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CORPORATE REAL ESTATE AND CORPORATE STRATEGY ALIGNMENT IN SOUTH AFRICA

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RESEARCH REPORT

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ABSTRACT

1. Introduction

The paper discusses whether alignment between corporate real estate strategy and corporate strategy exists for non-property companies listed on the Johannesburg Securities Exchange, and alignments effects on the firms' financial performance. The presence of alignment and its effects on the firms' performance is an unresolved phenomenon in the South African context. The purpose of this study was to determine if alignment exists and the effects of its presence or lack thereof on the firms' financial performance.

2. Methods

The study was both qualitative and quantitative in nature and conducted on South African firms, with a specific focus on non-property firms listed on the Johannesburg Securities Exchange. The firms had to be listed on the exchange as of 15 August 2015 with a full year of audited financial statements, domiciled in South Africa, with their financial information reported in South African Rands. 140 firms met these criteria. The qualitative part of the study involved the interpretation of the firms annual reports to determine the presence and use of corporate real estate strategies and their alignment to corporate strategy, and collection of financial indicator data. The quantitative portion of the study involved the use of multivariate analysis, which used the results obtained from annual report analysis to distinguish and quantify the relationship, if any, between corporate real estate strategy and the identified financial performance indicators. To develop the regression model, the independent variables were the corporate real estate strategies employed and share price the dependent variable. The methods used in this study have been applied before in European and Asian studies, this assisted in ensuring that validity and reliability was achieved.

3. Results

This study finds that the most employed strategy by firms (47%) is that which facilitates production, operation and service delivery. Alignment is also found as 82% of the firms have a corporate real estate strategy based on their annual

reports and firms operating decisions. The Consumer Goods, Healthcare and Telecommunications sectors illustrate the highest level of alignment at 100%.

Return of Shareholder Funds has a significant correlation with share price (0.867, $p < 0.01$). With an R^2 of 24%, F-statistic of 4.21, a positive b-value of 3.67 and a t-value of 4.24, Return of Shareholder Funds has the highest explanatory power and positive relationship of all of the financial indicators considered. Strategy S2 – Flexibility has a positive regression coefficient, which indicates a positive relationship with share price and is significant at $p < 0.01$.

4. Conclusions

The application of corporate real estate strategy in the firms' corporate strategy formulation has the ability to enhance shareholder value. This research adds to the South African corporate real estate body of knowledge as this phenomenon has not been explored in the South African context before. The main contribution being the linkage between corporate real estate strategy and financial performance of the firm. Real estate developers and owners will be required to better understand the strategic requirements of corporates in order to ensure that the solutions they provide are linked to maximizing shareholder return or they could find themselves competing with corporates for developing and owning property.

Although consistent with results of studies conducted in Europe and Asia, the results of this research cannot be applied to privately held non-listed firms, government and state-owned enterprises. This could be a point of departure of determining if the same hypothesis holds to those entities.

CHAPTER 1 – INTRODUCTION, BACKGROUND AND OBJECTIVES

1. Introduction and Context

McDonagh and Nichols (2009) noted that all businesses need property to function, be it a manufacturer who requires large reserves of land mixed with plant and facilities, or be it a fast food chain selling burgers, they all need an enabling physical environment. Osgood (2004), however found that research conducted on almost 200 Fortune 1000 companies in the USA suggested that only about one third of these companies incorporate real estate initiatives as part of their business strategy.

In one of the landmark studies in the field of corporate real estate, Veale (1989) found that the buildings and land held by large organization typically represent one quarter of corporate wealth. Veale (1989) added that jointly, the ongoing costs and significant value of buildings and land denote a significant corporate asset and an immense management effort. This figure has not changed much in the last two decades as found by Glatte (2013), who notes that European corporations still retain a fairly high ratio of real estate assets (5 to 20% of fixed assets), with around 68% of these assets being owned by the corporations. Then (2000), noted that in order to achieve the much-needed alignment between an organizations strategic direction and the enabling physical environment, the organizations strategic intent must clearly recognize the role its physical environment plays in implementing its strategic corporate plans. Scheffer, Singer and Meerwijk (2006) cite Lindholm et (2006) who agreed that in order for the CRE portfolio to contribute effectively to the firm as a whole, the strategic consideration of the firms facilities must be “resultant from and support the overarching corporate strategy”. Matching this real estate to the business needs is seen as an obvious requirement in the profit potential of these businesses, but how often is this poorly done? This question is of great importance as Heywood (2011) noted that alignment, of all organisations costs and value creation activities including corporate real estate, is critical to achieving enterprise wide value. This proposition is supported by previous research undertaken by Rodriguez and Sirmans (1996) who identify that if maximizing firm value is the main goal for the firm, it becomes critical that there is a detailed understanding of how decisions associated with real estate assets affect the corporations' value.

Roulac (2001) noted that, corporate property had in the past been too concerned with the facility and insufficiently concerned with the relationship of that facility to the large real estate markets, and to corporate strategy. Roulac (2001) and Martin and Black (2006) stated that it is widely recognized that every business employs an overall strategy, yet it is a rare occurrence for a corporate strategy to include a corporate property real estate strategy. McDonagh and Nichols (2009) supported this statement by noting that the findings of researchers is that the link between the business plan and the property plan is weak or is non-existent in some corporations. Ali et al (2008) suggested that the reason for this lack of presence is due to actions of corporate strategic management researchers who, in the past, have neglected the significance of corporate real estate to the firm. In the same piece of research, Ali et al (2008) noted that the bias is not only with the corporate strategic management researchers. Researchers in the CRE field are swayed more towards topics that relate to real estate issues while neglecting issues important to corporate business. From this observation it can be seen that both sets of researchers have been applying the same unconstructive bias to the importance of CRE towards CS.

The manner in which management perceives the importance of CRE to the firm cannot be overlooked, Veale (1989), noted that the decision as to how corporate real estate was viewed and managed was more closely linked to the attitudes of top management than with the nature, size, value or function of the properties themselves. In support of this finding, Rodriguez and Sirmans (1996) found that the markets displayed a negative reaction towards the "turn over" of top management involved in CRE activities within the organization. The main reason for such reactions was linked to the perceived loss of "firm specific human capital".

However later work by Singer et al (2007) stated that many firms explicitly formulate a strategic approach to real estate and use the portfolio of buildings as an instrument to communicate and reinforce their competitive position in the market. This is further articulated by Ramakers (2008) who noted that in order for real estate strategies to add maximum value to organizations, they have to be aligned with corporate objectives. In addition, Ali et al (2008) noted that the CRE strategy employed by the firms "is viewed to have a direct impact of shareholder wealth", this point is supported by the earlier work of Pollert and Glickman as cited by Ali et al (2008) which discussed how firms are under constant pressure from owners to ensure the optimization of "long term returns" by deploying the corporate assets in the most "cost-effective manner".

