton, 1996). There are four different scorecards in the BSC system: financial, customers, internal business processes, and learning and growth. For each organization, the
performance indicators must represent performance drivers in accordance with traits in the industry and organization.

According to Assiri, Eid and Zairi (2006) the Balanced Scorecard presents a tool for translating an organisation’s mission embodied in its strategy into more tangible, measurable goals, actions and performance measures. This further emphasises the need to have organisational vision and mission.

Nair (2004) uses a nautical metamorphor to explain the Balanced Scorecard: Just as great ships must chart their position before undergoing ocean voyages, businesses must measure their position before knowing their direction. The challenge has been finding the tools to measure an organisation’s voyage. The true fallacy of measurement is that it is not an end but a means to a new beginning. Measurement is the driver of next direction, not just the documenter of today’s position. Business needs measurement that can sustain the changing tides of the climate of commerce.

Nair (2004) develops the metaphor by saying that the Balanced Scorecard is born from the rich history of measurement and serves the same purpose to business as the timepiece served the ancient mariners. Balanced Scorecard attempts to move businesses from monitoring to measuring; from measurement to management and from management to direction setting:

**Monitoring**
The art and science of observing employees’ behavior and coaching.

**Measurement:**
The art and science of gauging, using numbers and metrics, performance at a task.
Management
The art and science of motivating, coaching and enabling individuals and teams in the achievement of objectives.

Direction Setting
The art and science of discovering strategic directions that is unique and differentiating in the market place (Nair, 2004).

The Balanced Scorecard is focused on uncovering the main non-financial drivers of the business, along with economics of the business. In a nutshell, the Balanced Scorecard takes strategy from theory to action. It is not a measurement system per se; it is a directional tool for translating strategy into action at all levels of the organisation.

2.6.2 Evolution of the Balanced Scorecard

The Balanced Scorecard was originally proposed as an approach to strategic performance measurement that combined traditional financial measures with non-financial measures to provide managers with richer and more relevant information about organisational performance, particularly with key strategic goals (Kaplan and Norton, 1992).

Over time the Balanced Scorecard has developed to form the centre-piece of a strategic communication and performance measurement framework that helps management teams articulate, communicate and monitor the implementation of strategy using a system inter-linked with the long-term destination of the organisation (Andersen et al, 2001).
2.6.3 The Four Perspectives

Kaplan and Norton (1992) articulate four perspectives that can guide companies as they translate strategy into actionable terms. They do not argue that these perspectives are necessary and sufficient conditions for success. The implication is that other perspectives can be added if deemed critical in contributing to organisational success. This research will be confined to the four perspectives as set in the Balanced Scorecard.

2.6.3.1 Financial Perspective

This perspective asks the question: what financial goals need to be achieved to realise your strategic themes and objectives. In a profit pursuing business, this perspective is the more overused and overanalysed.

A common mistake with organisations is that they forget the link between financial goals and the non-financial strategy of the company.

For the profit-pursuing organisations, the financial perspective is critical, as it forces recognition and definition to the main critical financial goals that the organisation must achieve. This perspective gives organisations the following reminders:

- The goal of business is wealth creation, as measured by a series of financial targets achieved.
- The purpose of financial targets is to galvanise the operating units to manage performance and gain competencies for future success.
- It is one of many other perspectives but the one that funds the mission and purpose of the organisation.
- It is a lagging indicator of performance because it records success after the fact.
Although a lagging indicator, the financial measurement is critical because it funds all other initiatives. As indicated in the previous chapter, most SMEs focus on cash flow. This is not to suggest that revenue growth and profitability are excluded but rather that emphasis is placed on having a continuous positive cash flow.

2.6.3.2 Customer Perspective

This perspective asks the question: what customer-centric objectives must be achieved to attain your strategic theme? This perspective is the second most forgotten or misunderstood set of objectives in business. Before setting goals using this perspective, the following questions need to be answer:

- What is your target market?
- Who is/are your customer(s)?
- Whom do I compete against to gain customers?
- What value does the existing customer of the organisation perceive?
- If the organisation disappeared, who would miss us? What will they do?

Often the customer perspective is viewed as a set of objectives the organisation must achieve to gain customer acquisition, acceptance and perpetuation. These objectives are bound and framed by the questions listed above. Objectives are an outgrowth of assumptions made about the customers and their habits, the market they represent, and all the value they perceive in the relationship with your organisation (Nair, 2004).

The strategic performance measurement for customers should include at least three of the following; measurement of customers perspective on the finished product, measurement of customer’s perspective on the process of achieving the product and measurement on customer’s perspective on client-customer relationship. These will be discussed in detail in section 2.10..
2.6.3.3 Internal Process Perspective
Companies seldom fail because they have the incorrect strategy. They fail because they lack the methods to achieve the tactics that surround the strategy. The internal perspective reminds us that the background system, driven by objectives and goals, must be in place to ensure that the customer and financial objectives are achieved. Internal processes, cultures and procedures in all departments and business units support the value proposition to the target market segments. Typically, organisations have habits that are challenging to break or change in these perspectives. These organisations must re-tool to win, and this perspective helps define what this re-tooling is. Conversely, if an organisation can identify these internal characteristics and define ways to enable them, their execution arsenal can be tuned to win customers and also destroy the competition (Nair, 2004).

For the construction industry, the internal perspective is the heart of the process. The primary concerns are time, quality and cost. The internal perspective has a direct impact on the customer perspective. For example, it is highly probably that if inferior material is used in the construction, the customer perspective on the general quality of the work will be low. Therefore, SME practitioners should have a broader view of their scope of work and responsibility in the value chain.

2.6.3.4 Learning and Growth Perspective
Throughout history, organisations have behaved in short-term fashion, shrinking staff members when times are tough and growing indiscriminately when times get better. This inhale-exhale approach is what the learning and growth perspective serves to guard against. This perspective is the basis of all other perspectives and serves to remind the practitioner that the basis for all other results in the internal, customer and financial perspectives is found in the learning and growth of the people. Learning, however, is not dictated by how well you can teach but by how people absorb new ideas and turn them into action. In
a sense, it is more than just learning to action but the speed at which learning is transformed into action.

Learning and growth form the foundation for capabilities of the organisation. Usually current failure in the competitive business world is the result of past failures in the acknowledgement and exploitation of learning and growth of talent in the organisation (Assiri et al, 2006).

In order to develop and sustain core competencies within an organisation, there needs to be a training and development strategy with a view that human resources and strategic planning are critical to the success of the organisation. At a minimum, the organisations can measure actual versus budget on training and development at some predetermined frequency. Another indication that an organisation is moving in the right direction as far as learning and growth are concerned is through measuring employee turnover rate. High turnover rate implies that there is low employee morale, which could be due to a variety of factors including lack of training and development opportunities.

2.7 CHARACTERISTICS OF AN EFFECTIVE MEASUREMENT SYSTEM

Delivering an excellent service in business requires a high standard of performance on a wide range of factors. It is vital to establish what an effective strategic performance measurement system should be in order to focus on the critical aspects of business. Moullin (2004) highlights eight essentials of an effective performance measurement system. As Table 4 shows:
Amaratunga and Baldry (2002) stress that a strategic performance measurement system must have the following characteristics:

- Must be sensitive to changes in the external and internal environment of an organisation.
- Reviewing and reprioritizing internal objectives when the changes in the external and internal environment are significant enough.

This highlights an important factor of flexibility and adaptability to external and internal forces. Since SMEs are known to be quick in responding to changes, this characteristic of strategic performance measurement should be emphasised for SMEs. This is especially true, given the short-term planning nature of this sector. Measuring what matters will reduce costs and effort associated with strategic performance measurement.

According to Tangen (2004), a strategic performance measurement system should have the following elements:
Support Strategic Objectives
Performance measurement should be derived from the company’s strategic objective. Otherwise, this measurement tool may support actions that have the opposite effect to those implied in the strategy. Furthermore, it is important to remember that strategies usually change over time and when a strategy changes, some performance measurements must change also. There is, therefore, a need for flexibility in the strategic performance measurement tool, which provides a mechanism that ensures that the PMS is at all times congruent with the objectives of the company.

Have an Appropriate Balance
It is vital that performance is not only viewed from a financial point of view. A performance measurement tool ought to consist of various types of performance measures covering all-important aspects agreed as representing the success of a company. There must also be a balance between various performance measures. A performance measurement system should focus on short-term and long-term results, different types of performances (for example, cost, quality, delivery, flexibility and dependability), various perspectives (for example, customer, innovation and competitor) and various organisational levels (for example, local and global performance). The organisational level balance depends on the size of the organisation.

Guard Against Sub-optimisation
It is not rare than an improvement in one are leads to deterioration in another, even resulting in decline in overall performance. A performance measurement system must therefore guard against sub-optimisation, possibly by establishing a clear link between various, measures at all levels.

Have a Limited Number of Performance Measures
To create appropriate action, it is necessary to use a limited number of performance measures, more measurements require more time for analysis. It
will be a waste to collect data if it is going to be ignored. It is therefore important to limit the data requirements to both the necessary detail and frequency. Finally, the data must be needed for a specific purpose and the cost to produce it must not be greater than its expected benefit.

**Be Easily Accessible**

The main goal of performance measurement is to give important information, at the right time, to the right person. An important point to remember is that performance measurements must be designed in such a way that information is easily retrieved, usefully presented and easily understood by those whose performance is being evaluated.

**Consist of Performance Measures that have a Comprehensive Specification.**

A performance measure should have a clear purpose and be defined in an unambiguous way along with details of who will use the measure. Furthermore, it is also necessary to specify a target for each performance measure and a timeframe within which that target should be reached.

It is likely that failure to have an strategic performance measurement that has any of these elements will lead to disappointing results. For the SMEs, Biazzo et al, (2005) state that performance measurement system should include systems for reviewing measures and objectives that make it possible both to adapt the measurement tool quickly to the changes in the internal and external contexts. The measurement tool should also allow for systematic assessment of a company’s strategy in order to support continuous improvement.

### 2.7.1 Causal Model

Various studies on the adoption of the Balanced Scorecard show that one problem encountered by many organisations is their inability to develop a causal model of their strategy. Malmi (2001) found that the adopters of the Balanced
Scorecard in Finland experienced difficulty in developing the causal model of their strategy. Even though the respondents claimed to have developed their performance measures from the cause-effect model for their strategy, they were not able to describe their model very well.

Kaplan and Norton’s (1996) discussion about the causal model indicates that it is the basis upon which the management system envisioned in the Balanced Scorecard method is supposed to be developed. This causal model is supposed to depict the cause-effect relationship across all four perspectives.

The development of the performance measures in the Balanced Scorecard should be derived from an understanding of the sequence of the cause-effect relationship of the strategy. It should describe the relationship between the outcomes sought by the organisation and the performance drivers of the strategy. Merely specifying the outcomes or key performance indicators is not sufficient. It will not help members of the organisation understand how an objective is to be achieved (Kaplan and Norton, 1996). A clear understanding of the performance driver-outcome relationship is crucial in communicating the strategy.

