

**PIMS AND CORPORATE PERFORMANCE: THE INFLUENCE OF
STRATEGIC CAPABILITIES AND CONTEXTUAL FACTORS IN
KENYA**

BY

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Reg. No. D86/15305/05

**A Thesis Submitted to the School of Business in Fulfillment of the
Requirement for the Award of Doctor of Philosophy Degree in Strategic
Management of Kenyatta University**

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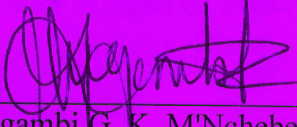


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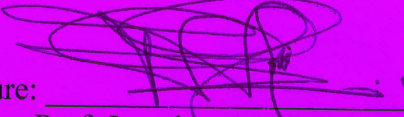
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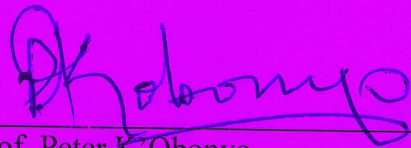
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DEDICATION

This thesis is dedicated to my dear wife Lucy and our beloved sons Roy, Ray and Rhys and in the memory of Ryan St. Francisco Mukaria.

Senior and I am indeed thankful for all the advice and help as extended to me especially

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DEFINITION OF TERMS

Contextual factors

also known as environmental factors. These are factors outside the direct control of a firm's management but do affect its performance

Corporate performance

outcome of a given strategy. Environmental variables interact with internal variables to produce performance outcome.

Criterion variable

also know as dependent variable. This is the variable measured, predicted or otherwise monitored by the researcher, expected by a manipulation of independent variable. In this study the criterion variable is corporate performance.

Dynamic capabilities theory

posits that since market places are dynamic rather than simple heterogeneity in firm resource endowment, it is by capabilities by which firm resources are acquired and deployed in ways that match the firm's market environment that explains the inter firm performance variance over time.

Likert scale

a variation of the summated rating scale, this scale asks a rater to agree or disagree with statements that express either favorable or unfavorable attitudes toward the object. The strength of attitude is reflected in the assigned score and individual scores may be totaled for an overall attitude measure.

Moderating variable

is an additional independent variable that is included because it is believed to have significant contributory or contingent effect on the originally stated Independent-Dependent Variable relationship. Strategic Capabilities and Contextual factors are considered as moderating variables in this study.

NORMCLUS

general but flexible modeling framework for constrained multi objective classification that is well suited for grouping entities such as firms and customers.

Organizational capabilities

set of things the organization is capable of doing confidently as a result of tacit accumulation of experience embodied in routines and learning by doing.

PIMS (Profit Impact of Market Strategy) principles

general relationships that can help managers understand and predict how strategic choices and market conditions affect performance.

Predictor variable

also known as independent variable. This is the variable manipulated by the researcher, which causes the effect or change on the dependent variable. In this study the predictor variable is PIMS principles.

Strategic capabilities

complex bundle of skills and accumulated knowledge that enable firms to create economic value and sustain competitive advantage.

ABBREVIATIONS AND ACRONYMS

AT	After Tax
BSC	Balanced Score Card
CP	Corporate Performance
CMA	Capital Markets Authority
DC	Dynamic Capabilities Theory
IOE	Industrial Organization Economic Theory
LT	Long Term Debt
MAR	Missing at Random
MCAR	Missing completely at Random
NSE	Nairobi Stock Exchange
P&E	Plant and Equipment
PIMS	Profit Impact of Market Strategy
PR	Public Relations
RBV	Resource Based View of Strategy
R&D	Research and Development
ROA	Return on Assets
ROI	Return on Investment
SIC	Standard Industrial classification
SPI	Strategic Planning Institute
UK	United Kingdom
US	United States of America

ABSTRACT

The influence of strategy and context on corporate performance has been and still is a central issue in Strategic Management Discipline. In spite of immense academic curiosity in this area, exemplified by extensive empirical research, results still remain inconclusive. Some argue that performance differences across firms is as a result of strategic choice and capabilities the firm builds over time. Yet others contend that external characteristics under which a firm operates is equally important in explaining performance, since strategic management is sensitive to the context in which it is practiced. Besides, empirical studies that forge these propositions using an integrated approach in an African setting, and specifically in Kenya, are scanty. This study examined the influence of PIMS (Profit Impact of Market Strategy) principles, strategic capabilities and contextual factors on corporate performance in Kenya. The study employed a triangulation of exploratory, descriptive and explanatory designs. Both primary and secondary data were collected. Primary data were collected vide a structured close ended Likert type questionnaire administered to all 56 CEOs of quoted companies in Kenya, in a census survey. Secondary data were collected on financial performance of the same companies for a period of five years between 2002 and 2006. Financial data summarized by Nairobi Stock Exchange (NSE) and company's financial statements obtained from Capital Markets Authority (CMA) were used. Data were analyzed using descriptive and multivariate analysis. Specifically, means and standard deviations were used to assess data characteristics. Factor analysis was used to validate and construct indices for the preconceived variables. Correlation analysis and different variants of regression analysis were used to test hypotheses. Model testing show that Kaplan and Norton's Balanced Score Card (BSC) conforms to Kenyan context and remains a viable measure of corporate performance. Further, the study provides additional support for the linkages between PIMS principles and corporate performance, suggesting that PIMS principles are generalizable across a broad spectrum of contexts. More important, the findings demonstrate that when strategic capabilities are considered in addition to PIMS principles, the explanatory power of the model increases significantly from $Adj.R^2 = 0.539$ to $Adj.R^2 = 0.741$ at $P < 0.001$. However, it was found that contextual factors have a negative ($\Delta adj.R^2 = -0.004$) moderating effect on the relationship between PIMS principles and corporate performance in Kenya, albeit not significant at $\alpha = 0.05$. The three study variables, PIMS, strategic capabilities and contextual factors in an integrated model account for 71.1% of variation in corporate performance, this variation being higher than that accounted by any of the study variables individually. These findings hold implications for corporate managers and the Kenyan government. The corporate managers should pay special attention to market strategy especially product quality and market share. These strategies should be leveraged by internally built capabilities such as IT, marketing, market linking, technological and management. The government should moot strategies for lowering political risk by addressing issues like insecurity, corruption, political bickering and unreliable electricity supply. Future research should explore to replicate the findings of this study to firms not listed in the NSE especially Small and Micro Enterprises. Future studies should seek employ optimization procedures to address spuriousness.

CHAPTER ONE

INTRODUCTION

This chapter gives the background to the study and discusses key study variables including corporate performance, PIMS principles, strategic capabilities and contextual factors. It explores the statement of the problem and highlights both the general and specific objectives. It also outlines the significance, the scope and organization of the study.

1.1 Background

Performance, which is an outcome of a given strategy (Hax & Majluf, 1991), is the ultimate test for any institution whether profit making or non profit making (Kotler, 1991). This is because the relationship between strategy and performance can contribute to greater effectiveness for individual firms and entire economies (Buzzell & Gale, 1987). According to Montgomery (1979) empirical work designed to explore the relationships between various strategic variables and corporate performance can provide valuable insights into optimal strategy for a business firm. A major initiative in studies connecting strategy and performance has been PIMS (Profit Impact of market Strategy) project (Meng Leong, 2001). The PIMS principles are discovered by documenting actual experiences of many businesses operating in many different kinds of markets and competitive settings (Buzzell & Gale, 1987). These principles can help managers understand and predict how strategic choices and market conditions will affect performance (Buzzell & Gale, 1987).

In spite of extensive research on the relationship between strategy and performance there is debate on what constitutes a good strategy, the nature of linkage between strategy and performance and above all what constitutes corporate performance variables (Ethiraj, Kale, Krishnan, & Singh, 2005; Hill 1994; Learned, Christensen, Andrews, & Guth, 1969; Montgomery, 1979; Rumelt, 1974). Economists on one hand argue that corporate performance is related to broader economic performance and differences in performances are a reflection of the context in which firms operate (Short et al. 2009; Sutcliff & Huber, 1998; McGahan & Porter, 1997; Nelson, 1994; Schmalensee, 1985; Dess & Beard, 1984). On the other hand, evolutionary theorists, argue that performance largely reflect choices made by firms (Schumpeter, 1934, 1942; see also Short et al. 2009; Misangyi et al. 2006; Ethiraj et al. 2005; Alvarez & Basenitz, 2001; Nelson, 1994; Williams, 1994; Williams and Winter, 1994) and differences in performance arise from the interplay of firm capabilities in pursuit of earning rents (profit) (Williams, 1994).

If the firm level explains the majority of the variance in the performance, issues involving managing of the firm, such as accumulating resources that will enable the firm to compete most effectively, are the most important concern. In the contrast, if industry membership (representing the context within which the firm operates) is the key to achieving firm performance, selecting the appropriate industry in which to compete is the core strategic decision. Although both arguments of context and firm discretion due to its capability are compelling, what is needed is analysis that links both these arguments in a coherent way (Nadkarni & Barr, 2008; Johnson & Hoopes, 2003; Nelson, 1994). This study seeks to integrate the two arguments by determining the influence of market

strategy, capabilities and contextual factors on corporate performance in Kenya. A description of the study concepts and their relationship follows.

1.1.1 Corporate Performance

Corporate Performance can be thought of as resulting from two types of variables: Those variables which are firm specific and those that can best be described as environmental because they exist outside the immediate boundary of the firm (Montgomery, 1979). Firm specific variables include such things as particular collection of technical and management skills a firm possesses, its chosen style of management and an array of product offerings among others (Montgomery, 1979). Patton (1976) called the firm specific variables strategic decision variables. These variables are also considered to be subject to management influence (Schendel, Hatten, & Cooper, 1976). It is the interaction of the environmental (contextual factors) and these firm specific variables that produce performance outcome. Hence, when evaluating strategy alternatives both sets of variables should be considered (Montgomery, 1979).

Performance just like strategy can be assessed at three levels. Firstly, the functional level, where the focus is individual performance of aggregate units. Secondly, the business level, where the focus is on strategic business unit (SBU), and finally, the corporate level, where the focus is on the outcome of an entire group of related SBUs under central corporate leadership (Pierce & Robinson, 1997). This study will assess performance at corporate level. Both financial and non financial indicators will be employed to measure corporate performance.

1.1.2 The PIMS Principles

Extensive research by Strategy Planning Institute (SPI) launched in 1972 has culminated in some general strategy principles (Buzzell & Gale, 1987; Kotabe, Dale, Smith & Wilson, 1991; Meng Leong, 2001). Studies involving PIMS data base began in USA and were later extended to Europe. Lately the veracity of these US derived PIMS principles have been assessed in Japan and Singapore (Meng Leong, 2001). These studies have identified a set of business principles regarding the relationship between performance and strategy (Buzzell & Gale, 1987; Kotabe et al. 1991; Meng Leong, 2001).

PIMS programs are designed to explore many possible diversions of strategy and the market environment that might influence performance. Some of these principles apply to virtually all kinds of businesses while others apply only to specific types or certain conditions (Buzzell & Gale, 1987). PIMS project and its associated research address generally the relationships between market structure, market strategies and business performance (Kotabe et al. 1991). However, extensive work with PIMS data base by Buzzell and Gale (1987) specified six basic principles with predictive value on corporate performance. These include product/ service quality, market share, investment intensity, business portfolio, vertical integration and long-term value. These are the principles which will be employed in this study as the predictor variables.

1.1.3 The Link between PIMS Principles and Corporate Performance

There has been considerable interest in establishing the relationship between PIMS principles and corporate performance (Meng Leong, 2001). Craig, Douglas and Reddy (1987) observed that high market share was related to high return on investment (ROI) among US businesses serving other world markets, although different factors appeared to be related to market share and ROI in different markets. Differences were also observed in magnitude of these effects in different geographic markets. Szymanski, Baradarawaj and Varadarajan (1993) expounding on Craig, Douglas and Reddy (1987) study by adding more marketing mix variables, found that with few exceptions, the effects of competitive strategy and market structure variables generalize across the US, UK, Canadian and Western European Markets.

Kotabe et al (1991) assessed the veracity of the US derived PIMS principles in a study of Japanese executives and found that most of the PIMS principles with predictive value on performance, were perceived by Japanese executives to apply in Japan but the level of veracity differed between the Japanese and the American contexts. Jain (1989) supposed that in theory business strategies and their effect on firm performance should generalize across national markets that are economically and culturally similar. Thus the differences revealed in Kotabe et al. (1991) research may be attributed to such market variations. Similarly the findings in Szymanski, Baradarawaj and Varadarajan (1993) research may be explained by evidence suggesting US, UK Canadian and Western European markets are economically, politically and culturally similar (Meng Leong, 2001).

Meng Leong (2001) replicated Kotabe et al. (1991) study in Singapore, but this time he expanded the population to include not only marketing executives but also sales people and business undergraduate students who had no management experience. Results indicated that Singaporean marketing manager's perceptions were in line with those of American and Japanese counterparts. The veracity perceptions of Singaporean sales people and business undergraduates were also found to be positively correlated with those of Singaporean, American and Japanese managers. This made him to conclude that PIMS principles were relevant across markets and have sufficient initiative appeal to be predicted similarly by individuals of varying expertise. We can therefore expect that PIMS principles which predict corporate performance will apply in Kenya although their predictive value will be influenced by Kenyan context.

1.1.4 Influence of Strategic Capabilities

Evolutionary organization theory has established that firm performance depends on its capabilities (DeSarbo, Di Benedetto, Song, & Sinhai, 2005; & Ethiraj et al. 2005). According to Ethiraj et al. (2005) different capabilities may involve different financial and managerial costs and yield different performances. Organizations may have many competences including core and distinctive competences. Core competences are those activities an organization can internally perform better than others while distinctive competences are those activities an organization performs better than competitors. It is the distinctive competences that give an organization competitive advantage or an edge over competitors (Porter, 1980). Lee (2008) argues that competitive advantage is derived from resources and certain resources that the firm owns or has access to may be

inherently superior leading to rents. The resource that lead to rent should enjoy isolating mechanisms that prevents competitors from appropriating the same resource or their substitutes at a low enough cost or fast enough speed (Lee, 2008). Lee (2008) further noted that one of the key firm specific resources is organizational capabilities.

Helfat & Peteraf (2003) define a resource as an asset or input to production (tangible or intangible) that an organization owns, controls, or has access to on a semi permanent basis but an organization capability refers to the ability of an organization to perform a coordinated set of tasks, utilizing organizational resources for the purpose of achieving a particular end result (Helfat & Peteraf, 2003). Organizational capabilities consist of a set of things the organization is capable of doing confidently (Winter & Nelson, 1994) as a result of tacit accumulation of experience embodied in routines and learning by doing (Ethiraj et al. 2005). Nelson (1994) argues that even if a firm has acquired a given level of capability at one point in time, it will not survive in the long run. To survive in the long run the firm must innovate and take advantage of innovation. The firm can only achieve this if it has acquired strategic capabilities (DeSarbo et al. 2005).

Day (1996) defines strategic capabilities as a complex bundle of skills and accumulated knowledge that will enable firms to create economic value and sustain competitive advantage. This is possible when the firm has capability to coordinate and deploy firm's assets to generate rents (Day, 1990, 1994). Porter (1994) contends that firms which have achieved competitive advantage exhibit high performance. DeSarbo et al. (2005) identified strategic capabilities common to business as consisting of marketing, market

linking, technology, information technology and management capabilities. It is expected that those firms in Kenya that possess these strategic capabilities will exhibit better corporate performance. This implies that if such firms pursue PIMS principles in absence of these critical strategic capabilities, they may not obtain optimal corporate performance.

1.1.5 Influence of Contextual Factors

Though Buzzell and Gale (1987) have a lot of faith in predictive value of PIMS principles on corporate performance, they contend that none of the principles constitutes a complete formula or prescription for any individual case because they are always situation specific factors. From economics perspective, market structures and changes in structural elements such as industry concentration, growth, dynamism and complexity (e.g. Dess & Beard, 1984; Schmalensee, 1985) have been shown to shape the performance of firms. Population ecologists have long emphasized environments power over firms (e.g. Haman & Freeman, 1977). Strategy researchers have also focused on how industry membership affects performance (e.g. Sutcliffe & Huber, 1998; McGahan & Porter, 1997; Rumelt, 1991).

In Kenya, Aosa (1996) agrees that apart from organizational factors, environmental factors, that form an organization's context, influence the way business is practiced. In African context, various environmental factors have been identified that influence managerial decisions. These include cultural, political and legal, behavioral, infrastructural and other national factors that make managers working environment (Austin, 1991; Glueck and Jauch, 1984; Jones, 1988; Kiggundu et al. 1983; Nambudiri,

and Saiyadain, 1978; Wallender 1978; & Yavas, et al. 1985). K'Obonyo (1999) identified unique contextual factors affecting businesses in Kenya as inadequate and poor physical infrastructure, undeveloped distribution systems, weak production linkages and regulatory constraints. This study sought to establish the influence of these unique contextual factors may have on corporate performance in Kenya.

1.1.6 Toward an Integrated Model

From the foregoing, two dominant views of strategic action have emerged, one that views performance as arising from internal characteristics (consisting strategic choice and firm capabilities) and another that views performance as an outcome of interplay of external characteristics. The context view assumes complete rationality on the part of strategic decision makers and contends that the industry structure (context) influence the timing and effectiveness of strategic actions (Ghemawatt, 1991; Porter, 1985; Fortunato & Ghemawatt, 1984; Maison, 1957, Bain, 1956). In contrast the internal characteristics literature suggests that bounded rationality prevents top managers from developing a complete understanding of their environments (Fiol & Oconnor, 2003; Bogner & Barr, 2000; Daft & Weick, 1984). Instead, top managers develop subjective representations of the environment that, in turn, drive their strategic decisions and subsequent firm action (Nadkarni & Barr, 2008).

The two camps have progressed along independent lines, with contextual view focusing on cross industry differences in strategic actions down playing the role of internal characteristics, whereas internal characteristics view has focused on the role of firm

characteristics in determining strategic actions within a given context while giving little attention to the nature of the context (Nadkarni & Barr, 2008). According to Nadkarni & Barr (2008) each camp focuses on distinct explanations of strategic actions creating disconnect between the two views and an artificial boundary between industry structure and managerial cognition as drivers of strategic action. These boundaries have severely inhibited the development of comprehensive and integrated explanations of strategic action. This study seeks to integrate internal characteristics encapsulated by market strategy and strategic capabilities and contextual factors in Kenya to explain corporate performance.

1.2 Statement of the Problem

The basic problem affecting the relationship between strategy and corporate performance is anchored on the fact that strategy is ex ante, and is therefore based on prediction, and its implementation occurs while before validation by experience. Performance on the other hand is post ante and represents the after effect of a given strategy (Rumelt, Schendel & Teece, 1994). This raises the question of how a good strategy is to be judged and has remained a central issue in strategic management (Learned et al, 1969; Montgomery, 1979). To answer this question, various studies have been conducted to establish the linkages between strategy and performance. A major initiative in studies correlating strategy and performance is by SPI under PIMS program (Meng Leong, 2001).

Other sets of moderating variables including contextual factors and strategic capabilities.

In spite of extensive empirical research on PIMS principles, Anderson and Paine (1978) observed that PIMS studies have tried to demonstrate relationships between either one or a few variables correlated to performance, thus omitting certain key variables. Further, no studies have been done in an integrated model factoring in PIMS studies with similar works by industrial organizational economists (Paine, 1978; Nelson, 1994) and besides, PIMS study findings have tended to be over generalized (Jaworski, 1989) implying they may not apply in all contexts for example Kenya, unless an empirical study suggests so.

Kenya has characteristics that set it apart from developed countries where PIMS studies have been conducted and replicated. Some of these characteristics include inadequate and poor physical infrastructure, undeveloped distribution systems, weak production linkages, regulatory constraints (K'Obonyo, 1999) and corruption (Wanjui, 1986). The political environment is also characterized by fluid ethnic based brinkmanship politics that resulted in post election violence of 2007/2008 where many business operations were disrupted, assets destroyed and over 1300 lives lost (Waki, 2008).

This study therefore, represents an important contribution by replicating several key empirically ground PIMS variables as predictors of corporate performance in Kenyan context, while extending the measures of corporate performance to include non financial measures as per Kaplan and Norton's (1996) Balanced Score Card (Balanced Score Card performance model marries the past performance and future performance potential). The study also extends PIMS- corporate performance relationship studies, by incorporating other sets of moderating variables including contextual factors and strategic capabilities.

By incorporating PIMS principles, strategic capabilities, contextual factors and corporate performance variables in an integrated model, this study marries together SPI views on PIMS principles, evolutionary theorists views on dynamic capabilities and industrial organizational economist's views on corporate performance. This is a significant contribution towards an integrated theory of corporate performance.

The study thus sought to answer the following basic research questions: (1) *what relationship exists between PIMS principles and corporate performance in Kenyan context?* In other words, *what strategy, pursued under what conditions produces what results?* (2) *What is the influence of strategic capabilities on corporate performance in Kenyan context?* (3) *What influence does the Kenyan context have on corporate performance?* (4) *What is the joint composite effect of PIMS principles, strategic capabilities and contextual factors on corporate performance in an integrated model? if, indeed there is a relationship between PIMS principles and corporate performance in Kenya,* (5) *how do strategic capabilities moderate the strength of this relationship?* And finally (6) *how do contextual factors moderate the same relationship?* This invaluable information which is useful in guiding managers in making critical strategic choice decisions, with bearing on performance is scarce in literature, especially in Kenyan context.

1.3 OBJECTIVES

The general objective of this study was to determine the influence of market strategy, strategic capabilities and context on corporate performance. The specific objectives were:

1. To establish the link between PIMS principles and corporate performance in Kenya
2. To determine the influence of strategic capabilities on corporate performance in Kenya
3. To establish the influence of contextual factors on corporate performance in Kenya
4. To determine the joint composite effect of PIMS principles, strategic capabilities and contextual factors on corporate performance in Kenya
5. To determine the moderating effect of strategic capabilities on the relationship between PIMS principles and corporate performance in Kenya and,
6. To determine the moderating effect of contextual factors on the relationship between PIMS principles and corporate performance in Kenya.

1.4 Significance of the Study

There is little information available on PIMS principles in Kenyan context. This study has thus provided insight into relationship between PIMS principles and corporate performance as well as the influence of strategic capabilities and contextual factors on the relationship between PIMS principles and corporate performance. Further, it has sought to establish the predictive power of an integrated model of PIMS principles, strategic capabilities and contextual factors on corporate performance. It has also contributed to the frontiers of knowledge and at the same time made recommendations for Kenyan managers to consider when making critical strategic choice decisions. Recommendations have also been made to Kenyan government on how to improve environment under

which firms operate in Kenya. Specific contributions to the existing knowledge and recommendations are outlined in chapter six of this report. Future investors in Kenya will also use the findings of this study to assess corporate performance in our context, hence making informed decisions.

1.5 Scope of the Study

Strategy and performance is a wide area of study. It is therefore difficult to develop a complete synthesis within the scope of one study. With this understanding, this study has focused on PIMS strategy principles and their effect on performance. The study has also determined the influence of strategic capabilities and contextual factors on corporate performance in Kenya and the moderating effect of the two variables on the relationship between PIMS principles and corporate performance. This kind of study required a lot of financial data from population of interest. For this matter, only listed companies were included in the study because their financial data is easily accessible from Nairobi Stock Exchange (NSE) and Capital Markets Authority (CMA) of Kenya.

1.6 Organization of the Study

Five chapters follow this general introduction to the research study, which constitutes chapter one of this thesis. Chapter two is the literature review. The literature review covers classical literature on firm performance, PIMS principles- corporate performance relationship as well as literature on the influence of strategic capabilities and contextual factors on the corporate performance. Further, empirical work modeling corporate performance is reviewed and critiqued. Chapter three develops concepts and seeks to

establish their relationships through formulation of hypotheses. Chapter four of the report explores the research methodology. Philosophical orientation and research design is presented and target population specified. Research instruments are developed from underlying constructs and their pre-testing, validation and consistency addressed. Study variables are decomposed and their operational measures provided. Data collection method and research instruments are then presented. A review of the methods employed in dealing with missing and data analysis techniques are explained. Chapter five presents data analysis and discussions and finally, chapter six present summaries, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In an area as diverse as strategy and performance it is difficult to achieve synthesis within the scope of one study. This research addressed the key strategy – performance issues relating to the objectives of the study. In so doing, literature relating to corporate performance, PIMS principles, firm capabilities and business contextual environment and their influence on corporate performance was reviewed. Various models of corporate performance were also reviewed in an attempt to isolate different corporate performance measures. The literature relating to the study variables was first reviewed then critiqued and gaps in knowledge identified.

2.2 Corporate Performance

Corporate performance is anchored on three key issues: an organization's capability, context within which it operates, and the strategy it uses. The internal capability ensures optimal configuration of resources within the organization (Ethraj et al, 2005; DeSarbo et al, 2005). The context or the environment within which the organization operates is not static but continuously changing exerting pressure on the organization. To ensure good performance, strategy must align the organization's capabilities with the external environment (Aosa, 1998). Ensuing under this section is a critical review of literature relating to the influence of capabilities, contextual factors and strategy on corporate performance.

Unobservable firm specific factors explain firm performance. Rumelt (1991) calls these

2.2.1 The Link between Strategy, Capabilities, Context and Corporate Performance

Any effort to understand firm (corporate) success must rest on an underlying theory of the firm and an associated theory of strategy (Porter, 1994). Porter (1994) defines firm success as a manifestation of attaining a competitive position that leads to superior and sustainable financial performance. Williams (1994) argues that firms exist as collections of evolving capabilities that are managed dynamically for the purpose of earning rents (profits) and that differences in firm performance arise from the interplay of capabilities, search behavior and sustainability conditions. Under the Maison/Bain structure – conduct – performance paradigm (Bain, 1956, Mason, 1939), firm differences are few and are limited to differences in size, product differentiation and vertical integration. Further, competitive behavior is limited to pricing and advertising. Differences that matter are market share and industry concentration. Industry concentration reflects the context within which the firm operates.

From the above argument, it emerges that firm performance depends on its prevailing internal characteristics and external characteristics. Internal characteristics posture is led credence by Stigler (1968) who argues that market outcomes, size and profit differences are as a result of differences in capabilities. Rumelt (1991) also arrived at similar conclusion that profit levels are highly sensitive to idiosyncratic character of a firm. Jacobson (1988), and Jacobson and Aaker (1985) found that a predominance of unobservable firm specific factors explain firm performance. Rumelt (1991) calls these

factors business specific. Hansen and Wernerfelt (1989) argue that important differences in firm performance can be organizational in nature. Fiegenbaum and Thomas (1990), Schendel (1987), Hatten and Schendel (1977) supports the distinctive character of the firm. According to Williams (1994), the distinctive character of the firm had also been recognized by early strategy writers including Learned, Christensen, Andrews and Gruth (1965) Selznick (1965) and Ansoff (1965).

External characteristics or the context in which an organization operates is equally important in firm success. Nelson (1994) in building his case for internal capabilities of firms recognizes that economists have tended to concentrate on the importance of the context of the firm to explain its success. According to Industrial Organization Economists, differences in firm performance are not discretionary but represent differences in contexts in which firms operate. Thus firms are forced to be different by situations in which they operate (Nelson, 1994). Chandler (1990) and Porter (1990) argue that national or environmental variables strongly influence firm strategy and structure, and that firms have considerable range of choice about these variables. Nelson (1994) contends that firm performance is related to broader economic performance, but not always. It can therefore be concluded, that firm success depends both on its internal capability, which the firm management has discretion over and external contextual factors which the management has little influence over. This position has been supported by Ansoff and McDonnell (1990); Aosa (1998); Hax and Majluf (1988) and Montgomery (1979). In this study, internal capabilities will be represented by the five strategic capabilities developed by DeSarbo et al. (2005) and external characteristics will be

represented by contextual specific factors in Kenya as highlighted by K'Obonyo (1999) and Aosa (1998) and are discussed later in this chapter.

2.2.2 The Influence of Strategy on Corporate Performance

To explain firm (corporate) success, the early literature on strategy defined three essential conditions: First, the firm had to develop and implement internally consistent set of goals and functional policies that collectively defined its position in the market. Secondly, these internally consistent set of goals and policies align the firms strength and weaknesses with the external opportunities and threats through strategy; and finally, the firm's strategy be concerned centrally with the creation and exploitation of unique strengths that give it competitive advantage (Andrews, 1971; Ansoff and McDonnel, 1990; Aosa, 1998; Christensen, Andrews and Guth, 1965; Hamel and Prahaland, 1990; Porter, 1994; Schendel and Hoffers, 1979; Selznick, 1957; Wernerfelt 1984).

Strategy is therefore important in linking the internal characteristics with the external characteristics and because the external environment is constantly changing, the strategy has to be changed to align the two (Ansoff, 1965; Aosa, 1998). Although strategy plays a central role in firm success, to date, there is no single universal definition of strategy; with some scholars arguing that it is unclear how strategy develops and how it is implemented (Mugambi, 2006).

demonstrated strategy – performance relationship. It is however, extensive empirical

Chandler (1962) defined strategy as planning and carrying out growth. Andrews (1971) accepted the definition of strategy by Chandler, but added Selznick's (1957) "distinctive competence" and the notion of uncertain environment to which the firm had to adapt. In Andrews (1971) view, the environment through constant change gave rise to opportunities and threats and organization strengths and weaknesses were adapted to the environment to avoid threats and take advantage of opportunities. An internal appraisal of strengths and weaknesses led to identification of distinctive competences and an external appraisal of environmental threats and opportunities led to identification of potential success factors. These twin appraisals were the action of strategy formulation, distinct from strategy implementation (Rumelt, Schendel, and Teece, 1996). Other writers in strategy have questioned the separation of strategy formulation and strategy implementation. They argue that strategy development does not end when strategy implementation starts. Similarly, implementation issues are not postponed until strategy has been fully specified. Rather, the two processes are interrelated and overlap (Alexander, 1985; Giles 1991; Hobbs and Heiny, 1977; Robert, 1991; Taylor, 1988; Whittington, 1993).

In spite of the different views of strategy there is considerable theoretical and empirical evidence linking strategy to performance. According to Ansoff and McDonnel (1990) some strategy options lead to better performance, for example, explicit diversification strategies have been shown to lead to higher performance. Other empirical studies including those by Rumelt (1974) and Montgomery (1979) among others have demonstrated strategy – performance relationship. It is however, extensive empirical

research in strategy by SPI, using PIMS data base that has culminated in general strategy principles with predictive value on corporate performance (Buzzel & Gale, 1987; Kotabe et al, 1991 & Meng Leong, 2001).

2.3 Empirical Studies Modeling Corporate Performance

According to Rumelt, Schendel and Teece (1994), the birth of strategic management can be traced to three works of the 1960s; Alfred Chandler's strategy and structure (1962), Igor Ansoff's corporate strategy (1965) and the Harvard text book; Business Policy, Texts and Cases, by Learned et al. (1965). However, empirical studies seeking to understand the relationship between strategic choice and performance began in the 1970s (Rumelt, Schendel & Teece, 1994). Four streams of these works can be cited, one centered at Harvard and following on Chandler (1957), generated and tested propositions about corporate growth and diversification strategies. A second focusing on business strategies began at Purdue University. The third, also at Harvard was based on industrial organization economics perspective and culminated in Michael Porter's (1980) work on analysis of competitive strategy and competitive advantage (Rumelt, Schendel & Teece, 1994).

As strategy research developed based on case studies, a fourth stream of research on strategy- performance linkages began in 1972 championed by Strategic Planning Institute (SPI). The program under which this data was amassed was called PIMS (Profit Impact of Market Strategy) program. SPI believed that general relationship between strategy and performance can be found by analyzing the experience of many companies across a wide

variety of industries (Buzzell & Gale 1987). This is the relationship this study wishes to replicate and extend it to establish whether it is influenced by strategic capabilities and contextual factors. In this regard literature and studies based on the economic paradigm will be reviewed and critiqued. This will be followed by a review of literature and studies using PIMS paradigm

2.3.1 Structure, Conduct and Performance

When studies linking strategy and performance began in the 1970s they were based on theoretical underpinnings of industrial organization economics paradigm called structure conduct – performance (Montgomery, 1979). Under this paradigm, Scherer (1970) noted that performance depends upon the conduct of sellers and buyers; including product line strategies, research and development commitments, advertising strategies, and legal tactics and so on. Conduct on the other hand depends on the structure of the relevant market including number and size of buyers and sellers, the degree of physical or subjective differentiation, barriers to entry, ratio of fixed to total costs, degree of vertical integration, the amount of diversity and the geographic dispersion or concentration of buyers and sellers (Scherer 1970). Although feedback effects exist, the general causation was expected to flow from structure to conduct to performance (Montgomery, 1979).

The economist's view that market structure variables are related to firm performance has been empirically investigated by numerous researchers, with much of the work supporting industrial organization economics theoretical arguments. Portions of these works are reviewed in this study to illustrate their focus on the structural context of the

firm as a condition for performance and their ignorance of firm strategic capabilities as one of the pre-requisite for success. We shall focus on five structural contextual variables, including market share, market concentration, market growth, market profitability and absolute firm size. These market structural variables have been a subject of many empirical studies.

In 1973, Shepherd attempted to draw together three kinds of structural variables and assess the relationship of these variables and firm profitability. The variable groups included market share and industry concentration, barriers to entry, firm size and advertising. To explore the relationship between these variables and firms long run rates of return, shepherd (1972) specified the following static models:

$$RR = a + bM + cG + dS + eA + fE + u \text{ and}$$

$$RR = a + bM + cG + dB + eE + u$$

Where,

RR = net income after tax as a percentage of equity, 1960 – 1969,

M = market share,

G = leading firm group, defined as the concentration ratio, C, minus the firms market share, M.

S = absolute firm size, measured by the natural logarithm of net total assets

A = advertising intensity

E = firm growth rate

B = Entry barrier; high, medium and low some effect in medium growth industries but

Shepherd (1972) found that the market share coefficient was positive and highly significant and that the relationship between share and profitability appeared to be a linear one. Market share, (also a PIMS principle) will be adopted for this study. Contrary to the expectation, the logarithm of assets showed a negative, and often a significant association with profitability. PIMS principles recognize this negative effect under investment intensity, a variable adopted for this study. Advertising carried a small coefficient, but was positively related to profitability, as was firm growth with larger, positive coefficients.

Gale (1972) noted that previous studies exploring the relationship between market share and profitability, just like the one by Shepherd (1972) used additive multiple regression models and did not capture the interaction effects of structural variables on profitability. To study these relationships Gale (1972) proposed an interactive model where profitability, P , was measured as an average of earnings available for common equity divided by common equity over a period of time. This measure has been adopted in this study. Gale (1972) specified the following equation:

$$P = b_1 + b_2 D_2 + b_3 D_3 + b_4 D_1 SH + b_5 D_2 SH + b_6 D_3 SH + U$$

Dummy variables D_1 , D_2 and D_3 alternately represented low, medium, and high levels of concentration, industry, growth and firm share and firm sales as a measure of absolute firm size. Gale (1972) noted that market share was significantly correlated to profitability in highly concentrated environments, had some effect in medium growth industries but

not in rapid growth industries. PIMS evidence shows that high growth industries are net consumers of cash and this, acts as a drag to profitability (Kotabe et al 1991). Gale (1972) further noted that the effect of share was strong and significant in large firm subgroup and positive but not significant in the small firm subgroups. He postulated that large firm size would enhance a firm's ability to exploit share advantages.

Based on this evidence Gale (1972) concluded, interaction effects, which tended to be overlooked in studies, play an important role in determination of firm and industry performance.

Patton (1976) found that market share was positively related to equity only in a pooled regression based on heterogeneous subgroups. When focusing on homogeneous subgroups within the larger sample, Patton found negative relationships and profitability. This raised the question of generalization of market structure variables.

Montgomery (1979) posited that market share appears to be significantly and positively related to firm performance. Hence, models of firm performance should in some way assess the importance of this variable. That, structural relationships, can vary by industry group and models uncritically pooling data from many industries can produce misleading conclusions. Therefore, when working with cross sectional data, such as this study does care should be taken to evaluate the homogeneity across firms.

