

**CORPORATE GOVERNANCE STRUCTURE AND PERFORMANCE OF
MANUFACTURING FIRMS LISTED IN THE NAIROBI STOCK EXCHANGE //**

BY

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FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER
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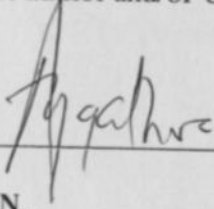
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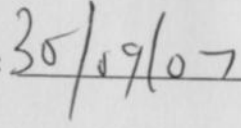
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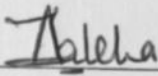


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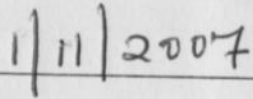
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Dedication

To my family-Miriam, Kiyu and Nyaga

Acknowledgement

I would like to acknowledge the support and advice given by my supervisor, Mr. Alex Jaleha.

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Abstract

The broad objective of the study was to determine the relationship between various components of corporate governance structure and the performance of manufacturing firms listed in the NSE. The study was guided by the following specific objectives: To determine the relationship between firm performance and frequency of board meetings for manufacturing firms listed in the NSE between 1996-2006; To determine the relationship between board composition and firm performance in manufacturing firms listed in the NSE; To determine the relationship between the percentage of insider equity holding and firm performance in manufacturing firms listed in the NSE; and to determine the relationship between executive compensation and firm performance in manufacturing firms listed in the NSE. The study targeted 18 manufacturing companies that are listed in the NSE as at 30th June 2007. Data was obtained from the information centre at the Nairobi Stock Exchange and comprised observations for the period between 1996 and 2006.

The key findings of the study revealed the existence of a linear relationship between various structures of corporate governance and performance of manufacturing firms listed in the NSE. Specifically, the findings revealed that there exists a perfect linear relationship between performance measures and the frequency of boards meetings; CEO compensation, board composition; and percentage of insider holding. The results were obtained through a regression-based F-TEST on each of the four performance measures (Tobin's Q; Return on Equity; Return on Assets; and Price-to-Earnings ratios) used in the study. It was recommended that adoption of sound corporate governance structures is critical for the success of manufacturing firms.

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List of Abbreviations and Acronyms

CEO	:	Chief Executive Officer
CLSA	:	Credit Lyonnais Securities Asia
CMA	:	Capital Markets Authority
NSE	:	Nairobi Stock Exchange
ROA	:	Return on Assets
ROE	:	Returns on Equity
S & P	:	Standard & Poor

CHAPTER ONE

1.0 INTRODUCTION

1.1. Background of the Study

Corporate governance is a set of interlocking rules by which corporations, shareholders and management govern their behaviour. This is a combination of a legal system that sets some common standards of governance and systems of behaviour determined by the firms themselves. Much of the research on corporate governance examines the interaction between the institutional frameworks of governance and the response of firms within those frameworks (Piesse, 2005).

Corporate governance has traditionally dealt with the agency problem of the separation of management and finance. This basic agency problem suggests a possible definition of corporate governance as addressing an adverse problem of governance in corporate organizations. The traditional definition of corporate governance took a narrow view. Shleifer and Vishny (1997), for instance, defined corporate governance as the ways in which the suppliers of finance to corporations assure themselves of getting a return on their investment. However, recent trends do not entirely support a definition that primarily focuses on shareholder value.

1.1.1. Corporate Governance Structure and Performance of Firms

The corporate governance structure specifies the rules and procedures for making decisions on corporate affairs and provides the structure through which the company objectives are set, as well as the means of attaining and monitoring the performance of those objectives.

Typical governance structures adopted by firms result in changes in frequency of board meetings (Congen et al 1998); board composition (Stapledon and Lawrence, 1996; Jensen, 1997); insider share ownership (Morck, Shleifer, and Vishny, 1988); and executive compensation (Murphy, 1985; Conyon, 1997). Board meeting frequency potentially carries important governance implications since it is less costly for a firm to adjust the frequency of its board meetings to attain better governance of the firm, than to change the composition of its board or ownership structures. Vafeas (1999) found that meeting frequency was influential in improving operating performance in a manner consistent with the agency theory.

Empirical studies on firm performance as a function of board composition yield mixed results (Baysinger and Butler, 1985). Bricley and James (1987) for example, found that the proportion of outside directors is significantly lower on boards of banks in states that restrict banking acquisitions, suggesting that outside directors play a role in evaluating takeover proposals. Hermalin and Weisbach (1998) reported that CEO turnover is more highly correlated with firm performance in corporations having a majority of outside directors than in firms that have a predominant insider board. Further, Hermalin and

Weisbach (1998) found that outsiders are more likely to join a board after a firm performs poorly or leaves an industry. One inference may be the need for additional outside guidance in companies undergoing strategic shifts.

Berle and Means (1932) commented that where managers hold little equity in the firm and shareholders are too dispersed to enforce value maximization, corporate assets might be deployed to benefit managers rather than shareholders. According to Jensen and Meckling (1976), the cost of deviation from value maximization declines as management ownership rises because of converging interests. Consistent with these findings, McConnel and Servaes (1990) found an inverted U-shaped relationship between Tobin's Q and managerial ownership. Numerous studies have identified a positive relationship between executive compensation and firm performance, although debate continues as to the exact size of this function. Using Australian data Evans and Stromback (1994) for example, found lower (and statistically insignificant) elasticity when compared with US studies.

1.1.2. Manufacturing Firms listed in the NSE

A wide range of opportunities for direct and joint-venture investments exist in the manufacturing sector, including agro-processing, manufacture of garments, assembly of automotive components and electronics, plastics, paper, chemicals, pharmaceuticals, metal and engineering products for both domestic and export markets (Republic of Kenya, 2003).

The sector was initially developed under the import substitution policy. There has been a shift, however, to export-oriented manufacturing as the thrust of Kenya's industrial policy. The sector plays an important role in adding value to agricultural output and providing forward and backward linkages, hence accelerating overall growth. By the year 2003 the manufacturing sector comprised more than 700 established enterprises and directly employed over 218,000 persons as at the year 2000 (Republic of Kenya, 2003).