Othman (2006) further notes that even though the Balanced Scorecard is not presented as a strategy formulation technique, the emphasis on developing a causal model of the strategy indicates the necessity of having a properly developed strategy before the tools of the Balanced Scorecard are used to map out the implementation of the strategy. Whatever techniques an organisation uses, the end product should be a plan that describes the strategic outcomes and how these outcomes are to be achieved.

Bruggeman and Decoene (2006) note that the provision of strategically aligned financial and non-financial performance measures is not unique to the Balanced Scorecard. Previous research on performance measurement in operations
management has investigated the design, implementation and management of strategic performance measurement systems.

A survey questionnaire in small- and medium-sized United Kingdom manufacturing companies by Neely (1999) showed that linking performance measures to a manufacturing strategy assures consistency between decision-making and manufacturing actions.

Developing the causal model of the strategy is also important because it provides the milestones for the development of the scorecard. The scorecard describes the temporal relationship of the strategy. Thus, it has to be based on an understanding of how the strategy is to be implemented over time. This means that the causal model of the strategy is supposed to help organisations understand how decisions made today will affect future outcomes (Kaplan and Norton, 1996).

It can be deduced from the literature that a causal model is a necessary element of organisation performance measurement. The cause-and-effect model shows the areas of focus and impact of actions taken and thus simplifies decision-making. For example, one can say that from the learning and growth perspective, a measurement of training and development budget versus actual leads to highly competent employees, which in turn causes improved safety due to reduced incident rates, which leads to better customer ratings and therefore financial reward.

2.8. DESIGNING A PERFORMANCE MEASUREMENT INSTRUMENT

In order to develop a strategic PM system, it is critically important to identify the properties of an effective development process. Without this, there can be no practical value for business from the concept of strategic performance
measurement. The characteristics discussed in section 2.7 give a guideline of what the measurement instrument should be. This section seeks to establish how to go about developing such a measurement. It asks the question: what is the best method or process of designing an effective strategic performance measurement?

According to Neely and Powell (2004), there are four fundamental processes of performance measurement; namely: measurement system design, implementation, managing through measurements and refreshing the measurement system. All four of these processes pose different challenges. Tangen (2004) views performance measurement design as a complex issue incorporating at least three different disciplines: economics, management and accounting. In order to select appropriate performance measures and design a suitable performance measurement system for a particular organisation, a number of factors must be considered. The choice of a suitable measurement technique depends on a number of factors, including the following:

- The purpose of the measurement.
- The level of details required.
- The time available for the measurement.
- The existence of available pre-determined data.
- The cost of measurement.

This shows that design is just as important a process as the final measurement instrument. In fact, the design process and the people involved ultimately have a bearing on the quality of the measurement instrument.

Gregory, Neely and Platts (1995) describe the following steps in designing a strategic performance measurement system
Table 5: Steps in Designing a Strategic Performance Measurement System.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clearly define organisation’s vision and mission</td>
</tr>
<tr>
<td>2</td>
<td>Identify organisation’s strategic objectives, using mission statement as a guide</td>
</tr>
<tr>
<td>3</td>
<td>Develop understanding of each functional area’s role in achieving the various strategic objectives</td>
</tr>
<tr>
<td>4</td>
<td>For each functional area, develop performance measures capable of defining the organisation’s overall competitive position</td>
</tr>
<tr>
<td>5</td>
<td>Communicate strategic objectives and performance goals to lower levels in organisation. Establish more specific performance criteria at each level</td>
</tr>
<tr>
<td>6</td>
<td>Assure consistency with strategic objectives among the performance criteria used at each level</td>
</tr>
<tr>
<td>7</td>
<td>Assure compatibility of performance measures used in all functional areas</td>
</tr>
<tr>
<td>8</td>
<td>Use the performance measurement system</td>
</tr>
<tr>
<td>9</td>
<td>Periodically re-evaluate the appropriateness of the established performance measurement system in view of current competitive environment.</td>
</tr>
</tbody>
</table>

Source: Gregory, Neely and Platts, 1995

The steps in Table 5 follow a logical progression and should be easily adopted by SMEs. These steps stress the need for vision, mission from which strategic objectives are derived from.

According to Nair (2004) an objective is a goal to be achieved. In combination with other objectives, if achieved, it can achieve a strategic thrust. A measure is a quantifiable formula whose variables define what needs to be measured and monitored in order that a target is achieved. A target is usually a numeric value to be achieved. It is a desired result of an objective executed. An initiative is a programme, an activity or a project that will meet an objective, alone or in a combination with other initiatives.

There are also a number of studies that investigate appropriate methods for developing strategic performance measurement tools in SMEs. Barnes et al,
(1998) recommend that the process should be structured and more formalised in order to increase managerial understanding and control of the business.

**2.8.1 New process for strategic performance measurement tool development in SMEs**

Chytas, Glykas and Valiris (2005) propose a smart Balanced Scorecard methodology to the measurement development process. This incorporates principles from the Simple Multi-Attribute Rating Technique (SMART). The smart Balanced Scorecard methodology is composed of a series of stages that involve:

- work to be performed;
- inputs to be provided; and
- outcomes to be generated.

The smart Balanced Scorecard methodology is composed of the following stages:

- Establishing the mission and strategic objectives. In this stage the focus is on understanding the organisation’s strategy, culture and capabilities in order to specify the strategic objectives (which state the specific goals/directions of the organisation aims to achieve) and critical success factors (things the organisation must do well to achieve its strategic objectives).

- Identify all possible measures. This stage leads to the identification of all possible measures (which allow the organisation to monitor the progress of achieving the critical success factors and strategic objectives).

- Identify KPIs using the SMART approach. This stage aims to narrow down the list of all possible measures into the shortest one that provides the KPIs, which will be used in each perspective. This stage is based on the six-step procedure of SMART analysis (Goodwin and Wright, 2000) and is composed of the following steps: identify the criteria and alternatives, which are relevant to the decision problem; for each criterion, assign values to measure the
performance of the alternatives on that criterion; determine a weight for each criterion; for each alternative, take a weighted average of the values assigned to that alternative; make a provisional decision; and perform a sensitivity analysis to see how robust the decision is.

- Establish targets. Measurement alone is not good enough. We must drive behavioral changes within the organisation if we expect to execute strategy. This requires establishing a target for each measurement within SMART and Balanced Scorecard. Targets are designed to stretch and push the organisation in meeting its strategic objectives. Targets need to be realistic so that people feel comfortable about trying to execute the target (Chytas, Glykas and Valiris 2005).

In the late 1980s and early 1990s the process of deciding what to measure became topical, with several authors discussing it, albeit often at a rather superficial level. Keegan, Eiler and Jones (1989), for example, argued that the process of deciding what to measure consisted of three main steps. The first involved looking to strategy in defining the strategic objectives of the company and determining how they could be translated into divisional goals and individual management actions. The second encompassed deriving an appropriate set of measures by populating a performance measurement matrix. The third focused on instilling the performance measurement system into management thinking, possibly through the budgeting process. Critical here is closing the management loop and ensuring that the measurement system actually drives day-to-day decisions and actions; thereby ensuring that the organisation’s strategy is implemented.

The first and third of these steps, while difficult in practice, are relatively self-explanatory. The second, actually deciding what to measure is however, much more involved. Keegan et al. (1989) suggest that the best approach is to start with five generic measures of quality, customer satisfaction, speed,
product/service cost reduction, and cash flow from operations and then simply derive the rest, ensuring that each of them is: integrated, both hierarchically and across the business functions; and based on a thorough understanding of the organisation's cost drivers.

Using the process, the following diagrammatic representation can be developed to explain the process;

**Figure 2: Process of designing strategic performance measurement.**

1. Establish mission and strategic objective
2. Identify all possible measures
3. Identified Key Performance Indicators
4. Establish targets
5. Measure and Report
6. Review

Adapted from: Chytas, Glykas and Valiris, 2005

Figure 2 outlines the process of designing the performance measurement instrument. There's a great similarity between this process and the steps outlined in Table 5. Identification of all possible measures prior to selecting KPIs is vital in ensuring that every measure is discussed to determine relevance.

The review process incorporates revisiting the identified KPIs and assessing their relevance for a particular project. External and internal changes may also warrant a change in the KPI and or a change in the set target.
2.9 CRITICAL SUCCESS FACTORS IN CONSTRUCTION

To assist in developing a strategic performance measurement instrument for construction, one needs to ask the question: what constitutes success within the construction sector? Within the South African context, the Construction Industry Development Board (CIDB) has set out to establish frameworks for defining success and improving construction performance, including quality, health and the environment. The aim is to get KPIs for the four perspectives within the Balanced Scorecard.

The government through the CIDB has specifically singled out quality, safety, health and the environment amongst the goals of performance improvement. But these goals can only be driven in the context of a governance framework that addresses the disparate nature of the industry and its client base (Hodgson and Milford, 2005).

2.9.1 The South African Construction Excellence Model

The South African Construction Excellence Model (SACEM) is a contractor performance assessment tool. But more than just a tool, it is a comprehensive, systematic model intended to promote the concept of ‘total quality management’ at both the corporate level as well as the construction site level. SACEM’s approach to excellence is through systematic, continuous improvement of eleven key performance criteria. The model is diagnostic in its approach and does not provide a specific solution, only an indicative approach towards a solution.(van Huysteen et al, 2002).

The model will highlight key areas of focus for measuring organisational performance within this section. The outcome will be specific key performance indicators that are deemed important for success within this industry.
2.9.2 The Structure of the Model

The structure of SACEM is illustrated in Figure 3. SACEM comprises eleven performance assessment criteria that are strongly linked to one another so that activities on the enabler side have a direct result on the supply side. For example, a deployment of a customer management system – an activity on the enabler side - will have an impact on the results side of the performance equation (Dlungwana et al, 2002).

Figure 3: Structure of the South African Construction Excellence Model.

![Figure 3: Structure of the South African Construction Excellence Model.](source)

Figure 3 shows the model with the various performance indicators. It can be seen that the scope of the model, although broader than the Balanced Scorecard, covers the most essential performance assessment criteria.

Some of the eleven performance assessment criteria described in the SACEM model can be classified using the four perspectives of the Balanced Scorecard as shown in the Table 6.
Table 6: Classification of SACEM Model in Balanced Scorecard Perspectives.

<table>
<thead>
<tr>
<th>BALANCED SCORECARD PERSPECTIVES</th>
<th>SACEM PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Customer and Market focus, Customer satisfaction,</td>
</tr>
<tr>
<td>Internal Business Process</td>
<td>Business process, Resources and information management</td>
</tr>
<tr>
<td>Learning and Growth</td>
<td>People management, People Satisfaction</td>
</tr>
<tr>
<td>Financial</td>
<td>Business results</td>
</tr>
</tbody>
</table>

Adapted from: Dlungwana, Noyana, Nxumalo, Rwelamila, and van Huysten, 2002

Table 6 indicates that there is harmony within the SACEM framework and the Balanced Scorecard in determining appropriate measures for the construction industry. Once again, SME managers may choose to focus on the critical issues, given their specific constraints.

### 2.10 KEY PERFORMANCE INDICATORS IN CONSTRUCTION

The purpose of the KPIs is to enable measurement of project and organisational performance throughout the construction industry. This information can then be used for benchmarking purposes, and will be a key component of any organisation’s move towards achieving best practice. (KPI Working Group, 2000). Collin (2002) advocates that the process of developing KPIs involves the consideration of the following factors.

