EFFECT OF KNOWLEDGE MANAGEMENT ON COMPETITIVE ADVANTAGE IN THE REAL ESTATE SECTOR: THE CASE OF PAM GOLDING PROPERTIES

BY

LILIAN NDINDA NZONGI

UNITED STATES INTERNATIONAL UNIVERSITY- AFRICA

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A Research Project Report Submitted to the Chandaria School of Business in Partial Fulfilment of the Requirements for the Degree of Master of Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

SPRING 2018
STUDENT DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other university or academic institution other than United States International University for academic credit.

Signed: _______________________________  Date: ____________________________

Lilian Ndinda Nzongi (ID 644638)

This project has been supervised for examination with my approval as the appointed supervisor.

Signed: _______________________________  Date: ____________________________

Professor Peter M. Lewa

Signed: _______________________________  Date: ____________________________

Dean Chandaria School of Business
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This study’s impetus stems from the realization that the real estate industry in Kenya is currently rife with challenges, despite property pundits auguring its promising future. For real estate firms to remain relevant, research is necessary to investigate the use and management of Knowledge and its effect as a source of Competitive Advantage. The general objective of this study was to investigate the effect of knowledge management (KM) on the competitive advantage of real estate firms. This research was guided by four specific objectives: 1) to determine the dimensions of knowledge management employed by real estate firms in Kenya, 2) to determine the effect of information technology in KM on competitive advantage 3) to determine the effect of leadership style in KM employed on competitive advantage and 4) to determine the effect of organizational structure in the KM employed on competitive advantage in real estate firms.

The research design selected for this study was a descriptive research to identify and explain association between variables. The target population for the study were all the fifty employees of Pam Golding Properties (PGP), Kenya. Fifty questionnaires were distributed and 46 responded obtaining a 92% response rate. The study employed Spearman’s correlation and multiple linear regressions for analysis. Data collected utilized SPSS (version 24) software and analysis done gave both descriptive and inferential statistics. Following analysis, results were presented in tabular and chart form and descriptions given.

Analysis of the first objective which was to examine the dimensions of knowledge management applied in the firm, revealed that at PGP Kenya, there was a clearly defined system of KM that was widely understood and utilized by both employees and management. However, PGP does not share information with other RE industry players for better knowledge management. The second objective established that employees used technology tools to create, share and store knowledge. Critical to note was that IT in use contributed to enhanced knowledge and eased decision making. Analysis of the third objective seeking revealed that the organization’s leadership embraced an open-door policy and enhanced free knowledge sharing through dialogue and feedback. Many respondents however, strongly agreed that little if any awards or promotions were given for knowledge creation or enhancement. The fourth objective showed that PGP’s organizational structure facilitates task accomplishment according to KM services.
This study concludes that PGP Kenya has acknowledged that they viewed KM to be a major strategic imperative for staying competitive in the industry. The firm’s investment in budgetary allocation, staff trainings and IT infrastructure has had impetus from this realization. The main motivator for PGP implementing KM was quality service delivery, competitive advantage sustenance and client acquisition and retention. PGP has enjoyed competitive advantages in innovation, quality service and employee efficiency because of investing in KM. However, it also concludes that PGP could stand to benefit more from KM if it incentivized knowledge creation among employees. From the study it can be inferred that KM has benefited the firm and not only enhances efficiency leading to competitive edge but also delivers expertise to the firm by giving the firm’s agents, the opportunity to focus on its key competencies.

This study recommends that real estate firms invest more in KM systems; not only on internal information sharing but liaise with related and supporting industries e.g. banking, to capture and share knowledge that would be vital in alignment of knowledge to business strategy for both industries, ultimately contributing to profitability and performance. The study further recommends that RE firms should strike a balance between people and technology elements of KM. A good technology-based KM system need not be complicated or capital-intensive, in so far as it could serve the core business by providing internal information within a group and sharing customer-specific information with clients. It should further be noted that the best tools and processes alone cannot achieve a KM strategy. Ultimately, KM aims to free up professional “valuable” time to focus on creating thoughtful and innovative approaches.

For further studies, there is a need to undertake a study to establish the barriers involved in KM implementation between related/supporting industries fundamentally in knowledge sharing in order to bridge the gap between industries.
ACKNOWLEDGEMENT

First, I would like to thank the Almighty God for the gift of good health and strength throughout the period of this study.

I would also like to sincerely thank my supervisor, Professor Peter M. Lewa for his work ethic and dedication in helping me to complete this research report in the prescribed period.

Finally, I thank my family and friends who have always been unwavering in their encouragement and support.
DEDICATION

I dedicate this research report to the girls in my life whose unyielding love and support made this research process accomplishable.
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<td>HR</td>
<td>Human Resources</td>
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<td>HPI</td>
<td>Housing Price Index</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Frost (2012) defines KM as “the systematic management of an organization’s knowledge assets for the purpose of creating value and meeting tactical & strategic requirements consisting of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge.” GMI Market Research Terms describes KM as a system that affords control, dissemination, and usage of information and is usually a net-enabled corporate initiative. Girard and Girard (2015) puts it simply by saying that KM is the creation, transfer, and exchange of organizational knowledge to achieve a [competitive] advantage. Samuells (2011) specifically links it to real estate by noting that “real estate organizations require real-time access to knowledge on a variety of subjects, including information on the core business and conditions affecting it, the business units’ current objectives and corresponding real estate requirements, and the latest thinking in approaches to real estate.”

The success of the property industry players depends on how they capture knowledge from every component in real estate industry and turn it into processed or analysed knowledge for the usage and benefit of the firm and industry. Managing the knowledge falls under the scope of Knowledge Management (Samuells, 2011). Knowledge management is considered a powerful strategy in this information age and regarded as a determinant for maximizing the organization performance and competitive edge. In the real estate industry, players include property valuers, real estate brokers, marketers, agents, property developers and property managers. The nature of these players services would depend heavily on market knowledge to ensure that they can deliver the best services to clients. Although many organizations have successfully adopted the knowledge management concept, there are still many organizations unable to implement knowledge management comprehensively (Mosoti & Masheka, 2010).

Various literature has addressed these issues, and many of them agreed that most of the problems came from the combination of internal and external processes, specific to the nature of the organization’s core business (Aggestam et al., 2010; Lam & Chua, 2005; Matzdorf et al., 2008).
Knowledge Management (KM) is increasingly gathering attention. This is partially due to the appreciation that progressive economies will depend increasingly on their power to generate and deploy knowledge for competitive advantage. KM is a cross-disciplinary field that draws from a wide range of disciplines and technologies such as cognitive science, expert systems, artificial intelligence, lean management, knowledge-based management systems, computer-supported collaborative work, library and information science etc. There is a general agreement that KM will represent the biggest competitive advantage for organizations in the new millennium (Halawi, 2008). The main cause for this concern with KM is the idea propagated forth by Halawi et al. (2017) that knowledge and its various application are the means by which creativity can be promoted (Nonaka & Nishiguchi, 2000; Nonaka & Takeushi, 1995), innovation facilitated (Hargadon, 1998; Von Krogh, Ichijo & Nonaka, 2000), and competencies created in such a way as to advance overall organizational performance whether in the public, private or not-for-profit sectors (Pitt & Clarke, 1999). KM is crucial to organizational survival, nonetheless, it is a complex job involving great outflow of resources. As such KM is becoming an ever more persistent subject within the business community.

The key aim of KM is to enhance competence and simplify communication procedures, permitting team members to concentrate on inventiveness and novelty rather than on finding information (Samuells, 2011). According to O’Dell (1996), KM applies systematic approaches to find, understand, and use knowledge to create value. Wiig (1997a, b) defined KM as “the systematic, explicit, and deliberate building, renewal, and application of knowledge to maximize an enterprise’s knowledge-related effectiveness and returns from its knowledge assets.” With today’s global and competitive environment, KM is vital for the success of the real estate industry. It behoves Corporations to impart its knowledge or else elude its competitive edge. This necessitates an all-inclusive solution that permits the business to explore and seek, categorize and organize, and gather all corporate knowledge in a sole and protected warehouse for reviewing critical matters (Samuells, 2011).

Real estate organizations require immediate access to knowledge on a mix of issues, including information on the main business and conditions influencing it, the business units existing objectives and resultant real estate requirements. Real estate companies are knowledge intensive, and the application of progressive technology might well change these organizations in the future and hence they symbolize an industry that appears
suitable to KM examination thus the necessity of this study at this current tumultuous time.

Throughout the world, Knowledge Management has been enrolled in company practise in most of the successful management and consultancy firms. This business practise has proved the vital need for knowledge which when utilised aptly propagates innovation and contributes to competitiveness of the firm (Conradie, 2010). Researchers Kruger and Johnson (2011) argue that a firm’s overall strategy should clearly reflect its knowledge management strategies, the value of these strategies, the application of them and how value to the customer is directly embroiled in the effectiveness of knowledge management within the firm. It should also reflect how this value feeds into the economy so as to aid companies overcome the challenges of creating optimal measure to assess the effectiveness of KM initiatives (Kruger & Johnson, 2011). In their research on Knowledge Management enhancement, Kruger and Johnson (2011) found that a positive correlation existed between positive growth in Knowledge management effectiveness and Organizational performance.

The key to gaining and retaining a competitive edge was found to be attainable by ensuring that systematic knowledge of a company was effectively managed through strategies that develop, organise, transfer and retain their resources through knowledge throughout the whole organization (Ahmad and Daghfous (2010). Their research revealed that KM played a vital role in the process of strategy and in analysis of the many organizations in their study, they underscored the value obtained from knowledge sharing activities. These values included improved communications, visibility, and adaptability to changing environments which all led to increased competitiveness of the firm (Ahmad & Daghfous, 2010).

Competitive Advantage is the distinctive competencies that set an organization apart from its competitors (Tiwana, 2002). Firm’s resources and capabilities are considered to be the source of Competitive Advantage. Resource based view (RBV) is the concept widely adopted to perform internal analysis of a firm and identify its Competitive advantage (Wang, 2014). It is formulated with the premise that firms possess a bundle of resources and capabilities (Wernerfelt, 1984) that provide the basis for Sustainable Competitive Advantage (SCA) and superior profitability. A firm is said to possess SCA if its resources and capabilities are Valuable, Rare, In-Imitable and Non-Substitutable as per the
Valuable Rare Inimitable Organization (VRIO Framework) capabilities to exploit resources efficiently (Barney, 1991). By using the RBV as the broad guideline, firms adopt Value Chain Analysis (VCA) or SWOT Analysis to aid Strategic Analysis and identify their strategies to compete in the market. By focusing and building strengths and maximizing the favourable opportunities in market place, firms gain competitive advantage. Both, Value Chain Analysis & SWOT Analysis aid in introspection of firms to identify their competency. This is followed by working & building their competency innovatively, and thus achieving SCA.

Regardless of the industry, some firms are superior performers than others because they conceivably possess a distinctiveness which is hard to imitate that allows them to outperform their rivals (Bharadwaj et al., 2015). In the field of strategy management, the inimitable, unique capabilities and resources are known as the sources of Competitive Advantage (CA). CA can result either from implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors (Barney, 1991; McWilliams and Turk 1989) or through superior execution of the same strategy as competitors. Sustainability is achieved when the advantage resists erosion by competitor behaviour (Porter, 1985) In other words, the skills and resources underlying a businesses’ competitive advantage must resist duplication and remain unique (Barney, 1991).

Numerous studies have investigated the conditions under which a businesses’ competitive advantage is sustainable (Barney, 1991; Coyne, 1985). Barney describes four qualities pertinent to a resource being a source of CA. It must be valuable; it must be rare within the competitor’s realm; it must not be easily replicable, and it must also be un-substitutable within that market.

Value in a firm’s resources/skills is defined by its ability to aid a firm in formulating and implementing strategies that improve its efficiency and /or effectiveness. However, if these resources are possessed by many competitors they cannot be a source of SCA. Valuable/rare organizational resources can be source of SCA only if firms that do not possess these resources cannot obtain them (as a direct consequence of capability gap [Coyne, 1985] the critical resources being imperfectly imitable (Coyne 1985; Barney 1986a). In 2015, the world faced some major upheavals including the collapse of oil prices, the rebound of the US dollar, the slowdown of the Chinese economy, the weakening of the Russian economy, the European crisis, the fear of a Grexit and terrorism.
These significant incidents, among others, created a highly volatile environment for all markets. As an emerging market, Kenya was directly affected by these international events and faced several challenges. Among these were the depreciation of the shilling against the dollar and the British pound, inflation that exceeded 8% in December 2015, a Central Bank Rate that increased twice in 30 days, thereby significantly increasing the cost of finance, an increase in the number of red loans, and the stoppage of operations by two banks according to the CBK Index. There was also an obvious slowdown in the real estate market, with the house price index gaining a marginal 4.21 per cent increase in the first three quarters of 2015, according to the Kenyan Bank Association HPI (2015). The increase in the external debt and the need for money, which pushed the yield of Treasury Bills to more than 23 per cent, were also among the main phenomena that marked 2015.

On the positive side, the real estate sector remained the focus of investment interest. According to the latest data released by the Kenya National Bureau of Statistics (KNBS), the real estate sector’s year-on-year growth at the end of third quarter of 2015 was 5.4 per cent, while the sector’s overall contribution to the GDP remained at 8 per cent. The growth in the real estate sector was driven by heavy government investment in infrastructure, which opened up satellite towns such as Ruaka, and Mlolongo (Cytonn real estate, 2016). At the same time, Madowo in 2015 reported that the devolved government created investment and development opportunities in the counties, since it was up to each county to fund local development. Favourable demographic trends, including a growing middle class that is spurring development across all real estate sectors, also contributed to the sector’s growth. The key question then remained whether the growth of this sector, which is predominantly local — with a small percentage of foreign investors — would be able to maintain a return on investment that would maintain high investor interest and the asking prices in the market sustainable.

In the last few years, Kenya has been performing on average better than what experts had predicted at the beginning 2000. The country’s economy has been consistently growing by unprecedented percentages according to property pundit, Kioleoglou, (2016). With an average growth rate above 5 per cent since 2010, the Kenyan economy has been upgraded to a middle-class one. Kioleoglou (2016) continues to argue that, at the same time, many people’s expectations of an even better future are growing too. Between the actual numbers and Kenyans’ expectations, the real estate market has capitalised the most on this positive course. He notes that real estate values have been growing all over the
country, with Nairobi and its satellite towns gaining amazing price rises and making big profits for almost all industry players.

Today, some of these factors that boosted the real estate market and the Kenyan economy are facing challenges. 2017, will be remembered as one of unprecedented events for the nation of Kenya. The nation is rife with challenges from political instability as a result of elections upheavals, financial instability as the stock market reports sinking results, economic woes with big name firms affected, case in point- Nakumatt. (“Real Estate Today,” 2016). The real estate sector has also been adversely affected. With the increased volatility, the Real Estate sector has to prove its ability to continue attracting investments. According to Hass Consult research of 2016, The Chinese economy is shaky and oil prices have been so low that they do not allow for investment in new oil exploration in the country. Besides, the shilling if facing stability problems. Consequently, in 2016 the sector’s growth was driven mainly by the fact that an increasing number of people cannot afford housing.

Despite the woes, key factors that played a vital role in the real estate market in 2016 include: The rapidly expanding middle class in the country that was searching for affordable, secure and aspirational living that meets their housing needs; the housing deficit which according to the National Housing Corporation (NHC), has a deficit of more than 200,000 units per annum for the low- to middle-income market. Sustained investment in infrastructure and urban planning is also key to continued growth of the sector which the government is engaged in. Quality, financial stability with fair interest rates and lending options, devotion and political goodwill, and political stability will all play a role in the health of the real estate sector (Ngugi, 2017). Kenya’s real estate market is adopting a wait and see attitude due to the elections upheavals. Kenya’s real estate market is well diversified in terms of income, geography and types and despite the nervous tension of elections, there is reason to adopt a hopeful attitude of the sector. (Okumu, 2017). The Central Bank of Kenya had projected that the economy would grow by 5.7 per cent in 2017 a slow-down from 5.9 per cent in 2016. The International Monetary Fund and the World Bank have also projected a sub-six per cent growth rate. According to Ngugi (2017), Real estate players Hass Consult, Cytonn Investments and Knight Frank have, however, remained bullish on the sector, which has witnessed fast growth in recent years, claiming that a drop-in price as a result of impending elections, will actually lend the property market more stable price growth. (Ngugi, 2017). Increased
liquidity is a recipe for increased investment in the real estate sector and hence leads to an increase in property value. This has a positive effect on the real estate sector (Cytonn, 2017).