Lio and Ooi (2004), proposed that for non-real estate firms with substantial amounts of corporate real estate, shareholder value/ wealth is derived from the profitability of its primary business activities and the value of the firms' real estate portfolio. Ali et al (2008) referred to the work of Roulac (2001) to build on the position taken by Lio and Ooi (2004), by introducing the link of enhancing shareholder wealth through the corporate real estate strategies employed by the firm. Roulac (2001) argued that the superiority of the CRE strategy employed "can contribute" to the competitive edge of the firm through numerous ways, but most importantly by "enhancing shareholder wealth/[value]". Lio and Ooi (2004) however noted that the contribution of real estate is often hidden. In later work, Lindholm et al (2006) supported the earlier research by referring to shareholder value theory, which states that shareholder value is created by maximizing the wealth of shareholders. Lindholm and Levainen (2006) also agreed that the corporations main aim is to add to the wealth of owners/shareholders, but in order to ensure that the value adding attributes of corporate real estate can be realized by the firm, corporate real estate managers are required to choose the most suitable corporate real estate strategy for the firms business environment and overall goals. The results of the Ali et al (2008) study, referred to earlier and conducted in the Malaysian context, confirm the link of CRE strategies employed on financial performance, by noting that corporate real estate strategies have the potential of enhancing financial performance of the firm by the application of strategies that facilitate managerial processes and knowledge framework amongst others. These results were similar for a study carried out by the same authors, but in the UK market. That parallel research also clearly supports the contention that a strategically managed corporate real estate portfolio has the potential of contributing to the enhancement of shareholder wealth. However it is clear that the corporate real estate strategy is subject to deviation over time depending on the current economic conditions and business environment in which firms are competing and operating.

These differing and contrasting views indicate that the phenomenon and importance of aligning corporate real estate strategies to corporate strategy is not well understood, and therefore an unresolved controversy. Secondly, there is also a lack of empirical analysis when it comes to establishing the relationship or link between corporate real estate strategies employed and the effect on the financial performance of the firm in the South African context.

Heywood (2011) did however acknowledge that a long-standing issue for corporate real estate management practitioners and theoreticians has been the alignment of corporate real estate strategy with organizational strategy. Scheffer et al (2006) and Allard and Barber (2003) agreed with this observation by stating that since the late 1990s managing the CRE portfolio has received increased attention as a source of competitive advantage, and the proactive and strategic planning of corporate real estate continue to be a challenge for many businesses.

Heywood (2011) listed numerous studies which have been conducted within this field, but noted that what has happened is that each new author in the field has created their own explanation for alignment without much reference to previous models. Appel-Meulenbroek (2010) supported the statement by noting that only half of the studies in this field have defined their corporate strategies on previous work, while the others make up their own. Furthermore, Appel-Meulenbroek and Haynes (2014) noted that although previous research has looked into strategic alignment at the strategic level, the models which are the result of these efforts vary in completeness and appear too difficult to be employed in practice.

Liow and Ooi (2004) however suggested that by analyzing the impact of CRE from both the space and investment perspective will help provide a complete picture of how real estate interacts with corporate strategy in a non-real estate company context.

The numerous studies as listed by Heywood (2011) illustrated that the linkages between corporate real estate strategies and business strategy are diverse, complex and topical. Nourse and Roulac (1993) suggested that when a corporation lacks the context of how a particular real estate decision fits into the corporations overall real estate strategy and ultimately the links to its business strategy, the transactions involving corporations' use of space may frustrate rather than promote the realization of the corporations overall objectives. Gibson and Louargand (2002) added that this lack of alignment can lead to operational and real estate market exposure risks.

With this as the background, it is clear that numerous studies have been carried out in the field of corporate real estate strategies and the alignment to corporate strategies and competitive advantages' in mature markets to varying conclusions, (Nourse and Roulac, 1993; Roulac 2001; Acoba and Foster, 2002; Osgood, 2004;Allard and Barber, 2003; Lindholm, Gibler and Levainen, 2006; Martin and Black, 2006). However this phenomenon has not been extensively studied in emerging markets, Oladokun (2010), and specifically in the South African context. Ali et al (2006) added more evidence of the lagging behind of the emerging markets when it comes to the acknowledgment of corporate real estate strategies by noting that, the percentage of companies not displaying any evidence of corporate real estate strategy is more evident in emerging markets, than in the mature markets.

To better understand this unresolved controversy between the alignment of corporate real estate strategies and corporate strategies, the importance of this alignment, and to provide the empirical analysis required in establishing the relationship between corporate real estate strategies employed and their effect on financial performance, a Linear Multiple Regression Analysis (MRA) will be employed as per the study conducted by Ali et al (2008). The proxy used for financial performance, share price, will be that similar to the one employed by Ali et al (2008). The only factors that will be considered in the empirical analysis model will be those relating to internal factors that provide an impact on the proxy.

2. Research Problem

The relationship between the corporate real estate strategies employed by the firm and the effects on the financial performance of the firm is an unresolved controversy. Empirical analysis research on this topic has only been conducted in mature markets and has not been tested in emerging markets, specifically South Africa.

This controversy is highlighted by; Roulac (2001) who noted that "it is a rare occurrence for a corporate business strategy to include a corporate/real estate strategy." Martin and Black (2006) in later research identified that "few firms have a real estate strategy that is linked to the overall strategy of the firm", McDonagh and Nichols (2009) also suggested that the perceptions of authors in the field is that "the link between the business plan and the property plan is weak or non-existent". Singer et al (2007) however posited that "many firms explicitly formulate a strategic approach to real estate", Ramakers (2008) noted that managers have started considering real estate as the "fifth corporate resource", Heywood (2011) found that although literature has attempted to address the imbalance in advancing alignment, practice reveals this not to be the case, "though CRE practitioners are consistently able to answer surveys on the positive state of their CRE alignment."

Furthermore, these studies have been conducted in mature markets, Oladokun (2010), and these problems have not been explored in great depth in emerging markets, especially in South Africa, with specific focus on non-real estate firms listed on the Johannesburg Stock Exchange.

3. Aim and Objective

This report investigated the attributes of corporate strategy, corporate real estate strategy, their alignment, and the impact on the financial performance of firms listed on the Johannesburg. Specifically, the study sought to do the following:

I. Investigate whether non-property firms listed on the JSE employ the use of CRE strategies; and
II. Establish whether a relationship exists between CRE strategy employed by the firm and firm financial performance.

4. Research Questions

I. Which CRE strategies are employed by firms listed on the JSE;
II. Is there alignment between CRE and firm strategies?
III. Which indicators of alignment exist within the respondent firms?; and
IV. What is the link between CRE strategy and firm performance?

5. Significance of study

In today's highly charged and competitive economic environment, all businesses and organisations have to make the most of all the resources and assets at their disposal (Varcoe, 2002). This statement still rings true today over a decade later in an environment typified by difficult and competitive economic markets. In order for these resources to be used to the best of the firms ability, they are required to be considered from a strategic point of view.

Park and Glascock (2010) noted that the term strategy in the field of CRE focuses more towards operational efficiency, which is not comparable to the recognition of strategy in the strategic management field. Park and Glascock (2010) added that CRE cannot be considered in CS conversations unless CRE involves more than operational concerns. More importantly the strategic literature makes a clear distinction between issues that are classed as operational and those that are strategic. From this is clear that in order for CRE to be considered as a strategic

resource it is imperative that the link between CRE and the firms' strategy and competitive advantage be established (Park and Glascock, 2010).
Krumm and De Vries (2003) made a very important observation that adds to the significance of the study. The authors suggest that CRE mangers struggle to "relate [the] consequences of real estate decisions to corporate performance". This difficulty to link the decisions with the consequences can prove to be extremely detrimental to the firm. This danger is primarily due to the fact that firms are faced with real estate decisions periodically and the decisions taken can have a permanent effect on the firm, both in terms of executing on the firms strategic objectives and the financial performance of the firm. The difficulty is that in most instances, these effects are only seen well after the decision has been made and not immediately after they are taken. Understanding the importance of this phenomenon is of specific interest in emerging markets as multinationals look to these new markets in an effort to maximize their financial performance.