Table 7: Factors to Consider in Developing KPIs.

| KPIs are general indicators of performance that focus on critical aspects of outputs or outcomes |
| Only a limited, manageable number of KPIs is maintainable for regular use. Having too many (and too complex) KPIs can be time- and resource-consuming |
| The systematic use of KPIs is essential as the value of KPIs is almost completely derived from their consistent use over a number of projects |
| Data collection must be made as simple as possible |
A large sample size is required to reduce the impact of project specific variables. Therefore, KPIs should be designed to use on every building project.

For performance measurement to be effective, the measures or indicators must be accepted, understood and owned across the organisation.

KPIs will need to evolve and it is likely that a set of KPIs will be subject to change and refinement.

Graphic displays of KPIs need to be simple in design, easy to update and accessible.


According to the KPI Working Group (2000), clients of the construction industry want their projects delivered on time, on budget, free from defects, efficiently and right first time. While individual organisations have been measuring their performance for many years, there has been little consistency in the data, and the way it has been published.

The KPI framework consists of seven main groups: Time, Cost, Quality, Client Satisfaction, Client Changes, Business Performance, Health and Safety. The project’s client is also interested in the defects, not only of the materials, but those that come about from workmanship. Similarly, the project’s client is interested in delivery times and costs, but of the whole project, not for individual items (The KPI Working Group 2000).

2.10.1 Frameworks to determine KPIs

Anumba, Beatham, Hedges and Thorpe (2004) note that within the construction industry, key performance indicators are a collective term for strategic performance measurements. These have been developed to assist in the production of the measures and also the translation of the results into improved activity. They further note that the Movement for Innovation and the Construction Best Practice Programme (CBPP) are the leading organisations involved in the production of KPIs within the construction industry and have been very
successful in introducing many companies to the subject of strategic performance measurement.

Over and above this, there are numerous other organisations with their own agenda for KPIs, including representatives from the Government Construction Clients Forum, Movement for Innovation, Housing Forum, Major Contractors Group (MCG), National Contractors Federation, Design and Build Foundation, Association of Consulting Engineers (ACE), Architectural Practiced Benchmarking and the Construction Round Table. Unfortunately, evidence suggests that there is very little, if any, sharing of information between the groups, with over twenty organisations developing their own KPIs.

The above literature indicates that depending on the specific service the construction industry offers, there maybe differences in the key performance measurements. This research will only focus on generic performance measurements across the construction industry.

2.10.2 Using the BSC to determine measures in construction

Al-Ghassani, Anumba, Carrilo and Robinson (2005) note that organisations are using various types of performance measurement models and some have adopted more than one measurement system. It was suggested that smaller companies aware of the importance of KPIs might find the Balanced Scorecard the more useful tool, due to its simplicity in application.

This is the main reason why it has been chosen by the researcher as the framework that will be used to design a generic strategic performance measurement and assess the type and nature of measurements currently in practice within this sector. Using the four perspectives, financial, customer, internal processes and learning and growth, the current literature will be used to determine the actual performance measurements.
2.10.3 Internal Process

2.10.3.1 Defining Internal Process Success

Internal process explains how the organisation goes about producing the service or product. This is the concept of value chain, which describes the full range of activities, which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use.

Within the construction industry, this process can be termed project management. The internal process will then include all the different processes of the project management cycle.

Chan and Chan, (2005) consider a project as the achievement of a specified objective, which involves a series of activities and tasks that consume resources. Lim and Mohamed (1999) advocate a criterion as a principle or standard by which anything is or can be judged. They further define success as a favourable outcome. When combining these terms together, criteria of project success can be defined as the set of principles or standards by which favourable outcomes can be completed within a set specification.

2.10.3.2 Theories of Internal Process Success

Within the internal process, there needs to be measurements that determine its success or failure. The challenge has been that in practice, success means different things to different people and there is no universal definition for success. Parfitt and Sanvido (1993) support this view and consider success as an intangible perceptive feeling, which varies with different management expectations, among persons, and with the phases of project. Owners,
designers, consultants, contractors, as well as sub-contractors have their own project objectives and criteria for measuring success.

In the early 1990s, internal process success was considered to be tied to organisational performance measures, which in turn were tied to project objectives. At the project level, success was measured by the project duration, monetary cost and project performance (Navarre and Schaan, 1990). According to Belassi and Tukel (1996) time, cost and quality are the basic criteria to project success, and they are identified and discussed in almost every article on project success.

Atkinson (1999) further analysed these three criteria and called them the “iron triangle”. He further suggested that while other definitions on project management and success have been developed, the iron triangle is always included in the alternative definitions. In addition to these basic criteria, Pinto and Pinto (1991) advocated that measures for project success should also include project psychosocial outcomes which refer to the satisfaction of interpersonal relations with project team members. Subjective measures such as participants’ satisfaction levels are known as “soft” measures.

The inclusion of satisfaction as a success measure is suggested by Wuellner (1990). Pocock, Hyun, Liu, and Kim (1996) further suggested the inclusion of the absence of legal claims as an indicator of project success. This then calls for including safety as a success indicator as well, since it is reasonable to expect that if accidents occur, both contractors and clients may be subject to legal claims, as well as financial loss and contract delay in the construction project. For this research, the legal claims indicator will not be considered.

Kometa, Harris and Olomolaiye (1995) used a comprehensive approach to assess project success. Their criteria include: safety, economy (construction cost), running/maintenance cost, time and flexibility to users. Songer and
Molenaar (1997) consider a project as successful if it is completed on budget, on schedule, conforms to user’s expectations, meets specifications, attains quality workmanship and minimises construction aggravation. Kumaraswamy and Thorpe (1996) included a variety of criteria in their study of project evaluation. These include meeting budget, schedule, and quality of workmanship, client and project manager’s satisfaction, transfer of technology, friendliness of environment, health and safety.

It is clear from the above literature that project management success encompasses the time factor, cost factor, quality factor and safety factor. These aspects are therefore part of a generic measurement framework. Successful project management means that a product/service is: completed on time, within the agreed cost, safely and with the expected workmanship or quality.

2.10.3.3 Frameworks for Internal Process Measurement

According to Chan and Chan (2005) project success has been a recurring topic in the construction management field for many decades. The review of journals on project success reveals that cost, time and quality are the three basic and most important performance indicators in construction projects. Other measures, such as safety, functionality and satisfaction are attracting increasing attention

Within the times aspect of project success measurement, Shenhar, Levy and Dvir (1997) proposed that internal process success should be divided into four dimensions. The first dimension is the period during project execution and right after project completion. The second dimension can be assessed shortly afterwards, when the project has been delivered to the customer. The third dimension can be assessed after a significant level of sales has been achieved (1-2 years). Finally the fourth dimension can only be assessed 3-5 years after project completion. The time measurement in this research will focus on the period during project execution and right after completion. SMEs in the
construction industry are not known to have projects that last for such lengthy periods as described in the above dimensions.

Atkinson (1999) similarly divided internal process success into three stages: the first stage is “the delivery stage; the process; doing it right”; the second is “post delivery stage; the system; getting it right” and the last stage is “the post delivery stage: the benefits: getting them right.”

Sadeh, Dvir and Shenhar (2000) divided internal process success into four dimensions. The first dimension is meeting design goals, which applies to a contract that is signed by the customer. The second dimension is the benefit to the end user, which refers to the benefit to the customers from the end products. The third dimension is benefit to the developing organisation, which refers to the benefit gained by the developing organisation as a result of executing the project. The last dimension is the benefit to the technological infrastructure of the country and of organisations involved in the development process. The combination of all these dimensions gives the overall assessment of project success.

Though important, it is assumed that these benefits are inherent in the product or at least accounted for in the design phase of the project, prior to the involvement of the contractor. This specific aspect of project success deals with the cost associated with the project. Once the design has been agreed to, the client expects that the project should be executed within the set and agreed costs. The third and fourth dimension will not contribute to strategic performance measurement success and will prove too cumbersome and irrelevant to measure.
2.10.3.4 Health and Safety Measurement

Lin and Mills (2001) advocate that construction and maintenance are dangerous by their nature, and increased emphasis needs to be placed on occupational health and safety (OHS) in order to reduce the cost to the industry.

Most research done into OHS has shown that the high rates of injury are primarily due to inadequate, or non-existent, OHS systems. Therefore, the application of an effective management systems can lead to safer systems of construction and reduce incidence of injuries and work related diseases (Lin and Mills, 2001). Past research has shown that an effective way of measuring the safety performance of a company is by using a combination of both quantitative and qualitative safety measurements (Jaselskis, 1996).

To improve construction safety performance, statistical data and various management elements need to be analysed. Quantitative measures include lost time and severity rates, and experience modification rating (EMR), a measure used to calculate insurance premiums of companies. Qualitative ratings consist of outstanding, average, and below average project performances, as determined by OHS assessors.

Holmes (1999) conducted research from a sample of Australian companies and found that small construction organisations may not manage OHS risks as effectively as larger organisations. Data from the Australian Bureau of Statistics shows that the majority of Australian construction organisations were small businesses. Ninety seven per cent of general construction businesses employ less than 20 employees, and 85 per cent employ less than five people. Holmes (1999) commented that small businesses did not feel the need to focus on OHS in their management systems; instead they often believe that the control of risk is the responsibility of employees.
Although safety in general terms may be understood by managers in the construction industry, it will be useful to ascertain their level of awareness and disposition towards the OHS systems and associated acts.

This was contrasted with the attitude of large businesses that indicated that OHS should be integrated into their entire management system across all projects within the company. A similarly study was conducted by Wilson (2000) who found that safety attitudes varied by the size of the company. He suggested that there is some doubt whether smaller companies can benefit from higher standards of OHS practice, due to the implementation costs involved.

Holmes (1999) points out that time and economic constraints appear to influence the way individuals perceive risks and consequently risks should be identified prior to construction. Hinze (1988) found that the injury rate tends to be higher on those projects that were competitively bid. It is common practice for contractors to discount their jobs just to win the tender; as a result OHS often suffers. Safety is sometimes found to be the first item to face cost cutting as the employers who often believe that implementing a safety system will cost more. In addition, managerial focus tends to concentrate on production ``at cost” and safety does not help production; therefore it suffers when a project runs over budget.

It is clear that a possibility exists that some factors may impact on the safety records as mentioned above. This is particularly true in where costs are a constraint.

The measurement of safety is mainly focused on the construction period as most accidents occur during this stage. The methodology adopted by the Hong Kong Labour Department for calculating the annual accident rate on construction sites forms the base for calculating the accident rate in a specific project (Construction Industry Review Committee, 2001).
Accident rate = (Total number of reportable construction site accidents) / (Total number of workers employed or man-hours worked on a specific project) *1000.

The safety management systems (SMS) therefore become the mandated means through which site safety measures can be managed more effectively. The division between quality management and safety management, however, suggests that immense benefits and synergy can be reaped by integrating quality management systems (QMS) with SMS in an organisation, since both management systems are common features in many construction organisations. Instead of operating two separate management systems, synergy can be achieved by integrating QMS and SMS to work from a common platform (Pheng and Shiua, 2000).