According to the World Bank (2004), the productivity growth in the Kenyan manufacturing sector had been zero or negative since the early 1990s. Productivity declined by 0.5 per cent per year between 1991 and 1998. Regression analysis of company data suggests that, between 1999/2000 and 2002/03, almost no productivity improvement was visible in the average firm. There had been virtually no change in labour productivity. Capital seemed moderately more productive, but the increase was not statistically distinguishable from zero. Total factor productivity appeared to have increased by 7% between 1999 and 2002, but again this estimate was not statistically different from zero.

The Nairobi Stock Exchange (NSE) facilitates improved corporate governance. Public companies tend to have better management records than private companies because of the improvement of management standards and efficiency to meet the demands of shareholders and the NSE under its corporate governance rules (NSE, 2004). Currently, there are 56 firms listed in the NSE, with 18 of them engaged in the manufacturing business. For the listed firms, one of the aims of corporate governance is to overcome

incentive problems generated by the separation of ownership and control in non-owner operated firms. The main mechanisms by which corporate governance works are internal control and management compensation, designed to align managers' incentives with the owners' goals (Shleifer and Vishny, 1997). However, corporate governance may not always be effective. Factors like concentration of share ownership, capital structure and board structure determine the owners' incentives to incur the cost of installing effective governance mechanisms.

1.2. Problem Statement

Two main approaches towards investigating corporate governance exist in practice. The first is where governance is investigated in terms of an endogenous set of behaviours within the firm. This includes concerns about executive compensation, the composition of the board, board independence and patterns of ownership, for example, internal or external block shareholders, domestic or international ownership. The second is where governance is exogenous to the firm and is a consequence of national institutions. This includes issues such as how much of a constraint is imposed on the firm by legal restrictions including levels of disclosure, health and safety legislation, the rules on insider trading, the discipline of the market or privatization of nationalized industries (Piesse, 2005).

In both sets of circumstances, the effect can be seen in performance at the firm level as well as having an impact on the economy as a whole, while the extent of control exerted by senior management is largely confined to the former. Although most large investors may believe that corporate governance is a necessary precondition for good financial

performance, a clear causal relationship has not yet been established. This presents a dilemma and calls for a comprehensive view of the impact of governance on performance examining the interaction between internal and external decisions. Good and bad models of corporate governance exist within firms while institutional failure and poor policy can dilute the benefits of micro level best practice. Indeed, there is often more to be learned about the organization of the firm from market and institutional failure than success (Agrawal and Knoeber, 1996).

Empirical studies conducted in Kenya have revealed that corporate governance is correlated to firm performance. According to Mululu (2005) board activity is related to a number of corporate governance variables such as the board size, the number of executive directors, number of shares held by the largest shareholder, the number of shares held by directors, the number of shares by unaffiliated block holders, and the ratio of non-executive to executive directors. Mululu further reported that boards increase the frequency of their meetings during financial crises. In her study, Jebet (2001) documented the corporate governance structures in listed companies; Kitonga (2002) studied the need for corporate governance in Kenya; Mwangi (2002) surveyed the corporate governance practices in the insurance industry; and Mwangi (2003) investigated the determinants of corporate governance practices. Finally, Langat (2006) studied the effect of corporate governance practices on declining performance of the listed firms. The aim of this research was to determine the relationship between performance of the Kenyan manufacturing firms listed in the Nairobi Stock Exchange (NSE) and their corporate governance structures. Several components of corporate

governance including executive compensation, board composition, and insider equity holdings were studied with reference to the financial performance of firms. The study sought to answer the following research questions

- a) What is the relationship between firm performance and frequency of board meetings in manufacturing firms listed in the NSE?
- b) What is the relationship between board composition and firm performance in manufacturing firms listed in the NSE?
- c) What is the relationship between the percentage of insider equity holding and firm performance in manufacturing firms listed in the NSE?
- d) What is the relationship between executive compensation and firm performance in manufacturing firms listed in the NSE?

1.3. Objectives of the Study

The broad objective of the study was to determine the relationship between various components of corporate governance and performance of manufacturing firms listed in the NSE. The study was guided by the following specific objectives:

- i). To determine the relationship between firm performance and frequency of board meetings in manufacturing firms listed in the NSE between 1996 and 2006.
- ii). To determine the relationship between board composition and firm performance in manufacturing firms listed in the NSE between 1996 and 2006
- iii). To determine the relationship between the percentage of insider equity holding and firm performance in manufacturing firms listed in the NSE between 1996 and 2006.

- iv). To determine the relationship between executive compensation and firm performance in manufacturing firms listed in the NSE between 1996 and 2006.

2.0 LITERATURE REVIEW

1.4. Significance of the Study

2.1. Introduction

The findings will guide manufacturing firms in determining the appropriateness of various governance structures and how these (structures) relate to the performance of their respective firms. Some of the relevant findings to management of these firms will relate to the effect, if any, of the frequency of board meetings, the CEO compensation levels, the percentage of equity to be held by insiders, and the composition of the boards of management. The findings will assist the policy makers especially at the Capital Markets Authority (CMA) and the NSE in designing appropriate regulations to guide the governance of public limited companies listed in the stock exchange. The findings will also guide the CMA in setting up policies on the composition of boards for listed firms. The study will also be an important resource for academicians and future researchers who may wish to investigate the performance of firms in the various sectors of the Kenyan economy.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. Introduction

This chapter presents a review of the related literature on the subject under study as presented by various researchers, scholars, analysts and authors. The review has drawn materials from several sources that are closely related to the theme and the objectives of the study. The chapter also outlines various ways of measuring firm performance.