Lastly on the significance of the study, Gallte (2013) added that many corporations still perceive the alignment between CS and CRE strategy as a one-way road, where the CRE department is seen as the executor of operational directives. This attitude results in an environment where there is a lack of transparency, excessive portfolios of surplus property, inefficiently utilized space and high property related costs (Gallte, 2013).

By, firstly, understanding the presence of CRE strategies employed by the firm ,and secondly, the relationship between financial performance and the CRE strategy employed, the above-mentioned situations and scenarios as identified by Glatte (2013) and Krumm and De Vries (2003) can be avoided.

6. Scope and Assumptions

The study makes two main assumptions:

- All firms use real estate as factor of production in executing their core functions and business objectives, and

- All firms objective are to maximize shareholder/owner value by using share price as the proxy for financial performance.

The study will focus on those firms that do not trade in real estate or derive most of their profits from mainly real estate related activities. These are referred to as non-property companies. The study will also focus only on firms listed on the Johannesburg Securities Exchange main board as at 15 August 2015 and had at least a full years' worth of annual financial statements.

7. Definition of key terms and concepts

a. Corporate Real Estate

Ali et al (2008) provided one of the more comprehensive definitions of corporate real estate. The authors define CRE as a functional unit in a corporation, which is responsible for the real estate holdings and their activities, and supports the corporation in achieving its set business activities. This definition starts to identify corporate real estate as a strategic asset to the firm, but does not go all the way.

The definition of strategic CRE used by Park and Glascock (2010) is the most relevant definition in the context of this study and is therefore applied from this point onwards in the research. Strategic corporate real estate is defined as the category of real estate where the firm has successfully combined the unique characteristics of real estate with the corporate real estate isolating mechanisms (superior access to inputs or customers, first-mover advantage and spatial preemption, procedural barrier to resource accumulation, and unique design) to create firm-level barriers to entry (Park and Glascock, 2010).

b. Corporate Real Estate Management

Ali et al (2008) noted that the management of corporate real estate is known as corporate real estate management and is defined as the optimum use of all real estate assets utilized by a corporation in pursuit of its primary business mission. For the purposes of this study, the definition used by de Vries, de Jonge and van der Voordt (2008) is the most appropriate as it covers all of the elements of this research. The authors define corporate real estate management as "the range of activities undertaken to align corporate real estate to the needs of the core business, in order to obtain maximum added value for the business and to contribute optimally to the overall performance of the corporation"

c. Corporate Strategy

Ramakers (2008) noted that strategic management can be distinguished into four levels of strategy that in turn determines the type and range of decision to be made. These levels are corporate level, divisional level, organizational level and functional level. This study focuses on the top level of strategic management, which is said to be concerned with the overall purpose and scope of the organization, and how value will be added to parts of the organization (Ramkers, 2008).

In earlier work, Lynch (2000) described corporate strategy as being concerned with an organisations direction, purpose, ambitions, resources and how it interacts with world within which it operates. Roulac (2001) supported this statement by noting that the environments in which the enterprise interacts with its end users, accommodates its people and supports its processes, profoundly impact the elements that make up the corporate business strategy.

Lynch (2000) defined corporate strategy as the pattern of major objectives, purposes or goals and essential policies or plans for achieving those goals, stated in such a way as to define what business the company is in or is to be in and the type of company it is to be. Haynes and Nunnington (2010) cited the definition used by Johnson et al (2008) in their work. This definition is very similar to that of Lynch (2000),but introduced the concept of the strategy being configured in such a way that the resources and competencies of the corporation fulfill the stakeholder expectations. Beckers and van der Toodt (2014) did note however that because of the vast diversity in the corporate strategy world, the alignment of these strategies with its corporate real estate is strongly related to its organizational context.

For the purposes of this study, the resource-based view of corporate strategy in relation to the firm, as described by Park and Glascock (2010) will be applied. They noted that this view provides the most developed analytical framework to properly consider corporate real estate as an enterprise resource.

d. Corporate Real Estate Strategy

Ramakers (2008) noted that there is a better understanding of real estate strategies than that of corporate strategies in the field of corporate real estate and corporate strategy alignment. Gibler and Lindholm (2012) added that corporate real estate strategy consists of a pattern on decisions related to the acquisition and management of property, and related services in an effort to support the overall competitive corporate strategy.

Nourse and Roulac (1993) are considered to be the initiators of the concept that multiple real estate strategies are necessary for different corporate priorities. Nourse and Roulac (1993) believed that there were eight different types of alternative strategies that guided how property decisions can be guided, namely strategies that focus on:

1. Occupancy Cost Minimization
2. Flexibility
3. Promoting Human Resource Objectives
4. Promoting the Marketing Message of the firm
5. Promoting Sales and the Selling Process
6. Facilitating and Controlling Production, Operations, Service Delivery
7. Facilitating Managerial Process and Knowledge Work
8. Capturing the Real Estate Value Creation of Business

The strategies of Nourse and Roulac (1993) were applied in this study as they are the most commonly referred to strategies in the field of corporate real estate strategy.

e. Alignment

Heywood (2011) defined alignment as the bringing into harmony things that differ or could differ by making them consistent or in agreement with each other. Beckers and van der Voordt (2014) also used Heywood's definition but note that in the context of corporate real estate, alignment is concerned with making corporate real estate consistent or in agreement with the core business. Beckers and van der Voordt (2014) however noted that term corporate real estate alignment itself is somewhat new.

f. Financial Performance within the context of Corporate Real Estate

Simpson and Kohers (2002) studied the link between corporate social performance and financial performance. In this study, which spans two and a half decades worth of previous research, the authors note that numerous innovations in methodology had been made, but accounting data of large corporation was still the main measure of financial performance.

From the corporate real estate context, the share price proxy applied by Ali et al (2008) for financial performance will be applied for the purposes for this study. Ali et al (2008) noted that share price is most applicable due to its "inter-relationships" with the various financial ratios applied by the firm.

8. Research Structure

The research report comprises of five chapters. Chapter 1 is the Introduction, Background and Objectives. Its sets the scene for the research and what the research aims to achieve. Chapter 2 is the Literature Review, here the main literature and studies previously conducted in this field are examined and set into context as they relate to achieving the objectives of the study. Chapter 3 is the Research Methodology, where the steps followed in the research are laid out. This chapter also interrogates previous methodologies and helps determine the most effective and efficient method to achieve the researches objectives. Chapter 4 is the Results section. Here the findings of the research are presented and explained in line with the objectives of the research. Chapter 5 is the Summary and Conclusions section and is the last chapter of the research. The objectives and findings of the research are brought together to detail the importance of the study and suggest future possible studies.

CHAPTER 2 – LITERATURE REVIEW

1. Introduction and Purpose

The purpose of the literature review will be to review both; the literature and studies that have been carried out with regards to; business and corporate strategy, corporate real estate strategies, the alignment of corporate strategies to corporate real estate strategies and the impact of corporate real estate strategies on the financial performance of the firm.