These present-day complexities of the dynamic and competitive business environment are exerting enormous pressure on real estate firms, and they are all working hard to survive, thus they put forth a great deal of effort in developing their competitive strategy over their competitors to achieve a sustainable competitive advantage and thereby to enhance business performance (Low & Nair, 2010). The environmental turbulence has forced many businesses to scrutinize their competitive strategies more closely and determine the sources that would provide a sustainable competitive advantage in the business environment. Saravananan (2017) stated that the first and central to the developing a sustainable competitive advantage (SCA) in rapidly and often changing circumstances is the ability to learn fast and adapt quickly so as to create new advantages that will keep them one step ahead of competitors. It is in this regard that organizations are developing and implementing strategies to achieve a sustainable competitive advantage and enhance their survival (Porter, 1985).

A body of literature to address sources that may be used to attain a Sustainable Competitive Advantage (SCA) has been developed by many (Barney, 1991; Hoffman, 2000) scholars and professionals in the past. Hoffman (2000) summarized the development of the concepts of sustainable competitive advantage until 1999, which have been evolved from as early as 1965. In brevity, the development of SCA contributed by those scholars could be categorized into two major concepts: First, Cost and differential advantage concepts that was focused on by an earlier group of scholars from 1960s to early 1980s and second, resource-based concept that was focused on by a latter group of scholars from mid 1980s. The concept of Sustainable Competitive Advantage has been researched on in different industry contexts within and outside Kenyan. In Kenya, various scholars (Kimari, 2010; Oyeyo, 2008; Ndung’u, 2006; Kimani, 2006 and Ngigi, 2006) investigated on different aspects of sustainable competitive advantage among identified Kenyan companies. At the international level, several studies (Khandekar and Sharma, 2005; Wunyu, 2010; Javalgi and Radulovich, 2005; Sharkie, 2003; Azizah and Norshuhada, 2010) had been carried out in relation to Sustainable Competitive Advantage. SCA sources have been found to include Low cost leadership, Quality, Speed, focusing on specific segment of the market, Innovation, developing human assets,
Knowledge Management, entering into Strategic Alliances, creating virtual organization, Knowledge Management, building a learning organization, level & quality of service etc. (Saravanan, 2017). This study focuses on Knowledge Management and its effect as a source of SCA as applies to the real estate sector in Kenya which is not evident in recent research studies in the sector even though a number of empirical studies have been done in other sectors like the manufacturing enterprises with results showing KM was contributory to gaining competitive advantage and hence which superior performance (Cheruiyot, Jagongo & Owino, 2012).

Muiruri (2016), studied knowledge management and its effect on organizational performance in universities and concluded that written documents are used as part of its knowledge management sharing strategy, however, some had no concept of this and knowledge had become redundant due to their nature in becoming relic. The effect of knowledge management on the competitive advantage of real estate firms in Kenya was investigated by Odero (2017) and his conclusion was that knowledge management had proved to be a strategy that can be employed by real estate firms wishing to attain competitive advantage. This study has been adapted from his research and will investigate if findings can be generalized in the real estate sector.

This research focuses on one real estate firm: Pam Golding Properties. Offering a full spectrum of property services, Pam Golding Properties boasts a network of over 300 offices in sub-Saharan Africa as well as offices in the UK, Germany, Mauritius and Seychelles, Spain, Portugal and in the USA. The Group is a world-class global organization comprised of a number of operating companies which cover the full spectrum of the property market in sub-Saharan Africa and internationally. It forms part of a strategic alliance with Savills plc, gaining access to its prestigious network of over 600 offices worldwide. Through this partnership and other associations, PGP offers a comprehensive range of property services across various real estate sectors - from residential sales, acquisitions and rentals, development sales, property management and home loans to commercial property and business brokerage advisory services (PGP, 2017). This study will focus on PGP Kenya, a franchise company of PGP Group. It has been a bonafide real estate agency for over 15 years now and it well entrenched in the Kenyan business and real estate environment.
1.2 Statement of the Problem

Since 2014, the Kenyan economy has been upgraded to a middle-class one and the real estate market has capitalised the most on this positive course. However, the prolonged and uncertain election period has seriously challenged Kenya’s economy and property market. Marginal property price increases have been experiencing further slowing down for the last two years (Kioleoglou, 2017). Beginning of November 2017, the Kenya Bankers Association (KBA) released the House Price Index (HPI) for the third quarter 2017 which reported a 0.42% increase in overall house prices compared to the previous quarter’s 0.98%; an indication of no respite for the declining trend since the third quarter of 2015. Another report released by the national statistician shows that the value of buildings approved for construction by Nairobi County in 2017 declined by 18.4% in the same period last year.

KNBS in 2017 attributed the slowdown in the construction sector to a toxic political climate as well as poor credit extension by the banking sector. Kioleoglou (2017) augurs heady days for the sector that for a while had boosted the country’s economy, particularly after Kenya rebased the way it calculated its GDP and included real estate in its computation. The property market, real estate and construction sector is indissolubly linked with the economic performance and growth of the country. The constrained supply of financing, the downward trend of the HPI, the constant increase of Non-Performing Loans (NPL’s), the prolonged election costs, the slowing credit growth and the new accounting rules for banks are all threats to economic growth and are all adding more pressure and leaving fewer options for potential investors.

In light of all these facts, real estate firms must reconsider their strategies. Basic economics and business principles show that all markets operate in cycles, which depend on the sustainability and real growth of an economy as well as political and economic developments and Kenya’s property market is no different. It is therefore vital that real estate firms become proactive in following up with all the knowledge of economic and political developments in order to be ready to act prudently. The question therefore arises for real estate firms in the sector, do they and must they employ knowledge management in order to survive through these tumultuous times and weather the stormy business environment to be able to benefit in the promising future?
Garud and Kumaraswamy (2005) relied on the knowledge-based theory of organizations in stating that “knowledge is the main resource for an organization’s survival and success”. While scholars have built on merits of Knowledge Management as a significant source of CA, research gaps remain in the real estate sector in Kenya and how firms in the sector can employ KM to their benefit. As a sector that contributes highly to the economy and that reaps abundantly from knowledge, it is vital for researchers to ascertain if real estate firms employ KM and perhaps enlighten them on this strategy. Other empirical studies on KM done in other sectors include Muiruri (2016) who studied KM effect in universities and Odero (2017) who studied effect of KM on the CA of audit firms in Kenya. These scholars offered congruent conclusions that KM had proved to be partially or wholly in use and in some cases applied as a strategy by their respective sectors to survive and attain CA. Therefore, this research study attempts to investigate the effect of utilising KM as a strategy to achieve competitive advantage in the real estate sector for firm survival in these turbulent times.

1.3 General Objective

To determine the effect of knowledge management on competitive advantage in the real estate sector in Kenya.

1.4 Specific Objectives

- To determine the dimensions of knowledge management and their contribution as employed by real estate firms in Kenya.
- To determine the effect of leadership style dimension in Knowledge Management in real estate firms
- To determine the effect of information technology and infrastructure on Knowledge Management in real estate firms
- To determine the effect of organizational structure on Knowledge Management in real estate firms

1.5 Significance of the Study

This study will prove important to:
1.5.1 Real Estate Managers

The management of real estate firms in Kenya will find this study an invaluable source of material in developing and harnessing their competitive strategies in the present evolving and dynamic business environment and specifically in utilising Knowledge Management as a strategy. This study will provide insight on some of the challenges faced in the sector in achieving competitive advantage through Knowledge Management and hopefully pave way for KM strategy formulation for survival and success.

1.5.2 Government

The government and industry regulators will also find invaluable information in how Knowledge Management can be utilized to achieve competitive advantage, how it can be adopted in other industries owned by Government and as a result put in place policies that will guide them in playing their vital role in the sector to provide support services and ensure regulations are adhered to. The policy makers could use the wealth of information garnered from the study to identify key areas of focus in order to make the sector even more attractive to foreign investors thus contributing to economic growth.

1.5.3 Scholars and Academicians

Future researchers will find the results of this study an important source of reference. These results can be compared with other sectors to determine the various ways institutions can apply Knowledge Management strategy in reacting to competitive forces and turbulence in their respective environments. Scholars can use this study as a foundation upon which other similar and replicated studies can be based on.

1.6 Scope of the Study

The scope of the study will be limited to a case study of a real estate firm operating in Nairobi County. Other real estate firms were not considered for this study due to time and financial constraints. It will target the top and middle level management as well as the employees of Pam Golding Properties (PGP) Kenya, including real estate agents and marketing executives and human resource managers. The study will target a population of at least 50 personnel of PGP Kenya staff.
1.7 Definition of Terms

The definition of terms in this research context is as follows:

1.7.1 Pam Golding Properties (PGP)

A premier real estate agency that offers a full spectrum of property services, with a network of over 300 offices in sub-Saharan Africa as well as offices in the UK, Germany, Mauritius and Seychelles. The Kenyan office is a franchisee which facilitates property sales and residency for the Kenyan market and provides professional property services.

1.7.2 Knowledge

The business dictionary defines knowledge as the awareness or understanding of a situation or the grasping of a fact which is enhanced through affiliation or by experience (Business Dictionary, 2017).

1.7.3 Knowledge Management

Knowledge Management is the intentional organization of a company’s resources (human, technology, structures and processes) to generate and add value through knowledge use, reuse and innovation (Dalkir, 2011).

1.7.4 Competitive Advantage

Competitive Advantage is the distinctive competencies that set an organization apart from its competitors (Tiwana, 2002).

1.7.5 Sustainable Competitive Advantage (SCA)

A firm is said to possess Sustainable Competitive Advantage if its resources and capabilities are Valuable, Rare, In-Imitable and Non-Substitutable as per the Valuable Rare Inimitable Organization (VRIO Framework) capabilities to exploit resources efficiently (Barney, 1991).

1.8 Chapter Summary

This first chapter of the research study introduces the topic of the research and gives a background of the research problem; it also addresses the problem statement, that is, what is known of the problem and what is desired to be known. It also states the general as well as specific objectives of the study, its scope and defines the terms that take up special meaning relevant to the study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter critically delved into and critiqued the concept of strategic Knowledge Management, as discussed by various past scholars and researchers and its relation to achieving competitive advantage in sequential order of the specific objectives under investigation. The first review is specific objective one about the dimensions of knowledge management systems in place while the second section reviews literature about the effect of leadership on knowledge execution and competitive advantage. The third section reviews literature on the information technology that led to sustainable competitive advantage from utilizing knowledge management system and the fourth reviews the organizational structure effect on knowledge management application in attaining CA.

2.2 Dimensions of Knowledge Management

Knowledge management can be summarised as the creation, transfer, and exchange of organizational knowledge to achieve a [competitive] advantage (Girard & Girard, 2015). By organizing information and keeping it current, an organization significantly decreases time lost on the dreaded “reinvention of the wheel”. Organizations are now viewed as bodies of knowledge thus creating a new perspective on organizations (Nahapiet & Ghoshal, 1998). It has been recognized that the economic prosperity of an organization depends on the effective exploitation and retaining of this organizational knowledge. Teece (2007) suggested that knowledge assets underpin competences and competences in turn underpin the firm’s product and service offering to the market.

2.2.1 The Process of Knowledge Management

According to Alluri (2009), organizations today have realised how vital knowledge has become to their modus operandi at the work place. With increased complexity and necessity of expertise from various fields, organizations are beginning to realise how different knowledge types are redefining and becoming ever more useful in enhancing efficiency, effectiveness and ability to innovate. Johnson (2011) categorized knowledge tools as Knowledge repositories, Expertise access tools, E-learning applications, Discussion and chat technologies, and Search and data mining tools. Johnson attributed
effectiveness of knowledge management processes to the systemic collection of a firm’s knowledge sources like databases, reports or even employee’s informal knowledge base and appropriating it accordingly to where it yields the greatest results. The benefits of KM have undoubtedly been touted in business literature over time and Wiig (2007) has among them, defined KM as the creation of value for an organization by systematically using, developing and renewing available knowledge. He is credited with coining the four aspects of the knowledge process thus: creation, storage, transfer, and application. Organizations are recognized as knowledge systems when they embrace both the cognitive and social nature of organizational knowledge as it is represented in individual employees as well as the collective organizational practices and culture.

Knowledge acquisition is one of the fundamental aspects of the knowledge creation aspect in the knowledge process. Despite this, business pundits agree that crucial to competitive advantage is the capability of an organization to generate new knowledge with internal-sourced information. The trend in now from data preparing towards knowledge creation and continuous development (Malhotra, 2000). Challenges arise especially because information creation is not an orderly procedure that can be firmly controlled and yet it can even be considered as the minimum deliberate procedure of KM. Knowledge creation process entailing the developing and consistent change of knowledge to adapt to the current situation so that it acquires optimum usability (Bhatt, 2006). There is also general consensus that culture and social processes have a significant impact on how knowledge is created and managed. Case in point, in the learning creation model of Nonaka and Takeuchi–SECI model, three of the four stages, i.e. socialization, externalization and combination, include broad social collaborations among the organizations employees (Chua, 2002).

Knowledge sharing techniques have been a subject of interest for many scholars of strategy with majority of companies analysed indicating that beneficial consequences of their use had been realised (Hicks, et al., 2007). Sveiby and Simons (2012) agree that fundamental to effective knowledge management is the collaboration of all assets including employees and ensuring vital knowledge is shared appropriately. The limitations of formal processes must be mitigated by acknowledging and allowing use of informal processes which have proven just as important in information collection and creation. Contrary to popular thought, acquisition and set up of cutting edge mechanical frameworks is not the motivation for employees to exchange and share information.
Employee motivation is mostly propelled by the organizational culture and especially if it promotes knowledge processes and a structure that encourages knowledge techniques and practise. This way, the unconstrained, unstructured information that also bears weight to the organization’s success can be figured out. The necessity of creating devoted systems to energize such unconstrained information is vital and specifically focusing on casual relations (Davenport & Prusak, 2000).

Nemati (2002) observed that Knowledge is only significant when codified to give certain meaning, then classified appropriately and stored in a useful, retrievable format. Only then is it usable and potentially a competitive strategy that can lead to a sustainable competitive advantage with future re-use when needed and that way knowledge belongs to the organization rather than the knower or user.

American Productivity & Quality Center (APQC), had come out with knowledge management framework as a whole process in knowledge management. Figure 1.1 shows knowledge management process in a context for thinking about strategies and methods of identifying, capturing, and leveraging knowledge to help an organization to compete.

**Figure 2.1: APQC's Knowledge Management Framework**

*Source: APQC and Nonaka, 1995.*
2.2.2 Knowledge Management System

The concept of Knowledge Management (KM) was first pioneered by Peter Drucker in the 1950’s, and extensive research has been conducted on the topic in the intervening years. According to Drucker (1999), land, labour and capital - the classical factors of production - have become secondary to knowledge as the primary resource for the new economy. Prusak (2008) expounded on this stating that “knowledge has always been an important driver of competitive advantage but changes in the economy have made it increasingly so. As it becomes harder to obtain privileged access to land, labour and capital, a firm’s proprietary knowledge remains difficult for other firms to replicate”.

Liang et al. (2009) acknowledge that we are in the midst of an economic transition from an era of competitive advantage based on information to a new era based on knowledge creation. On a fundamental basis KM typically is the process of creating value from an organization’s intangible assets (Liebowitz, 2011) and is founded on core competences and capabilities developed by both individuals and the organization over time. Tsoukas and Vladimirou (2001) considered that on the one hand individuals appropriate knowledge and expand their knowledge repertoires, and, on the other hand, how knowledge in organized contexts, becomes organizational. Increasing turbulence in the business world dictates that organizations adopt faster learning, creating and operating cycles. Organizations that position themselves to use their administrative frameworks adequately to obtain information will reap great benefits in looking at the trends of worldwide economies.