2.10.3.5 Quality Measurement

There are two quality issues to consider:

Definition of Quality

Nowadays, quality is the guarantee of the product, which convinces the customers or the end-users to purchase or use. Songer and Molenaar (1997) propose that quality be measured as the meeting of specification. They defined specification as workmanship guidelines provided to contractors by clients or clients’ representatives at the commencement of project execution. The measure of technical specification is to the extent that the technical requirements specified can be achieved.

According to Parfitt and Sanvido (1993), the assessment of quality is rather subjective. In the construction industry, quality is defined as the totality of features required by a product or service to satisfy a given need; fitness for
purpose. Dalhgaard and Setijono, (2007) propose that quality should be defined as fitness for use and conformance to specification.

These definitions will be combined to give the following broad definition of quality: The state at which the product or service meets or exceed specification and it is fit for use in the originally intended purposes as specified by the client.

**Measurement of Quality**

At present there is no objectively recognised method of measuring quality in the construction industry. Chan and Chan (2005) note that a quality KPI is to improve the visibility of quality issues on construction projects through the measurement of “quality issues”. Therefore this measure should record quality issues on all elements within the project from project commencement.

They further identify a Quality issue as:
An issue that affects the project so that work needs to be redone, modified or compromised to a lower standard than originally agreed.

As a result, a quality issue will encompass defects, but it is also a much wider measure that covers issues that would not normally be considered to be defects. For instance, a quality issue may include incorrect information on a drawing, defective materials or poor workmanship on site.

Definitions of the three types of quality issues are:
*Rejected*: when a quality issue involves the work being completely restarted and all previous work deemed unusable, then the quality issue will be classified as rejected.
*Reworked*: when a quality issue involves work that requires modification to return it to the agreed standard, then it should be classified as rework. Love and Li (2000) have defined rework “as the unnecessary effort of re-doing a process or
activity that was incorrectly implemented the first time” whilst Ashford in Love and Li (2000) defines rework as “the process by which an item is made to conform to the original requirement by completion or correction.”

**Compromised:** if the project team accepts work below the agreed standard this will be classified as compromised.

According to Arditi and Gunaydin (1997) it is important to make a distinction between product quality and process quality in the construction industry. They found that product quality refers to achieving quality in the materials, equipment and technology that go into the building of a structure, whereas process quality refers to achieving quality in the way the project is organized and managed in the three phases of design, construction, and operation and maintenance.

When an agreed quality issue is identified it is recommended that details of quality issues be recorded in a project quality register. The quality register should be started at the start of the project and be maintained for the duration of the project. The indicators are the frequency rate per 100,000 hours worked. If data is not available for the number of hours worked on site, an estimate can be calculated by multiplying the average number employed on a site during the year by an estimate of the average number of hours worked. Where the construction period is for less than a year the figures need to be adjusted on a pro-rata basis.

The quality issues that can be measured include conformance to specification and process efficiency and effectiveness. The first one, conformance to specification, is relatively easy to measure, as specifications are usually detailed in the set of drawings. However, it is important to institute a system of communicating any changes to material or suggestions to improve the design to the client. The measurement of process quality will be typical things such as the speed with which the items on the snag list are rectified, the frequency of
feedback to client on work progress and the professional manner in which the project is handled.

Within existing construction literature, terms such as rework, repairs, quality failures, non-conformance and defects are quite often associated with snagging. (Love, 2002).

The elimination and prevention of poor quality is quite often not even considered as an issue and indeed quality systems which would help to alleviate some of the snagging problems are also overlooked because they place too heavy an administrative workload onto the construction site team (Love and Sohal, 2003). The prevention and possible eradication of snags, however, is possible through the implementation of a quality management system. However, a major issue within the construction industry is its inability to become quality focused. Even when quality is focused upon more often than not it is sacrificed or compromised to meet time objectives.

In summary, there are four categories of internal process measures namely: project time, project cost, quality, health and safety. The objective is to have internal processes that ensure that the service or the product is delivered on time, within the agreed costs, at the right quality and with no health and safety incidents.

### 2.10.4 Learning and Growth Measurement

Human resources are the most valuable assets in the construction industry. Interested parties in the construction industry including government, training institutions, and also individual employers and employees need to understand and realise the importance of labour resource issues and the need for planning of labour resource requirements. This will allow them to maintain a skilled,
competitive and adequate workforce able to meet the future demands of the industry (Chan, Chiang and Wong, 2006).

The construction labour market is heterogeneous in nature. It employs a wide variety of labour trades, between which interactions are minimal. This view is supported by Ball and Wood (1995) who believe that the diversity feature in construction forms the basis of subcontracting practice as many subcontractors offer only one trade to the main contractor. With this labour-only subcontracting practice, most of the personnel are usually assigned to tasks of specialised skill. The subcontracting system in the construction industry provides flexibility in the employment of workers and the use of resources, thereby improving efficiency and cost-effectiveness.

Lockyer and Scholarios, (2007) describe recruitment and selection in the construction industry as ad hoc – the search for workers to match immediate employment needs is unsystematic, usually conducted in a short-term manner, and often contributes to, rather than overcomes, persistent recruitment difficulties and skill shortages.

They further purport that human resource strategy throughout the sector is shaped by the need to manage an irregular flow of work and a series of different professional and skilled trades at each sequential stage of a project.

Agapiou (2002) notes empirical, non-anecdotal evidence about the practised used to select workers and casual labour in construction is rare. The importance attached to selection of seasonal or casual workers has tended to depend on economic conditions, with full employment meaning that the problem becomes one of recruitment rather than selection. Investigations of the selection of workers show reliance on word-of-mouth, primarily through existing staff and some use of aptitude tests for selecting artisans.
Kagioglou, Cooper and Aouad (2001) further highlight the challenge in this industry by stating that organisational learning and growth in SME can be problematic since participants in construction projects are only temporarily joined.

The above findings represent some of the challenges associated with the industry but do not negate the need to attract and retain a skilled workforce.

This, however, does not negate the need to determine training needs and measure progress and expenditure. At the most basic minimum, companies should have a training budget and measure the amount spent against the budget. If all the companies up-skill the employees, they are guaranteed to have a well-trained pool of contractors and thus improve the chances of permanent employment. Companies should also identify key competencies and have retention strategies that will ensure learning and growth.

In summary, there are three categories of learning and growth measures. These are: absenteeism, employee turnover, training and development. The aim of these measures is to ensure that absenteeism and employee turnover rate is minimized while increasing investment in training and development.

2.10.5 Customer Perspective Measurement

2.10.5.1 Customer satisfaction

Customer satisfaction in the construction industry can be defined as how well a contractor meets the customer’s expectations, and the quality on construction projects can be regarded as the fulfillment of expectations (Barrett, 2000).

According to Bhave (2002) success is largely about retention of customers, which is dependent on customer satisfaction levels. Customer satisfaction is the key factor in determining how successful the organisation will be in customer
relationships. Fecikova (2004) observed that customer satisfaction (CS) has become an important issue for commercial and public service organisation. Companies win or lose based on what percentage of their customers they can keep.

Fecikova (2004) further stresses that in an atmosphere of competition, it is dangerous to be a non customer-oriented company. Most markets are very competitive and to survive, organisations need to produce products and services of very good quality that yield highly satisfied and loyal customers.

Karna (2004) states that customer satisfaction is a function of perceived quality and disconorganisationation – the extent to which perceived quality fails to match repurchase expectations. Customers compare the perceived performance of a product (service, goods) with some performance standard. Customers are satisfied when the perceived performance is greater than the standard (positively disconorganisationed), whereas dissatisfaction occurs when the performance falls short of the standard (negatively disconorganisationed). Additionally, there is an extensive difference between the loyalty of merely satisfied customers and those who are completely satisfied. Customers who are just satisfied find it easy to switch suppliers when a better offer comes along.

2.10.5.2 Factors influencing customer satisfaction in construction

A company must periodically measure customer satisfaction in order to learn how satisfied its customers are. Torbica and Stroh (2001) argue that, in construction, the extent of customer satisfaction is only known late in the project when most of the customer’s money has already been spent. When companies know which attributes of a service or product affect customer satisfaction, their challenge is to modify their current offering in a way that would lead to maximum customer satisfaction.
This means that in those companies that measure customer satisfaction and are concerned with maintaining good customer relations, they measure it too late in the process to affect change. In order to know what to measure it is important to know what the client minimum requirements are or rather what they are assessing during the project. Karna (2004) notes that at the project level, the customer assesses the contractors’ performance in relation to three comparisons, all of which impact on customer satisfaction:

Comparison – between the quality of the building, the customer’s expectations and the adjusted goals for the building.
Comparison – between the quality of the construction process and the experiences, which have emerged during the process.
Comparison – between the customer’s expectations and experiences.

Barrett (2000) notes that customers’ expectations play an important role in the evaluation of a contractor’s performance. These can be a function of several factors: the customer’s past or direct experiences with the contractor and similar contractors, word-of-mouth information about the contractor, and the customer’s personal needs. In addition, a customer’s expectations are affected by a contractor’s marketing activities and image, and the customer’s own investment in the project and the relationship.

The subjective nature of customer perspective or satisfaction can then be summarised into the three elements that literature shows as important. At very minimum, contractors should measure the customers’ perceptions on the following: product satisfaction, process satisfaction and relationship satisfaction. The internal process plays a key role in client satisfaction as it accounts for two thirds of the measurement. The customer relationship factor is influenced directly by the calibre of management and employees, which relate to learning and growth perspective.
In summary, there are three categories of customer perspective measures. These are: Customer product satisfaction, customer process satisfaction and customer-supplier relationship satisfaction. The objective of these measures is to ensure that the customer satisfaction rate is high on all three.

With these measurements in place, a generic measurement instrument can be designed.

2.10.6 Measurement instrument using BSC perspectives

From the above discussions in literature, the following generic strategic performance measurement instrument with KPIs can be designed. As shown in Table 8, it is important to ensure that all four perspectives of the Balanced Scorecard are covered within the framework.

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Measurement</th>
<th>KPI</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>Profitability</td>
<td>Percentage profit made</td>
<td>Maximise profitability</td>
</tr>
<tr>
<td></td>
<td>Cash flow</td>
<td>Period of positive cash flow</td>
<td>Maintain positive cash low</td>
</tr>
<tr>
<td></td>
<td>Return on capital employed</td>
<td>Percentage return on profit</td>
<td>Maximise return on capital</td>
</tr>
<tr>
<td>Internal Processes</td>
<td>Project Time</td>
<td>Time of construction</td>
<td>Meet planned time for construction</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
<td>Cost of construction</td>
<td>Meet budget for construction</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>Number of quality issues logged on quality register</td>
<td>Reduce number of quality defected</td>
</tr>
<tr>
<td></td>
<td>Health and Safety</td>
<td>Lost time due to injuries</td>
<td>Eliminate injuries and lost time associated with it</td>
</tr>
<tr>
<td>Customer</td>
<td>Customer product satisfaction</td>
<td>Client satisfaction rate</td>
<td>Increase client satisfaction rate on final product.</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Customer process</td>
<td>Client satisfaction rate</td>
<td>Increase client satisfaction rate on project management</td>
<td></td>
</tr>
<tr>
<td>relationship satisfaction</td>
<td>Client satisfaction rate</td>
<td>Increase client satisfaction rate on relations between customer and service provider</td>
<td></td>
</tr>
</tbody>
</table>

| Learning and Growth    | Absenteeism                   | Absenteeism rate         | Minimise absenteeism                             |
|                        | Employee turnover             | Employee turnover rate   | Minimise turnover rate                           |
|                        | Training and development      | Amount spent on training and development budget | Ensure that budget is spent                      |

Source: compiled by author based on literature study

This instrument represents all the generic critical success factors within the construction industry and will be used to determine the current types of measures undertaken by SMEs.