This review further seeks to understand the current methodologies that are being used to research the topics in the field; also seek to understand what the unresolved controversies are in relation to the question of the effect of CRE strategies on firm performance and the presence of CRE strategies in firms.

The scope of the literature will focus on research conducted globally and will not be limited to specific industries. The research will however be limited to non-real estate firms in the listed sector. Where available, specific preference will be given to research conducted in the emerging markets context.

2. Corporate Strategy in relation to Real Estate

Nourse and Roulac (1993) noted that the strategic management literature has numerous models and ways to think about corporate strategy. Roulac (2001) stated that a corporate business strategy addresses such critical elements as customers, employees and processes. Lindholm et al (2006) added that a business strategy gives direction to all the functional areas within a company, including real estate. Acoba and Foster (2003) noted that strategic planning is an often-used phrase and therefore will have many meanings depending on the context. From a corporate real estate point of departure, all strategic planning must have the core business strategic plans as the starting point. As important as the direction that the corporation will take, the strategy needs to state what the corporation will not do (Osgood, 2004).

However Park and Glascock (2010) noted that strategy literature has mostly overlooked corporate real estate as a topic of research. This can partly be attributed to the notion that the value and contribution of real estate and workplace decisions to business strategy execution continue to be misunderstood and under-appreciated at the senior levels in firms (Allard and Barber, 2003). They add that due to the fact that physical assets are normally considered as non-specific factors of production, strategy scholars have shelved corporate real estate from attention as a possible source of sustainable competitive advantage and as a strategic firm resource. There has however been a movement against this treatment from researchers in the field of corporate real estate research. The movement has been more towards that which considers corporate real estate as a strategic asset with more than purely operational implications (Park and Glascock, 2010).

Marin and Black (2006) suggested that many corporate plans are just restatements of the basic economic objectives that all companies must follow. The authors posit that corporations are in a better position if they develop a well-articulated and stable purpose that speaks to discovering, understanding, documenting and exploiting how to create value from its stakeholders.

As noted earlier, the resource-based view of the firm will be applied in this study. The resource-based view disregards the industry, but notes that profitable firms posses unique resources that enable them to create and deliver more economic value than their competitors, and thus realize competitive advantages (Park and Glascock, 2010)

3. Corporate Real Estate Strategy

Brounen and Eichholtz (2005) noted that corporations typically build up a real estate portfolios to meet the needs of their business activities, but after undertaking this exercise, most of these firms spend very little time evaluating the portfolio and the strategies required for this real estate to meet the needs of the business. Roulac et al (2003) stressed that fundamental to implementing an effective CRE strategy is an understanding and knowledge of the landscape of corporate real estate involvement. The lack of this critical knowledge will result in insufficient capacity to assess the corporation's performance. This knowledge is also important as real estate plays a fundamental connecting role in the value chain (Roulac et al, 2003). In earlier work Roulac (2001) had identified that the strategic relevance of corporate real estate management had been one of the five corporate real estate eras that had significantly evolved. This evolution was noted to have resulted in a shift beyond concerns of growth, efficiency and effectiveness, to look more at issues of efficacy and contributions that lead to corporate property achieving corporate objectives. Roulac (2001) observed corporate property is beginning to be recognized as the means of connection between business and customers.

Nourse and Roulac (1993) noted that while some corporations explicitly considered how real estate transactions relates to their real estate strategy, the greater majority did not make such link, on top of this observation, the authors note that many do not have a formal real estate strategy. Roulac et al (2003) also suggest that in order to implement an effective corporate real estate strategy, the knowledge of the landscape of CRE involvement is critical.

Roulac (2001) supported the work of Nourse and Roulac (1993) by stating that its widely recognized that every business employs an overall strategy, but what is not so well know or understood is that every business with a corporate strategy usually also employs a strategy for its functions and platform (real estate). Nourse (1996) added that the thinking around the strategic value and framework in which real estate for corporations operates is difficult to identify, as much of the literature is narrow and limited in scope. Yontz (2001) identified CRE as supporting the company's strategies through the CRE vision; Yontz (2001) added that the vision is the highest-level expression of CRE's objectives.

Roluac et al (2003) list the various principles that drive the impact of CRE strategies as:

- Flexible lease terms to match occupier and investor requirements;
- Use of design of corporate real estate to accelerate technological change programmes;
- Enhancing financial performance and shareholder value;
- Focusing on space management and delivery of CRE functions; and
- Adopting a robust approach to the portfolio management of CRE assets.

Many of the strategies developed can be traced back to the break through work of Nourse and Roulac (1993). Ramakers (2008) conducted a detailed analysis of the work done identifying real estate strategies, she notes that work of Nourse and Roulac (1993) is used 3 times by other authors in the field, but believes that the work of Lindholm et al (2006) developed the most complete set of real estate strategies. This is not considered a coincidence as their strategies are drawn from the work of Nourse and Roulac and de Jonge, which was also used 3 times.

Nourse and Roulac (1993) believed that there are eight types of property strategies that encapsulate how property decisions can be guided. These eight strategies are:

1. Occupancy Cost Minimization
2. Flexibility
3. Promote Human Resources Objectives
4. Promote Marketing Message
5. Promotes Sales and Selling Process
6. Facilities and Control Production, Operations, Service Delivery
7. Facilitate Managerial Process and Knowledge Work
8. Capture the Real Estate Value Creation of Business

Nourse and Roulac (1993) then linked the real estate strategies to the corporate driving forces and note that real estate strategies that work for on type of business may be totally inappropriate for another type of business. The tendency therefore to emphasize generalized approaches rather than specific approaches, is suggested to be misdirected and lead to less than optimal real estate decisions that frustrate rather than promote the execution of corporate objectives and goals (Nourse and Roulac, 1993).

What is clear, and as supported by Ramakers (2008), is that the authors in this field are more in line about the real estate strategies than about corporate strategies. This is the crux of the research, the disagreement of authors about one of the elements of alignment, makes alignment a difficult and topical task.

Amongst the business initiatives identified by Roulac et al (2003), CRE value is created by aligning property and business strategies. This statement leads into the next section of this review, alignment.

4. Alignment between corporate strategy and corporate real estate strategy

Manning and Roulac (2001) suggested that the closer CRE function is linked to long term overall corporate objectives, the greater will be its relevance and impact on business operations.
This suggestion sits at the core of the relevance of alignment, which is for corporate real estate to establish its relevance in the corporation.

Manning and Roulac (2001) continued by stating that, for corporate real estate research to be useful it needs to be targeted at senior executives who are the ones who sit closest to, and are tasked with the strategic objectives of the corporation. This statement is supported by the earlier work of Veale (1989) who noted that at the senior management level, the real estate decision is most likely based upon or influenced by operational factors derived from the mission of the corporation as a whole. Allard and Barber (2003) however highlighted that the proactive and strategic planning and management of CRE and workplace infrastructure, i.e. its CRE, continues to be a challenge for many corporations. Lindholm et al (2006) added two further deficiencies in the alignment field; the authors note that the field lacks research that develops theoretical models of the relationship between strategic management systems and real estate decisions. Secondly, there is also a lack of empirical testing using well-defined models to quantify the value real estate brings to the corporation.