Harrison and Kessels (2013) assert that the creation of new knowledge depends on existing organizational structure and capabilities. It is the knowledge, values, understanding and experience that has been built up throughout an organization over a period and the capability members of an organization have developed to draw distinctions in the process of carrying out their work. Knowledge comprises the organization’s resources, values, hardware as well as software that gives meaning and structure in combining different data sources. In organizations, it represents in the form of reports, authoritative schedules, procedures, practices, and standards. (Davenport & Prusak, 2008). Emphasis on the importance of knowledge as a critical resource for organizations to draw upon is studied by Zheng et al (2010) as well as Tsai et al (2012) and they further explore the link between Knowledge Management and Competitive Advantage.
Resource-based view (RBV) highlighted the value-addition of the human resource to an organization by defining and linking concepts such as knowledge and organizational learning (Senge, 2007) and organizational leadership. The process of creating knowledge engenders firms in motivating internal learning and propagates use of information practically in work activities which contributes to efficiency and profitability (Zheng et al, 2010). Given the distributed character of the organizational knowledge, the key to achieving coordinated action does not so much depend on the top management collecting more knowledge, as on those ‘lower down’ finding more ways of getting connected and interrelating the knowledge each one has (Tsoukas, 2005, cited by Hicks et al, 2007). Knowledge is only useful for those who can effectively learn, and learning is only effective if useful knowledge is available (Davenport & Prusak, 2008).

Knowledge Management is defined as deliberately processing and utilising the information of an organization’s workforce accomplishable by numerous strategies including straightforwardly, using specific software in ICT, or by implication through the administration of social procedures, inculturation or personalization of systems (Peck et al, 2009).

Research reveals all knowledge as two dimensional, that is, explicit and tacit (Nonaka & Takeuchi, 1995; Hansen, 1999); Nonaka and Takeuchi (1995) differentiate between ‘explicit’ knowledge, i.e. that which can be documented and stored on paper or electronically, and ‘tacit’ knowledge, i.e. that which is stored in people’s heads. It is the view of Haas & Hansen (2007) that existing research has only partially investigated how different types of knowledge sharing may affect task performance differently. Hansen et al. (1999) argue that KM can be seen as following two primary strategies: codification and personalization. Codification involves the collection, coding and storage of data, information and knowledge that is accessible by others with appropriate access rights, and expanding on Nonaka’s theory, argues that explicit knowledge is knowledge that can be codified, such as simple software codes and market data.

Personalization accommodates knowledge sharing by unstructured means within the organization. These informal means propagate a big percentage of learning as people share more freely. Due to the informality of this method, when workers require explicit information for work, a record is created to facilitate the exchange. Tacit information creates the challenge of documentation and is better transferred by individual experience. It involves use of ingrained logic, skills in operations, expert knowledge of the industry
and use of personal judgment. Use of tacit knowledge is most practical with the face to face approach (Hansen et al., 1999). Tacit knowledge is believed to be one factor that distinguishes successful managers from others and the origin of the construct of tacit knowledge is often attributed to the science philosopher, (Polanyi, 1966) who described it in his famous quote, “we can know more than we can tell”. Nonaka and Takeuchi (1995) argue that effective organizational knowledge creation best occurs through the spiral process where knowledge is converted from tacit to explicit in a continuous and dynamic cycle as illustrated in Figure 2.2: The SECI Model.

![Figure 2.2: The SECI Model of Knowledge Generation](image)

**Source:** Xu, F. (2013)

Innovation occurs when tacit knowledge and explicit knowledge engage. Knowledge creation is facilitated by deliberately managing the cycle and occurs probably unwittingly in most organizations. The process of creating knowledge in the organization begins when people socialize (water-cooler talk, office parties etc.) with people freely, sharing perspectives and thoughts on various issues. The next stage is externalization and it occurs with employees use of indirect wording like analogies to express hidden meaning which only those privy to it may understand clearly. The third stage is the combination stage where knowledge is shared clearly, and interpretation is easy. Lastly, people learn by doing and disguising the new information.
The spiral begins again as the experience-based operational knowledge learned in the first cycle provides a larger knowledge base for continuous innovation and growth. It is this model that demonstrates how knowledge is generated and recycled. This process of knowledge interaction enhances the growth of both explicit and tacit knowledge (Hauschild et al., 2011).

Nandita (2013) discovered that generally, human beings are reluctant to share information. In her studies on knowledge management, Szulanski (1996) coined the term “knowledge stickiness”, referring to the hesitation and hindrance to effective knowledge sharing by individuals and the collective organization culture. She however added that this can be mitigated by cultivating a learning environment. Nonaka and Nishiguchi (2001), believed that knowledge development, especially social knowledge development of organizations, cannot be taken for granted since knowledge in the organization is fragile and individual knowledge can be easily annihilated and also that organizational knowledge development as a social activity can be quite difficult to achieve. Sven Carlsson (cited by Mylonopoulos & Tsoukas, 2003) developed a theoretical argument concerning the role of information technologies in supporting inter-organizational knowledge management. He established the criticality of knowledge in interorganizational networks and, by drawing on the resource-based view of the firm, emphasized the role of such inter-organizational knowledge in competitive strategy and comparative advantage.

2.2.3 Knowledge Management Structure

According to some cognitive theories, the structure of knowledge management lies in three spheres: data, information and knowledge that exist more as a continuum than discreet entities. Other researchers are of the thought that hierarchy should extend beyond the three spheres. Amongst them, System theorist and professor of organization change, Russell Ackoff, extended the hierarchy by including intelligence as another building block. The building blocks are interrelated.

Davenport and Prusak (2008), defined data as discrete, objective facts about transactions or events. Data of itself lacks value for an organization. Additionally, they defined information as “a set of data arranged systematically to elicit meaning in communication”. Scholars in the field agree that knowledge is not just moulded
information but comprises of information that is transformed into particular meaning for a particular purpose.

Also, in agreement is Polanyi (1996) who stated that "We can know more than we can tell" which loosely translates to the essential idea propagated all along that explicit and implicit knowledge is virtually impossible to transpose.

Figure 2.3: The Knowledge Hierarchy


2.2.4 Knowledge Management Strategy

Management guru Peter Drucker (1995) dismissed the quintessential factors of production (land, labour and capital) as being the key elements of an organization’s success but rather argued that knowledge was the key economic resource for an organization’s competitive advantage. He even dared to say it may be the only source of competitive advantage for organizations in the current age. In acquiescence, Hauschild, Licht and Stein, (2011) stated that Information and not the previous factors of production (land, labour and capital), was the major determinant of survival of organizations.

In an effort to propagate Knowledge Management, most organizations have put in place systems that focus on top management efforts, such as board room strategizing, enforcing employees to share information through lessons learned and even out-of-office team building activities to enhance collaboration and build relationships. Greater results are likely to be obtained by concentrating resources on learning for the whole organization.
with emphasis on knowledge sharing and knowledge sharing systems put in place as noted by McAdam, *et. al.* (2000).

Barney (2006) expounded on the resource-based view and noted that organizations that invested in efficient and effective application of its assets were likely to achieve competitive advantage. Knowledge of an organization’s culture among all employees plays a big role in strategic planning of the knowledge managements systems to employ at different organizations (Dyer 2005). In relating knowledge and strategy, Fahey (2006) noted that formulating strategies about knowledge is dynamic and involves a lot of complexity as both terms are diverse and dynamic by themselves.

Conducting an internal analysis is vital in establishing the best fit for the organizations available “knowledge assets” (Halawi *et al.*, 2006). This will aid in establishing the link between the knowledge system and learning among the employees by analysing key performance indicators for the organization. Zack (2009), proposed that initiating this process by depicting the relationships between "information and system" by clearly outlining knowledge gap was key. This knowledge gap could then be filled up with a Knowledge Management strategy. Tiwana (2000) adds that knowledge and strategy compel each other and are in tandem.

### 2.2.5 Knowledge Management Assets

Knowledge management assets first comprise the pundit employees holding key experience in the organization. The term Chief Knowledge Officer (CKO) was coined in 1994 after Lucier due to his executive command over knowledge management at his firm. Knowledge managers are usually appointed based on their experience in the firm which is usually based on term of employment as it correlates to firm knowledge. Jay Leibowitz (2011) in his book “Learning from Knowledge Engineering” emphasises that “people aspects” are the most important element in knowledge management.

Traditional assets (capital, labour and land) still carry weight in economics but seem to have lost the number one spot as the trend now is towards intellectual assets which are mostly knowledge-based assets such as intellectual property, customer data, financial records, strategies and trade secrets (Nakazawa, 2002). The importance of intangible assets has beenunderscored in recent times. Davenport and Prusak (2008) posit that sustainable differentiation and competitive advantage is derived from Knowledge and
give the perspective that knowledge is as much a corporate asset as the traditional tangible assets. According to Wiig (2007) the organization's advancement is based on how vested the company is in knowledge-based resources and the impact of this investment in its operational activities towards achieving its goals. Research done in the recent decade reveals pundits in the field of business assuming a similar stance as to the value of knowledge in the world today. They all contend that intellectual capital and the activities of knowledge management is foremost in the race towards competitive advantage in corporations (Haanes & Hansen, 2007). Greater assertion is made by Wiig (2007) who states that it is fundamental to determine which Knowledge Management activities are necessary to obtain the highest competitive edge and capitalize on them to obtain the greatest value for the firm.

2.3 Effect of Leadership Style on Effectiveness of KM Systems

A Leadership style is the manner and approach in which a leader (managers or supervisors) influences his followers in providing direction and motivating them. Leaders set the standards for all others in the organization provide a great impetus for achievement of goals. Leaders therefore have a direct effect on how organizations handle knowledge management. Lack of a strong leadership geared towards knowledge management employment will certainly prove it unsuccessful (Singh, 2013).

2.3.1 Transformational leadership and Knowledge Management

Implementation of a quality management framework revealed that to actualize leadership and knowledge management measures, leaders in the process had to be wholly participative, engaging and motivating (Gapp, 2008). The role of leaders in the organization and specifically in relation to knowledge management lies in the fact leaders impact on workers is great and corporation in this effort can be enhanced by a leader who is genuinely concerned and engaged in his workers lives both professionally and socially. This can be through considering their inputs in decision making, encouraging interpersonal communication among employees and creating a cohesive organizational culture (Birasnav, Rangnekar, & Dalpati, 2011). This embraces the transformational leadership style. Transformational leadership can enhance an organization’s innovation through creating a participative environment or culture that stimulates learning, sharing and corporation. Workers who have a transformational leader enjoy autonomy and self-
governance and can therefore share knowledge more easily (Nguyen and Mohamed, 2011).

Numerous studies have shown the positive correlation between knowledge acquisition and transformational leadership. Transformational leadership liberates and encourages employees’ free expression even with their superiors and this enhances knowledge sharing and greater transparency among colleagues (Politis, 2011). The role of participative leadership is heavily underscored here as the leader acts as a facilitator rather than a dictator.

Crawford (2005), explored the connection between transformational leadership and knowledge management in organizations and discovered that transformational leadership impacted the organization’s learning positively leading to the conclusion that transformational leadership and personal learning are connected. In line with the premise that knowledge enhanced innovation, He established that transformational leaders were inherently better at innovation than other leadership styles.

2.3.2 Transactional Leadership and Knowledge Management

This style of leadership is defined by the idea of reward and discipline; this leadership style stipulates that the employees anticipate only rewards- which is usually monetary or punishment. This means that employees work hard motivated by monetary benefits as the end to their means and nothing else motivates them to work hard; while they expect punishments when they fail to realise the leader’s expectations (Odero, 2017). On the same hand, transactional leaders enforce their authority and dictate to the employees what they expect of them with little or no guidance. They do not get involved with the employees once they have given the assignments clearly and expect employees to pursue matters accordingly with further help or guidance (Odero, 2017). Though this style may seem appealing in providing autonomy for the worker, it often leaves the worker without further guidance and creates an overly-independent attitude at the work place rather than team work and collaboration.

Transactional leadership encompasses two spheres: expected reward and Management by Execution (MBE). Expected reward is the reward that a worker is guaranteed to get if they fulfil the mandated assignments as per given instructions by the leader. Compliance is enforced with the leader pushing for day to day accomplishments towards realising the ultimate goal and therefore once this is achieved the leader rewards as promised. The
MBE approach is where only significant deviations from the set-out plans are brought to the attention of management.

The idea behind it is that management's attention will be focused only on those areas in need of urgent action. The rest is left to the discretion of the employee. In both cases, the leaders must be succinct in their expectations and give acknowledgement when expectations are met. Bass (1985) concurred with these findings. He compared transactional leaders to transformational leaders and found them contrasting in degrees of motivation for employees and relationships among them and that transformational leaders engendered a learning organization (Nemanich & Kellar, 2007) which ultimately translates into superior performance and profitability.

In Maslow’s hierarchy of needs, transactional leaders cater to the workers physical and security needs only which is the most basic need. The leader-follower relationship is based purely on reward system, essentially monetary reward, and the subordinates’ motivation is the attraction of rewards for the efforts they give (Birasnav, Rangnekar, & Dalpati, 2011). This is not very motivational and therefore workers are less invested in the company’s overall wellness or enhancement except for purely fiscal interests thus implementation of new systems like a learning culture and knowledge processing and management is greatly hindered.

2.3.3 Laissez-faire and Knowledge Management

In this leadership style complete autonomy is given to the workers with the leader delegating authority to the workers and allowing them to make decisions in the work place without much guidance or control. The leader may be nearby for questions but is rarely involved in the workers work space (Crawford, 2005). This strategy works in set ups where the workforce is highly experienced, skilled and capable of doing their jobs. Contrary to that, this leadership style has proved the least effective yielding poorly motivated worker and thus poor results. While this leadership style contributes to worker empowerment especially the visionary worker, by providing a relaxed, stress-free atmosphere with no management interference, it may cause indolence as well as frustration when workers are indecisive and working in team that have conflict without a manager to help resolve the issues.

Knowledge management is relevant in all leadership styles considering the context of the knowledge process involved. Studies have shown that there is a link between the diverse
parts of Knowledge management and transformational leadership. A learning organization is emboldened by leadership, value-based initiative and self-management. Interestingly, researchers have found that participative, collaborative leadership style facilitates the flow of knowledge the most however explicit studies to establish the direct relation between knowledge management and transformational leadership are pending (Crawford, 2005). In a research study investigating the behavioural aspects of knowledge management (Barth, 2000) a typology of personal knowledge management categories, revealed that, free enterprise turned out to negatively affect learning organizations, which proved the vital necessity of the leader’s involvement in knowledge management process (Crawford, 2005).

Gowen et al. (2009) investigated the effect of a leader’s personal attributes to leadership style and found that transformational leaders impact greatly the knowledge management practices in hospital settings and specifically that their personal characteristics were very influential. Politis (2001) explored the role of leadership styles in Knowledge Management and found that leaders with high scores in interpersonal skills were more effective in Knowledge Management processes. This was congruent to transformational leaders who also possess great interpersonal skills. Nguyen and Mohamed (2011) in their research, concluded that the leadership role plays a big part in knowledge management practises and the environment suitable for its effectiveness.

2.4 Effect of Information Technology on Effectiveness of KM in CA

Empirical studies by Lopez, Peon and Ordas (2009) have found that IT competency has a direct effect on the processes of knowledge management: knowledge generation, knowledge transfer, and knowledge codification and storage. Recent studies have supported their claims.

2.4.1 Information Technology and Knowledge Transfer

Knowledge Sharing is a vital part of KM because as employees share, the knowledge asset changes ownership from the individual employee to the organization. Ipe (2003) defined knowledge sharing as “the process of exchanging personally possessed knowledge with others such that it is also understood in a similar manner in the organization”. This author additionally posits that it is a deliberate action where there is no claim of ownership of the knowledge but rather knowledge belongs to both sender and recipient.
Sveiby (2001), asserts that as one shares knowledge, there in increased mutual competency as both the sharer and recipient are stimulated differently by the knowledge which yields even greater knowledge. Employees who do not share knowledge create a barrier to the knowledge management process. Contrary to this, Goh (2002) stipulates that knowledge is equated with power especially in competition, and therefore if competition persists internally, it is expected that employees will hesitate to share knowledge.

Knowledge transfer is incorporated in the knowledge management process as a key step during and after knowledge sharing. It occurs at different levels including: from people to explicit sources and vice versa, between sets and the organization and between persons. Transfer and sharing continue to be a challenge to most organizations due to the difficulty in differentiating the known from the unknown resulting in a weak system. Knowledge transfer in organizations is facilitated by the communication process utilized and how information flows in the organization. IT constitutes a key enhancer of knowledge transfer through tools of formal communication such as email, teleconference, and internet (Alavi & Leidner, 2001).