Market concentration is a form of market classification bringing like industries together to aid research. Unlike other variables like market share, market growth, or absolute firm

size, market concentration has been linked with collusion in the market place. The more highly concentrated the market, the greater the chance that sellers will not act independently. Due to this, management theorists unlike industrial organization economists have tended not to include the variable in their work (Montgomery, 1979). Empirical studies modeling concentration have shown a positive relationship between market concentration and profitability (Montgomery, 1979).

In Kenya market concentration unlike in America where SIC (Standard Industrial Classification) is used to pool industries together is not developed. The implication of market concentration is that, different sets of market concentration, tends to affect performance. For this study, sector classifications used by NSE will be employed to check sector performance.

Empirical work on the relationship between market (industry) growth and firm profitability has shown mixed results. Where significant relationships have been found the coefficients have tended to be small and positive (Rhoades, 1973; Bass et al, 1978). Where negative coefficients have been observed the coefficients have tended to be small and non significant (Bass, 1973; Dalton and Penn, 1976). Issues of market growth are discussed later under PIMS principle of business portfolio.

Although market profitability could be considered a structural variable, industrial organization economists have not explicitly addressed its influence on corporate performance (Montgomery, 1979). Rumelt (1977) work indicates that average market

profitability does influence the success of the firms within industry groups. PIMS findings posit that, the laws of market place determine about 80% of the observed variance in operating results across different businesses (Montgomery, 1979). Schoeffler (1977) also supports this contention.

Management theorists tend to associate the following advantages with large firm size. Economies of scale in advertising, production etc, lower cost of capital, ability to withstand swings in demand or general economic conditions; and a potential for cross-subsidization of multi-product operations (Scherer, 1970). Prior to 1967, few studies in America showed a positive relationship between firm size and profitability beyond total assets of five to ten million (Montgomery, 1979). Hall and Weiss (1967) noted that most of those studies classified firms with more than \$ 250 million in assets into a single size class. Hall and Weiss (1967) corrected for this oversight by treating size as a continuous variable, $1/\text{Log assets}$. They found negative and highly significant correlation between $1/\text{Log assets}$ and profitability measured as return on assets. Return on assets will be employed in this study as a measure of corporate performance. They concluded that managers will forego current profits to maximize growth and long-term profits.

2.3.2 Summary

Though the industrial organization economics theory of corporate performance is based on a rather straight forward paradigm of structure-conduct-performance (Montgomery, 1979), the theory ignore fundamental role of firm capabilities in performance outcome. It tends to assume that the structure of an industry and its dynamics would account for

performance in firms. We know this to be flawed. For instance, in Kenya there are industries that are quite attractive but you will still find some firms performing poorly. For example, While, Safaricom continues to perform exceptionally well in the attractive telecommunications industry, Zain, its closest competitor continues to make loss. This implies there is something more regarding corporate performance than structure and conduct of the industry. What follows, is review of PIMS – corporate performance paradigm in a view to finding a more appropriate model of corporate performance. This is not to say that the industrial organization theory is irrelevant, but just to enrich it. This is because some of PIMS principles like market share, investment intensity among others do overlap with variables discussed under structure- conduct-performance.

2.4 The PIMS Principles

PIMS principles grew out of quest for general principles of strategy correlated to performance. The study began in 1972 in the USA and collected data on over 3000 business units in 450 corporations for a period ranging from two years to a decade. This data contained market conditions, competitive positions and relative financial performance. The inclusion of about 400 UK and other Western European businesses has added strategic insights from a European perspective. Today PIMS studies have been replicated in Japan and Singapore (Buzzel & Gale, 1987; Kotabe et al. 1991; Meng Leong, 2001). According to Jaworski (1989) the term “principles” as used under PIMS is not intended to imply that PIMS researchers have uncovered universal and precise “laws of strategy”. The term is used to mean general relationships that can help managers

understand and predict how strategic choices and market conditions affect business performance.

Buzzell and Gale (1987), posit that the logic of PIMS is similar to that of portfolio analysis whereby firm's strategy depends on its business position and market characteristics. However, PIMS differ from portfolio analysis in that while portfolio classifications attempt to explain business performance in terms of a few key factors, PIMS programs are designed to explore many possible dimensions of strategy and the market environment that might influence performance (Buzzell & Gale, 1987). PIMS principles are in form of statements of relationship between strategic variables and firm performance. The PIMS findings are reported in PIMSLETTERS published by Strategic Planning Institute (SPI). However, typically the research results in PIMSLETTERS are also reported in other academic and popular business publications (Kotabe, 1991).

2.4.1 Linking PIMS Principles and Corporate Performance

According to Buzzel and Gale (1987), strategy or the policies and key decisions adopted by management that have major impacts on financial performance usually involve significant resource commitments and are not easily reversible. The concept underlying

Table 1.1 Some Major Dimensions of Business Strategy

<ul style="list-style-type: none"> • Product/Services policies <ul style="list-style-type: none"> - Quality of products/services - Relative rate of new product Introduction • Pricing policies • Marketing programs <ul style="list-style-type: none"> -Sales force -Advertising -Sales promotion 	<ul style="list-style-type: none"> • Investment strategy <ul style="list-style-type: none"> - Mechanization /automation of operation - Capacity additions - Inventory levels • Work force productivity • Vertical integration • Research and development
--	--

Source: PIMS principles: Linking strategy to performance by Buzzell & Gale (1987)

the PIMS program, from its inception was one of investigating as many dimensions of strategy as possible based on general relevance and measurability. PIMS focus on general denominators and not specifics and treatment of strategies is confined to dimensions that can be measured in reasonable terms. Table 1.1 above shows dimensions of strategy available for choice. However, the choices available are constrained by technologies, capital or human resources available or even overall corporate policy constraints. In appraising a business unit competitive position, management must consider where it stands, relative to its competitors on all of the dimensions (Buzzell & Gale, 1987).

Each of the factors listed on table 1.1 above, has a significant impact on performance although they are interrelated. For example, it is rarely possible to charge premium prices for inferior-quality products or services. Similarly, workforce productivity is usually linked to mechanization and the benefits of a program of productivity improvement must be weighed against the penalty of the increased investment required to achieve it (Buzzell & Gale, 1987).

A key dimension of competitive position, in addition to those already mentioned is a business market share. Market share can be measured either as a fraction of the overall market in which a business participates, or relative to one or a few leading competitors. Competitive position interacts with strategy in determining business performance in two important ways, (1) the strategy options available to a business depend on the current position. A program of extensive product innovation along with a policy of premium pricing that would produce outstanding results for a market leader might make no sense

for a small share competitor. (2) Performance in a given time period is heavily influenced by beginning competitive position as well as by current strategy moves. This implies that, in order to develop measures of how performance relates to strategy, we must disentangle the effects of beginning position and changes made during a given time period (Buzzell & Gale, 1987).

The influence of market and industry factors on business performance is also widely recognized. This relationship has been explored extensively by economists. The studies have focused on average profit rates for entire industries and not individual firms (Buzzell & Gale, 1987). Line of business research programs have demonstrated that profitability is systematically related to variations in market situations. PIMS researches have established market/industry factors that have greatest influence on business performance, as shown by the table 1. 2.

Table 1.2 Market /Industry Factors that Influence Performance

- | | |
|---|---|
| <ul style="list-style-type: none"> • Stage of market evolution and growth • Selling price inflation • Degree of product/ service standardization • Supply concentration | <ul style="list-style-type: none"> • Typical customer purchase amount and importance • Degree of employee unionization • Extent of industry export and imports |
|---|---|

Source: PIMS principles: Linking Strategy to Performance by Buzzell and Gale (1987).

These factors do not only affect profitability and growth directly, but they also interact with competitive position and current strategy. A strategy that produces good results in a rapidly growing market for instance might be very inappropriate in a mature, slowly growing one (Buzzell & Gale, 1987).

2.4.2 PIMS Performance Measures

PIMS assumes that managers try to maximize profits. In line with this practice, two measures have traditionally been used, Return on Sales (ROS) and Return on Investment (ROI). Later net cash flow (cash generated minus cash used) as a supplementary measure was incorporated (Buzzell & Gale 1987). Buzzell and Gale (1987) argue that ROI is superior to ROS as a measure of performance because it relates results to the resources used in achieving them. ROI depends on two key factors - Profit Margin (ROS) and Investment Turnover. Because profitability varies over a period of several years, the results of strategic choice are usually apparent over a period of several years. For this matter average measures of ROI and ROS are used. Even when profitability is computed or estimated over a period of several years it is not a complete measure of performance. A strategy that may maximize current profits even if “current” is a mean of four years may weaken or destroy business long term viability. Long term viability could best be captured by shareholder value or wealth. This is interpreted to mean a combination of current profitability and appreciation in common stock value, appropriately balanced in those cases where trade offs between the two arise. An ideal measure of business performance would take into account both the short term effects of a strategy and its eventual impact on the market value of shareholders equity. The shareholders wealth is the stream of dividends received by the shareholders plus or minus the change in market value of the stock (Buzzell & Gale, 2007).

At SBU level, value creation means that the effect of a proposed strategy should be measured in terms of two components: (1) The cash flows it is expected to generate over

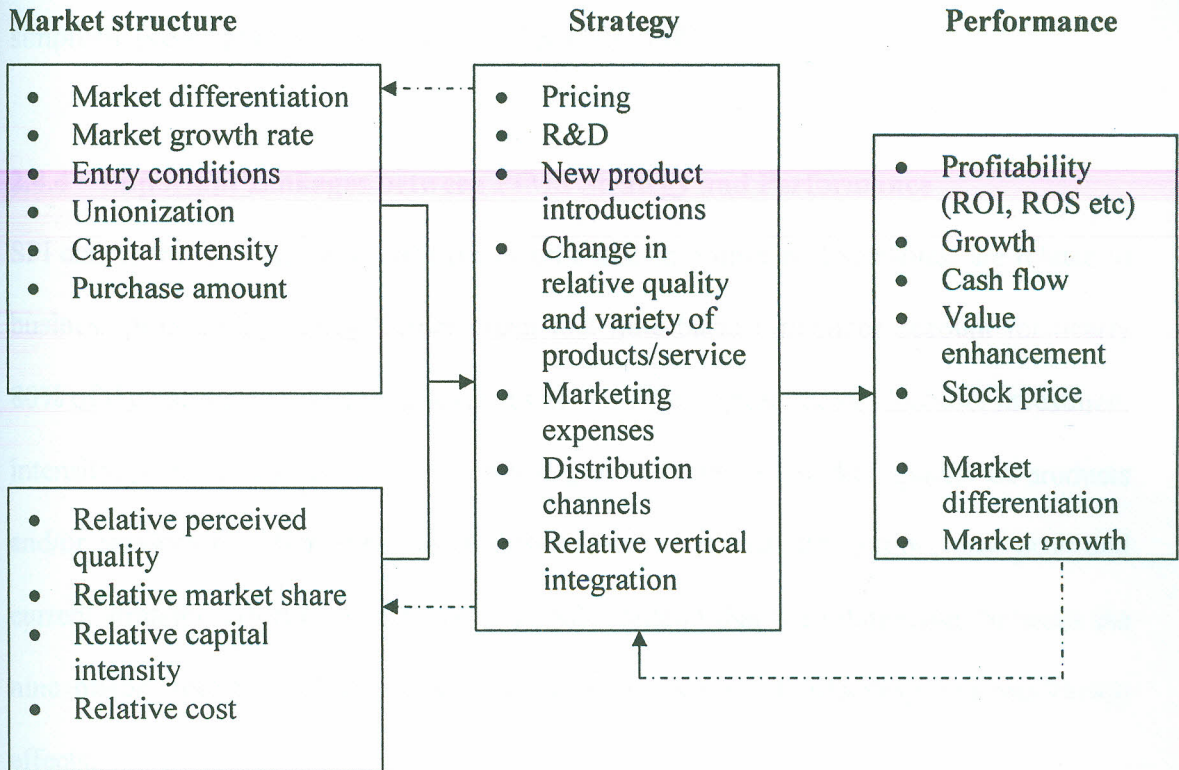
a period of time and because these cash flows occur over a period of several years, they must be discounted at appropriate rates. (2) The change in the business unit's market value between the beginning and the end of planning period. Since there is no actual market value for a business unit's equity, an input value must be estimated using a valuation model derived from an analysis of the factors that appear to affect company's stock prices (Buzzell and Gale 1987).

Buzzell and Gale (1987) posit that regardless of how performance is defined actual results must be judged in relation to some kind of standard. Three standards are widely used, a company or SBU own past experience, the performance of others in the same industry and the cost of capital. Although the past two standards are organizational and industry specific respectively, the cost of capital cuts across the industries. Even if a company's profitability is well above the average level of industry it is inadequate if it is lower than the cost it must pay for the debt and equity capital resources. When a firm makes investment that yield return below the cost of capital, the result is a reduction in shareholder value. Value is reduced via a decline in the market value of a company's stock, relative to book value (Buzzell & Gale, 1987).

2.4.3 The PIMS competitive Strategy – Performance Paradigm

The PIMS paradigm postulates that, performance depends on three kinds of factors; the characteristics of market in which a business competes, the business competitive position in that market place and the strategy it pursues (Buzzell & Gale, 1987). The linkages among these factors are summarized by the figure 1:

Figure 1.1: The PIMS Competitive Strategy Paradigm



Source: PIMS principles: Linking Strategy to Performance by Buzzell and Gale (1987)

The arrows in the diagram indicate that each of the three classes of performance influences has a direct impact on the results, and each interacts with the others. Thus in the short term, strategy is constrained by competitive position and by market structure conditions. Over time, competitive position is shaped by past strategies and by performances and each of these contributes to changes in market structure (Buzzell & Gale, 1987). Though Buzzell and Gale (1987) do not claim that the above competitive strategy paradigm includes everything that affects performance, they argue that in general measurable factors included in the framework do explain most of the variations in performance. They also believe that PIMS principles, though complex do capture the

interactions of market structure, strategy and performance more realistically than simplistic prescriptions could do (Buzzell & Gale, 1987).

2.4.4 Important Linkages between PIMS Strategy and Performance

SPI claims that a combination of firm specific and environmental variables, are related to business profitability. They further claim that nine basic influences account for nearly 80% of the variance in operating revenues across firms. These factors include; investment intensity, productivity, market position and growth of served market, quality of products and/or services on offer, innovation, differentiation, vertical integration, cost push and current strategic effort (Schoeffler,1979). SPI contend that the relationship between the nine major strategic influences is complex with a series of offsetting and reinforcing effects.

According to Kotabe et al (1991) excellent reviews of PIMS results have been summarized by Buzzell and Gale (1987). Buzzell and Gale (1987) summarized six principles which they supposed were the most important linkages between strategy and performance. These principles highlighted earlier in the introduction chapter, are discussed below. The discussion will commence with the presentation of the PIMS statement followed by delineation of its effect on performance.

a) Product/Service Quality and Performance

"In the long run, the most important single factor affecting business performance is the quality of its products and services relative to those of competitors". Buzzell & Gale

(1987) suggested that quality boosts performance in two ways. (1) In the short run superior quality yield increased profits via premium prices. PIMS businesses that ranked in the top third on relative quality sold their products or services on average, at prices 5-6% higher (relative to competition) than those in the bottom third.

(2) In the long run, developing superior products and/or improving relative quality is the most effective way for a business to grow. Quality leads to both market expansion and gains in market share. The resulting growth in volume means that a superior-quality competitor gains scale advantage over rivals. As a result even when there are short-run costs connected with improving quality, over a period of time these costs are usually offset by scale economies. On average, businesses with superior quality products have costs about equal to those of their leading competitors. As long as their selling prices are not out of line, they continue to grow while still earning superior profit margins (Buzzell and Gale, 1987).

b) Market Share and Profitability

"Market share and profitability are strongly related." Businesses with very large market shares (over 50% of their served market) enjoy rates of return more than three times greater than small share businesses (those that serve fewer than 10% of their markets).

Jacobson and Aaker (1995) questioned the share-profitability relationship claiming that it is largely spurious. By this they meant that both a strong market position and high ROI are reflections of other factors, notably management skill or luck. While Buzzell and Gale (1987) agree that premium profits can be explained by other factors that accompany

a strong competitive position, especially relative quality, their empirical studies demonstrated that market share had a strong positive impact on profitability even when taken into account with other factors. Its net effect is about 3 ½ points of ROI for every 10 points of market share.

The primary reason for the market share profitability linkage apart from the connection with relative quality is that large share businesses benefit from economies of large scale.

Lower per unit costs than that of competitors directly reflects on higher margins. Buzzell and Gale (1987) cautions against companies striving to increase market share at all cost, since this may result in debt burdens. Although costs of gaining share may exceed the pay offs, this is not always the case. Most PIMS businesses that have improved their market share positions also enjoyed rising profitability (Buzzell & Gale, 1987).

c) High Investment Intensity and Profitability

“High-investment intensity acts as a powerful drag on profitability.” Investment-intensive businesses are those that employ a great deal of capital per shilling of sales, or per shilling of value added or per employee. High investment intensity in the form of either fixed assets or working capital-usually leads to lower rates of return. As investment intensity rises, pre-tax profit margins on sales change only modestly. Because the investment base is rising, ROI falls steadily and sharply. The average rate of return for the most capital-intensive businesses is less than half that earned by the low capital intensity business (Buzzell & Gale, 1987).

The fact that high capital intensity tends to depress profitability does not mean that managers should shun new capital investments. Large addition to business investment base need not affect capital intensity adversely, as long as sales and value added grow commensurably. It may be desirable to accept a reduction in average rate of return on investment as long as ROI on a particular incremental investment exceeds the applicable cost of capital (Buzzell & Gale, 1987).

d) Business Portfolio and Performance

“Many so called ‘dog’ and ‘question mark’ businesses generate cash, while many ‘cash cows’ are dry.” The guiding principle of the growth-share matrix approach to planning is that cash flows largely depend on market growth and competitive position. Thus strategic business units (SBU) with dormant shares of static or declining markets should be cash generators, while those with small shares of growing markets should use much cash. PIMS research shows that while market growth and relative share are linked to cash flows, many other factors also influence this dimension of performance (Buzzell & Gale, 1987; Gale & Branch, 1981; Hambrick & McMillan, 1982). More than half of the “question marks” and six out of 10 “dogs” were cash generators. Conversely more than one in four “star” businesses and almost as high a proportion of “cash cows” were actually net cash users (Buzzell & Gale, 1987). The reason for these deviations from normal cash flow performance is that growth and relative share are not the only factors that influence cash flows. Buzzell and Gale (1987) argue that cash flows are affected by the same market and strategic factors that determine profitability.

e) Vertical Integration and profitability

“Vertical integration is a profitable strategy for some kinds of businesses, but not for others.” Whether vertical integration helps or hurts profitability depends on the situation and not the cost of achieving it. For smaller share businesses, ROI is highest when the degree of vertical integration is low. But for businesses with average or above average share positions, ROI is highest when vertical integration is either low or high and lowest in the middle. The complex linkage between vertical integration and profitability reflects several things. Increased vertical integration usually leads to higher capital intensity. This poses major problems for small share businesses because they may have difficulties in achieving a minimum efficient scale of operations at each of several vertically linked stages (Buzzell & Gale, 1987).

f) Strategic Factors, Performance and Long Term Value

“Most of the strategic factors that boost ROI also contribute to long term value.” Businesses with high ROI usually invest in long term value enhancement. Most of the strategic and market factors that enhance ROI also tend to increase long term value. Businesses with strong initial competitive positions, high employee productivity superior relative quality and cost advantages relative to competitors, have acquired long term value. There are trade offs between current profitability and long term value enhancement. Businesses that performed best over long term are more aggressive in marketing research and development (R&D) and capacity expansion (Buzzell and Gale, 1987).

influenced by Kenya's unique business factors that are not prevalent in developed

2.4.5 Summary

It is notable that PIMS performance paradigm does address the issues of corporate performance more candidly than industrial organization economics paradigm of structure- conduct- performance. This is because PIMS principles go further into looking not only at the aspect of market structure, but also competitive position and the role of strategy. The PIMS competitive- strategy performance paradigm will be adopted for this study, and the six so called important linkages between strategy and performance will be taken as the predictor variables.

Though the PIMS competitive strategy paradigm appears to be superior to structure- conduct- performance paradigm, three gaps can be identified. Firstly, the performance measures used in PIMS are not adequate because they measure only one aspect of performance, that is, financial. Kaplan and Norton (1996) argue that performance being a multi dimensional phenomenon requires assessment that goes beyond financial indicators. This study will therefore supplement financial indicators with non financial measures as specified by Kaplan and Norton (1996) under balanced score card, which literature is reviewed herein after.

The second gap identified is lack of emphasis on idiosyncratic nature of firms. This implies differences in performance could be as a result of intrinsic strategic capabilities of the firms and not only their capability to execute PIMS strategy. Finally, it is envisaged that the relationship between PIMS and corporate performance will be influenced by Kenya's unique business factors that are not prevalent in developed

economies where PIMS principles were developed. To capture the effects of strategic capabilities and contextual factors on PIMS- corporate performance relationship, respective literature will be reviewed after balanced score card literature.

2.5 The Balanced Score Card

After review of PIMS and corporate performance literature, one realizes that the parameters used to measure performance are basically financial in nature. Measuring corporate performance in terms of financial indicators alone has come under increasing criticism. This is not surprising because performance is a multi dimensional concept. Kaplan and Norton (1998) addressed the inadequacies of traditional financing measurement system by introducing balanced score card (BSC). Balanced score card includes financial measures that tell the result of action already taken and compliments the measures with three sets of operational measures that include the customer satisfaction, internal- business- process and the organizations ability to learn and improve the activities that drive future financial performance. This study will incorporate balanced score card measures. The measures demands that managers translate their general mission statements on customer service into specific measures that reflect the factors that really matter to consumers e.g. time, quality, performance, service and cost. The four perspectives are discussed as follows:

2.5.1 Financial Perspective

Financial performance measures are valuable in summarizing the readily measurable economic consequences of actions already taken. It includes whether a company's

strategic implementation and execution is contributing to bottom line (profit) improvement (Kaplan and Norton, 1996). Financial objectives typically relate to profitability, return on capital employed or economic value added.

2.5.2 Consumer Perspective

Under this perspective managers identify the customer and market segments in which the business unit will compete and the measures of the business unit's performance in these targeted segments. The core outcome measures include customer satisfaction, customer retention, new acquisition, customer profitability and market and account share in target segments. The segment specific drivers of core customer outcomes, represents those factors that are critical for customers to switch to or remain loyal to their suppliers. For example short lead times, on time delivery, innovative products and services, new products and ways to satisfy existing needs. The customer perspective enables business unit managers to articulate the customer and market based strategy that will deliver superior future financial returns (Kaplan & Norton, 1996).

2.5.3 Internal – Business –Process Perspective

Under this perspective, executives identify the critical internal processes in which the organization must excel. These processes enable the business unit to; (1) deliver the value propositions that will attract and retain customers in targeted market segments and (2) satisfy shareholder expectations of excellent financial returns (Kaplan & Norton, 1996). The perspective focus on those internal processes that have greatest impact on customer satisfaction and those that also achieve an organization's financial objectives. In addition

to traditional measures which focus on improvement of existing processes BSC also incorporates innovation into the process. Innovation assures an organization future performance than short term operation cycle (Kaplan & Norton, 1996).

2.5.4 Learning and Growth Perspective

Learning and growth identifies the infrastructure that the organization must build to create long term growth and improvement. The customer and internal -business – Process perspective identifies the factors most crucial for current and future success. Businesses are unlikely to be able to meet their long term targets for their customers and internal processes using today's technology and capabilities due to global competition.

Organizational learning and growth comes from three principal sources; People systems and procedures and what will be required to achieve breakthrough performance are normally identified by financial, customers and internal business process. To close these gaps, business will have to invest in reskilling employees, enhancing information technology and systems and aligning organizational procedures and routines. As in the customer perspective, employee based measures include a mixture of generic outcome measures – employee satisfaction, retention, training and skills.

2.6 Firm Capabilities

An understanding of a firm's capabilities process has great scientific potential as it can guide the actual practice of business strategy (Williams, 1994). According to Nelson (1994) the emerging theory of dynamic firm capabilities can be presented in different

ways. To express it effectively three strongly related features of a firm must be described, its strategy, its structure and its core capabilities. The structure and the capabilities involve considerable costs, thus defining a relatively stable firm character. This position is supported by Ethiraj et al (2005) who contend that different capabilities may entail different financial and managerial costs and yield different dissimilar performance differences.

Though strategy is viewed as less costly it definitely plays a central role. According to Nelson (1994) strategy connotes a set of broad commitments made by a firm that define and rationalize its objectives and how it intends to pursue them. Viewed from an Economist point of view, strategy presents a firms solution to its profit maximization. Similarly, strategy tends to define a designed firm structure in general way without giving details. Firm structure involves how a firm is organized and governed and how decisions are made and carried out. Structure actually determines what the firm actually does, given the broad strategy. Strategy and structure call forth and mould organizational capabilities (Nelson, 1994).

2.6.1 Origin of Organizational Capabilities

Ethiraj et al. (2005), argue that although there are a number of theoretical arguments about characteristics of resources or capabilities that yield competitive advantage (Burney, 1991) and what prevent their imitation (Dierrick and Cool, 1989 & Petaraf, 1983) we have limited understanding of where capabilities come from or what kinds of investments in money, time and managerial effort is required in building them. Ethiraj et

al. (2005) trace the notion of capability to Penrose (1959) and Andrews (1991). Penrose (1959) suggested that resources consist of a bundle of potential services. While these resources or factor inputs are available to all firms, the capability to deploy them productively is not uniformly distributed.

Recently, literature on resource based view conceptualizes resources and capabilities along two lines (Ethiraj et al, 2005). One set of authors (e.g. Burney, 1991; Peterof, 1993) tend to define resources broadly so as to include assets, capabilities, organizational process, firm attributes, inflation and knowledge among others. Other authors have however sought to clearly differentiate between resources and capabilities (Amit and Schoemaker, 1993; & Grant, 1991) by arguing that resources consist of knowledge that can be traded, financial or physical assets, and human capital among others. Whereas others argue that capabilities refer to a firm's capability to deploy resources (Amit and Schoemaker, 1993). According to Teece (1994) firm capabilities must include control over or access to, the complementary assets and activities needed to enable it profit from innovation. This implies capability to innovate and make that innovation profitable again and again. The definitional and conceptual differences notwithstanding, strategy, researchers agree that both resources and capability are essential assets with rent generating potential (Ethiraj et al, 2005).

2.6.2 The Source of Strategic Capabilities

Traditionally strategy research devoted little attention to the issue of where capabilities come from (Ethraj et al. 2005). The first attempt to establish the source of capabilities

was made by Nelson and Winter (1982). They viewed the firm as a bundle of path dependent knowledge bases. This knowledge is accumulated over time through learning by doing and is embedded in bundles of routines that are likened to the genetic material of the firm. Routines involve repetitive patterns of activity, require investment in routine – specific human and physical capital and are easily recognized as belonging to a class (Winter, 1990). These capabilities are rooted in the organizational skills and routines that serve as the organizational memory to repetitively execute the sequence of productive activities without trouble. The organizational skills and routines embody knowledge and competence in carrying out the productive activities that the firm is engaged in (Winter, 1990).

Successful firms can therefore, be understood in terms of a hierarchy of practiced organizational routines, which define lower order organizational skills and how these are coordinated and higher order decision procedures for choosing what is to be done at lower levels. The notion of hierarchy of organizational routines is key building block under core organizational capabilities (Winter and Nelson, 1994). Practiced routines that are built into organization define a set of things the organization is capable of doing confidently. If lower order routines for doing various tasks are absent or if they exist but there is no particular higher order routine for invoking them in particular combination needed to accomplish a particular job, then the capability to do that job lies outside the organization extant core capabilities (Nelson 1994).

Some researchers have also suggested that capabilities are not merely the result of tacit accumulation of experience embodied in routines and learning by doing (Ethiraj et al. 2005). They are also the result of deliberate investments in organizational structure and systems to make constant improvements in those routines and practices (Zollo & Winter, 2002). Although making deliberate investment to improve firm capabilities may be understood uniformly by most firms, there are idiosyncratic firm level differences in timing effort, the nature and amount of investment effort they undertake and the organizational mindset that supports this process (Ethiraj et al, 2005).

Impact of the existing process Capabilities in Innovation Making

Nelson (1994) argues that even if a firm that has acquired a given level of capability is able to produce competently at a given point in time it will not be able to survive in the long run. To survive in the long run the firm must innovate and take economic advantage of innovation. In an industry where technology is important the firm needs a set of core capabilities in research and development (R&D). The capabilities are constrained by skills, experience and knowledge of personnel in R&D, nature of teams and procedures for forming new ones, the character of the decision making processes, the links between R&D and production and marketing among others. R&D capabilities may be the lead ones in defining the dynamic capabilities of a firm. However, in a well tuned firm, the production, procurement, marketing and legal organization must have built into them the capabilities to support and compliment the new product and process technologies emanating from R&D. Day (1990, 1994) called these capabilities able to coordinate activities and make use of a firm's assets strategic capabilities. Strategic capabilities are able to reduce costs, improve consistency in delivery and ultimately increase

competitiveness (Day, 1994). Porter (1994) posits that lower cost than rivals leads to competitive advantage, and any firm with competitive advantage will achieve superior performance.

According to Desarbo et al. (2005) strategic capabilities common to business include, marketing, technology, information technology and management capabilities. Marketing capabilities such as skills in segmentation, targeting, pricing and advertising, permit the business to take advantage of its market sensing and technological capabilities, and to implement effective marketing programs. Capabilities in information technology (IT) help the firm diffuse market information, effectively access all relevant functional areas that it can exploit to direct the new product development process. Finally, management related capabilities support all the above and include human resource management, profit and revenue forecasting among others.

2.6.3 Strategic Capabilities Measures

This study will use strategic capabilities measures previously used by Day (1994), Connate, Mokwa and Varadarajan (1990) and replicated by DeSarbo et al. (2005). Desarbo et al. (2005) classified strategic capabilities into five categories. The five categories discussed hereinafter will be employed in this study as moderating set of variables.

a) Market Linking Capabilities

These capabilities relate to focused market sensing and linking outside and are rated according to several scales developed from Day's (1994) descriptions. The component items measure the relative capabilities in creating and managing durable customer relationships, creating durable relationship with suppliers, retaining customers and bonding with channel members such as wholesalers and retailers (DeSarbo et al, 2005).

b) Technological capabilities

Technological capabilities, pertains to production process efficiency, cost reduction greater consistency in delivery and greater competitiveness. These measures will be rated according to scale items drawn from Day's (1994) set of such capabilities. The items measure relative capability in the prediction of technological change, technology and new product development and product facilities (DeSarbo et al, 2005).

c) Marketing capabilities

Marketing capabilities will be measured using set of scale items drawn from Connate et al (1990). These include knowledge of customers, knowledge of competitors, integration of marketing activities, skills in segmentation and targeting and effectiveness of pricing and advertising programs (DeSarbo et al. 2005).

d) Information Technology Capabilities

Information technology capabilities refer to the relative capabilities that help an organization create technical and market knowledge and facilitate intra-organizational

communication flow (DeSarbo et al. 2005). This study will apply DeSarbo et al. (2005) items that measure the possession of information technology systems for new product development, cross functional integration, technology and market knowledge creation and internal and external communication.

e) **Management Capabilities**

These capabilities include the ability to integrate logistics systems, control costs, manage financial and human resources, forecast revenues and manage marketing planning (DeSarbo et al, 2005). Items that measure the possession of these management capabilities will be applied in this study.

2.7 **Contextual Factors**

Apart from organizational factors, environmental factors also influence the way business is practiced (Aosa, 1996). Actually strategic management is sensitive to the context in which it is practiced (Ansoff, 1987; Austin, 1991; Desarbo, 2005; Humbrick, 1983; Hussey, 1990; Osigweh, 1989; Pugh et al. 1963; & Pugh et al. 1969). Various environmental factors have been identified that influence managerial processes in Africa. These include social and cultural, economic, political and legal, behavioral, infrastructural and other national factors that make managers working environment (Austin, 1991; Glueck and Jauch, 1984; Jones, 1988; Kiggundu, Jorgessen & Hafsi, 1983; Nambudiri and Saiyadain, 1978; Wallender, 1978 & Yavas, Kaynak & Dilber, 1985). What follows is a discussion of these factors that affect business operations in Africa and especially Kenya.

2.7.1 Social and Cultural Factors

What people do and how they do it are largely determined by social- cultural forces (Nambudiri & Saiyadain, 1978; see also Cox & Cooper, 1985; Dia, 1991; Jones, 1988 & Osigweh, 1989). African societies are characterized by the prevalence of extended families. This creates a bond which place common obligation of the members of extended family. Individualism tends to be discouraged and individuals do not acquire property for themselves but share it among others in the group (Onyemulukwe, 1973 & Dia, 1991). In Africa, age is important source of authority; thus the views of younger people may be regarded as subordinate, yet these young people tend to be more learned and trained (Blunt, 1978; Dia, 1991; & Onyemulukwe, 1973). The sense of belonging creates loyalty to small groups which are family based and ethnic with little if any national outlook. The way people carryout their activities is more influenced by ethnic considerations (Nambudiri & Saiyadain, 1978) and not ethics.

Onyemelukwe (1973) argued that ethnicity and group loyalty tended to created conflict in modern organizations in Africa. This was supported in East Africa by Blunt (1978). Dia (1991) argued that ethnicity could have a negative impact on organizational effectiveness. Even though Africans with western education are aware of Western management values when working in modern organizations, they are still influenced by their traditional values. This mix of cultures causes tension in individuals aware of the two sets of values. (Blunt, 1978; Dia, 1991, Henley, 1973; & Onyemelukwe, 1973). The mix of Western management practices and traditional practices can bring about conflict and ineffective performance (Blunt, 1978, 1980; Dia, 1991; Haines, 1988; Jones, 1988; Thomson, 1964).

The mix of Western and African values is reflected directly in many multinational organizations working in Africa. First, there are expatriates who occupy senior management positions. Then, there are locals who have trained in Western countries. These tend to occupy senior and middle management positions. They are familiar with Western management systems but belong to their local communities. Lastly, there are locals who are brought up locally. They have little contact with western values. This mixture of people from different backgrounds can create problem in running organizations due to conflicts arising from their backgrounds (Aosa, 1996). Maathai (2009) argues that that colonization decultured African people leaving them insecure and obsessed with acquisition of material things and public display. She argues that corruption stems from this lack of self identity and character that has been brought about by years of colonization and imposition of foreign culture with a view to subjugate Africans.

2.7.2 Economic Factors

African countries are at early stages of industrialization and therefore rely on Agriculture whose levels of productivity and income are low (Kirkpatrick, et al. 1984, Maathai, 2009). Because of low level of income, the internal markets are small (Kirk Patrick, et al. 1984). This means that business organizations serve very small markets. If they have to expand they have to look for export. When this is not possible, either of the two situations can occur: A situation where one established firm adequately serves the entire market making it difficult for other firms to get into similar operations. Alternatively, many small firms compete to serve limited markets available creating intense rivalry. The end

result is business situations characterized by both monopoly and excessive rivalry (Aosa, 1996). This rivalry situation is compounded by protection of firms by African governments from external competition creating inefficiency and high cost products. The firms are therefore forced to sell their products in protected home markets further intensifying the competition (Aosa, 1996). Today, African countries have been forced by western donors and international lenders to open their markets through liberalization to take imports from these countries in exchange for foreign aid (Maathai, 2009).

and competent managers. Such managers are an asset to the firm (Aosa, 1996). Though

African countries face serious foreign exchange problems. They consistently import more than they can export (Maathai, 2009; Nambudiri and Saiyadain, 1986; Government of Kenya (GoK), Sessional paper no. 1, 1986). There is general scarcity of capital in Africa (Coughlin & Ikiara, 1988; Coughlin, 1990; & Kirk Patrick, Lee & Nixon, 1984). Capital markets are weak and access to international capital markets is difficult (Glenn & James, 1980). Such financial constraints create further problems to organizational operations in Africa. Reliance on aid to finance development creates further complications to firms operating in African (Aosa, 1996).

Pressure from World Bank and IMF forced Kenya to adopt structural Adjustment Programs (SAPS). These included reduction in government spending, liberalization of trade sector, removal of price controls, monetary and exchange rates reforms as conditions for foreign aid. Kenya and other African countries have found it hard to implement these programs. This creates additional uncertainty regarding continued availability of foreign aid and economic performance of African countries (Aosa, 1996).

