

**INTELLECTUAL CAPITAL AND FINANCIAL PERFORMANCE OF  
KENYAN STATE CORPORATIONS**

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## DECLARATION

This research project is my original work and has not been presented for a degree in any other University

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Signed.....

Date.....

This is to certify that this research project was submitted to the University with my approval as the candidate's supervisor.

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## **ACKNOWLEDGMENTS**

I want to acknowledge God, for the gift of wisdom, knowledge and strength to finish this project. I want to appreciate my supervisor DR Wanjare who has dedicated his time in supervising the writing of this project. Through his expert, guidance, discipline, thoroughness and patience, I was able to take the challenge of every step until I completed this project.

## **DEDICATION**

This research project is dedicated to my family for their much assistance and unwavering support throughout the study period.

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## **ABSTRACT**

Intellectual Capital is combination of the Intellectual property (IP) held by a business and the people in that business that can exploit and increase it. The main issue the study aimed to investigate was Intellectual Capital and Financial Performance of Kenyan State Corporations. The study main objective was to determine how intellectual capital affects the financial performance of Kenyan state corporations. The study adopted a descriptive research design in investigating the concept of intellectual capital and financial performance of Kenyan state corporations. The target population for the study was formed by the total number of parastatals currently operating in Kenya which is 192. The study applied a census method to sample the respondents and therefore the study targeted all the 192 parastatals who were the respondents. The study used primary data which was collected through self-administered questionnaires. The data collected was analyzed using SPSS version 16 and presented using descriptive statistics and inferential statistics. Multiple regression analysis technique was used to determine the effect of independent variables on the dependent variable. The findings of the study indicate that the company culture which contains valuable practices of conducting business is the major benefit resulting from organizational intellectual capital. The findings also indicated that employees being very highly skilled in their jobs as the major way of human capital to improve the firm's performance. The study concluded that organizations should update their database promptly to enable utilization of organizational capital to spur performance; organizations should strive to ensure that their employees are considered the best in the industry as a way of utilizing human capital and hence spurring firm's performance and organizations should take part in corporate social responsibility activities as a way of social capital initiative which will create goodwill and thereby spurring the firm's performance.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

According to Smith and Parr (2005) Intellectual capital is combination of the Intellectual property (IP) held by a business and the people in that business that can exploit and increase it. The term became more widely known in the context of assessing the wealth of organizations. Intellectual capital is normally classified as follows: Human capital, the value that the employees of a business provide through the application of skills, know-how and expertise. Human capital is an organization's combined human capability for solving business problems and exploiting its Intellectual Property (Maddocks & Beaney, 2002); Structural capital, the supportive non-physical infrastructure, processes and databases of the organization that enable human capital to function. Structural capital includes processes, patents, and trademarks, as well as the organization's image, organization, information system, and proprietary software and databases and relational capital, consisting of such elements as customer relationships; supplier relationships (Edvinsson, & Malone, 1997); trademarks and trade names (which have value only by virtue of customer relationships) licenses, and franchises. The notion that customer capital is separate from human and structural capital indicates its central importance to an organization's worth (Levey, and Wrappe, 2007)

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in

aggregation. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt. Measuring the results of a firm's policies and operations in monetary terms; these results are reflected in the firm's return on investment, return on assets, value added, etc (Brealey, Myers and Marcus, 2009)

The study will be built on the following theories: the theory of intellectual capital which lies in the fact that tangible assets (land, buildings, equipment and money) of today's leading companies around the world have less value than intangible assets, which has not been quoted in their business balances. Theory is founded on the conviction that the wealth of enterprises is based on the human capital, structural capital and consumer capital. It will also look at the theory of human capital is rooted from the field of macroeconomic development theory .Becker's (2003) argues that there are different kinds of capitals that include schooling, a computer training course, and expenditures on medical care and The resource base that (resource-based theory) point of view, core competencies can be constructed from the organizational point of view, many ideas that intellectual capital is a core competence or power (Mavridis, 2005). The study will also look at the knowledge-based theory of the firm which considers knowledge as the most strategically significant resource of a firm. Its proponents argue that because knowledge-based resources are usually difficult to imitate and socially complex, heterogeneous knowledge bases and capabilities among firms are the major determinants of sustained competitive advantage and superior corporate performance. The theory was originally

resource-based view of the firm (RBV) initially promoted by Penrose (1959) and later expanded by others (Wernerfelt 1984, Barney 1991, Conner 1991).

The study was carried out on parastatals currently operating in Kenya. This was the complete number of parastatals in the country and therefore comprehensive information will be gathered concerning them. These parastatals include Kenya Leather Development Council Board, Geothermal Development Company, Kenya Electricity, Transmission Company (KETRACO), Kenya Pipeline Company, New Kenya Co-operative Creameries National Cereals and Produce Board, Kenya Meat Commission, Anti-Female Genital Mutilation Board, Kenya National Bureau of Statistics and others.

### **1.1.1 Intellectual Capital**

Intellectual capital is normally classified as human capital, the value that the employees of a business provide through the application of skills, know-how and expertise. Human capital is an organization's combined human capability for solving business problems and exploiting its Property. Structural, the supportive non-physical infrastructure processes and databases of the organisation that enable human capital to function. Organizational includes the organization philosophy and systems for leveraging the organization's capability. Relational, consisting of such as customer relationships, supplier relationships, trademarks and trade names licences, and franchises. Stewart (1997) defines intellectual capital as the intellectual material knowledge, information, intellectual property, experience that can be put to use to create wealth while Bontis (1998) defines intellectual capital as the pursuit of the effective use of knowledge (the finished product) as opposed to information (the raw material). According to his

definition intellectual capital consists of three types of capital; human capital, structural capital and customer capital.

Intellectual capital comprises the organizational routines, procedures, systems, cultures, databases, this includes organizational flexibility, a documentation service, the existence of a knowledge Centre, the general use of Information Technologies, organizational learning capacity, etc. Some of them may be legally protected and become Intellectual Property Rights, legally owned by the firm under separate title. Relational capital is defined as all resources linked to the external relationships of the firm, with customers, suppliers or R&D partners. It comprises that part of Human and Structural Capital involved with the company's relations with stakeholders, plus the perceptions that they hold about the company. Examples of this category are image, customer's loyalty, customer satisfaction, links with suppliers, commercial power, negotiating capacity with financial entities, environmental activities Meritum, and (2002).

A second related phenomenon is the increasing reliance on share price appreciation as the principal means for shareholder return as opposed to returns through dividends. This suggests that share prices are becoming an even more critical firm performance measure than traditional accounting-based firm performance measures like return on investment (ROI) In this present study, we adopt the definition of firm performance as being the ability to get work done Cohen & Prusak, (2001) Adler & Kwon, 1999) as well as its characterization by Nahapiet & Ghoshal (1998) as successful work performance connections between people within the firm and with outside parties, which give the firm

or its member's access to new knowledge, may be said to constitute the firm's Social Capital (Burt, 2000).

### **1.1.2 Financial performance**

A firm's financial performance is a measure of how well it uses its assets from its core operations and generates revenues over a given period of time. This measure is thus compared to some given industrial average standard of similar firms in the same industry. Brealey, Myers and Marcus (2009) measure financial performance in terms of profitability, liquidity, solvency, financial efficiency and repayment capacity. However, the performance measure significant for this study is the earnings per share (EPS). The study uses EPS as a key performance indicator for parastatals in Kenya. This measure is an indicator of how profitable a firm is relative to its total assets.

Many researchers (Edvinsson and Malone, 1997; Stewart, 1997; Sveiby, 2000) among others advocate for traditional measures of a company's performance, which are based on conventional accounting principles, may be unsuitable in the knowledge-based economy which is driven by intellectual capital. They further state that the use of traditional measures may lead investors to make inappropriate economic decisions. The study uses ROA as a key performance indicator for parastatals in Kenya. This measure is an indicator of how profitable a firm is relative to its total assets.

### **1.1.3 Parastatals**

The State Corporation in Kenya Act Cap 446 (1987) defines a parastatal as a state corporation (SC) or a corporate body established by or under an Act of parliament; it is



also a corporate body established by order of the president to perform the functions specified in that order; it also includes a bank or a financial institution licensed under the banking Act or other company incorporated under the company Act whose shares or majority of whose shares are owned by the government of Kenya or by another state corporation (Government of Kenya, 1987; Wamalwa, 2003).

Government the world over including Kenya established parastatals with both economic and public policy motives. The government of Kenya forms parastatals to meet both commercial and social goals. They increase Kenyan citizen's participation in the economy and to promote foreign direct investment through joint ventures (GoK-Sessional Paper No. 4, 2005). The economic motive arose out of the government desire to promote or enhance private African enterprises (Wamalwa, 2003). The financial performance of parastatals in Kenya has continuously been unimpressive to the public, which to a larger extent are its majority shareholders. The dismal performance can be largely attributed to lack of discipline in expenditure pattern, mismanagement, wastage, poor governance and lack of adequate supervision both by management and regulatory bodies (Sessional Paper No.4, GoK 1991). These mismanagement and poor governance practices have led to parastatals not achieving their objectives, rather most have lagged in the delivery of the required services, failed to meet the demands of the consuming public, while most services provided were poor and unreliable, thereby making the public to lack confidence in the performance of state-owned enterprises.

## **1.2 Statement of the Problem**

According to Desouza and Awazu (2006) the organizational capital in business entities is primarily developed and maintained by developing their employees. Even though there is lack of knowledge repositories maintained by the owner, knowledge is created, shared, transferred and applied through the organization's members without the intervention of the automated mechanisms usually found in larger firms. Intellectual capital has been interesting to public sector organizations in Kenya since the late 2000. Both state and local governments have created policy statements on intellectual capital and knowledge management often in the context of the employee to maintain knowledge even if employees leave the institution (Ministry of Finance, 2000).