Eppler and Mengis (2003) stated that “the development of IT has helped to increase the amount of information.” Bawden and Robinson (2008) concurred claiming that the crux of new technology is to facilitate faster access to information. Filippov and Lastrebov (2010), also agreed that information and communication technology have transformed the creation and accessibility of information exponentially. Professional service firms (e.g., consultants, accounting firms, or advertising agencies) were investigated to determine the impact of knowledge management on their competitive patterns with results revealing that in competition of firms with similar capabilities, competitive firms invest more in KM systems to create greater value to customers and hence higher quality. Dynamism in the business setting offers a challenge to firms heavily invested in KM as funds are diverted for this purpose and interferes with revenues and may lead to an industry shakeout. Most recently, firms have engaged more on knowledge creation activities by collaborations, specifically observed by the “retail consulting” services where retail industry players have engaged together to share relevant knowledge in industry.

Oliver (2008), studied “knowledge management practices to support the continuous development” with the purpose of finding out knowledge management practices regarding operations. Successful organizations were those that had engaged in knowledge
sharing activities including experiences, project progress, best practices, lessons learned and even failures and those that employed an organizational structure that facilitated open communication between employees.

2.4.2 Information Technology and Knowledge Application

Knowledge application is one of the most vital concepts of knowledge management that gives credence to its relationship to competitive advantage. Knowledge application is the use of knowledge in problem-solving and decision-making by the management of an organization. The human element is absolutely essential in knowledge application (Alavi & Tiwana, 2003) along with abilities in Information Technology (IT) to ensure applied knowledge is indeed useful and appropriate. The organization can enhance this capability by investing in their human resource for example, training programs, sponsored further education and mentoring by IT professionals in order to enlighten employees of the growing importance of knowledge management and IT (Rasli & Maseri, 2008).

The relevance of IT specialists has grown exponentially over time and it is evident with their incorporation in almost all strategic decision-making process undertaken by many organizations. They are integral in not only managing the firm’s IT needs but also managing the competitor’s activities for the organization’s benefit (Wang et al, 2006). IT helps with capturing information and even updating it thus producing a positive correlation to knowledge application. Codifying in IT has also been proved to improve the speed of knowledge application. (Alavi & Leidner, 2001). The barrier between authority and subordinates has been greatly reduced by IT as technology favours the development of fluid organizational structures where information, ideas and knowledge are fast-flowing and therefore enhance not only the knowledge process but also knowledge processing.

2.4.3 Information Technology and Knowledge Storage

Once knowledge is created, it must be stored and made easily recoverable (Duffy, 2000). Knowledge storage is done in computer hardware like flash discs and software like databases, portal, websites, the cloud etc. IT is also used in knowledge storage where specialists develop the organizational memory and the means for accessing it. Knowledge in raw form (data) is stored in a virtual warehouse in the server. Specialists can then access this warehouse and sort it to enable even basic employees retrieve relevant information for use at the work place (Alavi & Leidner, 2001).
Data mining defined as “the process of collecting and finding correlation in raw data by looking for similar patterns.” (Alavi & Leidner, 2001). This is the role is IT specialists who can easily identify which information would most suite different sectors of an organization and therefore arrange it to allow fast and easy access accordingly.

Kumar and Kumar (2013) studied the relationship between knowledge management and information technology in the higher education system in India and realised that knowledge management implementation is considerably facilitated by information technology and not only leads to better quality of services but is a key driver of lower costs of higher education in India. Almaani, (2009) studied Trends of Managers in Jordanian ministries centres to the role of knowledge management and found that the respondents feel a high level of functionality with utilising knowledge stored in the systems which is easy to retrieve and use with ease.

**2.4.4 Information Technology and Knowledge Acquisition**

Far from simply getting information is obtaining quality information which is a serious challenge to organization as simple information does not translate to useful knowledge and identifying the difference is more complex than expected. The key indicators that denote quality information are accuracy, reliability, precision, timeliness, and the relevance of the information in the decision-making process. (Huber, 1990). Accessibility of IT for employees is fundamental and must be propagated (Peck et al, 1999) to enable application of IT to create new knowledge. Adequate training for employees cannot be emphasised enough as it underscores the ability to understand IT processes and thus information retrieval and acquisition as well as keep up to date with technological changes as they occur (Azari, 2008).

Due to the incremental availability of data, IT specialists in the organization must have the ability and licence to filter information. Information filtering is a supportive function for management and other employees. IT support includes the measure of knowledge management which is supported by IT use (Gold et al, 2001). Managerial support also includes provision of knowledge process infrastructure and support systems that improve and enable knowledge process techniques at the suitable levels (Attaran, 2003). Singh et. al. (2013) observed that the rapid development of numerous technological applications which are operable even on mobile phones has considerably enhanced organizational capacity and led to a huge accumulation of information which may be pertinent to
effective knowledge creation and utilization in the organization. Zhang (2008) noted that with the development of information and communication technologies, the world has evolved into a knowledge era.

2.4.5 Information Technology and Technical Capabilities

For competitive ends, knowledge management cannot exclude IT capability. IT significantly impacts Knowledge creation and transfer and facilitates its storage, and its sharing as well (Lee & Suh, 2003; Ray, 2008). Many organizations utilize IT in form of internet, communications, data mining and warehousing etc. IT capability is especially vital in storage and transfer of explicit knowledge. IT can be categorized into seven elements; IT technology, tools, and organization information, IT support, IT skill, IT accessibility for employee and IT infrastructure and investment. All these elements are interrelated and function effectively together.

Knowledge management effectiveness dictates that firms ought to make more investments in IT (Borghoff, 2007). Management of the organization’s knowledge requires fiscal budgeting as IT infrastructure and creating an IT capability for a firm is a capital intensive undertaking. Management therefore should provide adequate budgets for knowledge management in their master budgets and not leave it as an option for inadvertent scenarios. Besides pecuniary investments, a firm would also need to make considerable non-financial investment towards IT capability and experts in the field agree that IT infrastructure should be made flexible to easily support the vagaries of the business environment including rapid changes of hardware and software, emerging applications, abilities, skills and commitment of the employee’s etc. This is only achievable by deliberately investing significant resources in IT (Chanopas et al, 2006).

In his studies, Kasim (2010) observed that the magnitude of information technology investment in a firm correlated with the measure of knowledge management development. He also concluded that a positive correlation existed between KM and organizational performance and Safarzadeh, et. al. (2011) agreed with his deductions. Whelan and Teigland (2010) studies contributed to the knowledge base of the impact of IT by revealing the role of technology in massively exposing information to many and very rapidly.
As technology advanced, knowledge sharing, and knowledge transfer became progressively cheaper and more widely available thus stimulating further knowledge creation and sharing; a vicious cycle that has proved beneficial for firms which practise knowledge management effectively. Paghaleh, et. al. (2011) discovered that Information Technology enabled two major abilities for KM: the ability to reveal knowledge and the ability to create fast connections among knowledge channels. These studies along with Fernandez et. al. (2004), firmly attest to IT being fundamental to effective knowledge management and ultimately to competitive advantage.

2.5 Organizational Structure and Knowledge Management

An organization’s mission is to achieve goals. According to Albers (2012), these goals are broken down into tasks as the basis for jobs. Jobs are grouped into departments and departments in organizations maybe characterized by procurement, production, accounting or finance, marketing, sales, advertising and so on. Within each department, even more distinctions can be found between the jobs people perform. Departments are linked to form the organizational structure (Sebastian & Korrapati, 2007). “The term organizational structure refers to the formal configuration between individuals and groups regarding the allocation of tasks, responsibilities and authority within the organization” (Greenberg, 2011). In the past, organizational structures were often based either on product or function (Galbrinth, 1987). The matrix organizational structure configured these two ways of organizing.

Many pundits have explored beyond these early approaches and examined the relationship between organizational strategy and structure. Starting from Chandler’s work in 2003 where he traced the historical development of such large American corporations as DuPont, Sears, and General Motors. His studies culminated in the conclusion that an organization’s strategy follows its structure meaning a firm’s structure including variables such as task’s, technology and environment, is created in order to implement a certain strategy. In relation, Knowledge sharing is also impacted by organizational structure. It is worth noting that knowledge sharing is negatively influenced by a hierarchical structure and positively affected by strong interorganizational relationships. Organizations with hierarchical structures possess the assumptions, orientations and values linked with the hierarchy culture where strong relationships, similar to those of an "extended family," are typical of the clan culture.
Organizational memory, which is intrinsically associated to organizational culture, facilitates the learning processes within organizations by ensuring that what has been learned in the organization can be stored, shared and updated (Schwandt & Marquardt, 2000). Mintzberg (2009), suggests that “organizations can be differentiated along three basic dimensions: (1) the key part that plays the major role in determining its success or failure; (2) the prime coordinating mechanism, that is, the major method the organization uses to coordinate its activities and (3) the type of decentralization used, that is, the extent to which the organization involves subordinates in the decision-making process” which give five possible structural configurations depending on the strategy adopted and the extent of adherence to the strategy hence: simple structure, machine bureaucracy, professional bureaucracy, divisionalized form and adhocracy.

2.5.1 Types of Organizational Structures

Organizational structure characterised by a strong hierarchy can dictate and limit interaction and set barriers for knowledge transfer, especially between leadership, management and business units within an organization. It can also promote knowledge hoarding as individuals realise the personal benefit they can draw from withholding knowledge (Becerra-Fernandez et al., 2004). A decentralised, flatter structure with limited layers places more responsibility on each individual. It allows for emphasis to be placed on leadership promotion and not top-down management. Good leadership can promote creativity, increase individual motivation and lead to innovation. Organizational structure is closely linked to the culture of an organization. Strong hierarchies where knowledge hoarding is seen as vital to moving up in the organization will promote disempowerment and dissatisfaction resulting in decreased motivation, efficiency and productivity. This can result in the loss of staff and consequent loss of knowledge (Becerra-Fernandez et al., 2004). Make-up of an organization is important in determining the ideal structure and placement of employee within an organization.

Determining the knowledge transfer needs will uncover the make-up of the organization in terms of novices, practitioners and experts. The resultant high number of novices in the organization will require greater support and increased emphasis will also need to be placed on leveraging the expertise of long term staff (Becerra-Fernandez et al., 2004). Organizational routines embedded in standard operating procedures and policies can become formalized by their implementation in computer programs and databases as the
firm’s dominant business logic becomes reinforced (Malhotra, 2002b). Such formalized information systems become inflexible when they are based upon static assumptions about the business environment. Due to turbulence in the business environment, such systems are increasingly vulnerable to becoming out-dated. To overcome these vulnerabilities, it is necessary to design technological systems that are sensitive to the dynamic and divergent interpretations of information necessary for navigating unforeseen changes in business environment.

Organizational structure that promotes individualistic behaviours where locations, divisions and functions are rewarded for hoarding information inhibits effective knowledge management within the organization. The structure of an organization can be defined as the formal relationships and allocation of activities and resource among people. Many studies have examined two major structure dimensions of centralization and formalization from a traditional point of view (Tata & Prasad, 2004). Centralization refers to the hierarchical level that has the authority to make a decision within an organization. “Formalization refers to written documentation, rules and procedures in the organization that affect the communication of knowledge” (Schminke et al., 2000). It also refers to the degree to which formal rules, standard policies and office procedures are controlled (Lee & Choi, 2003).

Centralization usually prevents section interactions, knowledge sharing and knowledge application. It refers to the focus of decision making authority and control in the organization. Decentralization on the other hand, is a structural factor that improves knowledge sharing by giving personnel the necessary authorization. However, decentralization may lead to disorderliness and redoubled work (Hurley & Green, 2005). The knowledge domain and distribution must be in line with organization structure and personnel policies. The more flexible the organization structure is, the more important the distribution and the more limited their thinking will be. Organizational structures are not usually made to be responsive to knowledge management needs, but they ought to be responsive all the same. Geographical or functional obstacles may make knowledge distribution difficult or even impossible. “Companies need structures based on specific subjects or interests such as capability centres or learning scenes in addition to geographical or functional structures” (Probst et al., 2000).
2.5.2 Importance of Organizational Structures

The correct organizational structure is crucial to enable the organization to implement its strategy. The tasks accomplished by employees at all levels and divisions in the organization should be engaged in order to facilitate the function of the organization structure in coordination and integration in a bid to achieve strategic and organizational objectives of the firm (Hill et al., 2009). Organizational structure takes many roles in the firm including determining the departments and functions in an organization, it defines the hierarchy, span of control and reporting relationships, and includes the systems for communication, coordination and integration across these divisions and functions, both vertically and horizontally (Daft, 2001).

First, tasks and people need to be grouped into functions which are then categorised into divisions for effectiveness and efficiency in goal accomplishment. Across these divisions and functions authority and responsibilities need to be allocated. The structure then assumes a clear hierarchy beginning with the Board of Directors at the top most through middle management and at the bottom/base is the operational employees. The hierarchy should clarify the span of control that each of the employees has i.e. the people and tasks they are responsible for and have authority over. As the organization has been divided into separate functions and divisions, which all together should strive to achieve the same organizational objectives, communication and coordination across these functions and divisions is needed. Through integrating mechanisms such as direct contact, liaison roles and cross-functional or divisional teams, information about activities, ideas and problems are efficiently spread across the organization (Hill et al., 2009).

2.5.3 Organizational Structure and Knowledge Management

Knowledge is defined as the refined data or meaningful information that enables timely and optimum decision-making and problem-solving. Business decisions are categorised into three different levels: strategic decisions undertaken by the corporate level management; business decisions provided by midlevel management and operational or functional decisions which involve tactical decisions by low-level personnel (Alavi & Leidner, 2001). For knowledge management to be effective, every employee in the organization should have access to the pertinent information relevant to his department at the right time specifically during decision-making.
An organization that promotes a ‘knowledge culture’ correspondingly succeeds in effective knowledge management (DeLong & Fahey, 2000; Nahm et al., 2004). This stands to reason as a knowledge culture indicates that management is dedicated to enforcement and adherence to knowledge management initiatives and techniques. Tacit knowledge in such organizations is promoted as a modus operandi. Organizational culture is engendered by the habits of the employees in applying certain strategies through certain processes and within a certain structure (Sanchez, 2004). Employees adapt to the structure they initially find at the work place and pursue goal accomplishment through the present structures. Knowledge management strategies are therefore seen to be embroiled with the Organizational structure and effective implementation of these strategies receives impetus from a supportive structure as well as culture (Santoro & Gopalakrishnan, 2000).

Different organizational structures have differing impacts on the knowledge management process. The hierarchical management structure facilitates only vertical knowledge transfer specifically the top-down information passage. This power-centralised structure is bureaucratic and limiting as it hinders horizontal knowledge transfer between different functional units or even down-top communications. The matrix structure is more decentralised and facilitates knowledge transfer cross-sectionally between functional units and all levels of management and has been proven to improve decision-making. Better knowledge transfer has been increasingly observed as competition increases and technological changes occur in rapidity specifically in firms which are heavily influenced by information technology. Systematic knowledge transfer throughout the organization can only be developed by a composition of the different members of the different cross-functional areas in the organization. These would create dynamic knowledge teams comprised of knowledge workers stemming from the whole organization and sharing knowledge from the different perspectives of each unit with the others as well as with their unit areas. (Gopalakrishnan & Santoro, 2004). Knowledge workers are the designated knowledge-sharers and users in the organization who enhance quality decision-making (Walczak, 2006). The challenge with this strategy remains in the scope limitation of the organizational problem assigned to the team and therefore results in limited knowledge sharing.

Knowledge sharing proves useful when all aspects of the organization are inclusive for example, the knowledge teams should originate from different backgrounds and thus possess diverse tacit knowledge which they then share with the others in the team.
(Walzak, 2006). Any organizational change expects a degree of resistance in the organization including a change in the structure (Goh, 2003). This can be mitigated by reducing the perception of change. Reorganizing the structure must take place fluidly and if possible successively rather than abruptly to reduce the effects of resistance to change. The existing structure should be incorporated in the new knowledge team structure to ease the transition and align the teams to the existing functional areas.