Though this may not be the case today in Kenya, under the Government of National Unity (GNU) and subsequently Grand Coalition Government which have been able to meet over 90% of their budgetary needs locally (2006/ 2007, 2008/2009 Kenya Budget), the government still relies on foreign partners to fund major developmental projects.

Further, though Africa has abundant labour there is lack of skilled labour (Iboko, 1976). This means business firms have difficulty in obtaining adequate, qualified, experienced and competent managers. Such managers are an asset to the firm (Aosa, 1996). Though this may have substantially changed in Kenya today, some strategic jobs in multinationals are still held by expatriates. In the public sector there is discontent that key jobs are held by those with connections with the powers that be. This can also result in problems when running organizations, discussed earlier under social cultural factors.

African countries tend to have large public sectors (Kirk Patrick et al, 1984; Kiggundu et al, 1983). The public sector institutions in turn tend to be used by governments to control operations of firms in the private sector. As a result, the difficulties and problems experienced in managing public sector institutions are extended to private sector firms and this tends to undermine managerial actions there (Austin, 1991; Iboko, 1976; Wanjui, 1986).

2.7.3 Political and Legal Factors

African governments tend to have highly centralized governments (Maathai, 2009; Kiggundu et al, 1983). Power is centralized and decision making usually takes place in

the high echelons of government. There is little delegation of authority. Decision making is slowed and getting government approvals is long and tedious (Kiggundu, 1983). Wanjui (1986) pointed out that such concentration of power gave rise to abuse of power and corruption, leading to economic disruption and mismanagement.

Government intervention in business operations in African is frequent e.g. price control or threats of price control by politicians. This makes it hard for organizations to make projections of prices, sales and profit margins from their products (Haines, 1988; & Wanjui, 1986). Though the government does not regulate prices in Kenya today, government ministers have issued threats to revert to price control regime from time to time. This frustrates organization's management and stifles long term planning.

Governments also tend to regulate private business in Africa through various forms of licenses and through setting up business operations (Wanjui, 1986). Although some of the licenses requirements have been reduced, Kenya is still rated among countries with unfavorable regulations. Businesses have also been lobbying for self regulation as opposed to government regulation e.g. media publishers. Actions by government regulators have generated hostilities between the government and private sector firms in Kenya with accusations of corruption being imputed on the part of regulators.

At policy level, the Kenyan government has been found to be characterized by hostile institutional environment and unsupportive policy regime. Specifically, small businesses have also been found to be plagued by inadequate basic business and managerial skills,

inadequate capital , lack of access to credit facilities and retrogressive cultural beliefs (Gachira, 1996; Mutoria, 1996; Nyamweya, 1995; USAID, 1995). K'Obonyo (1999) notes that even though the above factors have been subject to many studies , institutional environment , and Policy regime have been addressed only at peripheral level.

Although the above environmental factors were documented as affecting small scale businesses, environment being an exogenous factor, it is conceptually assumed that the same factors will affect even large businesses; nevertheless the magnitude might be lower. Further, though it can be argued that time may have mitigated the impact of the above factors, Shelley (2004), claims that little progress has been made in addressing public service inefficiencies. However, since 2004, the Kenyan government has initiated policy reforms aimed at improving service delivery to the public. This earned GoK a UN award in public service delivery in 2007.

Haines (1988) points out the difficulties of doing business in Africa where one would encounter political instability brought about by civil wars, border clashes with neighboring countries and military coups. These political circumstances further complicate business operations. Though Kenya has enjoyed relative peace, there have been instances of tribal clashes largely blamed on politicians. During the period of this study the country was plunged into post election violence never witnessed before in the history of post independence Kenya. Besides, large scale destruction of businesses, over 1000 people were killed and hundreds of thousands displaced (Waki, 2008). Kenyan political environment is also very fluid with no profound political ideologies. These

political circumstances may cause anxiety among business management. This may hamper long term strategic planning.

2.7.4 Infrastructural Factors

Kiggundu et al (1983) and Wanjui (1986) have described African countries as being characterized by inadequate infrastructure, with some services being unreliable or not there at all. There is need for good roads, rail and water networks, telephone power and port facilities, to facilitate communication which is necessary for economic activity (Aosa, 1996). This infrastructure is inadequate in Africa thus constraining business activities (Wallender, 1978). In Kenya, K'Obonyo (1999) argues that physical infrastructure, is inadequate and poor and is characterized by inefficient and poor quality railway and road network, inefficient, congested and expensive telephone network, inaccessible, unavailable, interrupted electricity which is also very expensive, unreliable port services and unavailable piped water. Recently, the government identified infrastructure as one area requiring revamping for economic growth and wealth creation. There is concerted effort to rehabilitate and revamp the road net work. The railway network has been put under concession and the communication frequencies liberalized. The energy sector is also under going restructuring. These efforts are expected to yield long term benefits to businesses. However, at the moment the infrastructural cost burden incurred by businesses in Kenya still remain high.

In addition, there is lack of information support system needed by business firms for purposes of decision making (Wallender, 1978). Without such information, business

decision making is difficult. Information from government agencies comes late thus reducing its relevance to planning and decision making. It also tends to be inaccurate (Haines, 1988). Although today in Kenya, there is better access to information through internet and other means, it's cost is high and it is mostly concentrated in towns. This is being addressed by linking Kenya wide optical cable with the rest of the world.

K'Obonyo (1999) posits that distribution system in Kenya is dominated by a small group to exclusion of others. This minimizes interaction between the wholesale distributors and small enterprises, affecting development of inter - enterprise trade and spread of market information and production innovations especially to small enterprises. Lack of production linkages may constrain vertical integration one of the PIMS principles.

2.7.5 Technological Factors

Wallender (1978) observes that many firms in Africa have little understanding of the value of technology. Even when African firms identify problems in organizations, they are unable to match them to specific courses of action so they can be solved. Further, once African organizations have acquired a technology they often do not have adequate resources to fully utilize that technology (Wallender, 1978).

Wallender (1978) further points out that those firms which are more successful are those that have established contact with foreign firms, academic institutions and other public associations. Through such contacts they have been able to create an internal managerial capability to manage technology.

2.8 Summary of Selected Recent Studies Modeling Strategic Capabilities, Contextual Factors, Strategy and Corporate Performance

The purpose for reviewing this selected empirical literature is not to develop a complete synthesis of recent developments on the study area, but to lay ground for study variable conceptualization in the following chapter three and also lay basis for the methodological approach adopted in chapter four. The three studies reviewed here have been selected because of their close similarities to the current study.

2.8.1 Strategic Capabilities and Performance

Ethiraj et al (2005) modeled the effect of strategic capabilities on performance of software industry in India. They specified firm's profit function from each project as follows:

$$\pi_{ijt} = F(P, C(\delta, k))$$

Where, π_{ijt} are the profits from project i for client j in time t . This recognizes that profitability can vary as a function of time, client characteristics and project characteristics. P are the prices and C are the costs respectively of project i for client j in year t . Both prices and costs depend on project specific characteristics, δ , such as size, complexity, duration and type of contract. The last term on the equation, k , captures the capabilities measures, which vary with client and time and also depend on project specific characteristics δ (Ethiraj et al, 2005).

They hypothesized that capabilities, tend to influence both the prices and the costs of software services. To test this hypothesis they estimated the following equation:

$$\text{Log}(\pi_{ijt}) = \beta \text{Log}(W_{ijt}) + XZ_{ijt} + Yk_{ijt} + \varepsilon$$

Where, the criterion variable, π_{ijt} , is project level contribution (revenue minus cost), W_{ijt} is the vector of project specific controls and k_{ijt} reflected the capability measures. The coefficients of logged variables are directly interpreted as elasticities, while the coefficients on variables measured in levels vary with the magnitude of the variables (Ethiraj et al, 2005).

The results indicated that the relationship between the capability measures and project contribution was negative as expected, though only the process defects variable was statistically significant. They concluded that in software services industry capabilities contribute positively to project performance (Ethiraj et al, 2005). Although this study has made a significant contribution in regards to the role of strategic capabilities in performance, its scope of performance is limited as it defines performance by profitability only. This study also ignores the contribution of the contextual factors on performance.

2.8.2 Strategic types, Capabilities, Environmental uncertainty and Firm Performance

Another study reported, by DeSarbo et al. (2005) sought to uncover interrelationships between strategy types, capabilities, environmental uncertainty and firm performance. They began their analysis without any a priori expectation and every study variable was allocated a battery of variables. They allowed research data to optimally derive strategic typologies (as defined by Miles & Snow, 1978) objectively from the overall best fit.

Miles and Snow (1978) specified strategic typologies as consisting of prospectors, analyzers, defenders and reactors. The constrained multi-objective classification approach called NORMCLUS methodology was applied.

Based on nested model Pseudo F-tests on Φ for the various numbers of strategic types Desarbo et al. (2005) found that four strategic types result from the analysis and subsequently increasing the number of strategic types from 4 to 5 does not produce a significant increase in the overall goodness-of-fit measure, Φ . However, when environment and strategic capabilities batteries are introduced, one can see the price paid for sticking to the traditional typologies of Miles and Snow (1978), in terms of very low fit values for the environment and strategic capabilities item batteries (0.376 & 0.396). This implies low statistical relationships or associations between the traditional Miles and Snow (1978) typologies and environmental conditions and strategic capabilities of these firms. Even the performance battery fit in the Miles and Snow (1978) taxonomy is much lower (0.570) than what is witnessed from the derived four group solution. Notably, overall goodness-of-fit value is substantially higher for the derived four group solution obtained from NORMCLUS when applied to the data set (Desarbo et al. 2005).

DeSarbo et al. (2005), concluded that strategic capabilities and environmental factors, do interrelate with strategic types, and understanding this framework of interactions is important to managers in that it does have significant impact on firm performance. That, strategic types empirically derived from field samples, tend to be highly context dependent and do not neatly fall into Miles and Snow (1978) grouping. Based on the

findings, Desarbo et al. (2005) suggested that managers need to consider both the environment and strategic capability when developing strategy as there is a clear relationship between these batteries of variables and performance. DeSarbo et al. (2005) also recommended further use of NORMCLUS methodology as it is ideally suited to incorporating all the batteries of variables required in capability – environment framework, including performance outcomes (Desarbo et al, 2005).

Since Desarbo et al (2005) study questioned the Miles and Snow (1978), strategy typology in optimizing performance this study will incorporate PIMS principles as opposed to strategy typologies of prospectors, defenders, analyzers and reactors. This study will adopt capabilities variables used by Desarbo et al. (2005). However, it will modify environmental (contextual) factors to reflect the Kenyan situation. Performance variables will also be enriched to incorporate both financial and non financial indicators envisaged by Kaplan and Norton (1996) in balanced score card. Though NORMCLUS optimization procedures would have been appropriate for this study especially because they address the issue of spuriousness, the analysis program could not be obtained for this study since its inventor Wayne DeSarbo is still improving it for export market (See correspondences in the appendix).

2.8.3 Business Strategy, Marketing Structure, Strategic Behavior and Performance

The other recent study that has attempted to model strategy and corporate performance and which used similar methodology with this study was by Olson, Slater and Hult

(2005). The study sought to determine the performance implication of fit among business strategy, marketing, organization structure and strategic behaviour. Hypotheses were tested using least squares regression and relative impact of structure and behaviour variables on performance with respect to strategy type after controlling for market structure, determined via hierarchical regression.

The study found that firm performance is influenced in part by how well the marketing organization structure variables are aligned with business strategy. The study also demonstrated that when behavioral orientations are considered in addition to marketing organizational structural elements, the explanatory power of the model increases across all strategy types (Olson, Slater & Hult, 2005).

Olson, Slater & Hult (2005) also concluded that their results do not always provide a clear direction to managers on how to implement the most effective structures or behavioral orientations. The researchers as a result fell short of recommending on which business strategy to pursue because of the overlapping effect between different strategy archetypes and resultant behavioral orientation.

Though this study will employ the methodological approach used by Olson, Slater & Hult (2005), it will instead substitute strategy archetypes with PIMS principles. This is because of the low fit value demonstrated in DeSarbo et al (2005) study between strategy archetypes and performance. Because of overlapping nature of strategic behaviour orientation (for example, a customer oriented company may also pursue cost orientation),

this study sought to determine the moderating effect of strategic capabilities, since capabilities are unique to a given firm and their relationship with performance is not as ambiguous as that of strategic behaviour orientation. This study also sought to establish the influence of the Kenyan context on performance fit to avoid erroneous replication of models developed elsewhere without constraining them to contextual characteristics.

CHAPTER THREE

THE CONCEPTUAL FRAMEWORK

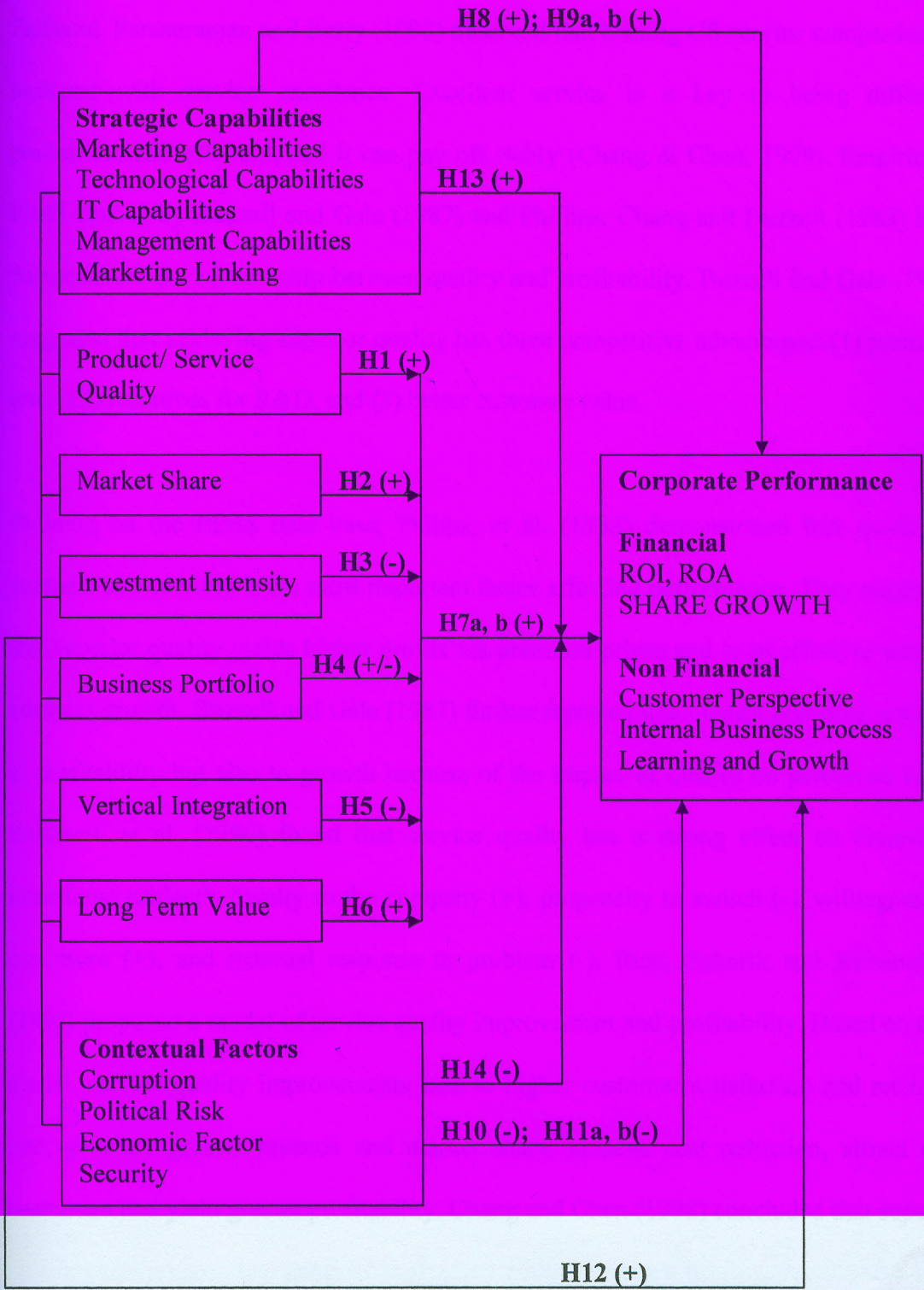
3.1 Introduction

This Chapter begins by developing the concepts guided by theory and logic. The conceptual model is then delineated and the direction of the predictor variables given. The conceptual model is presented in figure 3.1. Hypotheses relating to the conceptual variables and referenced in the conceptual diagram are then stated at the end of the chapter.

3.2 PIMS Principles and Corporate Performance

PIMS competitive strategy paradigm views corporate performance as a function of three major sets of factor: (1) the characteristics of the market in which a firm competes, (2) its competitive position in the market place and (3) and the strategy it pursues. Each of these classes of performance is posited to have direct effects and interactive effects (Buzzell & Gale, 1987; & Jaworski, 1989). Six PIMS principles identified by Buzzell and Gale (1987) have received praise from other scholars like Kotabe, et al. (1991) and Meng Leong (2001) as excellent predictors of corporate performance. They include product/service quality, market share, investment intensity, business portfolio, vertical integration and long term value. These PIMS principles constitute predictor variables for this study and are discussed below. Figure 3.1 shows the relationships between independent, dependent and moderator variables. The hypothesized directions of these relationships are also shown in the figure.

Figure 3.1 The relationship between PIMS Principles, Strategic capabilities, Contextual Factors and Corporate Performance.



3.2.1 Service/ Product Quality

Zeithaml, Parasuraman and Berry (1990) observed that leading US service companies are obsessed with service excellence. Excellent service is a key to being different, productive, and efficient, and it can pay off richly (Chang & Chen, 1998). Empirically PIMS studies by Buzzell and Gale (1987) and Phillips, Chang and Buzzell (1983) have demonstrated the relationship between quality and profitability. Buzzell and Gale (1987) suggested that achieving superior quality has three competitive advantages: (1) premium price, (2) resources for R&D, and (3) better customer value.

Building on the PIMS data base, Philips, et al. (1983) demonstrated that quality of products and services is the most important factor affecting performance. They suggested that superior quality yields higher profits via premium prices and is an effective way for business growth. Buzzell and Gale (1987) further reported that quality is related not only to profitability but also to growth because of the impact of quality on perceived value. Zeithaml, et al. (1996) found that service quality has a strong effect on behavioral intentions: subject's loyalty to the company (+), propensity to switch (-), willingness to pay more (+), and external response to problem (-). Rust, Zahorik and Keiningham (1995) proposed a model of service quality improvement and profitability. Based on their model, service quality improvements lead to higher customer satisfaction and retention rate, generate greater revenue and market share, achieve cost reduction, attract new customers and yield greater profitability. Chang and Chen (1998) concluded that superior

service quality has a positive effect on business profitability. It is expected that superior product/ service quality has positive effect on corporate performance in Kenya.

3.2.2 Market Share

To achieve a high profitability, selecting the right markets in which to compete is not enough; a high market position is also necessary (Jaworski, 1989). Buzzell and Gale (1987) posit that market share has much more dramatic effect on ROI than market concentration when both factors are considered together and, on average market share leaders are more profitable than their smaller share rivals. Businesses with large market share benefit from economies of scale resulting in lower per unit cost than that of competitors with smaller market share (Buzzell & Gale, 1987).

Market leaders not only command higher prices, but also maintain their leadership position by offering products and services that are superior to those of their competitors (Buzzell & Gale, 1987). Though low market share businesses may exhibit superior profits, Buzzell and Gale (1987) posit that they are favorably positioned on most other key strategic dimensions such as product/ service quality, investment intensity, labor productivity and market growth rate. It is therefore, expected that market share is positively correlated to performance in Kenya.

3.2.3 Investment Intensity

PIMS businesses with investment to sale ratios of 20% or less earn ROI that are dramatically greater than those of businesses with investment to sales ratios of 80 % or

more (Buzzell & Gale, 1987). Among the reasons offered for the negative relationship between investment intensity and profitability are that (1) capital intensity leads to aggressive and often destructive competition, (2) heavy capital investment often acts as a barrier to exit from an unprofitable business, (3) managers sometimes set a normal profit-to-sales target for businesses that have heavier than normal investment-to-sales ratio and (4) capital intensive businesses may be less efficient in using fixed or working capital than competitors (Buzzell & Gale, 1987; & Jaworski, 1989).

Buzzell and Gale (1987) do note, however, that capital investments can pay off if the discounted cash flow plus the discounted future market value of a strategy exceeds the current market value of investment. Investment intensity is expected to be negatively correlated to performance in Kenya. This is because as investment intensity rises there is moderate rise in profits and since the base is rising ROI falls.

3.2.4 Business Portfolio

Business portfolio analysis is based on the premise that high growth market segments require cash investments and products/ services with higher market shares generate cash. Based on the market growth and relative market share, a business portfolio can be classified into four categories in what is known as BCG (Boston Consulting Group) growth share matrix. These categories are cash cow, Star, Question mark and Dog (Buzzell & Gale, 1987; & Kotler, 2000).

Cash cows have large market shares and operate in slow growth market segments and are therefore cash generators. Stars have large market shares and operate in fast growth market segments and though they generate cash they also consume it. Question marks have low market shares and operate in fast growth markets and are therefore net cash users. Dogs have low market shares and operate in low market segments and therefore net cash users (Buzzell & Gale, 1987). Business portfolio could therefore be either negatively or positively correlated to corporate performance in Kenya depending on the cash flow characteristics.

3.2.5 Vertical Integration

PIMS results on vertical integration suggest that (1) there is no difference in profit margins up to a value added per sales ratio of 60% but, from that point onward, profit raises consistently with increasing integration, (2) either a very low or a very high level of integration yields an above average ROI whereas profit is lowest in the middle, (3) for both consumer and industrial manufacturing processes, ROI is usually enhanced by a high degree of backward integration but there is no connection between ROI and different degrees of forward integration, and highly integrated businesses generate more new products in mature as well as growth markets (Buzzell & Gale, 1987; & Jaworski, 1989).

Vertical Integration may result in either positive or negative correlation with performance in Kenya, depending on the circumstances under which it's achieved. If increased vertical integration leads to higher investment intensity as firms acquire suppliers or/ and

intermediaries, it will be negatively correlated to performance, otherwise the reverse of this will lead to positive correlation.

3.2.6 Long term Value

Long-term value is positively correlated to corporate performance. This is because factors that enhance long term value also enhance ROI e.g. strong initial competitive positions, high employee productivity and cost advantages relative to competitors (Buzzell & Gale, 1987).

3.3 Strategic Capabilities, PIMS principles and Corporate Performance

According to Fuerer and Chaharbaghi (1996) organizational characteristics (including resources and capabilities) influence the relationship between the level of dynamics in competitive environment, the level of dynamics in strategy development capability and business performance. Ethiraj, et al. (2005) posits that (strategic) capabilities and performance are positively correlated and are often contextual specific. Dynamic capabilities theory, posits that firm's capabilities explain inter firms performance variances (Eisenhardt & Martin, 2000; Makadok, 2001; Teece, Pisano & Shwen, 1997).

DeSarbo et al. (2005) identified five strategic capabilities that have effect on corporate performance as marketing capabilities, market linking capabilities, IT capabilities, technological capabilities and management capabilities. Though DeSarbo, et al. (2005) contend that a relationship exists across business strategic capabilities, the environment and strategic type, they argue that the relationships among the antecedent variables and strategic types remain unclear and in need of further research. Ethiraj, et al. (2005)

attributed a positive relationship between strategic capabilities and performance in a one direction study. Although this study assumes the direction predicted by Etiraj et al. (2005) it incorporates other batteries of variables in an integrated model including PIMS Principles and contextual factors. In such an integrated model, the interactive effects between variables cannot therefore be completely ruled out.

For instance, a firm with optimal management capabilities would be expected to make strategic choice decisions that would maximize profitability. Such a firm would for example deploy its management capabilities to calibrate its market oriented decisions aimed at producing quality products, maximizing market share and at the same time being cautious about heavy investments that would depress profitability as witnessed in Uchumi retail chain in Kenya. In this case, management capabilities would have positive moderating effect on the relationship between PIMS principles and corporate performance. If the same firm has right technological capabilities it can employ them to reduce costs, thus positively impacting corporate performance. This would result into an interactive positive relationship between strategic capabilities, PIMS principles and corporate performance illustrated by figure 3.1.

3.4 Contextual Factors, PIMS Principles and Corporate Performance

The strategy literature generally posits that strategy is conditional on how closely a business is aligned to its environment (Hofer & Schendel, 1978; & Porter, 1980) and any environmental uncertainty may require a firm to respond to unforeseen changes in order to survive (Lawrence & Lorch, 1967; & Covin & Slevin, 1989). Though empirical studies

have established existence of relationships between strategy, performance and the environment or the context under which a firm operates, the direction of causality has not been vigorously determined (DerSarbo, et al. 2005).

In Kenya, contextual factors discussed in chapter two have been demonstrated to influence business operations by Aosa (1996) and K'Obonyo (1999). Physical infrastructure has for instance been said to contribute significantly into the cost of doing business in Kenya. Corruption and energy costs have also been blamed for making Kenyan goods uncompetitive in regional markets. Political risk and insecurity have also played a big role in disrupting business operations and loss of assets and even life (Waki, 2008). These attributes of Kenyan context can therefore be said to have negative impact on corporate performance. However, there are other contextual factors that boost corporate performance in Kenya like economic growth and government related interventions like reduction in business licenses.

As discussed above, when contextual factors are viewed in light of other variables in an integrated model, still interactive effects among the variables cannot be completely ruled out. For instance, distribution systems would definitely have effect on the level of vertical integration, a PIMS principle. This again would result in an interactive effect that moderates the relationship between PIMS principles and corporate performance.

3.5 The Integrated Model

The four relationships of PIMS principles, strategic capabilities, contextual factors and corporate performance lead to the conceptual model shown in figure 3.1. Corporate

performance (criterion variable) is positively influenced by PIMS principles (predictor variable), strategic capabilities and some aspects of contextual factors, although it is generally hypothesized that contextual factors in Kenya will negatively affect corporate performance. Though PIMS principles have a direct effect on corporate performance, strategic capabilities, and contextual factors, moderate this effect. At the same time, interrelationships in the hypothesized direction exist between the moderating variables and the predictor variable.

This results in an omnibus model (figure 3.1) with some degree of spurious relationships among variables. However, in absence of more sophisticated analytical tools, only relationships explaining corporate performance will be specified and estimated via general linear regression and hierarchical regression. The moderating effect of strategic capabilities and contextual factors on the relationship between PIMS principles and corporate performance will also be explained.

3.6 HYPOTHESES

Hypotheses drawn from variable conceptualization as shown in the schematic diagram figure 3.1 and related to the study questions and objectives are presented below in their null form.

Ho₁: There is no positive relationship between corporate performance and product/service quality.

Ho₂: There is no positive relationship between market share and corporate performance.

- Ho₃: Investment intensity does not have a negative relationship with corporate performance.
- Ho₄: There is no relationship between business portfolio (based on BCG model) and corporate performance.
- Ho₅: There is no negative relationship between vertical integration and corporate performance.
- Ho₆: Long term value indicated by strategic factors that enhance total return and Market value is not positively correlated with corporate performance.
- Ho_{7a}: There is no positive relationship between corporate performance and PIMS principles as a composite variable.
- Ho_{7b}: PIMS principles have no significant predictive power on corporate performance
- Ho₈: There is no positive relationship between corporate performance and strategic capabilities indicated by (a) marketing capabilities (b) technological capabilities (c) IT capabilities (d) management capabilities and (e) marketing linking capabilities.
- Ho_{9a}: There is no positive relationship between strategic capabilities as a composite measure and corporate performance.
- Ho_{9b}: Strategic capabilities do not have significant predictive value on corporate performance.
- Ho₁₀: There is no negative relationship between corporate performance and contextual factors in Kenya indicated by (a) corruption (b) political risk (c) economic and (d) security factor.

Ho_{11a}: There is no negative relationship between contextual factors as a composite variable and corporate performance.

Ho_{11b}: Contextual factors do not have significant predictive value on corporate performance.

Ho₁₂: The predictive effect of the integrated model (i.e. joint effect of PIMS principles, strategic capabilities and contextual factors) on corporate performance is not higher than that of the individual variables with the corporate performance.

Ho₁₃: The strength of the relationship between PIMS principles and corporate performance does not depend on the firm's strategic capabilities.

Ho₁₄: The strength of the relationship between PIMS principles and corporate performance does not depend on the contextual factors in Kenya.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This chapter discusses the research methodology. It begins with a discussion of the philosophical orientation building up to the research design. The population of interest is then stated and rationale for picking this population of interest discussed. Instrument construction, pre testing and revision procedures are then discussed and methods of instruments validation and measures of reliability delineated. This is followed by variable operationalization where the three set of variables that is, the criterion, predictor and moderator are decomposed into the underlying constructs. Data collection techniques are then highlighted and procedures for dealing with missing data described. Data analysis methods are then discussed with special attention given to hypotheses testing statistics and model formulation and estimation.

4.2 Philosophical Orientation

The research philosophy adopted in a given study contains important assumptions that underpin research strategy and methods chosen as part of that strategy, although the philosophy will in turn be partly influenced by practical considerations (Saunders, Lewis, & Thornhill, 2007). Saunders, Lewis & Thornhill (2007) posit that there are three major ways of thinking about research philosophy: epistemology, ontology and axiology. Epistemology concerns what constitutes acceptable knowledge in a field of study while ontology is concerned with the nature of reality and axiology is the branch of philosophy that studies judgments about value (Saunders, Lewis & Thornhill, 2007).

This study is about the influence of market strategy, strategic capabilities and contextual factors on corporate performance, and how the three variables interrelate to produce performance outcome. For this matter, this study is concerned about the state of knowledge regarding corporate performance and possible influencers of corporate performance, given contextual peculiarities. This study will thus adopt epistemology orientation.

Epistemology philosophy orientation has three positions: positivism, interpretivism and realism (Saunders, Lewis & Thornhill, 2007; Ramenyi et al. 1998). Remenyi et al. (1998) posit that positivism principles involve working with observable social reality and that the end product of such research can be law- like generalizations similar to those produced by physical and natural scientists. Under positivism existing theory is used to develop hypotheses and these hypotheses are tested and confirmed in whole or part, or refuted, leading to further development of theory which then may be tested by further research and the research is concerned with facts and not impressions (Saunders, Lewis & Thornhill, 2007). Positivism assumes that the researcher is independent of and neither affects nor is affected by the subjects of the research (Ramenyi et al. 1998).

Interpretivism is an epistemology that advocates that it is necessary for the researcher to understand differences between humans in our role as social actors, implying that the researcher and the subjects of research should interact and this leads to adjustments of researchers own meanings and actions (Saunders, Lewis & Thornhill, 2007). Realism on

other hand is epistemological position which relates to scientific enquiry. The essence of realism is that what the senses show us as reality is the truth: that objects have an existence independent of the human mind. Realism thus tries to marry scientific enquiry of positivism and social aspects of interpretivism (Saunders, Lewis & Thornhill, 2007).

This study sought to develop hypotheses based on existing theories and models on corporate performance, PIMS principles and dynamic capabilities. The study extended these theories and models to suite the Kenyan context by factoring in contextual characteristics that may affect firms operating in Kenya. In doing this no attempt was made to influence the respondents. Actually, the instruments used in the study to gather data were so structured and closed ended. Thus, this study employed epistemological philosophy leaning on positivism.

4.3 The Research Design

Business Researchers have at their disposal other than case study; numerous quantitative statistical techniques which, if used in conjunction with careful conceptual work, can increase the insights drawn and can add confidence to significance of reported findings (Montgomery, 1979). In line with this philosophy, this study employed multivariate techniques for parameter estimation. In doing so, this study employed a triangulation of exploratory, descriptive and explanatory research designs. Lehman, Gupta and Steckel (1997), contend that there are cases where research objectives require multiple research approaches. According to Churchill (1991) an exploratory study is used for any or all of the following purposes: (1) Formulating a problem for more precise investigation or for

developing hypothesis, (2) Establishing priorities for further research, (3) Gathering information about the practical problems of carrying out research on particular conjectural statements, (4) Increasing the analyst's familiarity with the problem and, (5) Clarifying concepts.

In the absence of well grounded theory on external factors that influence corporate performance in Kenya, and to satisfy this research inquiry, exploratory research design is considered appropriate. This will increase our familiarity with the problem set out and clarify the underlying external factor constructs. Exploratory factor analysis was used to extract the underlying contextual factors through varimax factor rotations. Descriptive statistics were used to determine data characteristics.

In the case of the relationship between PIMS principles, strategic capabilities and corporate performance, there is sufficient evidence from classical and empirical literature explaining their relationships. These causal relationships have been reviewed earlier in chapter two. In this study we are therefore concerned with two basic problems regarding the hypothesized relationships; Firstly, Confirming or disapproving the hypothesized relationships, and secondly, if the hypothesis is specific that mathematical form of the relationship between the predictor and criterion variables is determinable, estimating the parameters and the strength of the relationship by multivariate analysis. Under such circumstances Lehman, et al. (1997) recommends use of explanatory or causal design.

4.4 Population

A census survey was used to collect primary data and secondary data from the population of interest. All Companies listed at the Nairobi Stock Exchange (NSE) formed the population of interest. Currently, 56 companies are listed on NSE (see appendix B). Four justifications were used to settle on a census of NSE. Firstly, the financial data required for this kind of study was readily obtained at NSE. When Aosa (1992), attempted to collect financial data from private non quoted Manufacturing Companies in Kenya, he was unsuccessful because respondents considered this kind of information confidential. Secondly, a census provides a useful resource with which to compare or set in context research findings (Saunders, Lewis & Thornhill, 2007). Third, the quoted companies are relatively few and concentrated in Nairobi area, and therefore, it is appropriate to include all of them in the study. Finally, with such few units of study, if sampling was used and there was a large non response, this would greatly affect quantitative data analysis used.

4.5 Instrumentation

The study constructs are based on theory of corporate performance (Hax & Majluf, 1998; Kaplan & Norton, 1996; Nelson, 1994; Porter, 1994; Rumelt, 1991; & Williams, 1994), PIMS principles (Buzzell & Gale, 1987; Kotabe, et al. 1991; & Meng Leong, 2001) competitive capability theory (Connate et al, 1990; Day, 1994; & DeSarbo, et al. 2005; & Olson, Slater, & Hult, 2005) and contextual factor underpinnings (Aosa, 1996 & K'Obonyo, 1991). Review of theory of corporate performance, PIMS principles and competitive capabilities found existing scales for measuring the variable's underlying constructs. However, review of Kenyan contextual environment did not reveal any

existing validated scales. The scales were nevertheless developed from existing literature and logical conceptualization.

Relevant measurement scales for corporate performance were identified and grouped into two categories, that is, financial measures and non financial measures. Financial measures were largely adopted from studies by Montgomery (1979), Hax and Majluf (1988) and Desarbo, et al. (2005). Non financial measure scales were adopted from Kaplan and Norton's (1996) Balanced Score Card (BSC) to include customer, internal-business-processes and learning and growth perspectives.

PIMS scales were identified from Buzzell and Gale (1987) and PIMS data bases. Six PIMS principles specified by Buzzell and Gale (1987) and demonstrated to have predictive value on corporate performance have been adopted for this study. Strategic capabilities scales were adopted from studies by Desarbo, et al. (2005) and Olson, et al. (2005). Contextual factors scales were mainly based on studies by Aosa (1996) and K'Obonyo (1999) and from other studies across Africa.

All the above described construct measure scales, with the exception of financial category of corporate performance were incorporated in a five section questionnaire (see appendix A). Section A collected general demographic information regarding the respondents and their organizations. Section B collected data relating to non financial aspect of corporate performance. Section C collected data on PIMS principles while

section D was used to collect data on contextual factors. Finally, Section E collected data on strategic capabilities.

