

**KNOWLEDGE MANAGEMENT STRATEGY, ORGANIZATIONAL
COMPETENCE AND COMPETITIVENESS IN KENYA'S COMMERCIAL
BOOK PUBLISHING INDUSTRY**

BY

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A Doctoral Thesis

**Submitted in Fulfillment of the Requirement for the
Degree of Doctor of Philosophy in Business Administration
School of Business, University of Nairobi**

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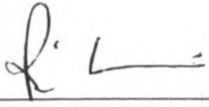
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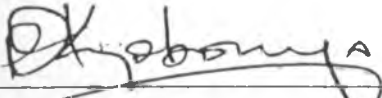
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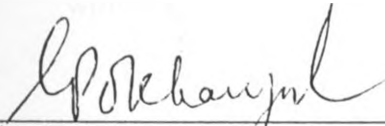


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DEDICATION

I dedicate this doctoral thesis to my parents Francis Mbugua and Kathleen Wangui Mwihia who have always had confidence in me, and by way of their devoted self-sacrifice and prayers, stood by my side from the formative to the current academic endeavours

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ABSTRACT

Existing research on knowledge-competency-competitiveness relationship has traditionally viewed competence as either an intervening or dependent variable. While a knowledge management strategy is crucial in attaining competitive advantage, a suitable knowledge strategy cannot be effectively devised and implemented in the absence of organizational competence. Competence therefore, plays a critical role in the knowledge-competitiveness relationship, which suggests that a focus on improving competencies is needed if knowledge is to be optimally converted to competitive advantage.

This study departs from previous research by introducing organizational competence as a co-independent variable to knowledge management strategy in the knowledge-competence-competitiveness model. This realignment of variables bridged a research gap by contributing to a better understanding of the exact nature of the interaction between the knowledge-competence co-independent variables and the degree to which this contributes to improved competitiveness.

The research objectives included ascertaining the nature and extent of the relationship between knowledge management strategy and organizational competence. The study also sought to determine the relationship between knowledge management strategy, organizational competence and competitiveness. Additionally, the influence of the interaction between knowledge management strategy and organizational competence on competitiveness was also investigated. Consequently, four hypotheses were formulated for testing in order to meet these key objectives.

The research was cross-sectional study that applied a triangulated research approach in order to access the widest possible range of data from the organizations under study. A census survey was carried out targeting 118 commercial publishing firms in Kenya involved in the publication of educational and general books and managing directors or at least one other top line manager. The study used correlation and regression analysis to test the hypotheses relating to the relationships between the study variables.

The results of the study showed that there was a very strong and significant relationship between knowledge management strategy and organizational competence and that the two variables in turn had a moderately strong and significant relationship with competitiveness. It also revealed that increased competitiveness was marginally more strongly linked to organizational competence than knowledge management strategy. It was further established that competitiveness was not a function of the interactive relationship between knowledge management strategy and organizational competence even though a combination of the two variables was positively linked to increased competitiveness. In view of these findings, the study concluded that for enhanced competitiveness, organizations should focus on enhancing both their organizational competence and knowledge management strategies.

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ABBREVIATIONS AND ACRONYMS

ABC – African Books Collective

AfriAfya – African Network for Health Management and Communication

AIDS – Acquired Immunodeficiency Syndrome

AMREF – African Medical Research Foundation

ANOVA – Analysis of Variance

APNET – African Publishers Network

C- Competitiveness

CA – Competitive Advantage

CD – Compact Disk

CEO – Chief Executive Officer

DW – Durbin Watson

DV – Dependent Variable

E-books – Electronic Books

E-Publishing – Electronic Publishing

EABA – East African Book Development Association

EARCE – East Africa Regional Consultative Exercise

FBF – Friends of the Book Foundation

GM- General Manager

HC - Human Capital

HIV – Human Immunodeficiency Virus

I-AMP - Intellectual Asset Management Portfolio

IC – Information Capital

ICT – Information, Communication and Technology

ICM – Intellectual Capital Management
ICT – Information and Communication Technology
IPR – Intellectual Property Rights
IT – Information Technology
IV – Independent Variable
KPA – Kenya Publishers Association
KIE – Kenya Institute of Education
KIPI – Kenya Industrial Property Institute
KNLS - Kenya National Library Services
KBV – Knowledge-based View
KM - Knowledge Management
KMS – Knowledge Management Strategy
KPA – Kenya Publishers Association
MANOVA – Multivariate Analysis of Variance
MD – Managing Director
MDG – Millennium Development Goals
NBDCK – National Book Development Council of Kenya
OC – Organizational Competence
PoD – Print on Demand
PPMC – Pearson’s Product Moment Correlation
R&D – Research and Development
RBV – Resource-based View
ROI – Return on Investment
SD – Standard Deviation

ICM – Intellectual Capital Management
ICT – Information and Communication Technology
IPR – Intellectual Property Rights
IT – Information Technology
IV – Independent Variable
KPA – Kenya Publishers Association
KIE – Kenya Institute of Education
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PoD – Print on Demand
PPMC – Pearson's Product Moment Correlation
R&D – Research and Development
RBV – Resource-based View
ROI – Return on Investment
SD – Standard Deviation

SM – Strategic Management

SWOT – Strengths, Weaknesses, Opportunities and Threats

VIF – Varlance Inflation Factors

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the Industrial Revolution, capital was in short supply while labour remained relatively cheap. In today's economy however, financial capital and other tangible assets are becoming no more than transient commodities, while intellectual capital and other intangible assets, the key strategic resources, will be in short supply (Burton-Jones, 1999, Abell and Oxbrow, 2001). Drucker (1993) writes the final obituary of capitalism altogether and announces that capital's central place in the economy is being taken over by knowledge.

According to Alee (1997) we have moved from the Industrial Age to the Knowledge Age and are fast moving to a world we can only imagine. Knowledge management today can best be defined as a set of processes that aim to create value that can be leveraged for competitive advantage. A knowledge management strategy is an evolving set of processes that lead to this value creation (Funes and Johnson, 1998, Scarbrough et al., 1999, Abell and Oxbrow, 2001, Tiwana, 2001, Nimmagadda and Prasad, 2003).

The skills and knowledge applied in organizations are called competencies. These competencies include personal characteristics, motives, self-concepts, knowledge, and

behavioral skills. The more competitive the business environment, the more important these competencies become and the competency models become increasingly complex. As a result, organizational key competencies consequently cause or foretell outstanding performance and are therefore critical in executing a knowledge management strategy to attain competitive advantage.

In recent years, the resource-based theory of the firm (Wernerfelt, 1984 and 1995) and related contributions (Teece, 1982; Rumelt, 1984, Barney, 1986) have focused on the importance of understanding company performance as a result of the efficient use of unique company capabilities that create sustained performance differentials within industries. Similar approaches are found in evolutionary economic theory (Nelson and Winter, 1982) and the theory of dynamic firm capabilities (Nelson, 1991) that analyze inter-firm differentials in terms of strategy, structure and core capabilities. Other recent contributions stress the importance of down-scoping of firms in terms of re-focusing of major activities to explain successful corporate performance (Hoskisson and Hitt, 1994, Hoskisson et al, 1999) which are understood as part of the general attempt to study the effect of endogenous company capabilities on economic performance.

A firm that earns a higher rate of economic profit than the average rate of economic profit of other firms competing within the same market is said to have a competitive advantage in that market (Porter, 1980). Accordingly, the source of this competitive advantage is an evolving strategy that cannot be easily duplicated by competitors. According to Pitelis (2002, p 127), "... human, and in particular managerial resources are of essence, because expansion (firm growth) requires planning and managerial resources..." She further argues

that these inimitable resources form a “cohesive shell of the firm” which in turn helps to create knowledge. Because this knowledge is firm specific and cannot therefore be easily acquired in the marketplace, it offers a distinct competitive advantage. This acquired competitiveness leads to an “internal stimulus to growth and innovation.” A resource strategy addresses the firm’s only competitive differentiation - renewable resources of knowledge, skills, and capabilities (Penrose, 1959; Grant, 1991, Kogut and Zander, 1993, Zack, 1999, Teece, 2000, Nimmagadda and Prasad, 2003), a view that suggested that the enterprise knowledge base is quickly becoming the only sustainable competitive advantage.

1.1.1 Knowledge Management Strategy, Competencies, and Competitiveness

The study of human knowledge, though, is as old as human history itself and has been a central subject matter of philosophy and epistemology since the time of Greek philosophers and beyond (Gordon, 1999). This recognition of the importance of knowledge as a management resource and power has led to an increasing number of scholars and practitioners researching on the management of knowledge. These increasing contributions from both academics and practitioners have focused on areas such as the evolving research field of identification and assessment of intangible assets or intellectual capital (Nonaka and Takeuchi, 1995; Petrash, 1996, Haanes and Lowendhal, 1997, Marr and Schiuma, 2001) and the knowledge management of those intangibles (Grant, 1996, Sveiby, 1997, Wiig, 1997; Davenport and Prusak, 1998, Leonard-Barton, 1998, Ruggles, 1998; Teece, 2000). This ties in with the strategic management resource-based theories of the firm,

which contend that competition is based on the control of unique and inimitable resources (Collis and Montgomery, 1995, McEvily and Chakravarthy, 2002, Kaplan and Norton, 2004). Accordingly, managers should craft strategies around these resources, which are also durable, and competitively superior to their rivals' resources, which means that profits that can be appropriated.

While many firms in developing countries are far behind their developed country counterparts in terms of the ability to create knowledge that can lead to a sustainable advantage, it is necessary that the former reduces the gap. For instance, the value of intellectual property, such as patents "as competitive weapons and intelligence tools" is today widely acknowledged (Almeida, 1996, Brooking, 1999, Afuah, 2002, Nimmagadda and Prasad, 2003) "Indeed whether a company is trying to block a competitor's product development plan, gain entry into a hotly contested new market, find the most attractive acquisition opportunity, or reduce the risks involved in a high-stakes merger, patents can be potent weapons – and quite possibly the greatest source of competitive advantage on earth" (Rivette and Kline, 2000: 65).

Accordingly, organizational competences can be singled out to measure their impact on performance. Hamel and Prahalad (1994) describe competences as "a bundle of skills and technologies.. (p. 202)". Markides and Williamson (1994) define organizational or core competences as a pool of experience, knowledge, and systems that together can act as catalysts that create and accumulate new strategic assets. These strategic assets, which are imperfectly imitable, constitute a firm's competitive advantage. Following Nelson (1991), core capabilities can be linked to a set of skills and search routines developed within firms.

In industries where technological innovation is an important phenomenon these core capabilities of firms are expected to depend largely on skills and routines related to research and development (R&D).

In the 21st century, knowledge has become *the* resource, rather than *a* resource. and this is what makes societies 'post-capitalist' (Drucker 1993, Wilson, 1996, Beatty, 1998) In view of that, Giannetto and Wheeler (2000) argue that increasingly, more organizations are coming to regard their intangible knowledge assets as important, if not more important than their physical and financial assets. For instance, in the technology industry, the value of software now exceeds that of hardware (Almeida, 1996, Buckley and Carter, 2000) and in the pharmaceutical industry, it is found that most of the value is locked up in patents (Biery and Chakrabarti, 1996)

According to Sanchez (2001), two themes have become epicenters of new management thinking in the late 1990s: knowledge management and competence-based approaches to strategic management. These two themes share a common interest in identifying important forms of organizational knowledge and in understanding processes through which knowledge can be transformed into organizational capabilities and competences to attain competitive advantage.

Hanulla et al. (2003) support this view in their study, which found that companies have recognized the significance of personnel competencies as an asset in contemporary business. As competencies of personnel are differentiated, knowledge sharing and competency development have in turn become important issues. They further suggest that

there are yet several aspects of knowledge and competency to be developed and evolved in order to become as common as, for instance, performance measurement. In the field of knowledge management, for example, companies have recognized the need for measuring the utility of knowledge management. Danskin et al. (2005) also linked knowledge, competence and competitiveness in their study that described the process of acquisition, retention, maintenance and retrieval of knowledge within the firm by improving organizational memory and across the value chain through knowledge management systems to gain competitive advantage.

Drucker (1993) also argued that an organization must abandon obsolete knowledge and replace it with a new one through continuous innovation and improvement. This process of attaining superior knowledge is also a core competency, which helps an organization gain a competitive advantage in attracting customers, thereby creating the future (Hamel and Prahalad, 1994). Furthermore, resource-based theories of the firm argue that competition is based on control of unique and inimitable resources (Scarbrough et al., 1999). Collis and Montgomery (1995) support this view and contend that managers should craft strategies around resources that are inimitable, durable, unique, and competitively superior to rivals' resources, and with profits that can be appropriated. Furthermore, von Krogh and Roos (1995) assert that the 'key to success in today's business is the application and development of specialized knowledge and competencies.

Knowledge creation should therefore, lead to continuous innovation and ultimately to competitive advantage (Nonaka & Takeuchi, 1995). The idea is "to improve on and then institutionalize an ongoing process for drawing upon various sources of information,

knowledge, data, and wisdom for consideration when making important decisions about the business” (Mitroff et al., 1994). The importance of learning and knowledge creation as a source of sustainable competitive advantage therefore need not be gainsaid, and knowledge management as a subject is drawing the attention of strategy researchers, since it is being increasingly felt that the effective accumulation and use of intellectual capital will be the hallmark of success in the 21st Century (Das, 2000).

Even though this is a relatively new field, considerable progress in the area of knowledge management continues to be made, and today there is a much greater awareness about its need and importance. The strategy researchers from developing countries need to understand the knowledge-creating process of an organization and explore the reasons why certain firms are able to create and accumulate knowledge and are characterized by organizational learning cultures, while others are not (Das, 2000)

1.1.2 The Context of Knowledge Management Strategy and Organizational Competence in Kenya

The increasing relevance of knowledge management and the contributions of knowledge management in Kenya present unparalleled opportunities, innovations and strategies for the nation. In Kenya, knowledge management is increasingly being adopted in a myriad of industries. In the information, communication and technology (ICT) industry, knowledge management is currently widely used by firms that are leveraging their knowledge assets in the form of patents, copyrights and other intellectual assets for economic gain and effective

management Extensive use of knowledge management is also now widely accepted by library and other information professionals such as archivists in Kenya (Shiholo and Ocholla, 2003) and public library networks already exist in sub-Saharan Africa (Makotsi, 2005)

The African Network for Health Knowledge Management and Communication (AfriAfya) is a Kenya-based health initiative by development agencies to explore new opportunities for harnessing communication and information technology for community health The idea for AfriAfya was based on the realization that while modern ICT firms had provided commercial entities such as universities, ministries, research institutions and big hospitals with information and assistance in their activities, it had done very little for rural communities, particularly in the area of health (AfriAfya, 2006) Another initiative is the integration of knowledge management in a water and sanitation programme (Rukunga, et al, 2004). Knowledge management is also being utilized in rural development to improve access to services and markets for poor farmers (ISG, 2006)

Although Kenya has no comprehensive knowledge management policy, there are several sector policies in the form of legislation, regulations and guidelines covering, for instance, media (Media Act, 2007), public libraries (the KNLS Board Act, revised 1986), archives (the Public Archives Act, 1966), and legal-deposit material (the Books and Newspaper Act, revised 1987) Other relevant laws include the Copyright Act (2001), the Industrial Property Act (2001), the Science and Technology Act (1977), the Museums and Heritage Act (2006), Education Act (1968) the several Universities Acts

Kenya as a nation has continued to suffer knowledge loss through brain drain of all types of knowledge professionals to the developed world largely as a result of real and perceived higher returns for knowledge in those countries “It is ironical to note that Africa imports 100,000 international experts who do not deliver annually to ‘advise’ and ‘build capacities’ in a whole range of fields even after it loses more than 30,000 professionals to the developed countries” (EARCE, 2004)

1.1.3 The Competitiveness in Kenya’s Book Publishing Industry

The publishing industry is in effect a knowledge management process whereby knowledge is shared and made public. In the case of commercial book publishing, the main asset leveraged is intellectual capital in the form of copyrights and imprints. Chakava (2004) suggests that an immediate challenge faced today is how to democratize publications so as to make them more readily available, accessible and affordable to all people. To accomplish this, publishers need to manage the flow of knowledge more efficiently and the new generation of publishers therefore, needs to build on the foundations already established, take advantage of the liberalized marketplace, and harness the emerging technologies to put African publishing squarely on the world map.

Mass-market book publishing is today dominated by a decreasing number of large corporations, some of them parts of giant worldwide entertainment conglomerates that have consolidated their position through mergers and acquisitions. In Kenya, most of the large book publishers are local affiliates of conglomerates such as Longman, Oxford University Press, and Heinemann. Each of these firms publishes under many imprints, the

publishing world's term for brands. Educational and scholarly books are the largest segment produced by publishing houses in Kenya and the local dominant publishers are Jomo Kenyatta Foundation, East African Educational Publishers and the Kenya Literature Bureau. There is also a huge market for technical books for almost all occupations (Makotsi and Nyariki, 1997)

There are also various institutions that have expanded opportunities for indigenous African publishing and include the Kenya Publishers Association, the National Book Development Council of Kenya, East African Book Development Association, Friends of the Book Foundation, African Publishers Network, and African Books Collective among others (Chakava, 2005). These organizations focus on helping publishers take advantage of expansion opportunities particularly in the international markets which offer vast opportunities particularly in the intra-African book trade and especially in the regional East African market because of the increasing number of students going to school at all levels which translates to increased readership. Moreover, the local publishing industry has yet to fully exploit the tertiary publishing industry, which is knowledge intensive, requiring expensive research, higher print quality and a longer lead-time to develop a manuscript as opposed to the traditional lower educational level books.

The internet revolution is bringing about a major shift towards electronic presentation, production and delivery. The success of online booksellers, such as Amazon, has made a huge difference to the availability of books. Additionally, CD or online delivery is a fast-growing area. Print-on-Demand technology also presents vast opportunities for improving efficiency of production and distribution systems. Furthermore, the increasing acceptance

of e-books means that there is an unfolding market for this novel product. Although e-books have experienced some technical problems, work is being done that will solve these problems and make electronic reading much easier (Agas, 2006)

Further development in the use and functions of websites for both customer use and as a point of contact for publishers, including the establishment of an on-line publisher's discussion group has not been fully exploited. Analysts believe that the match between internet user and book buyer is a market still awaiting significant exploitation. These changes will separate industry leaders from followers in the global market and provide an excellent opportunity to differentiate

The industry however also faces some significant challenges particularly in the form of infringement of copyrights. While the fair use doctrine allows limited of copyrighted material, wholesale copying of books poses a major threat. Cheap imports of books published under license e.g. from India, also makes it difficult to compete fairly as some of these products are heavily subsidizing by their governments. Other challenges faced by the industry include rising paper prices as a result of higher taxes and the need to import quality paper. The competitive landscape has also been made more challenging as a result of the faster speed and lower prices resulting from internet publishing and e-publishing. These innovations have changed the traditional character of the book and industry structure.

1.2 The Research Problem

From the observations made so far, it appears that knowledge management strategies are increasingly becoming critical for success in all kinds of businesses and industries. Yet like management of any other input, process or output, knowledge management requires appropriate management competencies without which the organization is very unlikely to be competitive. However, the literature review did not reveal a systematic study that links knowledge management strategies and management competencies as co-independent variables to competitiveness thereby exposing a knowledge gap that was that was addressed by this study.

While a knowledge management strategy is crucial in attaining competitive advantage, a suitable knowledge strategy cannot be effectively devised and implemented in the absence of organizational competency. Competency therefore, plays a critical role in the knowledge-competitiveness relationship, which suggests that a focus on improving competencies is needed if knowledge is to be optimally converted to competitive advantage. Empirical research on the knowledge-competency-competitiveness relationship has traditionally viewed competency as either an intervening or dependent variable (for example Li and Catalantone, 1998, Sanchez, 2001, Sanchez and Heene, 2004). However, the exact nature of the interaction between knowledge management and competency, and its subsequent effect on competitiveness has not been adequately addressed by existing literature. Including organizational competence as an independent rather than intervening

or outcome variable, makes it possible to determine the main effects of organizational competence especially when paired up with knowledge management strategy

Accordingly, this study departs from previous studies by introducing organizational competency as a co-independent variable to knowledge management strategy. The nature of the relationships and interaction between the knowledge-competency co-independent variables and the degree to which this contributes to improved competitiveness constitutes the research problem. The realignment of variables is expected to address the following main research question: Are publishing firms' competitiveness related to the relationships and interaction between their knowledge management strategies and organizational competencies?

1.3 Objectives of the Study

The objectives of the study were to:

- a Ascertain the nature and extent of the relationship between knowledge management strategy and organizational competence
- b Determine the relationship between knowledge management strategy and competitiveness
- c Determine the relationship between organizational competence and competitiveness
- d Establish the influence of the interaction between knowledge management strategy and organizational competence on competitiveness

1.4 Significance of the Study

The emerging knowledge economy is the basis for new knowledge-intensive industries. These industries need effective knowledge management strategies in order to conduct their core business. It is recognised today that tremendous amounts of knowledge are locked up inside organizations. It requires a dedicated effort to harness human capital and manage knowledge in order to ensure that optimal value is added to the knowledge which is available. In the knowledge economy leaders and managers need to understand new forms of best practice on how they manage knowledge and knowledge workers in modern-day organizations.

Competitiveness in the knowledge economy will increasingly be driven by the capabilities of organizations to manage knowledge. A key objective of knowledge management is to achieve higher levels of organizational effectiveness, efficiency and competitiveness in emerging knowledge-based markets. The current study explores the benefits of having purposeful knowledge management strategies and systems for developing high performance knowledge organizations. In fact, Nonaka and Takeuchi (1995), based on their considerable research on Japanese firms, were able to conclude that in the Japanese context, knowledge creation has been the most important source of international competitiveness.

It is also important for managers to learn which knowledge management techniques work in the Kenyan context. Kamoche (2001) argues that the context specificity of knowledge

implies that the community of practitioners' view of what constitutes valuable knowledge may be at variance with other communities, which implies that what works in other countries may not necessarily succeed in Kenya. By addressing the linkage between knowledge and competency with competitiveness in a Kenyan industry, this study goes a long way in helping managers in developing nations decide if these topics are conceptually sound with practical frameworks to address their context specific problems (Das, 2000)

Sanchez (2001) also talks of two themes namely: knowledge management and competency in approaching strategic management. The current study further investigates these two themes by investigating the nature of the interaction between competency and knowledge and especially the degree to which competency affects knowledge management strategy and its impact on increased competitiveness.

Finally, this research by extending previous research on knowledge, competency and competitiveness to the Kenyan context is important in that it lays down the groundwork for other similar replicative studies with extensions in developing countries. In this respect, recommendations for further research will be presented at the end of the study.

1.5 Arrangement of Materials

This thesis is presented in five chapters titled as Introduction, Literature Review, Research Methodology, Data Analysis and Results, as well as Conclusions, Interpretation and Recommendations. Chapter one, as the introductory chapter gives a brief overview of the literature pertinent to the various components of the conceptual framework that informs the

study This section gives the background to the study by exploring the basic tenets underlying the main themes of this research. Additionally, the chapter identifies the research problem and outlines the objectives of the study. Finally, the significance of the study is examined towards the end of this chapter.

An extensive review of the empirical and theoretical underpinnings that underlie major components of the study is presented in chapter two. A substantive review of each of the key variables is presented including origins, goals and objectives, components, and concepts, processes, techniques, tools and methods. A review of the empirical and theoretical literature pertaining to the relationship between knowledge management strategy, competency and competitiveness is also examined. An evaluation of the literature and future directions in research follows and a conceptual framework is developed from the foregoing discussion leading to four hypotheses that were derived for examination in this study.

Chapter three lays out the research methodology that was used to execute this research. The various stages of research design, study population, census survey, data collection techniques, operationalization of the study variables, aspects of the data collection instrument, data analysis procedures and techniques are extensively detailed. Data analysis and research results are contained in chapter four. The demographics and personal characteristics of the respondents is examined and descriptive data analysis is carried out using means, standard deviations, factor analysis, and tests for reliability and validity. The results of tests for hypotheses and the interpretations of the relationships between the variables are also explained.

The conclusions, interpretation and recommendations of the study are given in chapter five. There is also a discussion on the implications and contributions of the findings for theory, practice and policy. The chapter also reports on opportunities for further related research related to this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter takes a broad orientation towards the relationship between knowledge Management Strategy (KMS), Organizational Competency (OC) and how this relationship influences competitiveness (C), especially drawing from the resource-based perspective of strategic management. A review of related literature and research pertinent to these three variables has been carried out leading to the conceptual framework depicted at the end of the chapter.

2.2 Knowledge Management Strategy

The definitions of knowledge provided by the literature range from the practical to the conceptual to the philosophical, and from the narrow to broad in scope (Quintas et al 1997, Ruggles, 1998, Teece, 2000, Tiwana, 2001). Nimmagadda and Prasad (2003: 259-260) describe knowledge as “the fact or condition of knowing something with familiarity gained through experience or association.” As a result, at the enterprise level, KM “is the process by which the organization generates its wealth from its intellectual or knowledge based assets.”