To ensure that the instrument relates to the causal model and links measurements to the company strategy, Figure 2.3 depicts the relationship between the four perspectives.
Figure 4: Relationship Between the Four Balanced Scorecard Perspectives.

Source: Compiled by Author based on literature study and model adapted from Kaplan and Norton, 2004)
2.11. CONCLUSION

The literature study supports the fact that strategic planning is a very vital process of organisations. The organisation’s vision and mission determine its short-term and long-term objectives. Once these objectives have been determined, a performance measurement needs to be in place in order to determine its position relative to the set objectives and thus take a decision to correct discrepancies.

Strategic performance measurement is thus part of a system that is linked to overall strategy. Furthermore, a clear link exists between an organisational approach to strategic planning and its business performance in both large and small organisations.

SMEs approach to strategic performance measurement was thought to be informal and unplanned. This highlights the possibility that that SMEs have other characteristics that inhibit successful implementation of balanced performance measurements. Using the four perspectives of the Balanced Scorecard, it appears that cash flow is an important measure for SMEs from a financial standpoint. Non-financial measures have not been readily adopted within this sector due to the short-term approach to planning. The internal perspective measurement emphasised cost, quality, time and safety as key indicators to success. Within the customer perspective, the overall quality of the process (project management) and product are main drivers of customer satisfaction.

Finally, the learning and growth perspective stresses the importance of employee turnover and training budget expenditure as KPIs. With these generic performance measurements, analyses of current practices within the construction sector can be undertaken.

The next chapter will outline the research methodology adopted in this study.
CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 INTRODUCTION

The primary aim of this research is to establish the extent of strategic performance measurement in the SMEs operating in the construction industry. The Balanced Scorecard is used as a strategic performance measurement framework for the empirical study.

In chapters two, the literature review was presented to put the study in proper perspective as well as to increase understanding of strategic performance measurement practices within SMEs in the construction industry. The literature identified critical elements that an effective strategic performance measurement tool should have and the KPIs of SMEs in the construction industry.

The purpose of this chapter is twofold. Firstly, an explanation of the research paradigm that was used in this study is given. Next, the research methodology and the structure of the research instruments used are discussed. Drawing on the literature review and in line with the research objectives, this chapter focuses on the overview of the research area, and methods used as a guideline for the empirical study. In this sense, it links the theory with the empirical work that will be reported in subsequent chapters.

3.2 RESEARCH PARADIGMS

The term research can be described as a systematic process of collecting, analysing, and interpreting information or data in order to increase the understanding of the phenomenon in which the researcher is interested in (Leedy
According to Sekaran (1992), research is a detailed study of a subject or an aspect of a subject by collecting and analysing facts and information, which, through correct interpretation, leads to new knowledge and understanding. Business research, in particular, is explained as the systematic and organised effort of gathering, recording and analysing data for assisting in making business decisions (Zikmund, 1994).

Research originates with a question or problem and requires a clear articulation of a goal and a specific plan for preceding. It usually divides the principal problem into more manageable sub-problems, guided by the specific research hypothesis. It also accepts certain critical assumptions and requires collection and interpretation of data in an attempt to resolve the problem that initiated the research (Leedy and Ormrod, 2005).

Research can be categorised as basic or applied research. The purpose of basic or pure research is to develop and evaluate concepts and theories to contribute to a general body of knowledge. Applied research has as its aim to solve an existing real life problem. The overall approach adopted in this study is founded on the principles of basic scientific research. A systematic analysis of the body of knowledge (secondary sources) is conducted with regard to pertinent issues pertaining to strategic performance measurement in SMEs within the construction industry. The findings from the literature review and questionnaire will then enable the researcher to make inferences and conclusions about strategic performance measurement practiced in SMEs in the construction industry. (Leedy and Ormrod, 2005)

There are a number of research methodologies some of which lend themselves more to one paradigm than another. The term paradigm refers to the progress of scientific practice based on people’s philosophies and assumptions about the world and the nature of knowledge. For the purpose of this study, a paradigm
relates to how research should be conducted. A paradigm offers a framework for research that comprises an accepted set of theories, methods and ways of defining data. There are two main research paradigms or philosophies. These are termed positivist and phenomenological. These two paradigms can be labeled quantitative and qualitative respectively. Considerable overlapping is found between these two paradigms, which can be regarded as the two extremes on a continuum where the features and assumptions of one paradigm are gradually replaced by those of the other paradigm (Collis and Hussey, 2003).

According to Leedy and Ormrod (2005) quantitative research or descriptive research involves either identifying the characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena. In every case, descriptive research observes the situation as it is. It does not involve changing or modifying the situation under investigation nor is it intended to determine the cause-and-effect relationships.

The quantitative paradigm was appropriate for this study, mainly because other researchers have studied the issues in this particular research; hence a substantial body of literature exists.

3.3 RESEARCH METHOD: SURVEY

A survey is a positivistic method whereby a sample of subjects is drawn from a population and studied to make inferences about the population (Collis and Hussey, 2003). The research is both exploratory and descriptive in nature.
3.3.1 Sampling and Data Collection Technique

3.3.1.1 Sampling:

The researcher who conducts a descriptive study wants to know how things are and therefore describe one or more characteristics of a fairly large population. In probability sampling, the researcher specifies in advance that each segment of the population will be represented in the sample. According to Matrix Marketing (2007) there are approximately 1483 construction companies located in the Eastern and Western Cape provinces. There is roughly a 50-50 split between the two provinces, which give a total of 742 construction companies in the Western Cape. Only companies located in Mossel Bay, George and Knysna will constitute a sample for this research. Within these delimitations, only 20 companies will be contacted to participate in this research. A process of stratified random sampling will be used in selecting the sample. (Leedy and Ormrod, 2005). This is because SMEs can be stratified into two distinct types (Small and Medium) based on number of employees and or turnover. In this case, number of employees will be used to stratify the population. Random sampling will then be used to select the sample group using the following criteria: businesses have to be (a) construction concerns; (b) located in the Western Province (Mossel Bay, George and Knysna); (c) operational (d) meet the definition of small business as set out in the National Small Business Act of 1996 (See Chapter 1, section 1.4.4).

The information will be purchased at an agreed cost from Matrix marketing.

3.3.1.2 Survey Instrument: Data Collection

For this research, a questionnaire was used as a method of collecting original data from the selected sample group. The questionnaire was designed using the generic performance measurement instrument with KPIs from the information gathered in the literature study. The
Balanced Scorecard, with its four perspectives, was used as a performance measurement framework in designing the questionnaire. The objective of the questionnaire was to identify the current strategic performance measurement practiced within the sample group against the Balanced Scorecard model. The instrument also sought to ascertain information relating to perceptions on measurement frameworks among SMEs and the challenges faced in implementation. The sections that were included in the questionnaire were:

- General company information: required to establish general company information.
- Strategic planning: required to solicit respondents to indicate management approaches to strategic planning.
- Strategic performance measurement: sought to establish information on the specific types of strategic performance measurements used in the organisation, using the four perspectives of the Balanced Scorecard.

A positivistic paradigm questionnaire suggests that closed questions should be used. All the questions in these sections were answered by means of a five-point scale (Likert Type Scale), closed questions or selection of an appropriate answer from the choices given.

The questionnaires were posted to the sample group and telephonic contact was initiated prior to postage to outline the purpose and aims of the study to the sample group. A copy of the questionnaire is included in Annexure A.

3.3.2 Data Analysis Procedure

Descriptive statistics were used to analyse the data given the relatively small sample size. Inferential statistics was also used on some of the data to support the literature research findings. Cross tabulation was done on some of the variables.
According to Leedy and Ormrod (2005), correlation in the statistical process is how we discover the nature of relationships among different variables. Where possible, this type of analysis was also done.

3.3.3 Reliability and Validity of the Instrument

Validity of a measurement instrument is the extent to which the instrument measures what it is actually intended to measure. Reliability of a measurement instrument is the extent to which it yields consistent results when the characteristics being measured hasn’t changed. Researchers employ various strategies to support the validity of their findings. One of these strategies is feedback validation. (Leedy and Ormond, 2005).

In this study, feedback from managers regarding the use and value of strategic performance measurement could contribute towards verifying the validity of the study. In addition, the quantitative data can be used to describe the expected relationships. According to Collis and Hussey (2003) reliability is concerned with the findings of the search. It seeks to ensure that repeat searches will yield similar results. Prior research relating to Balanced Scorecard as a strategic performance measurement framework is sufficient to prove the reliability of the measurement instrument.
CHAPTER FOUR

4 RESULTS AND DISCUSSION

4.1 INTRODUCTION

In this chapter data obtained from the research instrument is analysed and interpreted to determine the current strategic performance measurements adopted in the SMEs in the construction industry.

The study aims to assess to what extent SMEs utilise strategic performance measurement and perceived relevance to overall organisational performance as outlined in the literature review section. This section discusses the findings under the different measurement perspectives derived from the Balanced Scorecard. These are: financial, customer, learning and growth and internal processes. The nature and extent of strategic planning is also analysed and findings discussed. The results presented are obtained from questionnaire sent out to the sample group as outlined in Chapter three.

4.2 SAMPLE AND EXTENT OF RESPONSE

In an effort to achieve an objective assessment of SMEs in construction industry with regards to strategic performance measurement practised, an empirical investigation was undertaken in the form of a questionnaire aimed at the sample group.

A total of twenty questionnaires were sent out to construction companies located in Mossel Bay, George and Knysna. These were sent via email or hand delivered. Only thirteen questionnaires were returned, giving a response rate of 65 per cent.
The relatively small number of responses obtained renders the use of statistical tests, parametric or non-parametric, meaningless since it is unlikely to result in statistically significant findings. This limitation simply means that the findings of this survey should be considered as indicative of the experience of the respondents only.

Table 9: Geographical Distribution and Classification of Respondents by Size of Organisation.

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Geographical Location</th>
<th>Number of permanent employees</th>
<th>Classification as per SMME definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Construction</td>
<td>Knysna</td>
<td>Fewer than 100</td>
<td>Medium</td>
</tr>
<tr>
<td>Meyerkon Construction</td>
<td>George</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>Raymer Construction Services</td>
<td>George</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>JH Barry Builders</td>
<td>George</td>
<td>Fewer than 100</td>
<td>Medium</td>
</tr>
<tr>
<td>Nikitac Construction</td>
<td>George</td>
<td>Fewer than 100</td>
<td>Small</td>
</tr>
<tr>
<td>Ice Construction</td>
<td>George</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>Van Brakel Engineering</td>
<td>Mossel Bay</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>McCleod Construction JF</td>
<td>Mossel Bay</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>Metamorphic Engineering</td>
<td>Mossel Bay</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>Praxos Construction</td>
<td>Knysna</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>South Right Construction</td>
<td>Knysna</td>
<td>Fewer than 50</td>
<td>Small</td>
</tr>
<tr>
<td>A and R Enterprises</td>
<td>Mossel Bay</td>
<td>Fewer than 100</td>
<td>Medium</td>
</tr>
<tr>
<td>Siyakhona</td>
<td>Mossel Bay</td>
<td>Fewer than 100</td>
<td>Medium</td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey
Table 9 shows the geographical distribution and classification of the respondents. Of the thirteen companies, five are located in Mossel Bay, five in George and three in Knysna.