4.5.1 Instrument Pre-testing and Revision

A part from contextual factors, construct measures were adopted from studies conducted in America for example DeSarbo et al. (2005) and Olson, Slater and Hult (2005) and PIMS studies Buzzell & Gale (1987). To avoid American bias and incompleteness of the contextual factor measures, the questionnaire was pre-tested with 6th cohorts of Executive Master of Business Administration (EMBA) students of Moi University, Nairobi campus. To qualify as an EMBA student of Moi University, one requires an undergraduate degree or its equivalent and at least five years management experience. The students were therefore presumed to have sufficient management skills necessary for instrument pre-testing. DeSarbo, et al. (2005) used EMBA students to validate their measures in a similar study. The questionnaire was administered to 50 students specializing in Strategic Management. These students were presumed to have sufficient management skills considered necessary for pre testing. A total number of 32 questionnaires representing a response rate of 62% were returned.

Data analysis for the purpose of questionnaire revision was performed in three phases. The first phase was to inspect the data using descriptive statistics such as frequency distribution, percentages, the mean and standard deviation. Skew ness, kurtosis and cross tabulations were also applied. The second phase involved use of factor analysis procedures. Principal component with Kaiser Normalization was used. Varimax rotation

method was employed and iteration transformations performed. Finally, reliability assessment of internal consistency of items was performed using Cronbach Alpha coefficient.

Measures of Validity

All items with non response rate of $n > 3$, were reviewed by a focus group comprising of lecturers from the School of Business and Economics, Moi University. Some items were dropped while others were reworded. All items with $\delta > 3$, were automatically dropped. Factor analysis loading was set at 0.5 and all items with a lower factor loading and communality of less than 0.5 were not entered for orthogonal varimax rotations. Step by step varimax rotations were performed and items that did not converge after successive iteration were dropped. Items with Cronbach Alpha of less than 0.6 and total variance explained of less than 60% were also dropped.

All items used to measure the construct of business portfolio did not meet the criteria for validity and reliability. The items only converged after 35 iterations and had a low Cronbach Alpha of 0.4436. This could be attributed to the abstract nature of the two dimensions used to measure business portfolio. These are relative market share and market growth. Since the construct is an important measure of PIMS principles variable it was not dropped from the questionnaire. However, the construct was reworded and rating scale changed.

The reliability of the technological construct was also low at alpha 0.3934. However, it was discovered that only one item was suppressing the reliability and when this item was

dropped reliability improved to 0.5066. The construct was nevertheless retained but the item with low reliability was dropped.

4.6 Measures of Validity

Validity concerns the soundness of the inferences based on the scores - that is, whether the scores measure what they are supposed to measure, but also not measure what they are not supposed to measure (Thompson, 2003; Kline, 2005). There are four categories of validity; content validity, construct validity, criterion related validity and external validity.

Content validity refers to the extent to which the measuring instrument provides adequate coverage of investigative questions guiding the study (Cooper and Schindler, 2001; Kline, 1994). For this study questionnaires were persistently checked to ensure they covered all the four main areas of this study, that is, PIMS Principles, Strategic Capabilities, Contextual factors and Corporate Performance. Exploratory and confirmatory factor analyses were also applied to check whether the defined eigen variable structure are in tandem with classical and empirical Literature.

Construct validity is the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure (Cooper and Schindler, 2001; Hair et al, 2006). It has four dimensions; Face validity, convergent validity, discriminant validity and nomological validity. Face validity amounts to the belief that an instrument seems to correspond to common sense without empirical evidence. This study

ensured face validity by constructing the questionnaire based on prior studies and logical conceptual framework.

Convergent Validity measures the extent to which items that are indicators of a specific construct share a high proportion of variance in common. The adequacy of convergent validity will be assessed through factor analysis indicators such as factor loadings that are higher than 0.5 with a composite reliability of alpha above 0.6 and a total variance explained of 60 % (Hair et al, 2006).

Discriminant validity is the extent to which a construct is truly distinct from other constructs. This means that a construct is unique and captures some phenomena other measures don't. This validity was ensured by use of orthogonal Varimax method of rotation in factor analysis. Nomological validity on other hand, tests whether the correlations among constructs in a measurement theory make sense. This study applied Pearson moment correlation matrix of constructs to assess nomological validity (Kline 1994; Hair et al, 2006). Criterion related validity reflects the success of measures for prediction and estimation (Cooper and Schindler, 2001). It consists of concurrent validity which represents how well the measure relates to the predictor. Predictive validity dimension was demonstrated by the results of hypothesis testing in case of PIMS principles, strategic capabilities and corporate performance.

External validity is the extent to which the findings of a particular study or experiment can be applied to the individuals and settings beyond those that were studied (Gall, et al.

2003). This study has demonstrated external validity by testing hypothesis developed elsewhere to check for replication in Kenyan situation. Confirmatory factor analysis was employed to establish whether eigen variables discerned elsewhere apply in Kenyan context.

4.7 Reliability Analysis

Reliability concerns the degree to which the scores are free from random measurement errors. Reliability statistics measure the degree to which responses are consistent across the items within a single measure.

This study will use a four step measure of reliability; (1) Drawing from Literature those items that have been tested for reliability by other researchers and adopt them. PIMS measures were adopted from Kotabe, et al. (1991); capability measures were adopted from DeSarbo et al (2005) and Olson, Slater and Hult (2005) and corporate performance measures were adopted from Kaplan and Norton (1996). (2) Revision of questionnaires and pre testing. (3) Using exploratory factor analysis to identify redundant items that weaken reliability and excluding them from construction of scales. (4) Finally, Cronbach Alpha coefficient was used to assess reliability.

The alpha coefficient was considered appropriate because most variables were measured at interval and ratio scale. Cronbach Alpha values range from 0 to 1.0 where values tending to 1.0 are usually considered more reliable. Whereas the cut off alpha levels are

debatable, a conservative threshold of 0.6 and above is used to check for internal consistency among items (Kline, 2005).

4.8 Variable Operationalization

This study has four sets of variables: Corporate performance is the criterion variable, PIMS principles is the predictor variable and moderating variables are strategic capabilities and contextual factors, operationalized as per the tables 4.1 through to 4.3.

Table 4.1 Criterion Variable

Category	Item	Operationalization	Measure(s)
Financial	Investment	$\frac{\text{Net income A.T.} + \text{Interest}}{\text{Shareholders equity} + \text{L.T. debt}}$	Return on Investment (ROI)
	Assets	$\frac{\text{Net income A.T.}}{\text{Total assets}}$	Return on Asset (ROA)
	Share growth	$\frac{100}{N} \frac{XN - XI}{XI}$	Average percentage growth in earnings per common share (GEPS)
Non-financial (customer perspective)	Market share	Management's perception on organization's market share to that of three close competitors	Sum of management judgments on 1-5 scales
	Customer retention	Customer retained by the organization	Sum of management judgments on 1-5 scales
Internal-business-process perspective	Research	$\frac{\text{Profit before tax}}{\text{Total R\&D}}$	Return on research and development (RR&D)
	Process efficiency	Amount of waste, scrap, rework and returns	Sum of management judgments on 1-5 scales
	Service delivery	Waiting times, information accuracy, service accessibility, transaction fulfillment, communication, customer PR	Sum of management judgments on 1-5 scales

Table continues

Table 4.1 continued

Learning and growth	Employee retention	<u>Staff turnover</u> Number of staff	Rate of staff turnover (RST)
	Staff contribution to revenue	<u>Total revenue</u> Number of employees	Revenue per staff (RPS)
	Employee empowerment	Employee involvement with decision making, reskilling, recognition, access to information, encouragement and support, reward structure.	Sum of management judgments on 1-5 scales
	Process efficiency	Process redesign and reengineering	Sum of management judgments on 1-5 scales

Table 4.2 Predictor Variable

Category	Item	Operationalization	Measure(s)	Hypothesized direction of predictor
Product/service quality	Price ratio	<u>Sales revenue</u> Direct costs	Relative price ratio (RPR)	Positive
	Product innovation	Investment in research and development of new products/services, expenditure in product/service enhancement, marketing expenditure	Sum of management judgments on 1-5 scales	Positive
	Pricing advantage	Ability to command higher relative price without effecting market share, cushioning against price vulnerability due to price wars.	Sum of management judgments on 1-5 scales	Positive
Market share	-	Proportion of market share relative to three close competitors	Sum of management judgments on 1-5 scales	Positive
Investment intensity	Investment	<u>Total assets–Current liabilities</u> Sales	Amount invested to sales (INSA)	Negative
Investment Intensity	Working capital	<u>Current assets-current Liabilities</u> sales	Amount of working capital to sales	Negative
	Plant and equipment	<u>Gross book value of P&E</u> sales	Investment in plant and equipment	Negative
	Labor costs	<u>Total Assets-current liabilities</u> Labor costs	Investment per labor cost	Negative

Table Continues

Table 4.2 continued

Business portfolio	Cash cow	Business portfolio with large relative market share in a slow growth market	Sum of management judgments on 1-5 scales	Positive
	Star	Business portfolio with large market share in a high growth market	Sum of management judgments on 1-5 scales	Negative/ Positive
	Question mark	Business portfolio with low relative market share in a high growth market	Sum of management judgments on 1-5 scales	Negative/ Positive
	Dog	Business portfolio with low relative market share in a slow growth market	Sum of management judgments on 1-5 scales	Negative/ Positive
Vertical integration	Value added	$\frac{\text{Sales} - \text{purchases}}{\text{Sales}} \times 100$	Percentage value added	Positive/ Negative
	Adjusted value added	$\frac{\text{ROI}}{\text{Invested capital}}$	ROI per invested capital in value chain acquisition	Positive/ Negative
	Backward integration	Organization acquisition of suppliers	Sum of management judgments on 1-5 scales	Positive/ negative
	Forward integration	Organization acquisition of intermediaries	Sum of management judgments on 1-5 scales	Positive/ Negative
Long term value	Total return	$\frac{\sum \text{dividend paid} + \text{net } \Delta \text{ in stock}}{\text{Stock beginning value}}$	Percentage total return (TR)	Positive
	Market value	$\frac{\text{Market value of equity}}{\text{Book value of equity}}$	Market to book value (MB)	Positive

Note. A.T. = after tax; L.T. = long term; R&D = research and development; P&E = plant and equipment; PR = Public relations, BK = book value.

of innovation within competitive clusters.

Table continues

Table 4.3 Moderating Variables

Category	Item	Operationalization	Measure(s)
Strategic capabilities	Marketing capabilities	Knowledge of customers, knowledge of competitors, integration of marketing activities, skills to segment and target markets, pricing programs effectiveness, advertising program effectiveness	Sum of management judgments on 1-5 scales
	Marketing linking capabilities	Marketing sensing, durable customer and supplier relationships, ability to retain customers, channel bonding capabilities	Sum of management judgments on 1-5 scales
	Technological capabilities	New product development capabilities, manufacturing processes, technology development, ability to predict technological changes, production facilities, quality control skills	Sum of management judgments on 1-5 scales
	Information technology capabilities	(IT) IT systems for New Product Development projects, IT system for functional integration, IT systems for technology creation, IT system for market knowledge creation, IT system for internal and external communication	Sum of management judgments on 1-5 scales
	Management capabilities	Integrated logistics systems, cost control capabilities, financial management skills, HR management capabilities, profitability and revenue, forecasting and marketing planning process	Sum of management judgments on 1-5 scales
Contextual factors	Infrastructure	Distribution and cost of railway network, distribution and cost of road network, distribution, quality and cost of electricity, distribution and cost of telephony, efficiency and cost of port services, availability and cost of piped water.	Sum of management judgments on 1-5 scales
	Distribution systems	Presence or absence of domination of distribution systems by small groups, presence or absence of interaction between organizations and distribution intermediaries, presence or absence of information exchange among channel members, presence or absence of innovations within distribution channels.	Sum of management judgments on 1-5 scales

Table continues

Table 4.3 continued

Political/ legal	Number of business licenses, business laws, efficiency of regulatory bodies, government support, hostilities from government institutions, government and political interference in business operation.	Sum of management judgments on 1-5 scales
Economic	Market size, competition, foreign exchange regime, accessibility of credit, cost of capital, efficiency of capital markets, threat of price controls	Sum of management judgments on 1-5 scales
Social cultural	Cultural beliefs, business ethics, ethnicity, loyalty to ethnic grouping, culture clash	Sum of management judgments on 1-5 scales
Technological	Presence or absence of appropriate technology cost of technology.	Sum of management judgments on 1-5 scales
Corruption	Presence or absence of fair business practices, presence or absence of vested political interest in business, cost of corruption.	Sum of management judgments on 1-5 scales
Security	Uncertainty about security of assets and security of employees, interruption of business operations due to insecurity	Sum of management judgments on 1-5 scales

4.9 Data Collection

Both primary and secondary data were required for this study. Secondary data included financial statements for five years between 2002 and 2006. An average of five years will minimize influence of current one-year observations which could occur through the use of a single year data. Five year period is considered sufficient to avoid biases of one year point estimates. Similar studies have used between five and seven year averages (e.g. Montgomery, 1979; see also DeSarbo, et al. 2005; & Rumelt, 1974).

Secondary data was collected from NSE and Capital Markets Authority (CMA) and it formed the basis of testing financial perspective of corporate performance. A structured

questionnaire with close ended questions was used to collect primary data. The questionnaire had five sections: Section A collected general information regarding the respondents and their organizations. Section B had non financial measures of corporate performance adopted from Kaplan and Norton (1996). Section C had PIMS measures adopted from Buzzell and Gale (1987) and PIMS data bases. Section D had contextual factor measures adopted mainly from Aosa (1996) and K'Obonyo (1999) studies and those developed from logical Conceptual framework. Section E had strategic capabilities measures adopted from DeSarbo, et al. (2005) and Olson, et al. (2005).

The questionnaire was administered to all Chief Executive Officers (CEO's) of NSE listed companies in Kenya. These respondents are considered to have proper grasp of what transpires at corporate level in their organizations and proper understanding of complex issues at the corporate level. The questionnaires were dropped to all the respondents and a personal follow up made after a week. By dropping and making personal follow up response rate was enhanced and field data editing improved. Where possible the questionnaires were administered to the respondents by either the researcher or by his research assistant.

4.10 Missing Data Procedures

The two categories of data, that is primary and secondary data, were coded and merged in an SPSS spread sheet. Missing data analysis were performed to identity the patterns and relationships underlying the missing data in order to maintain as close as possible the original distribution of values when any remedy was applied.

A four step process for identifying missing data developed by Hair et al (2006) was employed. Step one involved determining the type of missing data with a view to determine whether the missing data is ignorable or not ignorable. The missing data resulting from merging the two sets of primary and secondary data was not ignorable. According to Hair et al (2006) Missing data that cannot be classified as ignorable fall into two categories: Known versus unknown processes based on their source. Known missing data processes may include failure to complete entire questionnaires. Unknown missing data processes may include refusal by the respondent to complete some questions in the questionnaire. Both of these processes manifested in this study.

Having decided that the missing data was not ignorable due to known missing data and unknown missing data processes, the second step was taken to determine the extent of missing data by tabulating the percentage of variables with missing data for each case and the number of cases with missing data for each variable. Two items of study variable vertical integration with over 50% missing data including value added and adjusted value added were dropped. Similarly, 13 cases with over 50% missing data were deleted. Working capital item of investment intensity variable was dropped since it was shown to significantly improve data completeness.

The next step (3) is diagnosing the randomness of the missing data. The data were assessed for non random component both Missing at Random (MAR) and Missing Completely at Random (MCAR) levels were assessed. Although significant differences

were found due to missing data under MAR distribution the effects were limited just to a few variables, making it of marginal importance. The data demonstrated MCAR distribution indicated by a non significant statistical level (littles' MCAR test: Chi-square = 18.633. Df = 1991, $p = 1.00$ with $\alpha = 0.05$). This implies a non significant difference between the observed missing data pattern in the reduced sample and a random pattern. According to Hair et al (2006), MCAR distribution is sufficiently random to accommodate any type of missing data remedy.

The final step (4) involved selecting the method of data imputation and eventually replacing the missing data, by calculating replacement values. Three imputation methods including, all available, regression and EM were employed. Because the missing data is MCAR all these methods are applicable (Hair et al, 2006). A comparison of the estimating means and standard deviation revealed consistency between the methods. This indicates lack of bias in any of the three methods. This is expected since the missing data processes were deemed MCAR. A composite replacement score was computed using scores for regression and EM. All available imputation method scores were dropped since they were based on relatively small sample of 17 cases with complete data.

4.11 Data Analysis

Data analysis was carried out using SPSS analytical tools. First, data was coded to facilitate computer input. The data was then summarized by use of descriptive statistics. This entailed using proportions, frequency distributions, means and standard deviations. Correlation coefficients were also computed to determine relationships among variables and test hypothesis while one way ANOVA was used to find confounding effect of one

variable on another. Parameter estimation and the strength of predictive relationships were determined by multivariate analysis. Simple linear regression, multiple regression, stepwise regression and hierarchical regression models were employed. A description of test statistics used to test hypothesis follows.

4.11.1 Correlation Analysis

Hypotheses H1 to H6 sought to establish whether there is a relationship between various PIMS principles and corporate performance, whereas hypothesis H7a sought to determine whether PIMS principles as a composite variable is positively correlated to corporate performance. Hypothesis H8 sought to determine whether various constructs of strategic capabilities are related to corporate performance individually, while hypothesis H9a sought to establish whether the composite strategic capabilities variable is related to corporate performance. Hypothesis H10 sought to establish whether contextual factors are individually related to corporate performance whereas hypothesis H11a sought to determine the relationship between corporate performance and contextual factors as a composite variable.

Correlation analysis using Pearson's product moment correlation coefficient was used to study the above stated relationships with corporate performance. Correlation coefficient indicates and measures the strength and direction of linear relationships between two random variables. The closer the coefficient is to -1 or +1, the stronger the correlation between the variables. If the variables are independent, the correlation is zero. This is

however not expected because the r coefficients only measure linear dependences between two variables.

4.11.2 Model Formulation and Estimation

Based on the theory of the firm and associated theory of strategy as earlier discussed in chapter two, corporate performance (CP) is a function of the interaction of internal characteristics and external characteristics and was formulated using a series of equations, that were estimated via different variants of general linear regression. A regression analysis is a collective name for the techniques used in modeling and analysis of numerical data consisting of values of a dependent (criterion) variable and independent (predictor) variables (Hair et al. 2006).

The model is specified as follows:

$$CP_{ijt} = \beta_0 + \beta_1 IC_{ijt} + \beta_2 EC_{it} + U_i \dots\dots\dots (1)$$

Where;
 CP_{ijt} = Corporate Performance for firm i given operating context j in period t, to be estimated by hierarchical of regression analysis,
 β₀ = Beta intercept,
 U_i = disturbance term,
 β_{1ijt} = firm specific internal characteristic (IC) coefficient to be estimated by two sets of internal characteristics from the following cross sectional hierarchical regression:

$$CPIC_{ijt} = \alpha_0 + \alpha_1 PIMS_{ijt} + \alpha_2 SC_{ijt} + \xi \dots\dots\dots (2)$$

Where;

$CPIC_{ijt}$ = Corporate Performance predicted by internal characteristic for a firm i given context j for a period t ,

α_0 = intercept coefficient,

ξ = extraneous variables,

α_{1ijt} = market strategy characteristic coefficient predicted by PIMS principles adopted by firm i given context j for a period t . This is estimated by the following stepwise linear estimation regression:

$$CPPIMS_{ijt} = c_0 + c_1X_1 + c_2X_2 + c_3X_3 + c_4X_4 + c_5X_5 + c_6X_6 + \xi \quad \dots (3)$$

Where;

$CPPIMS_{ijt}$ = Corporate Performance attributable to market strategy for firm i given context j for period t ,

c = regression coefficients including intercept c_0 ,

X_1 = product/ service quality, X_2 = market share, X_3 = investment intensity, X_4 = business portfolio, X_5 = vertical integration and X_6 = long term value. The direction of the parameter coefficients is explained under the conceptual model and extraneous distribution is unknown.

α_{2ijt} = strategic capabilities (SC) coefficient for a firm i given context j for a period t to be estimated by the following linear regression:

$$CPSC_{ijt} = d_0 + d_1Z_1 + d_2Z_2 + d_3Z_3 + d_4Z_4 + d_5Z_5 + \xi \quad \dots\dots\dots (4)$$

Where;

d = regression coefficient including intercept d₀,

Z₁ = marketing capabilities, Z₂ = market linking capabilities, Z₃ = IT capabilities, Z₄ = technological capabilities and Z₅ = management capabilities. The direction of the estimator parameters is predicted to be positive and the extraneous distribution is unknown.

β_{2it} = contextual specific characteristics (EC) impacting on firm i over period t to be specified vide exploratory factor analysis and estimated by multiple linear regression (refer equation 1):

$$CPEC_{ijt} = e_0 + e_1a_1 + e_2a_2 + e_3a_3 + e_4a_4 + \xi \quad \dots\dots\dots (5)$$

Where;

CPEC_{ijt} = corporate performance predicted by external factors

e = regression coefficient including intercept e₀

a₁ = corruption factor, a₂ = political risk factor, a₃ = economic factor, a₄ = security factor.

The direction of the estimator parameters is predicted to be negative and the extraneous distribution is unknown.

Model fitness of equations three, four, five and integrated equation one finds that

In summary, if Y_{ijt} represents Corporate Performance for firm i given the operating context j for period t ;

$$Y_{ijt} = \text{Eqn.3} + \text{Eqn.4} + \text{Eqn.5} + U_i \dots\dots\dots (6)$$

Where;

Eqn.3 represents market strategy predicted by PIMS principles,

Eqn.4 represents strategic capabilities

Eqn.5 represents contextual factors impacting on firm i for period t and

U_i represents disturbance term, which is not known.

Estimation data (predicted by the above equations) in this study, relates six sets of hypotheses. Hypothesis (H7b) sought to establish predictive power of PIMS principles on corporate performance. This is represented by equation three and was estimated via stepwise regression analysis. Hypothesis (H9b) sought to determine the predictive power of strategic capabilities on corporate performance. This relationship is specified on equation four and was estimated via simple linear regression. Hypothesis 11b sought to determine the predictive value of contextual factors on corporate performance. This relationship is specified by equation five and estimation was through multiple regression. Hypothesis (H12) sought to establish whether the integrated model of PIMS principles, strategic capabilities and contextual factors is better predictor of corporate performance than each of the individual predictors. This hypothesis was tested by comparing the model fitness of equations three, four, five and integrated equation one (note that

equation six is an elaboration of equation one). Hypothesis (H13) sought to determine the moderating effect of strategic capabilities on the relationship between PIMS principles and corporate performance. This hypothesis was tested via a two step hierarchical regression specified in equation two. The final hypothesis (H14) involved establishment of the moderating effect of contextual factors on the relationship between PIMS principles and corporate performance. This was tested via a two step hierarchical regression involving a combination of equation three and five.

4.11.3 Model Assumptions

The process used to estimate the vector of coefficients depends upon the assumptions associated with the model, particularly with regard to the disturbance terms. The most common estimation technique is derived from the least square principle and includes the following assumptions:

A.1 $E(U) = 0$

A.2 $E(UU^1) = \delta^2 I_n$

A. 3 X is a set of fixed numbers

A.4 X has rank $K < n$ (Johnston, 1972).

The first assumption which states that the expected value of U is 0 makes it possible to express Y as a function of the constant term $B_1 + B_2 X_i$. The second assumption, $(E(UU^1) = \delta^2 I_n)$, states that the disturbance terms are pair wise uncorrelated ($E(U_t U_{t+s}) = 0$ for $S \neq 0$) and homoscedastic ($E(U_i^2) = \delta^2$ for all i) (Johnston, 1972). Since the disturbance terms are assumed to be uncorrelated, the outcome in any one trial is not expected to affect the disturbance term for any other trial. And, because the disturbance

terms are uncorrelated, so are the dependent variables, Y_i and Y_j . Similarly, since the U_i terms are assumed to have constant variance, the Y_i s should have constant variance regardless of the level of X .

The third assumption states that, in repeated sampling the only source of variation in the Y vector is variance in the disturbance vector, that is, the X_s are not random variables. The final assumption assures that no exact linear relationship exists among any of the X variables and that it will be possible to invert the $X'X$ matrix to obtain the ordinary least squares estimator β

$$\beta = (X'X)^{-1} X'Y$$

Assumption A.4 also indicates that the number of observations exceeds the number of parameters to be estimated.

To employ the general linear model one should be reasonably sure that none of the regression assumptions is seriously violated. The following section review the model violations which are most likely to occur in strategic management work, procedures which test for violations and remedial measures which can be used to correct the violations.

4.11.4 Model Violations and Remedial Measures

In such a study there are three major violations likely to affect the specified model. These are heteroscedastacity, multi co linearity and heterogeneity. Heteroscedastacity occurs where error variance is not constant over all observations, that is where $E(uu') \neq \delta^2 I_n$,

Under such conditions the beta estimates are still unbiased and consistent, but they are no longer minimum variance unbiased estimators. Heteroscedasticity can be detected by examining a plot of the residual terms against fitted Y_i values, or against a particular predictor variable, X , which one suspects is correlated with the residues (Montgomery, 1979).

Johnston (1972) has recommended the parametric Goldfield – Quant test, method to detect heteroscedasticity. Hair et al. (2006) posit that homoscedasticity can be ensured by checking the constancy of the residuals across values of the independent variables. This study adopted analysis of residual suggested by Hair et al. Examinations of residuals vide plots of studentized residuals showed no pattern of increasing or decreasing residuals. This implied homoscedasticity in multivariate analysis. This was not at all surprising since various varimax rotations had been performed before index construction through exploratory and confirmatory factor analysis. This approach has been employed in a similar study by Montgomery (1979) and is recommended by Tabachnick and Fidell (2007). Using rotations to obtain constant error variances and applying ordinary least squares is equivalent to using weighted least squares regression (Montgomery, 1979).

Assumption A.4 associated with general linear model, X has rank $K < n$, states that no linear dependence exists among explanatory variables. Should any or all of the independent (predictor) variables be perfectly collinear it would not be possible to derive estimator β . Even where perfect collinearity does not exist, high dependence among any of the predictor variables can result in serious consequences (Johnston, 1972). Detecting

colinearity among a set of independent variables is not a straight forward process, yet an examination of the correlation matrix for pairs of highly correlate X variables can indicate that a problem exists. Similarly, wide confidence intervals for some or all beta coefficients or a near-zero determinant for $X'X$ matrix would suggest the presence of multi co linearity (Montgomery, 1979).

Hierarchical regression where predictor variables are entered into the equation in an order predetermined by the researcher can be very useful in examining possible co linearity among variables. For example, if the correlation matrix indicates that two predictor variables are highly correlated and only one enters the regression with significant coefficient forcing the other to enter the regression first and subsequently examining the changes in both variables coefficients can reveal considerable information about the relationship between the two variables and about their independent and joint influences on the criterion variable. Having gained this information the researchers can better decide how to deal with the colinearity problem (Montgomery, 1979).

Hair et al. (2006) posit that the two common measures for assessing both pair wise and multiple variable collinearity are tolerance and its inverse, the variance inflation factor. Tolerance is the amount of variability of the selected independent variable not explained by the other independent variables while the variance inflation factor is its variance. This study has applied both tolerance and variance inflation factor to assess multicollinearity.

Various remedial measures have been proposed for handling multicollinearity including: Firstly, Creating a new variable which is a composite scale of the set of highly intercorrelated variables and using the new scale variables in the regression equation in place of its components. This can be achieved through factor analysis. Secondly, by using only one of the variables in the highly correlated set to represent the common underlying dimension (SPSS, 2000). Where multicollinearity proved to be a problem in this study, as it were with strategic capabilities measures, the first technique was applied by constructing a composite index.

Bass (1973) argues that indiscriminant pooling of cross-sectional data can have dangerous consequences due to heterogeneity. Since this study employed data from different sectors of the companies listed in NSE, to avoid such problem, this study used analysis of covariance to determine whether or not pooling is appropriate across the census population. Similar methodology was used by (Montgomery, 1979).

Other assumptions that might affect the model include linearity and normality. Linearity was assessed through an analysis of residuals by testing the overall variate and partial regression plots for each independent variable in the analysis. Normality of the error term of the variate was checked through visual examination of the normal probability plots of the residuals. These procedures are recommended by Hair et al. (2006).

CHAPTER FIVE

RESULTS AND DISCUSSIONS

5.1 Introduction

This chapter presents the results of the study in three sections that follow this introduction section. Section 5.2 highlights population, respondents and company characteristics. Section 5.3 outlines the descriptive statistics for study variables while Section 5.4 presents estimation data and hypotheses testing as per the study objectives. Section four (5.5) of this chapter discusses the results.

5.2 Population, Respondent and Company Characteristics

This section highlights response rate and compares the response rate for this study with other similar studies in Kenya. It also delineates respondent's and company characteristics. The confounding effect of the respondent's and company characteristics on study variables has been addressed under the estimation results section.

5.2.1 Response Rate

Secondary data on financial performance were collected from 55 out of 56 companies listed on NSE representing 98 % of the total population. This high representation did not come as a surprise, since it is possible to achieve 100% representation when dealing with secondary data. The one company, whose secondary data was not collected, had not submitted its audited financial statements to CMA for the period under review. Attempts to get this data from the company were unsuccessful. On the other hand 43 out of 56 respondents filled and returned the questionnaires designed to collect the primary data. This represented a response rate of close to 77%. This was

considered a fairly high response rate since a similar study by Irungu (2007) achieved a response rate of 64%.

5.2.2 Respondent Characteristics

In order to generate a profile of respondents who participated in this study, information concerning their position in the organization, the number of years they have held that position and their level of education (both formal and professional) was collected. Information on position of the respondents was aggregated into three levels, top management, middle level management and lower level management as presented on table 5.1. Though the questionnaire targeted CEOs of NSE quoted companies, in most instances the CEOs delegated the questionnaire to other officers in the organization. One way ANOVA was employed to check confounding effect of management level on responses and it was established only 8% of variable items were perceived differently by the different cadre of employees.

Although managers at different levels of organization may possess different levels of expertise that may influence their opinions, empirical studies (Armstrong 1985, Ascher 1978, Camerer and Johnson 1990) show that expertise adds little or nothing to forecast accuracy. For this matter, the variable items perceived differently were not dropped from analysis as outliers on basis of ANOVA findings. According to Hair et al (2006) Outliers variables should only be dropped if there is demonstrable proof that they are truly aberrant and not representative of any observations in the population. Further more they are very few to have significant impact on the study findings.

Table 5.1 Respondents Characteristics

Position of Respondent	Frequency	Percent	Cumulative Percent
Top Management	10	23.3	23.3
Middle Level Management	28	65.1	88.4
Lower Level Management	5	11.6	100.0
n	43	100.0	
Years of Experience			
Less than 5 years	31	72.1	72.1
Between 5 and 11 years	11	25.6	97.7
Over 10 years	1	2.3	100.0
n	43	100.0	
Level of Formal Education			
Bachelors Degree	17	39.5	39.5
Master/ Ph.D	17	39.5	79.1
Below University Graduate	9	20.9	100.0
n	43	100.0	
Level of Professional Education			
Business Oriented	34	79.1	79.1
Technical Oriented	5	11.6	90.7
None	4	9.3	100.0
n	43	100.0	

Descriptive results in table 5.1 indicate that 28 respondents (65%) held middle level management jobs while 10 (23%) were top managers and 5 (12%) were lower level managers. In terms of work experience, respondents were asked to indicate the number of years they had held their current position. Results show that 31 (72%) held their current position for less than five years; 11 (26%) held their current position for a period of five to ten years and only 1 (2%) held the position for a period of more than 10 years. In terms of formal education level, 17(40%) had a bachelors degree while another 17 (40%) had a masters degree and above. Only 9 (20%) did not have a university level of education. Regarding professional education, most respondents (n= 39, 91%) indicated having either business or technical oriented professional skills. Only 4 (9%) did not have professional skills. Of those having some professional skills, 87% had business oriented skills like CPA and CPS, while the remaining 13% had technical skills in IT and Engineering.

5.2.3 Company Characteristics

In order to generate the profile of the companies that participated in the study, data on NSE grouping, the year of their establishment, company's ownership and number of employees were collected and presented on table 5.2.

Table 5.2 Company Characteristics

NSE Grouping	Frequency	Percent	Cumulative Percent
Agricultural	2	4.7	4.7
Commercial and services	9	20.9	25.6
Financial and Investment	12	27.9	53.5
Industrial and Allied	14	32.6	86.0
Alternative Investment	6	14.0	100.0
Total	43	100.0	
Nature of Ownership			
Parastatal	4	9.3	9.3
Private	39	90.7	100.0
Total	43	100.0	
Year of Establishment			
Before independence	27	62.8	62.8
1960s after independence	7	16.3	79.1
1970s	4	9.3	88.4
1980s	2	4.7	93.0
1990s	3	7.0	100.0
Total	43	100.0	
Nature of Ownership			
Predominantly local	29	67.4	67.4
Predominantly Foreign	8	18.6	86.0
Balanced Foreign and Local	6	14.0	100.0
Total	43	100.0	
Number of Employees			
Up to 10 employees	2	4.7	4.7
Between 11 and 50 employees	3	7.0	11.6
Between 51 and 100 employees	2	4.7	16.3
Over 100 employees	36	83.7	100.0
Total	43	100.0	

As shown in table 5.2, 2 (5%) were grouped as agricultural companies, 9 (21%) were grouped as commercial and service companies while 12(28%) were grouped as

financial and investment companies. Others that participated in the study, 14(33%) were in the industrial and allied category while 6(14%) were grouped in the alternative investment sector. Regarding ownership 4(9.3%) companies were government parastatals and 39(90.7%) are private companies. On shareholding, 29(67.4) companies are predominantly local, with local citizens owning over 51% of the shares. There were 8 (18.6%) predominantly foreign companies where foreigners own 51% and above of the shares. The remaining 6(14.0%) companies have ownership balanced between foreign and local where by the shareholding is on 50/50 basis.

In order to determine early entry advantage reflected on performance of organizations, data was collected on year of establishment. Table 5.2 reveals that most of the companies (n=29, 67.4%) were established before Kenya gained independence. Seven (16%) were established in the 1960s but after Kenyan independence in 1963. Four (9.3%) were established in the 1970s while only 2 (4.7 %) and 3 (7.0%) were established in the 1980s and 1990s respectively.

In order to assess the size of the companies based on employee numbers, data on employees was collected. As shown on table 5.2, most of the companies (n=36, 83.7%) had more than 100 employees. Two (4.7%) companies had up to 10 employees. Three (7%) had between 11 and 50 employees while 2 (4.7%) had between 51 and 100 employees respectively. This implies that over 83% of the companies that participated in the study can be classified as large and only about 5% are small.

5.3 Descriptive Results

This section presents descriptive statistics on study variables. Mean being the most robust statistic for interval and ratio data, as been employed to measure central tendency. Range has been used to show the spread between the minimum score and the maximum score while standard deviation as been employed as the measure of dispersion. Standard deviation has been chosen because of its stability (e.g. Gall, Gall & Walter, 2005).

The analysis begins by examining the characteristics of corporate performance. Measures of financial performance when aggregated and per sector are first examined. Next, Non financial measures of performance are examined. This is followed by PIMS principles, contextual factors and finally strategic capabilities.

5.3.1 Corporate Performance

As mentioned earlier, corporate performance was assessed using both financial and non financial measures. As shown on table 5.3, quoted companies in Kenya have an average Return on Investment (ROI) of 10.27%. This however, ranges from a minimum of negative 66.92% to a maximum of 55.98% indicated by a dispersion of SD 16.00. On average these companies have Return on Assets of 4.97 ranging from a minimum of negative 14.84% to 18.08% with a standard deviation of 6.51. In terms of share growth, the companies registered a mean of ln 5.57%, ranging from ln – 2.89 to ln 8.54% with a SD of 2.24.

	SD	Min	Max
Total	16.00454	-66.92	55.98
Non-Financial	6.50856	-14.84	18.08
Share Growth	2.23503	-2.89	8.54

Note: Natural logarithm in share growth data.