Knowledge management is also defined as any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organizations (Scarbrough et al, 1999) Tiwana, (2001: 34), enhances this view by defining KM as “the process of managing organizational value and sustaining CA through the creation, communication, and application of knowledge gained from customer interactions to maximize business growth and value ”

Abell and Oxbrow (2001), argue that the KM label is not as important as the concept and strategy behind it, which is vital to the future survival and growth of an organization. This is because they are about succeeding in linking business strategy to the way an organization works. The link between knowledge and strategy is further established by Funes and Johnson (1998) who define KM as the systematic and active development of ways to create, use, learn and share knowledge for a strategic purpose. What emerges as result are the following three main aspects of KM whereby it is presented as a set of processes, it aims to create value for the organization, and this value thus created is subsequently leveraged for competitive advantage (Quintas et al 1997, Ruggles, 1998, Teece, 2000; Tiwana, 2001)

One aspect is concerned with the managerial facet of the KM and it is about how to manage a company's knowledge. It reflects the dynamic view of KM as a set of processes concerned with the usage, development, renewal and value creation of knowledge (Wiig, 1997). Another aspect is more concerned with the economic facet of KM and involves a more static notion of knowledge as asset, which can be managed and deployed in order to generate value.

The final aspect is concerned with the symbiotic link between KM and strategy as alluded to by Tiwana (2001). These three main aspects correspond with Murray and Myers (1997) who postulate that knowledge management is a strategy that turns an organization's intellectual assets - both recorded information and the talents of its members - into greater productivity, new value, and increased competitiveness. This view is aligned to the research objective of establishing the exact nature of the relationship between knowledge management strategy and competitiveness.

2.2.1 A Historical Perspective of Knowledge Management

The study of human knowledge is as old as human history itself and is an interesting and complex concept. It has been a central subject matter of philosophy and epistemology for thousands of years (Alvesson, 1995, Gordon 1999, Huatari and Iivonen, 2003). It also existed and was effectively practiced by traditional societies though not always codified and in some oriental and other societies, philosophical and applicable knowledge had been in use even before the western societies emerged. For instance, the Vedas are arguably the oldest surviving texts in the world and the Sanskrit word veda means "knowledge", and more particularly "sacred book". Vedas are said to be close to 20,000 years old, but there are some modern scholars who think that the number is exaggerated and should be about 5000. No matter the age, it is the belief by many that these texts are the oldest in the world. They express philosophies, realities and truths about life. The texts themselves show that

the collection is the result of the work of generations of poets, extending over many centuries (Walker, 1968)

Early thoughts considered how our knowledge is derived from our senses. It was later realized that what we sense is not necessarily what actually happens. Two opposing views emerged, the view that knowledge is mainly derived from the world we live in, through experiences, and the view that true knowledge can only be derived from abstract thought. These opposing views gradually grew together because these early philosophers appreciated the contributions made from experience and from abstract thought. Within all of this work, precise definitions were still elusive and the meaning of knowledge remained largely relative. In western philosophy, the attention knowledge has attracted from the time of the Greek philosophers, is briefly traced in Appendix B, including the divergent positions espoused.

Later, other components of knowledge were identified, including tacit knowledge (Gordon, 1999). It was accepted that human experts do understand and have acquired knowledge through an incremental process which leads to the acquisition of the expert knowledge in question. This knowledge which resides in the human mind is what is referred to as tacit and, as will be explained later, is the most important form of knowledge. The period from the 1950's-70's saw the rise of strategic management as it came of age as a distinct discipline. The resource-based view of strategic management is discussed as the jumping-off point that links KM and strategy by explicitly considering knowledge as a key strategic resource.

In 1980, the Digital Equipment Corporation (DEC) launched one of the first commercially successful expert systems, XCON, and in the same year, Carnegie Mellon University (Pennsylvania, USA) successfully configured computer components. In 1986, Dr. Karl Wiig coined the KM concept at a keynote address for the United Nations International Labour Organization. Large management consulting firms then began internal efforts to formally manage knowledge by creating a strategy for KM (Blumentritt and Johnston 1999) and as a result, in 1989, Price Waterhouse consultants became one of the first to integrate KM into its business strategy.

In 1991, the *Harvard Business Review* published one of the first journal articles on KM. In 1993, Dr. Carl Wiig wrote "Knowledge Management Foundations," one of the first books dedicated to KM. The first KM conference was held in 1994, by the Knowledge Management Network and thereafter followed the practice of offering KM services to clients by large consulting firms. From 1996, an explosion of interest and activities in KM by various firms and practitioners followed (Liebowitz, 1999).

The number of companies reliant on developing value in management consulting through knowledge has now grown significantly (Buono, 2002). In some industries like consulting, the main product sold is derived from the knowledge and wisdom of consultants (Alvesson, 1995). Other major knowledge based industries include, engineering organizations, research laboratories, marketing firms, sales and software enterprises, project based entities and all forms of recruiters and headhunters (Brooking, 1999,

Berreby, 1999) As a result, worldwide spending on knowledge management services grew from \$1.8 billion to more than \$8 billion by 2003 (Dyer and Nebeoka, 2000) Today nearly all major corporations use KM initiatives, particularly to strengthen the knowledge base within the organization, especially to help employees share, activate and increase their knowledge to finally generate a more innovative, faster acting, competitive organization

2.1.2 Strategic Management and Knowledge Management

Selznick (1957) pointed out the crucial importance of distinctive competence and discussed how leadership fits with studies on firms' internal strengths and managerial capabilities. Penrose (1959) further expounded, on this resource-based view by proposing that growth and diversification was due to inherited resources such as managerial capabilities of a firm, which corresponds to Chandler's (1962) findings on the growth of the firm. It is however Penrose (1959) who is credited with originating the resource-based and knowledge-based theories of the firm, proposing that competitive advantage comes from combining resources with the unique knowledge of the firm. Her broad conceptualization of the knowledge set of the firm includes everything that resource-based theorists would consider, except physical resources.

Ansoff (1965: viii) focused on strategic decisions defined as “decisions on what kind of business the firm should seek to be in.” He was more explicitly interested in understanding what was meant by “strategy” and accepted that the objective for the firm was to maximize economic return, which he distinguished from accounting return. He argued that strategy

provided a “common thread” among a firm’s activities and product markets and had the following five component choices: (1) product/market scope, (2) growth vector (the direction in which scope was changing e.g. the emphasis on old versus new products or markets), (3) competitive advantage (unique opportunities in terms of product or market attributes), (4) synergy internally generated by a combination of capabilities or competencies, (5) the make or buy decision

Andrews (1971) popularized a framework for strategic planning known as the SWOT, an acronym for Strengths, Weaknesses, Opportunities, and Threats and has since influenced both practice and research in the field of strategic management. Performing a SWOT analysis involves describing and analyzing a firm’s internal capabilities - its strengths and weaknesses - relative to the external opportunities and threats of the competitive marketplace. Organizations are advised to take strategic actions to preserve or sustain strengths, offset weaknesses, avert or mitigate threats, and capitalize on opportunities. Strategy can be seen as the balancing act performed by the firm as it straddles the high wire strung between the external environment (opportunities and threats) and the internal capabilities of the firm (strengths and weaknesses).

Collectively, Andrews (1971), Ansoff (1965) and Chandler (1962) help define a number of critical concepts and propositions in strategy, including (1) How strategy affects performance, (2) Importance of both external opportunities and internal capabilities, (3) The notion that structure follows strategy, (4) The practical distinction between formulation and implementation, (5) The active role of managers in strategic management

2.1.4 Concepts, Process, Techniques, Tools and Methods of KM

(a) Concepts

A number of concepts, processes, techniques, tools and methodologies have been employed in linking KM to competitive advantage. For instance, many corporations have employed the principles of knowledge management to meet business objectives such as reduced cycle time, reduced costs, more efficient use/reuse of knowledge assets, enhanced functional effectiveness, increased organizational adaptability, increased value of existing products and services and to create new knowledge intensive products, processes and services. One of the important reasons that organizations have focused on KM is because it employs a holistic approach through the acquisition, creation, organizing, sharing and applying of knowledge. Through this process, the transfer of best practices, the “best way” to identify, collect, evaluate, disseminate and implement information and monitor outcomes is realized. The key enablers and drivers, which create a conducive environment for a KM system to flourish, include leadership, organization culture, measurement and technology.

According to Huatari and Iivonen (2003), trust enhances performance. This is because managing the challenges of the knowledge-based society, where organizations have changed and where knowledge and information intensive work prevail, demands more than just smart technology to enable the acquisition, collection and sharing of knowledge artifacts. Organizations and networks are social systems, and new conceptions of their primary roles need to be explored to further understand more invisible managerial means,

like trust, to reap the real benefits of KM in the networked economy which includes trust in online organizations, "swift trust" or interpersonal trust in temporary online partnerships, the trust between the citizens and the public administration

(b) Processes

To be effective, information cannot be imposed from outside the service delivery system. The systematic approach should aim to build on local experience, meet felt needs for knowledge, which in turn should be adapted and used to introduce change through a process that is driven from within the system.

The idea of embedding knowledge permanently in an organization and further building on it has given prominence to what has become known as the learning organization or organizational learning (Akella, 2003, Argyris, 1992; Bierly III et al, 2000, Senge 1990). The notion of learning gained significance in the 1980s and 1990s as organizations struggled to adapt to accelerated change.

Today knowledge management is a key activity in organizations. Senge (1990) popularized the term, "the learning organization," which is a conceptual framework for the organization of the future. He argued that learning is central to success and organizations that will excel in the future will be those that discover how to tap people's commitment and capacity to learn and used the systems theory to clarify and explain the concept of learning organizations. Learning organizations were described as places where people continuously expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured and where people are continuously learning.

how to learn together. What is considered in particular is the increased use of relevant information and sharing of knowledge to create new knowledge and develop organizational knowing (Huataari and Iivonen, 2003)

Learning organizations are therefore dependent, according to Senge (1990) on the mastery of certain distinct factors, namely: mental models, personal mastery, shared vision, systems thinking and team learning and refers to systems thinking the fifth discipline because it is the conceptual cornerstone that underlines and encompasses all the learning disciplines (i.e. the cornerstone of how learning organizations think of their world).

Mental Models refers to each individual's deeply ingrained assumptions, generalizations, pictures or images that influence how we understand the world and take action. Personal Mastery is the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively. These are the skills of unearthing genuine shared "pictures of the future" where people excel, not because they are told to, but because they want to be known as a Shared Vision. On the other hand, Systems Thinking is a conceptual framework, a body of knowledge and tools that have been developed over time to make the full patterns clearer, and to help an individual see how to change them effectively. Team Learning is vital discipline because teams, not individuals, are the fundamental learning unit in modern organizations.

Argyris (1992) explains the organizational learning by arguing that organizations can learn only through the actions of their individual employees. Therefore, if the learning abilities of employees are to be improved, management will need to create suitable conditions to

influence the individuals' mental paradigms, their conceptual framework and their approach towards work and problem solving. An organizational culture for expanding organizational intelligence then becomes an inimitable strength (Allee, 1997, Barney, 1991)

Motivation for significant organization change is due to developments in the external environment. Strategic change takes place where organizations respond to external changes and adapt to new environmental realities. Accordingly, strategy is an indication of how an organization relates to its environment and is therefore a key consideration in understanding organizational change. Strategic change is a key component of organizational adaptation.

Two dominant schools of thought have emerged to explain the occurrence of such changes. The Rational School which proposes that when environmental changes occur, strategists recognize available options, evaluate them and make appropriate decisions, and The Cultural School which advances the view that strategic change occurs as a result of changes in the formulae that managers use to construe or understand their environment. Environmental change does not necessarily lead to strategic change. Change is driven by what managers perceive to be a beneficial realignment. Significant change cannot occur unless managers have a change of mindset and begin to see this beneficial realignment. This discussion establishes that because of the central role of humans in a KM strategy for competitive advantage, organizational competencies are extremely crucial.

In order to have a successful KM strategy, there must be a way of measuring inputs and outcomes. The challenge in any measurement system is to be sure that what we are measuring is really an indicator for what we want to observe (Alee, 1997) In view of that, we need a way of establishing credibility in relating knowledge management to improved performance gained through competitive advantage through appropriate financial, growth, capabilities, and intellectual capital measures (Liebowitz, 1999) These measures will ideally reflect an aspect of the organizations performance that, if improved, will lead to better financial performance These may include the number of users of a knowledge management system, the number of "hits" to a knowledge repository, or the satisfaction levels of knowledge workers with a knowledge management initiative Improvements in these measures are however not a sign that better organizational performance is being achieved, but only that levels of knowledge activity are improving

(c) Techniques

Knowledge worker capabilities and ideas and decision improvements need to be measured and related to overall performance improvements Measures assessing improvements in knowledge worker capabilities also involve the human dimension of knowledge management Some sample measures might include retention of knowledge workers, knowledge worker satisfaction, investment in knowledge worker productivity and even the tested knowledge levels of employees (Bontis et al , 1999)

Though the above intangible assets are inherently difficult to measure, Kaplan and Norton (2004), proposed a method to systematically measure a company's human, information,

and organizational capital - or what they called strategic readiness - with a view to managing a competitive position more easily and accurately. This is because an estimation of a company's strategic readiness is critical for the success of any strategy. They identified three categories of intangible assets essential for implementing any strategy, namely Human Capital (HC), Information Capital (IC), and Organizational Capital (OC).

Human Capital (HC) refers to whether employees have the right kind and level of skills to perform the critical internal processes of the strategy. This includes the skills, talent, and knowledge that a company's employees possess. The first step is estimating HC readiness to identify positions in which employees with the right skills, talent, and knowledge have the biggest impact on enhancing the organization's critical internal processes. The next step is to pinpoint the set of specific competencies to perform each of those strategic jobs. The difference between the requirements needed to carry out these jobs effectively and the company's current capabilities represents a "competency gap" that measures an organization's HC readiness.

Information Capital (IC) is a measure of how well the company's IT portfolio of infrastructure and applications such as the company's databases, information systems, networks, and technology infrastructure supports the critical internal processes. Transformational applications that change the prevailing business model of enterprise have the most impact on strategic objectives and require the greatest degree of organizational change to deliver their benefits.

This is the company's culture, its leadership, how aligned its people are with strategic goals, and employees ability to share knowledge is its Organizational Capital (OC) - This measure involves first identifying the changes in organization capital required by a new strategy, referred to as the "organizational change agenda," and then separately identifying and measuring the state of readiness of the company's cultural, leadership, alignment, and teamwork objectives

These intangible assets are the foundation of every organization's strategy and the measures in this perspective are the ultimate lead indicators. Measuring the value of intangible assets is, therefore, actually about measuring how closely aligned those assets are to the company's strategy. Consequently, the measurement of and management of these assets plays a prominent role in transforming companies into successful strategy focused organizations

Once thus transformed, competitive advantage can be measured using broad initiatives such as efficiency, core competency advancement, actualization of customer-centric products and services, and financial indicators such as reduced costs and return on investment as shown in Table 2-2. This is because KM is a targeted expertise designed to impact productivity and innovation in profound ways in a bid to achieve a sustainable competitive advantage within the marketplace

Table 2-2: Effect of Indicators of KM on Business Results

Performance Area	Indicators
Financials	Shareholders Value, NPV, Profit, ROI, ROA, and ROE
Customer Satisfaction	Number of refunds made, number of merchandising items returned, etc (See Liebowitz, 2000). Explanation the customer satisfaction may increase because of faster response times and a better understanding of customer needs due to external knowledge links.
Internal Processes	<p>Efficiency of internal processes e.g percentage of tasks/milestones achieved within a certain timeframe measures the efficiency of a group/unit</p> <p>Quality of internal processes the fraction of tasks finished correctly</p>
Potentials	Knowledge Value-Added Methodology (KVA) The process-oriented view with learning time as basic metrics shows the performance of business units

Source: Resatsch, F. and Faisst, U. (2003) Measuring the performance of knowledge management initiatives, *Beitrag für*, 22.

In order to transform knowledge into a valuable organizational asset, knowledge experience and expertise must be formalized, distributed, shared, and applied. KM is considered a key part of the strategy to use expertise to create a sustainable competitive advantage in today's business environment. An example of a KM process model is the Funes and Johnson's (1998) five-step process that begins by identifying, consolidating, and valuing knowledge as an intangible asset as the first step. This involves mapping and building a knowledge repository or inventory. This is a phase one activity that sets up expectations and establishes needs and commitment to the initiative, especially because most knowledge management initiatives will suffer from the usual amount of skepticism.

The second step is acquiring and creating more knowledge, for example, best practice and lessons learned. This phase two activity is the most difficult and to perform it effectively, the knowledge worker needs to tap into the knowledge of experts. Fortunately techniques have been developed to make it more practical. Retaining, storing and classifying knowledge is the third step. This activity permeates the whole cycle though it is most intense in phase two. This activity is facilitated by management software.

The fourth step calls for sharing and transferring knowledge occurs early in phase three of the cycle. If the approach taken in phase two was highly dependent on information technology, then this activity will also tend to be heavily dependent on it and could include access from an Intranet or other collaborative technology. The fifth and final step entails using and embodying knowledge in products and services, systems or processes. This is the main thrust of the entire exercise whereby knowledge is reapplied in another context. Though technology is an important aspect at this point, the instrument of change is not the

technology itself. Rather, it is the point at which skills and expertise in knowledge management and the innovative ability of the individual is brought to the fore.

Miller (2002) points out that managing knowledge inventories is a central issue posed by the knowledge-based view of the firm. Knowledge inventory management involves acquiring, retaining, deploying, idling, and abandoning technologies. Because of future opportunities to switch technologies over time, managing knowledge inventories requires valuing flexibility. To achieve knowledge-based competitive advantages, management needs to overcome shortcomings related to cognitive capabilities. These are temporal myopia (focusing on the short term, and spatial myopia (the lack of awareness of other technologies within or outside the organization).

The Internet, intranets, computer based expert systems and artificial intelligence has made a significant contribution to our understanding of knowledge. In more recent times, researchers have investigated knowledge in a more applied way with the chief aim of bringing knowledge to life in machines. Artificial Intelligence has provided some degree of rigor to the study of knowledge and expert systems are able to use knowledge to solve problems and answer questions (Gordon, 1999). Artificial intelligence technologies are, therefore, an integral part of the implementation of knowledge management systems today (Becerra-Fernandez, 2000).

For this activity to succeed, researchers had to be very clear about what they mean by knowledge, and develop rigorous representations for knowledge so that the knowledge could be brought to life in a computer program. If a computer based expert system can be

said to know things or have knowledge, it is not possible to extend this to say that the computer understands. When a human expert possesses the same knowledge, we may withdraw the status of expert if that human is found not to understand the knowledge, but simply to believe it to be true. This is a significant difference between knowledge which we say may be possessed by machines and knowledge which is possessed by humans. It may be an oversimplification to say that 'Intelligent machines' 'know' and 'humans' understand, but this is a useful generalization (Gordon, 1999)

For a computer to function in an expert or artificial domain, it is given the necessary knowledge and is able to use this knowledge to solve problems or give advice. In the design of these systems neural networks and fuzzy neural networks can be incorporated for the purpose of both acquiring and disseminating knowledge. Bulsari et al (2006) illustrated this in their study focusing on the implementation of a fuzzy expert system for continuous steel casting diagnostics in an artificial neural network. They found that developing an expert system is often time consuming even after knowledge acquisition. Artificial neural networks, however, offer an advantageous alternative to coding such knowledge in an expert system shell or writing a program for it. Earlier work illustrated the feasibility of using a feed-forward neural network for knowledge storage and interfacing, and like an expert system, for predicting operational problems in continuous steel casting

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As KM has progressed through several learning stages, some common themes that have emerged from the corporate world, which would help any KM initiatives include having champions of KM initiatives present and engaged with the “unconvinced” and the late adopters. Other themes include neutralizing the nay-sayers with quick early wins and having researchers and developers build on existing core competences, as well as a firm commitment from the top of supporting agencies involved. Also, when sharing knowledge, utilize early qualitative feedback such as testimonies, success stories, and anecdotal evidence from the end-user that are positive thereby reducing the degree of separation between the knowledge source and end-user.

Before embarking on the development of a knowledge sharing system, it is critical to identify why people do not share knowledge. These factors include: cognitive limitations related to how knowledge is stored/processed, the difficulty or inability to articulate tacit knowledge, motivational limitations, competition or other disincentives to knowledge sharing, lack of acknowledgment for the contributor of knowledge, IT system not intuitive or conducive to sharing, and the lack of relevance of centralized, top-down decision making are some reasons.

The process of knowledge creation is achieved through sharing tacit knowledge. It begins with concept creation from shared mental models or ways of thinking, and moves to concept justification and building an archetype or prototype, which provides customer-oriented solutions. In this manner, the explicit knowledge can be disseminated to different organizational levels and other organizations in a process known as cross leveling of knowledge.

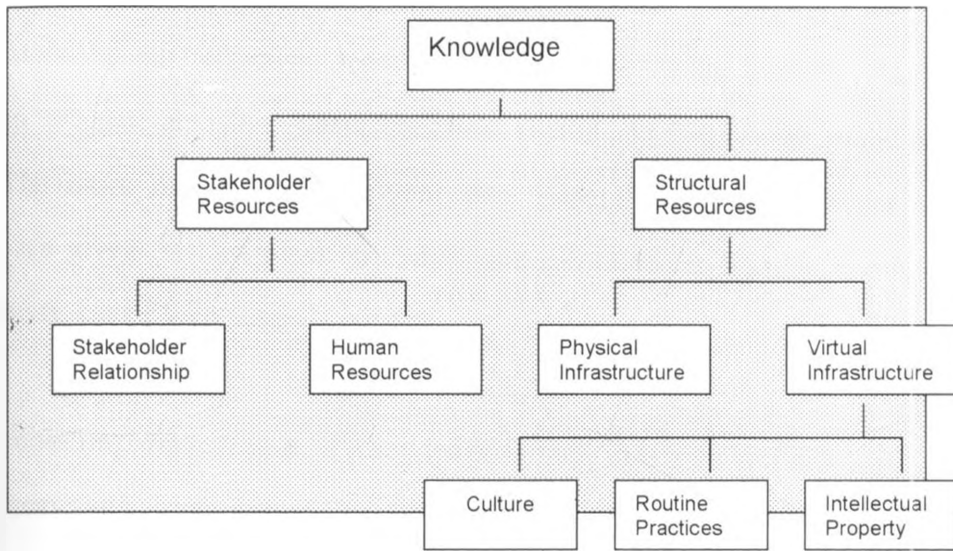
The spiral of knowledge refers to making this knowledge available to others. The role of middle management is to mediate between “what is” and “what should be” and in so doing, become the true “knowledge engineers” in knowledge creating companies because of their critical role in dispersing knowledge (Holden, 1999). According to Brooking, 1999, making knowledge explicit generates infrastructure assets. However, despite this attention to action, Spender (1996) suggests that we need to move even further ahead from the idea of knowledge as just a kind of economic asset or commodity, whether explicit or tacit, individualistic or collective towards a more dynamic knowledge based firm theory. This would be closer to Penrose’s idea of knowledge as the skilled process of leveraging resources, where that knowledge is permanently embedded in the organization (Pitelis, 2002)

Maier and Schiuma (2001) bring together these different aspects and further propose the kind of knowledge management processes that are useful for managing knowledge assets. They identify and describe the following seven key knowledge processes: knowledge generation, knowledge codification, knowledge application, knowledge storing, knowledge mapping, knowledge sharing and knowledge transfer, which are tightly interrelated and often overlap. These processes represent the managerial lever that managers can adopt within an organization to manage a company’s knowledge assets.

They further propose a classification of organizational knowledge assets based on the distinction between stakeholders’ resources and structural. This knowledge asset map identifies and classifies knowledge assets (see Figure 2-1). Moreover it provides a basic

framework for both a qualitative and quantitative assessment of organization knowledge assets.

Fig. 2-1 The Knowledge Asset Map



Source: Marr, B., and Schiuma, G. (2001). Measuring and managing intellectual capital and knowledge assets in new economy organisations, *Handbook of Performance Measurement*, London: Gcc. p 42.

(d) Techniques, Tools and Methodologies

The techniques of capturing and preserving knowledge are at the core of KM. While KM also involves extracting knowledge from written sources, the human source is the most difficult and yet the most rewarding contributor to the process. Funes and Johnson (1998) propose techniques such as talking to people purposefully and clearly identifying your questions. The focus should be on learning before, during and after using tools such as peer assists and after action reviews (Collison and Parcell, 2004).

Other important tools or processes include expert locator systems, communities of practice (formal and informal), distance learning information-sharing tools, emergent expertise, storytelling, knowledge repositories, conferences/workshops/seminars, e-learning applications, virtual communities are some of the methods one can use to disseminate knowledge

Characteristics of an effective team should include being diverse, balanced and establishing creative abrasion Team members should challenge each other and options debated The more options that are generated, generally better the eventual solution Examples are given on KM team structures one can consider such as homogeneous vs heterogeneous, spider web teams

Since the most important source of knowledge is tacit in nature and resides in individual minds, it means that when knowledge workers leave an organization the knowledge asset in the form of expertise also leaves unless it has been permanently embedded (Brooking, 1996, 1999) There is therefore an inherent urgent need to transfer as well as retain knowledge both within and outside the organization (Bender and Fish, 2000).