According to Sharon, (2007) the main challenge facing the intellectual capital in Kenya is most organization putting more infancy on the intellectual capital of the management. The thoughts and consideration of the management or a more qualified employee is given an upper hand compared to the suggestions and innovativeness of a less qualified employee, even though the ideas of that employee could change the face of the organization for the better and give it a competitive edge in the already flooded market. Another challenge facing most Kenyan organization is the unwillingness to change. Most management have a tendency to be comfortable with the status quo and any change however positive is "painful" to them. Thus the intellectual capital and the innovativeness that require changes in the organization cannot be utilized by the management because of either fear of change or the fear of the unknown. Thus this study seeks to establish intellectual capital as an antecedent to employee performance.

Atieno (2009) stressed that most parastatals in Kenya are characterized by inefficiency, losses and the provision of poor products and services. These conditions were a consequence of poor governance, poor public sector financial management, bureaucratic wastage and pilferage in the management of parastatals, all of which led to heavy budgetary burden to the public. As a result, The IMF and World Bank in 1994 proposed the privatization of parastatals in Kenya. Some studies have concluded that well-governed firms perform better (Charkham, 1995; Bebchuk, Cohen & Ferrell, 2004; Stanwick and Stanwick 2002, Kamung'a, 2000; Wambua, 2009, Kihara, 2006); yet, other studies have found there is no difference in the performance of firms having poor and good use of intellectual capital. Hence, no significant relationship (Lamport et al, 2010) exists between the variables.

According to empirical data in this area; research studies reveal that the area addressed mainly has to do with the role of intellectual capital on firm performance (privately owned) and generally the human aspect of intellectual capital; Caroli and Van Reenen, 2001; Montresor, 2004; Black and Lynch, 2005; Lev and Radhakrishnan; 2005 and De and Dutta; 2007), Black and Lynch (2004) revealed a correlation between intellectual capital (human capital) and business performance as measured by labour productivity. Bresnahan et al. (2002), added that technical progress tends to be skill-biased and it may be the case that the organizational change would also be skill-biased. Osterman (2000) finds that measures of organizational capital are associated with a higher probability of

layoffs, even within firms that have been experiencing net gains in total strategic performance.

The gap that this study aims to fill is on the effect of all the components of intellectual capital that is human social and organizational capital and how they affect the performance of state corporations in Kenya. The study will also aim to fill the gap on the performance of parastatals since very few studies have been done in the area of intellectual capital and parastatal performance. Therefore the study will aim at answering the question what is the effect of intellectual capital on the performance of Kenyan state corporations?

### **1.3 Research Objectives**

The main objective of this study was to determine how intellectual capital affects the financial performance of Kenyan state corporations

### **1.4 Value of the study**

The value of the study to the Policymakers: Decision makers at the various levels of management at the parastatals will gain value added information corporate governance as a key enabler of developing economic perspective. The government of Kenya will also be able to understand how politics impacts on corporate governance of state corporations. This will assist the government to improve on areas that negatively impact corporate governance in parastatals in Kenya in order to enhance productivity. This study is also significant to policy makers of the Republic of Liberia (RL). As most parastatals continue to perform dismal in the post-war country, it is anticipated that policy makers will

replicate findings from the study that best suit the Liberian scenario which will improve governance in the parastatals.

The value of the study to the Management of Parastatals Management of parastatals will benefit from the findings of this study by adopting findings which will help them enhance responsible governance which lead to sustained productivity and better financial performance.

The value of the study to the Academicians those in the academic realm cannot be forgotten too. Future researchers and academic institutions, especially those of higher learning can use the findings of this research as a source for future reference.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter reviews literature related to the study by other researchers and it will mainly focus on; the concept of Intellectual Capital, Financial performance, Organizational performance, Organization Capital, Human Capital, Social Capital.

### **2.2 Theoretical Review**

The theories that are underpinning the study are Human Capital Theory, Social capital theory, Intellectual capital Theory, Resource Base Theory and the Organizational Capital Theory. The theory of intellectual capital is a new prominent theory which has not only challenged the large attention, but already considerably promises the increase of business results in the future. The theory of human capital is rooted from the field of macroeconomic development theory .Becker's (2003) argues that there are different kinds of capitals that include schooling, a computer training course, and expenditures on medical care. The resource base that (resource-based theory) point of view, core competencies can be constructed from the organizational point of view, many ideas that intellectual capital is a core competence or power.

#### **2.2.1 Intellectual Capital Theory**

The theory of intellectual capital is a new prominent theory which has not only challenged the large attention, but already considerably promises the increase of business results in the future. The base of the theory lies in the fact that tangible assets (land, buildings, equipment and money) of today's leading companies around the world have

less value than intangible assets, which has not been quoted in their business balances. Theory is founded on the conviction that the wealth of enterprises is based on the human capital, structural capital and consumer capital. The value creation happens when one kind of capital turns into another. For example the value has been created whenever the human ability (the human capital) creates new business processes (the structural capital) which results in better services for consumers and increases their loyalty (the consumer capital). One of the main attributes of intellectual capital is its intangibility. The intellectual property is the intangible property. The intellectual capital is also often described as “hidden assets”. Therefore it is often difficult to identify and mark its economic value.

### **2.2.2 Human Capital Theory**

The theory of human capital is rooted from the field of macroeconomic development theory. Becker's (2003) argues that there are different kinds of capitals that include schooling, a computer training course, and expenditures on medical care. And in fact, lectures on the virtues of punctuality and honesty are capital too. In the true sense, they improve health, raise earnings, or add to a person's appreciation of literature over a lifetime. Consequently, it is fully in keeping with the capital. Concept as traditionally defined to say that expenditures on education, training and medical care are investments in capital. These are not simply costs but investments with valuable returns that can be calculated.

### **2.2.3 Resource Base Theory**

The resource base that (resource-based theory) point of view, core competencies can be constructed from the organizational point of view, many ideas that intellectual capital is a core competence or power. How do we use the simplest method from the internal resources or external search to form a reliable measure of further discussion and the relationship between corporate performances, intellectual capital is often used to demonstrate its value in the company to replace the implementation of force measurement? Academic definition of intellectual capital, and its characteristics are (1) intellectual capital is intangible assets, representing a potential value creation (Mavridis, 2005); (2) from the Board of Directors of the organization point of view, it is specific to the company and can often adapt changes in conditions; (3) the composition of many intangible assets can improve business functions (Brooking, 1996). Pulic (2000) proposed the added value of intellectual capital model (VAIC), to compare with the measure of corporate cross-sectional data.

### **2.2.4 Knowledge Base Theory**

The knowledge-based theory of the firm considers knowledge as the most strategically significant resource of a firm. Its proponents argue that because knowledge-based resources are usually difficult to imitate and socially complex, heterogeneous knowledge bases and capabilities among firms are the major determinants of sustained competitive advantage and superior corporate performance.

This knowledge is embedded and carried through multiple entities including organizational culture and identity, policies, routines, documents, systems, and



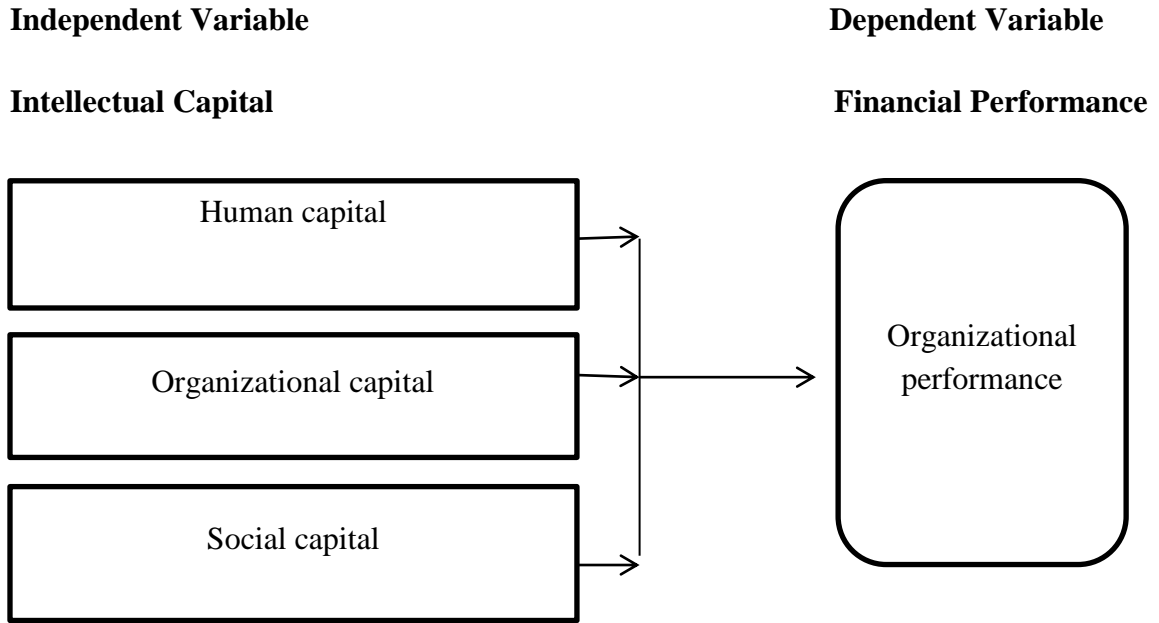
employees. Originating from the strategic management literature, this perspective builds upon and extends the resource-based view of the firm (RBV) initially promoted by Penrose (1959) and later expanded by others (Wernerfelt 1984, Barney 1991, Conner 1991).

Although the resource-based view of the firm recognizes the important role of knowledge in firms that achieve a competitive advantage, proponents of the knowledge-based view argue that the resource-based perspective does not go far enough. Specifically, the RBV treats knowledge as a generic resource, rather than having special characteristics. It therefore does not distinguish between different types of knowledge-based capabilities. Information technologies can play an important role in the knowledge-based view of the firm in that information systems can be used to synthesize, enhance, and expedite large-scale intra- and inter-firm knowledge management (Alavi and Leidner 2001).

In this study, the theory will help in elaborating the intellectual capital and its role in organizational performance

### **2.3 Conceptual Framework**

The study will employ the following conceptual framework to illustrate how the variables interact in the study.