Table 5.3 Measures of Financial Performance

Performance Indicators	N	Range	Minimum	Maximum	Mean	Std. Deviation
Return on Investment	54	122.90	-66.92	55.98	10.2672	16.00484
Return on Asset	54	32.86	-14.84	18.02	4.9657	6.50850
Share Growth	44	11.43	-2.89	8.54	5.5723	2.23503

Note: Natural logarithm, ln was used to transform share growth data

On the basis of NSE sector grouping, financial and investment sector is the best performer in terms of ROI with an average of 14.55% and dispersion of SD 7.90. This sector is closely followed by Industrial and Allied with an average of 12.74% and a higher dispersion of SD of 9.49. Commercial services sector follow with an average ROI of 11.13% and the largest dispersion of SD=29.97. Agriculture sector had a relatively low ROI of 4.77%, although this closely distributed among the companies within the sector with SD=3.98. The worst performer in terms of ROI is the Alternative sector with negative 3.16%, implying that companies in this sector are loss makers on average. However the dispersion in performance is relatively high with SD of 8.73.

Table 5.4 Financial Performance by Sector

NSE Grouping		Return on Investment	Return on Asset	Share Growth
Agricultural	Mean	4.7725	3.8375	5.4175
	n	4	4	4
	Std. Deviation	3.98425	2.99337	1.21859
Commercial and services	Mean	11.1318	6.7009	4.9100
	n	11	11	7
	Std. Deviation	29.97397	8.11846	3.47535
Financial and Investment	Mean	14.5593	3.0893	6.4755
	n	15	15	11
	Std. Deviation	7.90499	2.09609	.70456
Industrial and Allied	Mean	12.7412	8.6171	6.2931
	n	17	17	16
	Std. Deviation	9.49157	5.94970	1.25964
Alternative Investment	Mean	-3.1571	-1.9629	2.8700
	n	7	7	6
	Std. Deviation	8.72782	6.80113	2.99483
Total	Mean	10.2672	4.9657	5.5723
	n	54	54	44
	Std. Deviation	16.00484	6.50850	2.23503

Note: Natural logarithm ln used to transform share growth data

In terms of ROA Industrial and Allied sector registered the highest average score of 8.62% with a dispersion of SD=5.95. This was followed by Commercial and services sector with an average score of 6.70% with a wide distribution of SD=8.12. Agricultural sector came next with an average ROA of 3.84% distributed closely around SD of 2.99. Financial and investment sector followed closely with an average of 3.09% also distributed closely within SD of 2.10. Again, Alternative investment sector registered the least ROI of negative 1.96% widely dispersed with SD= 6.80. Since ROA is an indicator of growth, this would imply the Alternative sector shrank by 1.96%.

Generally, NSE listed companies registered phenomenal average share growth of ln5.57% which translates to 262.43% between 2002 and 2006. Financial and investment sector recorded the highest share growth rate of ln6.48% closely distributed about SD of ln0.70. This was closely followed by Industrial and Allied sector with an average of ln6.29% dispersed about SD of ln1.26. Agricultural sector had share growth of ln5.42% dispersed about SD of ln1.22. Then follows Commercial and services with an average of ln4.91% with SD of ln3.48 and finally alternative Investments with an average of ln2.87 with SD of ln2.99.

To assess the non financial measures of performance respondents were asked to evaluate on a five point likert scale how well or poorly they believed their companies performed on predetermined indicators in comparison with three close competitors, whereby 1=much worse, 2=worse, 3=neither worse nor better, 4=better, 5=much better. Table 5.5 show the descriptive statistics on the respondent's opinions.

Table 5.5 Non Financial Measures of Performance

Variable Construct	N	Minimum	Maximum	Mean	Std. Deviation
Market Share	43	2	5	3.84	.871
Overall Customer Retention	43	2	5	3.95	.872
Retention of Major Customers	43	2	5	4.23	.751
Customer Acquisition	43	1	5	3.81	.906
Resource Utilization	43	2	5	3.95	.754
Waiting Time	43	2	5	3.77	.718
Information Accuracy	43	3	5	4.16	.615
Service Accessibility	43	2	5	4.12	.793
Transaction Fulfilment	43	2	5	3.88	.823
Lead Times	43	2	5	3.72	.766
Yields	43	2	5	4.05	.785
Throughput Time	43	2	5	3.60	.849
Employee involvement in Decision Making	43	1	5	3.72	.934
Employee Training	43	2	5	3.95	1.045
Employee access to information	43	2	5	3.88	.905
Employee Creativity	43	1	5	3.91	.895
Continuous Process Improvement	43	2	5	4.21	.742

The result shows that on average respondents generally believed that their companies performed better than the competition on all the non financial measures of performance. The scores were closely distributed with $SD < 1$, except for employee training that had SD of 1.045.

5.3.2 PIMS Principles

PIMS principles were assessed on both ratio and interval scales. Items on ratio scale were ratios computed from the financial statements of the participating companies while interval data was generally gathered from respondents vide a five point likert scale questionnaire. Table 5.6 summarizes descriptive results on PIMS principles. Other than price ratio ($M=1.81$, $SD=1.12$), investments to sales ($M=1.53$, $SD=2.79$) and investment in plant and equipment ($M=0.44$, $SD=0.53$), that have close dispersion, other ratio measures of PIMS principles have wide range and SD ranging

from 9.83 to 26.37. This implies that investment per labour cost, total return and market to book value among NSE listed companies are heterogeneous.

Table 5.6 Means and Standard Deviations for Measures of PIMS Principles

Variable constructs	N	Minimum	Maximum	Mean	Std. Deviation
Price Ratio	51	-1.29	6.25	1.8141	1.11891
Investment to Sales	55	-2.79	15.79	1.5285	2.78944
Investment in Plant and Equipment	50	.00	3.27	.4350	.53263
Investment per Labour Cost	53	-4.99	188.84	11.7304	26.37243
Total Return	42	-.09	52.45	7.8921	9.83401
Market to Book Value	44	.46	126.29	17.0105	23.32959
Market Share	42	2	5	3.83	.881
Investment in Research	42	1	5	3.81	1.153
Product Enhancement	42	2	5	3.81	.890
Premium Pricing	42	2	5	3.52	.917
Market Share Improvement	42	1	5	3.93	1.091
Price Discounting	42	1	5	2.83	1.208
Business Portfolio	41	1	4	1.95	.805
Forward Integration	41	1	5	2.76	1.356
Backward Integration	40	1	5	2.43	1.318

On market share (M=3.83, SD=0.881), respondents believed they are better than the competition. When they were asked to indicate the amount of emphasis they put on investment in research and development (M=3.81, SD=0.881), product enhancement (M=3.81, SD=1.153), premium pricing (M=3.52, SD=0.92) and market share improvement (M=3.93, SD=1.09) the results reveal that the participating companies put more emphasis on these product related principles. However, respondent's opinions were not well formed regarding the emphasis participating companies put on price discounting (M=2.83, SD=1.21). The results further reveal that on average NSE listed companies have their dominant portfolio in the category of stars (M=1.95, SD=0.81). Finally, when respondents were asked the extent to which they agreed their companies engaged in vertical integration, there was no formed opinion on whether

the companies engaged on forward integration ($M=2.76$, $SD=1.356$) and they tended to disagree that they engaged in backward integration ($M=2.43$, $SD=1.318$).

5.3.3 Contextual Factors

Generally, respondents were asked to indicate the extent to which they agreed or disagreed with statements describing business environment in Kenya. These statements were extracted from prevailing literature on business operations in Africa and were generally negative implying that business environment in Kenya is adverse. They were to apply a five point likert scale where 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree and 5=strongly agree.

Results on table 5.7 indicate that except for electricity accessibility and quality, where the opinion is divided ($M=3.23$, $SD=0.95$) respondents agree that infrastructure in Kenya is poorly distributed and rather expensive. Results also reveal that there is no formed opinion on the state of distribution systems in Kenya. Regarding political and legal factor the findings show that respondents felt that the political climate is not supportive of business. The opinion was however divided as to whether government directly interferes with business operations ($M=3.09$, $SD=0.971$). On the economic factor, opinion is divided on whether the Kenyan market is limited in size ($M=3.07$, $SD=1.10$) and whether capital markets are weak and inefficient ($M=3.37$, $SD=0.976$). However, respondents agreed that the cost of credit in Kenya is high ($M=4.02$, $SD=0.67$) and that Kenyans disposable income is low thus affecting business volumes ($M=3.65$, $SD= 1.02$). Other than ethnicity influence when filling employment positions that had divided opinion ($M=3.00$, $SD0.98$), respondents did not feel that social cultural factor was unfavourable to business in Kenya.

Though respondents had divided opinion on whether corruption expenses form a significant part of operating expenses ($M=2.63$, $SD=1.2$), they generally agreed that corruption practices do affect competition and acquisition of business opportunities. Finally, opinion was divided regarding the role insecurity has played in terms of asset safeguarding and business interruptions.

Table 5.7 Descriptive Statistics on Measures of Contextual Factors

Variable Construct	N	Minimum	Maximum	Mean	Std. Deviation
Infrastructural					
Transport Network Distribution	43	2	5	4.09	.781
Transport Cost	43	1	5	4.12	.879
Electricity Accessibility and Quality	43	2	5	3.23	.947
Energy Cost	43	2	5	4.26	.848
Distribution systems					
Distribution Domination	43	1	5	3.00	1.000
Cross Functional Integration	43	1	4	2.88	.956
Information Exchange	43	1	5	2.74	.978
Channel Innovation	43	2	5	3.21	.914
Political and Legal					
Business Regulation and Bureaucracy	43	2	5	3.81	.880
Laws and Dispute Settling	43	2	5	3.56	.796
Political Ideology	43	2	5	3.86	.833
Government Institutions	43	2	5	3.51	.935
Government Interference	43	1	5	3.09	.971
Economic factors					
Limited Markets and Competition	43	1	5	3.07	1.100
Cost of Credit	43	2	5	4.02	.672
Capital Markets	43	1	5	3.37	.976
Effects of Consumer's Income	43	2	5	3.65	1.021
Social- Cultural factors					
Cultural Beliefs and Business Operations	43	1	4	2.16	.754
Work Ethics and Business Enterprise	43	1	4	2.33	.837
Loyalty Culture and Employment	43	1	5	3.00	.976

Table Continues

Table 5.7 continued

Variable construct	N	Minimum	Maximum	Mean	Std. Deviation
Mixed Culture and Productivity	43	1	4	2.19	.852
Unfair Business Practices	43	2	5	3.56	.881
Political Influence	43	1	5	3.53	1.008
Corruption Expenses and Operating Costs	43	1	5	2.63	1.196
Security					
Security of Assets	43	1	5	2.84	1.111
Employee's Safety	43	1	5	2.72	1.031
Business Interruption	43	1	5	3.16	1.090

5.3.4 Strategic Capabilities

To measure strategic capabilities, respondents were asked to evaluate how well or poorly they believed their companies performed on predetermined strategic management constructs on a five point likert scale in comparison with close competitors whereby 1=much worse, 2=worse, 3=neither worse nor better, 4=better and 5=much better. Table 5.8 summarises the descriptive results on strategic capabilities.

The results reveal that apart from the evaluation of ad effectiveness where opinion was not well formed ($M=3.4$, $SD=0.98$), generally respondents felt that they performed better than the competition on marketing capabilities. The same sentiment applies to market linking, IT, technological and management capabilities.

Table 5.8 Descriptive Statistics on Strategic Capabilities Measures

Variable Construct	N	Minimum	Maximum	Mean	Std. Deviation
Marketing Capabilities					
Customer Knowledge	43	2	5	4.09	.781
Competitor Knowledge	43	2	5	4.21	.773
Marketing Integration	43	2	5	3.67	.892
Segmentation and Targeting Skills	43	2	5	3.88	.879
Effectiveness of Pricing Programs	43	2	5	3.74	.759
Effectiveness of Advertising Programs	43	1	5	3.40	.979
Market Linking Capabilities					
Market Sensing	43	2	5	3.74	.902
Customer Linking	43	2	5	3.91	.750
Creating Durable Relationships with Suppliers	43	2	5	3.86	.804
Ability to Retain Customers	43	1	5	4.02	.801
Channel Bonding Capabilities	43	3	5	3.88	.697
Relationship with Channel Members	43	3	5	3.84	.754
IT Capabilities					
IT for new Product Development	43	1	5	3.67	1.063
IT for Cross-functional integration	43	1	5	3.84	1.067
IT for Knowledge Creation	43	1	5	3.88	.879
IT for Internal Communication	43	2	5	4.16	.785
IT for External Communication	43	2	5	3.93	.828
Technological Capabilities					
New Market Development capabilities	43	2	5	3.84	.871
Manufacturing/ Service process	43	3	5	4.02	.740
Technology Development Capabilities	43	2	5	3.86	.915
Predicting Technological Changes	43	2	5	3.77	.947
Production/ Service Delivery Facilities	43	2	5	4.16	.785
Quality Control Skills	43	2	5	4.14	.804

Table continues

Table 5.8 continued

Variable Construct	N	Minimum	Maximum	Mean	Std. Dev.
Management Capabilities					
Integrated Logistics Systems	43	2	5	3.84	.814
Cost Control Capabilities	43	2	5	3.98	.771
Financial Management Skills	43	3	5	4.33	.680
Human Management Capabilities	43	2	5	3.91	.868
Profitability and Revenue forecasting	43	2	5	4.09	.750
Marketing Planning Process	43	2	5	3.86	.990

5.4 Estimation Results

This section presents relationship results as per the study objectives. As a prelude to results presentation on each study objective, the criterion variable corporate performance has first been analyzed and its constituent measures tested for reliability and validity. This is followed by results on each of the four objectives. Analysis of the objectives begins by first assessing the reliability and validity of the constructs that builds up to index construction. These indices are correlated to establish underlying relationships after which hypothesis are tested where applicable. This is followed by model estimation and finally interpretation and discussions.

5.4.1 Corporate Performance

a) Factor Analysis and Reliability test of Non Financial Measures of Corporate Performance

Seventeen items were used to test the non financial perspective of corporate performance on a 5- point likert scale. Composite reliability analysis on the seventeen items showed internal consistency result of cronbach $\alpha = 0.8743$ above the upper threshold of $\alpha = 0.70$ with a variance explained at 66.74% above the threshold of 50%.

Factor analysis, revealed that Bartlett's Test of Sphericity was statistically significant at $\alpha = 0.01$ level ($\chi^2 = 351.145$, $df = 136$, $P = 0.00$) above the threshold of $\alpha = 0.05$ implying that factor analysis using principal component was relevant for the data set. Exploratory factor analysis revealed that the communality of all the seventeen items was above the threshold of 0.5. Orthogonal varimax rotations converged after six iterations and four components with eigen values greater than unity were extracted accounting for 66.00% of the variance (see table 5.9).

Table 5.9 Exploratory Factor Analysis for Non Financial Measures of Performance

Item Description	Rotated Component Matrix(a)			
	1	2	3	4
Market Share		.752		
Overall Customer Retention		.803		
Retention of Major Customers		.678		
Customer Acquisition		.658		
Resource Utilization				.783
Waiting Time			.812	
Information Accuracy			.512	
Service Accessibility			.863	
Transaction Fulfilment			.715	
Lead Times		.656		
Yields		.559		
Throughput Time				
Employee involvement in Decision Making	.764			
Employee Training	.748			
Employee access to information	.749			
Employee Creativity	.834			
Continuous Process Improvement	.635			

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

This is above the upper threshold of 60% and indicates that the four component factor model derived fits the data. However, the items used for measuring non financial aspects of corporate performance were derived from Kaplan and Norton's (1996) Balanced Score Card (BSC). The BSC model on non financial perspectives of performance envisages three factors including customer, internal-business-process and learning and growth perspectives. Since only one item (resource utilization) with a factor loading of 0.783 formed the fourth component, confirmatory factor analysis was employed to fit items under the BSC model by specifying the number of components to be extracted as three. Table 5.10 gives a summary of the findings of the rotated component matrix under the confirmatory factor analysis.

Table 5.10 Confirmatory Factor Analysis for Non Financial Measures of Performance

Rotated Component Matrix(a)	Component and Factor Loading		
	1	2	3
Market Share		.742	
Overall Customer Retention		.802	
Retention of Major Customers		.667	
Customer Acquisition		.687	
Resource Utilization	.537		
Waiting Time			.883
Information Accuracy	.547		
Service Accessibility		.519	
Transaction Fulfilment			.794
Lead Times			.738
Yields		.674	
Throughput Time		.579	
Employee involvement in Decision Making	.687		
Employee Training	.774		
Employee access to information	.795		
Employee Creativity	.799		
Continuous Process Improvement	.694		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 6 iterations.

The orthogonal varimax rotations under confirmatory factor analysis converged after six iterations. Items with factor loading of greater than 0.5, combined to form three factors, namely, Learning and Growth perspective, Customer perspective and Internal-Business-Process perspective.

The first non financial performance factor labeled “Learning and Growth Perspective” comprises of employee related attributes such as employee involvement in decision making, employee training and employee access to information and employee creativity. It also comprises other activities executed by employees including proper resource utilization, accuracy of information given to customers and ability of employees to execute continuous process improvement. The seven items were summated to form an interval scale “Learning and Growth perspective Index” (LGPI).

The second measure of performance was labeled “Customer Perspective” and is made up of customer oriented aspects like market share, overall customer retention, retention of major customer, customer acquisition and service accessibility. It also comprises yields, a measure of proportion of service success to failure and throughput time (a measure of time spent in product or service production). The seven items were summated resulting in a composite scale, “Customer Perspective Index” (CUSTPI).

The third corporate performance measure was labeled “Internal-Business-Process Perspective” Comprising of drivers of efficiency. These include waiting time before service, Length of transactions fulfillment and lead time. The three items were summated to form a composite scale, “Internal-Business-Process Perspective Index” (IBPPI).

Table 5.11 Validity and Reliability for Indices of Non Financial Measures of Performance

Factor Index	Items	Factor Loading	Alpha if item deleted	Composite Reliability
Learning and Growth Perspective Index (LGPI)	Employee creativity	0.799	0.7961	0.8420
	Employee Access to information	0.795	0.8133	
	Employee Training	0.774	0.8102	
	Continuous Process Improvement	0.694	0.8170	
	Employee involvement in Decision Making	0.687	0.8282	
	Information Accuracy	0.547	0.8318	
	Resource Utilization	0.537	0.8400	
Customer Perspective Index (CUSPI)	Overall Customer Retention	0.802	0.7983	0.8452
	Market share	0.742	0.8323	
	Customer Acquisition	0.687	0.8069	
	Yields	0.674	0.8219	
	Retention of Major Customers	0.667	0.8358	
	Throughput Time	0.579	0.8344	
	Service Accessibility	0.519	0.8332	
Internal-Business Process Perspective Index (IBPPI)	Waiting Time	0.883	0.7098	0.7991
	Transaction Fulfillment	0.794	0.6892	
	Lead Times	0.738	0.7746	

Table 5.11 summarizes factor index constructed, its code and label, the constructs underlying the factor, their loading, alpha measure of reliability if the construct item is deleted and composite reliability across the factor index items

b) Correlation Analysis and Data Transformations

This section seeks to determine associations through correlation analysis for ratio data on corporate performance. It also attempts to determine data that may require transformation to fit further analysis procedures. As earlier mentioned, ratio data was used to measure financial aspect of corporate performance. Three measures, ROI, ROA and SHARE growth were employed.

Table 5.12 Means and Standard Deviations for Financial Measures of Performance

Performance Indicators	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Return on Investment	43	-18.15	37.14	431.94	10.0451	10.14701
Return on Assets	43	-14.84	17.54	209.69	4.8765	5.86972
Share Growth	43	-2.89	8.54	245.91	5.7188	1.75795

Table 5.12 shows the minimum and maximum scores for the variables. This statistic was used to calculate the range that was used as a basis for data transformation from ratio scale to interval scale. This is necessary in order to form one composite measure of corporate performance by combining the financial and the non financial measures of performance. The standard deviations for ROI and ROA are 10.15 and 5.87. This dispersion is considered quite large implying there is need for data transformation on the two constructs. At the same time, correlation analysis was used to establish relationships between corporate performance constructs.

Table 5.13 Results of Correlation Analysis for Financial Measures

Variable Construct	Statistic	Return on Investment	Return on Asset	Share Growth
Return on Investment	Pearson Correlation	1		
	Sig. (2-tailed)	.		
	N	43		
Return on Asset	Pearson Correlation	.742(**)	1	
	Sig. (2-tailed)	.000	.	
	N	43	43	
Share Growth	Pearson Correlation	.146	.177	
	Sig. (2-tailed)	.352	.256	
	N	43	43	43

** Correlation is significant at the 0.01 level (2-tailed).

As expected, correlation analysis table 5.13 shows that ROI and ROA are positively correlated ($r=0.742$, $p=0.00$) and the association is significant at $p<0.01$. The association between ROI and Share growth ($r=0.146$, $p=0.352$) is positive but not significant. The same case applies to the association between ROA and Share growth ($r=0.177$, $p=0.256$). This is not as expected and could imply that share growth among NSE listed companies is speculative and does not reflect company fundamentals. Due to this anomaly, Share growth was dropped from further analysis.

In order to come up with one measure of overall Corporate Performance, the summated scores of non financial measures of performance (discussed earlier) were added with those of financial performance. However, the two are not measured using the same scale and are thus not homogenous. To make them homogenous, ratio scores used to measure financial perspective of performance, and summarized by the descriptive statistics on table 5.12, were transformed into interval scores. To do so, range statistic was computed between the minimum scores and the maximum scores of ROI and ROA, and divided by 5, the points on the interval scale. The grouped data was subsequently updated into the SPSS data editor as the new interval measure of financial perspective of corporate performance coded FINPERF. A composite Index labeled “Overall Performance” and coded OPERFI was derived by summing Financial Performance Index (FINPERFI), Customer perspective Index (CUSTPI), Internal Business Processes Index (IBPPI) and Learning and Growth Perspective Index (LGPI). This Overall Performance Index (OPERFI) is the dependent variable measure and is corroborated by Balanced Score Card (BSC). Table 5.14 and table 5.15 show descriptive statistics and correlation analysis between different constructs of dependent variable respectively.

Table 5.14 Means and Standard Deviations for Measures of Corporate Performance

Measures of Performance	N	Minimum	Maximum	Mean	Std. Deviation
Financial Perspective Index	43	2.00	10.00	6.6512	1.54124
Customer Perspective Index	43	16.00	35.00	27.6047	4.20396
Internal Business Process Perspective Index	43	7.00	15.00	11.3721	1.95208
Learning and Growth Perspective Index	43	17.00	35.00	27.7907	4.27372

Though the standard deviations of customer perspective index ($\delta=4.20$) and learning and growth index ($\delta=4.27$) are not within the ideal range of $\delta<3.0$ as showed by table

5.14, this is expected with summated scores. No further transformations are considered since this will lead to further data loss and in any case they are not so far from the ideal range. Also the two constructs are critical measures of corporate performance under the balanced score card, and cannot therefore be dropped from further analysis.

Table 5.15 Results of the Correlation Analysis for the Measures of Corporate Performance

Variable Construct	Statistic	1	2	3	4
Financial Perspective Index (1)	Pearson Correlation	1			
	Sig. (2-tailed)	.			
	N	43			
Customer Perspective Index (2)	Pearson Correlation	.368(*)	1		
	Sig. (2-tailed)	.015	.		
	N	43	43		
Internal Business Process Perspective Index (3)	Pearson Correlation	-.027	.465(**)	1	
	Sig. (2-tailed)	.863	.002	.	
	N	43	43	43	
Learning and Growth Perspective Index (4)	Pearson Correlation	.422(**)	.394(**)	.232	1
	Sig. (2-tailed)	.005	.009	.134	.
	N	43	43	43	43

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

As expected, measure of financial performance perspective, is positively correlated with the measure of customer perspective ($r=0.368$, $p=0.015$) and the association is significant at $P<0.05$. It is also positively correlated with the measure of learning and growth perspective ($r=0.422$, $p=0.005$) with the association being significant at $P<0.01$. Contrary to the expectation, financial perspective measure is negatively correlated with the measure of internal business processes perspective ($r=0.027$, $p=0.863$). However, the association is weak and insignificant. There is also strong positive correlation between customer perspective and learning and growth perspective ($r=0.394$, $p=0.009$) and between customer perspective and internal business processes ($r=0.465$, $p=0.002$). The two relationships are significant at $P<0.01$. This means that internal business processes perspective is only significantly

correlated to customer perspective. This may be explained by the fact that internal business processes construct measures relates to efficiency that may be difficult to operationalize. However, since the construct is a critical measure of performance under balanced score card, the measure was not dropped from further analysis.

5.4.2 PIMS Principles and Corporate Performance

The first objective of this study sought to establish the link between PIMS principles and corporate performance. In order to address this objective eight hypotheses (H1 to H7a & b) were formulated. As a prelude to testing these hypothesis, PIMS measures were validated and tested for reliability through factor analysis and cronbach alpha respectively. Pearson's product moment correlation analysis and stepwise estimation regression analysis were employed to test the hypotheses.

a) Factor Analysis and Test of Reliability for the PIMS Principles

PIMS principles were assessed on both interval scale and ratio scale. This section deals with factor analysis of the interval scale. Ratio scale items will be discussed later under correlations. The PIMS principles assessed through a five point likert scale included product/ service quality, market share and vertical integration. Business portfolio was also assessed through a management judgment where respondents were asked to pick one of the BCG characteristics that best described their dominant business portfolio. Since business portfolio and market share were measured by a single item, there was no need for validity and reliability assessment. Vertical integration was measured by two items. Factor analysis was not considered since the items did not meet the criteria for factor analysis of at least five items. Reliability analysis for the two items revealed internal consistency of Cronbach $\alpha = 0.8358$ above

the upper threshold of $\alpha = 0.7$. The two items were summated to form a composite scale “Vertical integration Index” (VERTI).

Product /Service quality was measured by five items as shown under variable operationalization in chapter four. Exploratory factor analysis was used to assess their validity. Exploratory factor analysis had a KMO measure of sampling adequacy of 0.635 above the threshold of 0.5. The Bartlett’s Test of Sphericity ($\chi^2=38.366$, $df =10$, $P= 0.00$) was significant at 0.001, implying principal component method of extraction fitted the data set. Among the five items measuring product/ service quality, premium pricing and market share improvement had a communality of 0.424 and 0.394, below the threshold of 0.5. The two items were therefore excluded from further analysis.

A repeat of factor analysis, extracted one component with eigen value of unity and variance explained at 56.834%. Two items, “investment in research and development of new product/service lines” and “product enhancement” had very high factor loadings of 0.920 and 0.922 respectively. The other construct item, “price discounting” had factor loading of less than 0.5 and was therefore dropped from index construction. A composite index of the two items labeled “Product Quality Index” (PROQI) was formed by summating the two items. The two items had a reliability of Cronbach $\alpha = 0.8083$. Table 5.16 gives a summary of indices constructed after factor analysis on PIMS principles. The table summarizes factor index constructed, its code and label, the constructs underlying the factor, its loading, alpha measure of reliability if the construct item is deleted and composite reliability across the factor index items.

Table 5.16 PIMS Index Constructed from Interval Data

Factor Index	Items	Factor Loading	Composite Reliability	Variance explained
Product/ Service quality Index (PROQI)	Investment in Research	0.920	0.8083	56.834%
	Product enhancement	0.922		

b) PIMS Ratio Data Validation Procedures

In order to examine association between dependent variable and ratio measures of the independent variables for index construction, a series of Pearson bivariate correlation analysis were conducted. Table 5.17 presents the results of these correlations. Price ratio, a measure of product quality calculated by dividing sales revenue and direct costs when correlated to overall performance revealed a weak positive and insignificant relationship ($0.232, p = 0.134$). Similarly, staff contribution, a ratio measure of the criterion variable, learning and growth was weakly correlated to overall performance ($r = 0.068, p = 0.663$) and insignificant. The two were dropped from index construction since there were other interval measures demonstrated under factor analysis to be more valid predictors.

Investment in plant and equipment, investment to sales and investment per labour costs were also found to be weakly correlated to overall performance and also insignificant. However they were not dropped from further analysis because they were the only measures of investment intensity in this study. Instead, they were summated to form "investment intensity Index" (INVINTEI). Total return a measure of long term value was weakly correlated to performance ($r = 0.120, p = 0.444$) and insignificant.

Table 5.17 Results of the Correlation Analysis for the relationship between ratio measures of predictor variables and Overall Performance

Item	Statistic	1.	2	3	4	5	6	7	8.
Staff Contribution (1)	Pearson Correlation	1							
	Sig. (2-tailed)	.							
	N	43							
Price Ratio (2)	Pearson Correlation	.110	1						
	Sig. (2-tailed)	.481	.						
	N	43	43						
Investment to Sales (3)	Pearson Correlation	.101	.647(**)	1					
	Sig. (2-tailed)	.520	.000	.					
	N	43	43	43					
Investment in Plant and Equipment (4)	Pearson Correlation	-.025	.063	.087	1				
	Sig. (2-tailed)	.875	.687	.577	.				
	N	43	43	43	43				
Investment per Labour Cost (5)	Pearson Correlation	.297	.181	.648(**)	.047	1			
	Sig. (2-tailed)	.053	.246	.000	.765	.			
	N	43	43	43	43	43			
Total Return (6)	Pearson Correlation	-.061	-.065	-.180	-.149	-.130	1		
	Sig. (2-tailed)	.698	.677	.248	.341	.406	.		
	N	43	43	43	43	43	43		
Market to Book Value (7)	Pearson Correlation	.066	-.033	-.030	.001	-.024	.059	1	
	Sig. (2-tailed)	.674	.835	.848	.992	.877	.709	.	
	N	43	43	43	43	43	43	43	
Overall Performance (8)	Pearson Correlation	.068	.232	-.106	.068	-.098	.120	.286	1
	Sig. (2-tailed)	.663	.134	.498	.665	.531	.444	.063	.
	N	43	43	43	43	43	43	43	43

** Correlation is significant at the 0.01 level (2-tailed).

Market to book value, another measure of long term value was moderately and positively correlated to performance ($r = 0.286$, $p = 0.063$) but insignificant at $\alpha = 0.05$. The two being the only measures of long term value in this study were summated to form “Long Term Value Index” LONGTVI. Table 5.18 show the two PIMS indices constructed from ratio data and their descriptive statistics.

Table 5.18 PIMS Indices constructed from Ratio Data

Index	Items	Minimum Value	Maximum Value	Mean	SD
Investment Intensity Index (INSA)	Amount Invested to sales (INSA)	-0.92	15.79	1.79	3.03
Index (INVENTI)	Investment in Plant & Equipment (PLANT)	0.01	3.27	0.46	0.54
	Investment per Labor Cost (ILC)	0.26	188.84	13.88	28.87
Long Term Value Index (LONGTVI)	Total Return (TR)	0.01	52.45	8.76	9.22
	Market to Book Value (MB)	0.46	98.01	12.18	15.96

The range and standard deviation of investment per labor cost ($\delta=28.67$) and market to book value ($\delta =15.96$) are quite large when compared to other measures of the investment intensity and long term value respectively. The ideal way is to treat them as outliers and drop them from further analysis. However, they are important measures of the constructs and dropping them would compromise the construct itself.

c) Results of the Tests of Hypothesis 1 to 7 on the Link between PIMS Principles and Corporate Performance

This section addresses objective one by presenting results on tests of hypotheses 1 through to hypotheses 7 a, and 7b. Correlation statistics namely, Pearson's product moment correlation analysis was employed to test hypotheses 1 to 7a, while stepwise estimation regression was employed to test hypothesis 7b. Results on correlation analysis are presented in table 5.19 while results of stepwise estimation are presented in table 5.20.

quality and corporate performance ($r=0.646$, $p<0.0001$). Since $p<0.05$ there is no support for the null hypothesis. We therefore reject the null hypothesis and accept the

Table 5.19 Correlations between PIMS principles and corporate performance

Construct	Statistic	1	2	3	4	5	6	7	8
Product/ Service Quality (1)	Pearson	1							
	Correlation								
	Sig. (1-tailed)	.							
	N	43							
Market Share (2)	Pearson		1						
	Correlation	.358(**)							
	Sig. (1-tailed)	.009	.						
	N	43	43						
Investment Intensity Index (3)	Pearson			1					
	Correlation	-.005	.055						
	Sig. (1-tailed)	.487	.364	.					
	N	43	43	43					
Business Portfolio (4)	Pearson				1				
	Correlation	.386(**)	-.325(*)	-.002					
	Sig. (1-tailed)	.005	.017	.495	.				
	N	43	43	43	43				
Vertical Integration Index (5)	Pearson					1			
	Correlation	-.113	.036	.028	.042				
	Sig. (1-tailed)	.235	.410	.430	.395	.			
	N	43	43	43	43	43			
Long Term Value Index (6)	Pearson						1		
	Correlation	.203	.176	-.091	-.056	.070			
	Sig. (1-tailed)	.096	.129	.281	.360	.327	.		
	N	43	43	43	43	43	43		
PIMS Principles Index (7)	Pearson							1	
	Correlation	.149	.181	.830(**)	-.035	.126	.474(**)		
	Sig. (1-tailed)	.170	.123	.000	.411	.211	.001	.	
	N	43	43	43	43	43	43	43	
Corporate performance (8)	Pearson								1
	Correlation	.646(**)	.585(**)	-.101	.337(*)	.202	.300(*)	.100	
	Sig. (1-tailed)	.000	.000	.260	.014	.096	.025	.263	.
	N	43	43	43	43	43	43	43	43

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

2-tailed test between business portfolio/corporate performance ($r=0.337$, $p=0.027$)

Hypothesis (Ho1): There is no positive relationship between corporate performance and product/service quality

In order to establish the strength, direction and significance of the relationship between the product/ service quality and corporate performance, Pearson's product moment correlation was employed and the results are shown in the table 5.19. The results reveal that there is a strong positive correlation between product/ service quality and corporate performance ($r=0.646$, $p=0.000$). Since $p<0.05$ there is no support for the null hypothesis. We therefore reject the null hypothesis and accept the

alternative hypothesis. Thus, “there is a significant positive relationship between corporate performance and product/ service quality.

The above finding is not surprising since many PIMS studies such as Buzzell and Gale (1987); Kotabe et al. (1991) and Meng Leong (2001) among others, have rigorously demonstrated this relationship. This study therefore replicates this relationship in Kenyan context implying that the principle of product/ service quality is robust and can be generalized across different markets.

Hypothesis (Ho2): There is no positive relationship between market share and corporate performance

To test this null hypothesis, Pearson’s product moment correlation analysis was employed and results presented in the table 5.19. Results show that market share is positively correlated with corporate performance ($r=0.585$ $p = 0.009$). The relationship is quite strong since the correlation is above 0.5 mid point and significant at $p < 0.01$. This implies that there is no support for the null hypothesis. Thus we reject the null and accept the alternative hypothesis, implying, “there is significant positive relationship between market share and corporate performance”. This is an expected outcome also extensively corroborated by PIMS studies. PIMS studies suggest that market leaders not only command higher prices, but also maintain this leadership leading to superior performance (Buzzell and Gale, 1987).

Hypothesis (Ho3): Investment intensity does not have negative relationship with corporate performance

This hypothesis was tested using Pearson's product moment correlation analysis. As shown on table 5.19, there is a weak negative correlation between investment intensity and corporate performance ($r = -0.101$, $p = 0.26$). Although the results are in the hypothesized direction, there is evidence in support of the null hypothesis, hence we reject the alternative hypothesis and accept the null hypothesis above.

The foregoing result implies that in the Kenyan context, high investments in working capital, plant and equipment, workers and labour costs, does not necessarily act as a drag to corporate performance. Although this is inconsistent with PIMS principles, companies in Kenya that seem to invest heavily in plant and machinery, operations and in employees for example Safaricom and East African Breweries, are also doing very well in terms of profitability. This principle is further revisited under the discussion section.

Hypothesis (Ho4): There is no relationship between business portfolio (based on BCG model) and corporate performance.