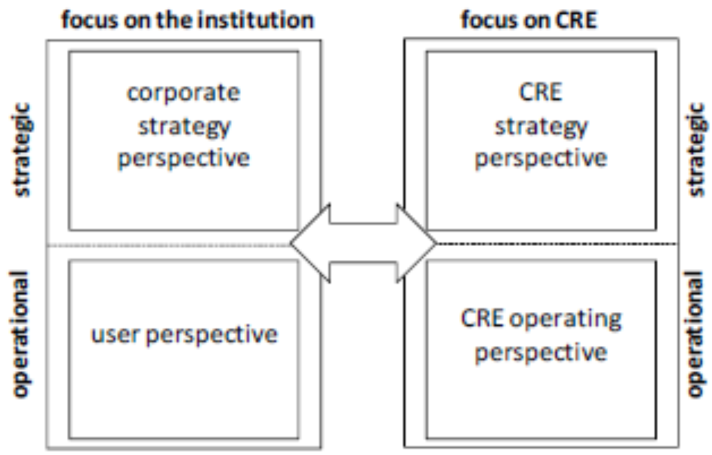
Nourse (1996) noted that many practitioners involved in real estate employed a narrow, limited and "unidimensional strategy." This resulted in a compromised perspective and comprehension of the magnitude of the real estate discipline. The consequential effect of this meant that strategies, decisions and actions were based on a compromised comprehension that was bound to lead to a less than effective involvement and suboptimal CRE strategies.
Roulac (2001) highlighted the fact that it a rare occurrence for a corporate business strategy to include a CRE strategy.

Lindholm et al (2006) however argued that an integrated CS should lead to a real estate strategy that ensures that real estate actions are directly connected to the corporations overall goals and objectives. The planning process should introduce strategic elements that lead to a scenario where the facilities occupied by the corporation align with the core business, as well as drive corporate real estate initiatives relative to process, people and enabling systems (Lindholm et al, 2006).

This observation is concerning due to the fact that, as per the definition as employed by Heywood (2011) alignment is the bringing into harmony things that differ or could differ by making them consistent or in agreement with each other. As seen by the definitions used in the context of this research there is a difference between the strategies that require a level of alignment to ensure they both function towards achieving a common goal.

Beckers and van der Toodt (2014) argued that corporate real estate management theory shows four perspectives concerning corporate real estate alignment. These four are those that deal with the institution and the corporate real estate and those that deal with the strategic level versus the operational level.

Figure 1: Four perspectives of CRE Alignment



(Source: *Beckers and van der Toodt, 2014*)

Beckers and van der Toodt (2014) described the arrow between the two sides as a representation of the alignment process between CRE and the firm. This alignment process is designed to analyze the corporate goals and objectives against the daily operating activities in order to determine if appropriate CRE and operating solutions match.

Roulac (2001) noted that research conducted on CRE in the past concentrated too much on the facility and not so much on the relationship of the facility with the overall corporate business strategy and real estate market opportunities. This lack of concentration on alignment has created a disconnect between the concerns and priorities of senior management and boards of directors of corporations.

Acoba and Foster (2003) noted that in order for the corporate real estate portfolio to be aligned with the business strategy and the CRE service offerings and capabilities to support the core business effectively, the strategic planning of their organizational initiatives are required to be in place. Acoba and Foster (2003) suggested that organizational strategic planning is an underutilized lever for business improvement and service alignment. These observations once again point out the suboptimal consequences of a lack of alignment.

Pfnuer et al (2004) conducted a study that looks at the alignment of real estate to the real estate investments functions, although not speaking directly to the essence of this research, interesting observations are made which can be linked to this research. Pfnuer et al (2004) found that while both functions are required to be balanced against each other, the main aim is still to adjust all decisions related to real estate to ensure that they are in accordance with the overall CS. Critical to this alignment is the evaluation, by management, of the contributions of the two functions to the success of the company.

Osgood (2004) developed a Strategy Alignment Model that sought out to address three issues relating to the lack of alignment that was picked up in his research.

Figure 2: Strategy Alignment Model

(Source: *Osgood 2004*)

These issues were as follows: firstly, the perception that real estate was not part of the core business, but rather a support service. This resulted in its function being reduced merely responding to core business strategy and not in helping craft it. Secondly, when practitioners and theorists describe business-strategy models, they refer to a wide range of strategies that find themselves in between three and nine schools of thought. The ideas from these schools of thought are then adopted and implemented in very unique and specific manners when it comes to each business, this is supported by Nourse (1996). Usually the ideas addressed are central to the core business strategy, but a rarity is for the corresponding real estate initiatives to respond to the identified themes that advocate for each strategic school of thought. Lastly, the terms strategy and strategic plan, although used interchangeably are interrelated but distinct topics. Osgood (2004) argued that strategy defines what needs to happen, and planning describes how it should happen. Beckers and van der Toodt (2014) added that the Osgood model illustrates that CRE alignment requires a continuous process of matching the infrastructure supply to the strategic objectives of the firm.

What the above research illustrates is the importance of alignment; alignment is necessary to identify the value adding and creating functions within a corporation. Once these value adding functions are identified, the key is to match them with the goals and objectives of the company in order to build a successful business.

Lindholm et al (2006) suggested that the lack of a unifying corporate real estate models means that the contribution of real estate to the corporation and the possibilities that exist for adding value are often neither recognized, nor properly considered. Gallte (2013) added that many corporations still perceive the alignment between corporate strategy and CRE strategy as a one-way road, where the CRE department is seen as the executor of operational directives. This attitude results in an environment where there is a lack of transparency, excessive portfolio of surplus property, inefficiently utilized space and high property related costs (Gallte, 2013).

5. Financial Performance and Corporate Real Estate strategies

Wurdemann (2012) noted that "the first theoretical research on the effect of corporate real estate performance on shareholder value management" was conducted in the late 80's and early 90's. The authors add that these studies were carried out in the US market, and therefore only captured a specific context.

Kaplan and Norton (2005) suggested that, "Financial performance measures indicate whether the company's strategy, implementation and execution are contributing to the bottom-line improvement". The authors note that the "typical financial goals have to do with profitability, growth and shareholder value."

In later work, Keskett et al (1997) as cited by Lindholm et al (2006) added that "financial performance is correlated with creation of value and delivery of quality products and services" the authors further support this statement by noting that firms need to "compute relevant performance measure" that should be formulated from the corporations strategy and these measures should be used to ensure that the firm is achieving its strategic aims and objectives. This is supported by earlier work of Roulac (2001) who stated "the design and implementation of corporate property strategies have direct, significant impacts on shareholder wealth".