Progressively, the Knowledge teams will be fully integrated and utilised in place of the functional teams (Zammuto et al., 2000) and aligned to the organization’s core competencies, product or service lines and projects. However, best practise dictates some incorporation of use of functional units rather than complete annihilation of their use in the revamped knowledge organization. This will further facilitate inter-unit knowledge sharing (Walczak, 2006)

2.6 Chapter Summary

This chapter reviewed critical literature on effect of knowledge management on competitive advantage. The first part reviewed literature on the dimensions of knowledge management and their impact on CA; the second section covered literature on the role of leadership in KM, the third objective of technological infrastructure in KM towards building the competitiveness of a firm was discussed thereafter and lastly, the effect of organizational structure on KM in the firm was elucidated.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used for data collection, processing and analysis in this study. It highlights the research approach that was used in the study that is relevant to understanding the strategy selected and the application of theory to the study. It provides an explanation of the data collection tools used in the study including the methods of assessing and presenting the data collected for each factor to explain the research objectives for the study.

3.2 Research Design

The research design constitutes the blueprint for the data collection, measurement, and analysis of data to facilitate for the smooth sailing of various research operations thus making the research as efficient as possible (Kothari, 2004).

The research design utilised was descriptive research. It was used because it tends to identify, explain and describe associations between variables related with the subject population (Kothari, 2004). In the study, the researcher sought to assess the effect that knowledge management has on achievement of competitive advantage in the real estate firm. The cross-sectional survey analysis technique was employed as the researcher seeks to capture data at a particular point in time. The descriptive survey is aimed towards a conclusive analysis of the effect of KM in the generation of competitive advantage.

3.3 Population and Sampling Design

This section delves into the specifics of the targeted population as well as the sampling design adopted for the study.

3.3.1 Target Population

Kothari (2009) defines target population as the aggregate analysis of all the members in a specified area of interest. In this study the population was the members of staff working at PGP Kenya, consisting of 50 employees at PGP Kenya.
Table 3.1: Population Distribution

<table>
<thead>
<tr>
<th>Employee Category</th>
<th>No. of Staff</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner(s)/Managers</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>RE Agents/Realtors</td>
<td>31</td>
<td>62%</td>
</tr>
<tr>
<td>Marketing</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td>Legal/Accounting</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>Administration/HR</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Source: PGP Kenya (2018)*

### 3.3.2 Sampling Design

A sample is defined as a portion of a population which is representative of the characteristics of the population. A researcher should be able to make inferences regarding the population parameters from the sample statistics (Saunders, Lewis, & Thornhill, 2009).

#### 3.3.2.1 Sampling Frame

The sampling frame refers to the list from which potential respondents were drawn. According to Saunders et al., (2009), a sampling frame is a comprehensive list of persons or objects from which a sample is obtained which ideally should typify the population under study.

The sampling frame used for the study is the updated office staff list obtained from the Human Resource Department of PGP Kenya in January 2018.

#### 3.3.2.2 Sampling Technique

Sampling technique is a scientific or statistical method of selecting the sampling units which provide the requisite estimates with their associated margins of uncertainty either from the probe of only the sample or the whole population if feasible (Saunders et al., 2009).

The study employed purposive and simple random sampling techniques. In purposive sampling the researcher selected the respondents based on their area specialty and experience (Trochim, 2006).
3.3.2.3 Sample Size

Sample size refers to the actual number of respondents that would be representative of the population under study (Blumberg et al., 2014). An adequate sample size should bear some proportional relationship to the population size from which it is drawn. Critical determinants of sample size include: the level of confidence, need for sufficient statistical power, the degree of variability in the attributes under study as well as the expense of data collection.

According to Mugenda and Mugenda, (2003), a sample size of between 10-30% of the population is a representative sample. However, for this study, the researcher employed the census method to obtain sample size since the target population was not huge. Therefore, the sample size targeted 100% of the population across all categories.

Table 3.2: Sample Size Distribution

<table>
<thead>
<tr>
<th>Employee Category</th>
<th>No. of Staff</th>
<th>Sample Ratio</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner(s)/Managers</td>
<td>4</td>
<td>100%</td>
<td>4</td>
</tr>
<tr>
<td>RE Agents/Realtors</td>
<td>31</td>
<td>100%</td>
<td>31</td>
</tr>
<tr>
<td>Marketing</td>
<td>6</td>
<td>100%</td>
<td>6</td>
</tr>
<tr>
<td>Legal / Accounting</td>
<td>4</td>
<td>100%</td>
<td>4</td>
</tr>
<tr>
<td>Administration/ HR</td>
<td>5</td>
<td>100%</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

3.4 Data Collection Methods

Primary and secondary sources of data were utilised in this study. Primary data refers to data that is collected afresh and for the first time, unique to the specific research (Saunders et al., 2009). The primary source of data used was a structured questionnaire. A questionnaire is a data collection instrument consisting of a series of questions and other stimuli used to gather information from respondents. It was preferred as it has relatively lower costs associated with it, minimized interviewer bias, gave respondents time to respond to questions, and as for where some respondents were not easily approachable, the questionnaire proved convenient for them. The questionnaire constituted structured and closed-ended questions in which Likert scale rating questions was used.
The questionnaire was divided into five parts: Part one for general information; part two to four covering questions based on research objectives being the dimensions of KM utilized in the firm, the effect of leadership, technology and organizational structure on use of KM in the firm to achieve CA. The questionnaire did not require any personal information such as contact details, and the respondents were not obliged to give names while filling in the questionnaire.

3.5 Research Procedures

According to Mugenda and Mugenda (2003), the validity and reliability of the questionnaire is tested by conducting a preliminary test to cross-check the tool used and ensure procedures to be used are optimal. Problems can be dealt with at this point and revisions made to save time and fiscal resources.

Randomly selected subjects were selected to pre-test the questionnaire with the objective of testing the understanding of the questions which was then amended to ensure clarity in delivering the outcome of the study. To ensure that this was achieved, the questionnaire was administered to 5 people from the target population. The purpose of the pre-test was to validate the data collection tool. The questionnaire was checked for ambiguity, grammar and clarity of questions and then fine-tuned and administered to a sample of respondents identified in the sample size. The research was conducted with the aid of a research assistant who helped to distribute and collect the questionnaires through a drop and pick process. Respondents were encouraged to participate through follow-up calls and emails to ensure high response rate.

3.6 Data Analysis Methods

The main purpose of the data analysis method that is used is to sum up observations in a way that provides answers to research questions. Both qualitative and quantitative data analysis techniques were used to analyse data. The Statistical Package for Social Scientists (SPSS) version 24 was applied in the analysis of the data collected from the close-ended questionnaires. The software package offered the most comprehensive solution for reporting, modelling and analysis of data and it also offered a variety of data formats and programs that made it easy to edit and transfer data from one program to another. Descriptive analysis of the data collected was used. The data analysis involved provided measures of central tendency and frequencies.
The study aimed to establish the relationship between the four variables and competitive advantage and so inferential analysis was necessary. One-way analysis of variance (ANOVA) was checked to determine the significance of the relationship between knowledge dimensions, Information technology, style of leadership and organizational structure on firm competitive advantage of the real estate firm while regression analysis was used to determine the direction of the relationship using Spearman rho.

3.7 Chapter Summary

This chapter summarizes the research design as used by the study: descriptive design. The population comprised of employees of PGP, which is the company under study. The research employed the census method to obtain a sample size which is the target population comprising all the staff members of the company. The simple random sampling technique was employed in data collection. Primary data was collection was through a structured questionnaire. The data was then cleaned and coded and SPSS utilized for analysis as described in tables and figures in the following chapter.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results obtained and analyses the findings of data and presented in sections based on the research objectives. The first part of the analysis considers the demographics of the population used in the study. The second part presents the findings of the dimensions of KM employed by RE firms. The third part presents the findings of the effect of leadership styles on KM in real estate firms while the forth part analyses IT factors affecting KM. The fifth part presents the findings of effect of organizational structure. The sixth section reports findings of the specific competitive advantages generated by the RE firm as a result of KM.

4.1.1 Response Rate

A total of 50 questionnaires were issued and of these, 46 responses were received from Pam Golding Properties, Kenya which represents 92% response rate achievement as indicated in table 4.1. According to University of Texas report (2014), an in-person survey mode should aptly yield 80-85%. The high response rate was attributed to the good relationship created with the management team and a very resourceful research assistant.

Table 4.1: The Response Rate

<table>
<thead>
<tr>
<th>Variable</th>
<th>Distribution</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Response</td>
<td>46</td>
<td>92%</td>
</tr>
<tr>
<td>Non-response</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.2 Demographic Information

Demographic information gathered per the questionnaires is presented in this section and comprise of: the gender, the age distribution, employment status, work experience as well as the level of education that each respondent provided.
4.2.1 Classification of Respondents by Gender

The gender distribution of this study is as illustrated in figure 4.1 and findings revealed that 78% of the respondents were female and 22% were male. The results show that majority of the employees at PGP are female employees and infers that the company is not gender biased but perhaps the profession attracts more female than male persons.

![Figure 4.1: Classification of Respondents by Gender](image)

4.2.2 Classification of Respondents by Age

The age distribution of the study revealed that those aged between 18-25 years were 5 and represented 11%, while those aged between 26-35 years were 31 representing 68%, and those aged between 36-45 years were 6 representing 14% while those aged above 46 years were 4 respondents represented by 7%. This is indicated below in figure 4.2. This implies that the firm has many young employees who are likely to embrace technology use and more innovative strategies in their work roles for company competitiveness.

![Figure 4.2: Classification of respondents by Age Bracket](image)
4.2.2 Classification of Respondents by Level of Education

The results in figure 4.3 show the number of respondents by levels of education. From this figure, it is seen that majority of the respondents, 68%, hold bachelor’s degrees. Those with a certificate or diploma were 15%, while Postgraduate holders accounted for 17%. The results imply that the company’s employees have all acquired formal education and are very capable of understanding and assimilating innovative strategies for company growth.

![Classification of Education](image)

**Figure 4. 3: Classification of Respondents by Education**

4.2.3 Classification of Respondents by Work Experience

Figure 4.4 shows the length of time served by different employees in the organization. From the findings, most of the respondents (86%) had worked in the company for only less than five years; those who had worked for a period of between 6 and 10 years accounted for 11% whereas, those who had worked for a period of between 11 and 15 years accounted for only 7%. None of the respondents had worked for the organization for over 16 years. This is concurrent with the length of years that the Kenyan franchise has been in operation only since 2012 with employees working for a longer period stemming from the parent company in South Africa.
Figure 4.4: Classification of Respondents by Years of Experience

4.2.4 Classification of the Respondents Role

Figure 4.5 shows the number of respondents by their respective roles in the firm. Owner/Managers were minority represented by 2% (1 person); RE Agents were the majority and represented 57%; Administrators were 11% of the respondents while the others were 12 respondents and accounted for 26%. The firm’s goals centre around the real estate agents hence their majority stake in role in the company; the other roles are primary supportive roles.

Figure 4.5: Classification of Respondents by Roles
4.3 Dimensions of Knowledge Management

The first objective of the study was to examine the dimensions of knowledge management applied by the firm. Respondents were required to rank their level of agreement in a five-point Likert scale measuring KM in terms of defined systems, budgetary allocation, identification of knowledge gaps, availability of CKO, awareness of KM, policies of KM, knowledge acquisition mechanisms, delivery of better services, motivation of auditors, mentors in KM, and knowledge sharing in the firm.

4.3.1 Descriptive on Dimensions of Knowledge Management

The responses revealed that at PGP Kenya there was a clearly defined system of KM; No respondents disagreed with 48% agreeing and 53.1% strongly agreed. 79.6% also agreed that there was sufficient budget location for KM, with only 10.2% remaining unsure of its existence. It was also established that 52% acknowledged that senior managers took an active role in KM by assessing knowledge gaps to identify competent staff and encouraging new ideas (61%). An overwhelming majority (64%) remained unsure of the presence of a CKO with the rest stating they did not have one at the organization. Further questioning revealed that the manager’s role included facilitating knowledge sharing. The findings also established that many (79%) agreed that they were aware of the KM policies, as well as the ability to identify internal knowledge and its applicability in their fields. On-job-training, mentoring and seminars received a majority agreement (81.7%) and most acquiesced that KM had improved service delivery (73.4%).

It was interesting to note that despite many (57%) having agreed to use of KM at the firm via apprentices and mentorship to transfer knowledge especially from the parent company in South Africa, the findings also revealed that the there was little to none sharing of knowledge with other industry players (77%) even for mutual benefit. Real estate agents claimed that sharing knowledge within their specialty areas as well as with other colleagues was very resourceful though not fully utilized as most only shared their own particular locations of property sales. KM however increased the mobility of realtors (67%). Most of the respondents representing 48% agreed that the firm has developed strategies to align operations to the changing KM systems, 43% strongly agreed while 8% were neutral. The summary is shown in Table 4.2 below.
**Table 4.2: Knowledge Management Dimensions**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Clearly defined systems for KM</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Budget dedicated to KM</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>10.2</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge gaps to identify competent staff</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4.1</td>
<td>7</td>
</tr>
<tr>
<td>CKO or an equivalent</td>
<td>10</td>
<td>20.4</td>
<td>10</td>
<td>20.4</td>
<td>16</td>
</tr>
<tr>
<td>KM policies of my firm</td>
<td>7</td>
<td>14.3</td>
<td>4</td>
<td>8.2</td>
<td>8</td>
</tr>
<tr>
<td>Failure to identify internal knowledge</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Knowledge acquisition</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4.1</td>
<td>1</td>
</tr>
<tr>
<td>KM improved services</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Encourages new ideas</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Use of apprentices/mentors to transfer knowledge</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4.1</td>
<td>4</td>
</tr>
<tr>
<td>Competitors has motivated use of KM</td>
<td>2</td>
<td>4.1</td>
<td>5</td>
<td>10.2</td>
<td>14</td>
</tr>
<tr>
<td>Increase in mobility of Agents has motivated KM</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4.1</td>
<td>12</td>
</tr>
<tr>
<td>Align ops to the changing KM systems</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4.1</td>
<td>2</td>
</tr>
<tr>
<td>Difficulty in applying work methods trained in</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4.1</td>
<td>11</td>
</tr>
<tr>
<td>Shares info with other players in RE industry for better KM</td>
<td>9</td>
<td>18.4</td>
<td>7</td>
<td>14.3</td>
<td>17</td>
</tr>
</tbody>
</table>

SD-Strongly disagreed; D-Disagree; N-Neutral; A-Agree; SA-Strongly agree
4.4 Effect of Information Technology Infrastructure in KM on Firm’s CA

The second objective sought to know the effect of information technology infrastructure on KM in RE firms. Among the dimensions tested were: availability of database, use of email, training programs, information trust, document management system, electronic files, availability of intranet, free sharing of knowledge, and lastly, effective communication. Different constructs were posed to test their level of agreement in a five-point Likert scale as shown in Table 4.3.

4.4.1 Descriptive on Effect of IT Infrastructure on Firm’s CA in KM

PGP. Kenya has been able to organize and put into practice the skills, abilities and experiences accumulated to support its growth and business results and owner/manager agrees that the firm considers intellectual capital as one of its greatest and most valuable intangible asset. As a result of this view, KM is considered strategical for the continuous improvement and occurs through the exchange of experiences among employees (79% strongly agree and 14% agree). 53% of respondents strongly agreed that the firm had a comprehensive, adequate database, while 34% agreed, leaving 10% who were neutral. All (100%) employees agreed they emails, social media (WhatsApp groups) and Instagram to share and exchange information and knowledge with others. This corresponds with the firm’s mostly younger demographic that embraces innovative ways of managing knowledge. It wasn’t distinct that IT had encouraged personnel to join training programs outside the firm as majority (58%) were neutral on the question. However, it was established that IT infrastructure had aided availability of knowledge when needed and could be trusted in making decisions with 46% agreeing and 42% strongly agreeing. Availability of a portal in assisting in knowledge transfer, easily retrievable electronic files and ease in communication facilitated by presence of IT infrastructure including an intranet were ranked the top 3 averages in agreement as summarised below:
Table 4.3: Effect of Information Technology

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive database</td>
<td>3.91</td>
<td>1.15</td>
<td>8</td>
</tr>
<tr>
<td>Use of emails</td>
<td>4.72</td>
<td>0.46</td>
<td>1</td>
</tr>
<tr>
<td>Attracting outside personnel</td>
<td>3.74</td>
<td>1.14</td>
<td>9</td>
</tr>
<tr>
<td>Availability of Info</td>
<td>4.33</td>
<td>0.63</td>
<td>5</td>
</tr>
<tr>
<td>Document system on portal</td>
<td>4.30</td>
<td>0.84</td>
<td>6</td>
</tr>
<tr>
<td>Presence of E-files</td>
<td>4.15</td>
<td>0.73</td>
<td>7</td>
</tr>
<tr>
<td>Presence of intranet</td>
<td>4.46</td>
<td>0.69</td>
<td>4</td>
</tr>
<tr>
<td>Free knowledge sharing</td>
<td>4.52</td>
<td>0.55</td>
<td>3</td>
</tr>
<tr>
<td>Effective communication</td>
<td>4.69</td>
<td>0.46</td>
<td>2</td>
</tr>
</tbody>
</table>

4.5 Effect of Leadership Style on Knowledge Management

The third study objective sought to know the effect of leadership style to the knowledge management in real estate firms. Leadership style was assessed in terms of open door policy, management’s role, knowledge reviews, development of team objectives, free knowledge sharing, continuous dialogue and respect, feedback, effective communication, guidance and support, staff recognition, promotions, teamwork and cooperation and promotion of trust.