Sixty nine per cent of companies in the sample group can be classified as small and 31 per cent per cent as medium sized. This is based on the definition of SMMEs outlined in Chapter two. The majority of these companies are in the building industry, working with brick and mortar while only two companies focus on steel construction.

4.3 GENERAL CHARACTERISTICS OF SAMPLE GROUP

Graph 1: Number of Years of Operation.

As can be seen from the Graph 1, 54 per cent of the respondents have been in business for more than ten years. Only eight per cent of the businesses have been in operation for less than three years. It shows that these businesses have been able to generate sufficient revenue to continue operations and that there is some demand for their services in the market place.
Thirty eight per cent of the companies have between three and five management positions and 31 per cent have between one and three management positions. Only eight per cent and 15 per cent of companies have management positions that are between five and ten and above ten respectively. This measurement is only vital when comparisons are made between number of management positions and the number of permanent employees.

It is clear that the majority of companies in the sample group have a between one and five management positions. This information will be useful in shedding more light into the reasons for some of the approaches and practiced towards strategic planning.
4.4 ATTITUDES TOWARDS STRATEGIC PLANNING AND STRATEGIC PERFORMANCE MEASUREMENT

As was argued in Chapter two, there is no widespread acceptance and practice of strategic planning and organisational performance measurement in SMEs. Table 4.2 shows that 77 per cent of the respondents are aware of the concept of strategic planning. The analysis of the data also reveal that 76 per cent of the organisations have a vision and a mission statement that is communicated to all staff throughout the organisation. An overwhelming majority (92 per cent) have indicated that they formulate plans and objectives based on the vision and mission but unfortunately, this is as far as it goes with regards to strategic planning. This finding is consistent with the assertions made in the literature review, that SMEs are aware of strategic planning in theory, but do not translate this into practice.
Table 10: Responses to Closed Questions.

<table>
<thead>
<tr>
<th>Description of closed question (Yes and No)</th>
<th>No of 'Yes' Responses</th>
<th>No. of 'No' responses</th>
<th>Total Responses</th>
<th>% of 'Yes' responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you the owner-manager?</td>
<td>11</td>
<td>2</td>
<td>13</td>
<td>85%</td>
</tr>
<tr>
<td>Are you aware of the concept of organisational strategic planning?</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>77%</td>
</tr>
<tr>
<td>Do you have a vision statement?</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>77%</td>
</tr>
<tr>
<td>Is this vision communicated to all employees?</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>77%</td>
</tr>
<tr>
<td>Do you have a mission statement?</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>77%</td>
</tr>
<tr>
<td>Is this mission communicated to all employees?</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>77%</td>
</tr>
<tr>
<td>Do you formulate plans and objectives based on vision and mission?</td>
<td>12</td>
<td>1</td>
<td>13</td>
<td>92%</td>
</tr>
<tr>
<td>Are these plans and objectives filtered through to the entire organisation?</td>
<td>7</td>
<td>6</td>
<td>13</td>
<td>54%</td>
</tr>
<tr>
<td>Does your company have OPM ?</td>
<td>8</td>
<td>5</td>
<td>13</td>
<td>62%</td>
</tr>
<tr>
<td>Are you aware of the Balanced Scorecard?</td>
<td>7</td>
<td>6</td>
<td>13</td>
<td>54%</td>
</tr>
<tr>
<td>Does your company measure financial performance?</td>
<td>13</td>
<td>0</td>
<td>13</td>
<td>100%</td>
</tr>
<tr>
<td>Are financial measures linked to organisational objectives?</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>38%</td>
</tr>
<tr>
<td>Does your company measure customer satisfaction?</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>69%</td>
</tr>
<tr>
<td>Does your company have a training and development plan?</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>69%</td>
</tr>
<tr>
<td>Does your company have a training and development budget?</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>69%</td>
</tr>
<tr>
<td>Does your company have a training and development budget?</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>69%</td>
</tr>
<tr>
<td>Average</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>70%</td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey

It is evident from the response of the sample group that within the construction sector, the owner is still very much solely responsible for much of the strategic planning. Table 10 shows that 85 per cent of the sample group is owner-
managed and Graph 3 conorganisation that they perform most management functions. This is the case even with companies that have more than one management position and over 25 permanent employees.

**Graph 3: Person’s responsible for strategic planning**

![Graph 3: Person’s responsible for strategic planning](image)

Source: Author’s computation based on data obtained from the survey

**Graph 4: Nature of Strategic Planning in SMEs in Construction**

![Graph 4: Nature of Strategic Planning in SMEs in Construction](image)

Source: Author’s computation based on data obtained from the survey

From the Graph 4 above, 37 per cent of the companies have an informal and structured approach to strategic planning. Only 21 per cent of companies have a
formal and structured approach to the strategic planning process. This characteristic is displayed by three of the four medium sized companies within the sample group.

**Graph 5: Strategic Planning Process Frequency Review**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly</td>
<td>21%</td>
</tr>
<tr>
<td>Quarterly</td>
<td>7%</td>
</tr>
<tr>
<td>Bi-Annually</td>
<td>21%</td>
</tr>
<tr>
<td>Annually</td>
<td>44%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey

Forty four per cent of the respondents review their strategic plans on an annual basis, while 21 per cent reviews them monthly and the other 21 per cent on a bi-annual basis.

**Graph 6: Respondents View on Importance of Balanced Strategic performance measurement**

Source: Author’s computation based on data obtained from the survey
There is a unanimous agreement by practitioners on the importance of having balanced strategic performance measurements.

In general, from the data analysed, it seems that strategic planning has a low profile in construction and receives a low level of attention. In addition, strategic management is not entrenched in construction organisations, but is usually performed by top management in a top-bottom approach, with little involvement of the lower echelons of the organisation, customers, partners, or suppliers. Moreover, construction organisations tend to focus on operational effectiveness; that is, performing similar activities better than their rivals at the expense of strategic positioning. They strive to perform activities different from those of rivals or similar activities in different ways. In this situation, performance measurement will not likely be used as a strategic deployment tool.

4.5 FINDINGS ON ADOPTED ORGANISATIONAL PERFORMANCE MEASUREMENTS

Generally, it seems that all the companies have some form of strategic performance measurement in place. Although 62 % (see Table 4.2) have indicated that they have such a system, the rest of the respondents, though not having one, do measure performance of the organisation in some manner. The actual measurements, as deemed important to these organisations will be discussed further in the sections that will follow and compared with literature findings.

4.5.1 Financial Measurements

The data analysed is consistent with the research findings that suggest that financial measurements are the most common and widely used forms of performance, measurement. All of the respondents measure financial
performance although at varying frequencies and using varied types of measurements (see Graph 7).

Graph 7: Types of Financial Measurements Used in Construction

![Graph 7: Types of Financial Measurements Used in Construction](image_url)

Source: Author's computation based on data obtained from the survey

The income statement (31 %)(showing the profit margin) and the balance sheet (31 %) rank high in the types of measurements used. This is closely followed by cash flow at 17 per cent. The other, in the measurements is return on assets. These were not highlighted in the literature study. The measurements are used by two of the four medium sized companies in the sample group.

Table 11 reveal that cash flow and profit margin rank top as far as the most frequently used and widely adopted measurement of financial performance are concerned. Sales growth and return on investments are used by only 10 per cent of the respondents.
Table 11: Disposition of Respondents Towards the Importance of Listed Used Financial Measurements.

<table>
<thead>
<tr>
<th>Types of measurements</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagreed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit margin</td>
<td>9</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cash flow</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sales growth</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Return on investment</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Responses</td>
<td>27</td>
<td>16</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>% Responses</td>
<td>51.92%</td>
<td>30.77%</td>
<td>17.31%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Combined % Responses</td>
<td>82.69%</td>
<td>17.31%</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey

While the total sample mainly use profit margin and cash flow as financial measurement, sales growth and return on investment is mainly used by companies that had over 50 employees with more than 10 years in operation. This might suggest that the longer the company is in operation, the more likely it will adopt other types of financial measures.

Graph 8: Percentage Split Between Organisations with Financials Measures Linked to Strategic Objectives

Financial measures linked to strategic objectives

Just over half of the respondents have financial measurements that are linked to strategic objectives. Although 92% of respondents formulate plans and
objectives from the vision and mission, linking of measurements to objectives is not practiced.

4.5.2 Customer Measurements

Data analysis reveal that only 70 per cent of the respondents have a formal customer satisfaction measurement even though 95 per cent of the respondents agree that this measure is important to organisational success (Graph 9).

**Graph 9: Respondents Views on Importance of Customer Service Measurement**

![Graph showing respondents' view on importance of CS in organisation]

Source: Author’s computation based on data obtained from the survey

The specific measurements that are deemed important to the organisation are shown in Table 12. It is evident that the generic measures of customer satisfaction are adopted by the respondents. This was highlighted in Chapter two.

**Table 12: Disposition of Respondents Towards the Importance of Used Customer Service Measurements.**

<table>
<thead>
<tr>
<th>Types of measurements</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS on finished product</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CS on project management</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CS on customer-client relation</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Responses</td>
<td>22</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>% Responses</td>
<td>66.67%</td>
<td>18.18%</td>
<td>6.06%</td>
<td>0.00%</td>
<td>9.09%</td>
</tr>
<tr>
<td>Combined % Responses</td>
<td>84.85%</td>
<td>6.06%</td>
<td>9.09%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey
4.5.3 Learning and Growth Measurements

The sample group shows that varied methodologies are employed in the staff recruitment process. As was highlighted in Chapter two, word-of-mouth is most common among SME practitioners in the construction industry. The results of the data analyses concur with this. Referral and internal recruitment are second and third in order of preference. This is quite a stark contrast with practice in large organisations, which use labour brokers and print media. The two medium companies in the sample group indicated that they use print media as a form of recruiting staff. It seems that there is a shift in methods of recruitment as the organisation grows in size.

Graph 10: Methods of Recruitment Used by Construction Practitioners

Source: Author’s computation based on data obtained from the survey
Although all the respondents but one, viewed training and development measurements as vital to organisational success, only 70 per cent had a training and development plan for staff and 46 per cent have a training budget.