2.2. The Concept of Corporate Governance Structure

Corporate governance can be interpreted as the set of mechanisms – both institutional and market-based – that induce self-interested managers (controllers of the firm) to make decisions that maximize the value of the firm to its shareholders (Denis and McConnell, 2003). The aim of these mechanisms is to reduce the agency costs that arise from the principle-agent problem; and they could be internal and/ or external in nature. According to Denis and McConnell (2003), internal mechanisms deal with the composition of the board of directors, such as the proportion of independent outsiders in its membership and the distinction between the Chief Executive Officer (CEO) and the chairperson. Another important internal mechanism is ownership structure, or the degree to which ownership by managers obviates the trade-off between alignment and entrenchment effects.

Equity ownership by insiders can align insiders' interests with those of other shareholders, thereby leading to greater firm value. However, higher ownership by

insiders may result in a greater degree of managerial control, potentially entrenching managers. Wan (1999) found that management ownership does in fact exhibit an inverted U-shaped relation with Tobin's Q-ratio. External mechanisms, on the other hand, rely on the takeover market in addition to the legal or regulatory system. The takeover market acts as a threat to existing controllers in that it enables outsiders to seek control of the firm if bad corporate governance results in a significant gap between the potential and the actual value of the firm. So, given these mechanisms, it can be seen that the legal system is only one way of ensuring good corporate governance. Besides, the balance of the available evidence also showed that the effective presence of the other mechanisms is positively associated with firm valuation.

Tsui and Gul (2000) argued that corporate governance structures (which include accounting and auditing standards) are designed to monitor managers and improve corporate transparency. A number of corporate governance structures have been identified analytically and empirically. According to Agrawal and Knoeber (1996), the structures may be broadly classified as internal structures and external structures. Internal structures are determined by insiders (Board size, composition of committees, CEO compensation, insider holdings, debt financing, and market for managerial skills) while the external structures (Institutional shareholding; outside block holdings, and takeover activity) are on the other hand determined by outsiders (Agrawal and Knoeber, 1996).

Corporate governance is both about ensuring accountability of management, in order to minimize downside risks to shareholders, and about enabling management to exercise

enterprise in order to enable shareholders to benefit from the upside potential of firms (Keasey and Wright, 1993; Tricker, 1984). This distinction has sometimes been referred to as the wealth-creating and wealth-protecting aspect of corporate governance. Therefore, there is a need to extend the understanding of governance issues beyond the narrow confines of economics and finance perspectives to embrace strategy and knowledge dimensions as well as contextual issues (Igor, 2005).

2.2.1. Effect of Frequency of Board Meetings on Corporate Governance

An empirical study by Jensen (1993) revealed that boards of well-run companies should be relatively inactive and exhibit few conflicts. Frequently scheduled meetings generate opportunity costs in the form of management time consumed, and cash costs in the form of travel allowances and fees for board members. Yet real benefits can be derived from such meetings as directors have the opportunity to confer, set strategy and monitor management. Vafeas (1999), for instance found that meeting frequency was influential in improving operating performance in a manner consistent with agency theory. Mululu (2005) and Lang'at (2006) further revealed that boards increase the frequency of their meetings following poor performance and, as a consequence of such increase, the performance of firms improve as captured by the increase in firm value. This agreed to earlier findings by Jensen (1993) and Vafeas (1999) who had reported that the role of boards becomes increasingly important during crises, when shareholders' interests are in visible danger. Overall, however, the association between meetings frequency and firm value remains unclear, and the linkage between board activity and monitoring difficult to establish.

2.2.2. Effect of Board Composition on Corporate Governance

According to Fama (1980), the board can effectively play its oversight role of monitoring if only it is composed of a majority of outside directors (Fama 1980). Weishach (1988) found that outside-dominated boards are significantly more likely to respond to poor performance by dismissing the CEO. Brickley et al (1994) also established that outside directors usually act in the shareholders' interest in their decision in the adoption of 'poison pill' provision. Brickley and James (1987) further found that the proportion of outside directors is significantly lower on boards of banks in states that restrict banking acquisitions. It is argued that outside directors will exhibit considerable independence from top management. There is evidence that supports effectiveness of board independence. For example, Mace (1971) reports evidence that poor performance or poor proposals will be opposed by outside directors. Outsiders are also more likely to join the board after the firm performs poorly or leaves an industry, reflecting the need to inject new blood or procure expertise in the new industry (Hermalin and Weisbach, 1998).

2.2.3. Effect of Block Insider Holdings on Corporate Governance

In their study, Hermalin and Weisbach (1991) reported a non-linear effect of insider shareholdings in the course of an analysis of board composition on firm performance. While these findings are mixed, the weight of the evidence implies that firms perform better when managers own a non-trivial fraction of the firm's shares. In a situation where managers hold little equity in the firm and shareholders are too dispersed to enforce value maximization, corporate assets may be deployed to benefit managers rather than shareholders. Managers in such situations may shirk, consume large amounts of perquisite, engage in empire building or make suboptimal investment and distribution

decisions. To induce management not to engage in opportunistic behavior, measures need to be taken to align their interests with those of shareholders by making them part owners of the firm (Jensen and Meckling, 1976).

Morck, Shleifer and Vishny (1988) estimated a piecewise linear relation between board ownership and performance as measured by Tobin's Q and found that Tobin's Q increases with managerial ownership. Klein (1998) further established that equity holdings are positively correlated to firm performance where at least one outside director owns 2% of the firm's equity. Mallette, Middlemist, and Hopkins (1995) argued that 'active defense of shareholders' interests may depend on the existence of directors whose personal interest compels them to actively monitor management activities.

2.2.4. Effect of Executive Compensation on Corporate Governance

In modern corporations, where ownership is dispersed and managers have access to superior information, managers typically end up with the residual rights of control, giving them enormous latitude for self-interested behaviour, a fact that is supported by the agency theory. In order to counter such pursuits, one way is to grant a manager a highly contingent, long term incentive contract ex-ante to align his interests with the interest of investors. Incentive contracts can take a variety of forms, including share ownership, stock options, or a threat of dismissal if income is low (Fama, 1980). The optimal incentive contract is determined by the manager's risk aversion, the importance of his decisions, and his ability to pay for the cash flow ownership upfront (Stiglitz, 1975; Homstrom, 1982). Empirical studies have identified a positive relationship between

executive pay and firm performance. Evans and Stromback (1994), and Izan, Sidhu, and Taylor (1998) both supported a positive pay-performance relationship.