Polanyi (1962) revealed that knowledge has a non-reducible tacit component, which is hard to transfer as it gets more tacit Explicit knowledge can be efficiently transferred using documents, electronic media and through artifacts, whereas tacit knowledge requires more personal interaction and training techniques such mentoring or storytelling However, as the utilization of artifacts reduces, the costs of transfer increase tremendously The relationship between tacitness and difficulty of transfer has been empirically tested by

Szulanski (1996) and Simonin (1999a), and found to be significant. Another characteristic of knowledge that has received interest in the literature is complexity. A particular routine, practice, knowledge is more complex when it has a lot of components to it and these components are inter-dependent. The effect of complexity on the transfer is proposed to be similar to that of tacitness. It is more difficult, and less efficient to transfer complex knowledge. This relationship has also been empirically tested by (Simonin, 1999b, Zander and Kogut, 1995)

In an organization, knowledge flows in many directions. There is knowledge flow within the organization and also the transfer of knowledge both in and out of the organization. Within the organization, knowledge flows by knowledge sharing through means such as cooperation and intranets and flows into an organization through partnerships, alliances, and mergers. Knowledge flows out in a similar manner and also when workers leave (Buckman, 1998)

The transfer of knowledge is not confined to any one country but can be global in nature especially in multinationals where knowledge gained in one country can be used effectively in another to reduce costs which are vital for competitiveness (Bresman et al, 1999). In this regard, Bender and Fish (2000), point out that the importance of host country nationals as well as third country nationals should not be ignored in the effective transfer of knowledge and the retention of expertise

Eriksson et al (1997) confirm that there is indeed a cost associated with experiential knowledge in the internationalization of a firm. This is because in the process of internationalizing, firms have to seek experiential knowledge on individual clients and markets, as well as institutional factors such as local laws, local governments and local cultures. These costs are related to collecting, encoding, transferring, and decoding knowledge as well as changing the resource structures, processes and routines in the organization.

A key foundation of knowledge infrastructure is devising, implementing and integrating an effective strategy. The real point of knowledge management strategy is to create an environment for leveraging the organization's intellectual property into a collaborative platform, making this knowledge actionable. Knowledge management is about action, not just about collection and consolidation. It is about leveraging what the organization knows to achieve competitive advantage (Penrose, 1959, Pitelis and Wahl, 1998, Pitelis 2002).

2.1.4 Goals and Objectives of Knowledge Management

Knowledge Management involves a strategic commitment to improving the organization's effectiveness, as well as to improving its opportunity enhancement. The goal of KM as a process is to improve the organization's ability to execute its core processes more efficiently. Davenport et al. (1998) describe four broad objectives of KM systems in

practice as to create a knowledge repository, improve knowledge assets, enhance the knowledge environment and to manage knowledge as an asset

The key to KM is capturing intellectual assets for the tangible benefits for the organization. As such, imperatives of KM are to transform knowledge to add value to the processes and operations of the business, leverage knowledge strategic to business to accelerate growth and innovation, and use knowledge to provide a CA for the business

The aim of KM is to continuously improve an organization's performance through the improvement and sharing of organizational knowledge throughout the organization (i.e., the aim is to ensure the organization has the right knowledge at the right time and place). KM is the set of proactive tasks to support an organization in creating, assimilating, disseminating, and applying its knowledge. It is a continuous process to understand the organization's knowledge needs, the location of the knowledge, and how to improve the knowledge.

2.1.5 Components of Knowledge Management

Knowledge comes in different forms and we need to examine the characteristics that enable it to function as a strategic resource and the implications for its management. Taxonomy of knowledge for classifying intangible assets that also identifies strategic implications is therefore very imperative (Winter, 1987; Hall and Andriani, 2002, Liebeskind, 1996). For example, there is knowledge of how to prepare the service or product, knowledge of what the market requires, and knowledge of how to deliver the

service and the product (Gladstone, 2000). However, this knowledge might not be readily available or accessible because it is usually in the heads of employees and may not be stored in a common place for access to all employees. Because of these different forms of knowledge, there are many dimensions around which knowledge can be characterized and include storage media, accessibility, typology, and hierarchy (Liebowitz, 1999)

The first knowledge characteristic which is storage media is based on where it resides, or storage media. Knowledge can reside in several media which including the human mind, organization, documents, and the computer. The human mind storage media is the most difficult to deal with as opposed to organizational knowledge which is often diffused and distributed, document knowledge which can range from free text to well structured charts and table, computer knowledge which is formalized, sharable and often well structured and well-organized (Liebowitz, 1999). Brooking (1999:9) argues that some knowledge such as "noting down how to ride a bicycle in a manner appropriate for someone who has not seen one before" may not even be possible to record.

The other characteristic of knowledge consists of two kinds of human knowledge based on the dimension of knowledge accessibility. Nonaka and Takeuchi (1995) divided accessibility into two forms of knowledge, namely explicit (formal, systematic, and easy to communicate) and tacit (not easily expressible and highly personal). Accessibility can be mapped to storage media as knowledge gains in value as it becomes more accessible and formal. Liebowitz (1999) further proposes another less discussed form of knowledge that he calls implicit knowledge, which is based on the human mind and is accessible

through querying and discussion though informal knowledge must first be located then communicated. We shall however focus on the more commonly discussed, explicit and tacit, forms of knowledge.

Explicit Knowledge is that knowledge which can be articulated in formal language including grammatical statements, mathematical expressions, specifications, manuals, and so forth. This kind of knowledge can be transmitted across individuals formally and easily and has been the dominant mode of knowledge in the Western philosophical tradition. Reporting documents, work sheets, and organizational documents fall in this category (Nimmagadda and Prasad, 2003). A more important kind of knowledge however is tacit knowledge, which is hard to articulate with formal language and convert into information. It is personal knowledge embedded in individual experience (for example, the expertise gained by an individual on a particular project) and involves intangible factors such as personal belief, perspective, and the value system. Tacit knowledge has been overlooked as a critical component of collective human behaviour. At the same time, however, tacit knowledge is extremely useful to an organization if it can be transferred to others so that they can use it and can be the most important source of a firm's competitiveness.

The only irreplaceable capital an organization possesses is the knowledge and ability of its people and the productivity of that capital is dependent on how effectively people share their competence with those who can use it (Abel and Oxbrow, 2001). Even more important, the interaction between these two forms of knowledge is the key dynamic of knowledge creation in the business organization. 'Organizational knowledge creation' is a spiral process in which the above interaction takes place repeatedly. Knowledge creation is

central to crafting and sustaining competitive advantage. Consequently, a 'knowledge-creating company', with the singular purpose of continuous innovation results in excellence (Nimmagada and Prasad, 2003, Nonaka and Takeuchi, 1995)

Nonaka and Takeuchi (1995) developed a matrix for knowledge conversion based on accessibility that has been summarized in Table 2-3.

Table 2-3 – Matrix for Knowledge Conversion

Knowledge Conversion	To: Tacit Knowledge	To: Explicit Knowledge
From: Tacit knowledge	Socialization	Externalization
From: Explicit Knowledge	Internalization	Combination

Source: Nonaka, I. and Takeuchi, H. (1995). *The Knowledge-Creating Company, How Japanese Companies Create the Dynamics of Innovation*, New York, NY: Oxford University Press, 19

Collins (1997) also relates knowledge types to their accessibility with four classifications, namely: Symbol-type knowledge (explicit), embodied knowledge (implicit) knowledge, embrained knowledge (implicit/tacit) and encultured knowledge (tacit). In addition to these typologies, Brooking (1996), proposes four conceptual levels of knowledge, namely goal-setting or idealistic knowledge, systematic knowledge, pragmatic knowledge, and automatic knowledge.

A further dimension considers the premise that knowledge can be organized into a hierarchy. On the one hand are several authors, including Tobin (1996), Van Der Spek and Spijkervet (1997), and Beckman (1997) who draw distinctions between data, information, and knowledge. Data is defined as facts, images, or sounds. Information is viewed as formatted, filtered and summarized data while knowledge refers to instincts, ideas, rules and procedures and guide actions and decisions.

On the other hand is Beckman's (1997) conceptualization that further proposes a five-level knowledge hierarchy in which knowledge can often be transformed from a lower level to a more valuable higher level. The hierarchy begins with data (text, fact, code, image, sound), followed by information (organized, structured, interpreted, summarize data). Next is knowledge (case, rule, process, model, and then expertise (fast and accurate advice, explanation and justification of result reasoning, and finally capability (organizational expertise knowledge repository, integrated performance support system, core competence). These two views on drawing distinctions in the knowledge hierarchy, while differing in structure, are both significant in further clarifying the knowledge transformation process.

2.1.6 Strategy for a Knowledge Management Methodology

Huang et al. (1999) identified the establishment of a knowledge management methodology as vital for successful knowledge management implementations. This can be based on the

intellectual capital management (ICM) methodology adopted by International Business Machines (IBM) global services.

The key components of ICM are a vision that values sharing and reusing knowledge, processes for efficiently gathering, evaluating, structuring and distributing intellectual capital, a competency community of practice consisting of knowledge workers in a core competency area, technology that enable company wide knowledge sharing and incentives to encourage intellectual contribution and reuse

Generally implementing a knowledge management methodology involves the following seven steps: identifying the problem, preparing for change, creating the team, mapping out the knowledge, creating a feedback mechanism, defining the building blocks and integrating existing information systems. Once the knowledge strategy is in place, the strategy for the organization is set and it is then time to develop the system. Zack (1999) suggested that knowledge assets should be analyzed in relation to their support of business strategy by performing a SWOT analysis. This makes intuitive sense in that knowledge management has strategic value.

2.3 Organizational Competence

In the literature the frequent use of the concept of core competences has not always run parallel to the further development of a clear definition. However, gradually the concept is becoming clearer and also more open to operational constructs for empirical research. A core competency is something that a firm can do well and that meets the three conditions of providing customer benefits, making it difficult for competitors to imitate and can be leveraged widely to many products and markets (Hamel and Prahalad, 1990)

A core competency can take various forms, including technical and subject matter know how, a reliable process, and/or close relationships with customers and suppliers (Mascarenhas et al 1998). It may also include product development or culture such as employee dedication. Modern business theories suggest that most activities that are not part of a company's core competency should be outsourced. If organizational competency yields a long term advantage to the company, it is said to be a sustainable competitive advantage.

2.3.1 Effects of Organizational Competences on Competitive Advantage

The importance of core competences, through their positive influence on the performance of companies, is frequently related to technological competences, technical skills and knowledge developed within companies (Nelson, 1991, Hamel and Prahalad, 1994, Markides and Williamson, 1994). Robins and Wiersema (1995) and Teece et al (1997) point at the importance of coherence in corporate capabilities, which strengthens the

competitive advantages of companies Robins and Wiersema (1995) found that multi-business companies with commonalities based on shared capabilities and know-how are associated with higher economic performance

Teece et al (1997) stress the relevance of corporate coherence based on learning economies, reinforced by path dependencies, for understanding successful performance Henderson and Cockburn (1994) mention 'idiosyncratic research capabilities' as a major source of strategic competence that has a positive effect on company performance in high-tech industries A common element that we find in all these contributions is the importance of a proven track record in terms of well-developed skills in related technologies leading to a certain degree of technological specialization

One of the more frequently used constructs that can help us trace the level of technological specialization of companies is found in patent statistics Patents are seen as an acceptable indicator for research output and proven technological competence (Cantwell and Hodson, 1991, Patel and Pavitt, 1991) Like so many other indicators, this one is also subject to a debate regarding its usefulness (Cohen et al., 1987, Griliches, 1990, Archibugi, 1992) but it appears to be one of the more appropriate indicators that enable us to compare the technological performance of companies (Pavitt, 1988, Acs and Audretsch, 1989)

2.3.2 Innovative Capabilities

Studies on the effect of innovation on economic performance mention that technological opportunity frequently acts as an intermediary factor explaining sectoral performance

differentials (Cohen et al, 1987; Dosi, 1984, Klevorick, et al, 1995) The relevance of technological skills for understanding core competence returns, and the possible effect of innovative input factors on performance, is particularly important in the high-tech sector In this sector, the relationship between innovation, measured in terms of R&D intensity, and economic performance is rather straightforward and positive Accordingly, a firm's specific innovative capabilities are expressed in terms of core competences that are associated with current technological trends in the industry

2.3.3 Diversification and Specialization

The degree of diversification, in particular unrelated diversification, or its reverse the degree of specialization, is expected to be relevant for understanding the role that organizational competences play in creating performance differentials Research by Rumelt (1984) and Ramanujam and Varadarajan (1989) suggest that it is difficult to establish a positive relationship between the degree of diversification of companies and their profitability

The recent contribution by Hoskisson et al (1999) indicates that the degree of companies' diversification is related negatively to their economic performance Other recent research has established that the degree of relatedness of lines of business, which comes closer to specialization in the light of core capabilities, is positively related to the economic performance of diversified firms (Wernerfelt and Montgomery, 1986, Varadarajan and Ramanujam, 1987; Ramanujam and Varadarajan, 1989)

2.4 Competitiveness

The fundamental question in the field of strategic management is how firms achieve and sustain competitive advantage. Since Teece et al (1997), produced their seminal article the focus has been on exploring the capabilities through which management renews resources and competencies.

The main thrust in the discussion on dynamic capabilities has been on how firms integrate, reconfigure, renew and transfer their resources. This internal emphasis is logical because the capability perspective originates from the resource-based view of the firm (RBV), which considers strategic capabilities as a pool of the internal resources that are important for the creation of competitive advantage (Barney, 1991, Penrose, 1959, Rumelt, 1984, Wernerfelt 1984). Although the relevance of exploiting external resources (Teece et al , 1997), the importance of alliance and acquisition routines that bring new resources into the firm from external sources (Eisenhardt and Martin, 2000), and the ability to integrate efforts of different actors (Grant, 1996) has been mentioned, the challenges involved in operating in a complex network remain fairly unarticulated.

2.4.1 The Knowledge-based View

Contributors to the knowledge-based view such as Winter (1987), Conner (1991), Kogut and Zander (1993), Grant and Baden-Fuller (1995), Grant (1996), Liebeskind (1996), Spender and Grant (1996), Teece et al (1997) and Leonard-Barton (1998), elaborated on the theme of knowledge as a strategic resource and capability. One sure source of

competitive advantage in an economy where the only certainty is uncertainty is knowledge creation and innovation. The knowledge-based view (KBV) which conceptualizes firms as heterogeneous, knowledge bearing entities (Hoskisson et al., 1999) is indeed an extension of the RBV in advancing the critical role of internal resources and focuses on differentiated knowledge inventories as a basis for competitive advantages. As a result the knowledge based view overlaps broadly with the resource based (Barney, 1991, Conner, 1991, Wernerfelt, 1984) and dynamic capabilities (Teece, et al., 1997) views. Foss (1996) clarified the knowledge-based view by noting that unique knowledge is a necessary, but not sufficient condition for existence of firms.

2.5 Linkage Between the Study Variables

Organizations need to explicitly manage their intellectual capital to gain and sustain a CA (Brooking, 1996). According to Wiig (1997: 399) the company's viability depends on "the competitive quality of its knowledge-based intellectual capital and assets and the successful applications of these assets in its operational activities to realize their value to fulfill the company's objectives."

According to Nonaka and Takeuchi (1995: 16), "Knowledge that is accumulated from the outside is shared widely within the organization, stored as part of the company's knowledge base, and utilized by those engaged in developing new technologies and products. A conversion of some sort takes place and it is this conversion process-from

outside to inside and back outside again in the form of new products, services, or systems – that is the key to understanding why Japanese companies have become successful ”

It is possible to view the strategy-knowledge relationship in terms of how knowledge and its effective management can provide competitive advantage. Indeed, Hamel and Prahalad (1994), explicitly argues for the use of knowledge for competitive advantage. Tiwana (2001) actually uses knowledge for competitive advantage as part of the definition of KM thereby implying that KM does not exist unless competitive advantage is pursued or even attained. Liebowitz and Wilcox (1997) however argue that CA should be decoupled from KM for purposes of definition. Rather, we should go through empirical studies to ascertain the extent of the relationship between KM and CA.

2.5 Empirical Studies on the Study Variables

Dutrent (2000) conducted a case study on learning and knowledge management focusing on technological capability accumulation in an industrial firm based in Mexico, a developing country. The study found that the firm experienced difficulties in socializing the learning process at the organizational level, coordinating different learning strategies pursued by different organizational units and in integrating knowledge across organizational boundaries. The central argument in this study is that there is no simple linear progress from the early stages of accumulation of innovative capability to the management of knowledge as a strategic asset.

A study conducted by Echeverri-Carroll (1999) showed that the Japanese firm and the "traditional" US firm have different inter-firm knowledge systems. In particular, Japanese

firms tend to exchange information more frequently with their main suppliers, customers and other kinds of organizations (i.e. non-profit organizations). As a result, they tend to develop new products and processes faster than the "traditional" US firm. The study demonstrated that non-Japanese high-technology firms that adopt Japanese-style networks tend also to develop new products and processes faster than their competitors.

Davenport and Probst (2000) conducted a case study on how a major multinational, Siemens AG, transformed itself into a knowledge-based company. He describes how through leveraging knowledge on a global basis, Siemens succeeded in transforming itself from essentially a product seller into a global solution provider. He further argues that though KM itself does not necessarily produce superior value, when knowledge is applied to marketable products and services, the true value of knowledge management emerges.

Low (2000) refers to a series of studies conducted on the role of intangibles in creating value in the modern corporation. The study developed a rigorous, comprehensive model - the value creation index - of value creation for progressive companies, one that enables users to measure the impact of key intangible asset categories on a company's market value. The devised set of standardized measures, weighted according to their relative impact, give managers the tools to better drive and monitor their company's future performance. It is envisioned that over time, the value creation index will evolve, continuing to identify value creation drivers, while remaining sufficiently flexible so it can adapt to the constantly changing nature of companies in the connected economy.

Klaila and Hall (2000) in their study of leveraging intangible assets for a successful strategy pointed out that millions of dollars in revenue sit, undiscovered, inside organizations. They are referring to the untapped potential of "forgotten" intangible assets that may already exist, including patents, trademarks, licensing arrangements, employee know-how, infringement protection plans and much more. These assets could be managed to their fullest potential by creating what they refer to as an Intellectual Asset Management Portfolio (I-AMP). Using three case studies (an energy company, a high-tech manufacturer and a telecom company), it was shown that remarkable increases in revenue could be generated. In one case, US \$1 billion was shifted from the expenditure to the revenue side of the ledger.

McEvily and Chakravarthy (2002) sought to verify the resource-based claims that intrinsic characteristics prevent imitation and thereby prolong exceptional performance. He contends that the complexity and tacitness of technological knowledge are useful for a firm's major product improvements from imitation, but not for protecting its minor improvements, though the design specificity of technological knowledge had the effect of delaying their imitation.

Nimmagadda and Prasad's (2003), contend that how well a job a company did in selecting targets, developing assays, optimizing new drug candidates, and getting them to the clinics before competitors was the source of competitive advantage. To achieve this, a knowledge management-based collaborative network or practice and a discovery development interface, was needed. One empirical study (Bierly and Chakrabarti, 1996) found that firms

with more aggressive and innovative knowledge-creation approaches were found to be more profitable over time than those with more prosaic knowledge strategies

Afuah (2002) did a study on the deployment firm capabilities for competitive advantage. With empirical evidence from cholesterol drugs, the study presented a model for mapping and estimating firm capabilities into customer value and competitive advantage in different markets from technological capabilities. The model rests on the fact that customers' valuation of a product is a function of the characteristics of the product. This study therefore established a link between capabilities and customer value, which is considered to be a key strategic advantage.

2.6 Evaluation and Future Directions

Although much work remains to be done to directly and systematically examine the link between strategy, knowledge, and performance in business organizations, many things have been written that do address the issue and hence form a useful place to begin the discussion. This review addresses several themes and perspectives that form the intellectual foundation for developing the concept of competitive advantage through KM. If we update the original model of strategy to reflect today's knowledge-intensive environment, then a knowledge strategy becomes the way in which the firm balances its knowledge resources and knowledge processing capabilities with the knowledge required to create its products for its markets in a manner superior to its competitors.

Identifying which knowledge is a unique and valuable resource, which knowledge

processes represent unique and valuable capabilities, and how those resources and capabilities support the firm's product and market positions are the essential elements of a knowledge strategy. This confirms Zack's (1999) view that the firm, given what it knows, must identify the best product and market opportunities for exploiting that knowledge. The creation of unique, strategic knowledge takes time, forcing the firm to balance short- and long-term strategic resource decisions. The firm therefore must determine whether its efforts are best focused on knowledge creation, exploitation, or both, and then balance its knowledge processing resources and efforts accordingly.

Knowledge and learning go hand in hand and defending and growing a given knowledge position is most effectively accomplished by continual organizational learning. The ability of an organization to learn, accumulate knowledge from its experiences, and reapply that knowledge is itself a skill or competence that, beyond the core competencies directly related to delivering its product or service, may provide strategic advantage.

A potentially fruitful new frontier for the application of KM principles, concepts, and useful corporate experiences is the area of social welfare, especially in the developing world. For instance, over the last few decades, considerable resources have been expended to develop and enhance reproductive health programs to improve access to and quality of reproductive health services so as to increase use of modern contraception, and to reduce maternal mortality, infant mortality, and the incidence of sexually transmitted infections and HIV/AIDS, a key Millennium Development Goal.

The inherent need to share knowledge and collaborate on key global health issues amongst health care professionals, researchers and end users provides a robust opportunity for helping developing countries in the area of reproductive health. After all, a key measure of competitiveness is not just trade but a country's standard of living (Scott, 1987). Knowledge management provides an innovative way to minimize the degrees of separation between the end-user and the knowledge source, thereby, accelerating human and process development by accessing best practices, valuable tools and lessons learned from other countries.

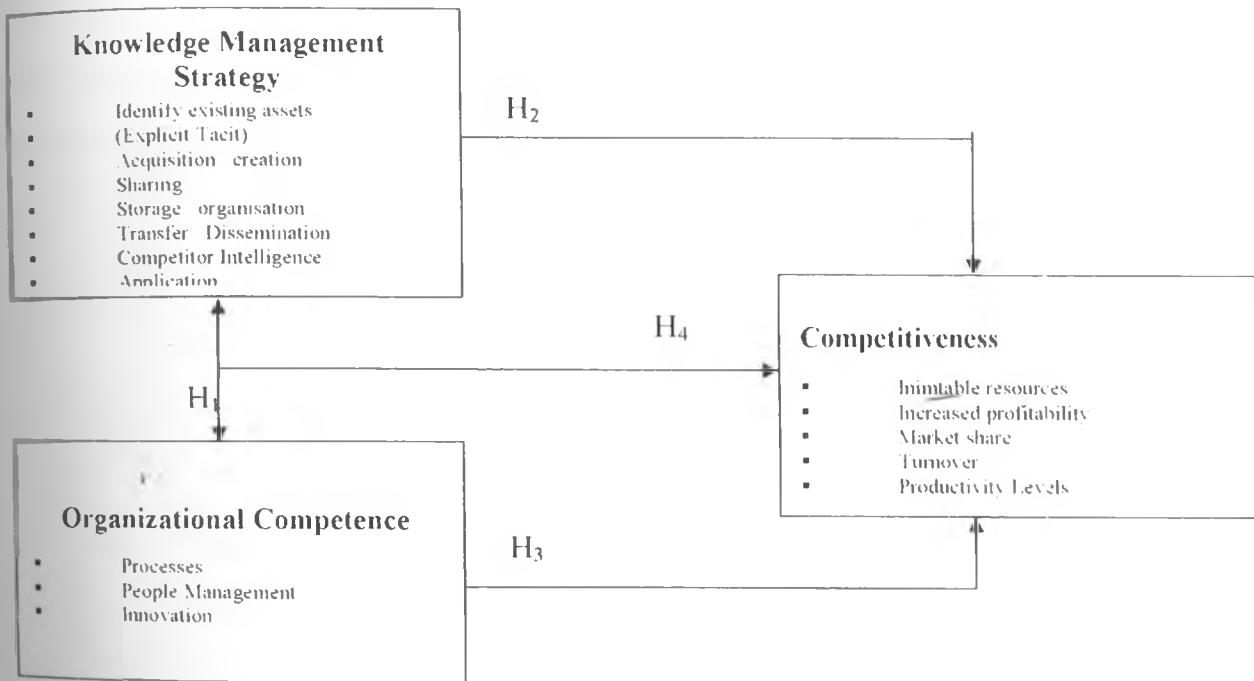
All this can be done without countries having to re-invent everything themselves. It also allows countries to identify their own best practices and lessons learned to share with others. Some strategies include capturing and recycling structured knowledge, capturing and sharing lessons learned from practice (collaboration), identifying sources and networks of expertise, structuring and mapping knowledge needed to enhance performance, assembling and managing internal knowledge and synthesizing and sharing knowledge for external sources. The challenges are formidable because of limited access to computers and frustrating connectivity, but the opportunities on the horizon are enormous.

2.7 Conceptual Framework and Hypotheses

This study seeks to find out how knowledge management and organizational competencies influence competitiveness in Kenya's book publishing industry. The research is therefore a continuation of the conversation linking these three variables and extended to a new industry setting in a developing country. The conceptualization shown below is thus built

around satisfying the elements of a dynamic model of the relationship between knowledge, competence and competitive advantage.