A varied response regarding the actual measurements used in the sample group was found. Table 13 shows that absenteeism rate ranks high as the most widely adopted learning and growth measurement. Although literature shows that there is value in measuring actual training expenditure against budget, 31 per cent of respondents did not find this a useful measure. Part of the reason is that these companies do not have a budget.
Table 13: Disposition of Respondents Towards the Importance of Used Learning and Growth Measurements

<table>
<thead>
<tr>
<th>Types of measurements</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Absenteeism rate</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Employee turnover rate</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Actual versus budget training and development</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total Responses</td>
<td>12</td>
<td>12</td>
<td>9</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>% Responses</td>
<td>30.00%</td>
<td>30.00%</td>
<td>22.50%</td>
<td>17.50%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Combined % responses</td>
<td>60.00%</td>
<td>22.50%</td>
<td>17.50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey

4.5.4 Internal Process Measurement

Chapter Two highlighted that project management measurement can be divided into at least three basic measurements; namely, time, cost and quality. Safety and health were later added as the industry progressed in types of measurements adopted. According to the results of the analyses of the sample group, it is evident that current practice is consistent with theory. Although low, quality measurement in the form of quality issues reported and actual time of project had 2% per cent of respondents not measuring this.

However, Graph 12 and Table 14 show that all the respondents perceived that this measurement is vital to the success of the organisation.

Graph 12: Respondents’ Views on Project Management Measurements

Source: Author’s computation based on data obtained from the survey
Table 14: Disposition of Respondents Towards the Importance of Listed Used Internal Perspective/Project Management Measurements.

<table>
<thead>
<tr>
<th>Types of measurements</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate versus Actual project cost</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Estimated versus Actual project duration</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lost time due to injuries</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Incident rate</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Accident rate</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of quality issues reported</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Responses</td>
<td>35</td>
<td>18</td>
<td>19</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>% Responses</td>
<td>47.30%</td>
<td>24.32%</td>
<td>25.68%</td>
<td>1.35%</td>
<td>1.35%</td>
</tr>
<tr>
<td>Combined % responses</td>
<td>71.62%</td>
<td>25.68%</td>
<td>2.70%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey

Measurements such as incident rate, accident rate, and lost time due to injuries were mostly adopted by organisations that had over 50 employees, both temporary and permanent. This seems to suggest that there is a difference in measurements adopted based on size of organisation. Most of the respondents that were neutral regarding these measures are typically SMEs with less than twenty employees.

4.6 HINDRANCES TO SUCCESSFUL IMPLEMENTATION OF STRATEGIC PERFORMANCE MEASUREMENT

As stated in Chapter Two, strategic performance measurements systems in SMEs might prove to be a challenge in implementation. Various reasons were solicited through the questionnaire to ascertain the most likely hindrance to successful implementation of strategic performance measurement systems. Table 15 highlights the fact that almost all the factors stated act as a hindrance to implementation.
Table 15: Respondents’ View on Hindrances to Successful Implementation of Strategic performance measurement.

<table>
<thead>
<tr>
<th>Type of hindrances</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of human resource</td>
<td>2</td>
<td>9</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Lack of managerial capacity</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Limited financial resources</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Lack of formalised process</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Misconception of OPMs</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Responses</strong></td>
<td><strong>9</strong></td>
<td><strong>27</strong></td>
<td><strong>9</strong></td>
<td><strong>14</strong></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>% Responses</td>
<td><strong>15.00%</strong></td>
<td><strong>45.00%</strong></td>
<td><strong>15.00%</strong></td>
<td><strong>23.33%</strong></td>
<td><strong>1.67%</strong></td>
</tr>
<tr>
<td><strong>Combined % Responses</strong></td>
<td><strong>60.00%</strong></td>
<td><strong>15.00%</strong></td>
<td><strong>25.00%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s computation based on data obtained from the survey

Overall, it is evident from data that lack of human resources and managerial capacity rated high as reasons why SMEs in the construction sector might not be able to successfully implement strategic performance measurement systems. It is strange that financial resources are not seen as a serious hindrance. The practitioners show that they do have the financial capacity but perhaps not investing it sufficiently in the capacity building specifically in strategic performance measurements.

**4.7 BALANCED MEASUREMENTS AND LINK TO OBJECTIVES**

There is evidence that non-financial measures are becoming increasingly important. The data analysed reveal that only 53 per cent of respondents are aware of the Balanced Scorecard as a framework for strategic performance measurement. Fifty per cent of the respondents who are aware of the Balanced Scorecard view it as a useful measurement framework. Even though this is low, all the respondents agree that having a set of balanced measures is vital to the success of the organisation. This seems to suggest that there is a widening acceptance of balanced set of strategic performance measurements.
For KPIs to be used successfully, they need to be part of a strategic performance measurement system. When developing the measures for such a system, a clear understanding of the different types and applications of measures is required.

The KPIs were not aligned to the strategy or business objectives of construction companies. They tended to be a complete suite of KPIs, which may or may not be aligned to an organisation’s business needs. Although they are generic and it could be argued that they are relevant to nearly all companies, they have been seen as external to the business needs of many organisations.

The findings of this study seem to suggest that the development of causal model and linking goals to strategy is very low in the SMEs within the construction sector, specifically with non-financial measures.

One possible reason for lack of link between objectives and measurements or the development of causal models could be that SME practitioners have a simpler conceptualization of their strategy and thus see the process of managing performance as much easier. These organisations may simply focus on developing key performance measures and consider managing performance as the process of monitoring these measures. They do not see managing strategy as managing the set of cause-effect relationships in the strategy.

It is also vital to have KPIs derived from set objectives thus making linking or cause-and-effect models possible. It is evident from the data analysis that only financial measurements are derived and linked to strategic objectives. There is still a need to adopt this practice to other non-financial measurements.
CHAPTER FIVE

5 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 RESEARCH SUMMARY

The main objective of this study was to ascertain whether SMEs in the construction industry are measuring strategic organisational performance effectively. To do this, it set out to understand the current status of strategic planning in SMEs, the strategic performance measurements currently in use, level of awareness of the Balanced Scorecard and various challenges in implementing strategic performance measurement systems.

A literature study was conducted in order to establish generic KPIs for the construction industry. The Balanced Scorecard was used as a framework for strategic performance measurement. The generic KPIs were classified in accordance with the four perspectives in the Balanced Scorecard; namely financial, customer, learning and growth and internal processes.

From this generic framework, a questionnaire was design as the main research instrument to gather primary data from a selected sample group within the Mossel Bay, George and Knysna regions.

It emerged that a low degree of formalization and structure exists in strategic organisational planning. In fact, the owner-manager in most small-sized enterprises sampled, carries out this vital process. The vision and mission are filtered down to the all staff but the objectives derived from the strategy are not.
As can be expected, the financial measurements is the most commonly practiced type of measurement with profit margin and cash flow emerging as the most frequently used and preferred KPI. This is consistent with the findings in the literature.

Although most companies were not aware of the concept of the Balanced Scorecard as a framework of strategic performance measurement, data analysis reveal that some understanding of the concept exists. The majority of the respondents in the sample group indicated that having a balanced set of measurements is vital to organisational success. Even though this is the case, practice is not yet commonplace in as far as some of the generic KPIs identified in the literature are concerned.

Customer satisfaction measurements were deemed vital to the success of the organisation but only finished product satisfaction is widely adopted among practitioners. Client’s satisfaction with regards to project management process and client-supplier relationship are also measured but by slightly fewer respondents.

With regards to the learning and growth perspective, most of the respondents measure employee absenteeism rate and employee turnover rate. Actual training and development expenditure versus budget is not deemed an important KPI.

The study revealed that the three types of internal process measurement, namely, time, cost and quality, are currently the most widely adopted set of KPIs in the construction industry. Safety and health measurements such as lost time due to injuries and accident rate are only used by 50 per cent of the respondents in the sample group.
It emerged from the data analyses that the KPIs used in the organisational performance systems are not linked with the strategy or objectives except for financial measurements.

The two most cited reasons that act as barriers to effective implementation of strategic performance measurement are lack of managerial capacity and lack of human resources.

**5.2 CONCLUSION**

The significance of this research is accentuated by the fact that the government wants to encourage the development of SMEs in construction through the Construction Industry Development Board (CIDB). Part of its scope is to ensure that performance within the industry reaches acceptable levels.

The research problem addressed in this study was to determine the current strategic performance measures in SMEs and design a generic tool to measure it effectively. This was accurately explained and expressed clearly and sub problems were identified from areas in the main problem that required detailed attention.

The first sub problem of was addressed in Chapter 2 which encompassed a literature study on the principles and current state of strategic planning in SMEs. The second sub problem was addressed in Chapter 2 which covered literature study on KPIs within the construction industry. The questionnaire also addressed this sub problem and results were discussed in Chapter 4.

The third sub problem was addressed in Chapter 2 which entailed a look at the principles of the Balanced Scorecard and practices within the SMEs. The final sub problem was also addressed in Chapter 2 which encompassed a literature
study on the various hindrances to successful implementation of strategic performance measurements.

It is stated in Chapter 2 that organisations that practice strategic performance measurement outperform those that do not. It is also well-documented that not many strategic performance measurements are appreciated and practiced in SMEs unlike in large organisations.

An analysis of data from the questionnaire has revealed that strategic planning does take place in SMEs but not to the extent that large organisations do it. It is evident that with the current situation of strategic planning, performance measurement systems will not likely be used to deploy strategy. However, the need exists and is expected to grow as organisations shift toward outward focus and stakeholder concern.

Based on the findings of the research it is evident that there is an awareness of strategic performance measurement in the SMEs’ within the construction industry. In fact, all the respondents were favourably disposed to the usefulness of strategic planning and strategic performance measurement to enterprise success. It is also standard practice to have a balanced set of measures, although there was a varying degree of adaptation within the sample group. Furthermore, there were differences in the types of KPIs used within these companies when compared to the generic models. A focus on financial measures exclusively is not the case even though these measures were prominent in the KPIs used.

As noted in the previous chapter, SMEs exhibit different characteristics from larger organisations. These differences are commonly perceived as being a consequence of the structural and cultural environment that these organisations operate in (Hudson and Smith, 2006). One such culture that is still prevalent is having the owner-manager wearing different management hats with little or no involvement of employees in management or in planning. This is evidenced by
the fact that in most companies within the sample group, the owner-manager is still solely responsible for the strategic planning process. This culture shifts slightly when the organisation makes the transition from small to medium, with a distinct feature of additional management positions. It is still unclear as to the reason for this noted difference.

Botchway et al, (2005) assert that a number of factors must be responsible for the limited or lack of uptake of strategic performance measurement systems within SMEs. This research has revealed that the two main reasons that act as impediments to implementation of a balanced measurement framework such as the Balanced Scorecard is lack of human resources and lack of managerial capacity.

This study revealed that there are differences in the recruitment methods adopted by medium and small sized companies. The medium sized companies in the sample group relied heavily on word-of-mouth and referrals, while medium size organisations practiced other formalised methods such the media. Medium sized companies also had a training and development plan and budget for employees while only few small sized companies had a training budget. The difference could be attributed to a change in structure from a single manager to multiple management positions responsible for specific focus areas, such as finance and human resources.

Even though literature highlights the importance of using training budget PMSs in SMEs, very few companies carry out strategic performance measurement. A significant gap between theory and practice was found.

The study revealed that there are basically two main obstacles in introducing strategic performance measurement systems in SMEs: exogenous barriers such as the lack of financial and human resources and endogenous barriers such as short-term strategic planning and the practitioner’s perception on such systems.
A basic strategic performance measurement tool (Table 8 and Figure 4) was formulated in Chapter 2 in order to have a generic set of KPIs for the industry. The measures are viewed as vital to strategic performance and thus recommended as a tool that can be adopted and applied within the industry to effectively manage operations.