2.3. Firm-level performance

Igor (2005) viewed performance as a comparison of progress to date with expected progress while Huson et al (2004) considered performance as simply functional effectiveness. Organizational performance comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). Specialists in many fields are concerned with organizational performance including strategic planners, operations, finance, legal, and organizational development. In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as financial performance (for example shareholder return), customer service, social responsibility (for example corporate citizenship, community outreach), and employee stewardship (Kanter and Binkerhoff, 1981).

In organizational development, performance improvement is a concept of organizational change in which the managers and the governing body of an organization put into place and manage a program which measures the current level of performance of the organization. The program then generates ideas for modifying organizational behavior and infrastructure. These are then put into place in order to achieve a better level of output. The primary goals of organizational improvement are to improve organizational effectiveness and efficiency in order to improve the ability of the organization to deliver its goods and/or services and prosper in the market places in which it competes. Another

area of improvement, which is sometimes targeted for improvement, is organizational efficacy, which involves the process of setting organizational goals and objectives.

Organizational performance can be divided into three major categories: social, technical or operational and ideological. Social performance is based on the relationships and interaction between individuals and groups within the organization. The criteria and measures of social performance include morale, conflict, cohesion, participation and shared influence, role and norm congruence, internalization of organizational goals, goal consensus, absenteeism, accidents, turnover and dismissals. Operational performance is based on the techniques and technologies used in organizational operations. The criteria and measures for operational performance include information management and communication, managerial and interpersonal skills, quantity of work, quality of work, utilization of environment, stability, readiness, control and evaluations by external entities. Ideological performance is based on the ideas of what the proper orientation is regarding organizational structure and function. The criteria and measures of ideological performance include achievement emphasis, training and development emphasis, flexibility and adaptation, growth, planning and goal setting, quality and value of human resources (Rollins and Darryl, 1998).

According to Katrina (2007), organizational performance involves measuring the functioning of important processes and services, and, when indicated, identifying changes that enhance performance.

2.4. Measuring firm-level performance

There are three different measures of firm performance documented in the literature. The return on assets (ROA) is a purely accounting-based measure and is computed from company financial statement data. Each firm's annual earnings before interest, taxes and depreciation are divided by the average of the book value of total assets at the beginning and ending of the year. Accounting performance measures (like ROA) have an advantage because they are backward looking. Still, they are prone to manipulation by management and usually do not reflect investment in intangible assets. This distorts performance comparisons across firms with differing degrees of intangible assets.

The second performance measure, Tobin's Q-ratio (Q), is a hybrid one. It is measured by dividing the sum of the market value of equity and the book value of debt by the book value of total assets. The last performance measure used is stock return (RET) which is a capital market-based performance measure. It is computed from annual changes in share price plus dividends divided by previous year's share price. Stock return is considered to be a purely forward-looking benchmark. It should be pointed out that almost all published empirical studies on the control-performance relation are set within the Anglo-American context and usually take one performance measure; Tobin's Q, or an accounting measure like ROA. Because Tobin's Q reflects the present value of firms, it indicates how much the firms grow in the future. As a measure of Tobin's Q, market-to-book ratios can proxy for future growth opportunities available to the firm: a high market-to-book indicates that a firm has strong growth opportunities. Since no consensus exists in the literature on the

use of a reliable performance measure, there is a general belief that these three approaches would reflect company performance in a robust way.

2.5. Corporate Governance and Performance of Firms

Two broadly defined theories co-exist in the corporate governance literature. One theory stresses the discipline of the market, claiming that the threat of hostile takeovers and leveraged buyouts in firms is sufficient to ensure full efficiency. Where managers neglect to invest in those projects that add value to the firm and its shareholders, but divert resources to their own benefit, the financial markets act to restore good governance. A number of mechanisms have been suggested, such as removing senior managers in poorly performing firms (Palepu, 1986, Morch, Shleifer and Vishney, 1989); demanding cash flow payments in the form of debt service (Jensen, 1986); and linking executive compensation to performance, including equity and options (Jensen, 1986). The other theory is that this threat of takeover results in managers being concerned with short-term price performance at the expense of developing innovative strategies for sustained growth and thus falling behind foreign competitors that are not under the same pressures (Dertouzos et al, 1989). A solution to this dilemma is that large financial institutions should develop long-term relationships with firms, providing what has come to be known as patient capital. In this section, a number of studies that have linked various aspects of governance to firm performance are reviewed.

Demsetz and Lehn (1985) established that the ownership structure of a firm is endogenously determined and reflects optimizing behaviour on the part of managers and investors. Differences in ownership structure arise because the optimal structure differs

across firms. They found no systematic link between ownership patterns and performance. Agrawal and Knoeber (1996) extended this work by examining the relationship between multiple agency control mechanisms and performance. They separated endogenous mechanisms, such as family shareholding and board composition and external mechanisms, such as the role of institutional shareholders. Endogenous mechanisms can be set to maximize firm value, which is not the case for external mechanisms. Cross sectional variation in firm performance could be related to these external factors.

Huson et al (2004) found that performance, relative to other firms, deteriorates prior to CEO turnover and improves thereafter. The extent of the recovery is related to the level of institutional shareholding, outsider-dominated board and the appointment of new senior managers from outside the company. Governance research on European firms, established that importing Anglo-American models of governance through board membership by foreigners improves performance compared to other firms in largely segmented markets and is a more cost effective method than obtaining a foreign listing (Oxelheim and Randoy, 2003).