Fig 2-2: Conceptual Framework Linking Knowledge Management Strategy, Organizational Competence, and Competitiveness



Source: Researcher's conceptualization

This model is focused on identifying key knowledge management strategies and organizational competencies and understanding the processes through which these elements can be transformed into competitive advantages. The framework builds on previous knowledge-competency-competitiveness studies such as Li and Catalantone (1998) and Sanchez (2001), while at the same time providing a new theoretical impetus by

introducing competency as co-independent rather than dependent variable to knowledge management strategy

The knowledge-competence-competitiveness conceptual model shown in Figure 2-1, represents the relationship between knowledge management strategy, organizational competencies and competitiveness. It further depicts the interaction between the knowledge and competency co-independent variables, which are considered key resources for achieving competitive advantage. Within the model, key variable indicators to be operationalized are identified for testing the following hypotheses:

- H₁ - There is a relationship between knowledge management strategy and organizational competence
- H₂ - There is a relationship between knowledge management strategy and competitiveness
- H₃ - There is a relationship between organizational competence and competitiveness
- H₄ - Competitive advantage is a function of the interaction between knowledge management strategy and organizational competence

2.8 Chapter Summary

It has become increasingly clear that the future of competitive advantage lies with knowledge today, just as it has in the past (Christensen, 2001). From the preceding

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It has become increasingly clear that the future of competitive advantage lies with knowledge today, just as it has in the past (Christensen, 2001). From the preceding

discussion, it appears that there is an increased interest among scholars on the relationship between knowledge management strategy, competency and competitive advantage. This is because competitive advantage based on knowledge and competencies is less visible to competitors and much more difficult to imitate thereby potentially providing a base for a sustainable and robust advantage over competitors.

However, the link between knowledge management strategy, competency and competitive advantage has yet to be firmly established especially because this research is methodologically challenging, since it has the measurement of knowledge or intellectual capital within the firm as a prerequisite. In addition, further research needs to be done in empirically testing existing findings in different contexts to avoid potential effects of a singular setting (Davenport and Probst, 2000). There are therefore structural, methodological and contextual gaps in previous research seeking to establish the exact nature of the relationship between knowledge management strategy and competency and its effect on competitiveness.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The main purpose of this chapter is to describe the procedures and methods employed in the study. These included research design, census, instrumentation, data collection and data analysis. These procedures were employed in order to address the primary purpose of the study, which was to determine the relationship between knowledge management strategy, organizational competency, and competitiveness in Kenya's commercial book publishing industry. A survey questionnaire was used to obtain measures of knowledge management strategy, organizational competency, and competitiveness among firms by focusing on responses from top managers in the period of investigation between September and October 2007, the year of investigation.

To determine whether there was a relationship between knowledge management strategy, organizational competency, and competitiveness, a combined set of quantitative and qualitative design elements and procedures was utilized. This triangulated methodology utilized survey and correlational multiple-design elements that sought a deeper understanding of the relationship between variables (Scandura and Williams, 2000).

3.2 Epistemology

There are two distinct positions regarding the approach to scientific inquiry. There are the positivists who argue that the only true knowledge is scientific in character, describing interrelationships between real and observable phenomena. According to Riley et al., (2000), the methods employed by such research is objective, impartial as well as value-free (i.e. from human values and beliefs). The good scientist should, therefore, avoid giving explanations on why things happen, particularly if these involve reference to unobserved entities. For the positivist, minds are unscientific, and must therefore not be the focus of any meaningful scientific study. This implies that the focus must be on that which is observable. Accordingly, operational definitions, objectivity, hypothesis testing, causality and replicability characterize this approach.

On the other hand, there are the phenomenologists whose focus is on the immediate experience. Indeed phenomenology is an inextricable part of the ordinary experience. The phenomenological researcher is open and trusts his experience. This has the advantage of providing an account of uniquely human characteristics and gives more prominence to cognition. To achieve an effective understanding of human action, the social scientist must therefore seek to identify, understand and interpret shared meanings. This is because human actions are directed and rarely value-free in content or motivation (Easterby-Smith et al., 1991). The most commonly used phenomenological method is the case study and this approach is characterized by open and unstructured interviews and introspective reports.

An extreme position however is not always ideal and phenomenological and positivist approaches can sometimes be complementary. There are several empirical methods for transforming qualitative data into quantitative data whereby objective and controlled procedures of content analysis, using trained judges, can reliably place verbal material into predetermined categories. According to Nachmias and Nachmias (1996), a researcher can use two or more methods of data collection to test hypotheses and measure variables using a method known as triangulation. Triangulation makes it possible to combine quantitative and qualitative research methods and also has the added advantage of overcoming the deficiencies that can result from employing one investigator or one method.

3.3 Research Design

This study is a cross-sectional, correlational study that utilized multiple design elements and applied a triangulated research approach whereby access to the widest possible range of data from the organizations under study was sought. Triangulation involves collecting and comparing data from two or more data sources and in this study a questionnaire was used together with a follow-up interview where possible, as the primary data source. This approach had the effect of allowing patterns of convergence to develop in order to corroborate the overall interpretation. It also improved both internal and external validity and the realism of context (Scandura and Williams, 2000), thereby reducing the risk of false conclusions. The study was therefore a cross-sectional study of commercial book publishing managers of firms operating in Kenya that was carried out at a specific period.

3.4 Target Population and Survey

The target population for this study was defined as all commercial publishing firms in Kenya engaged in the publication of educational and general books. The companies forming the population consisted of active publishing firms listed in the Kenya Business Directory, Yellow Pages and The Orange Book from Kenya Institute of Education (KIE). The total population was 118 firms and was spread across the country but predominantly in Nairobi.

A census survey was employed because the total population was considered to be relatively low, and could be further reduced due to the possibility that some of the firms may no longer be in business. A census is the process of obtaining information about every member of a population and can be contrasted with sampling in which information is only obtained from a subset of a population. As such it is an acknowledged method used for accumulating statistical data. The emphasis will be both on the number of companies covered as well as the substantive aspects of the organizations. This implies that the quality and depth of the data will be just as important as the number of companies studied. There will therefore be an emphasis on both depth and breadth.

3.5 The Data Collection Procedures

The nature of this study predetermined that both quantitative and qualitative data were collected. This is because it was intended that a more in-depth study be conducted that required both forms of data, where practicable, in order to gain a deeper insight as well as

enabling a better interpretation of the quantitative findings. The questionnaire consisted primarily of close-ended questions and a five-point Likert scale (Appendix B) that was adopted to provide a range of responses on each item of the questionnaire. The follow-up interview encouraged the respondent to talk freely about their organization while the researcher guided the interview with open-ended questions.

The interview sought to capture aspects that may have been overlooked in the questionnaire and that may lead to a deeper understanding of the relationship between strategy, competency and competitiveness. The researcher took notes during the interview and the data were coded using a coding scheme based on the variables and indicators obtained from the conceptual framework.

The researcher sought to supplement the questionnaire and interview guide with in-house company documents and other secondary public data where possible. This is because the emphasis was on explanation rather than simple description of events. The reason for this approach was that an explanatory approach leans more toward determining the nature of the existing relationships, which is crucial when effecting changes in strategic management process and choice of strategy (Das, 2000).

The primary research data was collected from the managing directors or one other top line manager from either the finance, editorial, production, or marketing departments because these are the key knowledge engineers in operationalizing visionary ideals (Holden, 1999).

3.6 Operational Definition of Variables

The main study variables were operationalized using survey questions aimed at identifying the presence of key variable indicators. Also, as shown in Table 3-1, the survey questions were further categorized into separate sections each focusing on a specific variable

Table 3-1: Variables and Indicators

	VARIABLE	INDICATORS
1	Knowledge Management Strategy <i>Independent Variable X_1</i>	<ul style="list-style-type: none"> ▪ Existing knowledge assets/strategy ▪ Knowledge Acquisition/creation ▪ Evidence of knowledge sharing ▪ Method of storage/organization ▪ Knowledge transfer/dissemination ▪ Degree of competitor intelligence ▪ Degree of knowledge Application
2	Organizational Competence <i>Independent Variable X_2</i>	<ul style="list-style-type: none"> ▪ Processes ▪ People Management ▪ Innovation
3	Competitiveness <i>Dependent Variable = C</i>	<ul style="list-style-type: none"> ▪ Unique Products ▪ Quality ▪ Market share ▪ Assets ▪ Sales ▪ Profits ▪ ROI ▪ Comparison with other firms ▪ Replicability of strategy

3.7 Reliability and Validity of the Instrument

Reliability is the consistency of a set of measurement items while validity indicates that the instrument is testing what it should. Reliability does not, however, imply validity because while a scale may be measuring something consistently, it may not necessarily be what it is supposed to be measuring.

(a) Reliability

The researcher used the most common internal consistency measure known as Cronbach's alpha (α). It indicates the extent to which a set of test items can be treated as measuring a single latent variable. The standardized Cronbach's alpha is defined as

$$\alpha = \frac{N \cdot \bar{r}}{1 + (N - 1) \cdot \bar{r}}$$

Where N is the number of components (items) and \bar{r} is the average of all Pearson correlation coefficients between the components. The recommended value of 0.7 was used as a cut-off as reliabilities much 0.8 are not necessary for instruments used for basic research (Nunnally, 1978).

(b) Validity

Face validity, which is commonly used in research of this nature, was applied to determine if the instrument was measuring what it is supposed to measure. To establish face validity, a panel of experts was asked to give their opinion as to whether or not the instrument met

this criterion. Additionally, a series of factor analysis was conducted to verify the structure of the scales.

3.8 Normality of the Data

Multicollinearity or linear inter-correlation among variables means there is a high correlation among the independent variables, which leads to testing the same thing. This was identified if there were wide confidence intervals for some or all of the beta coefficients or a near-zero determinant for the correlation matrix.

Autocorrelation refers to how much of what has happened will influence what will happen and was detected using the Durbin-Watson test. Heteroscedasticity means previous error terms are influencing other error terms and is a violation of the statistical assumption that the error terms have a constant variance. It was detected graphically by using the partial correlation scatter plots.

3.9 The Analytical Model

The study utilized correlation and regression analysis to determine the relationship between competitiveness, organizational competence (OC) and knowledge management strategy (KMS). For hypotheses H₁-H₃, correlation analysis was used to test for significance of the relationships, and the derived Pearson's product moment coefficient was employed to indicate the strength and significance of the relationships between the variables. A high r value denotes a very strong and significant correlation, thereby

implying a very strong relationship. The relationship in hypothesis H₄ was determined using the following regression model:

$$C = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where C = competitive Advantage

α = constant (intercept)

β = slope (gradient) showing rate dependent variable is changing for each unit change of the independent variable

X_1 = knowledge management strategy

X_2 = organizational competence

ε = Error/disturbance

The coefficient of determination (R^2 value) indicates the degree of variability in the dependent variable, in this case competitive advantage that is explained by knowledge management strategy and organizational competence. In the model, the beta coefficient (β value) revealed the degree of change in competitive advantage resulting from each unit change in knowledge management strategy and organizational competency. The specific tests of the hypotheses are presented in Table 3-2.

Table 3-2: Objectives and Hypotheses

	Objective	Hypothesis	Type of Analysis	Interpretation of Results
a	To ascertain the nature and extent of the relationship between KMS and OC	H ₁ - There is a relationship between KM Strategy and OC	Pearson's product moment correlation coefficient (r) Regression	R ² Range = +1 to -1 <i>Degree of correlation:</i> Positive or Negative
b	To determine the relationship between KMS and CA	H ₂ - KMS is related to CA	PPMC	0.01 almost no correlation 0.02 to 0.09 very weak 0.10 to 0.29 weak 0.30 to 0.49 moderately weak
c	To determine the relationship between OC and CA	H ₃ - OC is related to CA	PPMC	0.50 to 0.69 moderately strong 0.70 to 0.89 strong 0.90 to 0.98 very strong 0.99 almost perfect
d	To establish the influence of the interaction between KMS and OC on the firm's CA	H ₄ - CA is a function of the interactive relationship between KMS and OC	Regression Analysis Analysis of Variance (ANOVA)	R ² Beta coefficient Sum of Squares F Statistic

3.9 Chapter Summary

This chapter presented a discussion of the research design, instrumentation, data collection and data analyses procedures used to meet the research objectives. Furthermore, the process of selecting the population, census procedure, and operationalization of the research variables was presented.

The methods of testing for reliability and validity of the research instrument were also expounded on as well as the various tests for normality. Also covered was the analytical model and statistical procedures used to test the hypotheses.

CHAPTER 4

DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter contains an analysis of the data obtained from the questionnaires administered to book publishing firms in Kenya. The questionnaires were mailed out to 118 firms and 33 responded, which is a response rate of 28 percent. The data collected have been analyzed and are presented under summary of demographics, mean scores and standard deviations, descriptive statistics for the factor scales, intercorrelations and regression analyses of sub-scales and survey items, analysis of variance (ANOVA) for study variables, internal consistency (Cronbach's Alpha) reliability and validity analysis for factor scales, and tests of hypotheses.

4.2 Personal Characteristics and Organizational Attributes

Tables 4-1 through 4-9 present frequency distributions of the managers' responses in survey items pertaining to personal characteristics and organizational demographics.

4.2.1 Respondent's Characteristics

This section covers the frequencies of the respondents' personal details. These include position (title), gender, functions, number of years worked, and level of education.

4.2.1.1 Managerial Designation of the Respondents

The data shown on Table 4-1 is an analysis of the job title held by the respondents. They were categorized as Managing Directors, General Managers or Departmental Heads. The distribution of the respondents shows that just over half (51.5 percent) were Managing Directors, 27.3 percent held the General Manager position, while 21.2 percent were Departmental Heads. Thus, a majority of respondents were at the top management level.

Table 4-1: Managerial Designation of the Respondents

Position	Frequency	Percent
Managing Director	17	51.5
General Manager	9	27.3
Department Head	7	21.2
Total	33	100.0

4.2.1.2 Gender

Table 4-2 below shows that the majority of the respondents were male, 72.7 percent. The percentage of female respondents was 27.3 percent.

Table 4-2: Gender of the Respondents

Gender	Frequency	Percent
1 Male	24	72.7
2 Female	9	27.3

4.2.1.3: Managerial Functions

Managerial functions were categorized as policy and strategy, management and supervisory. Most of the respondents functioned at the policy and strategic level (60.6 percent). Respondents with managerial functions at the day-to-day management level were 36.4 percent while those who functioned at the supervisory level were 3 percent. This essentially shows that most of the respondents (97 percent) operated at the top-management level and were involved in deciding setting and implementing the goals and major policies of their organizations.

Table 4-3 Managerial Function of Respondents

Function	Frequency	Percent
Policy and Strategy	20	60.6
Management	12	36.4
Supervisory	1	3.0
Total	33	100.0

4.2.1.4 Number of Years in Present Organization

The number of years the respondents had worked in their organization was sought to establish their familiarity with its operations. Table 4-4 illustrating the distribution of the respondents according to the number of years worked in the current organization shows that 18.2 percent had worked with their firms for three or less years, 42.4 percent for between 4 and 9 years, 24.2 percent for between 10 and 15 years, 6.1 percent for between

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16 and 19 years, and 9.1 percent for 20 years or more. A majority of the respondents, 81.8 percent, therefore had 4 or more years in their organizations.

Table 4-4: Number of Years in Present Organization

Years Worked	Frequency	Percent
1-3	6	18.2
4-9	14	42.4
10-15	8	24.2
16-19	2	6.1
Over 20	3	9.1
Total	33	100

4.2.1.5 Highest Level of Education Attained

The highest level of education attained by the respondents is shown in Table 4-5. More than half of the respondents, 54.5 percent, had a Masters degree while those with at least a bachelors degree were 12.1 percent. Respondents who had attained Diploma level were 15.2 percent while those with advanced certification were 18.2 percent. This indicates a very high educational level in the publishing industry, with majority of respondents, 66.6 percent, having graduated from university.

Table 4-5: Highest Level of Education Attained

Education Level	Frequency	Percentage
Advanced	6	18.2
Diploma	5	15.2
Bachelors Degree	4	12.1
Masters Degree	18	54.5
TOTAL	33	100

4.2.2 Organizational Attributes

This section contains the frequencies for the organizational characteristics. It includes geographic scope and coverage, years in operation, main activity, number of employees, sales turnover, net profit, ownership, target market and market share.

4.2.2.1 Market Coverage

This section presents an analysis of the market coverage of the organizations the respondents worked for. Firm that only covered Kenya were the vast majority at 78.8 percent, while those with a regional presence within Africa were 15.2 percent. Firms with international coverage were the fewest at 6 percent. The results therefore indicate a significant bias towards national coverage by Kenyan publishing houses with very little activity outside their geographical borders.

This scenario is most likely as a result of the fact that most publishing houses focus on national curriculum-based educational publishing which has little or no relevance regionally or internationally. It could also be partly attributed to the country's economic dominance within the region, which means that there is little economic incentive to venture outside the country with its attendant risks.

Table 4-6: Market Coverage

Geographic Scope and Coverage	Frequency	Percent
National	26	78.8
Regional (within Africa)	5	15.2
International	2	6.0
Total	33	100.0

4.2.2.2 Number of Years of Operation

In this section, the respondents were asked to indicate the number of years their firms had been in operation. According to the frequency distributions in Table 4-7, 60.6 percent of the organizations had been in operation for over 20 years while 12.1 percent had operated for 6 to 10 years. Firms had been in operation for 2-5 years were 27.3 percent.

This shows that most of the firms in this study were well established and entrenched within their industry. This is most likely because publishing firms rely a lot on their publishing

backlist (previously published titles) or revised editions for financial stability and therefore those with formidable backlists tend to remain in business

Table 4-7: Number of Years of Operation in Kenya

Years Organization has Operated in Kenya	Frequency	Percent
Less than 1	0	0
2-5	9	27.3
6-10	4	12.1
11-15	0	0
16-20	0	0
Over 20	20	60.6
Total	33	100.0

4.2.2.3 Firm's Main Activity

Table 4-8 depicts the publishing segment that is the focus of the respondent organization's publishing activities. The results indicated that an overwhelming 72.7 percent of the firms under study focus their main publishing activities on the educational books publishing segment. The genre fiction books segment attracted 18.2 percent of the firms while a meager 9.1 percent focused their activities on children's books

We can therefore infer that Kenyan publishing is directed to the education sector and this could be because a large portion of the country's national budget is allocated to education. Another reason could be a poor reading culture, outside the requisite educational curriculum and little disposable income for the vast majority of Kenyans.

Table 4-8: Firm's Main Activity

Primary Activity	Frequency	Perecent
Educational Books	24	72.7
Genre Fiction Books	6	18.2
Children's Books	3	9.1
TOTAL	33	100.0

4.2.2.4 Number of Employees

The number of employees in the company was used to gauge the size and level of publishing activity in the organizations the respondents worked for. Table 4.9 shows that 12.1 percent of the firms had less than 10 employees, 42.4 percent had between 11 and 25 employees, 18.2 percent had 51-75 employees while 9.1 percent had 76 to 100 employees.

These results seem to indicate that the industry has few large dominant players with vigorous publishing activity, while most of the firms are small or mid-sized with moderate or minimal publishing activity.

Table 4-9: Number of Employees

Number of Employees	Frequency	Percent
Less than 10	4	12.1
11-25	14	42.4
26-50	6	18.2
51-75	6	18.2
76-100	3	9.1
Total	33	100

4.2.2.5 Sales Turnover Over Five Years

All the respondents indicated that the firms they worked for had increased sales turnover over the last five years. These results therefore indicate that the industry as a whole has been vibrant and robust and continues to grow favourably.

4.2.2.6 Net Profit From Year 2003 to Year 2007

Profitability trends of the respondents' firms over the last five years showed that 93.9 percent of the firms registered increased profitability while only 6.1 percent had declining profits. This suggests that publishing has been lucrative for industry players and holds favourable prospects for the future.

The figures for average turnover, profits, and margins for the past five years were provided by 6 of the respondents (18.2 percent) are shown in table 4-10 and a graphical depiction is presented in Figure 4-1. The numbers indicate that average turnover for the firms in was Kshs168M in 2002, and rose to 239M (2003), and 365M (2004). Sales dropped marginally to 308M (2005) and dramatically to 197M (2006). The average was 255M while the total sales for the period were 1277M. In the follow-up interview one of the respondents explained that large increase experienced in 2003-2004 was largely as a result of curriculum reviews and the free primary school education programme introduced by the new government that took over in December 2002.

The corresponding profits and margins are 2002 (27M, 16%), 2003 (29M, 12%), and 2004 (10M, 2%), the year with the lowest margin but the highest sales, 2005 (50M, 16%) and 2006 (24M, 12%). The average profits were 28M and total profits for the period 140 M. The average margin for the period was 11 percent.

Table 4-10: Average Turnover, Profits and Margins (2002-2006)

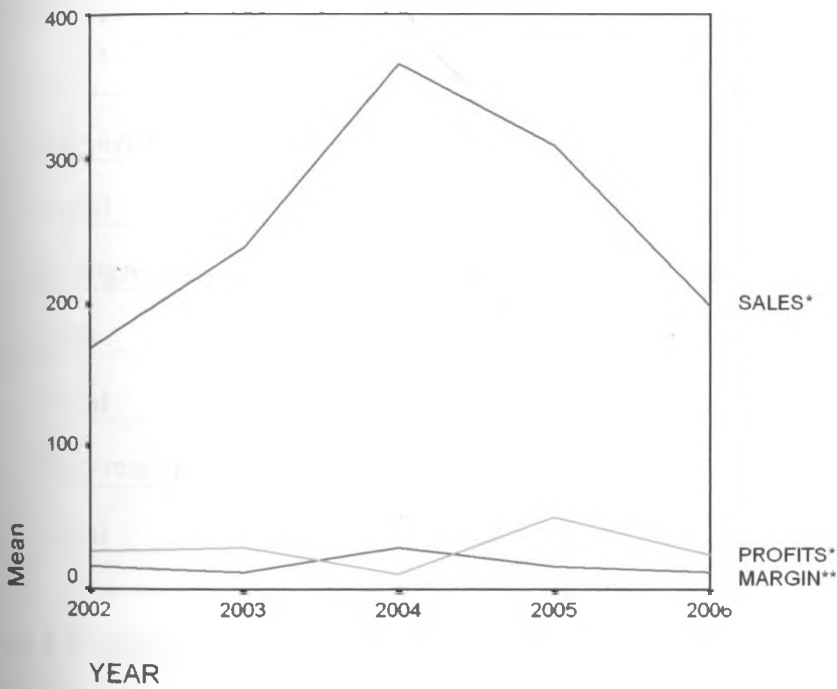
No	Year	*Avg Turnover	*Avg Profit	% Margin
1	2002	168	27	16
2	2003	239	29	12
3	2004	365	10	2
4	2005	308	50	16
5	2006	197	24	12
	Average	255	28	12
	Total	1277	140	

N=6

*Kshs in millions (M)

The graphical depiction in table 4-1 charts shows that the average sales for 2002-2006 grew steadily and peaked in 2004 before experiencing a drastic drop that saw sales plummet to nearly 2002 levels. The average profits and margins however remained steady in the period.

Figure 4-1: Line Graph Depicting Turnover, Profits and Margins (2002-2006) N=6



* Figures in millions
 ** Percentage

The results from this analysis show that while most of the respondents felt their sales and profits had generally increased over the five-year period, the actual figures provided by six of the respondents show that this may not actually be the case for some firms. However, since most of the respondents did not provide actual figures, the results from the larger pool that indicated a general increase in sales and profits over the period were adopted.

4.2.2.7 Ownership of the Organizations

The section sought to establish who held the majority shareholding in the organizations studied. Table 4-11 shows that 69.7 percent of the firms had local majority shareholding and 18 percent had majority shareholding held by foreigners. There was a no response from 3 percent of the respondents. These results therefore show that most of the publishing firms are indigenously held and that the local industry players are dominant.

Table 4-11: Ownership of the Organizations

Majority Ownership	Frequency	Percent
Local	23	69.7
Foreign	6	18.2
Joint	3	9.1
Total	32	97.0
Non-response	1	3.0
Total	33	100.0

4.2.2.8 Primary Target Market for Products

All the respondents indicated that the primary target market for their firm's products was local. These results indicate that local publishers have a bias for the local market, perhaps because there is currently a high demand for their products locally. Follow up interviews suggested that while there was interest in venturing into regional markets, there was some traditional unease owing to the fact that industry structures in these markets were not yet well established, and were therefore prone to corruption especially for government funded

textbook programmes. Markets identified as extremely attractive were Uganda and Tanzania while some had been awarded tenders to supply books to emerging markets like Southern Sudan.

4.2.2.9 Market Share

Most of the respondents, 87.9 percent indicated that the firms they worked for held less than 25 percent of the industry market share as shown on Table 4-12. Another 9.1 percent indicated that they held between 25-50 percent of the market share while 3 percent indicated a market share of between 50 and 75 percent. These results suggest that most of the firms in the industry have a small market share while a few large firms dominate the industry. Follow-up interviews suggested that some of the respondents had been more aware of market share in their genre and had been vaguer about their market share in the industry as a whole.

Table 4-12: Market Share

Market Share	Frequency	Percent
Less than 25	29	87.0
25-50	3	9.1
50-75	1	3.0
Total	33	100.0

4.3 Tests of the Reliability and Validity of the Data Collection Instruments

4.3.1 Instrument Reliability

To establish consistency of the scores obtained from the scale, Cronbach's alpha was calculated as a measure of the internal reliability of each of the scales. This is a scale measurement instrument commonly employed to measure the internal consistency of instruments such as questionnaires.

In order to measure the reliability of a scale, the alpha value of the reliability coefficient is used. The value of coefficient alpha varies from zero, which denotes no internal consistency to one, representing perfect internal consistency. The Cronbach's alpha reliability coefficients for the factor scales obtained (see Appendix G) are summarized in Table 4-14.

Knowledge management strategy had a mean value of 0.87, organizational competence 0.82, and competitiveness 0.80. Since alpha values above 0.7 are considered to be an indication of reliable internal consistency, the scores calculated for this study, which were all above this threshold, suggest that the scales represented a high and stable measure of the variables of interest. The measurement instrument therefore had internal consistency.