4.5.1 Descriptive on Effect of Leadership Style on KM

Analysis on the effect of leadership style in the firm ranked the top three averages as attributed to leadership management employing an open-door policy (mean = 4.60), management improving the level of knowledge efficiency (mean = 4.5), and managers developing team objectives (mean = 4.47). Majority (>50%) respondents were in agreement that the leadership at PGP enhanced free knowledge sharing, continuous dialogue and feedback as well as encouraging teamwork and mutual care however majority also indicated that there was hardly any special recognition of staff for knowledge creation (67.5%) and no promotions were given based on the ability to create knowledge. The lowest average on 2.67 (6.4%) was obtained from responses indicating that there were no monetary rewards or otherwise given to staff for knowledge management abilities like sharing or creating. Results were ranked and summarised in table 4.4 below.
Table 4.4: Effect of Leadership Style on Firm’s Competitive Advantage

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S. D</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open door policy</td>
<td>4.60</td>
<td>0.09</td>
<td>1</td>
</tr>
<tr>
<td>Knowledge efficiency</td>
<td>4.5</td>
<td>0.09</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge review</td>
<td>3.96</td>
<td>0.13</td>
<td>10</td>
</tr>
<tr>
<td>Develops team objectives</td>
<td>4.47</td>
<td>0.07</td>
<td>3</td>
</tr>
<tr>
<td>Promotes sharing of knowledge</td>
<td>4.39</td>
<td>0.08</td>
<td>6</td>
</tr>
<tr>
<td>Offers continuous feedback</td>
<td>4.43</td>
<td>0.08</td>
<td>4</td>
</tr>
<tr>
<td>Effective top down communication</td>
<td>4.39</td>
<td>0.11</td>
<td>5</td>
</tr>
<tr>
<td>Give rewards</td>
<td>3.04</td>
<td>0.20</td>
<td>12</td>
</tr>
<tr>
<td>Guidance from management</td>
<td>4.11</td>
<td>0.14</td>
<td>7</td>
</tr>
<tr>
<td>Special recognition for K creation</td>
<td>3.46</td>
<td>0.19</td>
<td>11</td>
</tr>
<tr>
<td>Promotions on ability to knowledge creation</td>
<td>2.76</td>
<td>0.20</td>
<td>13</td>
</tr>
<tr>
<td>Teamwork and cooperation</td>
<td>4.02</td>
<td>0.17</td>
<td>9</td>
</tr>
<tr>
<td>Mutual respect, rust and care</td>
<td>4.04</td>
<td>0.17</td>
<td>8</td>
</tr>
</tbody>
</table>

4.6 Effect of Organizational Structure on Knowledge Management

The fourth objective in this study sought to know the effect of organizational structure on knowledge management in real estate firms. This objective utilized parameter in terms of: whether the organizational structure allowed employees to accomplish tasks according to KM systems, free flow of relevant information, if specific knowledge was with experts or stored in firm portal, management encouragement on reflection of knowledge sources and whether top management supported implementation of strategy or allowed for others to engage in policy determination. The level of agreement of the respondents was ranked in a five-point Likert scale as shown in Table 4.5

4.6.1 Descriptive of Organizational Structure effect on KM

The findings indicate that the majority strongly agree (56%) and 40% agree that PGP’s organizational structure allows and facilitates them to accomplish tasks according to KM services. They also agree that free flow of information is prevalent.

16.3% of the respondents were unsure on whether even the smallest policy resided with top-level management. Majority (39.4%) disagreed and stated that they were not involved in policy decisions and those who agreed represented 35%. 51% of the respondents stated they thought the organization was not too large to establish coordination between
different departments and so this variable could not possibly contribute to poor knowledge management. The frequency and percentages were summarised in table 4.5 below:

**Table 4.5: Organizational Structure and Knowledge Management**

| Organizational structure | SD | | | | | D | | | | | | N | | | | | | A | | | | | | SA | | | | | | | | Mean |
|---------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|                           | N  | %  | n  | %  | N  | %  | n  | %  | N  | %  | n  | %  | N  | %  | n  | %  |        |        |        |        |        |        |        |        |        |        |
| Org. allows employees task completion according to KM systems | 0  | 0  | 0  | 0  | 12 | 24.5 | 12 | 24.5 | 25 | 51  | 9  | 18.4 | 12 | 24.5 | 3.94 |
| Free flow of relevant info | 0  | 0  | 0  | 0  | 5  | 10.2 | 5  | 10.2 | 29 | 59.2 | 12 | 24.54 | 12 | 24.54 | 4.15 |
| Specific knowledge resides with experts and NOT stored in firm portal | 0  | 0  | 8  | 16.3 | 8  | 16.3 | 8  | 16.3 | 23 | 46.9 | 7  | 14.3 | 7  | 14.3 | 3.63 |
| Management encourages reflection on info and data and reframe at strategic level | 0  | 0  | 3  | 6.1 | 14 | 28.6 | 14 | 28.6 | 24 | 49  | 5  | 10.2 | 5  | 10.2 | 3.67 |
| Support from top in strategy implementation | 2  | 4.1 | 0  | 0  | 8  | 16.3 | 8  | 16.3 | 23 | 46.9 | 13 | 26.5 | 13 | 26.5 | 3.98 |
| All policy decisions are by top mgt only | 10 | 20.4 | 18 | 36.7 | 8  | 16.3 | 9  | 18.4 | 1  | 2  | 1  | 2 | 1  | 2 | 2.41 |
| large organization therefore hard to coordinate different depts. | 0  | 0  | 0  | 0  | 4  | 8.2  | 4  | 8.2 | 25 | 51  | 17 | 4.28 | 17 | 4.28 | 4.28 |

50
4.7 Knowledge Management Practices and Competitive Advantage

This study sought to establish the effect of knowledge management practices on a firm’s competitive edge as denoted by variables like increased firm profitability, quality service delivery, sustenance of competitive advantage, effective collaboration between departments, and high level of client acquisition and retention. Variation occurs with the extent of application of knowledge management practices.

4.7.1 Descriptive on Knowledge Management Practices and CA

In the table below, results reveal that majority of employees of PGP Kenya attribute their competitiveness to their adoption and practise of knowledge management techniques. Quality service was greatly influenced by KM as supported by a majority of 51% agreeing and 44% strongly agreeing. Employees stated ease of transacting due to availability and ease of acquiring and sharing pertinent knowledge. 47% also agreed that KM influenced alignment of knowledge to business strategy; 33% strongly agreed while 18% were of neutral opinion. Forty eight percent also agreed that it affected competitive Advantage Sustenance, 30% agreed while 19% were neutral with none disagreeing. With regard to profitability, 47% agreed that it increased profitability and performance, 39% strongly agreed and 13% were neutral on the issue. It was also established that most real estate agents strongly agreed (55%) and 35% agreed that KM affected client acquisition and retention in this competitively turbulent environment. KM also had an impact on effective collaboration between departments and to this statement 65% agreed while 24% strongly agreed, 11% were neutral. Interestingly, the findings also noted that majority (44%) were not sure whether business was impacted due to lack of KM and loss of skills while 26.4% disagreed that business was impacted and only 12.1% agreeing that it had impacted business. Table 4.6 below summarises the findings:
Table 4.6: Knowledge Management and Competitive Advantage

<table>
<thead>
<tr>
<th>Knowledge Management measure</th>
<th>Competitive Advantage</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Quality service delivery</td>
<td>0 0 0 0 3 16 27 55.1 4.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alignment of knowledge to business strategy</td>
<td>0 0 0 0 5 23 18 36.7 4.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA Sustenance</td>
<td>0 0 0 0 1 2 29 59.2 16 32.7 4.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased Profit</td>
<td>0 0 0 0 2 26 18 36.7 4.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client retention</td>
<td>0 0 0 0 3 32 11 22.4 4.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective collaboration between departments</td>
<td>0 0 0 0 24.1 32 65.3 12 24.5 4.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business impact on loss of skills</td>
<td>7 14.3 11 22.4 22 44.9 5 10.2 1 2 2.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.8 Inferential Statistics Analysis

In this section, diagnostic tests for the regression model and its assumptions were performed to ensure the model was fit for the study.

4.8.1 Multicollinearity Test

Multicollinearity is deemed to exist whenever there is more than one variable meant to assess the same items (Atikiya, 2015). The independent variable (CA) was measured by four variables; dimensions of knowledge management employed, effect of IT, leadership style and organizational structure on KM in the firm.
This deemed the necessity for a multicollinearity test so that regression analysis and other statistical results remain unaffected. A tolerance value close to 1 implies that there is very little multicollinearity while those values near 0 imply multicollinearity may be a threat. VIF shows how the variance has been inflated by multicollinearity and less than 5 is acceptable. From Table 4.7 below the tolerance values and the VIF range within the acceptable values thus multicollinearity is unlikely to pose any serious issues in multivariate analysis.

Table 4.7: Multicollinearity Test (Independence)

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions of Knowledge Management</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Information Technology and Infrastructure</td>
<td>.495</td>
<td>3.392</td>
</tr>
<tr>
<td></td>
<td>Leadership Style</td>
<td>.539</td>
<td>1.855</td>
</tr>
<tr>
<td></td>
<td>Organizational Structure</td>
<td>.445</td>
<td>2.245</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.655</td>
<td>1.527</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Competitive Advantage

4.8.3 Reliability Test

Cronbach reliability test was done to ensure tool reliability. Variable reliability should have a Cronbach Alpha value of above 0.7. For the total five variables under study, the value had a range of 0.7-0.8 and therefore deeming the questionnaire used reliable.

Table 4.8: Reliability Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Management Dimension</td>
<td>0.856</td>
<td>15</td>
</tr>
<tr>
<td>Information Technology</td>
<td>0.881</td>
<td>9</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.787</td>
<td>13</td>
</tr>
<tr>
<td>Organizational structure</td>
<td>0.806</td>
<td>7</td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>0.762</td>
<td>7</td>
</tr>
</tbody>
</table>

4.8.4 Correlation and Regression Analysis

This section contains the inferential analysis on the effect of knowledge management practices on the real estate firm’s competitive advantage.
4.8.5 Correlation Analysis for Competitive Advantage and Firm KM

This study adopted Spearman’s correlation coefficients to establish the direction and intensity of the relationship between the independent variables and the dependent variable. From Table 4.9, the four independent variables revealed moderate to strong, positive relationships with the firm’s competitive advantage. Leadership style reflected the strongest (rho=0.627), followed by IT infrastructure (rho=0.601) which was stronger than Knowledge Management dimensions that had (rho=0.494) while organizational structure had (rho=0.398) impact on firm competitive advantage as shown in table 4.9

Table 4.9: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Firm CA</th>
<th>KM Dimension</th>
<th>IT Infrastructure</th>
<th>Leadership style</th>
<th>Organizational structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm CA</td>
<td>1</td>
<td>.494*</td>
<td>.601**</td>
<td>.627**</td>
<td>.398*</td>
</tr>
<tr>
<td>KM Dimension</td>
<td>.494*</td>
<td>1</td>
<td>.640**</td>
<td>.640**</td>
<td>.486</td>
</tr>
<tr>
<td>IT Infrastructure</td>
<td>.601**</td>
<td>.640**</td>
<td>1</td>
<td>.338*</td>
<td>.219</td>
</tr>
<tr>
<td>Leadership style</td>
<td>.627**</td>
<td>.640**</td>
<td>.338*</td>
<td>1</td>
<td>.460**</td>
</tr>
<tr>
<td>Organizational</td>
<td>.398*</td>
<td>.486**</td>
<td>.219</td>
<td>.460**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

4.8.6 Regression Analysis

The aim of the study was to determine the effect of knowledge management on the firm’s competitive advantage. In this regard, a regression model was fitted to make inferential analysis. The model stated that \( Y=\alpha +\beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon \). From the model summary displayed in Table 4.10, R Square and Adjusted R Square were 0.508 and 0.482 respectively. This means that there was a positive linear linkage between the practices of knowledge management and firm’s competitive advantage. The explanatory power of the model therefore stands at 50.8%. That means that 50.8% of the total variability in competitive advantage of PGP can be explained by variability in Knowledge Management or simply that KM determines 50.8% of real estate firm’s competitive advantage as displayed in table 4.10
Table 4. 10: Model Summary (Goodness of Fit)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.700a</td>
<td>.508</td>
<td>.482</td>
<td>.25465</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Organizational Structure, Information Technology and Infrastructure, Leadership Style, Dimensions of Knowledge Management

Table 4.11 reveals the findings of the Analysis of Variance (ANOVA) for the regression model that was applied. ANOVA showed an F-statistics of 25.759 and p-value 0.001. Since the p-value is less than 0.05, this implies that relationship between the knowledge management and competitive advantage is significant.

Table 4. 11: ANOVA Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>4</td>
<td>3.373</td>
<td>25.759</td>
<td>.001b</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>41</td>
<td>.065</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Competitive Advantage

b. Predictors: (Constant), Organizational Structure, Information Technology and Infrastructure, Leadership Style, Dimensions of Knowledge Management

**Regression Coefficients**

Regression coefficients show that there was a positive relationship between knowledge management dimension and competitive advantage ($\beta = 0.284$) which was significant ($p<0.05$). This implies that a unit change in the dimension of knowledge management increases a real estate firms’ competitive advantage by 0.284 units while holding other variables constant.

The second variable (IT) obtained a positive and significant relationship with the real estate firms’ competitive advantage ($\beta = 0.432$, p value <0.05). This means that a unit change in IT infrastructure increases competitive advantage by 0.432 units in the real estate firm (while holding knowledge management dimension, leadership style and organizational structure constant).
Thirdly, the strongest positive and significant relationship was realised between leadership style and competitive advantage of real estate firms. (\(\beta = 0.811\), p value <0.05). This implies that a unit change in leadership style increases real estate firms’ competitive advantage by 0.811 units while holding all other variables constant.

The last independent variable, organizational structure had a beta coefficient of 0.134 and was significant. This implies that a unit change in organizational structure of the firm will yield a 0.134 unit increase in the firm’s competitive advantage.

**Table 4.12: Regression Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.129</td>
<td>.456</td>
<td>6.869</td>
</tr>
<tr>
<td></td>
<td>Information Technology and Infrastructure</td>
<td>.277</td>
<td>.109</td>
<td>.432</td>
</tr>
<tr>
<td></td>
<td>Leadership Style</td>
<td>.385</td>
<td>.089</td>
<td>.811</td>
</tr>
<tr>
<td></td>
<td>Organizational Structure</td>
<td>.101</td>
<td>.078</td>
<td>.134</td>
</tr>
<tr>
<td></td>
<td>Dimensions of Knowledge Management</td>
<td>.241</td>
<td>.098</td>
<td>.284</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Competitive Advantage

\[ Y_{i, t} = \alpha + \beta_1 DKM + \beta_2 IT + \beta_3 LS + \beta_4 OS \varepsilon_{i,t} \]

\[ CA = 3.129 + 0.284 DKM + 0.432 IT + 0.811 LS + 0.134 OS + 0.362 \]

**4.9 Chapter Summary**

This chapter has presented the results and findings established from the data collected from respondents at PGP and the analysis done. It was presented in four sections; the first part analysed the findings from the demographics of respondents and the other four sections presenting the findings based on the four specific objectives of this study. Inferential statistics applied in analysis via correlation and regression gave congruent results as they led to the same deductions.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary and discussion of the findings of the data analysed previously in comparison with the findings in the critical literature review. The conclusions of the study and recommendations for further studies on identifying the effect of knowledge management on real estate firms’ competitive advantage is also presented here. These areas are presented in line with the research objectives under investigation.