The 1997 financial crisis in South East Asia resulted in a plethora of research that concentrated on the importance of models of corporate governance in countries that were largely organized through a system of family ownership and control of firms (Anderson et al, 2003; Carney and Gedajlovic, 2003). Corporate sector vulnerabilities and weak governance were noted as contributors to the Asian crisis, particularly the degree of

family involvement in firms. A theoretical model by Krugman (1999) explicitly incorporated the role of corporate balance sheets in the crisis and directly linked governance with performance and the ability to survive economic shocks. Claessens et al (2000) investigated the top 15 families in East Asia and found that they dominated listed corporate assets. They also found this non Anglo-American dominant in Mexico, Italy, Brazil, Argentina and other South American countries.

Zelenyuk and Zheka (2006) investigated the association between some individual governance elements and index of corporate governance quality (constructed from corporate governance indicators) and firms' efficiency, applying various methods with Data Envelopment Analysis, for a set of listed companies in Ukraine and found a positive correlation. Durnev and Kim (2003) investigated the determinants of corporate governance in emerging markets and briefly addressed whether corporate governance quality predicts market value. They found that higher scores on corporate governance indices (CLSA and S&P disclosure indices) predicted higher Tobin's Q for a sample of 859 firms in 27 countries. While the instruments used by Durnev and Kim seemed to be suspect (they assumed that industry does not affect governance), Black, Jang and Kim, (2004) using the specifics of the Korean legislation on corporate governance found a relatively good instrument (asset size dummy variable for companies with assets over 2 trillion won). The 2 trillion won limit was chosen because different governance requirements were applied to such companies. They used two-stage and three-stage least squares analysis to address endogeneity in the cross-sectional data and reported strong

evidence that overall corporate governance is an important factor in explaining the market value of Korean public companies.

4.6 Summary

Internal governance characteristics, such as monitoring mechanisms and incentive alignment systems, can also protect investors. Boards of directors monitor managers on behalf of shareholders, as noted by Jensen and Meckling (1976), and Rosenstein and Wyatt (1997). The two set of authors suggest that smaller boards are more effective, and boards with a greater proportion of outside directors are more independent, making them more effective monitors. Compensation can also be used to align the interests of managers and owners. Manager and shareholder interests tend to be more closely aligned when managers receive greater proportions of compensation in the form of incentive-based pay, as suggested by Jensen and Murphy (1990), Smith and Watts (1992), and Mehran (1995).

Agency theory suggests that corporate governance mechanisms, such as increased managerial ownership, greater pay-performance sensitivity, and more effective, independent boards that control owner-manager agency conflicts, enhance firm operating performance and value (Jensen and Meckling, 1976; Jensen, 1986; Stulz, 1990). The empirical literature suggests that firms with governance structures that protect investor interests tend to be worth more and perform better. Gompers et al (2003), Bebchuk et al (2004), and Brown and Caylor (2004) employed composite governance scores to show that governance structures that protect investors are associated with greater value.

Yermack (1996) and Anderson et al. (2004) found that firms with smaller boards tend to be more profitable and valuable, with lower costs of debt.

3.0 RESEARCH METHODOLOGY

2.6. Summary

There is a growing number of theoretical and empirical studies on corporate governance. However, the understanding of complex and dynamic links between corporate governance configurations and organizational performance is still very limited. The strengths and weaknesses of different corporate governance models are not well documented empirically, and there is a very little agreement on what forms an “ideal” corporate governance template. Moreover, a growing body of literature on comparative governance has identified a number of similarities and differences in corporate governance structures and practices across countries. Empirical studies in Kenya (Mululu, 2005; Jebet, 2001; Mwangi, 2002; Mwangi, 2003; and Lang’at; 2006) have revealed that there exists a relationship between various components of corporate governance and financial performance of firms. However, none of the studies had captured the relationship between governance and performance of firms in the manufacturing sector. This study sought to fill this gap by studying manufacturing firms listed in the NSE. The next chapter is a detailed outline of the research methodology that was applied.

3.4. Data Analysis

The firm-level performance of the sample firms was proxied using the Tobin's Q ratio, ROA, Stock Returns (ROE), and the PE ratio. The ratios were computed at the end of the calendar years 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, and

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1. Research Design

This is a cross-sectional survey that seeks to identify the relationship between governance mechanisms and firm level performance of firms within the Kenyan manufacturing sector. The firm level performance was analyzed against the following governance dimensions: Frequency of board meetings, board composition, percentage of insider equity holding and executive compensation.

3.2. Population of the Study

This study targeted 18 manufacturing companies that are listed in the NSE as at 30th June 2007. This represented 33% of the total number of firms listed in the NSE.

3.3. Data Collection

Data was obtained from the information centre at the Nairobi Stock Exchange and the respective company secretaries of the sample firms. Information on the market value of firm and the replacement cost of assets was obtained from the annual financial statements. The study sampled observations for the period between 1996 and 2006.

3.4. Data Analysis

The firm-level performance of the sample firms was proxied using the Tobin's Q ratio, ROA, Stock Returns (ROE), and the P/E ratios. The ratios were computed at the end of the calendar years 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, and

2006. To compute values for Q, (where Q is defined as the market value of the firm divided by the replacement cost of the firm's assets), the methodology of Vogt (1994) was applied by first defining the variables as follows:

Market value of firm (MV) = Market value of ordinary shares + book value of Debt

Book value of assets (BV) = Replacement value of plant and equipment + Replacement value of inventory

Therefore, *Tobin's Q*_{ij} = $\frac{MV_{ij}}{BV_{ij}}$ (1)

Where *Q*_{ij} represent the Q ratio for the *i*th firm in the *j*th year. The other three variables were measured as defined in Table 3.1

Table 3.1: Variable definition and Measurement

Variable	Definition	Measurement
P/E Ratio	Price–Earning ratio	Ratio of share price to earning per share.
ROA	Returns on assets	Net profit as a percentage of the total assets.
ROE	Returns on equity	Net profit as a percentage of equity value.