Table 4-14: Cronbach's Alpha Reliability Coefficients for Measures of Variables

Variables	No of Items	Cronbach Alpha
Knowledge Management Strategy	17	0.87
Organizational Competency	21	0.82
Competitiveness	7	0.80

4.3.2 Instrument Validity

Subjecting it to a thorough examination by research experts and industry practicing managers who had been purposively selected validated the instrument. These experts were asked to review the instrument to ascertain its validity. The instrument was also subjected to a thorough examination by the Doctoral Programme resource faculty and students at the University of Nairobi, School of Business and also benefited from the scrutiny by the researcher's supervisors.

This study also empirically examined the structure of the research instrument utilizing a series of factor analysis procedures. The principal components method was used to extract

factors. The orthogonal solutions using varimax rotation procedures were completed. Finally, based upon the results of the factor analyses of section C, D, and E (A, C, and D items) of the survey instrument, items were retained on subscales identified according to a set of explicit decision rules for factor loadings (e.g. magnitude and independence of loadings).

Subscales and items retained with established decision rules were used in subsequent data analyses. In a good factor analysis, there are a few factors that explain a lot of the variance while the rest of the factors explain relatively small amounts of variance which is the case in this study as shown in the tables and plots in appendices L to P. From these appendices it can be seen that 8 factors explain most of the variance while the rest explain relatively small variance. The analysis is graphically depicted by the component and scree plots in Appendix O.

4.4 Testing for Assumptions

Tests were conducted to ensure that statistical assumptions were valid in this study. Consequently tests were conducted to check for autocorrelation, multicollinearity, normality and heteroscedasticity and the results obtained are summarized below.

4.4.1 Autocorrelation

To detect autocorrelation, the Durbin-Watson test, which is a check for correlated (or autocorrelated) residuals, was utilized. One of the assumptions of regression analysis is that the residuals for consecutive observations are uncorrelated.

If this is true, the expected value of the Durbin-Watson statistic is 2. Values less than 2 indicate positive autocorrelation while values greater than 2 indicate negative autocorrelation.

The results presented in Table 4-15 indicate that a moderate degree of positive autocorrelation was detected on the first three models and none was detected for the aggregated conceptual model which had a value of 2.013 which is above the cutoff indicating negative autocorrelation.

Table 4-15: Autocorrelation Tests

Model	Durbin-Watson
Knowledge Management Strategy / Organizational Competence	1.143
Knowledge Management Strategy / Competitiveness	1.882
Organizational Competence / Competitiveness	1.948
Knowledge Management Strategy / Organizational Competence / Competitiveness	2.013

4.4.2 Multicollinearity

Each model was tested for multicollinearity, which exists when there is a correlation among the variables used in the analysis. As indicated earlier, the correlation for the primary variables in this study did not exceed 0.75. Typically the cut off rule of thumb used in social science research as a preliminary test for multicollinearity is when the correlation coefficient exceeds 0.80.

In order to further test for multicollinearity, the collinearity statistics detailed in Table 4-34 were checked. This table details the tolerance and Variance Inflation factors for all the models analyzed. It is noteworthy to note that there exists an inverse relationship between multicollinearity and tolerance whereby the higher the tolerance, the lower multicollinearity and vice versa. Multicollinearity statistics for both VIF and tolerance that are close to 1 are considered to be indicators of low multicollinearity.

Table 4-16 indicates that four of the indicators are exactly 1, which indicates low multicollinearity. The other indicators range between .437 and 2.281 which suggests moderate multicollinearity on average. However, none of the models had a tolerance level close to 0, which would point toward high levels of multicollinearity.

Table 4-16: Collinearity Statistics

Model	Tolerance	VIF
Knowledge Management Strategy/Organizational Competence	.749	1.000
Knowledge Management Strategy / Competitiveness	1.000	1.000
Organizational Competence/ Competitiveness	1.000	1.000
Knowledge Management Strategy/Organizational Competence/Competitiveness	.438	2.281

4.4.3 Normality and Heteroscedasticity

The normality and homoscedasticity assumptions were tested using residual statistics, a normal probability plot (see Appendix I) and histogram (see Appendix J). The normality

assumption indicates that the distribution of all independent variables in the model is normal. For this study the probability plot shows normality and the histogram shows a normal but moderately negatively skewed distribution, which means that there are a fair amount of outliers on the left tail. The partial correlation scatter plots in Appendix K indicate that previous error terms are not influencing other error terms have a constant variance and therefore the assumption that heteroscedasticity is not present.

4.5 Correlation Analyses

For the ordinal or ranked variables, Kendall's tau b, a nonparametric measure of association was employed. Its absolute value indicates the strength, with larger absolute values indicating stronger relationships with possible values range from -1 to 1.

As shown on Table 4-17 there was a statistically significant but moderate relationship between gender and position which had a value of $\tau=0.379$, $p<0.05$. There was also a strong relationship between position and managerial function ($\tau=0.672$, $p<0.01$). The other statistically significant and positive relationship was between position and educational level.

In the analysis, the relationship between educational level and years worked in the organization ($\tau = -0.745$ at $p<0.01$) indicated a very strong but negative relationship. This means that those who had worked longest in the organization tended to have lower educational levels.

The other relationships observed had the following tau values. Position and years in organization (-0.185), gender and managerial position (0.099), gender and educational

level (-0.128), gender and years in organization (0.231), managerial function and educational level (0.098), plus managerial function and years in organization (-0.086). These relationships were however weak and are not significant at the 95 percent confidence level.

Table 4-17: Relationship Between Position, Gender, Managerial Function, Years Worked and Educational Level Using Kendall's-tau b Correlation Coefficient

Variable	Position	Gender	Managerial Function	Education Level	Years in Organization
Position	1.000				
Gender	0.379*	1.000			
Managerial Function	0.672**	0.099	1.000		
Education Level	0.309*	-0.128	0.098	1.000	
Years In Organization	-0.185	0.231	-0.086	-0.745**	1.000

* Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

The results of Table 4-18 indicate that there was a positively strong relationship between the age of the organization and number of employees ($\tau=0.408$, $p<0.01$). There was a similarly strong correlation ($\tau=0.417$, $p<0.01$) between age of the organization and market share which means the longer a company had operated the more likelihood of having a larger

market share. The number of employees and ownership were also very strongly correlated at $\tau=0.779$, $p<0.01$. The number of employees and market share were moderately correlated at $\tau=0.342$, $p<0.01$. Ownership and market share was also correlated at $\tau=0.470$, $p<0.01$.

The other tau values obtained between position and years in organization (0.185), gender and managerial function (0.099), gender and education level (0.128), gender and years in organization (0.231), managerial function and education level (0.098), as well as managerial function and years in organization (-0.086) indicated relationships that weak and not significant at $p < 0.05$.

Table 4-18: Relationship Between Age of Organization, Employees, Profit Growth, Ownership and Market Share Using Kendall's-tau b Correlation Coefficient

Variable	Age of Organization	No. of Employees	Profit Growth	Ownership	Market Share
Age of Organization	1.000				
No. of Employees	.408**	1.000			
Profit Growth	.015	.006	1.000		
Ownership	.226	.779**	.172	1.000	
Market Share	.417**	.342**	.057	.470**	1.000

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the .01 level (2-tailed)

4.6 Results of Tests of Hypotheses

The four research objectives are addressed in this part of the chapter. The first three items in the questionnaire explored the relationships among and between the study's variables. The correlations for these variables are summarized in Table 4-19 and analyzed under the relevant hypotheses in the subsequent sections. The fourth question sought to find out if a firm's competitiveness was a function of the interaction between knowledge management strategy and organizational competency. Each item measured, on a scale of 1 to 5, the extent to which the organization exhibited the behaviour or tendency represented by each item where 1 represented 'not at all' and 5 represented 'to a great extent'. The following null and alternate hypotheses were tested:

Table 4-19: Pearson's Product Moment Correlation for Variables

	KMS	COMP	CMVE
KMS	1		
COMP	.749**	1	
CMVE	.506**	.523**	1

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

4.6.1 Hypothesis 1: Knowledge Management Strategy and Organizational Competence

Hypothesis 1 argued that a statistically significant relationship existed between knowledge management strategy and organizational competence

H₁₀ - There is no relationship between knowledge management strategy and organizational competence

H₁₁ - There is a relationship between knowledge management Strategy and organizational competence

The data used to test hypothesis 1 consisted 17 items from KMS15A to KMS21A measuring knowledge management strategy and 21 items from COMP22A to COMP24G measuring organizational competence

Pearson's product moment correlation statistic was used to test the relationship between knowledge management strategy and organizational competence. The results are presented in Table 4-19. The correlations table displays the Pearson correlation coefficient and the values of the correlation coefficient range from -1 to 1. As shown on in the table, $r=0.749$ which is relatively close to 1 or -1 and this indicates that knowledge management strategy and organizational competence are strongly correlated. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative) and in this case it is positive. The significance value $p<0.01$ means that the correlation is significant and

the two variables are linearly related. There is a therefore a strong and significant correlation between knowledge management strategy and organizational competence and the variables are linearly related.

Further analyses using regression analyses is shown in Table 4-20 which shows that knowledge management strategy has a strong positive relationship with organizational competence with a correlation coefficient of $r = 0.749$. When organizational competence is the dependent variable in the relationship, adjusted $R^2 = 0.57$.

This implies that 57% of the variance in organizational competence is explained by knowledge management strategy. When knowledge management strategy is the dependent variable in the relationship, adjusted $R^2 = 0.55$. This implies that 55% of the variance in knowledge management strategy is explained by organizational competence.

Table 4-20: Regression Results for Knowledge Management Strategy and Organizational Competence^b

Model	R	R Square	Adjusted R Square	Std. Error Of the Estimate
1	.749 ^a	.562	.568	293
2	.749 ^a	.562	.548	477

^a Predictors: (Constant), Knowledge Management Strategy

^b Dependent Variable: Organizational Competence

^{2a} Predictors: (Constant), Organizational Competence

^b Dependent Variable: Knowledge Management Strategy

From the foregoing, we can conclude that each of the variables does a good job in explaining variance in the other. Furthermore, there is a strong relationship between knowledge management strategy and organizational competence, which means that the null hypothesis is not substantiated and is rejected. Hence we accept the alternate hypothesis.

4.6.2 Hypothesis 2: Knowledge Management Strategy and Competitiveness

Hypothesis 2 of the study argued that a statistically significant relationship exists between knowledge management strategy and competitiveness.

The data used to test the hypothesis consisted 17 items from KMS15A to KMS21A measuring knowledge management strategy and 7 items from CMVE25A to CMVE25G measuring competitiveness.

H₂₀ - There is no relationship between knowledge management and competitiveness.

H₂₁ - There is a relationship between knowledge management and competitiveness.

Pearson's product moment correlation statistic was used to test the relationship between knowledge management strategy and competitiveness. The results in Table 4-19 indicate that there is a moderately strong and significant correlation between knowledge management strategy and competitiveness ($r=0.506$, $p<0.01$).

From the foregoing, we can conclude a moderately strong relationship exists between knowledge management strategy and competitiveness, which means that the null hypothesis is not substantiated and is rejected. Hence we accept the alternate hypothesis.

4.6.3 Hypothesis 3: Organizational Competence and Competitiveness

Hypothesis 3 of the study argued that a statistically significant relationship exists between organizational competence and competitiveness. The data used to test the hypothesis consisted of 21 items from COMP22A to COMP24G measuring organizational competence and 7 items from CMVE25A to CMVE25G measuring competitiveness.

H₃₀ - There is no relationship between organizational competence and competitiveness.

H₃₁ - There is a relationship between organizational competence and competitiveness.

Pearson's product moment correlation statistic was used to test if there was a statistically significant bivariate relationship between the organizational competence and competitiveness using the organization as the unit of analysis. The results are presented in table 4-31. As shown in the table, there is a strong and significant correlation between organizational competence and competitiveness ($r=0.523$, $p<0.01$).

From the foregoing, we can conclude that a moderately strong relationship exists between organizational competence and competitiveness, which means that the null hypothesis is not substantiated and is rejected. Hence we accept the alternate hypothesis.

4.6.4 Hypothesis 4: Knowledge Management Strategy, Organizational Competence, and Competitiveness

Hypothesis 4 of the study argued that the interaction between knowledge management strategy and organizational competence significantly affected the relationship with competitiveness. The data used to test the hypothesis consisted of 17 items on knowledge management strategy from KMS15A to KMS21A, 21 items from COMP22A to COMP24G measuring organizational competence and 7 items from CMVE25A to CMVE25G measuring competitiveness.

H₄₀ - Competitiveness is not a function of the interaction between knowledge management strategy and organizational competence.

H₄₁ - Competitiveness is a function of the interaction between knowledge management strategy and organizational competence.

The analysis for this hypothesis looked into the interaction and main effects of knowledge management strategy and organizational competence and is shown in Table 4-21. The column labeled source lists the source of the effects in the model, which include the interactive effect of knowledge management strategy (KMS) and competitiveness (OC) and the main effect of knowledge management strategy and organizational competence. Effects with a small p value less than 0.05 are considered to be significant. In this case the interactive effects of knowledge management strategy with organizational competence ($p=0.272$), and main effects of knowledge management strategy ($p=0.222$) and organizational competence ($p=0.161$) are not significant. This means that there are no main effects or difference in competitiveness between firms resulting from knowledge

management strategy, and/or organizational competence. Also, since the interactive effect (COMP*KMS) is not significant, we can conclude that a combination of knowledge management strategy and organizational competence does not produce a statistically significant difference in competitiveness.

Table 4-21 Tests of Knowledge Management Strategy and Organizational Competence Between-Subjects Effects

Source	df	Mean Square	F	Sig.
Corrected Model	3	2.238	4.798	.008
Intercept	1	467	1.001	.000
COMP * KMS	1	.584	1.253	.272
COMP	1	.584	1.364	.222
KMS	1	.727	1.273	.161
Error	29	466		
Total	33			
Corrected Total	32			

Dependent Variable: Competitiveness

From the foregoing, we can conclude that while a moderately strong relationship exists between knowledge management, organizational competence and competitiveness, there are no main or interactive effects resulting from knowledge management strategy and organizational competence in the model, which means that we fail to reject the null hypothesis

CHAPTER 5

INTERPRETATION, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter presents the discussion and implications of major findings, methodological and research design issues, implications for managerial practice and policy, directions for future research and thesis summary. Accordingly, a new conceptual framework was developed for this study. The presentation of the study findings is based on the linkages between and among variables in the conceptual framework.

5.2 General Findings

This section covers a summary of findings related to each of the main variables. The results indicated that there were strong or moderately strong relationships between most of the main study variables, factor subscales and factor subscale items. The findings for each of the variables are outlined below.

5.2.1 Knowledge Management Strategy

Most of the organizations appeared to have a dynamic knowledge vision and strategy that was actively promoted by the chief executive. However, the term knowledge management

was rarely if ever used at all in strategic planning meetings. Most organizations also regularly reviewed strategic plans.

The organizations studied also had clear ownership of legal entities such as copyrights, contracts and licenses and rigorously maintained their inventory of the legal entities. This is because the book publishing industry is knowledge intensive and is heavily reliant on maintaining legal intellectual property rights. They also had clear ownership of non-legal knowledge entities such as reputation, networks and databases and meticulously maintained an inventory of these.

Most firms were engaged in knowledge acquisition and creation and the best experts for different functions who also had key knowledge within their organization had been identified. Most firms however did not have adequate mechanisms in place to codify experts' knowledge into user manuals and other tangible formats. There was however wide divergence in responses and the maximum score of 5 indicates that a small minority of the organizations had externalization mechanisms. Knowledge sharing across departmental boundaries and individuals was also actively encouraged and rewarded.

Most organizations however did not have expert information staff to store and organize knowledge repositories and archival material. Most however efficiently transferred and disseminated this knowledge in the organizations studied and had information staff that served as focal points for the provision of information to support key decision-making. Staff in most of the organizations also received regular and timely information across departments and the case was similar in for the management hierarchy.

Most of the organizations also sought competitor intelligence and knowledge about competitors was consistently and systematically gathered though a small minority did not bother to gather competitor intelligence. The firms also to some extent had mechanisms to guard against knowledge leaks to competitors and trade secrets did not easily leak out.

In terms of knowledge application by the organizations, it was determined that most of the organizations had systematic processes for gathering and organizing knowledge.

5.2.2 Organizational Competence

Most organizations' information was easily available to users of their firm's network. However, most firms rarely measured or managed IC in a systematic way and did not regularly publish IC reports to external stakeholders. Additionally, a majority of the firms had experienced increased efficiency due to the use of knowledge in their production processes.

Knowledge sharing, creation, generation and maintenance were also perceived as important to the productivity in the firms studied. Informed decision making was for the most part swift in the organizations studied and most firms had in the recent past reduced their product development cycle times. In addition, service quality had improved over the previous five years.

Most firms also appeared to have superior people management practices, a key aspect of organizational competence. They also demonstrated a concerted effort to link personnel together and encourage knowledge sharing. Furthermore, firms made an attempt to use storytelling as a means of meaningfully sharing knowledge, which is a crucial aspect of tacit to tacit knowledge conversion or socialization. There was however an absence of online resources that allowed people to find colleagues with specific knowledge and expertise. On the other hand, workplace settings and format of meetings in most organizations to some extent favoured informal knowledge exchange. Surprisingly however, there was little supporting evidence that worker skills and knowledge improved as a result of these practices. In most organizations, there were significant implications when staff left although most of the firms to some extent managed to retain their best employees in the long term.

Results from the study suggest that all of the organizations studied were innovative. Moreover, knowledge management capabilities were packaged into products and services actively promoted by the organizations' marketing departments a practice that was entrenched in most firms. Most firms also focused on research, had a high competence to recognize business opportunities within the organization and regularly launched new products and services. Most of the organizations studied also had a culture of sustained innovation and there was evidence of a high degree of market co-evolution. It was also ascertained that most firms employed unique technology for competitive advantage. This indicates that most of the organizations were competitive to some extent and there was very only moderate variance in responses.

5.2.3 Competitiveness

Most of the organizations studied had products that were difficult to imitate and their products most respondents held the view that to some extent more superior to their competitors. Furthermore, a majority of the firms had experienced growth in market share and profits over the past years. In addition productivity levels had increased comparatively well when compared with similar firms in the same industry and most of the organizations had attained increased customer satisfaction over the past five years.

5.3 Major Findings

5.3.1 Major Finding: Objective One

The first objective of this research focused on whether a relationship existed between knowledge management strategy and organizational competence. The study employed correlation techniques to detect the presence of this relationship and multiple regressions to establish the nature and extent of the relationship. From the results, it was established that the correlation between knowledge management strategy and organizational competence was 0.749 ($p < 0.01$) implying that there was a fairly strong, positive and significant relationship between the variables.

Further analyses using multiple regression analyses also showed that knowledge management strategy has a strong positive relationship with organizational competence whereby 57 percent of the variance in organizational competence is explained by knowledge management strategy. Furthermore 75 percent of the variation in organizational

competence was contributed by knowledge management strategy. As a result the null hypothesis was rejected and the alternate hypotheses that a relationship existed between the two variables was accepted.

It can be concluded that organizational competence was heavily reliant on a sound knowledge management strategy. This finding is consistent with the previous studies that show that knowledge management strategy leads to organizational competence.

5.3.2 Major Finding: Objective Two

The second objective of this research focused on whether a relationship existed between knowledge management strategy and competitiveness. The study employed correlation techniques to detect the presence of this relationship and multiple regressions to establish the nature and extent of the relationship. From the results, it was established that the correlation between knowledge management strategy and competitiveness was 0.506 ($p < 0.01$) implying that there was a moderately strong, positive and significant relationship between the variables.

As a result the null hypothesis was rejected and the alternate hypotheses that a relationship existed between the two variables was accepted. It can be concluded that competitiveness was heavily reliant on knowledge management strategy. This finding is consistent with the previous studies that show that knowledge management strategy leads to competitiveness.

5.3.3 Major Finding: Objective Three

The third objective of this research focused on whether a relationship existed between organizational competence and competitiveness. The study employed correlation techniques to detect the presence of this relationship and multiple regressions to establish the nature and extent of the relationship. From the results, it was established that the correlation between organizational competence and competitiveness was 0.523 ($p=0.02$) implying that there was a moderately strong, positive and significant relationship between the variables.

As a result the null hypothesis was rejected and the alternate hypotheses that a relationship existed between the two variables was accepted. It can be concluded that competitiveness was heavily reliant on organizational competence. This finding is consistent with the previous studies that show that organizational competence leads to competitiveness.

5.3.4 Major Finding: Objective Four

The fourth objective of this research focused on whether the interaction between knowledge management strategies and organizational competence produced a statistically significant relationship with competitiveness. The study looked at the main and interactive effects to establish the nature and extent of the relationship. However, there was no evidence that there was a statistically significant interactive effect resulting from knowledge management strategy and organizational competence on competitiveness. As a result we failed to reject the null hypotheses that competitive advantage is not a function of

knowledge management strategy and organizational competence. From the foregoing, we can conclude that competitiveness is not a function of the interaction between knowledge management strategy and organizational competence since the results did not indicate a statistically significant relationship.

5.4 Summary and Implication of Major Findings

(a) Summary

This thesis has presented a study on the relationship between knowledge management strategy, organizational competence and competitiveness in Kenya's commercial book publishing industry. The conceptual framework for the study was derived from existing literature and empirical evidence and differed from previous studies by aligning organizational competence as a co-independent variable to knowledge management strategy. As a result, a crucial knowledge gap has been addressed. Furthermore, the use of triangulation in the study provided more depth to the research and thus provided more reliable findings.

The major findings of the study showed that:

1. Knowledge management strategy and organizational competence are very dependent on each other.
2. Knowledge management strategy had a moderately strong relationship with competitiveness.
3. Organizational competence had a moderately strong relationship with competitiveness.

- 4 There was no evidence that interaction between knowledge management strategy and organizational competence had a significant impact on competitiveness

(b) Implications of Major Findings

The study showed that organizations need to adopt vibrant knowledge management strategies and organizational competence practices in order to compete more effectively. Furthermore, the very strong correlation between knowledge management strategies and organizational competence means that none of the factors can be optimally executed in the absence of the other.

The findings of this study are particularly pertinent to the publishing industry, which is both knowledge intensive and competence based. Firstly, this study established that knowledge management strategies worked in tandem with organizational competence and organizations therefore need to ensure that their policies adopt both factors for more effectiveness. This is because the study showed that the presence of both factors had a higher impact on competitiveness than when either was absent. As a result, firms should consider entrenching knowledge management strategies in their competence enhancing training programmes in order to differentiate themselves and gain a competitive advantage.

It also emerged from the study that while there were several laws enacted to protect intellectual capital, enforcement was not adequate. This situation had a significant impact on the industry and needs to be urgently addressed by the industry and government alike. Additionally, the impact government subsidized books that are imported into the local markets needs to be dealt with at the government policy level.

The study also established that industry players have in the past shown little or no interest in the regional markets. This is one area where firms can use their established knowledge management strategies and internal competencies to gain a first-mover advantage over their competitors. As a result, they should begin by researching those markets and customizing their products, especially those that are curriculum-based, for the region.

5.5 Limitations of the Study

The researcher experienced encountered difficulties in getting the survey instruments to reach potential respondents through the postal system. This was noted from a number of questionnaires that were sent back marked "Return to Sender" indicating that the mailing addresses may have been inaccurate. It could also be a result of some of the firms going out of business but continuing to appear in the directory.

Additionally, there was difficulty in conducting follow-up interviews with firms outside Nairobi, due to the fact that many of them did not have listed telephone lines that worked and also because limitation of funds made it difficult to travel to locations spread across the country. However, some of these firms returned the questionnaires which ensured that the study benefited from the quantitative perspective from these respondents.

The study also had the limitation of lacking similar studies conducted in a developing country background and thus relied for the most part on studies conducted in contexts that are far removed from a country like Kenya. As a result, the study was not able to benefit

from the perspective that findings from research of this nature would have provided, as well as prospects for comparisons with this study

A number of design issues emerged in the course of this study that should be addressed in similar future research. Firstly, the low response rate of less than 30 percent is a design issue that requires attention in future research

Also there was unwillingness on some of the managers to complete the survey and even more reluctance to participate in the follow up interview. This could be attributed to a number of factors. For example, the length of the survey instrument could have put off the managers who undoubtedly have busy diaries. There was also a high degree of trepidation and distrust as to the real purpose of the study, and principally if the findings were going to be passed on to competitors - an understandable position meant to safeguard against knowledge leakage as it were. In this regard, the managers were obviously cagey on questions pertaining to financial records and very few were willing to provide actual figures. One of the managers who was particularly forthright in providing financial information did however give a positive spin to this concern by explaining that, "As far as financial records go, I have no problem providing you with these because the audited accounts can be found at the Kenya Revenue Authority if you chose to look "

There was also a problem in getting a follow up interview to the survey. Once the respondents had completed the questionnaire, they were reluctant to have a follow up interview as they felt that they had already spent enough time filling out the questionnaire. As a result, less than a third of the respondents agreed to have a follow-up interview. The

most successful instances were where the researcher assisted the respondent in filling out the questionnaire during a pre-arranged appointment, and craftily sneaked in the interview questions. The experience with questionnaires returned by mail or mailed and picked was not as successful.