**Fig 2.1 Conceptual Framework**

## **2.4 Empirical Review**

According to his definition intellectual capital consists of three types of capital; human capital, structural capital and customer capital .Many researchers have widely advocated that intellectual capital comprises non-financial measures and other related information which is the value driver of an organization (Amir and Lev, 1996; Edvinsson and Malone, 1997; Stewart, 1997; Bontis, 1999, 2001).

Stewart (1997) defines intellectual capital as the intellectual material knowledge, information, intellectual property, experience that can be put to use to create wealth while Bontis (1998) defines intellectual capital as the pursuit of the effective use of knowledge (the finished product) as opposed to information (the raw material).

Many researchers (Edvinsson and Malone, 1997; Stewart, 1997; Sveiby, 2000) among others advocate for a traditional measures of a company's performance, which are based on conventional accounting principles, may be unsuitable in the knowledge-based economy which is driven by intellectual capital. They further state that the use of traditional measures may lead investors to make inappropriate economic decisions. The first is the so called value relevance of intangibles in determining share market performance of publicly listed companies. The growing gap between market and book values has been proposed as an indication of the impact of intangibles on share price values.

Alternative intellectual capital balance sheets Sveiby, (1997) have been designed and the BSC (Kaplan & Norton, 1992) has been used to report on non-financial metrics. New financial and non-financial indices have been derived in an attempt to correlate intangible performance with market performance (Lev, 2001; Strassmann, 1999), and many versions of intellectual capital statements have been designed to inform company executives and investors of the intangible value drivers a company possesses (Unerman& Guthrie, 2007).

Early empirical study on intellectual capital performance carried out by Bontis, William and Richardson (2000), focused on the inter-relationship of intellectual capital within the service and non-service industries in Malaysia. The study findings revealed that structural capital has a great influence on business performance and human capital is of significance, especially in non-service based industries.

An earlier study by Low, (2000) divided intellectual capital into three components; human capital, relational capital and organizational capital. Human capital is defined as the knowledge that employees take with them when they leave the firm. It includes the knowledge, skills, experiences and abilities of people. Some of this knowledge is unique to the individual, some may be generic. Examples are innovation capacity, creativity. Structural capital is defined as the knowledge that stays within the firm at the end of the working day.

A second related phenomenon is the increasing reliance on share price appreciation as the principal means for shareholder return as opposed to returns through dividends. This suggests that share prices are becoming an even more critical firm performance measure than traditional accounting-based firm performance measures like return on investment (ROI) In this present study, we adopt the definition of firm performance as being the ability to get work done. Cohen & Prusak, (2001) Adler & Kwon, 1999) as well as its characterization by Nahapiet & Ghoshal (1998) as successful work performance connections between people within the firm and with outside parties, which give the firm or its member's access to new knowledge, may be said to constitute the firm's Social Capital (Burt, 2000).

Studies by Lev (2001) on intellectual capital estimated that the market-to-book ratio of the Standard & Poor's 500 companies is in excess of 6.0, compared to just over 1.0 in the early 1980s, the study findings are attributable to the current value of physical and financial assets exceeding their historical cost, hence emphasizing the in-depth study on

intellectual capital since large proportion of this variation is due to the rise in the importance of intangible assets.

Study findings by Shiu (2006) examined the correlation between corporate performances based on 80 Taiwan listed technological firms the study established that value added intellectual capital had a significant positive correlation with profitability that was measured by return on assets, (ROA) and market valuation (measured by market to book value ratio, M/B).

The determinants of financial performance of parastatals are board size, multiple directorship and ownership structure. Board size and Firm Performance The board size refers to the number of directors on the board or the number of directors of the board at a given period. The effect of board size on firm performance has been a mixed one. Empirical studies have given mixed finding on the relationship between both variables. Lipton and Lorch (1992) recommend limiting members on a board to seven or eight. A large board could also result in unproductive result as discussing in large group is often difficult and time consuming and sometimes lead to in cohesiveness amongst members.

Multiple Directorship and firm performance Chen (2008) in his studies of 923 large firms from 1998 to 2004 on multiple directorship concluded that the multiple directorship have both cost and benefits to the firm. He found that firms with high growth opportunity and low agency conflict need multiple directorships which can be source of beneficial advising and can lead to improvement in firm performance. On the other hand multiple directorships as a

result of director's reputation are positively associated with shareholders wealth. A multiple director is a director who sits on multiple boards.

Ownership Structure and Financial Performance of the Firm .Xu and Wang (1997) in the study of ownership structure and its effects on performance of publicly listed firms in China find that ownership structure (both mixed and concentrated) has significant effect on performance. They further that there is a positive correlation between ownership concentration and profitability. Profitability is positively correlated with legal persons or institutional ownership, but is negatively correlated or uncorrelated with state ownership.

One of the most fundamental facts about businesses is that the operating performance of the firm shapes its financial structure. It is also true that the financial situation of the firm can also determine its operating performance. The financial statements are therefore important diagnostic tools for the informed manager. Performance tends to be conceptualized to focus on the measurability of efficiency and effectiveness Miller et.al. (2001) and Bouckaert and Halligan (2008).Performance, in practice, needs to be defined to be measurable and utilizable for managing government operations in the public sector. In this sense, it is not easy or reasonable to define performance as a unique concept. Behn (2003) noted that no single performance measurement is appropriate for overall management. Bovaird (1996) makes a significant suggestion that performance is not a unitary concept, within an unambiguous meaning rather; it must be viewed as a set of information about achievements of varying significance to different stakeholders.

A study conducted by Grosh, Barbara in 2007 on improving parastatal performance: an organizational approach: found that the sector has performed poorly in Kenya, especially in terms of profitability and efficiency. In the literature review it is shown that no author has articulated a positive theory of how public firms respond to their environments. This lack of a theory of the firm has weakened policy analysis in Kenya and elsewhere. It is proposed that each firm should be thought of as a coalition between consumers, input suppliers, and management and stock holders. The coalition together produces a surplus, with coalition members competing for shares thereof. The performance of a parastatal can thus be characterized by the way this surplus is allocated. A central assumption of this model is that management will behave strategically to appropriate its share of the surplus, rather than passively obeying the wishes of the stockholders. Analysis of a firm's performance then turns into an examination of the mechanisms by which a coalition member can increase its share in the surplus. Policy prescriptions revolve around strengthening or weakening those mechanisms, taking into account the likely responses of other actors in the coalition. There is sufficient richness of experience in the parastatal sector in Kenya that it should be possible, through a careful comparative study, to demonstrate the effectiveness or lack thereof, of various types of controls which have been proposed.

A study by Miring'u Alice and Muoria Esther (2011) that sought to examine how Corporate Governance affects performance in commercial state corporations in Kenya. Well-governed firms have higher firm performance. Mismanagement, bureaucracy, wastage, incompetence and irresponsibility by directors and employees are the main problems that have made State corporations (SCs) fail to achieve their performance. The poor performance of SCs in Kenya by 1990 led to outflow from central government to parastatals equivalent to 1percent of the GDP in 1991. The objective of the study was to identify the relationship between financial

performance, board composition and size. The study used descriptive survey design. The target population for this study was 41 commercial State Corporations in Kenya as presented by Inspectorate of SCs. Sample of 30 respondents out of 41 was found ideal. Respondents were 30 human resource officers. Data were analysed through descriptive statistics and multilinear regression technique. The findings were that the board size mean for the sample was found to be ten while a minimum of three outside directors is required on the board. The study thus discloses that there is a positive relationship between Return on Equity and board size and board compositions of all SCs

## **2.4 Summary**

There is evidence from the various empirical studies reviewed that a more concentrated ownership structure consisting of legal individuals or firms tend to enhance performance more as compare to a diversely disperse ownership structure and state-ownership as the desire to thoroughly monitor may be lacking. The studies also revealed that small size board size seems to be more effective as it tend to make efficient use of board members whose expertise are required by the firm in an effective manner rather than a large number of board membership which may breed ineffectiveness and may provide additional cost to the firm without a corresponding productivity level as the issue of free rider may exist.

The study findings revealed that structural capital has a great influence on business performance and human capital is of significance, especially in non-service based industries. Intellectual capital comprises non-financial measures and other related information which is the value driver of an organization and assists firms in developing a sustainable competitive advantage



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter discusses the methodological aspects of the research including the research design, population of study, sampling procedures and sample size, data collection procedures, data analysis, limitations of the study and ethical considerations

### **3.2 Research Design**

The study adopted a descriptive research design in investigating the concept of intellectual capital and financial performance of Kenyan state corporations. The researcher conducted a survey of parastatals based in Nairobi. Descriptive research design allowed the researcher to study the elements in their natural form without making any alterations to them. The design also allowed the researcher to come up with descriptive statistics that assisted in explaining the relationship that exists among variables.

### **3.3 Target Population**

The total number of parastatals currently operating in Kenya is 192(Merger of parastatals). The entire 192 formed the target population for this study. It is from the 192 that the researcher sampled the ones that were considered for the study

### **3.4 Sample Design**

The study took a census of 192 Parastatals found in Nairobi town (GoK, 2013). This was arrived at by the researcher after conducting a baseline survey. The study unit of analysis were managers and assistant manager. The choice of these was arrived at because of the convenience and cost implications of collecting data moreover Public Parastatals are

exposed many loopholes to intellectual capital management during the knowledge management process.

### **3.5 Data Collection**

This study used both primary data and Secondary data. Secondary sources included library and the internet. Primary data was collected using questionnaires. Self-administered questionnaire were used in this study to collect data. While questions on organization performance were adapted from Keah Tan, and G. Keong Leong, (2011) the data collection procedures involved number of steps.

First, the researcher sought for a research permit in writing to conduct the study from National Council of Science and Technology. After the permission was granted, he recruited research assistants who were trained on how to carry out the data collection exercise. The researcher informed the study respondents about the data collection exercise and after consultation agreed on the date of commencement. The respondents were visited at their respective parastatals after been informed in advance about the data collection exercise.

Data for the study was collected using semi-structured questionnaires which were sent to the parastatals by the Research Assistants. In order to increase the response rate, research assistants were present to clarify any arising issues during the filling of questionnaires by the respondents.