This hypothesis sought to establish whether there is a relationship between business portfolio (based on the BCG model) and corporate performance. In order to test this hypothesis Pearson's product moment correlation analysis was employed. The results in table 5.19 show that there is a negative relationship between business portfolio and corporate performance ($r = -0.337$, $p = 0.027$) albeit weak.

correlation between vertical integration and corporate performance ($r = -0.202$, $p = 0.096$). Although the results are in hypothesized direction, the p value is greater

In order to assess characteristics of individual business portfolios, descriptive statistics were used. In this study, respondents were asked to classify their dominant business portfolio along the BCG growth share matrix classification. Twelve (27.9%) classified their dominant portfolio as “cash cow”, twenty three (53.5%) classified their dominant portfolio as star, six (14 %) classified their dominant portfolio as “question mark” while two (4.7%) classified their dominant portfolio as “dog”. From theoretical foundations, “question marks” are cash users as they require to be propped to weather the competition in high growth markets. This implies increased marketing expenditures resulting in higher operating costs and consequently lower profit margins. Given the proportion of these cash consumers is 67.5% as opposed to 42.5% of cash generators, it is in order, for the correlation between business portfolio and corporate performance to be negative.

Although in the above test the correlation is weak ($r = -0.337$, $P = 0.027$), it is significant at $P < 0.05$, implying there is a relationship between business portfolio and corporate performance. Although this is contrary to the PIMS principles, the hypothesis compares with BCG theorem. It appears, therefore, that Kenyan firms tend to subscribe to the BCG theorem as opposed to PIMS principles.

Hypothesis (Ho5): There is no negative relationship between vertical integration and corporate performance

To test this hypothesis, Pearson’s product moment correlation technique was used and the results are presented in table 5.19. The results reveal that there is a weak negative correlation between vertical integration and corporate performance ($r = -0.202$, $P = 0.096$). Although the results are in hypothesized direction, the p value is greater

than 0.05, implying that there is support for the null hypothesis. We thus reject the alternative hypothesis and accept the null hypothesis. This suggests that there is no relationship between vertical integration and corporate performance.

Previous studies based on PIMS principles have demonstrated that ROI is usually enhanced by high degree of backward integration but not by forward integration. Descriptive statistics in table 5.6 show that there are no formed opinions on whether companies in this study engaged in forward integration (M=2.76, SD=1.356) and respondents tended to disagree that their companies engaged in backward integration (M=2.43, SD=1.318). This could explain the reasons why this null hypothesis is not rejected.

Hypothesis (Ho6): Long term value indicated by strategic factors that enhance total return and market value is not positively correlated with corporate performance

To test this hypothesis, Pearson's product moment correlation analysis was used and the results are presented on table 5.9. The results show that there is a relatively weak relationship between long term value and corporate performance ($r = 0.300$, $P = 0.025$). However, since $P < 0.05$ there is no support for the null hypothesis. We therefore reject the null hypothesis and accept the alternative hypothesis indicating that "long term value indicated by strategic factors that enhance total return and market value is positively and significantly correlated with performance". This is in support of PIMS studies. This means that factors that enhance long term value of the firm also enhance performance in the long run.

Hypothesis (Ho7a): There is no positive relationship between PIMS principles as a composite variable and corporate performance

This hypothesis was intended to establish whether there is a significant relationship between corporate performance and PIMS principles when aggregated and addressed jointly. To test this hypothesis, all the PIMS principles/ constructs were summated into a composite score. This score was then correlated with performance vide Pearson's product moment correlation and the results are presented in table 5.19.

The results show a positive correlation between PIMS composite score and corporate performance ($r= 0.236$, $P=0.263$). Although the correlation is in the hypothesized direction, it is weak and the p value of 0.236 implies support for the null hypothesis. We therefore reject the alternative hypothesis and accept the null hypothesis. This implies that the relationship between composite measure of PIMS principles and corporate performance though positive it is not significant at $P<0.05$. PIMS theory suggests that PIMS principles have predictive power on corporate performance. We expect therefore, to find significant relationship between composite score of PIMS principles and corporate performance. However, by lumping all the principles together in one score, the underlying relationships may be influenced by variance inflation factor (VIF) thus suppressing the relationship. This is evident from the descriptive statistics of PIMS principles index ($M=55.6437$, $SD=35.5516$) showing a very large standard deviation around the mean. To determine the predictive power of PIMS principles on corporate, we need to assess hypothesis Ho7b.

Table continues

Hypothesis (Ho7b): PIMS principles do not have predictive power on corporate performance

To test this hypothesis, stepwise regression was employed. Hair et al. (2006) posit that stepwise estimation maximizes the incremental variance explained in each step of model building. The relationship between PIMS principles and corporate performance is captured by equation number 3 explained under model formulation and estimation on page 101. Based on results of Pearson's product moment correlation presented on table 5.19, product/ service quality has the highest correlation with performance ($r = 0.646$, $P = 0.00$) and was therefore selected to enter the estimation equation in the first step. Results of this estimation are presented on table 5.20.

Table 5.20 Stepwise Estimation Model of PIMS Principles

Step 1- Variable Entered: Product/ service quality

Variable construct	B	Std. Error	Beta	t	P-values	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	50.088	4.430		11.307	.000					
Product/ Service Quality	3.059	.565	.646	5.418	.000	.646	.646	.646	1.00	1.00
Model summary									Model fit	
R=0.646, R ² =0.403 Adj. R ² =0.403, SE=6.82212									Regression $\chi^2=1366.269$, Residual χ^2 =1908.196, F=29.356, P=0.00	

Variables Not Entered into the Estimation Model

Constructs	B	Std. Error	Beta	t	P-values	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	59.443	6.746		8.812	.000					
Market Share	5.207	1.306	.514	3.986	.000	.585	.548	.477	.864	1.158
Business Portfolio Investment Intensity Index	-1.679	1.426	-.149	1.178	.247	-.337	-.190	.141	.892	1.122
Vertical Integration Index	-.030	.034	-.104	-.862	.394	-.101	-.140	.103	.985	1.015
Long Term Value Index	-.829	.441	-.226	1.880	.068	-.202	-.295	.225	.990	1.010
Long Term Value Index	.097	.057	.208	1.697	.098	.300	.269	.203	.954	1.048

Table continues

Table 5.20 continued

Step 2- Variable Entered: Market share

Construct	B	Std. Error	Beta	t	P-values	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	39.543	4.864		8.130	.000					
Market Share	4.114	1.137	.406	3.617	.001	.585	.496	.379	.872	1.147
Product/ Service Quality	2.371	.531	.501	4.464	.000	.646	.577	.468	.872	1.147
Model summary									Model fit	
R=0.749,									Regression	
R ² =0.561									$\chi^2=1836.580,$	
Adj. R ² =0.539,									Residual χ^2	
SE=5.99559									=1437.885	
									F=25.546,	
									P=0.000	

Dependent Variable: Corporate Performance

The results reveal that product/ service quality explain up to 41.7% (R= 0.417, Adj. R²=0.403) of variation in corporate performance. However, when the coefficient of determination is adjusted for the sample size and degrees of freedom, the product/ service quality construct explains up to 40.3% of variation in corporate performance. The ANOVA analysis provides the statistical test for the overall model fitness in terms of the F- ratio. Using product/ service quality construct reduces the error of criterion estimation and this is deemed significant with an F ratio of 29.356 and a significance level of 0.001. This implies the data set fits the estimation model. The value 3.059 is the regression coefficient for the product/ service construct. The predicted value for each observation is the intercept (50.088) plus the regression coefficient (3.059) times the value of the independent variable, product/ service quality ($Y=50.088+ 3.059X$).

The standardized regression coefficient value of 0.646 is the value calculated from the standardized data and aids comparison between independent variables. The standard error of product of the regression coefficient of 4.430 is an estimate of how much regression coefficient will vary from sample to sample. The standard error of product/ service quality is 0.565 denoting that the 95% confidence interval for product/ service

quality, would be $3.059 \pm (1.96 \times 0.565)$ or ranging from low of 1.9516 to a high of 4.1664. The value product/ service quality divided by the standard error is the calculated t value for a t test of hypothesis (i.e. $3.059/0.565 = 5.414$). The t measures the significance of the partial correlation of the variable reflected in the regression coefficient. In this case, the t value is significant at 0.000 implying that there is no support for the null hypothesis relating to product/ service quality construct. We therefore reject the partial null hypothesis and accept the partial alternative hypothesis. Thus product/ service quality has significant predictive value of 40.3% on corporate performance.

With the first step of the stepwise procedure completed, the next step is to evaluate the variables not in the equation and determine whether another variable meets the criteria for addition into the regression model. Hair et al. (2006) sets the criteria for addition as partial correlation great enough to be significant at specified level of significance of between 0.05 and 0.1. For this study a significance of 0.05 will be used to determine whether a variable will be added or dropped from the equation.

Table 5.20 shows that market share has the highest partial correlation of 0.585 among the constructs unrepresented in the first step of the equation, and it is the only one that is significant at $p < 0.05$. Market share is therefore added into the equation in step two and all other variables dropped from further consideration since they are not significant. Results are presented in table 5.20. The multiple R, R^2 and the adjusted R^2 increased with the addition of market share. The R^2 increased by 0.144 from 0.417 to 0.561 and the adjusted R^2 increased by 0.136 from 0.403 to 0.539. Standard error of estimate decreased from 6.82212 to 5.99559. The three measures demonstrate the

improvement in the overall model fitness after the addition of market share construct, while controlling product/ service quality.

The predictive power of the new model is therefore 53.9% as adjusted for the number of variables with the additive explanatory power of market share being 13.6%. The regression coefficient for market share is 4.114 and the beta weight is 0.406 thus market share has a substantial impact on overall regression model. The coefficient is statistically significant at $p < 0.01$ and multicollinearity is minimal. Thus, tolerance is quite acceptable with a value of 0.872 and VIF of 1.147 indicating that only 12.8% of either variable is explained by the other. Market share therefore has a significant predictive power of 13.6% on corporate performance. This partially supports the alternative hypothesis, "that PIMS principles have predictive power on corporate performance". However, only product quality and market share among PIMS principles, have significant predictive power on corporate performance, explaining up to 53.9% of variance in corporate performance when adjusted for number of variables and degrees of freedom.

The other PIMS principles including long term value, vertical integration, business portfolio and investment intensity, do not have significant predictive power in an aggregated composite model. This therefore implies that the alternative hypothesis stating that "PIMS principles have significant predictive power on corporate performance" is only partially supported. This is not surprising since some PIMS scholars recognize that it is product quality and market share that have rigorously been linked with corporate performance (Shoeffler, 1977).

5.4.3 Strategic Capabilities and Corporate Performance

The second objective of this study sought to determine the influence of strategic capabilities on corporate performance. In order to achieve this objective, three hypotheses were formulated (H8, H9a, H9b). As a prelude to testing these hypotheses, strategic capabilities measures were validated and tested for reliability through factor analysis and cronbach alpha respectively.

a) Validity and Reliability Analysis on Strategic Capabilities

Strategic capabilities were measured broadly by five constructs including marketing, market linking capabilities, Information Technology (IT) capabilities, technological and management capabilities. Each of these constructs had several underlying items. This section analyses principal component factors to test validity and employs cronbach alpha to test reliability of each of the five constructs.

Marketing capabilities were measured by six items on a 5 point likert scale. The items included customer knowledge, competitor knowledge, marketing integration, segregation and targeting skills, Effectiveness of pricing programs and effectiveness of advertising programs. Factor analysis on marketing capabilities showed a KMO measure of sampling adequacy of 0.778 and a Bartlett's Test of sphericity ($\chi^2=107.636$, $df =15$, $P= 0.00$) significant at 0.001. All items except competitor knowledge (0.366) had communalities above threshold level of 0.5. Competitor knowledge was therefore dropped from further analysis. Further factor analysis extracted one component with all items having factor loading above upper threshold of 0.7. The five items had a reliability of cronbach $\alpha= 0.8507$. The five items namely Segregation and Targeting skills, Marketing Integration, Effectiveness of Advertising

Programs, Customer Knowledge and Effectiveness of Pricing Programs, were summated and a composite index labeled “Marketing capabilities Index” (MARKCI) was formed.

Market Linking Capabilities were measured by the following six items, Market Sensing, Customer Linking, Durable Relationships with Suppliers, Ability to Retain Customers, Channel Bonding Capabilities and Relationship with other Channel Members. The results of exploratory factor analysis revealed a KMO measure of sampling adequacy of 0.727 and Bartlett’s Test of Sphericity ($\chi^2=107.636$, $df =15$, $P=0.00$) significant at 0.001. All the items except Durable Relationships with Suppliers (0.378) had a communality of above the threshold of 0.5. Relationship with Suppliers construct was therefore dropped from further analysis. On further factor analysis “Ability to Retain Customers” attained a communality of 0.479 and was also dropped. After the third factor analysis trial all factors achieved above threshold communality, with only one factor extracted. All the remaining items had a factor loading of above upper threshold of 0.7. These remaining four items including Relationships with channel members, Channel bonding capabilities, Market Sensing and Customer linking were summated and a composite interval scale labeled “Market Linking Capabilities Index” (MLCI) formed. This composite index had a reliability of Cronbach $\alpha= 0.8704$.

Information Technology (IT) Capabilities were measured by five items on a 5- point likert scale. These items included IT for new product development IT for cross functional integration, IT for knowledge creation, IT for internal communication and IT for external communication. Exploratory factor analysis had KMO measure of

sampling adequacy of 0.836, implying the sample was sufficient for conducting factor analysis. Bartlett's Test of Sphericity ($\chi^2=128.432$, $df=10$, $P= 0.00$) was significant at $\alpha= 0.001$, implying that the data set is fit for principal component analysis. All the five factors had a communality above the 0.5 threshold and factor loadings above the threshold of 0.5. Only one component was extracted with a reliability of Cronbach $\alpha= 0.8964$. The five items were then summated to form a composite interval index labeled "IT Capabilities Index" (ITCAPI).

In order to measure technological capabilities, six items were employed. Management opinions were sought on a 5- Point Likert scale in regards to new market development capabilities, Manufacturing/Service process capabilities, Technology development capabilities, ability to predict technological change capabilities, Production/ Service delivery facilities and lastly quality control skills. Exploratory factor analysis showed KMO measure of sampling adequacy of 0.846 and Bartlett's Test of Sphericity ($\chi^2=128.476$, $df =15$, $P= 0.00$) significant at 0.001.

All the six metrics had communalities above the threshold of 0.5 and factor loading higher than the threshold of 0.5 in a one component formation. Further, the six metrics had a reliability of Cronbach $\alpha= 0.8909$. The six metrics were summated and a composite interval index labeled "Technological Capabilities Index" (TECI) was formed.

The final strategic capability measure was management capabilities. Again, six items were used to measure this variable on a five point likert scale. These items included Integrated logistics systems, Cost control capabilities, Financial management skills,

Human Resource capabilities, Ability to forecast revenues and profits and Marketing planning process. Exploratory factor analysis revealed KMO measure of sampling adequacy of 0.790 and Bartlett's Test of Sphericity ($\chi^2=131.946$, $df =15$, $P= 0.00$) significant at 0.001. Out of the six items ability to predict profit and revenue had a communality of 0.476, below the required threshold of 0.5 and as a result it was dropped from further analysis. The second factor analysis trial was conducted without the Profit and Revenues forecasting item. The remaining five items achieved communalities of above 0.5 and factor loading above the threshold of 0.5. Only one component was extracted with a reliability of Cronbach $\alpha= 0.8687$. These five items were subsequently summated to form a composite interval index labeled "Management Capabilities Index" (MACI). Table 5.21 gives a summary of indices constructed after factor analysis on Strategic Capabilities. The table summarizes factor index constructed, its code and label, the constructs underlying the factor, its loading, alpha measure of reliability if the construct item is deleted and composite reliability across the factor index items.

Table 5.21 Strategic Capabilities Indices

Factor Index	Items	Factor Loading	Alpha if item deleted	Composite Reliability	Variance explained
IT Capabilities Index (ITCI)	IT for cross functional integration	0.909	0.8483	0.8964	100%
	IT for knowledge creation	0.855	0.8708		
	IT for internal communication	0.828	0.8811		
	IT for new product development	0.823	0.8796		
	IT for external communication	0.807	0.8849		
Technological capabilities Index (TECHCI)	Technology development capabilities	0.929	0.8413	0.8909	100%
	Production/ Service delivery capabilities	0.863	0.8612		
	New market development capabilities	0.770	0.8780		
	Manufacturing/ Service Process	0.755	0.8817		
	Technological changes prediction	0.745	0.8756		
	Quality control skills	0.715	0.8883		
Management capabilities Index (MAGTCI)	Market planning process	0.888	0.8162	0.8687	100%
	Human Management capabilities	0.861	0.8223		
	Financial Management Skills	0.814	0.8442		
	Cost control capabilities	0.759	0.8579		
	Integrated logistics systems	0.748	0.8580		
Marketing Capabilities Index (MARKTCI)	Marketing Integration	0.840	0.7967	0.8661	96.379%
	Segregation and targeting skills	0.791	0.7944		
	Customer Knowledge	0.772	0.8327		
	Effectiveness of advertising programs	0.765	0.8341		
	Effectiveness of Pricing programs	0.719	0.8128		
Marketing Linking Capabilities Index (MLCI)	Relationship with channel members	0.876	0.8111	0.8661	98.540%
	Channel bonding capabilities	0.823	0.8316		
	Market Sensing	0.809	0.8425		
	Customer Linking	0.798	0.8326		
	Ability to retain customers	0.707	0.8704		

b) Results of Hypotheses testing on Strategic Capabilities and Corporate Performance

This section attempts to address the second objective of the study by presenting the results on test of hypotheses 8, 9a and 9b. Pearson's product moment correlation was employed in testing hypothesis 8 and the results presented in table 5.22. Simple linear regression was used to test hypothesis 9a and 9b and the results presented in table 5.23.

Table 5.22 Correlations between Strategic Capabilities and Corporate Performance

Variable constructs		1	2	3	4	5	6
IT Capabilities Index (1)	Pearson Correlation	1					
	Sig. (2-tailed)	.					
	N	43					
Management Capabilities Index (2)	Pearson Correlation	.560(**)	1				
	Sig. (2-tailed)	.000	.				
	N	43	43				
Marketing Capabilities Index (3)	Pearson Correlation	.479(**)	.630(**)	1			
	Sig. (2-tailed)	.001	.000	.			
	N	43	43	43			
Market Linking Capabilities Index (4)	Pearson Correlation	.581(**)	.596(**)	.742(**)	1		
	Sig. (2-tailed)	.000	.000	.000	.		
	N	43	43	43	43		
Technological Capabilities Index (5)	Pearson Correlation	.743(**)	.619(**)	.704(**)	.663(**)	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.	
	N	41	41	41	41	41	
Corporate Performance (6)	Pearson Correlation	.675(**)	.630(**)	.738(**)	.711(**)	.735(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.
	N	43	43	43	43	41	43

** Correlation is significant at the 0.01 level (2-tailed).

Hypothesis (Ho8): There is no significant positive relationship between corporate performance and strategic capabilities indicated by (a) marketing capabilities (b) technological capabilities (c) IT capabilities (d) management capabilities and (e) market linking capabilities.

This hypothesis sought to establish if the five theoretically grounded strategic capabilities are significantly correlated with performance. To test this hypothesis, Pearson's product moment correlation analysis was employed and the results presented on table 5.22. The results show that all the five strategic capabilities have a strong positive correlation with performance significant at $p < 0.001$. Marketing capabilities had the strongest correlation with performance ($r = 0.738$, $p = 0.000$) followed by technological capabilities ($r = 0.735$, $p = 0.000$) and then market linking capabilities ($r = 0.711$, $p = 0.000$). The correlation between IT capabilities and corporate performance is also strong at $r = 0.675$ and significant at $p < 0.001$. Management capabilities have the lowest correlation with performance among the other strategic capabilities. However the correlation is also strong at $r = 0.630$ and also significant at $p < 0.001$.

This implies that there is no evidence in support of the null hypothesis. We therefore reject the null hypothesis and accept the alternative hypothesis that states, "There is significant relationship between corporate performance and strategic capabilities indicated by (a) marketing capabilities (b) technological capabilities (c) IT capabilities (d) management capabilities and (e) market linking capabilities. These results support the dynamic capabilities theory that posits; it is the capabilities by which firm resources are acquired and deployed in ways that match the firm's market environment that explains inter firms' performance variance over time (Eisenhardt &

Martin, 2000; Makadok, 2001; & Teece, Pisano & shuen, 1997). This study therefore, supports the dynamic capabilities theory.

Hypothesis (Ho9a): There is no positive relationship between strategic capabilities as a composite measure and corporate performance

This hypothesis sought to establish whether there is significant positive relationship between corporate performance and aggregated composite measure. Simple linear regression using least square was used to test this hypothesis and the results presented in table 5.23.

Table 5.23 Results of Simple Regression Analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate							
.834(a)	.695	.687	5.05933							
Model Fit										
Statistic	Sum of Squares	df	Mean Square	F	P Value					
Regression	2275.821	1	2275.821	88.910	.000(a)					
Residual	998.277	39	25.597							
Total	3274.098	40								
Coefficients										
Construct	B	Std. Error	Beta	t	P value	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	23.627	5.342		4.423	.000					
Strategic Capabilities Index	.492	.052	.834	9.429	.000	.834	.834	.834	1.000	1.000

(a) Dependent Variable: Corporate Performance

The results show regression coefficient of R=0.834. This is also equivalent to the positive zero-order correlation of r=0.834 and the standardized coefficient $\beta=0.834$, since only one composite variable is used. The total sum of squares or baseline prediction is 3274.098 and the sum of squares of residual error is 998.277. The sum of the squares explained (regression) is 2275.821, being the differential of the total sum of squares and sum of squares of residual error. This implies that there is considerable improvement in prediction upon introduction of independent variable, strategic

The results are represented on table 5.23.

capabilities, in comparison to the baseline prediction. The prediction accuracy ($F=88.910$, $df=1$, $p=0.000$) is significant at $P<0.001$.

The strength of the relationship between strategic capabilities and corporate performance is Phenomenon with the t value= 9.429 being significant at $P<0.001$, indeed, a very strong, positive and significant relationship. This means that there is no support for the null hypothesis. We therefore reject the null hypothesis and accept the alternative hypothesis, thus, “there is significant positive relationship between aggregated composite strategic capabilities index and corporate performance”. This further supports dynamic capabilities theory reviewed in chapter two.

Hypothesis (Ho9b): Strategic capabilities do not have significant predictive power on corporate performance

This hypothesis sought to establish whether strategic capabilities have significant predictive power on corporate performance. The relationship between strategic capabilities and corporate performance is represented by equation 4 derived under model formulation and estimation.

This hypothesis was expected to be tested vide stepwise regression. However, after inspecting the correlations between the strategic capabilities constructs in table 5.22, we discovered that these strategic capabilities are significantly correlated with each other. Stepwise regression would therefore yield misleading results due to multicollinearity. Hair et al. (2006) posits that where underlying constructs are collinear a composite index consisting of all the variables should be constructed. Informed by this reasoning, the five strategic capabilities were aggregated into one strategic capabilities index. Linear regression was then used to test this hypothesis and the results are represented on table 5.23.

The results show that strategic capabilities explain up to 69.5% ($R^2=0.695$, Adj. $R^2=0.687$) of variation in corporate performance and when adjusted for sample size and degrees of freedom, strategic capabilities explain up to 68.7% of corporate performance. The statistical model fit ($F=88.910$) is significant at $p<0.001$. The regression coefficient $\beta=0.492$ and standard error of estimation is 0.052 implying at 95% confidence level the interval for strategic capabilities would be $0.492\pm(0.052\times 1.96)$ ranging from a low of 0.39008 to a high of 0.492. The beta correlation is 0.834 and is significant at $p<0.001$. This means that there is no evidence in support of the null hypothesis. We therefore reject the null hypothesis and accept the alternative hypothesis, thus, strategic capabilities have significant predictive value on corporate performance. This further supports the dynamic capabilities theory.

5.4.4 Contextual Factors and Corporate Performance

The third objective of this study was to determine the influence of contextual factors on corporate performance. Exploratory factor analysis was instead used to obtain the underlying components of contextual factors in Kenya. Three hypotheses (H10, H11a and H11b) relating to the extracted underlying factors and corporate performance were then formulated, and tested via Pearson's product moment correlation and multiple regression. As a prelude to hypothesis testing factor analysis was conducted to aid in index construction and validity testing. Cronbach alpha was used to assess reliability and correlation analysis was used to establish the relationships between variables.

a) **Factor Analysis and Reliability Analysis on Contextual Factors in Kenya**

Twenty Seven items grouped into seven categories were used to measure the influence of contextual factors on corporate performance. The seven categories derived from available literature regarding business environment in Africa and in particular Kenya, included Infrastructural, Distribution Systems, Political and Legal, Economic, Social-cultural, Corruption and Security factors. The first attempt on exploratory factor analysis using principal component showed KMO measure of sampling adequacy of 0.488, below the required threshold of 0.5, implying the sample size was not sufficient for the number of factors considered in the study. The Bartlett's Test of Sphericity ($\chi^2=614.924$, $df =351$, $P= 0.00$) was significant at 0.001 implying principal component method of factor extraction was appropriate. Nine factors were extracted vide principal component analysis. The measure of communalities for the first trial on all 27 items was above the threshold of 0.5 with unity eigen value. Orthogonal varimax rotation of the component matrix failed to converge in 25 iterations.

To improve KMO value and convergence rotation iterations, component matrix was scanned for items cross loaded on several component factors. Distribution domination by a small group of market players, one of the items measuring distribution systems was found to have cross- loaded on component factor 1 and 5(see appendix d for factor analysis output showing cross loaded factors). Information exchange among distribution channels and business organizations, another item used to measure distribution system, was found to have cross- loaded on factor 2 and factor 4.

Similarly, political ideology an item used to measure political and legal environment was found to have cross loaded on factor 1 and factor 3. These three items were dropped from further analysis.

The second trial of exploratory factor analysis after dropping the cross-loaded items improved KMO measure of sampling adequacy from 0.488 to 0.499, still below the required threshold of 0.5. Again, all the items had communality measures of above 0.5 and an eigen value of unity. Still nine factors were extracted by principal component analysis and orthogonal varimax factor rotations converged after fifteen iterations. An inspection of rotated component matrix revealed Transport cost; an item used to measure infrastructural factor had a factor loading of below 0.5. Other items with factor loading of below 0.5 included Laws governing dispute settling and Business regulations by many licenses, both used as measures of political and legal factor. Limited markets, an economic factor also had a factor loading of less than 0.5. Another measure of infrastructural factor, energy cost, was found to have cross-loaded on factor 2 and factor 5. These items explained above were dropped from subsequent factor analysis.

The third exploratory factor analysis trial after dropping the above items, which did not meet the analysis criteria improved KMO measure marginally from 0.499 to acceptable threshold of 0.5. Further, principal component analysis reduced extracted factors from nine to seven with eigen values of unity and communalities of more than 0.5. The rotated component matrix converged after twelve iterations, with Ethnic Loyalty Culture, a measure of social-cultural factor, cross-loading at factor 2 and factor 7. This item was dropped from subsequent analysis.

The fourth trial also improved KMO measure marginally from 0.5 to 0.502. Although principal component analysis still extracted seven factors, the convergence iteration

increased from twelve to thirteen. All the items had an eigen value of unity and communalities of above 0.5. An inspection of the rotated component matrix revealed that channel innovation, a measure of distribution systems factor and expenditure on corruption were cross-loading at component factor 2 and 7 and component factor 3 and 4 respectively. These two items were dropped from subsequent analysis.

The fifth trial on exploratory factor analysis further improved KMO from 0.502 to 0.556. All items except effects of mixed culture on employee productivity, a measure of social cultural factor, had communalities of above 0.5, whereas mixed culture effect on employee productivity had a communality of 0.466. Rotated component matrix converged after eight iteration extracting six factors. Cross functional interaction among business organizations and distribution intermediaries, a measure of distribution systems factor had a factor loading of less than 0.5. Mixed culture effect on employee productivity and cross functional interaction between organizations and channel members were dropped from further analysis.

After the sixth exploratory factor analysis, having dropped the two items above improved KMO measure of sampling adequacy from 0.556 to 0.570. Except cost of credit, a measure of Economic factor that had a communality of 0.482, all other items had communalities above the threshold of 0.5. Principal component analysis this time extracted five factors with varimax factor rotations converging after seven iterations.

The rotated component matrix had the Effect of cultural beliefs on business operations, a measure of Social- cultural factor load at a value lower than 0.5. Effect of work ethics on business enterprise, another measure of Social- cultural factor, cross-loaded on component factor 5 and 6. In order to conduct further analysis, cost

of credit, effect of cultural beliefs on business enterprises and effect of work ethics on business enterprises were dropped.

The seventh trial on exploratory factor analysis, further improved KMO from 0.570 to 0.631. All the remaining construct items had a communality of above 0.5 and eigen value of unity. Rotated component matrix converged in six iterations after extraction of factors via principal component analysis. All the four factors had relatively high factor loadings as shown on the table 5.25. The Bartlett's Test of Sphericity ($\chi^2=161.446$, $df =55$, $P= 0.00$) was significant at 0.001 in the seventh trial. The exploratory factor analysis therefore converged after seven trials extracting four contextual factors that influence performance in Kenya.

Table 5.24 Factor Analysis on Contextual Factors

Item Description	Component Factor Loading			
	1	2	3	4
Employee's Safety	.904			
Business Interruption	.723			
Security of Assets	.713			
Unfair Business Practices		.892		
Political Influence		.722		
Transport Network Distribution			.800	
Government Institutions			.709	
Government Interference			.701	
Capital Markets				.828
Effects of Consumer's Income				.727
Electricity Accessibility and Quality				.608

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 6 iterations.

The first factor comprised three items including Employee's safety, Business interruptions as a result of insecurity and Assets security. This implies respondents were concerned about security problems in Kenya. The three items above were

summated and an interval composite measure labeled “Security Index” (SECUI) formed. The second factor comprised of two drivers of corruption including influence of powerful individuals with political connections to influence business decisions to their favor and undercutting and other unfair business practices. The two items were summated and an interval composite index labeled “Corruption Index” (CORUPTI) formed.

The third factor had three items, including transport network distribution, weak and hostile government institutions charged with the responsibility of supporting business organizations and government interference or perceived ability to interfere with business. These items have political connotations and were summated to form an interval composite index labeled “Political Risk Index” (POLIRI). Finally, the fourth factor consisted of three items namely Capital market efficiency, Effects of consumers disposable income on business volumes and Electricity accessibility and quality. These items appear to represent the prevailing economic conditions. The three were then summated to form an interval Composite Index Labeled “Economic Index” (ECONI). Table 5.26 gives a summary of indices constructed after factor analysis on Contextual Factors. The table summarizes factor index constructed, its code and label, the constructs underlying the factor, its loading, explained variance, alpha measure of reliability if the construct item is deleted and composite reliability across the factor index items.

Table 5.25 Contextual Factor Indices

Factor Index	Items	Factor loading	Alpha if item deleted	Composite reliability
Contextual Factors	Employees safety	0.904	0.6254	0.7840
Security Index (SECURITI)	Business Interruption	0.723	0.7674	
	Assets Security	0.713	0.7264	
Corruption Index (CORUPTI)	Undercutting and Unfair business Practices	0.892		0.7818
	Undue influence by politicians	0.722		
Political Risk Index (POLITRI)	Transport Network distribution	0.800	0.7904	0.6908
	Weak/ hostile government institutions supporting business	0.709	0.4557	
	Government interference with business operations	0.701	0.4461	
Economic Index (ECONI)	Weak and inefficient Capital Markets	0.828	0.1152	0.5805
	Consumers low disposable income levels	0.727	0.5905	
	Electricity accessibility and quality	0.608	0.6369	
	Total Variance explained=			

b) Correlations between Contextual Factors and Corporate Performance

Table 5.26 on correlation analysis indicates that all contextual factors have negative influence on corporate performance. However, the negative effect is not statistically significant. Corruption factor is positively correlated to political risk factor ($r = 0.374$, $P = .013$) and the association is significant at $\alpha = .05$. It is also positively correlated to security factor ($r = 0.355$, $P = 0.020$) and significant at $\alpha = 0.05$. This may imply that corruption permeates across different institutions in Kenya and may contribute towards political risk and insecurity. This means there is significant interactive effects between corruption, political risk and insecurity. As expected all variables are significantly correlated to the composite index which they are part of.

Table 5.26 Correlations between Contextual Factors and Corporate Performance

Construct	Statistic	1	2	3	4	5	6
Corruption Index (1)	Pearson Correlation	1					
	N	43					
Political Risk (2)	Pearson Correlation	.374(**)	1				
	Sig. (1-tailed)	.007					
Economic Index (3)	Pearson Correlation	.172	.250	1			
	Sig. (1-tailed)	.135	.053				
Security Index (4)	Pearson Correlation	.355(**)	.292(*)	.260(*)	1		
	Sig. (1-tailed)	.010	.029	.046			
Contextual Factors Index (5)	Pearson Correlation	.645(**)	.688(**)	.621(**)	.755(**)	1	
	Sig. (1-tailed)	.000	.000	.000	.000		
Corporate performance (6)	Pearson Correlation	-.146	-.245	-.076	-.165	-.232	1
	Sig. (1-tailed)	.176	.057	.313	.146	.067	
	N	43	43	43	43	43	43

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

e) Results of Hypothesis Testing (Ho 10 to Ho11a,b) Relating to Contextual Factors and Corporate Performance

This section sought to address objective three by presenting results on tests of hypotheses 10 through to hypotheses 11 a, and 11b. Inferential statistics namely, Pearson's product moment correlation analysis was employed to test hypotheses 10 and 11a while multiple regression was employed to test hypothesis 11b. Results on correlation analysis are presented in table 5.26 while results of multiple regression are presented in table 5.27.

were done between 1970s and 1990s. These include Onyemelakwe, 1973; Haines, 1988; McCormick, 1997; & Kabonyo, 1998 among others. Over time, various interventions (highlighted under the discussion section) have been put in place to reduce the negative effects of contextual factors on performance in Africa and in

Hypothesis (H0): There is no negative relationship between corporate performance and contextual factors in Kenya indicated by (a) Corruption (b) Political risk (c) Economic and (d) Security factor.

This hypothesis sought to establish whether factors extracted by exploratory factor analysis negatively influence corporate performance in Kenya. To test this hypothesis person's product moment correlation analysis was employed and the results presented on table 5.26.

Generally, the results show that the correlations are in the hypothesized direction (negative) but they are weak. Political risk has the highest negative correlation coefficient ($r = -0.245$, $p = 0.114$) with corporate performance. This is followed by corruption ($r = -0.146$, $p = 0.351$) and then security (-0.1165 , $p = 0.291$). Economic factor has the least negative coefficient ($r = -0.076$, $p = 0.626$) with performance. All the contextual factors have a P value of greater than 0.05. This implies that there is support for null hypothesis. We therefore reject the alternative hypothesis, and accept the null hypothesis. Thus, there is no statistically significant negative relationship between corporate performance and underlying contextual factors in Kenya.

This is contrary to the belief that African context negatively influences business operation. This could be attributed to the time context. Studies that have revealed significant negative influence of contextual factors on business performance in Africa were done between 1970s and 1990s. These include Onyemelukwe, 1973; Haines, 1988, McCormick, 1997; & Kobonyo, 1998 among others. Over time, various interventions (highlighted under the discussion section) have been put in place to reduce the negative effects of contextual factors on performance in Africa and in

particular Kenya. However, contextual factors in Kenya still negatively influence corporate performance although the influence is not significant.

Hypothesis (Ho11a): There is no negative relationship between corporate performance and contextual factors as a composite variable.

This hypothesis sought to discover whether there is a significant negative relationship between corporate performance and contextual factors when aggregated together. Pearson product moment correlation analysis was used to test this hypothesis and the results presented on table 5.26. The results show that there is a weak negative correlation ($r=0.232$, $p=0.067$) between aggregated contextual factors and corporate performance. The relationship is not significant at $p<0.05$, implying there is some evidence in support of the null hypothesis. We therefore reject the alternative hypothesis and accept the null hypothesis. Thus, there is no significant negative relationship between corporate performance and aggregated contextual factors in Kenya. This implies that though contextual factors negatively influence business operations in Kenya, the effect is not significant.

Hypothesis (Ho11b): The contextual factors do not have predictive power on corporate performance.

To test this hypothesis, multiple regression was employed and the results presented in table 5.27. The relationship is represented by equation four (4) derived under the model estimation in chapter 4.

on these results, we therefore accept the null hypothesis and reject the alternative hypothesis. Thus, contextual factors in Kenya have no significant predictive power on corporate performance.