5.2 Summary

The general objective of this study was to investigate the effect of knowledge management on the competitive advantage of real estate firms in Kenya. This was to be achieved under the guidance of four (4) specific objectives thus: 1) Dimensions of knowledge management employed by real estate firms in Kenya 2) Effect of information technology on knowledge management 3) Effect of leadership style on knowledge management and 4) Effect of organizational structure on knowledge management in gaining competitive advantage.

The study adopted the descriptive research design to identify and explain association between the variables. The target population for the study was all the fifty employees of Pam Golding Properties Kenya. To attain an apt sample size, this study used the survey method to conduct a census of the whole target population. Convenience/purposive sampling especially for RE agents based on ease of access due to field work of agents associated with the position. The researcher targeted 100% of the population resulting into sample of 50 respondents. Structured questionnaires collected primary data and analysis was done on SPSS (version 24). A response rate of 92% was achieved by the 46 questionnaires that were filled and returned which was sufficient for the study.

The first objective of the study was to examine the dimensions of knowledge management applied in the firm and the results revealed that at Pam Golding Properties Kenya there was a clearly defined system of KM supported by sufficient budget location for KM according to most. It was noted that respondents were neutral as to whether management looked at knowledge gaps to identify competent staff. Most agreed that
knowledge gaps were identified but many remained unsure as to whether credit was given to employees identifying these gaps.

Despite this, majority acquiesced to being aware of the KM policies in place and utilised. Majority also confirmed that internal knowledge identification was a challenge. Knowledge was acquired and shared through on job training, mentoring and seminars especially through the parent company in South Africa which had many, experienced employees who facilitated the transfer of knowledge. The overall result was superior services for their clients. Firm rivalry and competition was the leading motivator for PGP in aligning itself with knowledge management practices. A close-second motivator was the rapidly changing effect of technology that propelled most processes to adapt or face failure. Majority of the respondents agreed that training was efficient and negated the challenge of knowledge application at the work place. Knowledge Management dimensions in place had a strong positive correlation to competitive advantage (rho=0.554).

Regarding the second objective seeking to know the effect of technology infrastructure on knowledge management in real estate firms, most of the respondents agreed that the firm had a comprehensive, adequate database where they shared and retrieved relevant information and they also used emails as well as internet mobile applications like WhatsApp to share and exchange knowledge with each other and clients alike. IT infrastructure in place facilitated the availability of knowledge at the optimal time and information retrieved was reliable and useful. The organization’s availed an internal portal that was hosted by an intranet which proved significantly helpful with the majority of respondents agreeing with the construct that the availability of a document retrieval system that was easily accessible was instrumental in knowledge transfer. A majority agreed that intranet and IT had enabled free sharing of knowledge within the various departments as well as with the parent company in South Africa. IT infrastructure had a positive correlation with the competitive advantage (rho= 0.650).

The third study objective sought to know the effect of leadership style to the knowledge management in real estate firms. The findings revealed that PGP embraced an open-door policy with managers cultivating close relationships with the agents. Majority also supported that managerial duties involved biweekly reviews and development of team objectives in conjunction with the RE agents. There was consensus that within team area specialists, knowledge was shared freely but most were neutral about sharing as the whole
company outside of the scope of teams however there was continuous dialogue and instant feedback which was effective overall.

Even though knowledge systems seemed to be in place, many respondents were neutral about the firm giving monetary/non-monetary rewards for knowledge sharing. RE Agents especially responded highly to lack of promotions offered based on the ability to provide knowledge. However, many agreed that the management insisted on teamwork and cooperation over competition, and promoted trust, care and concern among realtors.

The last objective sought was determining the effect of Organizational Structure on knowledge management. The findings established that majority of the respondents felt that the top managers enforce a flat structure where realtors are given authority in some of the marketing decisions of their work areas as well as given the opportunity to explore strategies that enhance knowledge creation and sharing. Majority also agreed that even though all policies are determined by the top-level authorities, there is free flow of relevant information throughout the organization.

5.3 Discussion of the Findings

5.3.1 Knowledge Management Dimensions and Firm Competitive Advantage

It was revealed that at Pam Golding Properties Kenya there was a clearly defined system of KM. Kenya real estate has not been left behind in recognising that knowledge is vital and strategic when used properly and is redefining the modus operandi of many industries in the world. Due to the increasing complexity of the work place as well as the multidisciplinary nature of strategic management requiring involvement of varied pundits, organizations are beginning to grasp the benefit of using different types of knowledge to enhance efficiency, effectiveness and increase the ability to innovate (Alluri, 2009). The trend has moved from simply acquiring useful knowledge during the knowledge creation process to generating new knowledge within the organization that serves to enhance competitive advantage (Malhotra, 2000). Pam Golding has made this realization by embracing creation and use of an intranet, and a document retrieval portal where employees download and upload pertinent information and thus making research easier and cheaper as well as client communications and transactions.

Employees overwhelmingly agreed that senior managers had not overlooked the knowledge gap to identify competent staff. Staff that were resourceful in knowledge
creation were more likely to get recognition from senior management. Resource-based view (RBV) highlighted the value-addition of human capital in organization by defining and linking concepts such as knowledge, organizational learning (Senge, 2007) and organizational leadership. This perspective would explain why realtors involved highly in knowledge creation, were located in areas where assets contributed to majority of the firm’s revenues.

Awareness of the KM policies utilised in the company did not prove a challenge to majority of the employees. Many acceded that this was company-wide knowledge. Liang et. al. (2009) stated that implementation of KM programs by managerial staff was aimed at gaining competitive edge, increasing productivity, and sustaining competitiveness. Within this context, it becomes a survival catalyst for an organization to effectively manage both internal and external knowledge activities when operating in a turbulent environment. Radwan (2013) observed pharmaceutical firms and noted that policies and strategies of knowledge management have a positive relationship with a firm’s differentiation strategy which was acquired through superior communication and knowledge sharing through KM programs in the organization. This differentiation strategy is what gave them competitive advantage.

The findings also revealed that the firm has developed strategies to align operations to the changing KM systems. It encourages employees to share information by social group applications that is all inclusive from senior management to realtors. Although it was noted that the different area specialists work in competition and usually information on their area remains covert. According to Nonaka, Toyama and Konno (2000), knowledge creation organizations are enhanced by innovation which occurs when their internal knowledge processes allow interactions between tacit and explicit knowledge and thereby stimulating growth both quantitatively and qualitatively (Hauschild et al, 2011). Szulanski (1996) coined the term “knowledge stickiness”, referring to the natural tendency of hesitation by individuals and organizations as well in sharing information and this slows down effective knowledge transfer. Supportive learning environments can cure organizations of knowledge stickiness. PGP registered elements of knowledge stickiness by majority agreeing that area specialists have different marketing strategies and operations that suit only their specific areas thus are not shared throughout the organization.
Knowledge Management dimensions showed a strong positive correlation to competitive advantage (rho=0.554). This is supported by Radwan’s (2013) study, where respondents proved that presence of knowledge management programs in the firm had propelled high customer retention and high-quality service deliverance.

5.3.2 Information Technology Infrastructure and Knowledge Management

All respondents concurred that they utilised the organization’s intranet to access emails and exchange knowledge with both clients and colleagues. Dawson (2000) stated that employees’ knowledge transfers their values into the organization’s resources thus building it. Knowledge sharing is a mutually beneficial activity where the giver as well as the receiver gain as they participate in sharing as new knowledge develops in the process (Sveiby, 2001). Contrary to this, knowledge is equated with power when an organization is in active economic competition and naturally people in a competitive mode will not be willing to share knowledge with their competitors (Goh, 2002).

The analyzed data revealed that IT infrastructure had elevated availability and retrieval of knowledge when needed and proved beneficial in timely decision-making. Malhotra (2004b) notes that despite increasing sophistication of Knowledge Management technologies, there is increasing failures of Knowledge Management technology implementations. He continues: “It is important to note that such failures result from the knowledge gaps between technology inputs, knowledge processes, and business performance.” From the findings most respondents (72%) agree that the technology in the organization is designed to aid the employees work more efficiently, however despite this 22% of the respondents do not believe that the organizational processes enables the organization respond more quickly to the market changes. 82% of the respondents also are not satisfied with the available knowledge in their departments. These findings support Malhotra’s arguments that such failures result from the knowledge gaps between technology inputs, knowledge processes, and business performance despite the adoption of the sophisticated technologies.

From the findings it is clear that PGP may be lagging behind and need to give priority to relevant technology so as to improve their ability to create new ideas. According to Garita (2002), tools used for KM in co-operations will have to be able to bridge the technological gaps between the participants. According to Heghe (2011), “The organizations of the future are those organizations that are able to valorise their
knowledge in the quickest and most efficient way.” The production of goods or the delivery of services is no longer of paramount importance. That place has been taken by the development, management and deployment of new knowledge (Heghe, 2011).

Knowledge transfer was greatly enhanced by the PGP portal that employees access with ease even externally while working in the field which is particularly essential for real estate agents. Storage and recovery of knowledge in a trusted system is vital to effective knowledge management. Knowledge storage occurs in databases, reports and portals as well as websites within the organization. Though many organizations have volumes of transactional data, it is worth noting that data is rarely of direct benefit. It must be synthesised and moulded into useful information. Knowledge storage is null and void without information technology infrastructure being in place. Data is mined in hardware using software by IT specialist for varied organizational uses (Hughes, 2011).

IT infrastructure correlated positively with competitive advantage (rho= 0.650). Gold et al., (2001) studied the importance of IT in knowledge management and concluded that it does influence how knowledge is created, transferred and maintained within the organization. Mahapatra (2000) notes that IT plays a key role in enabling knowledge management. From the results obtained, respondents show the strategic advantages found in an organization that invests in technological infrastructure because it enhances employee corporation and aides in achieving economies of scale when information is continually collected, and knowledge created. This study findings support claims by Hansen et al. (2015) who purported that the fastest way to gain an edge over the competition was to utilise available technology to create knowledge, share and store it within the organization. Duffy (2000) admonished against over emphasis on IT infrastructure importance without acknowledging that knowledge management processes contained the key to making knowledge a competitive strategy.

5.3.3 Leadership Style and Firm Competitive Advantage

At PGP Kenya, respondents concurred that their managers employed an open-door policy and were easily reachable for consultation and guidance. Politis (2011), in his studies, supported the notion of a leader who takes on a facilitative role rather than a commanding or authoritative one. Many employees look upon their leaders for behavioural cues in the work place and many leaders take on a role model appeal to employees therefore leaders who encourage openness facilitate sharing information which can be useful knowledge
for the organization. Respondents in this research study overwhelmingly agree with Politis (2011) assertions that management and their leadership did factor in their motivation to share and promoted a culture of sharing information.

Majority of the respondents stated that management looked at objectives and gave guidance which motivated them to do more than was required and not just as a reward-punishment system at play. Monetary incentives do play a role in motivating workers but has ceased to be the key motivator in recent times. Free flow of knowledge in the company was present as noted by majority respondents. Foss & Pedersen (2012) support these findings by claiming that in a turbulent environment, knowledge creation and application is the strongest strategy for a firm in attaining sustainable competitive advantage. Organizations must have systems in place that staff and train and thus qualify employees with critical knowledge and abilities to handle knowledge expertly (Damodaran & Olphert, 2013). Learning organizations with the goal of enabling knowledge-geared competitive advantages should embrace flexible knowledge management initiatives that are inclusive of development of Knowledge Management Systems (KMS) to hasten the process of knowledge collection, storage, and distribution directed at superior profits (Alavi & Leidner, 2001).

The findings revealed the management promoted trust, care and concern among employees by providing out-of-office parties, networking forums away from the office and even engaging in CSR activities together. Transactional leaders lead by consistent instruction but are not otherwise vested in the employee’s work satisfaction unless an urgent need or a problem is present (Bass, 1985). Transformational leaders on the contrary, motivate employees and inspire a work ethic that creates a genuine passion in the employees for the company to succeed and therefore thy put forth their best at work (Nemanich & Kellar, 2007). They play a role in encouragement, establishment of training and training systems and promote an esprit de corps among employees. These all enhance employee performance which translates to efficiencies and higher returns (Yulk, 2006).

Liu and Chen (2005) realised that in actuality, knowledge resided in those employees who engaged in the knowledge process of accessing, sharing, creating, transferring and maintaining. This proves to be a challenge to knowledge advancement as it relies on employees sharing behaviours or habits thus hard to monitor and control (Liebowitz, 2011). Bock et al. (2015) support findings at PGP that relayed that extensive knowledge
sharing within organizations was lacking. Majority responded in agreement that as real estate agents they find a lot of information out in the field and with experts rather than in the portal or work database. This information is usually tacit information that is not formalised. Transformational and charismatic leadership practiced in knowledge organizations provides positive influence associated with high levels of individual and organizational performance (Kirk & Dijk, 2007).

5.3.4 Organizational Structure and Knowledge Management

The majority of respondents (57%) at PGP Kenya felt that the organization is not so large and therefore it is not difficult to establish coordination between different departments. In support, Connelly and Kelloway (2013) argue that there is a negative relationship between organizational size and knowledge sharing resulting from changes in social interactions. Strach and Everett, (2006) argued that the size of a subsidiary may influence internal knowledge distribution. “Employees in smaller firms are more flexible than employees of larger organizations in terms of making cultural shifts, but they perceive various cultural aspects the same way” (Ismail, 2005; Walczak, 2005). Size is an important variable that affects various organizational aspects as well as overall organizational performance. The correct organizational structure is crucial to enable the organization to implement its strategy (Hill et al., 2009). This is evident at PGP Kenya with the fact that it is a small franchise and relationships are a bit intimate therefore easy to establish coordination which positively affects the effective implementation of Knowledge management.

The findings show that 60% of the respondents disagree that all policies even the smallest is determined by the management. They stated they have some input in decision-making particularly real estate agents regarding the areas of speciality. 63% of the respondents believe that the specific knowledge they need resides with the experts rather than been stored in portals. According to DeLong and Fahey (2000) knowledge management can only be effective if all the employees have access to relevant information pertaining to their specific goals and sectors at the crucial time of decision-making.

74% of the respondents agree that the top managers at PGP Kenya support implementation of strategies. The top management support is a critical factor in an organization during development and implementation of any strategy which can improve internal communication and more effective and proper coordination. Top management
involvement has positive effect in delivering the message on the importance of strategies and how they affect the future development of organizations. Employees work within the organizational structure in place and if the structure supports organizational knowledge management then knowledge management processes becomes easier to implement as a business strategy (Santoro & Gopalakrishnan, 2000).

The findings show that the managers and the realtor agents at PGP Kenya do not see eye to eye on some of the views and this might be dangerous as Heracleous (2000) states. In regard to the determination of all policies by the top management, 100% of the top managers believe this to be true while only 58% of the realtor agents agree. Majority (74%) of the employees also seem to agree that the organizations management encourages people to reflect on information and data and reframe it at the strategic level while only 26% of them believe this to be true. 82% of the respondents believe that there is free flow of relevant information in the organization with only 18% in disagreement. A majority of the respondents also seemed sure about most of the questions asked. This shows that there is proper communication in the organization. Peng and Litteljohn (2001) argue that organizational communication plays an important role in training, knowledge dissemination and learning during the process of strategy implementation. According to Al-Alawi et al., (2007) Interpersonal communication is vital for the development of social intra-organizational networking that forms the foundation for knowledge sharing processes.

5.3.5 Knowledge Management and Competitive advantage
Knowledge Management dimension had a strong positive correlation with competitive advantage (rho=0.554). McElroy, (2000) argues that Knowledge and information are becoming crucial core assets for businesses, who have to learn to handle these assets in new ways. Organizations now find that they must share information internally more efficiently and learn to adapt more quickly to external circumstances in order to retain their competitive advantage. “The knowledge organization has emerged as the dominant structure of both public and private organizations in the transition from an industrial to a knowledge society” (Lassen et al., 2006). The main resource contributing to an organization’s survival and prosperity in the current time is knowledge as it is the primary driver of the value of the organization (Garud & Kumaraswamy, 2005).
Traditionally in Kenya, real estate agencies have employed unskilled personnel, locally known as briefcase agents, who have no formal training. Recently, professionalism has emerged as a necessity in the business. For example, in a study by Dabholkar and Overby (2012), professionalism has emerged as an important factor in an investigation of real estate agent services to homeowners.