5.6 Directions for Future Research

While this study successfully examined the conceptual framework, it also presented rich prospects for several other areas to be researched in future. One aspect of the research was that the study was collected from a single source, mainly consisting of top management, to identify the key variables in the study. This method however has some weaknesses because it may leave out other key workers who may have some valuable insight on the areas covered. Future research should involve more employees across the management hierarchy and in a different setting such as a focus group.

In terms of research design, the present study was only confined to a specific industry. It would however be useful to carry out a similar study across heterogeneous industries. Furthermore the study could be extended to a different context, for instance across a variety of African countries or on the global setting. In addition, future studies could also look at moderating effects on the KMS-OC-C model that could influence the relationship between the three variables such as the environment, management practices, or industry structure.

Also this study only involved three variables namely knowledge management strategy, organizational competence and competitiveness. It would be useful to incorporate other competitiveness and performance based variables in the model. Furthermore, an investigation of other moderating characteristics such as environment should also be incorporated in such studies.

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APPENDIX A

Sample letter Corporate Permission

Date

Managing Director

Company Name and Address

RE: LETTER OF INTRODUCTION FOR RESEARCH STUDY

The above refers. I am undertaking research towards completing my Ph.D. dissertation at the University of Nairobi on *Knowledge, Competence and Competitiveness in Kenya's Commercial Book Publishing Industry*. The study aims to contribute to the development of a pragmatic, broad-based analysis framework for knowledge strategic planning with the aim of not only increasing performance, but also attaining sustainable competitive advantage. As part of the study, you will be interviewed and asked to answer some questions about your company and your own views. The questions will be in the form of a questionnaire and a personal interview. It should take no more than 1 hour to complete both the questionnaire and the interview.

We encourage you to be as forthright as you possibly can in answering the questions. Data collected through this questionnaire are secure and confidential. You will not be identified or identifiable in the subsequent analytical work. **No one else will see your answers. No one within your company, outside your company, your family, or government**

APPENDIX A

Sample letter Corporate Permission

Date

Managing Director

Company Name and Address

RE: LETTER OF INTRODUCTION FOR RESEARCH STUDY

The above refers I am undertaking research towards completing my Ph D dissertation at the University of Nairobi on *Knowledge, Competence and Competitiveness in Kenya's Commercial Book Publishing Industry*. The study aims to contribute to the development of a pragmatic, broad-based analysis framework for knowledge strategic planning with the aim of not only increasing performance, but also attaining sustainable competitive advantage. As part of the study, you will be interviewed and asked to answer some questions about your company and your own views. The questions will be in the form of a questionnaire and a personal interview. It should take no more than 1 hour to complete both the questionnaire and the interview.

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authorities will see your answers. Accordingly, feel comfortable in airing your sincere viewpoint, and don't put your name on the questionnaire. We don't need to know which answers are yours. Your answers will be combined with answers from other participants of this study. Research is conducted in line with normal University standards in research. Neither your own name nor that of your business will be passed on to anyone else.

If you cannot answer any question, please ask the researcher for clarification. You do not have to answer any question you are unable to or would prefer not to. If you decide to drop out of the study, you can do so at any point. After the research is completed, we shall send you a copy of the results if you so wish (please indicate on questionnaire). If you would like to find out more on the research, you can contact either me or The Ph D Coordinator, School of Business, University of Nairobi P.O Box 30197, Nairobi

The success of this research depends a lot on your cooperation and assistance. I will be calling soon to seek an appointment with you in this respect, and look forward to your positive response. Thank you in advance for your support.

Sincerely,

Robert Mwachia

Email: rmkagiri@yahoo.com, Tel: 0722-735207, 317553

Encl: Questionnaire

APPENDIX B

SURVEY INSTRUMENT

**KNOWLEDGE MANAGEMENT STRATEGY, ORGANIZATIONAL
COMPETENCE AND COMPETITIVENESS IN KENYA'S
COMMERCIAL BOOK PUBLISHING INDUSTRY**

BY

Robert Kagiri Mwihi
Doctoral Student
School of Business,
University of Nairobi

APPENDIX B
SURVEY QUESTIONNAIRE

PART A: YOUR PERSONAL DETAILS

1 Please state your position/title _____

2 What is your gender Male [] Female []

3 What are your main functions within the organization? _____

4 The number of years you have worked for the present organization (please tick)

- Less than 1 []
- 1-3 []
- 4-9 []
- 10-15 []
- 16-19 []
- Over 20 []

5 Highest level of education attained

- Secondary level []
- Advanced level []

Diploma []

Bachelors degree []

Masters degree []

PhD/Doctorate []

Other (specify) _____

PART B: ORGANIZATIONAL DATA

6 Name of Organization _____

7 What is the market coverage of your organization?

[] National

[] Regional (within Africa)

[] International subsidiary

8 The number of years the organization has been in operation in Kenya

Less than 1 []

2-5 []

6-10 []

11-15 []

16-20 []

Over 21 []

9 Which of the following best describes your firm's business publishing activity?

- Educational books []
- Genre Fiction []
- Genre non Fiction []
- Children's Books []
- Other (specify) _____

10 How many people are currently employed in the organization?

- Less than 10 []
- 11-25 []
- 26-50 []
- 51-75 []
- 76-100 []
- Over 101 []

11 What is your organization's annual sales turnover over the last 5 years (Kshs)

- 2001 _____
- 2002 _____
- 2003 _____
- 2004 _____
- 2005 _____

12 Annual net profits over the last 5 years (Kshs)

2001 _____

2002 _____

2003 _____

2004 _____

2005 _____

13 Is the majority ownership of the organization

Local []

Foreign []

Joint []

Other (Specify) _____

14 What is the primary target market for your organization's products/services?

Local []

Foreign []

50-50 []

15 What is the estimated percentage market share for your organization's products/services?

Less than 25 []

25-50 []

51-75 []

Over 75 []

PART C: KNOWLEDGE MANAGEMENT STRATEGY

This part looks at knowledge strategy and process and the extent of adoption by the company, from within their division/area or outside of it, from documents or people

Please indicate the extent to which the following statements are true regarding knowledge Management in your organization

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
15	Identify Existing Assets/Strategy					
15a	This organization has a compelling knowledge vision and strategy, actively promoted by the Chief Executive					
15b	In strategic planning meetings, the term knowledge management is used extensively					
15c	This organization regularly reviews its strategic plans					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
15d	The organization has clear ownership of legal entities e.g. copyright, contracts, licenses					
15e	This organization rigorously maintains an inventory of the above legal entities					
15f	The organization has clear ownership of non- legal knowledge entities e.g. reputation, networks, databases					
15g	This company rigorously maintains an inventory of the above non-legal entities					
16	Acquisition/Creation					
16a	The best experts for different functions and having key knowledge within the organization have been identified					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
16b	There are in place mechanisms to codify experts' knowledge into user manuals and other tangible formats					
17	Sharing					
17a	Knowledge sharing across departmental boundaries and individuals is actively encouraged and rewarded					
18	Storage/organization					
18a	There are information management staff who coordinate knowledge repositories and archive material					
19	Transfer/dissemination					
19a	There are information staff that serve as focal points for provision of information to support key decision making					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
19b	Information is received on a regular and timely manner across departments					
19c	Information is received on a regular and timely manner across the management hierarchy					
20	Competitor Intelligence					
20a	Knowledge about competitors is consistently and systematically gathered					
20b	Possibilities of knowledge leaks to competitors is closely guarded and trade secrets rarely leak to competitors					
21	Application					
21a	This organization has systematic processes for gathering, organizing, exploiting and protecting key knowledge assets, including those from external sources					

PART D: ORGANIZATIONAL COMPETENCY

This part looks at the competency of your organization in terms of process, people and innovation. Please indicate the extent to which the following statements are true in this regard.

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
22	Process					
22a	Important information can be quickly found by new users on the intranet (or similar network)					
22b	The organization measures and manages its intellectual capital (IC) in a systematic way, and publishes regular IC reports to its external stakeholders					
22c	There has been increased efficiency resulting from using knowledge to improve production processes					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
22d	Knowledge sharing, creation, generation and maintenance is perceived as important to the firm's productivity					
22e	The speed of informed decision making is fast in this organization					
22f	Product development cycle times have reduced over the past five years					
22g	Service quality by this organization has improved over the past five years					
23	People Management					
23a	This organization links people together to develop and share knowledge around specific themes					
23b	The ancient art of storytelling has been adopted to share knowledge in a more meaningful and interesting way					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
23c	This organization has an online resource that allows people to find colleagues with specific knowledge and expertise					
23d	Workplace settings and the format of meetings encourages informal knowledge exchange					
23e	Worker skills and knowledge have increased as a result of KM practices					
23f	There are knowledge implications for the organization when staff leave					
23g	This organization is able to retain good employees over a long period of time					
24	Innovation					
24a	Knowledge management capabilities are packaged into products and services that are promoted by the organization's marketing dept					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
		1	2	3	4	5
24b	This organization is focused on research and development					
24c	This organization regularly launches new products and services					
24d	Recognition of business opportunities is very strong within the organization					
24e	There is a culture of sustained innovation					
24f	There is a high degree of co-evolution with markets					
24g	This organization utilizes unique technology to gain a competitive edge					

PART E: COMPETITIVE ADVANTAGE

This part assesses the competitiveness of your organization. Please indicate the extent to which the following statements are true regarding the competitiveness of your organization.

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
25	Competitive advantage	1	2	3	4	5
25a	This organization's products are difficult to imitate					
25b	This organization's products are of superior quality when compared to those of our competitors					
25c	The market share for this organization has been growing in the last five years					
25d	Sales for this organization have increased in the last five years					
25e	Profits for this organization have increased in the last five years					

	STATEMENT	Not at All	To a small Extent	Not Sure	To some Extent	To a great extent
25f	This firm's productivity levels have increased comparatively well when compared with other organizations in the same industry					
25g	This company has attained increased customer satisfaction in the last five years					

APPENDIX C: KNOWLEDGE FOUNDATIONS

Philosopher	Period	Classification	Summary
Protagoras	480-411bc	Sophist	Nothing is absolutely good or bad, true or false, so each individual is therefore his own final authority.
Socrates	470-399bc	Rationalist	Every person has innate knowledge of ultimate truth and needs only to be spurred into conscious reflection to become aware of it. The philosopher's task is to provoke thought not to teach. Knowledge originates in sensory perception.
Plato	428-347bc	Rationalist	Reality lies in abstract thought. Abstract knowledge is superior to imperfect concrete observation.
Aristotle	384-322bc	Empiricist	Knowledge is acquired through empirical evidence obtained through experience and observation. Induction of principles from observation. The science of logic represented by the syllogism.
Aquinas	1225-1274	Empiricist	Perception is the starting point for knowledge and logic and is the intellectual procedure for arriving at reliable knowledge (also believed in faith).
Bacon	1561-1620	Empiricist	First to formulate rules of inductive inference. Called for new scientific method based on inductive generalisation.
Descartes	1596-1650	Rationalist	Based on mathematical proof. Application of deductive and analytical methods.
Locke	1632-1704	Empiricist	Argued that knowledge is derived from experience either of the external world through sensation or the mind through reflection. One cannot have absolute certain knowledge of the physical world.

APPENDIX C Continued...

Philosopher	Period	Classification	Summary
Hume	1711-1776	Empiricist	<p>Knowledge is of two kinds.</p> <ol style="list-style-type: none"> 1. Knowledge of mathematics and logic which is certain but provides no information about the outside world. 2. Knowledge derived from the senses which is largely a knowledge of cause and effect, which means that one cannot hope to predict scientific development or for scientific knowledge to remain true.
Kant	1724-1804	Empiricist	<p>One can have certain knowledge but such knowledge is more informative about the structure of thought than about the outside world. Three types of knowledge:</p> <ol style="list-style-type: none"> 1. Analytical base truths (uninformative). 2. Synthetic - learned from experience - prone to error. 3. Synthetic base truths - pure intuition (mathematics and philosophy)
Hegel	1770-1831	Rationalist	Revival. Thought and History
Husserl	1859-1938	Phenomenology	To distinguish the way things appear from the way one thinks that they really are. Understanding the conceptual foundations of knowledge.
Wittgenstein	1889-1951	Logic Empiricism	Use of language. Tacit knowledge and positivism

Gordon, J.L. (1999). Creating knowledge maps by exploiting dependent relationships. *Knowledge Based Systems*, April, 71-79

ANNEX D: INTERPRETATION OF CODES FOR FACTOR ITEMS

CODE	INTERPRETATION
KMS15A	This organization has a compelling knowledge vision and strategy, actively promoted by the Chief Executive.
KMS15B	In strategic planning meetings, the term knowledge management is used extensively
KMS15C	This organization regularly reviews its strategic plans
KMS15D	The organization has clear ownership of legal entities e.g. copyright, contracts, licenses
KMS15E	This organization rigorously maintains an inventory of the above legal entities
KMS15F	The organization has clear ownership of non- legal knowledge entities e.g. reputation, networks, databases
KMS15G	This company rigorously maintains an inventory of the above non-legal entities
KMS16A	The best experts for different functions and having key knowledge within the organization have been identified
KMS16B	There are in place mechanisms to codify experts' knowledge into user manuals and other tangible formats
KMS17A	Knowledge sharing across departmental boundaries and individuals is actively encouraged and rewarded
KMS18A	There are information management staff who coordinate knowledge repositories and archive material
KMS19A	There are information staff that serve as focal points for provision of information to support key decision making
KMS19B	Information is received on a regular and timely manner across departments
KMS19C	Information is received on a regular and timely manner across the management hierarchy
KMS20A	Knowledge about competitors is consistently and systematically gathered
KMS20B	Possibilities of knowledge leaks to competitors is closely guarded and trade secrets rarely leak to competitors
KMS21A	This organization has systematic processes for gathering, organizing, exploiting and protecting key knowledge assets, including those from external sources
COMP22A	Important information can be quickly found by new users on the intranet (or similar network)
COMP22B	The organization measures and manages its intellectual capital (IC) in a systematic way, and publishes regular IC reports to its external stakeholders
COMP22C	There has been increased efficiency resulting from using knowledge to improve production processes
COMP22D	Knowledge sharing, creation, generation and maintenance is perceived as important to the firm's productivity

ENDIC D continued

CODE	INTERPRETATION
COMP22E	The speed of informed decision making is fast in this organization
COMP22F	Product development cycle times have reduced over the past five years
COMP22G	Service quality by this organization has improved over the past five years
COMP23A	This organization links people together to develop and share knowledge around specific themes
COMP23B	The ancient art of storytelling has been adopted to share knowledge in a more meaningful and interesting way.
COMP23C	This organization has an online resource that allows people to find colleagues with specific knowledge and expertise.
COMP23D	Workplace settings and the format of meetings encourages informal knowledge exchange
COMP23E	Worker skills and knowledge have increased as a result of KM practices
COMP23F	There are knowledge implications for the organization when staff leave
COMP23G	This organization is able to retain good employees over a long period of time
COMP24A	Knowledge management capabilities are packaged into products and services that are promoted by the organization's marketing dept
COMP24B	This organization is focused on research and development
COMP24C	This organization regularly launches new products and services
COMP24D	Recognition of business opportunities is very strong within the organization
COMP24E	There is a culture of sustained innovation
COMP24F	There is a high degree of co-evolution with markets
COMP24G	This organization utilizes unique technology to gain a competitive edge
CMVE25A	This organization's products are difficult to imitate
CMVE25B	This organization's products are of superior quality when compared to those of our competitors
CMVE25C	The market share for this organization has been growing in the last five years
CMVE25D	Sales for this organization have increased in the last five years
CMVE25E	Profits for this organization have increased in the last five years
CMVE25F	This firm's productivity levels have increased comparatively well when compared with other organizations in the same industry
CMVE25G	This company has attained increased customer satisfaction in the last five years

APPENDIX E

SUMMARY OF INTERPRETATION OF CODES FOR FACTOR SUSCALES

NO.	CODE	INTERPRETATION
1	KMS	Identify Existing Assets/Strategy
2	KMS	Acquisition/creation
3	KMS	Sharing
4	KMS	Storage/organization
5	KMS	Transfer/Dissemination
6	KMS	Competitor Intelligence
7	KMS	Application
8	COMP	Process
9	COMP	People Management
10	COMP	Innovation
11	CMVE	Competitive Advantage

PENDIX F: SUMMARY OF DESCRIPTIVE STATISTICS FOR SURVEY ITEMS

	Range	Min	Max	Sum	Mean		Std. Dev	Var	Skewness		Kurtosis	
	Stat	Stat	Stat	Stat	Stat	Std. Error	Stat	Stat	Statistic	Std. Error	Statistic	Std. Error
POSITION	2	1	3	56	1.70	.14	.810	.655	.626	.409	-1.173	.798
EX	1	1	2	42	1.27	.08	.452	.205	1.070	.409	-.915	.798
FUNCTION	2	1	3	47	1.42	.10	.561	.314	.882	.409	-.201	.798
GEOGRAPHI	2	1	3	42	1.27	.10	.574	.330	2.058	.409	3.413	.798
YEARSWKD	4	2	6	114	3.45	.20	1.148	1.318	.844	.409	.288	.798
EDUCATIO	3	2	5	133	4.03	.21	1.212	1.468	-.735	.409	-1.142	.798
AGEORG	4	2	6	150	4.55	.32	1.856	3.443	-.529	.409	-1.744	.798
BOOKTYPE	4	1	5	51	1.55	.20	1.175	1.381	2.468	.409	5.194	.798
EMPLOYENO	5	1	6	98	2.97	.28	1.591	2.530	.747	.409	-.786	.798
TURNOVER	0	1	1	33	1.00	.00	.000	.000				
PROFIT	1	1	2	35	1.06	.04	.242	.059	3.861	.409	13.736	.798
OWNERS	3	1	4	47	1.47	.16	.915	.838	2.118	.414	3.647	.809
TARGET	0	1	1	33	1.00	.00	.000	.000				
MKTSHARE	2	1	3	38	1.15	.08	.442	.195	3.107	.409	9.819	.798
KMS15A	1	4	5	154	4.67	.08	.479	.229	-.741	.409	-1.548	.798
KMS15B	4	1	5	66	2.00	.24	1.392	1.938	1.332	.409	.453	.798
KMS15C	3	2	5	139	4.21	.17	.960	.922	-1.356	.409	1.199	.798
KMS15D	2	3	5	153	4.64	.10	.549	.301	-1.188	.409	.519	.798
KMS15E	2	3	5	153	4.64	.10	.549	.301	-1.188	.409	.519	.798
KMS15F	4	1	5	132	4.00	.20	1.173	1.375	-1.609	.409	2.121	.798
KMS15G	4	1	5	136	4.12	.18	1.053	1.110	-1.450	.409	1.765	.798
KMS16A	4	1	5	148	4.48	.16	.906	.820	-2.505	.409	7.216	.798
KMS16B	4	1	5	74	2.24	.25	1.415	2.002	.951	.409	-.473	.798
KMS17A	4	1	5	132	4.00	.26	1.500	2.250	-1.419	.409	.450	.798
KMS18A	4	1	5	94	2.85	.20	1.176	1.383	.434	.409	-.626	.798
KMS19A	4	1	5	119	3.61	.21	1.223	1.496	-1.243	.409	.467	.798
KMS19B	4	1	5	121	3.67	.21	1.190	1.417	-1.192	.409	.938	.798
KMS19C	3	2	5	145	4.39	.17	.998	.996	-1.696	.409	1.803	.798
KMS20A	3	2	5	114	3.45	.22	1.252	1.568	-.144	.409	-1.695	.798

ENDIX F Continued...

MP20B	4	1	5	120	3.64	.23	1.319	1.739	-1.012	.409	-187	798
MP21A	4	1	5	106	3.21	.28	1.635	2.672	-363	.409	-1.612	798
MP22A	4	1	5	124	3.76	.20	1.173	1.377	-1.595	.409	1.772	798
MP22B	4	1	5	69	2.09	.28	1.608	2.585	1.092	.409	-566	798
MP22C	3	2	5	127	3.85	.20	1.149	1.320	-739	.409	-864	798
MP22D	1	4	5	145	4.39	.09	.496	.246	.455	.409	-1.913	798
MP22E	1	4	5	151	4.58	.09	.502	.252	-321	.409	-2.023	798
MP22F	3	2	5	130	3.94	.15	.864	.746	-1.117	.409	1.181	798
MP22G	3	2	5	142	4.30	.17	.951	.905	-1.130	.409	157	798
MP23A	3	2	5	138	4.18	.18	1.044	1.091	-1.262	.409	514	798
MP23B	4	1	5	111	3.36	.26	1.496	2.239	-256	.409	-1.528	798
MP23C	4	1	5	92	2.79	.28	1.635	2.672	.226	.409	-1.629	798
MP23D	4	1	5	121	3.67	.28	1.594	2.542	-792	.409	-1.075	798
MP23E	2	2	4	97	2.94	.17	.966	.934	.127	.409	-1.998	798
MP23F	3	2	5	107	3.24	.19	1.119	1.252	-086	.409	-1.685	798
MP23G	4	1	5	136	4.12	.17	.992	.985	-1.277	.409	1.805	798
MP24A	4	1	5	103	3.12	.23	1.293	1.672	-331	.409	-1.366	798
MP24B	4	1	5	122	3.70	.27	1.551	2.405	-902	.409	-809	798
MP24C	4	1	5	144	4.36	.14	.783	.614	-2.423	.409	9.789	798
MP24D	3	2	5	140	4.24	.14	.830	.689	-844	.409	043	798
MP24E	3	2	5	144	4.36	.11	.653	.426	-1.251	.409	3.719	798
MP24F	3	2	5	131	3.97	.18	1.045	1.093	-810	.409	-417	798
MP24G	4	1	5	94	2.85	.25	1.460	2.133	.023	.409	-1.605	798
MP25A	4	1	5	102	3.09	.27	1.528	2.335	.173	.409	-1.696	798
MP25B	4	1	5	138	4.18	.21	1.211	1.466	-1.608	.409	1.628	798
MP25C	4	1	5	146	4.42	.16	.902	.814	-2.340	.409	6.616	798
MP25D	3	2	5	148	4.48	.14	.795	.633	-1.931	.409	4.071	798
MP25E	4	1	5	143	4.33	.17	.990	.979	-2.388	.409	6.545	798
MP25F	4	1	5	118	3.58	.21	1.200	1.439	-826	.409	-456	798
MP25G	3	2	5	140	4.24	.20	1.146	1.314	-1.304	.409	152	798

ANNEX G: PEARSON'S PRODUCT MOMENT CORRELATION MATRIX FOR FACTOR ITEMS

	KMS 15A	KMS 15B	KMS 15C	KMS 15D	KMS 15E	KMS 15F	KMS 15G	KMS 16A	KMS 16B	KMS 17A
15A	1									
15B	-.047	1								
15C	.363*	-.047	1							
15D	.238	-.368*	.744**	1						
15E	.238	-.368*	.744**	1.000	1					
15F	.334	-.038	.832**	.534**	.534**	1				
15G	.454**	-.234	.592**	.511**	.511**	.860**	1			
16A	.168	-.124	.345**	.366**	.366*	.589**	.755**	1		
16B	.077	.873**	-.085	-.326	-.326	.019	-.041	.003	1	
17A	.392*	.105	.586*	.418*	.418*	.693**	.692**	.552**	-.044	1
18A	.352*	.611**	.195	-.427*	-.427**	.272	.091	-.076	.436*	.425*
19A	.569**	.073	.712**	.758**	.758**	.654**	.669**	.488**	.165	.698**
19B	.183	.264	.556**	.526**	.526**	.537**	.532**	.300	.346*	.613**
19C	.349*	-.090	.888**	.840**	.840**	.854**	.785**	.508**	-.003	.668**
20A	.052	.269	.619**	.430**	.430**	.638**	.360*	.406*	.200	.283
20B	.248	-.051	-.085	-.016	-.016	-.020	.280	.257	.132	.000
21A	.253	.165	.667**	.333	.333	.717**	.475**	.414*	.099	.344**
P22A	.185	.077	.824**	.587**	.587	.908**	.783**	.643**	.131	.692**
P22B	-.244	.168	.250	.180	.180	.365**	.104	.140	.072	.130
P22C	.587**	-.098	.427*	.505**	.505	.557**	.609**	.403*	-.130	.743**
P22D	.570**	-.498*	.344	.543**	.543	.322	.563**	.327	-.229	.210
P22E	.043	.134	-.261	-.578**	-.578	-.212	-.195	-.083	.149	-.332
P22F	.252	.130	.656**	.479**	.479	.802**	.764*	.478**	.319	.434**
P22G	-.320	-.118	.269	.277	.277	.252	.149	.441**	-.149	-.109
P23A	.312	-.279	.365*	.664**	.664**	.383*	.519*	.697**	-.073	.219
P23B	.611*	.060	.445**	.509**	.509**	.427*	.566**	.350*	.105	.654**
P23C	-.053	-.110	.209	.399*	.399*	.342	.451**	.346*	.023	.382
P23D	-.150	.014	.252	.179	.179	.167	-.031	.310	-.143	-.078
P23E	.023	.441*	-.120	-.161	-.161	.083	.284	.213	.491*	.453**
P23F	.214	.301	.125	.148	.148	.214	.160	.096	.258	.391*
P23G	-.110	-.136	.562**	.428*	.428*	.510**	.374*	.593**	-.155	.147
P24A	.118	.278	.507**	.196	.196	.742**	.471**	.429*	.188	.467**
P24B	.028	.318	.149	-.060	-.060	.206	.023	.197	.277	-.148
P24C	-.167	.258	.476**	.245	.245	.306	.172	.449**	.200	.266
P24D	-.026	.297	.521**	.200	.200	.353*	.073	.338	.161	.125
P24E	.400**	.138	.571**	.381*	.381*	.367*	.297	.433*	-.098	.606**
P24F	.354*	-.172	.629**	.688**	.688**	.688**	.656**	.742**	-.122	.478**
P24G	.238	.553**	.046	-.110	-.110	.164	.337	.246	.729**	.314
P25A	.085	-.162	.391	.600**	.600**	.453**	.498**	.351*	.134	.164
P25B	.323	-.241	.342	.667**	.667**	.396*	.619**	.744**	-.045	.293
P25C	-.024	-.323	.253	.384**	.384**	.502**	.766**	.773**	-.181	.462**
P25D	-.055	-.452**	.434*	.488**	.488**	.603**	.748**	.835**	-.358	.524**
P25E	.044	-.386*	.417*	.575**	.575**	.566**	.739**	.930**	-.260	.484**
P25F	-.091	-.449**	.650**	.708**	.708**	.733**	.710**	.569**	-.324	.382*
P25G	-.474**	.039	.236	.045	.045	.116	-.154	.064	-.230	-.073

APPENDIX G Continued...