### 3.6 Data Analysis

Multiple regressions model was used to determine the hypothesis of intellectual capital on organization performance on service delivery and to test the study hypothesis. The regression equation estimated was of the form;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Where  $\beta_0$  is the intercept,  $\beta_1$  measures change in Y with respect to  $X_1$ , holding other factors constant,  $\beta_2$  measures the change in Y with respect to  $X_2$  holding other factors constant,  $\beta_3$  measures the change in Y with respect to  $X_3$  holding other factors constant,  $\beta_4$  measures the change in Y with respect to  $X_4$  holding other factors constant.

Where;

Y represents organization performance.

$X_1$  represents Human capital

$X_2$  represent Social capital

$X_3$  represents Relational Capital

E error term

The elements will be measured in the following ways:

Organizational performance through earnings per share, human capital by determining increase in the number of employees, social capital through no of sales and determining if there is growth in sales, relational or organizational capital through added organizational assets. Other measures that will be used include increased productivity and profit margins.

Earnings per share will be calculated as:

$$= \frac{\text{Net Income - Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

Koul (2005) define reliability as the ability of that test to consistently yield the same results when repeated measurements are taken of the same individual under the same conditions, basically, reliability is concerned with consistency in the production of the results and refers to the requirement that, at least in principle, another researcher, or the same researcher on another occasion, should be able to replicate the original piece of research and achieve comparable evidence or results, with similar or same study population.

The variables were tested for reliability by computing the cronbach alpha statistical tests where reliability coefficients around 0.90, were considered excellent, values around 0.80 as very good and values of around 0.70 as adequate (Koul, 2005). 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 (Thomson, 2003 in Kline, 2005). The two most important forms of validity are internal and external validity.

The Intellectual capital constituted the independent variables for the study. The relationship followed the description of the variables depicting the relationship between

the independent and dependent variables holding other exogenous 25 factors, which have the propensity to impact the firm performance, constant.

The dependent variable constitutes the financial performance which were measured using the Earnings per share (EPS) and Price Earnings Ratio (P/E)

## **CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION**

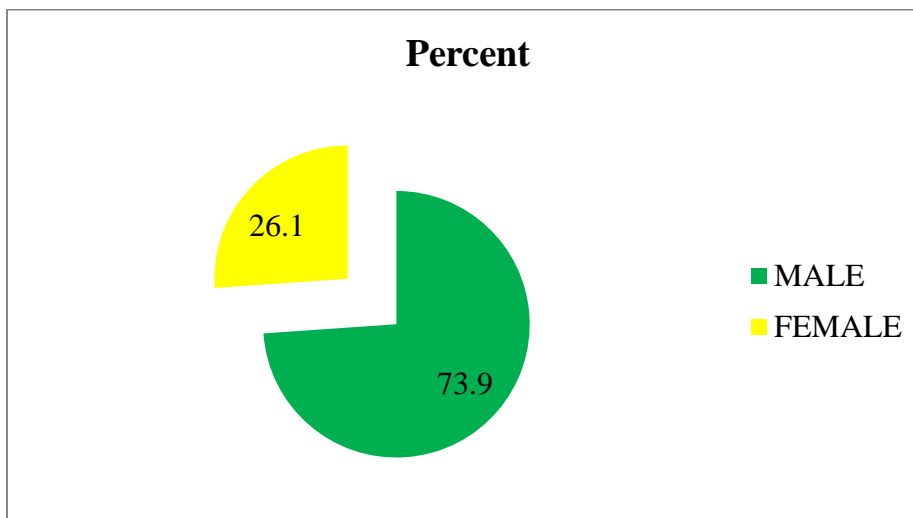
### **4.0 Introduction**

This chapter presents analysis and findings of the study as set out in the research project methodology. A sample of 192 respondents was used for the study representing the total sample population. 188 of the questionnaires were brought back giving a response rate of 97%. The analysis was done using the 188 returned questionnaires out of the 192 questionnaires that were distributed. Since the response rate was more than 85% it was deemed adequate and sufficient for purposes of data analysis as suggested by (Field, 2005). The respondents were quite cooperative and the data provided was taken to be a true representation of the respondents views due to independence of the study carried out.

### **4.1 Background Information**

#### **4.1.1 Gender of the Respondent**

The study sought to determine the genders of the respondents. This was to try and ensure that the genders were evenly distributed. The findings are represented in the fig1.1



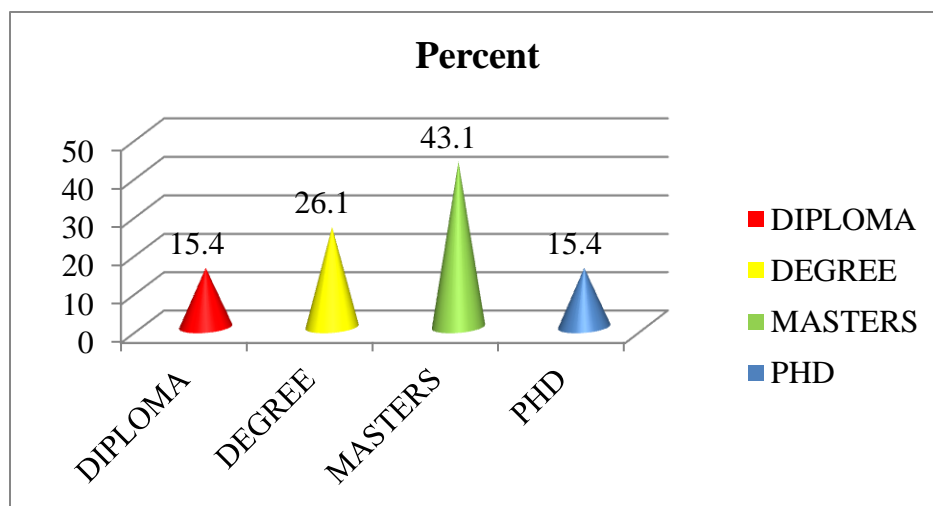
### Fig 4.1 gender of the respondents

The findings of the study indicate that 74% of the respondents were male while 26% were female. These were reliable findings since they reflected the true nature of issues on the ground and their responses could be relied upon to give true information. This therefore ensured that the study would get information on the study from the perspective of both genders.

One can therefore conclude that a majority of managers and assistant managers of parastatals in Kenya are drawn from the male gender and that only a small minority of the female hold these posts. This could be attributed to the masculine oriented nature of the country which traditionally does not give females the number one post in an organization.

### 4.1.2 Educational Level

The study sought to determine the educational level of the respondents. This was in order to ensure that the researcher got information from respondents with various educational backgrounds and to get the correct representation on the ground. The findings are represented in fig 4.2



## Fig4.2 Educational Level of the Respondents

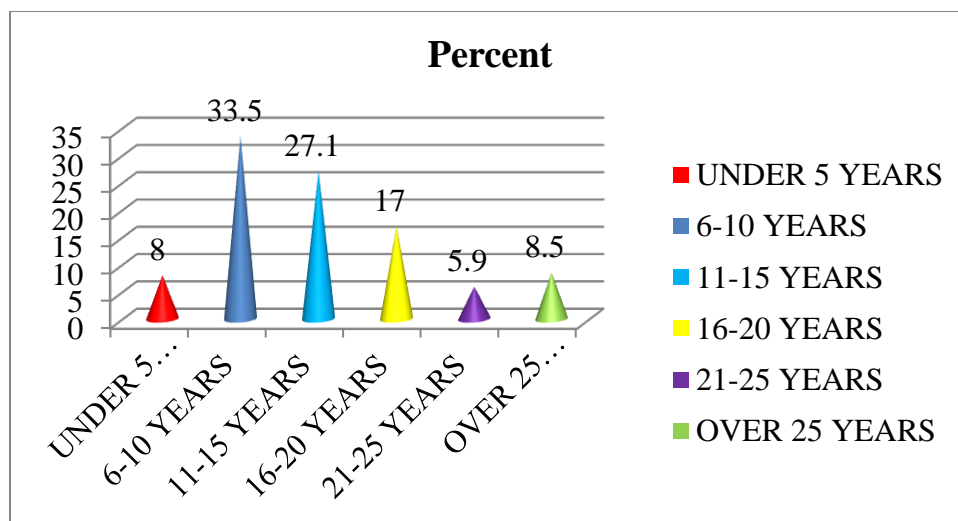
The findings of the study indicate that majority of the respondents that is 43.1% had masters' degree, 26.1% had a bachelor's degree, 15.4% had diplomas, and another 15.4% had diplomas while 5.9% had postgraduate qualification PHDs.

This therefore revealed that the respondents had different levels of qualifications and therefore were a good group to provide the information that the study required and the researcher was in a position to obtain the relevant information pertaining to the study that they required.

One can therefore conclude that individuals who managed parastals in Kenya had different qualifications.