Table 5.27 Contextual Factors and Corporate Performance Regression Results

Variable construct	B	Std. Error	Beta	t	P values
(Constant)	86.324	9.163		9.421	.000
Corruption Index	-.189	.904	-.037	-.210	.835
Political Risk	-.853	.725	-.205	-1.178	.246
Economic Index	.021	.671	.005	.032	.975
Security Index	-.304	.566	-.093	-.537	.594
Model Summary	Model Fit				
R=0.265, R ² =0.070	Regression $\chi^2=230.72$				
Adj. R ² =-0.027, SE=8.95	Residual $\chi^2=3043.75$				
	F= 0.720, P= 0.584				

Dependent Variable: Corporate Performance

The results reveal a weak multiple regression coefficient of $R=0.265$. The contextual factors explain only 7 % ($R^2=0.070$) of variation in corporate performance. However, when the coefficient of determination is adjusted for number of variables, degrees of freedom, ($df=38$) and sample size, the model loses all its explanatory power (Adj. $R^2 = -0.027$). The standard error of the estimate is as high as 8.94978. ANOVA analysis reveals that the predictors do not reduce the error of estimation to statistically significant levels with an F ratio of 0.720 and significance level of 0.584. This implies that the data set provides support for the null hypothesis ($F \neq 0$) meaning that the predictors do not have any predictive power.

The regression and the standardized Beta coefficients of the individual contextual factors are negative except for economic factor that has a weak positive regression coefficient. Further, all the contextual factor Beta coefficients are insignificant at $\alpha=0.05$ with all the t-values greater than 0.05. This implies that none of the contextual factors have statistically significant predictive power on corporate performance. Based on these results, we therefore accept the null hypothesis and reject the alternative hypothesis. Thus, contextual factors in Kenya have no significant predictive power on corporate performance.

The findings of this study, tends to lend more credence to evolutionally theory that downplays the importance of the external environment (context). For example, Alvarez and Burney (2007) argue that opportunities are created and are not therefore discovered from the context where a firm operates. This would imply that it is what organizations do internally that leverages their performance as opposed to the context within which they operate in Kenya.

5.4.5 The Joint Composite effect of PIMS Principles, Strategic Capabilities and Contextual Factors on Corporate Performance

The fourth objective of this study was to determine the joint effect of the integrated model of PIMS principles, strategic capabilities and contextual factors on corporate performance. Hypothesis (H12) was formulated to achieve this objective. Ensuing is the result of this hypothesis.

Hypothesis (Ho12): The predictive power on corporate performance by the integrated model consisting of PIMS principles, strategic capabilities and contextual factors is not higher than that of the individual predictor variables.

This hypothesis sought to establish whether jointly PIMS principles, strategic capabilities and contextual factors in an integrated model have a higher predictive power on corporate performance, than when each of the three variables is used independently to predict corporate performance. To test this hypothesis, the overall model fitness of the three independent predictors is compared with the integrated overall model fitness. The results are presented on table 5.16.

Table 5.28 The Overall Fitness of PIMS, Strategic capabilities, Contextual factors and Integrated Model.

Model Summary	PIMS	Strategic Capabilities	Contextual factors	Integrated Model
R	0.787	0.834	0.265	0.856
R ²	0.619	0.695	0.070	0.732
Adj. R ²	0.556	0.687	-0.027	0.711
SE	5.886	5.05933	8.94978	4.86572
Regression χ^2	2027.066	2275.821	230.720	2398.115
Residual χ^2	1247.399	998.277	3043.745	875.983
Residual df	36	39	38	37
SS _T	3274.47	3274.098	3274.465	3274.098
F	9.750, P=0.000	88.910, P=0.000	0.720, P=0.584	33.764, P=0.000

The adjusted coefficient of determination (Adj. R²) was used to assess the prediction power. Adj. R² is a modified measure of the coefficient of determination that takes into the account the number of variables included into the regression equation and the degrees of freedom. This statistic is quite useful for comparison between equations with different numbers of the independent variables, differing sample sizes or both (Hair et al, 2006).

From the results, strategic capabilities have the highest individual explanatory power (R=0.834, R² = 0.695, Adj. R² = 0.687) explaining up to 68.7% of variance, in corporate performance. Examining the adjusted R² value, reveals little loss in predictive power when compared to the R² value (0.687 versus 0.695) which indicates a lack of over fitting that would be shown by a more marked difference between the two values. Strategic capabilities are followed by PIMS principles in terms of individual explanatory power (R² = 0.787, R² = 0.619, Adj. R² = 0.556) on corporate performance, explaining 55.6% of the variance. Examining the adjusted R² value and R² value reveals a higher loss of explanatory power when PIMS are used to predict corporate performance than when strategic capabilities are employed (6.3% in case of PIMS compared to 0.8% incase of strategic capabilities).

Contextual factors have no explanatory power ($R=0.265$, $R^2 = 0.070$, $\text{adj. } R^2 = -0.027$) on corporate performance. The contextual factors reveal model over fitting ($F \neq 0$) implying that contextual factors in Kenya are not good predictors of corporate performance.

When the three predictors (PIMS, strategic capabilities and contextual factors) are put into an integrated model, they explain up to 71.1% of variance in corporate performance ($R=0.856$, $R^2=0.732$, $\text{Adj. } R^2=0.711$). This is a remarkable improvement from negative 2.7% explained individually by contextual factors and 55.6% explained by PIMS principles. It is also an improvement from 68.7% explained by strategic capabilities individually. The regression χ^2 of the integrated model is comparatively higher than that of strategic capabilities, PIMS and contextual factors. The integrated model also has the lowest standard error of estimation (SE) when compared to the individual predictors.

The F value of the integrated model is statistically significant at $P < 0.001$ and 37 degrees of freedom. This implies that there is no evidence in support of the null hypothesis. We therefore reject the null hypothesis and accept the alternative hypothesis, thus the integrated model of PIMS principles, strategic capabilities and contextual factors has higher explanatory power on corporate performance than the individual predictor models. This is consistent with theoretical support by Nelson (1994) for integrated performance models when conducting empirical studies on performance.

5.4.6 The Moderator Effect of Strategic Capabilities on the relationship between PIMS Principles and Corporate performance.

The fifth objective of this study sought to determine the moderating effect of strategic capabilities on the relationship between PIMS principles and corporate performance. One hypothesis (H13) was formulated to address this objective. Ensuing is the results on the test of this hypothesis.

Hypothesis (Ho13): The strength of the relationship between PIMS principles and corporate performance is not positively moderated by strategic capabilities

To test the moderator effect of strategic capabilities on the relationship between PIMS principles and corporate performance, hierarchical regression analysis was employed and the results are presented in table 5.29. Hierarchical regression approach has been applied before in a similar studies by Vorhies and Morgan (2003) and Olson et al. (2005). To improve the model fitness, only PIMS principles with significant predictive power were entered into the hierarchical equation. These are product/service quality and market share (see table 5.20).

Table 5.29 shows the regression model fit for the relationship between PIMS principles and corporate performance with strategic capabilities variable. The regression model fit for the relationship between PIMS principles and corporate performance with strategic capabilities variable is shown in table 5.29. The regression model fit for the relationship between PIMS principles and corporate performance with strategic capabilities variable is shown in table 5.29. The regression model fit for the relationship between PIMS principles and corporate performance with strategic capabilities variable is shown in table 5.29.

When strategic capabilities variable was introduced in the second step of hierarchical regression, while controlling for PIMS principles, the R^2 changed by 0.20, from 0.361 to 0.761. The adjusted R^2 changed by 0.202 from 0.539 to 0.741. At the same time,

Table 5.29 Results of Hierarchical Regression between Strategic Capabilities, PIMS Principles and Corporate Performance

Predictor Variables	Beta (β)	t	P – Values
Step 1			
Product/service quality	0.501	4.464	0.000
Market share	0.406	3.617	0.001
R ² = 0.561			
Adj. R ² = 0.539			
SE = 5.99559			
F – Value = 25.546			0.000
Step 2			
Product/service quality	0.268	2.723	0.009
Market share	0.126	1.221	0.219
Strategic capabilities	0.612	5.375	0.000
R ² = 0.761			
Adj. R ² = 0.741			
ΔR^2 (from step 1 to 2) = 0.200			
$\Delta \text{Adj. } R^2$ (from step 1 to 2) = 0.202			
SE = 4.60271			
F Value = 39.183			0.000
Dependent variable: Corporate performance			

The first step of hierarchical regression, involved entering the significant PIMS constructs. As earlier demonstrated, the PIMS constructs explain up to 53.9% of variation in corporate performance when adjusted for number of variables and degrees of freedom. The standard error of estimate is 5.99559. The error of criterion estimation is reduced by predictor regression with an F value = 25.546 significant at $P < 0.001$. This implies the regression model fits the data set. The Beta coefficient for product service quality is 0.501 with a corresponding t value of 4.464 significant at $P < 0.001$. The Beta coefficient for market share is 0.406 with corresponding t value of 3.617 significant at $P < 0.01$. This means the two PIMS principles are significant predictors of corporate performance.

When strategic capabilities variable was introduced in the second step of hierarchical regression, while controlling for PIMS principles, the R² changed by 0.20, from 0.561 to 0.761. The adjusted R² changed by 0.202 from 0.539 to 0.741. At the same time,

the standard error of estimate reduced from 5.99559 to 4.60271. There was also an F change of 39.183 and degrees of freedom changed from $df_1=3$ to $df_2=37$ in the second step of hierarchical regression. The change was significant at $P < 0.001$. This implies that introduction of strategic capabilities improves the model fitness significantly. It also implies that the strength of the relationship between PIMS principles and corporate performance is positively and significantly moderated by strategic capabilities. This is supported by the improved adjusted R^2 value. Actually, strategic capabilities have an incremental predictive power of 20.2%. We therefore reject the null hypotheses and accept the alternative hypothesis. Thus “the strength of the relationship between PIMS principles and corporate performance is positively and significantly moderated by strategic capabilities”.

These results supports Teece (2007) and Helfat (1997) views on complementarity of marketing strategies and dynamic capabilities. The results are also consistent with Morgan et al, (2009) who posit that, while resources (including market orientation and marketing capabilities) may be beneficial, firms also require complimentary capabilities to be able to deploy available resources in ways that match the market condition faced, in order to drive firm performance.

The relationship between market strategy and corporate performance in Kenya is positively moderated by strategic capabilities. Strategic capabilities constructs explains significant incremental variance ($\Delta R^2 = 0.202$, $P = 0.000$) in corporate performance. This implies market strategy decisions need to be leveraged by the firm's capabilities to enhance corporate performance. Further, the study shows that PIMS principles and strategic capabilities are complementary and interconnected.

Where firm assets are interconnected a causal ambiguity arises. This causal ambiguity makes it particularly difficult for competitors to disentangle the source of firms observed performance advantages (Read and Defilipis, 1990). In Kenyan context a combination of PIMS principles and strategic capabilities (firm characteristics) jointly explain up to 74.1% of variance in corporate performance.

Short et al (2009) study concluded that firm level characteristics, plays a dominant role in performance. Similar findings were also revealed in Ketchen Jr et al. (2007) study. The findings of this study, concurs with those of Short et al. (2009) and Ketchen Jr. et al. (2007). The Kenyan experience therefore, compares with other experiences in the world that tend to suggest that firm characteristics play a key role in determining performance outcomes.

5.4.7 The Moderator Effect of Contextual Factors on the relationship between PIMS Principles and Corporate performance.

The sixth and final objective of this study sought to determine the moderating effect of contextual factors on the relationship between PIMS principles and corporate performance. One hypothesis (H14) was formulated to address this objective. Ensuing are results on the test of this hypothesis.

Hypothesis (Ho14): The strength of the relationship between PIMS principles and corporate performance is not negatively moderated by contextual factors in Kenya

To test the moderating effect of contextual factors on the relationship between PIMS principles and corporate performance, hierarchical regression was employed and the

results presented in table 5.30. The significant constructs of PIMS principles were entered into the first step of the hierarchical regression and model fitness assessed. Contextual factors as a composite variable was afterwards introduced in the second step.

Table 5.30 Results of Hierarchical Regression between Contextual Factors, PIMS Principles and Corporate Performance

Predictor Variables	Beta (β)	t	P – Values
Step 1			
Product/service quality	0.501	4.464	0.000
Market share	0.406	3.617	0.001
R ² = 0.561			
Adj. R ² = 0.539			
SE = 5.99559			
F – Value = 25.546			0.000
Step 2			
Product/service quality	0.482	4.187	0.000
Market share	0.405	3.592	0.001
Contextual factors	-0.089	-0.827	0.413
R ² = 0.568			
Adj. R ² = 0.535			
ΔR^2 (from step 1 to 2) = 0.007			
$\Delta \text{Adj. } R^2$ (from step 1 to 2) = -0.004			
SE = 6.01938			
F Value = 17.124			0.000
Dependent variable: Corporate performance			

When the composite contextual factor construct was introduced into the hierarchical regression equation while controlling for PIMS principles, the predictor statistics on corporate performance changed as follows: R² changed by 0.007 from 0.561 to 0.568 adjusted R² charged by -0.004 from 0.539 to 0.535. The standard error of estimate increased from 5.99559 to 6.01938. These statistics indicate that contextual factors do not have predictive power on corporate performance. In fact, contextual factors suppress the strength of the relationship between PIMS principles and corporate performance. However, the strength ($\Delta \text{adj. } R^2 = -0.004$) of the relationship although

negative is marginal. The partial Beta coefficient of contextual factors is $\beta = -0.089$ with a corresponding t value = -0.827 and a P value = 0.413. This implies that there is support for the null hypothesis. We therefore reject the alternative hypothesis and accept the null, thus, the strength of the relationship between PIMS principles, and corporate performance is not moderated by contextual factors.”

5.5 Discussions

This section discusses the findings of both literature and empirical study in order to achieve the six objectives translated into fourteen hypotheses.

5.5.1 PIMS as a Determinant of Corporate Performance

Buzzell and Gale (1987), Kotabe et al. (1991) & Meng Leong (2001) have demonstrated that a firm's performance is influenced by PIMS Principles. This study provides additional support for these previous findings implying that PIMS principles are generalizable across a broad spectrum of countries including developing ones like Kenya. Correlation results are largely in the predicted direction and do conform to PIMS studies as summarized by Buzzell and Gale (1987). Except for investment intensity ($r = -0.101$, $p = 0.260$) and vertical integration ($r = -0.202$, $p = 0.096$), other PIMS principles show significant associations with corporate performance, thus corroborating PIMS studies.

The first hypothesis (H_{01}) suggested that high performing firms have quality products and services. That their quality products/services are characterized by innovation and investments in research and development aimed at product enhancements. This

finding is consistent with PIMS findings (Buzzel and Gale 1987, Kotabe et al, 1991, Meng Leong, 2001) and cuts across markets and countries.

The second Hypothesis (H_{02}) relating to market share and corporate performance, as expected revealed that market share is strongly and positively correlated to corporate performance. This is again corroborated by PIMS studies that suggest market leaders not only command higher prices but also maintain this leadership by offering high quality products that are superior to their competitors.

Contrary to the expectation this study offers some support to the null hypothesis H_{03} , implying that in Kenya, high investments in working capital, plant and equipment, workers and labour costs, does not act as a drag to corporate performance. Although this is inconsistent with PIMS studies, a Kenyan would not be surprised to find that investment intensity does not drag profitability. This is because companies that invest heavily in plant and machinery, operations and in employees like Safaricom and East African Breweries (EABL) are also doing very well in the market in terms of profitability. In fact, Safaricom has consistently ploughed back its profits as retained earnings and is now currently reported to be the most profitable company in East and Central Africa and has also won the title of the most respected company in East Africa.

Some of the reasons that have been advanced under PIMS studies to support negative relationship between investment intensity and profitability are that (1) capital intensity leads to aggressive and often destructive competition and (2) capital intensive businesses may be less efficient in using fixed and working capital than competitors

(Buzzell and Gale, 1987 and Jaworski, (1989) among others. If the two examples of Safaricom and EABL were to be considered, it can be inferred among others that the two companies are superior performers because they have not had very serious local competition in the last five years. In fact, EABL has been a near monopoly in malted beer market after the exit of South African Breweries (SAB) from the Kenyan market in 2001. Their brands are also perceived by Kenyans to be of high quality and they have therefore managed to acquire market leadership. In Kenyan context it can therefore, be argued if a company produces quality products and it is a market leader, market intensity will not act as a drag to its performance. However, this cannot be said to apply to other companies that do not have quality products and a sizeable market share.

Hypothesis H₀₄ was accepted implying that corporate performance depends on the dominant business portfolio. Though this position is consistent with BCG (Boston Consulting Group) assertions on business portfolio, PIMS studies show that while market growth and relative market share are linked to cash flows, many other factors also influence this dimension of performance. As a result, forecasts of cash flow based solely on the growth – share matrix are often misleading (Hambrick & Macmillan, 1982, Gale and Branch, 1981, and Buzzell and Gale, 1987).

In this study respondents were asked to classify their dominant business portfolio along the BCG growth Share Matrix Classification. Twelve (27.9%) classified their dominant portfolio as a cash cow, 23 (53.5%) as a star, 6 (14.0) as a question mark and 2 (4.7%) as a dog. One tailed correlation test revealed negative correlation between business portfolio and corporate performance (-0.337, $p = 0.014$) significant

at $P < 0.05$. Given the proportion representation of stars and question mark portfolios in this study it is not surprising that business portfolio tend to be negatively associated with performance. From the BCG model, stars and question marks have heavy cash requirements. This would correspond in increased marketing expenditures resulting in lower profit margins. This study therefore tends to lend support to BCG market share / market growth business portfolio models. Though PIMS studies tends to repudiate BCG underpinnings, in Kenyan context BCG model tends to hold, although from the analysis the relations presented are quite complex and perhaps further studies modeling business portfolio are required.

The findings of this study tend to support null hypothesis H_05 meaning that vertical integration is negatively correlated with performance. According to PIMS results, ROI is usually enhanced by a high degree of backward integration but there is no connection between ROI and different degrees of forward integration. The findings of this study are inconsistent with those of PIMS studies. In this study, backward integration is negatively correlated with performance ($r = -0.356$, $p = 0.019$) and the association is significant at $P < 0.05$. Forward integration is also negatively correlated to performance ($r = -0.026$, $P = 0.868$) although the association is not significant.

As predicted in the conceptual framework, vertical integration may result in either positive or negative correlation in Kenya, depending on the circumstances under which it is achieved. If vertical integration leads to higher investment intensity as firms acquire suppliers and or/ intermediaries, it will be negatively correlated to performance, as the incremental returns are not sufficient to offset the capital outlay. This tends to be the case in Kenyan context.

As expected the hypothesis H₀₆ was accepted implying that long term value indicated by total return and market to book value is positively correlated to performance. This is because the constructs that measure long term value also reinforce corporate performance. This implies that managers should not sacrifice long term objectives in pursuit of short term quick fixes.

Generally, the result of this study suggests that market strategies, in this case represented by PIMS principles positively and significantly influence firm performance accounting for up to 55.6% of variation in corporate performance. This study therefore lends further support to the body of literature on PIMS principles, especially regarding the relationship between market share, product quality and performance. This study further confirms that the relationship between PIMS principles is interactive. This is demonstrated by the positive association between market share and product/ service quality ($r=0.358$, $P=0.019$) with the correlation significant at $P < 0.05$ (see table 5.19). The study also supports Kotabe et al. (1991) and Meng Leong (2001) studies that concluded PIMS Principles have predictive effect on corporate performance across different markets. This implies therefore, PIMS principles, especially those relating to product/ service quality and market share, can be applied in Kenya to inform strategic decisions.

5.5.2 Strategic Capabilities as a Determinant of Corporate Performance

Overall, the results of this study, supports the dynamic capabilities theory linking directly strategic capabilities with corporate performance. The findings reveal that on their own, strategic capabilities accounts for ($R^2 = 0.695$; Adj. $R^2 = 0.687$) 69.5% of

variation in firm performance and 68.7% when adjusted for degrees of freedom and sample size. Dynamic capabilities theory posits that since market places are dynamic rather than simple heterogeneity in firm resources endowment, it is the capabilities by which firm resources are acquired and deployed in ways that match the firm's market environment that explains inter firm performance variance over time (Eisenhardt & Martin, 2000; Makadok, 2001; & Teece, Pisano & Shuen, 1997).

Correlation results between strategic capabilities variables and corporate performance are all in the hypothesized direction (positive) and significant at $P < 0.01$. There are also strong associations between the variables themselves and these associations are also significant at $P < 0.01$. This is what scholars in dynamic capabilities call complementarities. This implies the capabilities possess the characteristic of asset interconnectedness (Teece et al., 1987). The interconnectedness creates causal ambiguity that makes it particularly difficult for competitors to disentangle the source of a firm's observed performance advantage (Peed and Defillip, 1990).

As expected, results of the hypothesis testing relating to the relationships between the five strategic capabilities with corporate performance, suggested that there is significant relationship between all the five capabilities and corporate performance. As concerns market linking capabilities, it can be said firms that nurture and leverage good relationships with their customers and suppliers, are market oriented and have a "know what" advantage that enables the firm to be both more effective and efficient by allowing managers to select the most productive available resource combinations to match market conditions (Slater and Narrer, 1995).

Technological capabilities on one hand, presents valuable, rare, inimitable and non substitutable resource that may give a possessing firm competitive advantage, hence superior performance. On the other hand marketing capabilities relating to market resource deployment are usually associated with the marketing function (Daneels, 2007; Datta, Zbaracki & Bergen, 2003). Further more, marketing capabilities combine with market linking capabilities to enable the firm to align its resource deployments with its market environment better than its rivals (Day, 1994; Eisenhardt & Martin 2000). It also requires that a rival acquire both the interconnected market linking capabilities and marketing capabilities of a high performing firm that bases its strategy on these co specialized assets to be able to compete away its performance advantage (Helfat, 1997; Madhavan and Grover, 1998).

Capabilities in information technology (IT) help the firm diffuse market information effectively across all relevant functional areas that it can exploit the new product development process (DeSarbo et al., 2005). IT also drives innovation a requisite for long term survival (Nelson, 1994). Finally, according to DeSarbo et al. (2005) management related disciplines support all of the other capabilities and therefore, in order for the other capabilities to be effective, management capability should leverage them. Burgelman (1994) contends that resource allocation routines (a preserve of the CEO) are used to distribute resources for instance capital and manufacturing assets from central points within the organizational hierarchy. This is required to support all the other five strategic capabilities. At a more strategic level Eisenhardt & Galunic (2000) argue that coevolving, that involves routings by which managers reconnect webs of collaborating among various parts of the firm to generate new and synergetic

resource combinations among business is important in an organization. This will also require coordination by the management.

5.4.3 Contextual Factors as Determinants of Corporate Performance

The four underlying factors extracted by exploratory factor analysis, that is security, corruption, political risk and economic factor did not come as a surprise. That business managers were concerned about their employee's safety, likelihood of business interruption and security of their assets is not at all surprising, since this study was conducted barely one year after post election violence (PEV) of 2007/2008 that resulted in massive property loss, displacement of people and deaths.

The Exploratory factor analysis findings revealed that corruption is another underlying factor that affects corporate performance in Kenya. This again is not surprising since Kenya has been ranked among the top corrupt countries in the World over years by transparency International. The agitation by the public and parliament demanding the removal of the Kenya Anti Corruption Commission (KACC) director for not doing enough to combat corruption especially at upper echelons of government tends to confirm that indeed corruption is a problem in Kenya. Correlation analyses show that corruption index is positively correlated with the security index and political risk with the association significant at $p < 0.05$. This implies that corruption is interconnected with security issues and political issues and this causal ambiguity may create a blurred line between these factors that have a negative effect on performance.

The other factor that affects corporate performance in Kenya is political risk associated with weak government support system for business organizations and perceived government interference on business operations. Although the Kenyan

government may argue that it has done its best in improving business climate in Kenya by for example lowering the licenses and the prime minister inviting business executives for a round table talk from time to time, the threats that are issued by government officials regarding price controls have been impacting negatively on the investor confidence.

Further, one factor that loaded with the political risk associated factors was poor transport network distribution. Though this factor would be categorized as an infrastructural factor, by loading alongside political risk factors, it may imply that infrastructure development in Kenya is politically driven. On many occasions the executive arm of the Kenyan government has used infrastructural development to reward regions that are perceived to support the incumbent president. It is worth noting that although the government has invested heavily in infrastructure development especially road infrastructure, corporate managers still feel transport network is inadequate and poorly distributed.

Finally, the fourth factor that has influence on corporate performance in Kenya is economic factor. Corporate managers feel that capital markets, consumer disposable income and accessibility to energy more so electricity, have influence on corporate performance. These underlying variable constructs have economic connotations. From the results of exploratory factor analysis it would appear that distribution systems, legal factors and social cultural factors do not have influence on corporate performance in Kenya. Though K'Obonyo (1999) identified distribution channels as one factor that influenced business performance in Kenya, his study focused on SMEs. Pedersen and McCormick (1997) contend that while the entire economy

may suffer as a result of lack of inter-enterprise trade, that is facilitated by well developed supply chain, the loss to SMES is even more profound. A possible reason why under this study, distribution systems do not seem to have influence on performance could be explained by the company size, whereby quoted companies in Kenya are also among the largest in the country. For this reason, they dominate the distribution system making the system inaccessible to SMEs. As a result small businesses have had to rely on their own ingenuity to distribute their products to a wider market (K'Obonyo, 1999).

Possible reasons why legal factors do not seem to have effect on corporate performance in Kenya may be related to deregulations and liberalization effected in the early 1990s. Studies that identified legislation as a factor date back to the 1980's (e.g. Haines, 1988 and Wanjui, 1986). Today, business organizations in Kenya operate under free, uncontrolled environment with little direct government interventions. Similarly, the bulk of studies that have shown social cultural effect on business performance date back in the 1970s and 80s (e.g. Nambudiri & Saiyadain 1978, Jones 1988 & Osigiweh, 1989). A lot has changed since then, for example, Onyemelukwe's (1973) view that African societies are largely characterized by extended families hence sharing property among groups and that authority rests in the hands of the old (Pia, 1991) to the exclusion of young professionals who are well learned and trained, seems to have somewhat changed in Kenya. Today, Kenyan families are largely nuclear and private businesses are run by relatively young well trained professionals. The practices that were attributed to the old generation of managers of 1970s and 1980s may no longer be widespread and this could be the reason why cultural factor does not have influence on business performance in Kenya.

Results of correlation analysis show that all the underlying factors extracted via principal component exploratory factor analysis are negatively correlated to performance though these associations are not significant at $\alpha=0.05$. This implies that in Kenya, the context constrains corporate performance, even though to a less extent. Result of regression analyses reveal that 7% of variance in corporate performance can be explained by the contextual factors. This would appear to suggest that though the context under which businesses operate in Kenya matters, the compounding effect is little. This finding tends to support other recent studies. Short et al. (2009) found that industry level (context) matters little for the survival of firms. Short, Ketchen, Palmer & Hult (2007) found that approximately 10% of the variance in firm performance is attributed to industry (context) effect. Variance decomposition literature has found that industry level attributes account for between 4-20% of performance variance (Mc Grahena & Porter, 1997; Rumelt, 1991). This study findings fall within this range. However, Short et al. (2009) contend that while results vary, a tentative consensus seems to have emerged that a firm's choice of industry (context) explains about 15-20% of its profit level, while firm features plays about two to three times as great.

4.5.5 Toward an Integrated model of Corporate Performance

This study began by examining the influence of market strategy as encapsulated by PIMS principles. The results reveal that PIMS principles on their own account for 55.6 % of variation in corporate performance. The study went on to determine the predictive power of strategic capabilities on corporate performance, as well as the moderating effect of the strategic capabilities on the relationship between PIMS principles and corporate performance. The results reveal that strategic capabilities on

their own account for 68.7% of variation in corporate performance and enhance the strength of the relationship between PIMS principles and corporate performance significantly by 20.2%. Contextual factor however, account for only 7% of variation in corporate performance and when the prediction parameter is adjusted for sample size and degrees of freedom, the predictive power is totally lost. Further, contextual factors suppress the strength of the relationship between PIMS principles and corporate performance.

This study therefore tends to lend more credence to the evolutionary theory that views firm characteristics as being more dominant and important predictors of corporate performance. At the same time the findings of the study downplays the importance of the context within which a firm operates. These findings are corroborated by similar recent studies. Alvarez & Burney (2007) suggests that opportunities are created rather than discovered. This implies opportunities depend on the firm level attributes. Short et al. (2009) concurs that the firm based attributes are important for performance though these attribute vary across ventures.

Short et al (2007) further contends there are currently two main schools of thought about what level of analysis drives performance that competes for managers attention. They identified these schools as industrial economics schools that stresses the role of industry structure (context) and resource based view that emphasize the importance of firm attributes. Nelson (1994) recommends that strategy- performance studies should incorporate both internal capabilities and external factors in an integrated model. This approach was adopted in this study and

the results reveal that an integrated model is a more robust predictor of corporate performance than either strategic capabilities or contextual factors.

However, Short et al. (2007) argue that between firm level characteristics and contextual factors, managers should adhere to the resource based view logic and focus their energy on firm level concerns. However, industrial organization economic logic cannot be ignored when forming strategy (Short et al. 2007). A similar argument can be advanced for Kenyan context since the interactive effect of firm's strategic market choice and strategic capabilities explain over 74% of variation in corporate performance with context only accounting 7% and losing all predictive value when adjusted for sample size and degrees of freedom. Kenyan managers should therefore, pay special attention to firm characteristics. However, they should also calibrate their strategies to reduce the adverse effect of contextual factors including insecurity, corruption, political risk and unfavorable economic climate.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter is divided into five sections that follow this introduction section. Section 6.2 gives a summary of the study while section 6.3 presents the conclusions with section 6.4 highlighting contribution of the study to the existing knowledge. Section 6.5 describes the limitations of this study and suggests further studies that can address these limitations. Finally, section 6.6 highlights policy recommendations to corporate managers and Kenyan Government.

6.2 Summary

The general objective of this study was to determine the influence of strategy, capabilities and context on corporate performance. The specific objectives were six:(1) To establish the link between PIMS principles and corporate performance in Kenya (2) To determine the influence of strategic capabilities on corporate performance in Kenya (3) To establish the influence of contextual factors on corporate performance in Kenya (4) To determine the joint composite effect of PIMS principles, strategic capabilities and contextual factors on corporate performance in Kenya (5) To determine the moderating effect of strategic capabilities on the relationship between PIMS principles and corporate performance in Kenya and (6) To determine the moderating effect of contextual factors on the relationship between PIMS principles and corporate performance in Kenya.

To achieve these objectives a triangulation of exploratory, descriptive and explanatory designs were employed. A census of all 56 companies listed on NSE was

conducted. Primary data were collected via a structured closed ended 5 point likert type questionnaire administered to the CEOs of the said companies. Secondary data were collected on the same companies for a period of five years between 2002 and 2006. This data was gathered from NSE generated summaries of listed companies financial performance and respective company's financial statements held by the CMA.

Data were analyzed using descriptive and inferential test statistics. Specifically, frequency counts, percentage proportions, means and standard deviations were used to assess data characteristics. Factor analysis was used to validate and construct indices for the preconceived construct variables. Cronbach alpha was used to measure reliability while Pearson product moment correlation analysis was used to establish associations between construct variables and test hypothesis. Multivariate analysis using different variants of general linear regression was used to test hypotheses relating to performance model estimation. Hierarchical regression was used to determine the moderating influence of strategic capabilities and contextual factors on the relationship between PIMS principles and corporate performance. Total sum of squares was used to test the model fitness.

6.3 Conclusions

The key findings as they relate to study objectives and hypothesis and derived conclusions are as follows: The first objective seeking to establish the link between PIMS principles and corporate performance, had six hypotheses each relating to six principles that have been extensively grounded on theoretical and empirical literature. As expected, product/ service quality and market share are strongly and positively

correlated to corporate performance with significance at $P < 0.01$. Contrary to PIMS findings investment intensity does not act as a drag to corporate performance in Kenya. This could be explained by the fact that companies in Kenya that have invested heavily on plant and equipment, working capital and labor costs, are near monopolies and as such have high market share and their products are perceived as being of high quality. Regarding business portfolio, the study findings are in support of the BCG underpinnings and therefore inconsistent with PIMS studies that have tended to dismiss BCG business portfolio relationship (e.g. Hambrick & Macmillan, 1982; Gale & Branch, 1981; & Buzzell & Gale, 1987). The findings of hypothesis testing also revealed that there is no significant negative relationship between vertical integration and corporate performance in Kenya. From PIMS arguments, if vertical integration leads to high investment intensity as a firm acquires suppliers and or intermediaries it acts as a drag to profitability. However, the findings of this study showed little vertical integration among the population of study. As expected long term value enhances corporate performance.

When the six PIMS principles, were aggregated and the composite score correlated to corporate performance, the correlation was found to be positive, although not significant at $p < 0.05$. This could be attributed to variance inflation factor (VIF) suppressing the individual relationships between the PIMS principles and corporate performance. However, on their own, PIMS principles were found to account for 55.6% of variation in corporate performance among companies listed on NSE, with product/ service quality accounting for 53.9% of variation among the study population. It can therefore be concluded that PIMS principles have predictive power on corporate performance in Kenya. It can further be concluded that product/ service

quality and market share are more important in predicting corporate performance in the Kenyan context.

The second objective seeking to determine the influence of strategic capabilities on corporate performance in Kenya had three hypotheses with first hypothesis relating to the five empirically grounded strategic capabilities. The results on hypothesis testing using Pearson's product moment correlation showed that all strategic capabilities, that is marketing capabilities, market linking capabilities, IT capabilities, technological capabilities and management capabilities, are positively and significantly correlated to corporate performance at $P < 0.05$. The findings also revealed that there is a strong correlation between corporate performance and strategic capabilities when aggregated as a composite measure. The findings of this study further revealed that strategic capabilities on their own account for 68.7% of variation in corporate performance. This is corroborated by other studies employing dynamic strategic theory. It can therefore be concluded that strategic capabilities play a significant role in predicting corporate performance in Kenya.

The third objective of this study sought to establish the influence of contextual factors on corporate performance in Kenya. Exploratory principal component factor analysis extracted four contextual factors affecting performance in Kenya. These were security, corruption, political risk and economical factors. All these factors were negatively correlated to corporate performance under Pearson correlation analysis although the associations were not significant at $P < 0.05$. This implies that the environment under which businesses operate in Kenya is not conducive and does not therefore favor business operations. However, the contextual factors only account

for 7% of variation in corporate performance and the predictive power is totally lost when the coefficient of determination is adjusted for number of variables and degrees of freedom. It can therefore be concluded that though contextual factors have negative effect on corporate performance in Kenya the influence is not significant.

The fourth objective, sought to establish the joint composite effect of PIMS principles, strategic capabilities, and contextual factors on corporate performance in an integrated model. The results revealed that the three variables, that is, PIMS principles, strategic capabilities and contextual factors in an integrated model account for 71.1% of variation in corporate performance in Kenya. This represents better model fitness than when the individual variables are used to predict corporate performance. It can be concluded that the integrated model of PIMS principles, strategic capabilities and contextual factors is a better predictor of corporate performance than each of the individual predictor models.

The fifth objective of this study was to determine the moderating effect of strategic capabilities on the relationship between PIMS principles and corporate performance in Kenya. The findings of the study revealed that strategic capabilities have a positive and significant moderating effect on the relationship between PIMS principles and corporate performance. This implies that strategic capabilities reinforce market strategy in achieving desired corporate performance. It can therefore be concluded that organizations that leverage their market strategy with internally built capabilities, achieve superior corporate performance.

The sixth and the final objective of this study, sought to determine the moderating influence of the contextual factors in Kenya on the relationship between PIMS principles and corporate performance. The findings revealed that contextual factors have a negative but insignificant moderating effect on the relationship between PIMS principles and corporate performance among the study population. It can therefore be concluded that in Kenyan context market strategy is leveraged by strategic capabilities but inhibited by the underlying environmental context in achieving desired corporate performance.