There is an argument by practitioners in the comments section of the questionnaire that because things such as accidents, customer complaints and poor quality in SMEs are more visible, people get to know about these without the need for formalised strategic performance measurement system. This notion further proves the short-term approach of practitioners to managing operations. As pointed out in the literature, measurement systems also help in identifying trends that will form the basis of continuous improvement initiatives.

Changing and improving working practices is a long-term challenge for the construction industry. This is especially true in strategic organisational performance measurement. Nevertheless, this remains essential if the industry is to become more competitive.

5.3 RECOMMENDATIONS

There are several implications for SME practitioners in the construction industry based on the findings of this research. In order to improve the existing strategic performance measurement practices, the following are possible areas of intervention:

1. First, practitioners might want to plan more formally than before. For example, the creation of a business plan might help the organisations to identify risks and opportunities in the market place and plan for actions in due time. This might increase the chances of success.
2. Second, since the use of planning instruments in small organisations is rather low, it might be beneficial to increase the awareness of these instruments. To do so, issues pertaining to strategic planning might have to be emphasised in curricula for small business managers, both in higher and in further education, and not limited to business-related study programs. Also, handbooks for small business managers, which focus on strategic planning without the use of too many technical terms as well as a hands-on approach, can contribute to this goal.

3. Thirdly, awareness of the Balanced Scorecard as a framework for strategic performance measurement is rather low in SMEs even though literature study shows that it is relevant for this sector. With the use of technology, the framework can be simplified for use in SME with minor modifications required by practitioners in the form of modifying KPIs used. This will alleviate some of the management burdens on the owners.

4. Construction organisations have been known to have a short-term approach to business with a focus on the bottom line. This is compounded by the owner-managers’ style of management, which lacks the inclusive element of other members or departments. It is recommended that owner-managers be trained on delegation skills. Added to this, a ratio of employees versus number of management position should be established for the industry. This will encourage appointment of additional supervisors/managers in organisations to alleviate the work-overload challenge on the part of the owner-manager.

5. Training and development of employees should be prioritized in order to improve management capacity and thus long-term sustainability of the business and industry. This will also help alleviate the stated hindrances to the implementation of strategic strategic performance measurement.
systems. These hindrances were identified as lack of human resources and lack of managerial capacity.

6. It is expected that, in the future, the development of loyal, inclusive stakeholder relationships will become one of the most important determinants of commercial viability and business success. Thus, construction organisations should not be myopic in their strategic thinking and should respect the desires of their stakeholders, economically and morally. This approach should be addressed by developing a comprehensive stakeholder perspective approach to business performance so that the organisation can be monitored and judged in a socially accepted manner, thus providing the foundation for maximizing stakeholder value. For this reason, customer-client relationship measurement should be a serious consideration for SME practitioners in the construction industry.

Finally, organisational performance measures provide essential information needed to enable control and monitoring of organisational performance. Such efforts will be harmed if the measures are seen as an end instead of a means to an end. Developing measures is not a substitute for developing a sound strategy. Developing a sound strategy requires that the strategy be articulated in the form of a cause-effect model. The absence of causal model of the strategy is akin to a person driving a car in an unfamiliar place without a map. S/he may be clear of the final destination but s/he has no clue of how to get to the destination.
REFERENCES


APPENDIX

QUESTIONNAIRE

Strategic performance measurement practised in SMES within the construction sector

Dear Sir/ Madam

Completion of research questionnaire

I am at present conducting research into the strategic performance measurement practised in SMEs’ within the construction sector, at the Nelson Mandela Metropolitan University in partial fulfillment of an MBA degree. The topic is “The development of a strategic performance measurement tool for SMEs in the construction industry”.

The object of the questionnaire is to obtain the views of the management in construction enterprises that fall within the small and medium size and analyse what they measure in their organisation using the integrated financial and non-financial performance measures.

I should appreciate if you would complete the attached questionnaire or direct it to the person in charge with this responsibility. Due to limited resources a fairly small sample was selected to receive this questionnaire, thus your response is very crucial to the success of the survey. All information will be treated in the highest confidence and thus will not be revealed to anyone and the respondent’s name (optional information) will not be revealed.

Thank you for your time and consideration.

Molefe Pooe
Tel: 044 601 2218
Cell: 0845858989
Fax:0866009286
Email:molefe.pooe@petrosa.co.za
Section I- General Company Details

1. Please complete the details below by ticking the appropriate block

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Location</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of years in business</th>
<th>Less than 3 years</th>
<th>3 – 5 years</th>
<th>5 – 10 years</th>
<th>More than 10</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of Permanent Employees</th>
<th>&lt; 5</th>
<th>5-20</th>
<th>20-35</th>
<th>35-50</th>
<th>50-100</th>
<th>More than 100</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Current number of temporary employees</th>
<th>&lt; 5</th>
<th>5-20</th>
<th>20-35</th>
<th>35-50</th>
<th>50-100</th>
<th>More than 100</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Area of Focus in construction</th>
<th></th>
</tr>
</thead>
</table>

2. Are you the owner and manager of the business?
   Yes [ ] No [ ]

3. State the number of management positions in your organisation [tick applicable block]

<table>
<thead>
<tr>
<th>One</th>
<th>Between 1 and 3</th>
<th>Between 3 and 5</th>
<th>Between 5 and 10</th>
<th>Above 10</th>
</tr>
</thead>
</table>

4. Who makes important strategic decisions in the company?

<table>
<thead>
<tr>
<th>Owner</th>
<th>Board of directors</th>
<th>Management</th>
<th>Employees</th>
<th>Other</th>
</tr>
</thead>
</table>

123
Section II Strategic Planning

5. Are you aware of the concept of organisational strategic planning?
   Yes [ ] No [ ]

6. Please tick box that best describes your view on the following statement: Strategic planning process is vital to the success of my organisation.

7. Does the Company have a vision statement?
   Yes [ ] No [ ]

8. If yes, is this vision communicated to all employees in the organisation?
   Yes [ ] No [ ]

9. Does your company have a mission statement?
   Yes [ ] No [ ]

10. If yes, is this mission statement communicated to all employees in the organisation?
    Yes [ ] No [ ]

11. Does the company formulate plans and objectives based on the vision and mission of organisation?
    Yes [ ] No [ ]

12. If yes, are these plans/ goals and objectives filtered through the entire organisation?
    Yes [ ] No [ ]

13. How often are these plans revised?

<table>
<thead>
<tr>
<th>Monthly</th>
<th>Quarterly</th>
<th>6 months</th>
<th>Yearly</th>
<th>Twice a year</th>
<th>Annually</th>
<th>Other, please specify</th>
</tr>
</thead>
</table>

14. Which of the following best describes your strategic planning process:

<table>
<thead>
<tr>
<th>Formal and structured</th>
<th>Formal but unstructured</th>
<th>Informal and structured</th>
<th>Informal and unstructured</th>
<th>We don’t have a process</th>
<th>Other</th>
</tr>
</thead>
</table>
Section III – Strategic performance measurement

Part A

15. Does your company have strategic performance measurement in place?  
Yes [ ] No [ ]

16. Please tick box that best describes your view on the following statement:  
Strategic performance measurement Systems are vital for the success of the organisation

<table>
<thead>
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<tbody>
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</table>

17. Please tick the box that best describes your view on the following statement.  
Having a balanced set of performance measurements is vital to the success of the organisation.

<table>
<thead>
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</tbody>
</table>

18. Are you aware of the Balanced Scorecard?  
Yes [ ] No [ ]

19. If yes, tick the block that best describes your view on the following statement.  
The Balanced Scorecard is a Useful strategic performance measurement framework for my organisation.

<table>
<thead>
<tr>
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</tbody>
</table>
Please rate the following possible reasons as hindrances to successful implementation of strategic performance measurement within your organisation

20. Lack of human resource
21. Lack of managerial capacity
22. Limited financial resource
23. Lack of formalised processes
24. Misconception of performance measurement
25. Other, please specify

|-------------------|---------|------------|-------------|----------------------|

Part B

26 Does your company measure financial performance?
Yes [ ] No [ ]

27 If yes, state the type of measures used by ticking the appropriate block

<table>
<thead>
<tr>
<th>Income statement</th>
<th>Balance sheet</th>
<th>Cashflow</th>
<th>Return on Investment</th>
<th>Sales Growth</th>
<th>Other, please specify</th>
</tr>
</thead>
</table>

28. How often do you prepare formal financial performance measurement reports? Tick the appropriate block

<table>
<thead>
<tr>
<th>Weekly</th>
<th>Twice a week</th>
<th>Monthly</th>
<th>Quarterly</th>
<th>Twice a year</th>
<th>Annually</th>
<th>Other, please specify</th>
</tr>
</thead>
</table>

29. Are your financial measures linked to the organisational objectives derived from strategy?
Yes [ ] No [ ]

30. Tick the block that best describes your view on the following statement:
**Financial measures are vital to the success of the organisation.**

|-------------------|---------|------------|-------------|----------------------|
Rate the following financial measures relative to their effective use/importance in your organisation

<table>
<thead>
<tr>
<th>31. Profit margin</th>
<th>32. Cashflow</th>
<th>33. Sales Growth</th>
<th>34. Return on Investment</th>
<th>35. Other, specify………………</th>
</tr>
</thead>
</table>

Part C

36. Does your company have a customer satisfaction measure within our company for project management?

| Yes | No |

If your answer is yes, Tick the block that describes the types of customer satisfaction measures your organisation has.

|---------------------------------------------|-----------------------------------------------|-------------------------------------------------|-----------------------------|

41. Tick the block that best describes your view on the following statement:

**Customer measures are vital to the success of the organisation.**

|-------------------|----------|------------|-------------|----------------------|
Part D

42. Tick the block(s) that best describe your organisations’ recruitment method

<table>
<thead>
<tr>
<th>Word-of-mouth</th>
<th>Recruitment Agency</th>
<th>Referrals</th>
<th>Internal</th>
<th>Labour broker</th>
<th>Print media</th>
<th>Other, please specify</th>
</tr>
</thead>
</table>

43. Does your company have a training and development plan for its staff?
Yes ☐ No ☐

44. Does the company have a training and development budget?
Yes ☐ No ☐

Please indicate the type of measures your organisation has on employees.

| 45. Employee absenteeism rate |
| 46. Employee turnover rate |
| 47. Actual versus budget training and development |
| 48. Other, please specify………… |

49. Tick the block that best describes your view on the following statement:

Training and development is vital to the success of the organisation.

|-------------------|---------|------------|-------------|---------------------|
Rate the importance of the following measures of project management success as per current practice in your organisation

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<tbody>
<tr>
<td>Estimated versus Actual project cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated versus Actual project duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lost time due to injuries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Incident rate</td>
<td></td>
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<tr>
<td>Accident rate</td>
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<tr>
<td>No. of quality issues reported by client</td>
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<tr>
<td>Other, please specify</td>
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57. Tick the block that best describes your view on the following statement:

Internal processes measures or project management success measurements are vital to the success of the organisation.

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Comments

The End

Thank you