Lindholm et al (2006) found that in the strategic management field, researchers have struggled to identify and quantify how specific policies and decisions help the firm achieve its financial goals, especially with respect to decisions and policies related to CRE. Manning and Roulac (2001) as cited by Tay and Liow (2006) also found a "narrow financial corporate real estate perspective" in the literature at the time. The two earlier claims are substantiated by Ali et al (2008) who found that due to the main focus in CRE research being on links between the value of the firm and previously identified CRE strategies, there has been a lack of research conducted that, on an empirical basis, models the linkages between the CRE strategy employed and the effects on the firms financial performance. Krumm and de Vries (2003) added that regardless of the growing interest and acknowledgement of the difficulties and challenges faced in the management of CRE portfolios, "the financial perspective of the real estate academy remains very traditional". The authors note that this mismatch is somewhat strange due to the fact that the "amount of corporate real estate is much bigger that the real estate investment portfolios"

Simpson and Kohers (2002), found that previous studies had mainly focused on accounting measures to define financial performance. The main measures identified included, but were not limited to; return on equity, return on assets, return on sales and return on investment. This use of multiple measure of financial performance is supported by the work of Griffin and Mahon (1997) as cited by Simpson and Kohers (2002), who noted that previous studies only used single measures. The authors suggest that market derived measures are inappropriate as they pick up other measures unlike accounting measures which only pick up financial performance.

Krumm and de Vries (2003) noted that traditional financial performance measures were formed in the "industrial ear" and were appropriate for the time, but now firms are looking at performance from a more holistic point of view. This holistic approach involves looking at the firm from both a financial and operational perspective. In the search of these holistic perspectives, Krumm and de Vries (2003) found that the consistency required by accounting principles made net earnings the most used proxy for shareholder value creation, although creating some form of uniformity the number of different valuation techniques used from the accounting principles create a level of confusion.

Krumm and de Vries (2003) and Lio and Ooi (2004) identified and reintroduce economic value add (EVA). Their combined research suggests that this measure of financial performance comes closest to capturing the "true economic profit of an enterprise". The financial analysis technique employed in the EVA measure determines the extent to which the company is creating value over and above the cost of capital for assets employed (Krumm and de Vries, 2003). Wurdermann (2012) noted that although the research conducted by Liow and Ooi (2004) concluded that corporate real estate impacted negatively on the corporations EVA, firms were still unsure of whether "their RE assets [were] creating value or destroying value within their business portfolio".

Lastly, Wurdemann (2012) cited the work of Brounen and Eichholtz (2005) who explored the effects of corporate real estate ownership on the stock performance of companies not in the real estate business, although the general findings pointed to a relatively insignificant but negative relationship between the two, it must be noted that ownership does not speak to the strategic consideration of the owned real estate and performance is also "driven by the sector the company operates in"

The views of the above authors indicate that the phenomenon of the effects of the decisions, policies and strategic consideration taken in relation to CRE and the effects on the firms financial performance is still one requiring much attention from both an academic and practical discourse.

As noted earlier, for the purposes of this study, the share price proxy applied by Ali et al (2008) for financial performance will be applied. Ali et al (2008) noted that share price is most applicable due to its "inter-relationships" with the various financial ratios applied by the firm.

6. Conclusion

Corporate strategy is the pattern of decisions that determines and identifies the objectives, purpose and goals of a corporation. In addition, corporate strategy produces the policies and plans for achieving such goals and defines the range of business the corporation is to pursue, the kind of organization it intends to be, from an economic and human organization perspective, and the nature of contribution it intends to make to all of its stakeholders, i.e. shareholders, employees, customers and community (Foss, 1997). This strategy is executed by the effective and efficient control of all of the assets at the corporation's disposal including its real estate.

Gibler and Lindholm (2012) noted that corporate real estate strategies consist of a pattern of decisions related to acquiring and managing property and related services to support the overall corporate competitive strategy. Appel-Meulenbroek and Haynes (2014) in later work noted that two of the most important components of an alignment model are the corporate strategy and the corporate real estate strategy.

After an extensive literature survey and review, the two most comprehensive works conducted in reviewing the different alignment models are those of

Ramakers (2008) and Heywood (2011). Appel-Meulenbroek and Haynes (2014) noted that only 3 similar models were discussed in both papers, with Ramakers looking at 8 models and Heywood 11.

This observation illustrates that although studies are being conducted in the field of CRE and CS alignment there are differing views and very limited congruence of ideology. This leaves a gap for further research in the advanced market context and new research in the emerging market context.

There are similarities to the observations made about CS and CRE strategies in that they both involve a pattern of decisions and both are geared towards achieving the goals of the organization. What is not very clear or well understood is how strong the link is between the two strategies and how well the alignment process between the two strategies is managed.

Financial performance measures in the field of CRE are still a topical subject. Wurdemann (2012) acknowledged that research began only in the late 80’s early 90’s and therefore we can deduce that it is still in its growth stages from both a theoretical and empirical basis. The studies that have been carried out thus far have come to differing conclusion about; the most appropriate measure of financial performance, the effects of corporate real estate on the financial performance of the firm and the added value adding attributes of corporate real estate to the firm (Wurdemann, 2012, Krumm and de Vries, 2003, Simpson and Kohers, 2002, Ali et al, 2008 and Lindholm et al, 2006). What is clear from the discussion around financial performance is that measures are required to capture both the financial and operation aspects of performance while still being consistent with accounting principles and empowering senior management in making strategic decisions regarding corporate real estate.

CHAPTER 3 – RESEARCH METHODOLOGY

1. Introduction

Chapter 1 stated that the aim of the study was twofold; to establish the presence of CRE strategies for non-property companies listed on the JSE, and to determine the effects of specific corporate real estate strategies on the firms' financial performance.

In an effort to establish the above, the questions that this study seeks to answer are:

- Which CRE strategies are employed by firms listed on the JSE, is there alignment between CRE and firms strategies, and which Corporate Real Estate strategies have the most significance towards financial performance of the firm?

In answering these questions it is expected that the information will be both descriptive and analytical in nature. Due to the complimentary theories, sequential mixed-method research will be the primary means of data collection. Individual theories can lend themselves to weaknesses, but by employing sequential mixed methods research, these weaknesses can be mitigated by providing broader sets of variables. When analyzed, these variables increase the prospects of providing thorough answers to the extent to which CRE strategies exists, align to CS, and are employed for non-property companies listed on the JSE and the effects of the CRE strategies employed by the firm and their effects on financial performance of the firm.

2. Research Methods in previous studies

The most detailed work done regarding the research methods used in the field of alignment is the work done by Ramakers (2008). The author examines eight studies, which claimed to align corporate, and real estate strategies. Below is a summary of those studies together with the processes and methodologies undertaken to reach the different conclusions.

Nourse and Roulac (1993) attempted to demonstrate the links between real estate strategy and overall strategy, and between property strategies and real estate implementation decisions by drawing on benchmarking surveys conducted on over 60 American companies. These links are established by combing the nine business-driving forces with eight real estate strategies, then developed further by linking fourteen critical distinct decisions.

Follow up work by Roulac (2001) drew on previous research in an attempt to illustrate outcomes that can be realized from the strategic management and control of a corporations' real estate. Roulac follows an interpretative process and Ramakers (2008) noted that this is achieved by drawing on strategic management literature, together with more limited literature on the strategic management of CRE to make an inductive case for the integral importance of linkages between corporate strategy and CRE strategy.

In an effort to capture a practical framework for CRE managers to evaluate changes to the business and determine the implications these fundamental changes will have on the organizational CRE, Acoba and Foster (2002) used interviews to collect data which related to mission, operating environment, culture, approach to management practice and portfolio reach.

Osgood (2004) used a previously developed model from a different field, namely the strategy alignment model to provide a framework that would allow users to directly link real estate initiatives with core business strategy and then allow organizations to measure the outcomes. Osgood applies cases studies to "illustrate and reinforce" the models applicability.