### 4.1.3 Period of Employment

The study sought to determine how long these individuals had been in that organization. This was done by grouping the period of employment; the findings of the study are represented in the fig 4.5





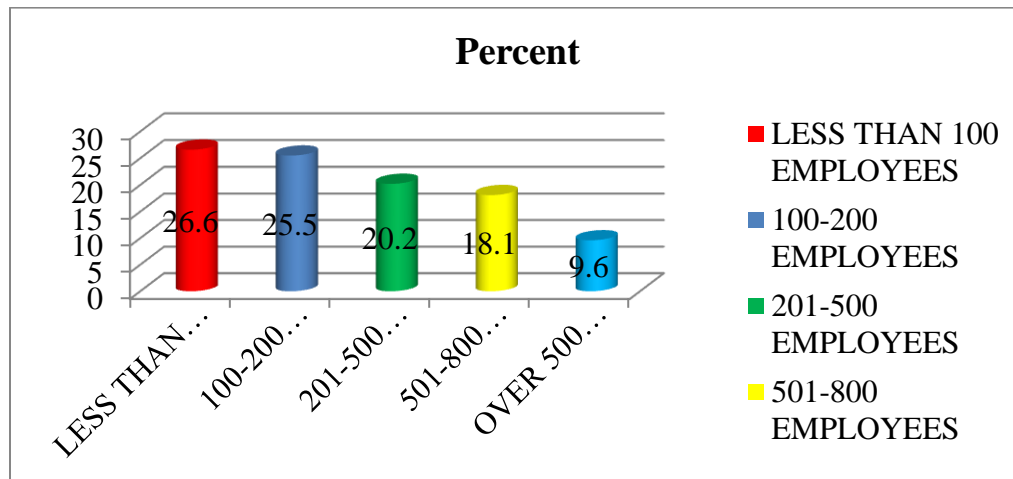
### Fig 4.3 Period of Employment

The findings indicate that a majority of the respondents that is 33.5% had been employed for a period between 6-10 years, 27.1% for a period between 11-15years, 17% between 16-20 years, 8.5% for over 25years 8% five years while 5.9% had been employed for 21-25 years

The findings therefore imply that a majority of the respondents had been operational for a period between 6-10 years indicating enough knowledge of the firms but fresh minds in management

#### 4.1.4 Firm Size

The study sought to determine the firm size. This was done by determining the number of employees the findings are represented in figure 4.4



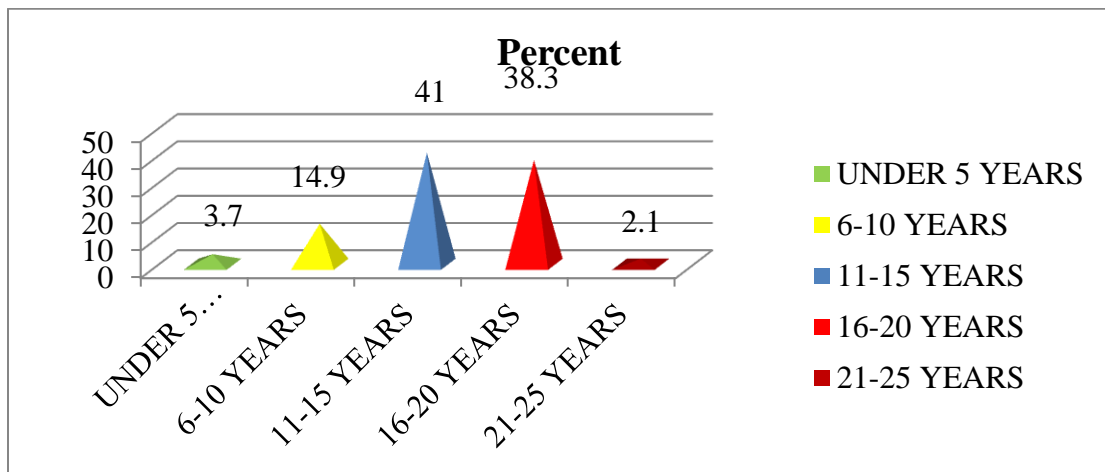
### Fig 4.4 Firm Size

The findings indicate that a majority of the firms that is 26.6% had less than 100 employees; 25.5% had between 100-200 employees; 20.2% had between 201-500 employees; 18.1% had 501-800 employees while 9.6% had over 500 employees.

These findings imply that the firms were of various sizes and therefore formed a good area of study for the study. The difference in the number of employees that a firm has could be attributed to operational size of the firms and the area that the firms serve and also their nature of business.

#### 4.1.5 Period of Operation

The study sought to determine the period which the firms have been operational. The findings are represented in the fig 4.5



**Fig 4.5 Period of Operation**

The findings of the study indicate that majority of the respondents that is 41% had been in existence for a period between 11-15 years, 38.3% between 16-29 years, 14.9% between 6-10 years; 3.7% under 5 years and 2.1% between 21-25 years.

This indicates that the firms had been operational for varied periods of time and therefore forming a good information base for the

## 4.2 Establishing Reliability and Construct Validity

### 4.2.1 Reliability Analysis

The study sought to determine the reliability of the of the study results. The findings are presented in table 4.1

**Table 4.1 Reliability Analysis**

Reliability Statistics	
Cronbach's Alpha	N of Items
.874	21

The reliability of the responses of the questionnaire was tested using Cronbach a measurements. The reliability coefficient was 0.874. The reliability coefficient was above 0.70, which concurs with the suggestion made by Nunnally (1978).Therefore they were reliable enough for the study.

### 4.2.2 Construct/ Factor Analysis

The study conducted a factor analysis to determine which factors were suitable for the study. The findings are represented in the table 4.2

**Table 4.2 Construct/ Factor Reliability for Independent variables**

Statements	Factor loading	Eigen values	Percentage of variance
Knowledge artefacts (data, documents etc.) in the organization are well stored and indexed in databases	0.739	3.011	26.415%
Our data base is updated promptly whenever new information data is created	0.734		
The company encourages free talk and discussions between colleagues	0.574		
The company culture contains valuable ideas/ ways of doing things	0.809		
The company has a brand identity that sets it apart	0.776		

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from others			
Employees are recruited placed and employed in the right jobs	0.839	3.148	23.6%
Employees are highly skilled in their jobs	0.767		
Employees are widely considered the best in the industry	0.809		
Our employees are confident in their ability to provide knowledge that other consider valuable	0.643		
Our employees develop new ideas and knowledge	0.629		
The company has developed a body to address the needs of their customers	0.834	3.830	19.265
The company puts a lot of emphasis on good customer relations	0.769		
The organization takes part in corporate social responsibility activities to inculcate good relations	0.726		
The employees are trained on how to interact with the external environment on behalf of the organization	0.720		
The company provides all the necessary resources to enable employees share knowledge and ideas with prospective clients	0.882		
The organization has cultivated a good relationship with community around	0.714		

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Construct validity measures “the degree to which a scale measures what it intends to measure” (Garver and Mentzer, 1999) and it is assessed by factor analysis in this research. In order to assess the construct validity, 16 items were examined by principal components extraction with varimax rotation. Tables 4.2 show the factor loading for each item, any item that fails to meet the criteria of having a factor loading value of greater than 0.5 was to be dropped however none of the factor were dropped from the study (Liao et al, 2007) the study had the following measures (0.739, 0.734, 0.574, 0.809, 0.776, 0.839, 0.767, 0.809, 0.643, 0.629, 0.834, 0.769, 0.726, 0.720, 0.882, 0.714) all of which were above the threshold of 0.5 (Field, 2005). Therefore, confirming the appropriateness of the factor analysis for the data set.

The eigenvalue for each factor was greater than 1.0 (3.011, 3.148, 3.830), which implies that each factor can explain more variance than a single variable.

The cumulative percentage of variance explained by five factors was above 60 per cent. In other words, more than 60 per cent of the common variance shared by 16 items can be accounted or explained by these five factors. Based on above results, the construct validity is established.

**Table 4.3 Construct/ Factor Reliability for Dependent variables**

<b>Firm has increased its profit margin</b>	<b>0.915</b>	<b>3.866</b>	<b>77.313%</b>
The firm has added assets	0.905		
There has been an increase in the number of	0.905		
The firm has increased its sales growth	0.864		
The firm has increased its productivity	0.803		

Tables 4.3 show the factor loading for each item, any item that fails to meet the criteria of having a factor loading value of greater than 0.5 was to be dropped however none of the factor were dropped from the study (Liao et al, 2007) the study had the following measures (0.915, 0.905, 0.905, 0.864, 0.803) all of which were above the threshold of 0.5 (Field, 2005). Therefore, confirming the appropriateness of the factor analysis for the data set.

The eigenvalue for each factor is greater than 1.0 (3.866), which imply that each factor can explain more variance than a single variable.

The cumulative percentage of variance explained by five factors was 77.313% In other words; more than 77% of the common variance shared by 5 items can be accounted or

explained by these five factors. Based on above results, the construct validity is established.

### 4.3 Organizational Capital and Firm Performance

The study sought to determine how organization capital affects firm performance. To determine this several questions related to organizational capital were posed to respondents who were supposed to indicate to what extent they agree with them; the findings are represented in table 4.4

**Table 4.4 Organizational Capital and Firm Performance**

Statements		SA	A	N	D	SD	Total	Mean
Knowledge artifacts (data, documents etc.) in the organization are well stored and indexed in databases	FRE	2	135	9	39	2	188	3.5213
	%	1.6%	71.8%	4.8%	20.7%	1.1%	100%	70.43%
Our data base is updated promptly whenever new information data is created	FRE	4	15	21	142	6	188	2.3032
	%	2.1%	8.0%	11.2%	75.5%	3.2%	100%	46.06%
The company encourages free talk and discussions between colleagues	FRE	3	146	36	3	0	188	3.7926
	%	1.6%	77.7%	19.1%	1.6%	0%	100%	75.85%
The company culture contains valuable ideas/ ways of doing things	FRE	11	170	1	6	0	188	3.9894
	%	5.9%	90.2%	5%	3.2%	0%	100%	79.79%
The company has a brand identity that sets it apart from others	FRE	1	51	47	88	1	188	2.8032
	%	0.5%	27.1%	25%	46.8%	5%	100%	56.06%

The study went further to compute the standard deviation, kurtosis and skewness to affirm the findings in table 4.4 the findings are presented in table 4.5

**Table 4.5 Standard Deviation, Kurtosis and Skewness in Effects of Low Cost**

	Mean	Std. Dev	Adjusted Mean+ SD	Adjusted Mean- SD	kurtosis	Skewness	Skewness error
Knowledge artifacts (data, documents etc.) in the organization are well stored and indexed in databases	3.5213	0.87421	4.39551	2.64709	-0.101	-1.182	0.177
Our data base is updated promptly whenever new information data is created	2.3032	0.75189	3.05509	1.55131	3.160	1.801	0.177
The company encourages free talk and discussions between colleagues	3.7926	0.47902	4.27162	3.31358	2.386	-1.407	0.177
The company culture contains valuable ideas/ ways of doing things	3.9894	0.43863	4.42803	3.55077	12.824	-2.360	0.177
The company has a brand identity that sets it apart from others	2.8032	0.86438	3.66758	1.93882	-1.316	0.393	0.177

The findings indicate that a majority of the respondents that is 79.79% of the respondents thought that the company culture contains valuable ideas/ ways of doing things was the major form of organizational capital that leads to firm performance. 75.85% said the company encourages free talk and discussions between colleagues 70.43% said Knowledge artefacts (data, documents etc.) in the organization are well stored and indexed in databases, 56.06% said The company has a brand identity that sets it apart from others while 46.06% said their data base was updated promptly whenever new information data is created.