6.4 Contribution of the study to Knowledge

The findings of this study offer four substantial contribution to the existing knowledge: First, while recognizing that dynamic capabilities is important in understanding firm performance (Morgan et al., 2009) researchers have not examined the role played by other complementary strategic choices. Current Portrayals of the resource view (RBV) make clear that strategic resources (e.g. strategic capabilities) only have potential value and that realizing this value requires alignment with other important elements (Ketchen et al., 2007; Morgan et al., 2009). This study supports this view and posit that for an organization to pursue dynamic capabilities it requires to make key market related strategies specified by PIMS principles, especially regarding product/service quality and market share. Hierarchical regression in this study, show the complementary importance of market strategy and the leveraging effect of strategic capabilities in explaining corporate performance.

Achieving superior performance, as a function primarily of what occurs within their firms

Second, emerging dynamic capabilities (DC) theory has a relatively weak empirical base (e.g. Newbert, 2009; & Morgan et al., 2009). As conceptualized in Morgan's et al., firm's capabilities are not inherently dynamic. However, DC theory focuses particular attention on the ways in which firms configure and deploy their resources to reflect the needs of the market and environment (e.g. Morgan et al., 2009; Eisenhardt & Martin, 2000; & Makadok, 2001). Market strategy as specified under PIMS principles as a key market based knowledge asset and strategic capabilities are interconnected and complementary. The two would thus constitute necessary conditions for a firm's dynamic capabilities. This study therefore, provides some needed albeit Partial support for DC theory.

Third, the influence of strategy, firm capabilities and context on corporate performance is the central issue in strategic management discipline (Learned et al., 1969; Montgomery, 1979; Ethraj et al., 2005; Short et al., 2009). Although PIMS does not provide formulas for management decision making, there are relationships that can provide valuable guidance to managers (Buzzell & Gale, 1987). This study has shown that these principles are in complementarity with strategic capabilities firm level characteristics. Short et al. (2009) found that industry level representing the context under which a firm operates, matters little for the survival of the firm. Instead, the firm level characteristics play a dominant role in performance. Empirical studies replicating these propositions in an African settings and specifically in Kenya are scanty. This study therefore, posit that through the context under which businesses operate in Kenya matters, managers and entrepreneurs should view achieving superior performance, as a function primarily of what occurs within their firms.

Fourth, researchers interested in the firm characteristics and contextual application of models have questioned the heavy reliance on financial performance measures and have called for the use of alternative metrics to broaden our understanding of how each level matters for performance measures beyond accounting returns (Hawawini et al., 2003; Short et al., 2009). Besides, PIMS studies have only relied on financial data (Buzzell & Gale, 1987). There have been calls for managers to move beyond financial measures alone when evaluating firm performance (e.g. Kaplan & Norton, 1996; Katchen et al., 2007). The implication is that a focus on financial measures alone will understate the importance of strategic execution for achieving sustained competitive advantage (short et al., 2007). In answering the call for moving beyond financial measures alone, when evaluating firm performance, this study employed BSC model of corporate performance. The study posit that BSC model conform to Kenyan context and remains a viable measure of corporate performance.

6.5 Recommendations for Further Study

The study framework and methods provide several limitations in this study: First, the hypotheses were tested using data collected from NSE listed companies. These are large companies that are expected by market regulators to be run prudently for the good of the investing public. This may lead to stronger market strategy, strategic capabilities and corporate performance relationships. Due to their relatively larger sizes, these companies may possess resources that may help them adapt better to the environmental context thus this may result in weak relationships between contextual factors and corporate performance. It is therefore, important to replicate this study in

different contexts in Kenya especially among small and micro enterprises that form the bulk of business organizations operating in Kenya.

Second, this study adopted an omnibus conceptual model which may imply multiple directions of causality. Though a lot of care was taken to address non orthogonal items, there is a chance reverse causality may have affected the variable relationships which leaves open the possibility of self serving bias in the data. Future studies adopting such framework should employ more sophisticated optimization procedures like NORMCLUS.

Third, the population used in this study was particularly small for estimation purposes. This reduces the statistical power of the models estimated (Anderson & Coughlan, 1985; Chege, 1999). To overcome this limitation, future studies should aim at larger populations/ samples. This provides a firmer basis for statistical inferences (Chege, 1999). Further, due to the small population inter sector analysis could not be performed since this would have grossly violated model assumptions.

Finally, considerations should be made for improvement of variable metrics so as to incorporate aspects of study constructs that are more relevant to the Kenyan situation. This should specifically target the metrics used to measure vertical integration, long term value and business portfolio.

6.6 Implications and Policy Recommendations to corporate Managers and Kenyan Government

The findings of this study hold implications for corporate managers and Kenyan government: First, the findings of this study demonstrate that PIMS principles have predictive value on corporate performance. This implies corporate managers may apply selected PIMS principles to drive their company's performance. It is therefore recommended that corporate managers pay special attention to market strategy especially product quality and market share. They should employ organic methods of building market share as external methods vide acquisition along value chain does not produce desired effects in the Kenyan context. Management should also support those business portfolio that fall in the categories of "cash cows" and "stars" and divest either selectively or entirely from those portfolio that fall within "question market" and "Dog" categories. In Kenyan context, investment intensity does not appear to drag profitability. It is however, recommended that large investments be calibrated with product quality and market share. This will prevent scenarios where capital intensity is not commensurate with long term sales and value addition.

Second, the finding that market strategy is interconnected with firm's strategic capabilities in a complementary manner implies that corporate managers should use firm built capabilities to support their market strategy. It is recommended that marketing strategy aimed at improving market share and product quality be specially leveraged by IT capabilities, market linking capabilities, technological capabilities and management capabilities. The IT capabilities should be calibrated to foster innovation, knowledge creation and facilitate cross functional integration. Innovations will ensure that the products/ services remain trendy and rugged. Knowledge creation ensures that

should be addressed by venturing into other renewable sources of energy like wind, geothermal and solar. Resources should be prudently spent to avoid wastage. Stimulus packages should be introduced to spur economic growth that in turn improves the disposal income levels of consumers.

Finally, the finding that firm specific characteristics are more important determinants of corporate performance as opposed to contextual factors implies that corporate managers should put more emphasis in building firm capabilities. Although superior performance is primarily a function of what occurs within their firms, corporate managers should also pay attention to the environment to mitigate the adverse effects of the contextual factors. This should be done by aligning their firm characteristics with environmental dynamics in a way that cushions the firm from environmental surprises that are contextual specific.

In conclusion, the thesis that firm performance is a reflection of the context within which it operates and choices it makes needs to be revisited and stated more precisely. In Kenyan context, this thesis can be stated more precisely, if the choice is considered a market strategy espoused by PIMS principles and leveraged by internally built complementary strategic capabilities, within an organization configuration that calibrates strategic choice in a way that protects the firm from political risk, corruption, insecurity and adverse economic climate.

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APPENDIX A

INTRODUCTION LETTER



KENYATTA UNIVERSITY SCHOOL OF BUSINESS

School contact

P.O. Box 43844
Nairobi.

Student contact:

Mugambi G.K. M'Nchebere
P.O. Box 69728 00400
Nairobi.

Ref: rsch/qn/no.

Date: 7th March, 2009

Dear Sir,

Re: Strategy and Corporate Performance: Your Views on Influence of Strategic Capabilities and Contextual Factors in Kenya

The attached questionnaire is part of a PhD research thesis at Kenyatta University aimed at understanding and developing a contextual specific strategy model that can predict corporate performance in Kenya. The study is being conducted by the undersigned PhD student under the supervision of Prof. Jonathan Chege and Prof. Peter K'Obonyo and is sponsored by German Academic Exchange Services (DAAD). We are kindly requesting your assistance in providing the necessary additional information to meet our objectives by filling the attached questionnaire. Already, financial information on your company, have been collected, collated and analyzed from secondary sources for five years from 2002 to 2006.

Confidentiality Undertaking

Your organization has been chosen for this study because it is listed on the Nairobi Stock Exchange (NSE) and its financial statements are in the public domain. Your views are sought, because we believe you have a thorough understanding of corporate strategy and prevailing business circumstances in Kenya. You are assured that the information you provide will be treated in strict confidence and will only be used for academic purposes.

Completed Questionnaire

The completed questionnaire will be collected by the undersigned PhD student or his research assistant at your earliest convenience. If you have any queries or would like further information on this study, please contact the undersigned PhD student on 0721 203745 or 0711 588483 or email mugambigkmn@yahoo.com. At your request, a summary of the results will be sent to you. It is expected that the findings of this study will inform strategic decision making in Kenya.

Thank you in advance for your cooperation and understanding.

Yours sincerely,

Mugambi G.K. M'Nchebere
PhD Student

Prof. Jonathan M. Chege, PhD
Supervisor

APPENDIX B
QUESTIONNAIRE

Market Strategy and Corporate Performance: The Influence of Strategic Capabilities and Contextual Factors in Kenya

A) BACKGROUND

1. Company's Profile

- a) Company name
- b) Year the company was established in Kenya
- c) How would you classify your company's ownership? (Tick appropriately)
 - i) Predominantly local (over 50% local ownership) []
 - ii) Predominantly foreign (over 50% foreign ownership) []
 - iii) Balanced between foreign and local (50/50) []
- d) Estimated total number of employees by the end of 2008.....
- e) Estimated number of employees that left within the year 2008.....
- f) Estimated number of employees that joined within the year 2008

2. Respondent's Profile

- a) Position of respondent in the company.....
- b) Number of years in the current position
- c) Level of formal education (Tick appropriately)
 - i) Bachelors degree []
 - ii) Masters degree and above []
 - iii) Others (specify)
- d) Professional qualifications (specify)

B) PERFORMANCE MEASURES

3. The following is a set of possible non financial performance measures/ indicators. Please evaluate how well or poorly you believe this company performs on these indicators relative to your three major competitors. Please use the following response scale by ticking your responses: 1 = Much worse, 2 = Worse, 3 = Neither worse nor better, 4 = Better, 5 = Much better

		Much worse	Worse	Neutral	Better	Much better
a)	Market share	1	2	3	4	5
b)	Overall customer retention	1	2	3	4	5
c)	Retention of major customers	1	2	3	4	5
d)	Customer acquisition	1	2	3	4	5
e)	Effective resource utilization	1	2	3	4	5

f)	Waiting time before service delivery	1	2	3	4	5
	PERFORMANCE MEASURES continued	Much worse	Worse	Neutral	Better	Much better
g)	Accuracy of information provided to customers	1	2	3	4	5
h)	Accessibility of your services	1	2	3	4	5
i)	Requests or transactions fulfillment	1	2	3	4	5
j)	Lead times (i.e. time taken from order placing to receiving goods/ services)	1	2	3	4	5
k)	Yields (i.e. proportion of product/ service success to failure)	1	2	3	4	5
l)	Throughput time (i.e. time spent in product/ service production)	1	2	3	4	5
m)	Employee involvement in decision making	1	2	3	4	5
n)	Employee training	1	2	3	4	5
o)	Employee access to information	1	2	3	4	5
p)	Employee encouragement to have initiative and be creative	1	2	3	4	5
q)	Continuous Process improvement	1	2	3	4	5

C) PIMS PRINCIPLES

4. What emphasis does your company place on the following product quality related aspects relative to your three major competitors. Please use the following response scale by ticking your responses: 1= Much less emphasis, 2= Less emphasis, 3= Neither less nor more emphasis, 4= More emphasis, and 5= Much more emphasis.

		Much less	less	Neutral	More	Much more
a)	Investment in research and development of new product/ service lines	1	2	3	4	5
b)	Expenditure in enhancing existing products/ services	1	2	3	4	5
c)	Premium pricing (i.e. charging a higher price without significantly affecting your market share)	1	2	3	4	5
d)	Improvement of your market share	1	2	3	4	5
e)	Price discounting in events of price wars	1	2	3	4	5

5. The following statements describe business portfolio characteristics. Please tick only **one** statement that best describes your predominant business portfolio relative to your three major competitors. Our predominant business portfolio has:

- a) Relatively high market share in low growth market segments []
- b) Relatively high market share in high growth market segments []
- c) Relatively low market share in high growth market segments []
- d) Relatively low market share in low growth market segments []

6. Please indicate the extent to which your company has engaged in the following vertical integration activities by ticking your responses using the following scale 1= Strongly disagree, 2= Disagree, 3 = Neither agree nor disagree, 4 = Agree, and 5 = Strongly agree.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
a)	Acquisition of distributors and intermediaries	1	2	3	4	5
b)	Acquisition of suppliers	1	2	3	4	5

D) CONTEXTUAL FACTORS

7. In general, please indicate the extent to which you agree or disagree with each of the following statements describing business environment or conditions prevailing in Kenya. Please tick your response by using the following scale 1= Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree and 5 = Strongly agree.

a) Infrastructural

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	Transportation network is inadequate and poorly distributed	1	2	3	4	5
ii)	Cost of transportation is generally high forming a significant proportion of our operating expenses	1	2	3	4	5
iii)	It is difficult to access electricity and even when accessed, it is unreliable due to interruptions	1	2	3	4	5
iv)	The cost of energy is rather high and forms a significant part of our operating expenses	1	2	3	4	5

b) Distribution systems

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	Distribution systems are dominated by a small group to exclusion of other potential participants	1	2	3	4	5
ii)	There is minimum cross-functional interaction between business organizations and distribution intermediaries	1	2	3	4	5
iii)	There is rather minimal exchange of information among distribution channels and business organizations	1	2	3	4	5

	Distribution systems continued	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
iv)	There are rather few innovations within our distribution channels	1	2	3	4	5

	c) Political and Legal	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	Private business is regulated by many licenses under a centralized bureaucratic regime	1	2	3	4	5
ii)	Laws governing business operations as well as dispute settling institutions are weak	1	2	3	4	5
iii)	The political environment is fluid with no profound political ideology	1	2	3	4	5
iv)	Government institutions that support business are rather weak and at times exhibit hostilities towards businesses	1	2	3	4	5
v)	Government directly interferes or threatens to interfere with business operations	1	2	3	4	5

d) Economic Factors

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	There are limited markets making business competition high and intense	1	2	3	4	5
ii)	The cost of credit in Kenya is high and access to international financial markets remain difficult	1	2	3	4	5
iii)	Capital markets are weak and inefficient making it difficult to raise equity capital	1	2	3	4	5
iv)	Consumers low income levels have had adverse effect on our business volumes	1	2	3	4	5

e) Social- Cultural Factors

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	Kenyan cultural beliefs and practices do not favor business operations	1	2	3	4	5
ii)	Kenyan work ethics does not promote business enterprise	1	2	3	4	5
iii)	Loyalty culture within ethnic groups affects business operations especially in filling employment positions	1	2	3	4	5
iv)	Mixed cultures within business organizations create tension among employees thus affecting productivity	1	2	3	4	5

f) Corruption

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	Competitive business environment is affected by undercutting and other unfair business practices	1	2	3	4	5
ii)	Powerful individuals with political connections ignore business regulations and influence decisions to their favor	1	2	3	4	5
iii)	Corruption related expenses have significantly affected our operating costs	1	2	3	4	5

g) Security

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	We are uncertain and concerned about the security of our assets	1	2	3	4	5
ii)	Our employees are not safe due to crime and political instability	1	2	3	4	5
iii)	Insecurity often results in interruption of our business operations	1	2	3	4	5

E) STRATEGIC CAPABILITY ITEMS

8. The following is a set of possible business strategic capabilities. Please evaluate how well or poorly you believe that your company performs in the specific capabilities, relative to your three major competitors. Please use the following response scale by ticking your responses: 1 = Much worse, 2 = Worse, 3 = Neither worse nor better, 4 = Better, and 5 = Much better.

a) Marketing capabilities

		Much worse	Worse	Neutral	Better	Much better
i)	Knowledge of customers	1	2	3	4	5
ii)	Knowledge of competitors	1	2	3	4	5
iii)	Integration of marketing activities	1	2	3	4	5
iv)	Skill to segment and target markets	1	2	3	4	5
v)	Effectiveness of pricing programs	1	2	3	4	5
vi)	Effectiveness of advertising programs	1	2	3	4	5

b) Market Linking capabilities

		Much worse	Worse	Neutral	Better	Much better
i)	Market sensing/ feeling capabilities	1	2	3	4	5
ii)	Customer-linking (i.e. creating and managing durable customer relationship) capabilities	1	2	3	4	5
iii)	Capabilities of creating durable relationship with our suppliers.	1	2	3	4	5
iv)	Ability to retain customers	1	2	3	4	5
v)	Channel -bonding capabilities (creating durable relationship with channel members such as whole sellers, retailers etc).	1	2	3	4	5
vi)	Relationship with channel members	1	2	3	4	5

c) Information technology capabilities

		Much worse	Worse	Neutral	Better	Much better
i)	Information technology systems for new product development projects.	1	2	3	4	5
ii)	Information technology systems for facilitating cross-functional integration	1	2	3	4	5
iii)	Information technology systems for facilitating technology knowledge creation	1	2	3	4	5
iv)	Information technology systems for internal communication e.g. across different departments, across different levels of the organization etc	1	2	3	4	5
v)	Information technology systems for external communication e.g. with suppliers, customers, channel members etc.	1	2	3	4	5

d) Technological capabilities

		Much worse	Worse	Neutral	Better	Much better
i)	New market development capabilities	1	2	3	4	5
ii)	Manufacturing/ service processes	1	2	3	4	5
iii)	Technology development capabilities	1	2	3	4	5
iv)	Ability of predicting technological changes in the industry.	1	2	3	4	5
v)	Production/ service delivery facilities	1	2	3	4	5
vi)	Quality control skills	1	2	3	4	5

e) Management capabilities

		Much worse	Worse	Neutral	Better	Much better
i)	Integrated logistics systems	1	2	3	4	5
ii)	Cost control capabilities	1	2	3	4	5
iii)	Financial management skills	1	2	3	4	5
iv)	Human management capabilities	1	2	3	4	5
v)	Accuracy of profitability and revenue forecasting	1	2	3	4	5
vi)	Marketing planning process	1	2	3	4	5

9. Generally to what extent do you agree with the following statements regarding governance in your company. Please use the following response scale by ticking your responses: 1= Strongly disagree, 2= Disagree, 3= Neither disagree nor agree, 4= Agree, and 5= Strongly agree.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i)	Our accounts are audited and submitted to relevant authorities in time	1	2	3	4	5
ii)	The company has well defined organization structure with segregation of duties	1	2	3	4	5
iii)	The company is involved in social responsibility activities that promote local communities and protects environment	1	2	3	4	5
iv)	The company ensures shareholders and other stakeholders are provided with accurate and timely information on its performance	1	2	3	4	5
v)	Our board stewardship is effective	1	2	3	4	5

THANK YOU FOR TAKING YOUR TIME TO COMPLETE THIS QUESTIONNAIRE.

If you have any queries please do not hesitate to contact Mugambi G.K. M’Nchebere by telephoning 0721 203745 or 0711 588483 or E-mailing mugambigkmm@yahoo.com

APPENDIX C

**NAIROBI STOCK EXCHANGE (NSE)
LISTED COMPANIES**

AGRICULTURAL

S.N	Company Name	Physical Address	Town
1	Unilever Tea Kenya	Norfolk Towers, 2nd Floor	Nairobi
2	Rea Vipingo Ltd	Madison Insurance House	Nairobi
3	Sasini Tea Ltd	Sasini House, Loita Street	Nairobi
4	Kakuzi Ltd	New Rehani House, Westlands	Nairobi

COMMERCIAL AND SERVICES

1	TPS (Serena)	Williamson House, 4th Floor	Nairobi
2	Car and General Ltd	New Cargen, Lusaka Road	Nairobi
3	Hutchins Biemer Ltd	Ralph Bunch Road, Milimani	Nairobi
4	CMC Holdings	Connauht House, Lusaka Road	Nairobi
5	Kenya Airways	Airport North Road, Embakasi	Nairobi
6	Uchumi Supermarkets Ltd	Nanyuki Road, Industrial Area	Nairobi
7	Marshals (EA) Ltd	Marshals House, Harambee Avenue	Nairobi
8	Nation Media Group	Nation Centre	Nairobi
9	SCAN Group	The Chancery, Valley Road	Nairobi

FINANCE AND INVESTMENT

1	National Industrial Credit Bank Ltd	NIC House, Masaba Road	Nairobi
2	Pan Africa Insurance Holdings Ltd	Pan Africa House	Nairobi
3	Housing Finance Ltd	Rehani House	Nairobi
4	Barclays Bank of Kenya Ltd	Barclays Plaza, Loita Street	Nairobi
5	CFC Bank Ltd	CFC Centre, Chiromo Road	Nairobi
6	Standard Chartered Bank Ltd	Stanbank House	Nairobi
7	Diamond Trust Bank of Kenya	Nation Centre	Nairobi
8	ICDC Investment Company Ltd	International Life House	Nairobi
9	Jubilee Insurance Co Ltd	Jubilee Insurance House	Nairobi
10	National Bank of Kenya Ltd	National Bank Building	Nairobi
11	Kenya Commercial Bank Ltd	Kencom House	Nairobi
12	Kenya Re	Reinsurance Plaza	Nairobi
13	Equity Bank Ltd	NHIF Building	Nairobi

INDUSTRIAL AND ALLIED

1	Athi River Mining	Chiromo Road, Westlands	Nairobi
2	BOC Kenya Ltd	Kitui Road, Industrial Area	Nairobi
3	Bamburi Cement Ltd	Kenya Re Towers, Upper Hill	Nairobi
4	British American Tobacco (K) Ltd	Likoni Road, Industrial Area	Nairobi
5	Crown- Berger (K) Ltd	Likoni Road, Industrial Area	Nairobi
6	Olympia Capital Holdings	Kijabe Street	Nairobi
7	E. A. Breweries Ltd	Tusker House, Ruaraka	Nairobi
8	E. A. Cables Ltd	Kitui Road, Industrial Area	Nairobi

(Appendix continues)

Appendix B Continued

S.N	Company Name	Physical Address	Town
9	Carbacid Investments Ltd	Commercial Street, Industrial Area	Nairobi
10	E. A. Portland Cement Co. Ltd	Namanga Road	Athi River
11	Sameer Group	Off. Mombasa Road	Nairobi
12	Unga Group Ltd	Ngano House, Commercial Street	Nairobi
13	Mumias Sugar Co.	Royal Ngao House, 2 nd Floor	Nairobi
14	Kenya Oil Ltd	ICEA Building, 9 th Floor	Nairobi
15	Total (K) Ltd	Chai House	Nairobi
16	Kenya Electricity Generating Co.	Stima Plaza	Nairobi
17	Eveready	Nakuru	Nakuru
ALTERNATIVE INVESTMENT MARKET SEGMENT			
1	A Baumann and Company Ltd	Baumann House, Haile Selassie Ave.	Nairobi
2	City Trust	Kiruingii, Ring Road, Westlands	Nairobi
3	Access Kenya		Nairobi
4	Standard Group Ltd	Likoni Road	Nairobi
5	Express (K) Ltd	Ectoville, Off Enterprise Road	Nairobi
6	Williamson Tea Kenya Ltd	Williamson House	Nairobi
7	Kapchorua Tea Company Ltd	Williamson House	Nairobi
8	Kenya Ochards	Off Dunga Road	Nairobi
9	Eaagads Ltd.	Ruiru	Ruiru
10	Limuru Tea Ltd	Norfolk Towers, 2 nd Floor	Nairobi

Source: www.nse.co.ke/listedcompanies.htm 9/3/2007 11:25 AM

APPENDIX D

FACTOR ANALYSIS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.488
Bartlett's Test of Sphericity	Approx. Chi-Square	614.924
	df	351
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.963	22.084	22.084	5.963	22.084	22.084
2	2.916	10.798	32.882	2.916	10.798	32.882
3	2.295	8.501	41.383	2.295	8.501	41.383
4	2.172	8.044	49.427	2.172	8.044	49.427
5	1.812	6.711	56.138	1.812	6.711	56.138
6	1.545	5.722	61.860	1.545	5.722	61.860
7	1.433	5.307	67.167	1.433	5.307	67.167
8	1.364	5.052	72.219	1.364	5.052	72.219
9	1.169	4.329	76.548	1.169	4.329	76.548
10	.968	3.586	80.133			
11	.786	2.912	83.046			
12	.707	2.620	85.666			
13	.587	2.174	87.840			
14	.507	1.877	89.717			
15	.492	1.821	91.538			
16	.389	1.440	92.978			
17	.345	1.276	94.254			
18	.329	1.219	95.473			
19	.278	1.029	96.502			
20	.248	.917	97.419			
21	.166	.617	98.036			
22	.141	.523	98.559			
23	.129	.479	99.038			
24	.103	.383	99.421			
25	.074	.274	99.695			
26	.050	.185	99.880			
27	.032	.120	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component								
	1	2	3	4	5	6	7	8	9
Government Institutions	.766								
Government Interference	.648								
Security of Assets	.606								
Laws and Dispute Settling	.579								
Unfair Business Practices	.574								
Energy Cost	.574								
Capital Markets	.552								
Distribution Domination	.532				.512				
Effects of Consumer's Income	.519								
Loyalty Culture and Employment	.513								
Corruption Expenses and Operating Costs									
Channel Innovation									
Cultural Beliefs and Business Operations									
Information Exchange		.575		.547					
Electricity Accessibility and Quality		-.565							
Limited Markets and Competition		.537							
Political Influence									
Business Regulation and Bureaucracy			.666						
Political Ideology	.529		.611						
Cross Functional Integration				.668					
Business Interruption				.597					
Employee's Safety									
Mixed Culture and Productivity									
Work Ethics and Business Enterprise									
Cost of Credit							.510		
Transport Cost								.545	
Transport Network Distribution								.541	

Extraction Method: Principal Component Analysis.
a 9 components extracted.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.499
Bartlett's Test of Sphericity	Approx. Chi-Square	472.979
	df	276
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.444	22.684	22.684	5.444	22.684	22.684	2.592	10.801	10.801
2	2.657	11.071	33.755	2.657	11.071	33.755	2.532	10.550	21.352
3	1.963	8.179	41.935	1.963	8.179	41.935	2.319	9.661	31.012
4	1.934	8.058	49.993	1.934	8.058	49.993	2.309	9.619	40.632
5	1.517	6.323	56.316	1.517	6.323	56.316	2.089	8.704	49.336
6	1.472	6.132	62.448	1.472	6.132	62.448	1.905	7.939	57.275
7	1.355	5.644	68.092	1.355	5.644	68.092	1.784	7.433	64.708
8	1.145	4.769	72.861	1.145	4.769	72.861	1.544	6.434	71.142
9	1.081	4.505	77.366	1.081	4.505	77.366	1.494	6.225	77.366
10	.914	3.810	81.176						
11	.752	3.134	84.310						
12	.633	2.638	86.948						
13	.557	2.319	89.267						
14	.460	1.918	91.185						
15	.395	1.644	92.829						
16	.345	1.439	94.267						
17	.327	1.364	95.631						
18	.285	1.185	96.816						
19	.242	1.010	97.826						
20	.157	.656	98.482						
21	.127	.527	99.010						
22	.101	.423	99.433						
23	.080	.333	99.766						
24	.056	.234	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component								
	1	2	3	4	5	6	7	8	9
Business Interruption	.844								
Employee's Safety	.802								
Security of Assets	.666								
Government Institutions		.735							
Government Interference		.674							
Work Ethics and Business Enterprise		.627							
Loyalty Culture and Employment		.585							
Effects of Consumer's Income			.771						
Capital Markets			.664						
Channel Innovation			.605						
Business Regulation and Bureaucracy									
Political Influence				.798					
Unfair Business Practices				.743					
Limited Markets and Competition									
Electricity Accessibility and Quality					.876				
Energy Cost		.501			.650				
Mixed Culture and Productivity						.733			
Corruption Expenses and Operating Costs						.732			
Transport Network Distribution							.910		
Laws and Dispute Settling									
Transport Cost								.835	
Cost of Credit			.501					.591	
Cross Functional Integration									.900
Cultural Beliefs and Business Operations									

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 15 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	320.165
	df	171
	Sig.	.000

Communalities

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.685	24.659	24.659	4.685	24.659	24.659	2.455	12.922	12.922
2	2.243	11.808	36.467	2.243	11.808	36.467	2.402	12.641	25.563
3	1.638	8.620	45.087	1.638	8.620	45.087	2.154	11.335	36.898
4	1.549	8.155	53.242	1.549	8.155	53.242	2.056	10.821	47.720
5	1.430	7.528	60.770	1.430	7.528	60.770	1.749	9.205	56.924
6	1.243	6.542	67.311	1.243	6.542	67.311	1.704	8.969	65.894
7	1.168	6.147	73.458	1.168	6.147	73.458	1.437	7.565	73.458
8	.920	4.842	78.300						
9	.817	4.301	82.602						
10	.658	3.463	86.065						
11	.529	2.785	88.850						
12	.484	2.548	91.398						
13	.412	2.168	93.567						
14	.358	1.886	95.453						
15	.267	1.406	96.859						
16	.249	1.312	98.171						
17	.138	.726	98.897						
18	.122	.640	99.536						
19	.088	.464	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component						
	1	2	3	4	5	6	7
Business Interruption	.825						
Employee's Safety	.794						
Security of Assets	.746						
Work Ethics and Business Enterprise		.766					
Mixed Culture and Productivity		.711					
Loyalty Culture and Employment		.603					.552
Cultural Beliefs and Business Operations		.545					
Corruption Expenses and Operating Costs		.526					
Cost of Credit			.794				
Effects of Consumer's Income			.687				
Channel Innovation			.670				
Political Influence				.870			
Unfair Business Practices				.779			
Transport Network Distribution					.855		
Government Institutions					.582		
Government Interference					.572		
Electricity Accessibility and Quality						.819	
Capital Markets						.698	
Cross Functional Integration							.900

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 12 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.502
Bartlett's Test of Sphericity	Approx. Chi-Square	291.117
	df	153
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.468	24.820	24.820	4.468	24.820	24.820	2.451	13.614	13.614
2	2.195	12.193	37.012	2.195	12.193	37.012	2.131	11.837	25.451
3	1.595	8.862	45.875	1.595	8.862	45.875	2.069	11.496	36.947
4	1.544	8.576	54.451	1.544	8.576	54.451	2.027	11.263	48.210
5	1.402	7.792	62.242	1.402	7.792	62.242	1.828	10.156	58.366
6	1.220	6.776	69.018	1.220	6.776	69.018	1.678	9.320	67.685
7	1.053	5.853	74.870	1.053	5.853	74.870	1.293	7.185	74.870
8	.836	4.644	79.515						
9	.702	3.898	83.413						
10	.652	3.621	87.035						
11	.521	2.897	89.931						
12	.453	2.516	92.448						
13	.364	2.024	94.472						
14	.354	1.967	96.439						
15	.257	1.428	97.867						
16	.156	.868	98.735						
17	.136	.755	99.490						
18	.092	.510	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component						
	1	2	3	4	5	6	7
Business Interruption	.817						
Employee's Safety	.796						
Security of Assets	.747						
Cost of Credit		.795					
Effects of Consumer's Income		.740					
Channel Innovation		.567					.538
Political Influence			.864				
Unfair Business Practices			.785				
Mixed Culture and Productivity				.808			
Cultural Beliefs and Business Operations				.630			
Work Ethics and Business Enterprise				.615			
Corruption Expenses and Operating Costs			.512	.570			

Transport Network Distribution					.828		
Government Institutions					.633		
Government Interference					.620		
Electricity Accessibility and Quality						.809	
Capital Markets						.683	
Cross Functional Integration							.887

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 13 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.556
Bartlett's Test of Sphericity	Approx. Chi-Square	239.973
	df	120
	Sig.	.000

Communalities

	Initial	Extraction
Transport Network Distribution	1.000	.755
Electricity Accessibility and Quality	1.000	.667
Cross Functional Integration	1.000	.538
Government Institutions	1.000	.725
Government Interference	1.000	.688
Cost of Credit	1.000	.689
Capital Markets	1.000	.775
Effects of Consumer's Income	1.000	.714
Cultural Beliefs and Business Operations	1.000	.743
Work Ethics and Business Enterprise	1.000	.740
Mixed Culture and Productivity	1.000	.466
Unfair Business Practices	1.000	.830
Political Influence	1.000	.840
Security of Assets	1.000	.710
Employee's Safety	1.000	.874
Business Interruption	1.000	.776

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.016	25.100	25.100	4.016	25.100	25.100	2.361	14.758	14.758
2	2.142	13.389	38.490	2.142	13.389	38.490	2.047	12.791	27.549
3	1.550	9.685	48.175	1.550	9.685	48.175	2.016	12.598	40.147
4	1.352	8.452	56.626	1.352	8.452	56.626	1.760	11.003	51.150
5	1.339	8.368	64.995	1.339	8.368	64.995	1.711	10.691	61.842
6	1.132	7.078	72.072	1.132	7.078	72.072	1.637	10.231	72.072
7	.935	5.846	77.918						
8	.794	4.963	82.881						
9	.662	4.135	87.016						
10	.507	3.171	90.188						
11	.432	2.701	92.889						
12	.356	2.225	95.113						
13	.287	1.793	96.906						
14	.224	1.402	98.308						
15	.140	.874	99.182						
16	.131	.818	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component					
	1	2	3	4	5	6
Business Interruption	.840					
Employee's Safety	.807					
Security of Assets	.701					
Cultural Beliefs and Business Operations		.769				
Work Ethics and Business Enterprise		.724				
Mixed Culture and Productivity		.617				
Cross Functional Integration						
Political Influence			.890			
Unfair Business Practices			.821			
Cost of Credit				.807		
Effects of Consumer's Income				.778		
Electricity Accessibility and Quality					.788	
Capital Markets					.742	
Transport Network Distribution						.851

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.868	27.631	27.631	3.868	27.631	27.631	2.385	17.034	17.034
2	2.005	14.321	41.952	2.005	14.321	41.952	2.138	15.271	32.305
3	1.530	10.932	52.884	1.530	10.932	52.884	1.963	14.018	46.324
4	1.344	9.598	62.483	1.344	9.598	62.483	1.887	13.477	59.801
5	1.240	8.856	71.339	1.240	8.856	71.339	1.615	11.538	71.339
6	.904	6.457	77.795						
7	.807	5.763	83.558						
8	.591	4.222	87.780						
9	.434	3.097	90.878						
10	.384	2.742	93.620						
11	.335	2.393	96.013						
12	.260	1.860	97.873						
13	.164	1.171	99.044						
14	.134	.956	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component				
	1	2	3	4	5
Employee's Safety	.851				
Business Interruption	.774				
Security of Assets	.765				
Effects of Consumer's Income		.809			
Cost of Credit		.674			
Transport Network Distribution			.810		
Government Institutions			.673		
Government Interference			.639		
Cultural Beliefs and Business Operations					
Political Influence				.884	
Unfair Business Practices				.808	
Electricity Accessibility and Quality					.785
Capital Markets					.678
Work Ethics and Business Enterprise		.517			-.567

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.631
Bartlett's Test of Sphericity	Approx. Chi-Square	161.446
	df	55
	Sig.	.000

Communalities

	Initial	Extraction
Transport Network Distribution	1.000	.677
Electricity Accessibility and Quality	1.000	.614
Government Institutions	1.000	.715
Government Interference	1.000	.735
Capital Markets	1.000	.766
Effects of Consumer's Income	1.000	.700
Unfair Business Practices	1.000	.851
Political Influence	1.000	.577
Security of Assets	1.000	.669
Employee's Safety	1.000	.875
Business Interruption	1.000	.630

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.559	32.354	32.354	3.559	32.354	32.354	2.287	20.795	20.795
2	1.577	14.341	46.695	1.577	14.341	46.695	1.969	17.898	38.693
3	1.432	13.015	59.710	1.432	13.015	59.710	1.810	16.451	55.144
4	1.241	11.286	70.996	1.241	11.286	70.996	1.744	15.852	70.996
5	.967	8.792	79.788						
6	.657	5.971	85.759						
7	.499	4.540	90.299						
8	.378	3.437	93.736						
9	.294	2.673	96.410						
10	.223	2.025	98.435						
11	.172	1.565	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component			
	1	2	3	4
Employee's Safety	.904			
Business Interruption	.723			
Security of Assets	.713			
Unfair Business Practices		.892		
Political Influence		.722		
Transport Network Distribution			.800	
Government Institutions			.709	
Government Interference			.701	
Capital Markets				.828
Effects of Consumer's Income				.727
Electricity Accessibility and Quality				.608

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

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