Lindholm, Gibler and Levainen (2006) build on the methods used by Acoba and Foster (2003). The authors, instead of only using questionnaires and interviews, use theory from strategic management with research conducted on business performance, corporate real estate management, facilities management and workplace performance to develop a framework that illustrates how CRE adds value to the core business and wealth of the corporation.

Scheffer, Singer and van Meerwijk (2006) adopted a theoretical framework based on the work of Nourse and Roulac (1993) to design a measurement tool that is validated by assessing the contribution of CRE to CS in the Dutch context. This model is built after conducting open interviews with corporations' real estate executives. Singer, Bossink and van de Putte (2007) developed a literature-based model that combines real estate strategy and competitive strategy. Although not strictly looking at the alignment with corporate strategy, the methodology used is noted.

From the above, it is clear that observations of Heywood (2011) were accurate in that each new author has created their own explanation for alignment, through a model or theory with very little reference to previous models or methods.

It can be noted that the main methods used in the field on alignment involve conducting interviews (Acoba and Foster , 2002;Lindholm et al,2006; Scheffer et al (2006);Heywood (2011)), case studies (Krumm and De Vries 2003;Then (2000);Varcoe (2002), Osgood (2004)) and carrying out surveys (Veale (1989);McDonagh and Nichols (2009);Gibler and Lindholm (2012).

These methods are then usually supplemented by a theoretical construct from another discipline. From here some type of model is developed to try and explain the alignment of CS and CRE strategy. What can be deduced is that there is limited theory in the field of CRE and CS alignment.

Ali et al (2008) introduced the regression analysis methodology for "establishing the relationship between CRE strategy and financial performance". This methodology spoke to the quantitative aspects of their study. The authors also applied qualitative investigative methodologies "through the interpretation of company strategy" looking for the CRE strategies employed by the different firms.

3. Research Methods to be used in this study

This research followed the methods used in previous studies by conducting interpretative research of annual reports to collect both qualitative and quantitative data. The research followed sequential, complementary mixed method research design process. Cameron (2009) described complementary mixed method as one where one dominant method is clarified by results from another method type.

Mixed-method research is an attempt to find a method of integrating qualitative and quantitative viewpoints to solve problems (Johnson, Onwuegbuzie & Turner, 2007). The mixed-method approach helps in counteracting the prejudices or limitations of either method (Creswell, 2003). The structure varies in different studies, and it provides a better understanding of the research problem (Johnson, Onwuegbuzie & Turner, 2007).

a. Design

The methodology applied by Ali et al (2008) was adopted. The authors' methodology is in three stages and employs both qualitative and quantitative processes.

Stage one was company selection. The selected companies are the non-property companies listed on the main board of the Johannesburg Securities Exchange.

The second stage was the "systematic interpretation" of the selected firms annual reports. This step is designed to delineate the companies on the following basis; "whether or not the company has a CRE strategy, whether the CRE strategy could be classified under the Nourse and Roulac (1993) framework or whether the company has a CRE strategy different from the Nourse and Roulac framework"

Lastly, the third stage involved multivariate analysis. In order to undertake the regression analysis, the results obtained from the initial annual report analysis were applied in an effort to distinguish and quantify the "extent of the relationship between the CRE strategy and the financial performance indicators" In the formulation of the model, the independent variables were the strategies employed with the dependent variable being share price.

b. Data Collection

Secondary data from journals, books, publications and annual reports of the different non-property listed companies on the JSE were the major sources of information for the regression model.

c. Data Collection Techniques

Collection of secondary data was conducted by way rigorous "systematic interpretation" of annual reports of the firms on the Johannesburg Securities Exchange.

Due to the fact that each of the firms that are part of the study are listed on the JSE, they are required to make public their audited financial statements and annual reports. The annual financial statements and annual reports were downloaded from each firms official website where they store all of the firms related documentation.

4. Sampling Techniques

The **population**, for the purposes of this study, is the non-property and non-financial companies listed on the JSE. There were 336 corporations of this classification listed on the JSE on 15 August 2015. The **unit of analysis** is the company, firm or industry.

The listed companies on the JSE can be classified 8 different sectors as identified below in Table 1. The trends between these sectors varied and this can discussed in further research.

Sectors
1. Basic Material
2. Oil and Gas
3. Industrials
4. Consumer Goods
5. Health Care
6. Consumer Services
7. Telecommunications
8. Technology

Table 1: Break down by sectors of listed non-property companies

5. Data Analysis

Empirical analysis as described by Ali et al (2008) was applied to classify and asses the relationship between CRE strategies and financial performance, in the form of share price. Ali et al (2008) stated that in order to achieve this aim, "liner multiple regression (MRA) is used with CRE strategies and financial indicators representing the predictor varaibles, while the share price represents the dependent variable"

The model as specified by Ali et al (2008) was used to analyze the financial performance data. The financial variables considered included; "profitability, liquidity and investment ratios". The following model and its variables was used:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10-1}X_{10-1} + e$$

Where:

Y = Share Price

a = Constant

b = Coefficient of the variables

X1 = Return on Shareholder Funds (ROSF)

X2 = Operating Profit margin

X3 = Current Ratio

X4 = Liquidity Ratio

X5 = Basic Earnings per Share (EPS)

X6 =	Solvency Ratio
X7 =	Gearing Ratio
X8 =	Interest cover ratio
X9 =	Dividend pay-out ratio
X10-1 =	Dummy variable (CRE strategy)
e =	Error term

6. Validity and Reliability

a. Validity

Validity in the research perspective has two meanings as identified by Saunders et al (2012). It is the extent to which data collection methods accurately measure what they initially set out to measure or determine. Secondly, the extent to which research findings are truly about what they claim to be about. Amaratunga et al (2002) add that the value of any research stems from the validity of its results and the extent of the contribution made by the research to the body of knowledge. Onwuegbuzie and Johnson (2006) argued that in mixed method research discussions around validity are at their infancy. The authors base this argument on the fact that in quantitative research the importance of validity has been long accepted and although issues of validity have been more under scrutiny in the qualitative field, different typologies and terms have been produced. Abowitz and Toole (2010) posited that, where possible the combination of quantitative and qualitative approaches should be explored. Although more expensive and time consuming than single method approaches, the mixed method approach improves the validity and reliability of the resulting data and strengthens casual inferences by providing the opportunity to observe data convergence or divergence in hypothesis testing (Abowitz and Toole, 2010). In earlier work, Driscoll et al (2007) noted that mixed methods are used to expand the scope of research and to offset the weakness of either approach alone. Green et al (1989) stated that by triangulating and using two methods that have offsetting biases to assess a given phenomenon, and the results of these methods converge, then the validity is strengthened and enhanced. The approach was helpful in validating the importance of specific information that was not covered in the literature. The benefit of this step was the identification of aspects and variables that were not observed in other previous studies.

The validity of the research design is strengthened by the fact that both the "systematic interpretation" and regression model to be used in this research have already been tried and tested in previous studies, but not in similar context.

b. Reliability

Bhattacherjee (2012) defined reliability as the degree to which the measure of a construct is consistent or dependable. Bhattacherjee (2012) added that reliability is only a measure of consistency and not accuracy. Saunders et al (2009) noted that errors and bias or subjectivity displayed by both the participants and researchers pose the largest threats to reliability; the study minimised the threats by using a (model) that was less dependent on subjectivity (Bhattacherjee 2012). Also it became important that the model was correctly specified to ensure that no variables were erroneously omitted or added.. The use of a standardized and previously tested model also ensured that the instrument was reliable and consistent.