The conceptual model applied is algebraically indicated by equation (2) while the analytical model applied is indicated by equation (3).

Performance = *f*(*meetings;composition;Insider;Compensation*) (2)

$(FIRMPERF_{ij}) = \alpha_0 + \alpha_1 (MEETINGS)_{ij} + \alpha_2 (COMPOSITION)_{ij} + \alpha_3 (INSIDER)_{ij} + \alpha_4 (COMPENSATION)_{ij} + \epsilon_{ij}$ (3)

Where $\alpha_0, \alpha_1, \alpha_2, \alpha_3,$ and α_4 are regression constants; and ϵ_{ij} is the error term.

Equation (3) specifies four independent variables: the frequency of board meetings within a particular year (MEETINGS); Board composition signified by the ratio of outside to

internal directors (COMPOSITION); Percentage of insider equity holding (INSIDER); and the value of Executive/CEO compensation (COMPENSATION). Equation 3 was therefore estimated four times: once each for the Tobin's Q, ROA, ROE and P/E ratio. The results for all these equations were divided into two types, descriptive results and those obtained from the regression analysis. The Statistical Package for Social Sciences, SPSS, was used for both types of analysis. The findings were presented using tables.

4.1. Sample Characteristics

4.1.1. Performance Measures

The findings presented in Table 4.1 illustrate the average values of the four manufacturing firms' performance measures over the sample period 2006-2010. The mean for the Tobin's Q ratio was 3.702 (SD 0.896), which is above the reference of Tobin's Q (see equation (1)) indicating that the market value of firms was increasing relative to the book value of assets. A t-statistic of 0.004 (p=0.999) was obtained for the sector's ROA performance measure, while a t-statistic of 0.000 (p=0.000) was obtained for the ROE performance measure. The t-statistic indicates that the probability of the sector was providing a return of 0.004 on the basis of assets while the return indicates that the firm should be able to earn a return of 0.000 on the basis of equity. Finally, the mean return P/E ratio was 16.744 (SD 0.073) (t-statistic = 0.000). A high P/E suggests that investors expect high future earnings growth in return for the listed firms as the most desirable growth. The firm performance in

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION

4.1. Introduction

This chapter presents data analysis, interpretation and discussion of the research findings. The findings are divided into two types, descriptive results and those obtained from regression analysis. The Statistical Package for Social Sciences, SPSS, was used for both types of analyses. The findings were presented using tables.

4.1. Sample Characteristics

4.1.1. Performance Measures

The findings presented in Table 4.1 indicate the average scores of the listed manufacturing firms' performance measures over the sample period 1996-2006. The mean for the Tobin's Q score was 5.793 (STD Error = 0.577) which, by definition of Tobin's Q (see equation 1), indicates that the market value of firms was growing to close to six times the book value of assets. A mean score of 0.0776 (STD error = 0.0136) was obtained for the sector's RoA performance measure while a mean score of 0.0758 (STD error = 0.0133) was obtained for the RoE performance measure. The former indicates that the profitability of the sector was growing at a rate of 7.76% on the basis of assets while the latter indicates that the shareholders in the sector were obtaining a net return of 7.58% on their equities. Finally, the mean sector P/E ratio was found to be 7.4870 (STD error = 1.2348). A high P/E suggests that investors were expecting higher earnings growth in the future for the listed firms in the manufacturing business. The four performance measures

therefore revealed that the manufacturing firms were exhibiting good performance for the eleven years between 1996 and 2006.

Table 4.1: Average scores for various performance measures (1996-2006)

Performance Measure	Mean (1996-2006)	Std Error of the Mean
Tobin's Q	5.793	0.577
Return on Assets	0.0776	0.0136
Return on Equity	0.0758	0.0133
P/E Ratio	7.4870	1.2348

4.1.2. Governance Structures

The findings presented in Table 4.2 indicate the average scores of the listed manufacturing firms' governance characteristics over the sample period 1996-2006. The mean for the number of board meetings was about 15 meetings per year. The average board composition (percentage of external directors to the total board size) was found to be 69.56% (STD error = 1.36). The average percentage of insider equity holdings was found to be 35.18% (STD error = 1.99). This indicates that the insiders control about one-thirds of the firms' total equities. Finally, the average for the total executive compensation was found to be Kshs. 23,614,568.89 (STD error = 616,476.52).

Table 4.2: Average scores for various Governance Indicators (1996-2006)

Performance Measure	Mean (1996-2006)	Std Error of the Mean
Frequency of Board Meetings	15.0	0.48
Board Composition (External directors as a % of total board size)	69.56	1.36
Percentage of Insider Holding	35.18	1.99
Total Executive Compensation (in Kshs.)	23,614,568.89	616,476.52

4.2. Governance and Performance of Listed Manufacturing Firms

4.2.1. Tobin's Q measure Approach

The relationship between firms' governance structures and performance was measured by applying multiple linear regression model specified by equation (3) with the Tobin's Q statistics as the dependent variables. F-Test was performed at 95% level of confidence to establish the significance of the model which implies existence of a linear relationship between the dependent variables and the independent variables. The test was based on the null hypothesis that there exists no linear relationship between firm level performance and governance structures. The decision rule was to reject H_0 if the P-value for the computed F-statistic was found to be less than 0.05 (the critical level of the test). Table 4.3 presents the results of the F-Test derived from regression of Equation (3). The findings of Table 4.3 indicate the existence of a significant linear relationship between the performance measure (Q) and the four governance structures namely; frequency of meetings, CEO compensation, board composition and percentage of insider holding.