Professionalism includes honesty and knowledge in addition to agents simply being professional in their interactions. Similarly, Hemphill (2007) finds that professionalism affects real estate broker selection. She finds that agents consider the following as key elements of a listing attempt: really hearing the vendor, getting along with the vendor and getting to know the vendor. A fundamental premise of market orientation of real estate brokers is that the firm should meet customer expectations. Hemphill’s (2007) research shows that the real estate firm (represented by the agent) has somewhat differing perspectives from the customer (represented by the vendor) in terms of factors affecting real estate broker selection. This report helps to highlight the changing roles of real estate agents and agencies as knowledge workers and organizations respectively and how this affects their competitive edge. Performance differences across firms can be attributed to the variance in their strategic knowledge (Garud & Kumaraswamy, 2005).

5.4 Conclusion

5.4.1 Knowledge Management Dimension and Firm Competitive Advantage

The findings conclusively prove that knowledge management dimension can be applied to organizations that pursue competitive advantage. The positive correlation between knowledge management dimension is hence forth presented for consideration and action by competitive firms. Learning organizations will attain greater advantage as they can explore more areas to harvest knowledge from and better ways to utilize it. Real estate firms stand to benefit greatly from knowledge processes and knowledge management in these turbulent times and as knowledge becomes increasingly touted as the key to a sustainable competitive firm. Effective KM systems are those that enhance interaction, awareness and familiarity of the system by the employees. In addition, this study notes that effective KM should embrace KM policies, individual components of KM, implementation of employee’s tacit knowledge and ideas and organization structures that enhance knowledge sharing.
5.4.2 Information Technology Infrastructure and Firm Competitive Advantage

The findings show that a real estate firm’s competitive advantage lies squarely on the information technology infrastructure in place and in use. These two variables had the greatest correlation from the analysis. Firms must start viewing information technology investments as a strategic move towards achieving competitive advantage. Continued enforcement of the use of emails, website portals, intranet, databases, electronic files for data sharing should be propagated as firms’ endeavour to keep up with rapidly changing technologies.

5.4.3 Leadership Style and Firm Competitive Advantage

Findings on leadership clearly depict the transformational leadership style as the suitable style to facilitate knowledge processes and management. This leadership style encourages free knowledge sharing, motivation of employees and an environment conducive to knowledge creation in the firm. The human resource is vital to managing knowledge effectively and therefore organizations need to invest in this resource both fiscally and psychologically to keep employees vested in adapting new and ever-changing aspects of knowledge. Leadership must also not be limited to knowledge sharing in their own industry but should be open to knowledge sharing among related and supporting industries, for example, real estate and the banking sector would find knowledge shared a vital resource.

5.4.4 Organizational Structure and Knowledge Management

From the study it can be inferred that knowledge management has benefited the firm, however, it is not quite clear whether the firm enjoys significant competitive advantage such as enhanced profitability, employee efficiency and improved business turnover. Pam Golding Properties being a franchise adheres to many of the parent company policies and it also benefits from the larger company’s wealth of experience and information database which is shared freely with it through a semi-flat hierarchy. It is a fact that KM not only delivers expertise to the firm, but also offers the firm the opportunity to concentrate efforts in client satisfaction.
5.5 Recommendations

5.5.1 Recommendations for Improvements

5.5.1.1 Dimensions of KM and Competitive Advantage

Dimensions of knowledge management practices had a significant positive effect on competitive advantage and based on this, the study recommends for greater awareness of knowledge management processes and how-to identify and utilise useful knowledge in increasingly technologically turbulent times. Even though the result were significant, they were moderately so, and therefore it is recommended that PGP and other RE firms consider restructuring of KM in areas where knowledge is a vital resource, in order to achieve efficient results that are in alignment with the company’s strategies. It is essential that each company understands its own needs before embarking on the structuring of the KM process, which should ideally reflect the corporate vision, mission and values.

Consultation from experts on this aspect would prove beneficial and should initiate with looking at areas of high-value knowledge like field realtors and ‘briefcase agents’; beginning with a focused pilot project and letting demand drive other initiatives; working across multiple fronts all at once (technology, organization, culture) and avoid putting off trouble-areas where knowledge is lacking until it is too late.

5.5.1.2 Information Technology Infrastructure and Competitive Advantage

According to findings in this study, information technology infrastructure is a major contributor to competitive advantage in the real estate industry. Currently the organization shares knowledge through e-mails and the intranet; this is a good start towards KM practises, but it is recommended that the firm stands to gain even further from expanding to technologies like cloud computing, teleconferences, intelligent agents and social media. They can also improve on what they already have for instance, establish a specific portal – the Knowledge Management Portal – on its intranet, where employees can access the best engineering practices; this would be geared at continuous improvement and would facilitate the exchange of experiences among employees, suppliers, customers, community, market and even competitors. These contacts generate ideas for more efficient construction solutions, in terms of economic and environmental aspects, as well as improvements that add value and provide more comfort and savings to customers. This is in practice in successful RE companies in Brazil and has proved very beneficial.
5.5.1.3 Leadership Style and Competitive Advantage

Based on this study’s findings, it is recommended that real estate company leaders employ effective leadership styles like transformational style and lead by example for their leaders to emulate. This can be done by focusing more on recognizing employees with potential to create and share knowledge and thereafter giving rewards for knowledge creation efforts that bear fruit. Leadership role can also lead by example and the company can start by ensuring their employees are people that are revenue creators, not cost items; treats its clients individually; builds company strength through skilled individuals and appreciates these kind of employees; develops the organization through developing the employee’s know-how and has managers who are formal as well as informal leaders.

5.5.1.4 Organizational Structure and Competitive Advantage

The knowledge organization is quite different from the bureaucratic organization as bureaucracy is a hindrance to free flow of information and limits knowledge creation with the enforcement of many rules. This study recommends for firms to embrace the learning school of thought that is enabled in learning organizations. Learning organizations with hierarchical structures have still proved better performers as they encourage team work and cohesion thus enabling knowledge creation, sharing and utilization. Inclusion of employees in generation of ideas, alternatives and decision-making enhances a knowledge organization perspective that should be incorporated in a competitive organization.

5.5.2 Recommendation for Further Studies

Further studies should be undertaken to study the challenges faced in knowledge management implementation specifically in Knowledge Process Capability as it relates to different related and supporting industries sharing knowledge to create efficiencies. As the backbone of Knowledge Management practices, Knowledge Process Capability requires greater analysis and investigation because if not effectively managed, there is potential risk to losing the full benefit of Knowledge Management. Research studies investigating the link between Knowledge process capabilities and organizational performance will be greatly beneficial.
Even though this study’s’ findings have been analysed inferentially, more conclusive results would be obtained from studying many firms throughout the nation instead of a singular one. Future research should also aim to develop methods and tools for KM which allow for the identification of the most relevant aspects to be addressed by pragmatic solutions.
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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

January 2018

Dear respondent,

I am a Strategic Management student at United States International University Africa (USIU-Africa) pursuing a Master of Business Administration degree. In partial fulfilment of my course work, I am conducting a research study to assess the EFFECT OF KNOWLEDGE MANAGEMENT ON COMPETITIVE ADVANTAGE OF REAL ESTATE FIRMS IN KENYA: THE CASE OF PAM GOLDING PROPERTIES KENYA. The purpose of this study is to identify the use of Knowledge Management in this sector as a strategy in attaining competitive advantage.

To attain this objective, the information you provide as a respondent will be imperative for this study. I kindly request for your honest participation as a respondent in this study by completing the attached questionnaire with accurate information that will be used entirely for this research only while observing utmost confidentiality.

A copy of the report findings will be made available upon request.

Your assistance is highly valued. Thank you in advance.

Yours faithfully,

Lilian N. Nzongi
APPENDIX II: QUESTIONNAIRE

EFFECT OF KNOWLEDGE MANAGEMENT ON COMPETITIVE ADVANTAGE OF REAL ESTATE FIRMS IN NAIROBI COUNTY: CASE OF PGP KENYA.

Knowledge Management (KM) is defined as any systematic activity related to the capture, sharing and creation of knowledge by an organization. The purpose of this survey is to find out the impact of knowledge management in attaining competitive advantage in real estate firms in Nairobi County. Four variables are examined; dimension of knowledge management applied by the firm, the information system, the style of leadership exhibited in the firm and the effect of organizational structure. Please note that your responses are confidential and that my reporting will not include your individual name. Kindly respond to the following questions by ticking on the appropriate box (√) or filling the answers in the blank spaces.

SECTION A: DEMOGRAPHIC INFORMATION

Please fill out your personal information in the spaces below. Tick only one response.

1. Please indicate your gender: Male [ ] Female: [ ]

2. Please indicate your age 18-25 [ ] 26-35 [ ] 36-45 [ ] 46 and above [ ]

3. Highest Level of education Certificate/Diploma [ ] Degree [ ] Postgraduate [ ] Other [ ]

4. Number of years worked in this company? Less than 5 years [ ] Between 6 and 10 years Between 11 and 15 years [ ] Between 16 and 20 years [ ] 21 years and above [ ]

5. Which of the following best describes your role at the firm? Admin [ ] Agent [ ] Manager [ ] Owner [ ] Other [ ]
PART B: DIMENSIONS OF KNOWLEDGE MANAGEMENT SYSTEM

6. Below are several statements on various elements of knowledge management regarding the performance of Real estate firms in Nairobi County. Kindly indicate the extent to which you agree with each of these statements as far as Pam Golding Properties is concerned. Please rate using a 1-5 scale where: Strongly agree (5) Agree (4) Neutral (3) Disagree (2) Strongly disagree (1).

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<td>PGP has clearly defined systems for knowledge management</td>
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<td>PGP has a budget dedicated to knowledge management program</td>
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<td>In our organization senior managers look at the knowledge gaps from the overall organizational level to identify competent staff</td>
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<td>PGP has a Chief Knowledge Officer (CKO) or an equivalent</td>
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<td>I am aware of the knowledge management policies of my firm</td>
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<td>In our organization the inability to apply the right skills and knowledge, in the right form, at the right time is failure to identify internal knowledge</td>
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<td>At PGP, knowledge is acquired through on-job training, mentoring, seminars and conferences</td>
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<td>Knowledge management has helped my organization in delivering better services</td>
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<td>My firm Encourages employees to seek new ideas from all sources.</td>
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<td>My organization makes use of apprentices and mentors to transfer knowledge</td>
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<td>The use of knowledge management tools and practices by other competitors has motivated the acquisition of KM in my firm</td>
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<td>Increase in mobility of Agents has motivated the acquisition of KM in my firm</td>
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<td>PGP develops strategies to align its operations to the changing knowledge management systems</td>
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<td>Employees don’t face difficulty in applying work methods they have been trained on</td>
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<td>PGP Shares information with other players in the Real Estate industry for better knowledge management</td>
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Adapted from: E.Odero (2017)
7. In your opinion, what other knowledge management approaches has PGP applied with the motive to gain competitive advantage?

PART C: INFORMATION TECHNOLOGY INFRASTRUCTURE AND KM

Below are several statements on various elements of information technology systems used by organizations to gain competitive advantage through knowledge management. Kindly indicate the extent to which you agree with each of these statements as far as PGP Company is concerned. Please rate using a 1-5 scale where: Strongly agree (5) Agree (4) Neutral (3) Disagree (2) Strongly disagree (1).

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<tbody>
<tr>
<td>My firm has a comprehensive, adequate database which is available for all personnel</td>
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<tr>
<td>Employees use e-mail to share and exchange knowledge with others</td>
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<tr>
<td>IT has encouraged personnel to join training programs outside the organization to gain knowledge in their fields</td>
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<tr>
<td>IT has aided availability of Information when needed and can be trusted to make decisions</td>
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<tr>
<td>My organization’s document management system on the Portal is assisting in the transfer of knowledge</td>
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<tr>
<td>Electronic files storing knowledge in my organization can easily be retrieved.</td>
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<tr>
<td>My firm has intranet that enables sharing and exchange of knowledge with others</td>
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<tr>
<td>IT has enabled free sharing of knowledge within my section/department</td>
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<tr>
<td>IT has facilitated effective communication in my firm</td>
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Adapted from: E. Odero(2017)

8. In your opinion, what other information system approaches has PGP applied with the motive to gain competitive advantage?
### PART D: LEADERSHIP STYLE AND KNOWLEDGE MANAGEMENT

9. To what extent do you agree with the following statements concerning the impact of leadership style to the implementation of knowledge management? (Place a check mark in the appropriate square bracket). Please rate using a 1-5 scale where: Strongly agree (5) Agree (4) Neutral (3) Disagree (2) Strongly disagree (1).

<table>
<thead>
<tr>
<th>Statements</th>
<th>5</th>
<th>4</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>In this organization managers and supervisors operate an open door and open mind policy</td>
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<tr>
<td>Management has improved the level of knowledge efficiency in the Company</td>
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<tr>
<td>Managers and supervisors conduct knowledge review very well</td>
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<td>In this organization supervisors and managers develop team objectives</td>
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<tr>
<td>Knowledge is shared freely within my section/department</td>
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<tr>
<td>In this organization there is continuous dialogue and feedback between supervisors and employees in addressing knowledge management issues</td>
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<tr>
<td>The communication from senior management in my company is effective</td>
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<td>There are monetary and non-monetary rewards for knowledge sharing</td>
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<tr>
<td>At PGP, supervisors and managers participate and provide guidance in the development of knowledge</td>
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<td>There is special recognition of staff for the time spent in knowledge creation</td>
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<td>Promotions are based on the ability to create knowledge</td>
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<td>Management encourages team work and cooperation instead of competition</td>
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<td>Management promotes Mutual respect, trust, care and concern amongst agents and all employees</td>
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</tbody>
</table>

Adapted from: E.Odero (2017)
10. In your opinion, what other leadership approaches has PGP applied towards enhancing knowledge management?

PART E: EFFECT OF ORGANIZATIONAL STRUCTURE IN KNOWLEDGE MANAGEMENT

On a scale of five, (5) Strongly Disagree, (4) Disagree, (3) Not Sure, (2) Agree and (1) Strongly Agree, rate the following factors in the table below by ticking.

<table>
<thead>
<tr>
<th>Statements</th>
<th>5</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>The organizational structure allows and facilitates its people to accomplish their task according to the knowledge management services</td>
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<td>There is free flow of relevant information in the organization</td>
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<td>The specific knowledge that I need resides with the experts rather than being stored in portals</td>
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<td>Management of the Organization encourages people to reflect on information and data, and reframe them at the strategic level</td>
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<td>There is support from the top managers in the implementation of strategies</td>
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<td>In this organization even the smallest policy is determined only by top-level authorities</td>
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<td>This organization is too large thus disabling the establishment of coordination between different departments</td>
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Adapted from: Gichunge, N. (2014)

Discuss any other critical factors that need to be taken into considerations -----------------
PART F: THE EXTENT TO WHICH ADOPTION OF KNOWLEDGE MANAGEMENT PRACTICES AFFECT THE COMPETITIVE ADVANTAGE OF PAM GOLDING PROPERTIES KENYA.

Below are several measures of Competitive Advantage among organizations. Kindly indicate the way PGP Kenya has performed on these measures due to the above-identified strategies. Use a 1-5 scale where: Very great extent (5) Great extent (4) Moderate extent (3) Least extent (2) Not at all (1)

<table>
<thead>
<tr>
<th>Variables</th>
<th>5</th>
<th>4</th>
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<tbody>
<tr>
<td>Quality service delivery.</td>
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<td>Alignment of knowledge to the business strategy</td>
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<td>Increased profitability and performance</td>
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<td>Competitive advantage sustenance</td>
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<td>Client acquisition and retention</td>
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<td>Effective collaboration and communication between employees</td>
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<tr>
<td>and departments</td>
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<td>Business impact due to lack of KM and loss of skills</td>
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</table>

Adapted from: E. Odero (2017)

THANK YOU FOR YOUR PARTICIPATION!