	KMS 18A	KMS 19A	KMS 19B	KMS 19C	KMS 20A	KMS 20B	KMS 21A	COMP 22A	COMP 22B	COMP 22C
KMS18A	1									
KMS19A	.044	1								
KMS19B	.141	.787**	1							
KMS19C	-.001	.873**	.772**	1						
KMS20A	.091	.386**	.210	.527**	1					
KMS20B	.004	.025	-.080	.041	-.219	1				
KMS21A	.294	.309	.054	.503**	.898**	.051	1			
COMP22A	.199	.715**	.746**	.885**	.630**	-.119	.582**	1		
COMP22B	-.042	.130	.196	.230	.708**	-.750**	.432*	.443**	1	
COMP22C	.098	.734**	.350*	.571**	.245	.004	.284	.389**	.092	1
COMP22D	-.269	.521**	.176	.497**	-.146	.608**	.048	.169	-.555**	.492**
COMP22E	.364*	-.535**	-.610**	-.467**	-.181	.610**	.151	-.392*	-.570**	-.386*
COMP22F	.145	.598**	.679**	.790**	.633**	.090	.607**	.848**	.409*	.242
COMP22G	-.293	-.109	-.239	.167	.668**	.165	.661**	.264	.308	-.214
COMP23A	-.486**	.620**	.176	.529**	.389*	.254	.324	.369*	.027	.518**
COMP23B	.157	.764**	.491**	.613**	.042	.513**	.172	.337	-.404*	.760**
COMP23C	-.229	.488**	.733**	.493**	.110	-.399*	-.158	.575**	.495**	.215
COMP23D	-.111	-.118	-.406	.026	.720**	-.015	.723**	.123	.366**	-.080
COMP23E	.349*	.270	.661**	.155	-.209	.129	-.288	.290	-.037	.076
COMP23F	.148	.460**	.508**	.248	.298	-.659**	.022	.356*	.682**	.394*
COMP23G	-.118	.144	-.018	.424**	.709**	.154	.754**	.536**	.267	-.066
COMP24A	.321	.347**	.149	.446**	.833**	-.267	.815**	.597**	.656**	.496**
COMP24B	.145	-.114	-.378**	-.021	.717**	.204	.790**	.061	.262	-.044
COMP24C	.163	.252	.436**	.371*	.400**	-.080	.304	.609**	.221	-.284
COMP24D	.231	.128	-.074	.258	.642**	.169	.721**	.351*	.077	-.059
COMP24E	.359*	.420*	.161	.397*	.441*	.195	.570**	.404*	-.032	.326
COMP24F	-.182	.650**	.218	.671**	.751**	.014	.717**	.631**	.392*	.620**
COMP24G	.423*	.368*	.635**	.257	-.098	.457**	-.078	.324	-.273	.005
IVE25A	-.409*	.638**	.687**	.652**	.272	-.262	.017	.605**	.416*	.257
IVE25B	-.441*	.598**	.260	.560**	.459**	.375**	.406*	.428*	.088	.447**
IVE25C	-.203	.298	.339	.503**	.184	.475**	.255	.543**	-.027	.215
IVE25D	-.220	.363*	.341	.579**	.211	.203	.255	.666**	.062	.254
IVE25E	-.331	.473**	.310	.591**	.353*	.240	.341	.637**	.118	.348*
IVE25F	-.335	.458**	.489*	.770**	.465**	-.101	.398*	.790**	.409*	.224
IVE25G	.028	-.353*	-.328	-.031	.530**	-.043	.572**	.115	.293	-.351*

APPENDIX G Continued...

	COMP 22D	COMP 22E	COMP 22F	COMP 22G	COMP 23A	COMP 23B	COMP 23C	COMP 23D	COMP 23E	COMP 23F
COMP22D	1									
COMP22E	.065	1								
COMP22F	.203	-.277	1							
COMP22G	-.062	.212	.289	1						
COMP23A	.641**	-.206	.290	.383*	1					
COMP23B	.727**	-.079	.284	-.212	.496**	1				
COMP23C	-.048	-.837**	.522**	-.178	.151	.020	1			
COMP23D	-.184	.247	.076	.893**	.338	-.210	-.376*	1		
COMP23E	-.144	-.248	.332	-.421**	-.236	.253	.565**	-.582**	1	
COMP23F	-.346*	-.757**	.307	-.335	.015	.002	.695**	-.199	.419*	1
COMP23G	.090	.169	.446**	.920**	.460**	-.031	-.080	.816**	-.351*	-.281
COMP24A	-.125	-.111	.510**	.376	.284	.138	.072	.490**	-.119	.346*
COMP24B	-.124	.472**	.219	.721**	.247	-.072	-.519**	.830**	-.430*	-.206
COMP24C	-.219	-.072	.403	.435*	.108	-.090	.282	.325	.236	.075
COMP24D	-.011	.404**	.195	.695**	.308	.103	-.444**	.771**	-.371*	-.334
COMP24E	.123	.104	.207	.370*	.267	.436	-.160	.510**	-.014	.004
COMP24F	.385*	-.264	.517**	.544**	.835*	.407	.197	.575**	-.249	.220
COMP24G	.128	.080	.463**	-.281	-.043	.426	.274	-.452**	.835**	.138
WVE25A	.281	.722**	.628**	-.041	.498**	.149	.809**	.244	.215	.498**
WVE25B	.553**	-.229	.489**	.493**	.887**	.480	.273	.372*	-.017	.802
WVE25C	.383*	-.073	.555**	.428*	.413*	.322	.402*	.101	.353	-.136
WVE25D	.372*	-.173	.453**	.419*	.492**	.241	.442**	.156	.161	-.101
WVE25E	.424*	-.210	.463**	.520**	.726**	.317	.412*	.310	.087	-.019
WVE25F	.290	-.464**	.698**	.445**	.438*	.106	.606**	.169	.004	.102
WVE25G	-.393*	.293	.047	.819**	-.116	-.363	-.355	.815**	-.409*	-.364**

APPENDIX G Continued...

	COMP 23G	COMP 24A	COMP 24B	COMP 24C	COMP 24D	COMP 24E	COMP 24F	COMP 24G	CMVE 25A	CMVE 25B
MP23G	1									
MP24A	.451**	1								
MP24B	.613*	.593**	1							
MP24C	.625**	.109	.094	1						
MP24D	.798**	.467**	.714**	.581**	1					
MP24E	.557**	.279	.328	.528**	.639**	1				
MP24F	.666**	.673**	.457**	.243	.477**	.520**	1			
MP24G	-.159	-.106	-.145	.323	-.046	.092	-.146	1		
VE25A	.075	.168	-.278	.206	-.215	-.253	.413*	.202	1	
VE25B	.527**	.245	-.297	.192	.235	.388*	.819**	.122	.468**	1
VE25C	.499**	.142	.005	.305	.067	.206	.445**	.381	.288	.642*
VE25D	.596**	.215	-.105	.461**	.195	.312	.544**	.092	.374**	.555*
VE25E	.658**	.285	.068	.443**	.279	-.387	.735**	.079	.434*	.783**
VE25F	.596**	.356*	-.054	.402*	.138	.123	.581**	-.056	.669**	.507**
VE25G	.742**	.317	.605**	.421*	.691	.421*	.189	.388	-.405*	.010

	CMVE 25C	CMVE 25D	CMVE 25E	CMVE 25F	CMVE 25G
VE25C	1				
VE25D	.880**	1			
VE25E	.852**	.940**	1		
VE25F	.691**	.812**	.755**	1	
VE25G	.139	.176	.147	.213	1

APPENDIX H

CRONBACH ALPHA RELIABILITY COEFFICIENTS

1) Knowledge Management Strategy

***** Method 1 (space saver) will be used for this analysis *****

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients

N of Cases = 33.0

N of Items = 17

Alpha = .8742

2) Organizational Competence

***** Method 1 (space saver) will be used for this analysis *****

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients

N of Cases = 33.0

N of Items = 21

Alpha = .8201

3) Competitiveness

***** Method 1 (space saver) will be used for this analysis *****

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients

N of Cases = 33.0

N of Items = 7

Alpha = .8305

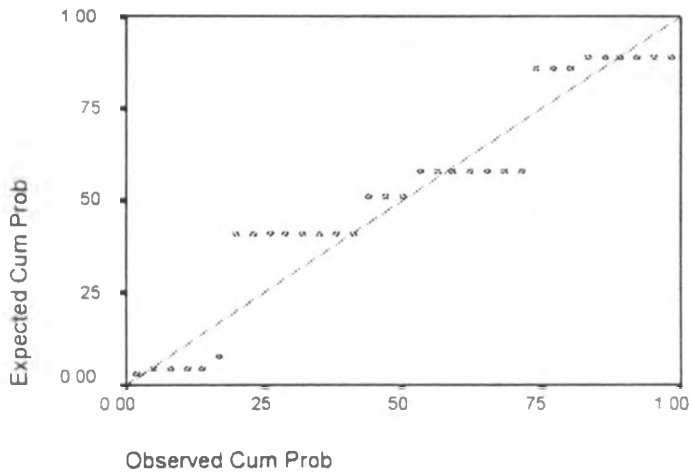
**RESIDUAL STATISTICS FOR KNOWLEDGE MANAGEMENT STRATEGY,
ORGANIZATIONALCOMPETENCE AND COMPETITIVENESS REGRESSION
AND PROBABILITY PLOT**

Residual Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.98	4.16	3.85	.438	33
Residual	-1.27	.84	.00	.664	33
Std. Predicted Value	-1.987	.716	.000	1.000	33
Std. Residual	-1.854	1.222	.000	.968	33

Dependent Variable: CMVE

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: CMVE

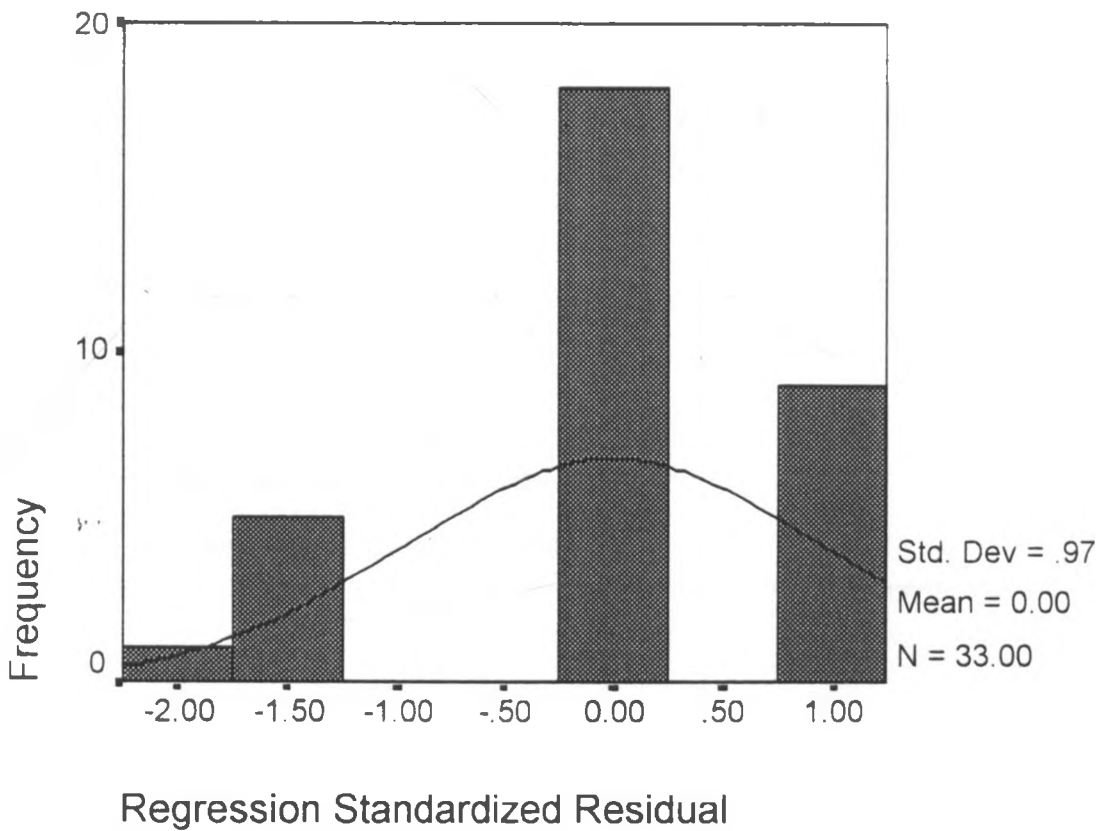


APPENDIX J

HISTOGRAM FOR KMS, COMP (IV) AND CMVE (DV) REGRESSION

Histogram

Dependent Variable: CMVE

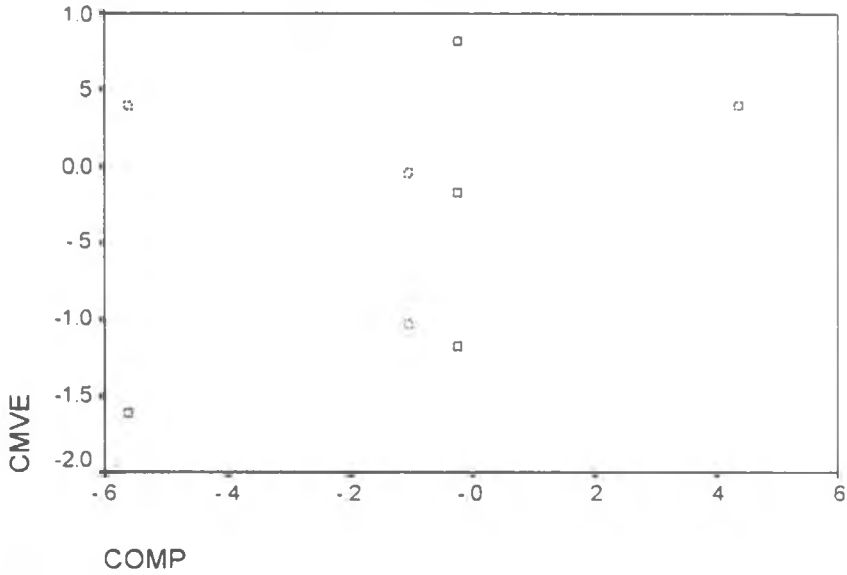


APPENDIX K

PARTIAL REGRESSION PLOTS FOR KMS AND OC IVs

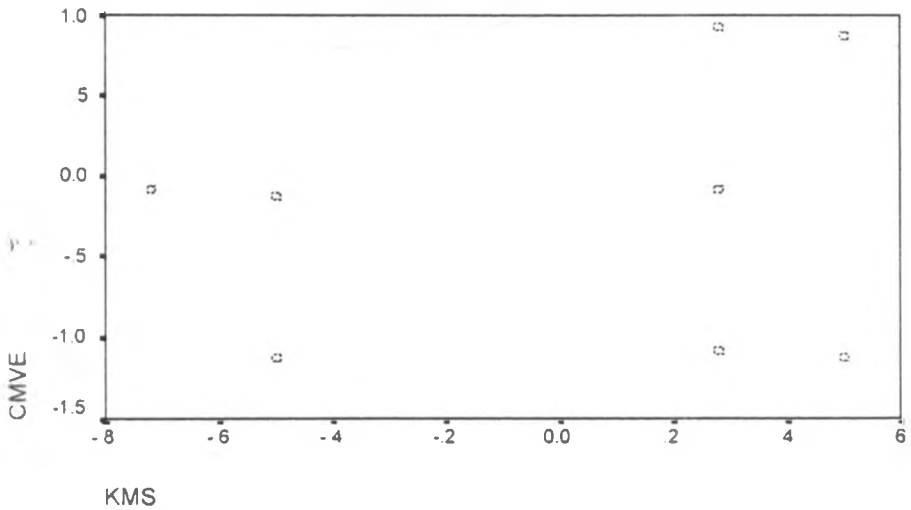
Partial Regression Plot

Dependent Variable: CMVE



Partial Regression Plot

Dependent Variable: CMVE



APPENDIX L: VARIANCE AND EIGEN VALUES FOR FACTOR ITEMS

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
KMS15A	16.058	35.684	35.684	16.058	35.684	35.684	8.574	19.054	19.054
KMS15B	8.045	17.878	53.562	8.045	17.878	53.562	7.736	17.191	36.245
KMS15C	5.377	11.948	65.510	5.377	11.948	65.510	6.672	14.826	51.071
KMS15D	4.819	10.709	76.219	4.819	10.709	76.219	5.588	12.418	63.489
KMS15E	3.478	7.728	83.947	3.478	7.728	83.947	4.795	10.655	74.143
KMS15F	2.194	4.875	88.822	2.194	4.875	88.822	4.350	9.668	83.811
KMS15G	1.932	4.293	93.116	1.932	4.293	93.116	3.671	8.158	91.969
KMS16A	1.571	3.491	96.606	1.571	3.491	96.606	2.087	4.637	96.606
KMS16B	818	1.817	98.423						
KMS17A	.710	1.577	100.000						
KMS18A	3.954E-15	8.788E-15	100.000						
KMS19A	1.457E-15	3.238E-15	100.000						
KMS19B	1.101E-15	2.447E-15	100.000						
KMS19C	1.050E-15	2.333E-15	100.000						
KMS20A	8.864E-16	1.970E-15	100.000						
KMS20B	8.105E-16	1.801E-15	100.000						
KMS21A	7.545E-16	1.677E-15	100.000						
COMP22A	6.065E-16	1.348E-15	100.000						
COMP22B	5.403E-16	1.201E-15	100.000						
COMP22C	4.750E-16	1.056E-15	100.000						
COMP22D	4.432E-16	9.849E-16	100.000						
COMP22E	3.317E-16	7.371E-16	100.000						
COMP22F	2.648E-16	5.885E-16	100.000						
COMP22G	2.137E-16	4.748E-16	100.000						
COMP23A	1.922E-16	4.271E-16	100.000						
COMP23B	1.320E-16	2.934E-16	100.000						
COMP23C	8.702E-17	1.934E-16	100.000						
COMP23D	5.694E-17	1.265E-16	100.000						
COMP23E	4.840E-17	1.076E-16	100.000						
COMP23F	6.036E-18	1.341E-17	100.000						
COMP23G	-3.257E-17	-7.237E-17	100.000						
COMP24A	-1.346E-16	-2.990E-16	100.000						
COMP24B	-2.292E-16	-5.094E-16	100.000						
COMP24C	-2.904E-16	-6.454E-16	100.000						
COMP24D	-3.411E-16	-7.579E-16	100.000						
COMP24E	-3.815E-16	-8.479E-16	100.000						
COMP24F	-4.447E-16	-9.882E-16	100.000						
COMP24G	-5.252E-16	-1.167E-15	100.000						
CMVE25A	-6.367E-16	-1.415E-15	100.000						
CMVE25B	-7.346E-16	-1.632E-15	100.000						
CMVE25C	-8.676E-16	-1.928E-15	100.000						
CMVE25D	-1.062E-15	-2.360E-15	100.000						
CMVE25E	-1.328E-15	-2.951E-15	100.000						
CMVE25F	-1.735E-15	-3.855E-15	100.000						
CMVE25G	-2.181E-15	-4.846E-15	100.000						

Method: Principal Component Analysis.

APPENDIX M

COMPONENT TRANSFORMATION MATRIX

Component	1	2	3	4	5	6	7	8
1	.354	.621	.531	.351	.148	.031	.222	.109
2	.869	-.229	-.048	-.288	-.204	-.233	-.052	.096
3	.242	.113	-.242	-.078	.525	.606	-.466	.064
4	.067	-.129	.012	.503	-.671	.447	-.246	.122
5	-.166	.005	.595	-.659	-.225	.332	-.088	.123
6	.161	-.273	-.016	-.006	.061	.490	.670	-.455
7	-.038	.476	-.533	-.271	-.266	.158	.380	.417
8	-.048	-.480	.137	.166	.291	.056	.263	.751

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

APPENDIX N

COMPONENT SCORE COEFFICIENT MATRIX

	Variables	Component							
		1	2	3	4	5	6	7	8
1	This organization has a compelling knowledge vision and strategy, actively promoted by the Chief Executive.	.008	-.003	-.057	.176	-.035	-.003	-.018	-.036
2	In strategic planning meetings, the term knowledge management is used extensively	.050	-.037	-.067	.007	.038	.207	.045	.083
3	This organization regularly reviews its strategic plans	.016	.212	-.118	-.004	-.062	-.062	-.080	.055
4	The organization has clear ownership of legal entities e.g. copyright, contracts, licenses	-.014	.121	-.102	-.001	-.019	-.054	.116	.106
5	This organization rigorously maintains an inventory of the above legal entities	-.014	.121	-.102	-.001	-.019	-.054	.116	.106
6	The organization has clear ownership of non- legal knowledge entities e.g. reputation, networks, databases	.030	.121	.029	.028	-.023	-.046	-.163	-.150
7	This company rigorously maintains an inventory of the above non-legal entities	-.003	.026	.124	.052	-.030	-.018	-.107	-.164
8	The best experts for different functions and having key knowledge within the organization have been identified	.016	-.162	.202	.045	.053	.045	.033	.032
9	There are in place mechanisms to codify experts' knowledge into user manuals and other tangible formats	.051	.007	-.063	-.029	-.023	.265	.108	-.092
10	Knowledge sharing across departmental boundaries and individuals is actively encouraged and rewarded	-.035	-.065	.102	.131	.077	-.052	-.150	.167
11	There are information management staff who coordinate knowledge repositories and archive material	.016	.020	.006	.080	-.011	.022	-.250	.029

APPENDIX N Continued...

	Variables	Component							
		1	2	3	4	5	6	7	8
12	There are information staff that serve as focal points for provision of information to support key decision making	-.015	.047	-.069	.084	.015	.047	.088	.085
13	Information is received on a regular and timely manner across departments	-.057	.130	-.045	-.044	-.003	.089	.022	.081
14	Information is received on a regular and timely manner across the management hierarchy	-.008	.165	-.058	-.003	-.047	-.010	-.015	-.008
15	Knowledge about competitors is consistently and systematically gathered	.110	.023	-.044	.003	.062	.046	.032	-.054
16	Possibilities of knowledge leaks to competitors is closely guarded and trade secrets rarely leak to competitors	.002	-.008	.054	.007	-.194	.088	.045	-.059
17	This organization has systematic processes for gathering, organizing, exploiting and protecting key knowledge assets, including those from external sources	.111	.050	-.022	.037	-.014	-.003	-.079	-.104
18	Important information can be quickly found by new users on the intranet (or similar network)	.005	.113	.027	-.034	.005	.013	-.083	-.011
19	The organization measures and manages its intellectual capital (IC) in a systematic way, and publishes regular IC reports to its external stakeholders	.060	-.025	.014	-.024	.188	-.003	-.009	-.082
20	There has been increased efficiency resulting from using knowledge to improve production processes	.001	-.101	.033	.219	.088	-.066	-.032	-.006
21	Knowledge sharing, creation, generation and maintenance is perceived as important to the firm's productivity	-.025	.087	-.036	.066	-.157	-.035	.057	-.103
22	The speed of informed decision making is fast in this organization	.053	-.006	.031	-.002	-.160	.029	-.096	-.094
23	Product development cycle times have reduced over the past five years	.031	.155	-.001	-.066	-.052	.082	-.041	-.195
24	Service quality by this organization has improved over the past five years	.089	-.017	.044	-.088	-.021	.013	.070	.000

APPENDIX N Continued...