The findings indicate that when the mean was adjusted using the standard deviation it did not have an effect on the findings therefore affirming the findings of the table 4.4

The findings of the study had a positive kurtosis of 12.824 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected. The skewness of the study revealed that the skewness error was not more than double the skewness and therefore implying that the data was symmetrically distributed and making it suitable for the study.

This therefore implies that focusing on the company culture which contains valuable ideas/ ways of doing things is major way of utilizing the organizational intellectual capital. These findings are in agreement with studies done by Bontis (1998) sees this as the pursuit of the effective use of knowledge (the finished product) as opposed to information (the raw material) all which contributes to the performance of the firm.

One can therefore conclude that for a firm to use organizational capital to improve firm performance they must focus on the company culture which contains valuable ideas/ ways of doing in doing this there are able to spur the performance of the organization to greater heights.

#### **4.4 Human Capital and Firm Performance**

The study sought to determine the effect of human capital on firm performance. The researcher posed questions that were intended to give the respondents reaction to the issue. The findings are represented in table 4.6



**Table 4.6 Human Capital and Firm Performance**

<b>Statements</b>		<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>	<b>Total</b>	<b>Mean</b>
Employees are recruited placed and employed in the right jobs	FRE %	43 22.9%	141 75%	1 0.5%	3 1.6%	0 0%	188 100%	4.1915 83.83%
Employees are very highly skilled in their jobs	FRE %	47 25%	138 73.4%	0 0%	3 1.6%	0 0%	188 100%	4.2181 84.36%
Employees are widely considered the best in the industry	FRE %	1 0.5%	17 9%	124 66%	46 24.5%	0 0%	188 100%	2.8564 57.13%
Our employees develop new ideas and knowledge	FRE %	9 4.8%	174 92.6%	0 0%	5 2.7%	0 0%	188 100%	2.9947 59.87%
Our employees are confident in their ability to provide knowledge that others consider valuable	FRE %	3 1.6%	147 78.2%	33 17.6%	5 2.7%	0 0%	188 100%	3.7872 75.74%

The study went further to compute the standard deviation, kurtosis and skewness to affirm the findings in table 4.6 the findings are presented in table 4.7

**Table 4.7 Standard Deviation, Kurtosis and Skewness in Market Focus**

<b>statements</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>Adjusted Mean+ SD</b>	<b>Adjusted Mean- SD</b>	<b>Kurtosis</b>	<b>Skewness</b>	<b>Skewness error</b>
Employees are recruited placed and employed in the right jobs	4.1915	0.51245	4.70395	3.67905	4.140	- 0.463	0.177
Employees are very highly skilled in their jobs	4.2181	0.51739	4.73549	3.70071	3.926	- 0.457	0.177
Employees are widely considered the best in the industry	2.8564	0.58099	3.43739	2.27541	0.585	0.186	0.177
Our employees develop new ideas and knowledge	3.9947	0.39377	4.38847	3.60093	17.24 3	- 2.703	0.177
Our employees are confident in their ability to provide knowledge that others consider valuable	3.7872	0.50394	4.29114	3.28326	2.986	- 1.600	0.177

The findings indicate that in relation to human capital and Firm's Performance a majority of the respondents that is 84.36% see employees being very highly skilled in their jobs as the major way of human capital to improve the firm's performance, 83.83% said Employees being recruited placed and employed in the right jobs, 75.74% said their employees being confident in their ability to provide knowledge that others consider valuable, 59.87% their employees develop new ideas and knowledge while 57.13% said their employees are widely considered the best in the industry.

The findings indicate that when the mean was adjusted using the standard deviation it did not have an effect on the findings therefore affirming the findings of the table 4.6

The findings of the study had a positive kurtosis of 3.926 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected. The skewness of the study revealed that the skewness error was not more than double the skewness and therefore implying that the data was symmetrically distributed and making it suitable for the study.

The findings of the study imply that employees being very highly skilled in their jobs as the major way of human capital to improve the firm's performance. These findings agree with studies done by Low, (2000) who divided intellectual capital into three components; human capital, relational capital and organizational capital. He saw human capital as the knowledge that employees take with them when they leave the firm. It includes the knowledge, skills, experiences and abilities of people. Some of this knowledge is unique to the individual, some may be generic. Examples are innovation capacity, creativity.

These skills are vital to an organization and contribute to the performance of the firm. One can therefore conclude that an employee being highly skilled in their jobs is a plus to an organization and plays a great role in increasing the performance of a firm. When an organization creates an impression to its customers that their employees are the best skilled in doing something; clients will keep coming to that organization and the firm performance will improve.

#### 4.5 Social Capital on Firm's Performance

The researcher sought to determine the effect of social capital on firm performance. This was done by formulating statements related to social capital and presented to the respondents to get their opinion. The findings of the study are represented in the table 4.3

**Table 4.8 Effect of Differentiation**

Statements		SA	A	N	D	SD	Total	Mean
The company has organized a body to address the needs of the customers	FRE	3	127	42	16	0	188	3.6223
	%	1.6	67.6%	22.3	8.5%	0%	100	72.44
		%		%			%	%
The organization takes part in CSR activities to inculcate good relations	FRE	4	9	11	75	89	188	1.7447
	%	2.1	4.8%	5.9%	39.9	47.3	100	34.89
		%			%	%	%	%
The organization puts a lot of emphasis on good relations with customers suppliers etc.	FRE	0	25	76	83	4	188	2.6489
	%	0%	13.3%	40.4	44.1	2.1%	100	52.97
				%	%		%	%
The employees are trained on how to interact with the external environment on behalf of the organization	FRE	0	115	60	12	1	118	3.5372
	%	0%	61.2%	31.9	6.4%	0.5%	100	70.74
				%			%	%
The company provides all the necessary resources to enable employees share knowledge and ideas with prospective clients	FRE	2	55	119	12	0	188	3.2500
	%	1.1	29.3%	63.3	6.4%	0%	100	65%
		%		%			%	
The organization has cultivated a good relationship with community around	FRE	9	128	24	19	8	188	3.5904
	%	4.8	68.1%	12.8	10.1	4.3%	100	71.81
		%		%	%		%	%

The study went further to compute the standard deviation, kurtosis and skewness to affirm the findings in table 4.8 the findings are presented in table 4.9

**Table 4.9 Standard Deviation, Kurtosis and Skewness in Differentiation**

	Mean	Std. Dev	Adjusted Mean+ SD	Adjusted Mean- SD	Kurtosis	Skewness	Skewness error
The company has organized a body to address the needs of the customers	3.6223	0.66295	4.28525	2.95935	0.683	-1.183	0.177
The organization puts a lot of emphasis on good relations with customers suppliers etc.	1.7447	0.92426	2.66896	0.82044	2.529	1.557	0.177
The organization takes part in CSR activities to inculcate good relations	2.6489	0.73439	3.3832	1.9146	-0.603	0.332	0.177
The employees are trained on how to interact with the external environment on behalf of the organization	3.5372	0.64062	4.1778	2.8966	0.844	-1.189	0.177
The company provides all the necessary resources to enable employees share knowledge and ideas with prospective clients	3.25	0.58158	3.83158	2.66842	0.133	0.237	0.177
The organization has cultivated a good relationship with community around	3.5904	0.89402	4.48442	2.69638	1.479	-1.410	0.177

The findings on the effect of social capital indicate that a majority of the respondents that is 72.44% felt that the company has organized a body to address the needs of the

customers as a social capital strategy of using intellectual capital to bring about firm performance, 71.81% that the organization has cultivated a good relationship with community around, 70.74% that the employees are trained on how to interact with the external environment on behalf of the organization, 65% said the company provides all the necessary resources to enable employees share knowledge and ideas with prospective clients, 52.97% said the organization puts a lot of emphasis on good relations with customers suppliers etc. while 34.89% said the organization takes part in CSR activities to inculcate good relations

The findings indicate that when the mean was adjusted by adding the standard deviation the majority of the respondents shifted from one opinion to another but when the mean was readjusted by subtracting the standard deviation the opinion of the respondents reverted back to the first opinion. Since two indicators agreed on the same issue the findings of the table 4.8 were affirmed.

The findings of the study had a positive kurtosis of 0.683 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected.

The skewness of the study revealed that the skewness error was not more than double the skewness and therefore implying that the data was symmetrically distributed and making it suitable for the study.

The findings imply that in terms of social capital firms organizes a body to address the needs of the customers as a social capital strategy of using intellectual capital to bring about firm performance. These findings are in agreement with findings by Burt,

(2000).who said that successful work performance connections between people within the firm and with outside parties, which give the firm or its member's access to new knowledge, may be said to constitute the firm's Social Capital and goes a long way in improving firm performance

One can therefore conclude that a customer care unit in an organization is one of the best ways to address the needs of the clients of an organization since the customer care body is the first representation of the organization to the customers and other stakeholders.