Table 4.3: Governance and Performance through Tobin's Q Approach

Model: $(Q_{ij}) = \alpha_0 + \alpha_1 (MEETINGS)_{ij} + \alpha_2 (COMPOSITION)_{ij} + \alpha_3 (INSIDER)_{ij} + \alpha_4 (COMPENSATION)_{ij} + \varepsilon_{ij}$						
	Sum of Squares	d.f.	Mean Square	F Statistic	P-value	Decision
Regression	436.627	4	109.157	5.407	0.001	Reject H_0
Residual	1413.079	70	20.187			
Total	1849.706	74				

Dependent Variable: Q_{ij} =MV/BV

H_0 : There is no significant relationship between the dependent and independent variables

($F_{(4, 70)} = 5.407$; P-value <0.01) denotes existence of a linear relationship between the dependent and the independent variables

4.2.2. The RoA measure Approach

Secondly, the relationship between the firms' governance structures and performance was measured by applying multiple linear regression model specified by equation (3) with the RoA statistics as the dependent variables. F-Test was performed at 95% level of confidence to establish the significance of the model which implies existence of a linear relationship between the dependent variables and the independent variables. The test was based on the null hypothesis that there exists no linear relationship between RoA and governance structure. The decision rule was to reject H_0 if the P-value for the computed F-statistic was less than 0.05 (the critical level of the test). Table 4.4 presents the results of the F-Test derived from regression of Equation (3).

The findings of Table 4.4 indicate the existence of a significant linear relationship between the performance measure (RoA) and frequency of boards Meetings; CEO compensation, board composition and percentage of insider holding.

Table 4.4: Governance and Performance through the RoA Measure Approach

Model: $(RoA_{ij}) = \alpha_0 + \alpha_1(MEETINGS)_{ij} + \alpha_2(COMPOSITION)_{ij} + \alpha_3(INSIDER)_{ij} + \alpha_4(COMPENSATION)_{ij} + \varepsilon_{ij}$						
	Sum of Squares	d.f.	Mean Square	F Statistic	P-value	Decision
Regression	0.323	4	0.081	6.131	0.000	Reject H_0
Residual	0.923	70	0.013			
Total	1.246	74				

Dependent Variable: $(RoA)_{ij}$ (Return on Assets Measure)

H_0 : There is no significant relationship between the dependent and independent variables

$F_{(4, 70)} = 6.131$; P-value < 0.01) denotes existence of a linear relationship between the dependent and the independent variables

4.2.3. The RoE measure Approach

Thirdly, the relationship between firms' governance structures and performance was measured by applying multiple linear regression model specified by equation (3) with the RoE statistics as the dependent variables. F-Test was performed at 95% level of confidence to establish the significance of the model; which in turn implies existence of a linear relationship between the dependent variables and the independent variables. The test was based on the null hypothesis that there exists no linear relationship between RoEs and the four governance structures. The decision rule was to reject H_0 if the P-value for the computed F-statistic was less than 0.05 (the critical level of the test). Table 4.5 presents the results of the F-Test derived from regression of Equation (3).

The findings of Table 4.5 indicate the existence of a significance linear relationship between the performance measure (RoE) and frequency of boards meetings; CEO compensation, board composition and percentage of insider holding.

Table 4.5: Governance and Performance through the RoE Measure Approach

Model: $(RoE_{ij}) = \alpha_0 + \alpha_1(MEETINGS)_{ij} + \alpha_2(COMPOSITION)_{ij} + \alpha_3(INSIDER)_{ij} + \alpha_4(COMPENSATION)_{ij} + \varepsilon_{ij}$						
	Sum of Squares	d.f.	Mean Square	F Statistic	P-value	Decision
Regression	0.323	4	0.081	6.648	0.000	Reject H_0
Residual	0.849	70	0.012			
Total	1.172	74				

Dependent Variable: $(RoE)_{ij}$ (Return on Equity Measure)

H_0 : There is no significant relationship between the dependent and independent variables

$F_{(4, 70)} = 6.648$; P-value < 0.01) denotes existence of a linear relationship between the dependent and the independent variables

4.2.4. The Price-to-Earnings Measure Approach

Finally, the relationship between firms' governance structures and performance was measured by applying multiple linear regression model specified by equation (3) with the P/E ratio statistics as the dependent variables. F-Test was performed at 95% level of confidence to establish the significance of the model; which in turn implies existence of a linear relationship between the dependent variables and the independent variables. The test was based on the null hypothesis that there exists no linear relationship between P/E ratios and the four governance variables. The decision rule was to reject H_0 if the P-value for the computed F-statistic was less than 0.05 (the critical level of the test). Table 4.6 presents the results of the F-Test derived from regression of Equation (3).

Table 4.6: Governance and Performance through the P/E Measure Approach

Model: $(P/E)_{ij} = \alpha_0 + \alpha_1(MEETINGS)_{ij} + \alpha_2(COMPOSITION)_{ij} + \alpha_3(INSIDER)_{ij} + \alpha_4(COMPENSATION)_{ij} + \varepsilon_{ij}$						
	Sum of Squares	d.f.	Mean Square	F Statistic	P-value	Decision
Regression	844.580	4	211.145	2.648	0.041	Reject H_0
Residual	5262.097	66	79.729			
Total	6106.677	70				

Dependent Variable: $(P/E)_i$ (Price-to-Earnings Measure)
H₀: There is no significant relationship between the dependent and independent variables
 $F_{(4, 66)} = 2.648$; P-value < 0.05 denotes existence of a linear relationship between the dependent and the independent variables

The findings of Table 4.6 indicate the existence of a significance linear relationship between the performance measure (P/E Ratio) and frequency of boards meetings; CEO compensation, board composition and percentage of insider holding.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary and discussion of findings derived from the study. The chapter also details the conclusions and recommendations as well as recommendations for further research.

5.2. Discussion of Findings

The broad objective of the study was to determine the relationship between various dimensions of corporate governance structure and performance of manufacturing firms listed in the NSE. The study was guided by the following specific objectives: To determine the relationship between firm performance and frequency of board meetings in manufacturing firms listed in the NSE between 1996-2006; to determine the relationship between board composition and firm performance in manufacturing firms listed in the NSE; to determine the relationship between the percentage of insider equity holding and firm performance in manufacturing firms listed in the NSE and; to determine the relationship between executive compensation and firm performance in manufacturing firms listed in the NSE. The study targeted 18 manufacturing companies that are listed in the NSE as at 30th June 2007. Data was obtained from the information centre at the Nairobi Stock Exchange and comprised of observations for the period between 1996 and 2006.