	Variables	Component							
		1	2	3	4	5	6	7	8
25	This organization links people together to develop and share knowledge around specific themes	.039	-.087	.011	.070	.009	.047	.227	-.004
26	The ancient art of storytelling has been adopted to share knowledge in a more meaningful and interesting way.	-.023	.001	-.033	143	-.068	.028	.033	.078
27	This organization has an online resource that allows people to find colleagues with specific knowledge and expertise.	-.067	.007	.081	-.058	116	.027	.031	.000
28	Workplace settings and the format of meetings encourages informal knowledge exchange	.112	-.085	.004	.004	.043	-.010	.067	.076
29	Worker skills and knowledge have increased as a result of KM practices	-.073	-.068	.128	-.016	.042	.139	-.036	.076
30	There are knowledge implications for the organization when staff leave	-.007	-.103	.010	.081	.220	.049	.040	.046
31	This organization is able to retain good employees over a long period of time	.071	.038	.032	-.075	-.043	-.009	.012	.047
32	Knowledge management capabilities are packaged into products and services that are promoted by the organization's marketing dept	.101	-.034	.037	.088	.095	-.008	-.108	-.166
33	This organization is focused on research and development	.145	-.050	-.025	.026	-.017	.080	.048	-.131
34	This organization regularly launches new products and services	-.007	.055	.007	-.132	-.005	.081	.033	.281
35	Recognition of business opportunities is very strong within the organization	.089	.042	-.070	-.024	-.063	.042	.024	.141
36	There is a culture of sustained innovation	.019	-.074	.006	.094	.020	-.020	-.021	.350
37	There is a high degree of co-evolution with markets	.068	-.076	.032	.094	.065	-.009	.085	-.008
38	This organization utilizes unique technology to gain a competitive edge	-.034	.026	.033	-.037	-.081	.211	.027	.008
39	This organization's products are difficult to imitate	-.021	.115	-.042	-.073	.023	.064	.135	-.143
40	This organization's products are of superior quality when compared to those of our competitors	.035	-.106	.060	.048	.014	.075	.212	.007

APPENDIX N Continued...

	Variables	Component							
		1	2	3	4	5	6	7	8
41	The market share for this organization has been growing in the last five years	-.025	-.050	.212	-.039	-.035	.005	-.042	-.041
42	Sales for this organization have increased in the last five years	-.035	-.025	.191	-.039	-.007	-.064	-.071	.036
43	Profits for this organization have increased in the last five years	-.006	-.092	.173	-.003	.024	-.012	.045	.054
44	This firm's productivity levels have increased comparatively well when compared with other organizations in the same industry	-.013	.138	.056	-.097	-.019	-.074	-.054	-.096
45	This company has attained increased customer satisfaction in the last five years	.067	.031	.008	-.090	-.011	-.061	-.075	.113

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

APPENDIX O

FACTOR LOADINGS AND REDUCED INTERPRETATION

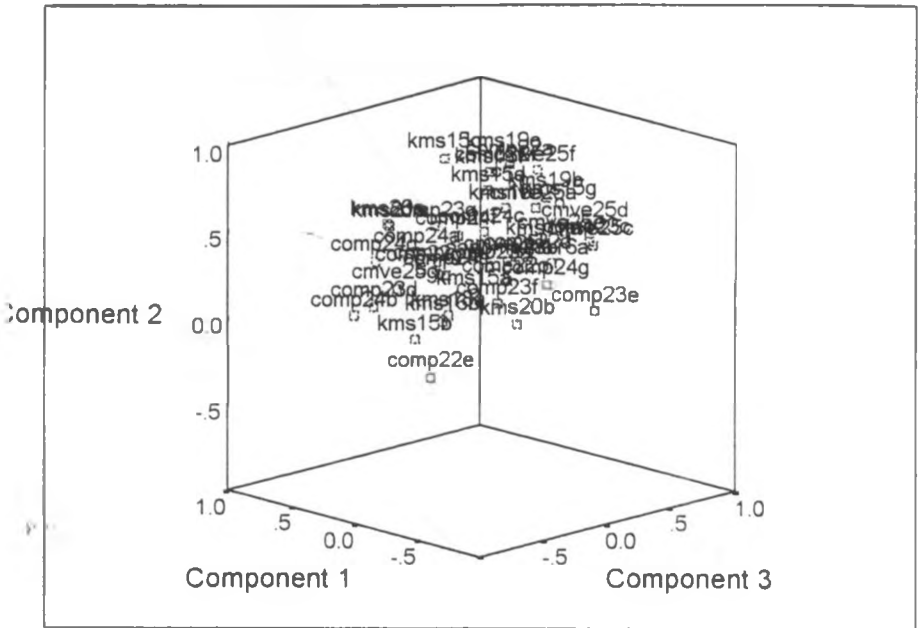
Factor	Item Description	Factor Loadings	Reduced Interpretation
	<p>Knowledge about competitors is consistently and systematically gathered</p> <p>This organization is focused on research and development</p>	<p>110</p> <p>145</p>	<p>Research and Development</p>
	<p>This organization regularly reviews its strategic plans</p> <p>The organization has clear ownership of legal entities e.g. copyright, contracts, licenses</p> <p>This organization rigorously maintains an inventory of the above legal entities</p> <p>Information is received on a regular and timely manner across departments</p> <p>Information is received on a regular and timely manner across the management hierarchy</p> <p>Important information can be quickly found by new users on the intranet (or similar network)</p> <p>Product development cycle times have reduced over the past five years</p> <p>This firm's productivity levels have increased comparatively well when compared with other organizations in the same industry</p>	<p>212</p> <p>121</p> <p>121</p> <p>130</p> <p>165</p> <p>113</p> <p>155</p> <p>138</p>	<p>Strategic competencies</p> <p>For Improved Productivity</p>
	<p>The best experts for different functions and having key knowledge within the organization have been identified</p> <p>The market share for this organization has been growing in the last five years</p> <p>Sales for this organization have increased in the last five years</p> <p>Profits for this organization have increased in the last five years</p>	<p>202</p> <p>212</p> <p>191</p> <p>173</p>	<p>Increased Performance</p>

APPENDIX O Continued...

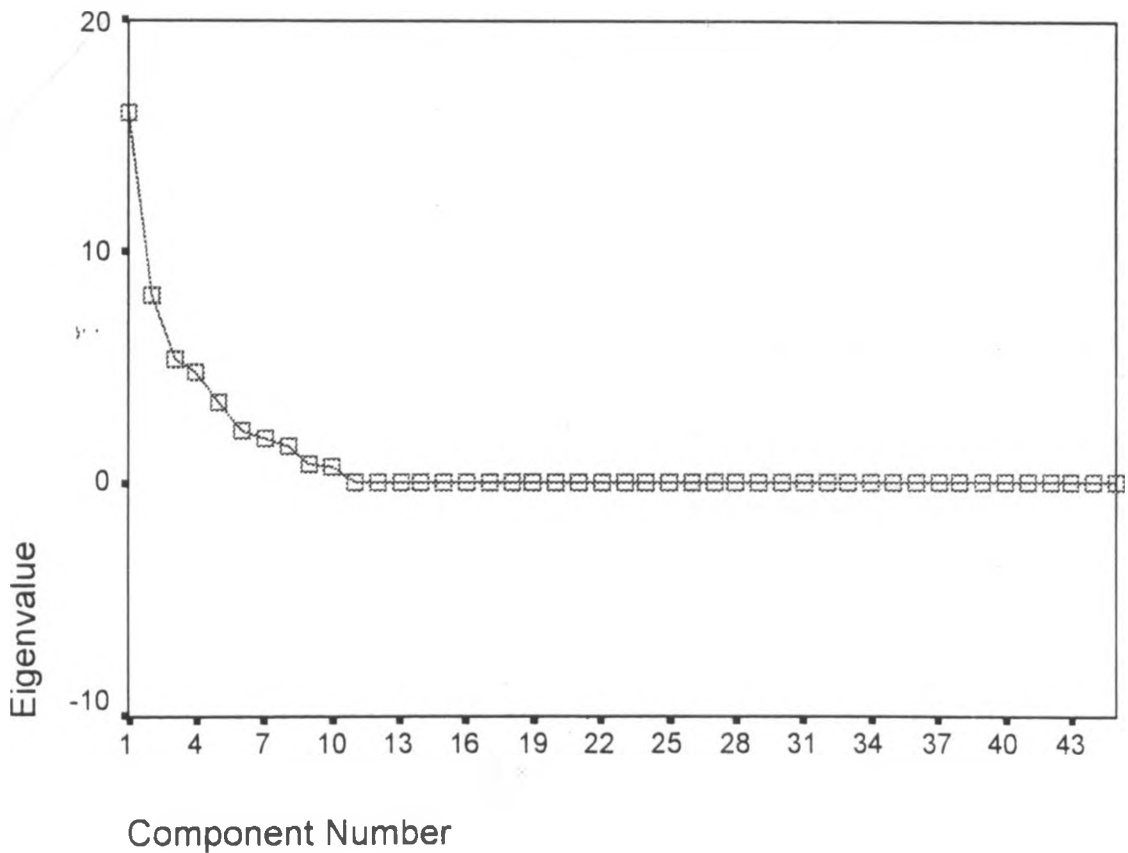
<p>This organization has a compelling knowledge vision and strategy, actively promoted by the Chief Executive.</p> <p>There has been increased efficiency resulting from using knowledge to improve production processes</p> <p>Service quality by this organization has improved over the past five years</p> <p>The ancient art of storytelling has been adopted to share knowledge in a more meaningful and interesting way.</p> <p>This organization is able to retain good employees over a long period of time</p> <p>There is a high degree of co-evolution with markets</p>	<p>.176</p> <p>.219</p> <p>-.088</p> <p>.143</p> <p>-.075</p> <p>.094</p>	<p>Strategic orientation</p>
<p>Possibilities of knowledge leaks to competitors is closely guarded and trade secrets rarely leak to competitors</p> <p>The organization measures and manages its intellectual capital (IC) in a systematic way, and publishes regular IC reports to its external stakeholders</p> <p>Knowledge sharing, creation, generation and maintenance is perceived as important to the firm's productivity</p> <p>The speed of informed decision making is fast in this organization</p> <p>This organization has an online resource that allows people to find colleagues with specific knowledge and expertise.</p> <p>There are knowledge implications for the organization when staff leave</p>	<p>- 194</p> <p>188</p> <p>- 157</p> <p>- 160</p> <p>116</p> <p>220</p>	<p>Internal competencies</p>
<p>In strategic planning meetings, the term knowledge management is used extensively</p> <p>There are in place mechanisms to codify experts' knowledge into user manuals and other tangible formats</p> <p>Worker skills and knowledge have increased as a result of KM</p> <p>This organization utilizes unique technology to gain a competitive edge</p>	<p>207</p> <p>265</p> <p>139</p> <p>211</p>	<p>Knowledge Conversion and Technology</p>
<p>The organization has clear ownership of non- legal knowledge entities e.g. reputation, networks, databases</p> <p>There are information management staff who coordinate knowledge repositories and archive material</p> <p>There are information staff that serve as focal points for provision of information to support key decision making</p> <p>This organization links people together to develop and share knowledge around specific themes</p> <p>This organization's products are of superior quality when compared to those of our competitors</p>	<p>- 163</p> <p>- 250</p> <p>.088</p> <p>227</p> <p>212</p>	<p>Quality Management</p>
<p>This company rigorously maintains an inventory of the above non-legal entities</p> <p>Knowledge sharing across departmental boundaries and individuals is actively encouraged and rewarded</p> <p>Knowledge management capabilities are packaged into products and services that are promoted by the organization's marketing dept</p> <p>This organization regularly launches new products and services</p> <p>Recognition of business opportunities is very strong within the organization</p> <p>There is a culture of sustained innovation</p> <p>This organization's products are difficult to imitate</p> <p>This company has attained increased customer satisfaction in the last five years</p>	<p>- 164</p> <p>167</p> <p>- 166</p> <p>281</p> <p>141</p> <p>350</p> <p>- 143</p> <p>113</p>	<p>Innovation and Opportunity recognition</p>

APPENDIX P: COMPONENT AND SCREE PLOTS FOR VARIABLES

Component Plot in Rotated Space



Scree Plot



APPENDIX Q

LIST OF BOOK PUBLISHERS

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
1	Acaçia Publishers	Muthithi/Tausi Rd	P O Box 14268-00800. Nairobi	020-3753302 0726-521770
2	Acton Publishers	P O Box 74419, 00200 jnmugambi@gmail.com info@acton.co.ke	P O Box 74419-00200 Nairobi, Kenya	(+254 722) 753- 227
3	Africa Herald Publishing House	Main St	P.O. Box 95 Kendu Bay	059-22227, 22244
4	African Urban Quarterly	Univ. of Nairobi	51336-00200 Nairobi	4449231
5	Africawide Network	P O Box 62480-00200	P O Box 62480-00200 Nairobi	312923/782845/7 83116
6	Amecea Gaba Publication	Kisumu/Eldoret Rd	P O Box 4002, Eldoret	053-61218, 62570
7	Baptist International Publications Services	Thika Rd	P.O. Box 30370, Nairobi	020-8563277
8	Bookman Consultants Ltd	Barot Hse. Kijabe St	P.O. Box 31191, Nairobi	020-240727, 245146
9	Book Distributers Ltd		47610-00100 Nairobi	210253/219885

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
10.	Camerapix Publishers Ltd	ABC Place, Waiyaki Way	P O Box 45048, Nairobi	020-4448923, 4448924.
11	Cana Publishing	Jabavu Ln. Off Argwing Kodhek Rd .	P O Box 4547-00100 Nairobi	020-2710586, 2720084
12.	Capital Times	Raicin Hse. 4 th Flr. Accra Rd	P O Box 144488-00100. Nairobi	020-217662
13.	Claripress Ltd	Kangundo Rd	P.O Box 46991, Nairobi	020-4347088, 570740, 571614, 571857
14.	Consolata Publishers	Consolata Institute of Philosophy	PO Box 49789 Nairobi	Tel 020-891506
15	Creative Print House	G V Plaza, Woodlands Lane	P O Box 14648, Nairobi	2720212, 2733095
16.	Dataweb Consultants			251919
17.	Dhillon Publishers	Factory St.	P O Box 32197, Nairobi	020-537553, 552566
18	East African Educational Publishers	Brick Court, Mpaka Rd/Woodvale, Grove, Westlands	P O Box 45314-00100, Nairobi	020-4444700, 4445260/1
19	Egerton University Press	254-051-62550; Fax: 254- 051-62442	P O Box 20107 Egerton	254-051-62550; Fax: 254-051- 62442

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
20.	Evans Brothers Kenya Ltd		P.O. Box 44536-00100, Nairobi	020-343992
21.	Evangel Publishing House		Pvt. Bag 28963 Nairobi Kenya	020- 8560839, 020 – 8562047
22.	Farmview Media Services	IBEA Bld. 1 st Fr. Moi Avenue	P.O. Box 74123, Nairobi	020-543797
23.	Friends of the Book Foundation		P.O. Box 39264	251490/812313
24.	Focus Publications Ltd	Siwaka Estate, Hse 125. Opp Strathmore College.	P.O. Box 28176-00200, Nairobi	020-600737
25.	Foundation Books			0722-644465
26.	Geoperi Publications		P.O. Box 69444-00400 Nairobi	213387/578316 0721-360204
27.	Gideon S. Were Press	Blessed Hse, 3 rd Flr., Ngara Rd.	P.O. Box 10622, Nairobi	020-600737
28.	Headlines Media Services Ltd	Ngong Rd	P.O. Box 4653, Nairobi	020-574623
29.	Heinemann Kenya Ltd		P.O. Box 52 Kerugoya	060 21460
30.	Highway Publishers	Bima Hse Harambee Ave.	P.O. Box 54678, Nairobi	020-222810, 240668, 242585, 242624
31.	In House Publishing Ltd	St. George's Hse, Parliament Rd.	P.O. Box 24949, Nairobi	020-240712, 545070, 545278

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
32.	Industrial & Trade Director Co.	Mago Hse. Gaberone Rd	P.O. Box 44169, Nairobi	020-333763. 340954
33.	Ines May Publicity	Riara Rd	P.O. Box 25087 Nairobi	020-568048
34.	Inter Africa Book Distributors			252034, 0722-660047
35.	International Journals Centre		46329-00100 nairobi	532056
36.	Initiatives Ltd	Crescent Rd	P.O. Box 69313, Nairobi	020-3744095
37.	Institutional Communication Services Ltd	Ellies Hse, 3 rd Flr. Baricho Rd	P.O. Box 20175, Nairobi	020-530664
38.	Intercontinental Publishers Ltd	Shell/Bp Hse. Harambee Ave.	P.O. Box 45754, Nairobi	020-216595, 219823
39.	Jacaranda Designs Ltd	Muthithi Rd, Off. Museum Hill Rd	P.O. Box 76691, Nairobi	020-3744737, 3746270, 3746270,3746277
40.	Jemisik Cultural Books		31191-00600 Nairobi	245146 0722-875506
41.	Jomo Kenyatta Foundation	Enterprise Rd	P.O. Box 30533-00100, Nairobi	020-557222, 531965, 536200/1/2
42.	Jyoti Bindu Publications Ltd M.S. Patel	Printed by Bizone	P.O. Box 32295, NBI	
43.	Kaiba Ltd	Tumaini Hse, Nkuruma Ave	P.O. Box 52324, Nairobi	020-241688

Appendix I Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
44	Kaizen Investments Ltd	Luthuli Hse. 1 st Flr.	P O. Box 76529. Nairobi	020-3743928
45	Kawal Enterprises Ltd	Luthuli Hse. 1 st Flr. Luthuli Ave	P.O. Box 74968. Nairobi	020-211520
46.	Kenya Baptist Media	Thika Rd	P O. Box 30022. Nairobi	020-8563261
47	Kenya Institute of Education	Muranga Rd	P.O. Box 30231. Nairobi	020-3749900. 3749901, 749902, 3749903
48	Kenya Leadership Institute		P.O Box 2671-00200. Nairobi	
49	Kenya Literature Bureau	Kapitu Rd. Off Mombasa Rd	P.O. Box 30022-00100. Nairobi	020-351196/7. 600839, 605595
50	Kenya National Library		30573,00100 Nairobi	725550
51.	Kenya Publishers Association	Jameson Court, Flat 15	P O. Box 4267. Nairobi	020-3741652. 578259
52.	Kenya Publishing House	Lusaka Rd.	P O. Box 30492. Nairobi	020-556407
53.	Kwani Trust		P O. Box 2895-00100 Nairobi info@kwani.org	4451383/4450490 0724
54	Lake Publishers		P O. Box 1743 Kisumu	2543522/ 22291

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
55.	Law Africa Publishers Limited	Co-op Trust Plaza, 1st Flr Lower Hill Rd	P.O. Box 4260-00100 Nairobi	020-2722579, 2722580
56.	Legal Media Ltd	Tumaini Hse. Moi Ave., 3 rd Flr.	P.O. Box 8947, Nairobi	020-230255, 248698
57.	Longhorn Kenya Ltd	Funzi Rd. Industrial Area.	P.O. Box 18033-00500, Nairobi	020-523579/80, 532591, 534181, 540037
58.	Longman Kenya Ltd	Next to Methodist Guest Hse. Lavington	P.O. Box 10679-00100, Nairobi	020-577302
59.	Lurambi Publishers			0721-516530
60.	Macmillan Kenya Publishers Ltd	Kijabe St.	P.O. Box 30797-00100, Nairobi	020-220012, 224488, 224488
61.	Malimu Publications		P.O. Box 46264 Nairobi	3741067/ 3744507
62.	Maneno Publications		P.O. Box 13770-00800, Nairobi	020-571854
63.	Marimba Publishers		P.O. Box 2157-00200	
64.	Moi University Press		P.O. Box 3900, Eldoret -	
65.	Motivating Educational Enterprises Karanja Ndungu/Njau Mwangi		Motivating2000@yahoo com	0722-658203

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
66.	Mountain Top Publishers		1057, Nyeri	01712749
67.	MvuleAfrica Publishers		2157-00202	318531
68.	The Media Institute	Cargen Hse. Harambee Ave	P O. Box 62651. Nairobi	020-217082. 217209. 219768. 244603
69	Micro Typesetters Ltd	Hill Plz Bldg, 10 th Flr. Ngong Rd		020-2717543. 2722137
70.	Mohanns Publishers		P O Box 12865. Nairobi	020-797407
71	Nation Media Group		49010-00100 Nairobi	337710
72.	News Services Ltd	Protection Hse. Parliament Rd	P.O. Box 41361. Nairobi	020-340307. 340428
73.	News Trachers Publishers Ltd , .		P O Box 47368. Nairobi	020-4449734. 4449741
74.	Newsread International	Leaders Hse. 1 st Flr. Moi Avenue	P O Box 46854. Nairobi	020-221815. 247758. 331402. 607252
75.	Njigua books		1158, Ruaraka. Nairobi	812874/ 2015424
76.	Nzomo Educational Supplies Ltd	Langata Shopping Centre	P O. Box 72796, Nairobi	020-604872

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
77.	Open & Distance Education Trust	Off Thika Rd	P.O. Box 61070, Nairobi	020-812506
78.	Oakland Media		P.O. Box 56919-00200	4441319/ 4451817
79.	Oluhgraphics		P.O. Box 62256-00200, Nairobi	
80.	Oxford University Press	ABC Place, Waiyaki Way		020-4440555, 4440556, 4440557
81.	Pamika Booksellers		P.O. Box 31392 Nairobi	229720
82.	Paulines Publications Africa		P.O. Box 49026 00100 NAIROBI GPO	
83.	Pezi Publishers		58 Ronald Ngala Nairobi	811029
84.	Phoenix Publishers Ltd	Coffee Plaza, Exchange Ln	P.O. Box 18650, Nairobi	020-222309, 223262
85.	Power Marketing		P.O. Box 21312, Nairobi	020-310699
86.	Queenex Holdings Ltd	Sonulux Hse, 3 rd Flr	56049-00200	253291
87.	Reginan Professional Designers		P.O. Box 52015, Nairobi	020-794935
88.	Rollout Publishing Ltd	Ukulima Co-op Hse	P.O. Box 58882-00200, Nairobi	020-341365, 341366

Appendix K Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
89.	Royal Communications (K) Ltd	Sonalux Hse. 7 th Flr. Moi Ave.	P.O. Box 58778. Nairobi	020-310408
90.	Rural Publishers Ltd	Manana Bldg. Tom Mboya St.	P.O. Box 67900. Nairobi	020-211715. 217298. 228738
91.	Sare Periodicals and Book Centre		51336-00200	4449231
92.	Sasa Sema Publications Ltd	South Gate Str	P.O. Box 13956-00800 Nairobi	020-550398. 550399. 550400
93.	SAT Publications		P.O. Box 39657. 00623 Parklands. Nbi	
94.	Science Scribes Co. Ltd	Jimca Hse. Upper 3 rd Flr Woodvale Grv. Westlands	P O Box 14869-00800. Nairobi	020-4442844
95.	Scientific Media Services Ltd	Hazina Towers. 19 th Flr. Hwy	P O Box 55787. Nairobi	020-213872. 242233
96.	Send Apply Ltd		P O Box 62766 Nairobi	020-213379
97.	Shadcom Media Services	General Commodities Bldg	P O Box 80312. Mombasa	041.2492212
98.	Shred Publishers & Suppliers	Krishna Mansion. 2 nd Flr.	P O Box 7732-00100. Nairobi	020-213047
99.	Single Education and Publishers Ltd		P O Box 14451. Westlands. Nairobi	531080
100	Space Sellers Ltd	Chepkerio Rd	P.O. Box 47186. Nairobi	020-555811/ 530598/9

Appendix J Continued...

NO.	NAME	PHYSICAL ADDRESS	POSTAL ADDRESS	TELEPHONE
101.	Star Books		42157-00100 Nairobi	3745201/ 3752058
102.	Strathmore University Press	Madaraka Estate, Ole Sangale Road	P. O. Box 59857, 00200-City Square	(+254) (0)20-606155
103.	Suba Books and Periodicals	Univ of Nairobi	P O Box 51336, Nairobi Email: subabooks@iconnect.co.ke	Tel: (+254 2) 449186 Fax: (+254 2) 444110
104.	Temsik Cultural Books Ltd	Kimathi St.	P O Box 67346, Nairobi	020-214286
105	The Communications House Ltd	Hughes Building, Kenyatta Ave	P O. Box 53328, Nairobi	020-318620
106	Tips and Trends Holding	Ellies Hse, 3 rd Flr Baricho Rd	P.O Box 22469, Nairobi	020-531674
107.	Transafrica Press	Kenwood, Hse, Kimathi St.	P O. Box 48239-00100, Nairobi	020-217891
108	Travel Trade Communications Ltd	Norwich Union Towers, Mama Ngina St.	P O Box 30882, Nairobi	020-213998
109	University of Nairobi Press	UKML Bldg, 3 rd Flr, University of Nairobi	P O Box 30197-00100, Nairobi	020-222235, 285811, 318267
110	Update Publishers Ltd	Continental Hse, Harambee Ave.	P O Box 73824, Nairobi	020-349617
111.	Upmarket Solutions Ltd	View Park Towers, Uhuru Highway	P O. Box 6245, Nairobi	020-246245, 246832

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Appendix K Continued...

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112.	Uzima Foundation	Mbaruk Road, Golf Course. P.O. Box 4356 - 00200. Nairobi, Kenya	P O Box 52218, Nairobi	020-2721410
113	Uzima Press	Imanu Hse. 2 nd Flr. Parliament Rd	P O. Box 48127, Nairobi	020-216836. 220239
114.	Vide~Muwa Publishers LTD Ltd	Nairobi West, Kogo Star Plaza (Next to Telkom) Langata Road.	P O. Box 3839-00506 info@videmuwapublishers.com	608387 608388
115.	Wanjenga Enterprises Ltd	Clyde Hse. 2 nd Flr., Kimathi St.	P O Box 44094, Nairobi	020-243165
116.	Wentoo Publications		P.O. Box 69404 Nairobi	0733-241023
117.	Western Educational Publishers	3 rd Flr., 64 Arcade Oloo St.	P O. Box 4140 Eldoret	0321-32651
118.	World Link Press Publishers	Development Hse, Moi Ave	P O. Box 17075, Nairobi	020-316925. 316928