#### 4.6 Firm's Performance

The study sought to determine the firms' performance in the last three years. The researcher did this by examining some particular financial items. The findings are represented in the table 4.10

**Table 4.10 Firms Level of Achievement**

Statements		VH	H	M	L	VL	Total	Mean
The firm has increased its profit margin	FR	4	16	113	47	8	188	2.7926
	E	%	2.1%	8.5%	60.1%	25%	4.3%	100%
The firm has added assets	FR	2	8	29	48	101	188	1.7340
	E	%	1.1%	4.3%	15.4%	25.5%	53.7%	100%
There has been an increase in the number of employees	FR	2	11	53	110	12	188	2.3670
	E	%	1.1%	5.9%	28.2%	58.5%	6.4%	100%
The firm has increased its sales growth	FR	0	14	66	95	13	188	2,4309
	E	%	0%	7.4%	35.1%	50.5%	6.9%	100%
The firm has increased its productivity	FR	1	11	67	96	13	188	2.4202
	E	%	0.5%	5.9%	35.6%	51.1%	6.9%	100%

The study went further to compute the standard deviation, kurtosis and skewness to affirm the findings in table 4.10 the findings are presented in table 4.11

**Table 4.11 Standard Deviation, Kurtosis and Skewness in Firms Level of Achievement**

	Mean	Std. Dev	Adjusted Mean +SD	Adjusted Mean-SD	Kurtosis	Skewness	Skewness error
The firm has increased its profit margin	2.7926	0.74183	3.53443	2.05077	1.151	0.036	0.177
The firm has added assets	1.734	0.94417	2.67817	0.78983	0.721	1.172	0.177
There has been an increase in the number of employees	2.367	0.73737	3.10437	1.62963	1.187	0.833	0.177
The firm has increased its sales growth	2.4309	0.73164	3.16254	1.69926	-0.166	0.284	0.177
The firm has increased its productivity	2.4202	0.73055	3.15075	1.68965	0.368	0.405	0.177

The findings indicate that a majority of the respondents that is 55.85% felt that the firm has increased its profit margin, 48.62% felt that the firm had increased its sales growth, 48.4% the firm has increased its productivity, 47.34% there has been an increase in the number of employees 34.68% said the firm has added assets.

The findings indicate that when the mean was adjusted using the standard deviation by adding and subtracting it did not have an effect on the findings therefore affirming the findings of the table 4.10

The findings of the study had a positive kurtosis of 1.151 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected.

The skewness of the study revealed that the skewness error was more than double the skewness and therefore implying that the data was not symmetrically distributed but since the study had a positive kurtosis, the implication of the skewness was ignored and making it suitable for the study.

This implies that that the firm's profit margin is the major area that firms felt they achieved. This could be attributed to the fact that profits are the first area that a firm uses to gauge its improvement or growth.

One can therefore conclude that most firms look at their profit margins to determine how well their firms are doing and to measure their firms' performance since it's the most immediate effect that an organization will experience a change in.

## **4.7 Relationship between the Variables**

### **4.7.1 Relationship between the Independent Variables**

A correlation test was conducted to determine the relationship between the dependent variable. To do this a correlation test was done to determine how correlated they were the findings are represented in the table 4.13



**Table 4.12 Relationship between the independent Variable**

		<b>Correlations</b>		
		Organizational capital	Human capital	Social capital
Organizational capital	Pearson Correlation			
	Sig. (2-tailed)			
	N	188		
Human capital	Pearson Correlation	.308**		
	Sig. (2-tailed)	.000		
	N	188		
Social capital	Pearson Correlation	.600**	.357**	
	Sig. (2-tailed)	.000	.000	
	N	188	188	

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

The findings indicate that there was a significant relationship of  $p=0.000$  between organizational capital and human capital. This could be attributed to the fact both forms of capital rely on the other to bring about firm's performance. The organizational capital requires the human capital to operationalize it while the human capital requires the organizational capital to function properly.

The findings indicates that there is a significant relationship  $p=0.000$  between organizational capital and social capital. This could be attributed to the fact that they are interrelated. When the organizational capital is well preserved and utilized the social capital is also well taken care of. They both need each other to function well.

The study findings also indicate that there is a significant relationship of  $p=0.000$  between human capital and social capital which is  $p=0.00$ . An organization uses the human capital of an organization to cater for the social capital of the organization. Therefore the relationship between the human and social capital

## 4.7.2 Overall Regression Model on Effect Intellectual Capital and Firms' Performance

The study sought to determine if there was a relationship between the independent and dependent variables. This was done by carrying out a regression. The findings are represented in the table 4.14

**Table 4.14 Relationship between the Independent and Dependent Variables**

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.685 <sup>a</sup>	0.469	0.46	0.50133		
a. Predictors: (Constant), organizational, human and social capital						
ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	40.785	3	13.595	54.091	.000 <sup>a</sup>
	Residual	46.245	184	0.251		
	Total	87.03	187			
a. Predictors: (Constant), organizational, human and social capital						
b. Dependent Variable: firm performance						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients	Standardized Coefficients	T	Sig.	
		B	Std. Error	Beta		
1	(Constant)	-2.153	0.495		-4.35	0.000
	Organizational capital	0.836	0.115	0.491	7.251	0.000
	Human capital	0.212	0.132	0.094	1.612	0.109
	Social capital	0.31	0.098	0.218	3.168	0.002
a. Dependent Variable: firm performance						

The model summary indicated that about 46.9% of the regression model could be accounted for in the study.

As shown from the table,  $F= 54.091$ ,  $p< 0.000$

The F test provides an overall test of significance of the fitted regression model. The F value of 54.091 indicates that all the variables in the equation are important hence the overall regression is significant.

The ANOVA table for the regression indicated that the resulted computed using the regression model were significant meaning that the regression model had been computed well and not by chance.

**Firm performance** =  $-2.153 + 0.491$  (organizational capital) +  $0.094$  (human capital) +  $0.218$  (social capital) +  $0.495$  (Error Margin)

Therefore firm performance can be summarized as the sum total of cost plus market focus plus different ion plus the error margin

#### **4.7 Hypothesis Testing Using the Multiple Regression Model**

From the regression model computed in table 4.14 above, the research hypotheses were tested using the significance level of the coefficients; the research aimed to test the hypothesis with an aim of accepting whether there was any effect by the variable of an organization on firm performance. The research hypothesis for the study included;

**HO<sub>1</sub>:** organizational capital has no significant effect on firm performance

Research results rejected the hypothesis. ( $\beta = 0.491$ ,  $p = 0.000$ ).

The research results rejected the null hypothesis one which stated that: organizational capital has no significant effect on firm performance. The results indicated that there was a significant relationship ( $p = 0.000$ ) between organizational capital and firm performance. These findings agree with studies done on intellectual capital performance by Bontis, William and Richardson (2000), who focused on the inter-relationship of intellectual capital within the service and non-service industries in Malaysia. The study findings revealed that structural capital has a great influence on business performance and human capital is of significance, especially in non-service based industries.

**HO<sub>2</sub>:** human capital has no significant effect on firm performance

Research results accepted the hypothesis. ( $\beta = 0.094$ ,  $p = 0.109$ ).

The research results accepted the null hypothesis one which stated that: human capital has no significant effect on firm performance. The results indicated that there was no significant relationship ( $p = 0.109$ ) between human capital and firm performance. This could be as a result of firms not putting much value on their employees and have the philosophy that value the contribution of their work force

**HO<sub>3</sub>**: social capital has no significant effect on firm performance

Research results rejected the hypothesis. ( $\beta = 0.218$ ,  $p = 0.002$ ).

The research results rejected the null hypothesis one which stated that: social capital has no significant effect on firm performance. The results indicated that there was a significant relationship ( $p = 0.000$ ) between social capital and firm performance. This is in agreement with earlier studies done by Marc M. Levey and Steven C. Wrappe, (2007) who said that the value of the relationships a business maintains with its customers and suppliers is also referred as goodwill, but often poorly booked in corporate accounts, because of accounting rules but contributes greatly to the performance of the of firms.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Summary of the Findings**

#### **5.1.1 Organizational Capital**

The findings indicate that a majority of the respondents that is 79.79% of the respondents thought that the company culture contains valuable ideas/ ways of doing things was the major form of organizational capital that leads to firm performance. 75.85% said the company encourages free talk and discussions between colleagues 70.43% said Knowledge artefacts (data, documents etc.) in the organization are well stored and indexed in databases, 56.06% said The company has a brand identity that sets it apart from others while 46.06% said their data base was updated promptly whenever new information data is created.

The findings indicate that when the mean was adjusted using the standard deviation it did not have an effect on the findings therefore affirming the findings of the table 4.4

The findings of the study had a positive kurtosis of 12.824 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected.

The skewness of the study revealed that the skewness error was not more than double the skewness and therefore implying that the data was symmetrically distributed and making it suitable for the study.

This therefore implies that focusing on the company culture which contains valuable ideas/ ways of doing things is major way of utilizing the organizational intellectual

capital. These findings are in agreement with studies done by Bontis (1998) sees this as the pursuit of the effective use of knowledge (the finished product) as opposed to information (the raw material) all which contributes to the performance of the firm.

One can therefore conclude that for a firm to use organizational capital to improve firm performance they must focus on the company culture which contains valuable ideas/ways of doing in doing this there are able to spur the performance of the organization to greater heights.

**HO<sub>1</sub>**: organizational capital has no significant effect on firm performance

Research results rejected the hypothesis. ( $\beta = 0.491$ ,  $p = 0.000$ ).

The research results rejected the null hypothesis one which stated that: organizational capital has no significant effect on firm performance. The results indicated that there was a significant relationship ( $p = 0.000$ ) between organizational capital and firm performance. These findings agree with studies done on intellectual capital performance by Bontis, William and Richardson (2000), who focused on the inter-relationship of intellectual capital within the service and non-service industries in Malaysia. The study findings revealed that structural capital has a great influence on business performance and human capital is of significance, especially in non-service based industries.

### **5.1.2 Human Capital**

The findings indicate that in relation to human capital and Firm's Performance a majority of the respondents that is 84.36% see employees being very highly skilled in their jobs as the major way of human capital to improve the firm's performance, 83.83% said

Employees being recruited placed and employed in the right jobs, 75.74% said their employees being confident in their ability to provide knowledge that others consider valuable, 59.87% their employees develop new ideas and knowledge while 57.13% said their employees are widely considered the best in the industry.

The findings indicate that when the mean was adjusted using the standard deviation it did not have an effect on the findings therefore affirming the findings of the table 4.6

The findings of the study had a positive kurtosis of 3.926 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected.

The skewness of the study revealed that the skewness error was not more than double the skewness and therefore implying that the data was symmetrically distributed and making it suitable for the study.

The findings of the study imply that employees being very highly skilled in their jobs as the major way of human capital to improve the firm's performance. These findings agree with studies done by Low, (2000) who divided intellectual capital into three components; human capital, relational capital and organizational capital. He saw human capital as the knowledge that employees take with them when they leave the firm. It includes the knowledge, skills, experiences and abilities of people. Some of this knowledge is unique to the individual, some may be generic. Examples are innovation capacity, creativity. These skills are vital to an organization and contribute to the performance of the firm.