The key findings of the study revealed existence of a perfect linear relationship between various structures of corporate governance and performance of manufacturing firms listed in the NSE. Specifically, the findings revealed that there exists a perfect linear relationship between performance measures and the frequency of boards meetings; CEO compensation, board composition; and percentage of insider holding. This was achieved through a regression-based F-TEST on each of the four performance measures (Tobin's Q; Return on Equity; Return on Assets; and Price-to-earnings ratios) that were used.

The average scores of the listed manufacturing firms' performance measures over the sample period 1996-2006 were reported to be high. The mean for Tobin's Q revealed that the market value of firms was growing to close to six times the book value of assets. The RoA measure revealed that the firms' profitability in the sector was growing at a rate of 7.76% on the basis of assets while the RoE revealed that the shareholders in the sector were obtaining a net return of 7.58% on their equities. A high mean sector P/E ratio of 7.4870 was obtained which in turn implied that investors were expecting higher earnings growth in the future for the listed firms in the manufacturing business. The four performance measures therefore revealed that the manufacturing firms were exhibiting good performance for the eleven years between 1996 and 2006.

With regard to governance, the findings revealed that a majority of the firms' boards meet about 15 times per year on average. In addition, a majority of the firms are outsider-dominated with the average score pegged at about 69%. On average, the percentage of

insider equity holdings levels was not found to exceed one-third of the total. A relatively high pay for the chief executive officers was also reported in all the firms under study.

5.3. Conclusions

The findings indicate that firms with more frequent board meetings exhibit improved performance than firms whose boards meet rarely; that firms with external directors as the majority, in proportion to the total board size, are bound to exhibit improved performance than firms with mixed boards or insider-dominated boards; that firms with low insider shareholding levels exhibit improved performance and that listed manufacturing firms that pay relatively high salaries and bonuses to the CEO exhibit improved performance. Therefore, good board practices are important catalysts of financial performance for corporations. Good corporate governance structures, on the other hand, are of utmost importance in contributing to investor confidence in the companies. Adoption of sound corporate governance structures is critical for the continued success of businesses. The findings of the study are in agreement to previous empirical studies conducted in Kenya (Lang'at, 2006; Mululu, 2005; Mwangi, 2003; and Mwangi, 2002).

5.4. Recommendations

5.4.1. To the Management Boards of Manufacturing Firms

Investors typically view a well-governed company as one; that has a majority of outside directors with no management ties to its board; that undertakes formal evaluations of directors; and that is responsive to requests from investors for information on governance issues. To ensure improved performance of firms, the study recommends that the boards

of manufacturing firms should provide, and maintain, a high executive pay package (relative to market); meet more frequently and regularly to assess and review performance; ensure that their boards are outsider-dominated (a large proportion of board members comprising external directors); and set a limit to which insiders can dominate in equity holdings.

5.4.2. For Further Research

The research sought to establish the relationship between corporate governance structures and performance of listed manufacturing firms. Further research should be done with emphasis on board behaviour and governance practices. The study may also be extended to incorporate the non-listed firms with the performance measures to be applied comprising those that are not market-based (e.g. the RoA and the RoE). This will help to bring further insight since it will be possible to relate governance and performance whether the firm is listed at the NSE or not.

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Appendix I: List of Manufacturing Firms at the NSE

1) Athi River Mining
2) BOC Kenya Ltd
3) Bamburi Cement Ltd
4) British American Tobacco Kenya Ltd
5) Carbacid Investments Ltd
6) Crown Berger Ltd
7) East African Cables Ltd
8) East African Portland Cement Ltd
9) East African Breweries Ltd
10) Eveready East Africa Ltd
11) Kenya Oil Co Ltd
12) Kenya Power & Lighting Ltd
13) KenGen Ltd.
14) Mumias Sugar Co. Ltd
15) Olympia Capital Holdings Ltd
16) Sameer Africa Ltd
17) Total Kenya Ltd
18) Unga Group Ltd

Source: NSE information centre June 2007

Appendix II: Data Collection Sheets

Year _____

Name of the firm	No of board meetings	P/E ratio	Net profit	Total Assets	Share price	EPS	Equity value
1) Athi River Mining							
2) BOC Kenya Ltd							
3) Bamburi Cement Ltd							
4) British American Tobacco Kenya Ltd							
5) Carbacid Investments Ltd							
6) Crown Berger Ltd							
7) East African Cables Ltd							
8) East African Portland Cement Ltd							
9) East African Breweries Ltd							
10) Eveready East Africa Ltd							
11) Kenya Oil Co Ltd							
12) Kenya Power & Lighting Ltd							
13) KenGen Ltd.							
14) Mumias Sugar Co. Ltd							
15) Olympia Capital Holdings ltd							
16) Sameer Africa Ltd							
17) Total Kenya Ltd							
18) Unga Group Ltd							

Name of the firm	Book value of debt	Plant & machinery	Inventory	Internal directors	External directors	% of insider equity holding	Total CEO pay for the year
1) Athi River Mining							
2) BOC Kenya Ltd							
3) Bamburi Cement Ltd							
4) British American Tobacco Kenya Ltd							
5) Carbacid Investments Ltd							
6) Crown Berger Ltd							
7) East African Cables Ltd							
8) East African Portland Cement Ltd							
9) East African Breweries Ltd							
10) Eveready East Africa Ltd							
11) Kenya Oil Co Ltd							
12) Kenya Power & Lighting Ltd							
13) KenGen Ltd.							
14) Mumias Sugar Co. Ltd							
15) Olympia Capital Holdings Ltd							
16) Sameer Africa Ltd							
17) Total Kenya Ltd							
18) Unga Group Ltd							