One can therefore conclude that an employee being highly skilled in their jobs is a plus to an organization and plays a great role in increasing the performance of a firm. When an



organization creates an impression to its customers that their employees are the best skilled in doing something; clients will keep coming to that organization and the firm performance will improve.

**HO<sub>2</sub>:** human capital has no significant effect on firm performance

Research results accepted the hypothesis. ( $\beta = 0.094$ ,  $p = 0.109$ ).

The research results accepted the null hypothesis one which stated that: human capital has no significant effect on firm performance. The results indicated that there was no significant relationship ( $p = 0.109$ ) between human capital and firm performance. This could be as a result of firms not putting much value on their employees and have the philosophy that value the contribution of their work force

### **5.1.3 Social Capital**

The findings on the effect of social capital indicate that a majority of the respondents that is 72.44% felt that the company has organized a body to address the needs of the customers as a social capital strategy of using intellectual capital to bring about firm performance, 71.81% that the organization has cultivated a good relationship with community around, 70.74% that the employees are trained on how to interact with the external environment on behalf of the organization, 65% said the company provides all the necessary resources to enable employees share knowledge and ideas with prospective clients, 52.97% said the organization puts a lot of emphasis on good relations with customers suppliers etc. while 34.89% said the organization takes part in CSR activities to inculcate good relations

The findings indicate that when the mean was adjusted by adding the standard deviation the majority of the respondents shifted from one opinion to another but when the mean was readjusted by subtracting the standard deviation the opinion of the respondents reverted back to the first opinion. Since two indicators agreed on the same issue the findings of the table 4.8 were affirmed.

The findings of the study had a positive kurtosis of 0.683 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected.

The skewness of the study revealed that the skewness error was not more than double the skewness and therefore implying that the data was symmetrically distributed and making it suitable for the study.

The findings imply that in terms of social capital firms organizes a body to address the needs of the customers as a social capital strategy of using intellectual capital to bring about firm performance. These findings are in agreement with findings by Burt, (2000).who said that successful work performance connections between people within the firm and with outside parties, which give the firm or its member's access to new knowledge, may be said to constitute the firm's Social Capital and goes a long way in improving firm performance

One can therefore conclude that a customer care unit in an organization is one of the best ways to address the needs of the clients of an organization since the customer care body is the first representation of the organization to the customers and other stakeholders.

**HO<sub>3</sub>:** social capital has no significant effect on firm performance

Research results rejected the hypothesis. ( $\beta = 0.218$ ,  $p = 0.002$ ).

The research results rejected the null hypothesis one which stated that: social capital has no significant effect on firm performance. The results indicated that there was a significant relationship ( $p = 0.000$ ) between social capital and firm performance. This is in agreement with earlier studies done by Marc M. Levey and Steven C. Wrappé, (2007) who said that the value of the relationships a business maintains with its customers and suppliers is also referred as goodwill, but often poorly booked in corporate accounts, because of accounting rules but contributes greatly to the performance of the of firms.

#### **5.1.4 Firm's Performance**

The findings indicate that a majority of the respondents that is 55.85% felt that the firm has increased its profit margin, 48.62% felt that the firm had increased its sales growth, 48.4% the firm has increased its productivity, 47.34% there has been an increase in the number of employees 34.68% said the firm has added assets.

The findings indicate that when the mean was adjusted using the standard deviation by adding and subtracting it did not have an effect on the findings therefore affirming the findings of the table 4.10

The findings of the study had a positive kurtosis of 1.151 to indicate that responses clustered around the mean. This was important for the study as it indicated that most of the respondents were in near agreement on the data collected.

The skewness of the study revealed that the skewness error was more than double the skewness and therefore implying that the data was not symmetrically distributed but since

the study had a positive kurtosis, the implication of the skewness was ignored and making it suitable for the study.

This implies that that the firm's profit margin is the major area that firms felt they achieved. This could be attributed to the fact that profits are the first area that a firm uses to gauge its improvement or growth.

One can therefore conclude that most firms look at their profit margins to determine how well their firms are doing and to measure their firms' performance since it's the most immediate effect that an organization will experience a change in.

## **5.2 Conclusion**

Organizational capital also referred to as structural capital, refers to the supportive non-physical infrastructure, processes and databases of the organization that enable human capital to function. Structural capital includes processes, patents, and trademarks, as well as the organization's image, organization, information system, and proprietary software and databases. Because of its diverse components, structural capital can be classified further into organization, process and innovation capital. It also includes the organization philosophy and systems for leveraging the organization's capability. Process capital includes the techniques, procedures, and programs that implement and enhance the delivery of goods and services. Innovation capital includes intellectual property such as patents, trademarks and copyrights, and intangible assets. Intellectual properties are protected commercial rights such as patents, trade secrets, copyrights and trademarks. Organizations should therefore utilize this form of intellectual capital to spur the performance of their firms.

Human capital is the value that the employees of a business provide through the application of skills, know-how and expertise. Human capital is an organization's combined human capability for solving business problems and exploiting its Intellectual Property. Human capital is inherent in people and cannot be owned by an organization. Therefore, human capital can leave an organization when people leave, and if management has failed to provide a setting where others can pick up their know-how. Human capital also encompasses how effectively an organization uses its people resources as measured by creativity and innovation therefore organizations should understand the value of their employees and utilize this human capital to spur the performance of their organizations.

Social capital also referred to as relational capital, consists of such elements as customer relationships, supplier relationships, trademarks and trade names (which have value only by virtue of customer relationships) licenses, and franchises. The notion that customer capital is separate from human and structural capital indicates its central importance to an organization's worth. The value of the relationships a business maintains with its customers and suppliers is also referred as goodwill, but often poorly booked in corporate accounts, because of accounting rules therefore organizations should understand the value of their social capital and utilize them for the improvement of firm's performance.

### **5.3 Recommendation**

- i) Organizations should update their database promptly to enable utilization of organizational capital to spur performance. Updating their data bases promptly will ensure that their information is often secured and it does not get lost or misplaced in their processes. Therefore this information will serve as sources of

organizational capital that the organization can utilize too spur the performance of the parastatals.

- ii) Organizations should strive to ensure that their employees are considered the best in the industry as a way of utilizing human capital and hence spurring firm's performance. When the reputation of the employees of an organization is widely recognized in the industry as the best there is in that industry; clients will be drawn to the organization since they are assured that they are going to get the best service in the industry and therefore this will help to improve the performance of the performance.
- iii) Organizations should take part in corporate social responsibility activities as a way of social capital initiative which will create goodwill and thereby spurring the firm's performance. When an organization takes part in corporate social responsibility; they show the community around them that they are not only interested in securing their profits but they are able to give back to the community and therefore appeal to the communities who are then drawn as clients to the organization increasing and spurring the profitability of the parastatls. parastals also represent the government and when they give back to the community they communicate the good will of the government to the communities.

#### **5.4 Limitations of the Study**

The study was limited to Intellectual Capital and Financial Performance of Kenyan State Corporations. In addition, the respondents were too busy doing their work and some hesitated to give out information due to the perceived need by most parastatals to keep their issues and operations undercover.. The researcher overcame all these by assuring the

respondents that the study is for academic purpose only and the information they presented would be treated with utmost confidentiality

## **5.5 Proposal for Further Research**

The study suggests that further research should be done in the following areas:

- i) The effect of corporate social responsibility on the performance of parastals
- ii) The effect of clients perception on the firms performance
- iii) Effect of information systems on firms performance

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# APPENDIX 1:QUESTIONNAIRE

Dear Respondent,

The purpose of this questionnaire is to aid in data collection for a research project to be submitted to ..... University for academic fulfillment.

All the information from the respondents will be treated with confidentiality.

Please answer the following questions

## SECTION A

### Background

---

1. Respondent's Gender

Male

Female

2. Highest education level attained

Secondary school  Certificate  Diploma  Degree

Masters  PhD

3. Area of Specialization.....

4. How long have you been an employee of this company?

Under 5 years  16-20 years  6-10 years

11-15 years  21-25 years

5. Firm size

Less than 100 employee's       100-200 employees

201-500 employees       500-800 Employees

More than 800 employees

6. How long has the firm been in existence?

Under 5 years  6-10 years  11-15 years  16-20 years

21-25 years  over 25 years

**SECTION B**

Please answer the following questions sincerely as regards where you are/ have been employed

**ORGANIZATIONAL CAPITAL**

❖ To what Extent do you agree with the following items as regards your organization? (1=Strongly Disagree, 2-Disagree, 3=Neutral, 4=Agree,

	1	2	3	4	5
Knowledge artifacts (data, documents etc) in the organization are					
Our database is updated promptly whenever new information or data					
The company encourages free talks and discussions between					
Company culture contains valuable ideas/ways of doing things					
The company has a brand identity that sets it apart from others					

**5=Strongly Agree)**

### HUMAN CAPITAL

- ❖ To what Extent do you agree with the following items as regards your organization? (1=Strongly Disagree, 2-Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	1	2	3	4	5
Employees are recruited placed and employed in the					
Employees are very highly skilled in their jobs					
Employees are widely considered the best in the industry					
Our employees are confident in their ability to provide					
Our employees develop new ideas and knowledge.					

### SOCIAL CAPITAL

- ❖ To what Extent do you agree with the following items as regards to you and your organization?(1=Strongly Disagree, 2-Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	1	2	3	4	5
The company has developed a body to address the needs of					
The organization takes part in CSR activities to inculcate					
The organization puts a lot of emphasis on good relations					
The company provides all the necessary resources to enable					
The organization has cultivated a good relationship with					

## FIRM PERFORMANCES

- ❖ To what Extent do you agree with the following items as regards your organization? (1=Strongly Disagree, 2-Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	1	2	3	4	5
The firm has increased its profit margin					
The firm has added asset					
There has been an increase in the number of employees					
The firm has increased its sales growth					
The firm has increased its productivity					