7. Ethical Consideration

As part of the Universities requirements a submission was made to the Human Research Ethics Committee. There was limited to no ethical concerns as the research involved only the collection and interpretation of secondary data that is publicly available and is a pre-requisite for all listed firms on the JSE.

8. Research Paradigm

There are four main research philosophies that can be adopted when conducting research. The work of Saunders et al (2012) provided the most complete summary of these approaches. In order to achieve my research objectives, I employed the pragmatic philosophical approach. This philosophical view is an advocate for multiple external views to be considered in an effort to find the best view when answering a question. This philosophy is similar to post-positivism as described by Bhattacherjee (2012) who noted that post-positivism argues that one can make reasonable inferences about a phenomenon by combining empirical observations with logical reasoning.

This philosophy does not limit itself to observable phenomenon or subjective meanings as a means to providing acceptable knowledge. This can only be determined by the research question, therefore the focus was more on practical applied research and integrating different perspectives in an effort to help interpret data (Saunders et al 2012).

When adopting the pragmatic philosophy to research, values play an integral role in interpreting the results. In the case of this research there were cases where values were determined from both an objective and subjective viewpoint, which the pragmatic philosophy allows for (Saunders et al 2012).

From a data collection point of view, this philosophical view is not prescriptive and allows for mixed method designs, qualitative or quantitative methods.

From an approach point of view, I applied an abductive approach. As identified by Suanders et al (2012), in the abductive approach, data is used to explore phenomenon, identify themes and explain patterns, to generate a new or modify an existing theory that is subsequently tested, through additional data collection.

This is the essence of the research I have undertaken. The phenomenon of; the presence of CRE strategies, alignment of real estate strategies and corporate strategies, and the effect of the corporate real estate strategy employed on the firms' financial performance are not well understood in South Africa. Consequently the effects of; misalignment and effects on strategy selection on financial performance are not well understood in the South African context.

By following the proposed philosophy and approach, I believe that a better understanding of the phenomenon was obtained and explained in the South African context.

9. Limitation

Findings of the study may not apply to the non-listed companies, and therefore a study may need to be conducted which incorporates their data. Secondly, the study does not differentiate between the sectors of the JSE. Further research is required to understand the specific characteristics of each sector.

10. Delineation

The study looked only at South African domiciled non-property companies listed on the Johannesburg Securities Exchange (JSE). This therefore means that the results obtained in this study will not necessarily hold true for firms listed on the Alternative Exchange, unlisted non-property firms and those firms not domiciled in South Africa as at 15 August 2015.

11. Contribution

Ladik and Stewart (2008), noted that the most common reason manuscripts fail to clear the hurdle necessary for publication in leading journals is a lack of strong incremental contribution. Ladik and Stewart (2008) continued by arguing that the contribution of research varies. The contribution ranges from developing a new theory, dealing with unresolved controversy or an unknown phenomenon, or extending what is already known. This research progresses on the basis that there is a general knowledge gap about corporate real estate in South Africa. This research focus is on issues of corporate real estate and its alignment to corporate strategy, so the contribution lies in the following:

- This study will develop our knowledge on corporate real estate strategies and alignment, and corporate real estate strategies and financial performance in the South African context.
- It will help JSE listed firms understand the benefits of strategy alignment in the South African context.
- Finally It will help JSE listed firms select the most appropriate corporate real estate strategy that will add value to shareholders.

CHAPTER 4 – RESULTS

1. Introduction

The main focal point of this study is the CRE strategies, their alignment to corporate strategy and linkages to financial performance of South African JSE listed companies during the 2015 financial year end. As explained in the methodology section of the report, both qualitative and quantitative approaches have been employed in an effort to answer the questions of the research. This section deals with the results of the process followed.

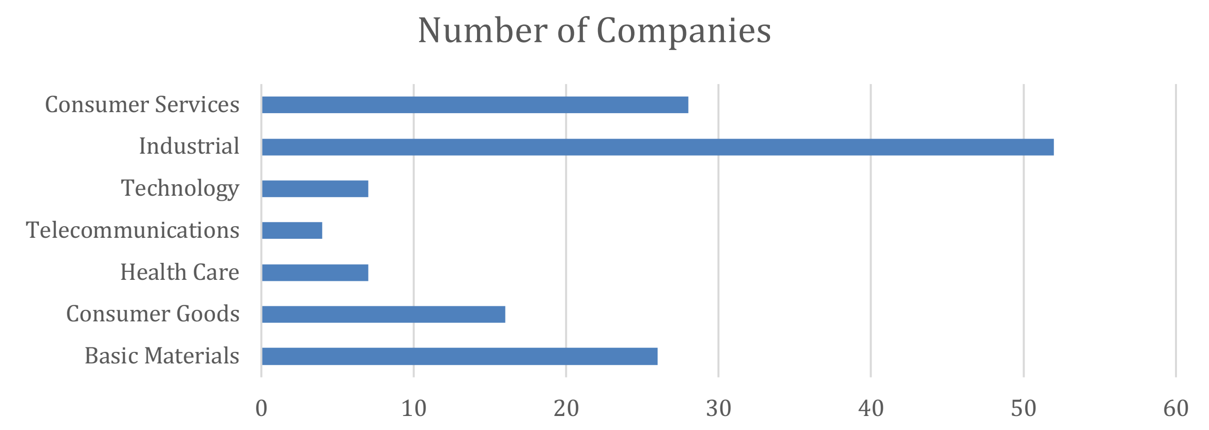
2. Respondent characteristics

A total of 321 non-property, non-finance related companies were selected for the purpose of conducting the study. These 321 companies were split between 8 different sub sections or industries, namely: Basic Material; Oil and Gas; Industrials; Consumer Goods; Health Care; Consumer Services; Telecommunications; and Technology. Of this number, 140 companies satisfied the conditions of being included in the final sample to be used to conduct the quantitative section of the study. This represents 44% of the total sample size and is considered acceptable. The 140 companies, as at 11th August 2017, had a market capitalisation ranging from R0,06bn to R1214bn, with an average of R29bn. 19% of the companies had market capitalisation above the average. The conditions that were required to be satisfied to pass the test to be included were as follows:

- The company must report its results in South African Rands;
- The company must have its registered office in South Africa; and
- All the financial data need to be available to calculate the different variables.

As stated by Ali et al (2008), the reason for leaving out the financial sector was due to the limitation of certain financial variables, secondly, the levels of gearing in these entities is not comparable to the other sectors.

Of the 8 sub-sectors or industries 7 of the industries were represented in the results, with only Oil and Gas not being represented. Below is a breakdown of the sectors and the percentage of each sector that was represented in the final 140 viable data points:



	Basic Materials	Consumer Goods	Health Care	Telecommunications	Technology	Industrial	Consumer Services
Number of Companies	26	16	7	4	7	52	28

Graph 1: Break down by sectors of listed non-property companies

From the above we note the following that the Basic Materials, Industrial and Consumer Services sectors make up over 75% of the sample size:

3. CRE strategies

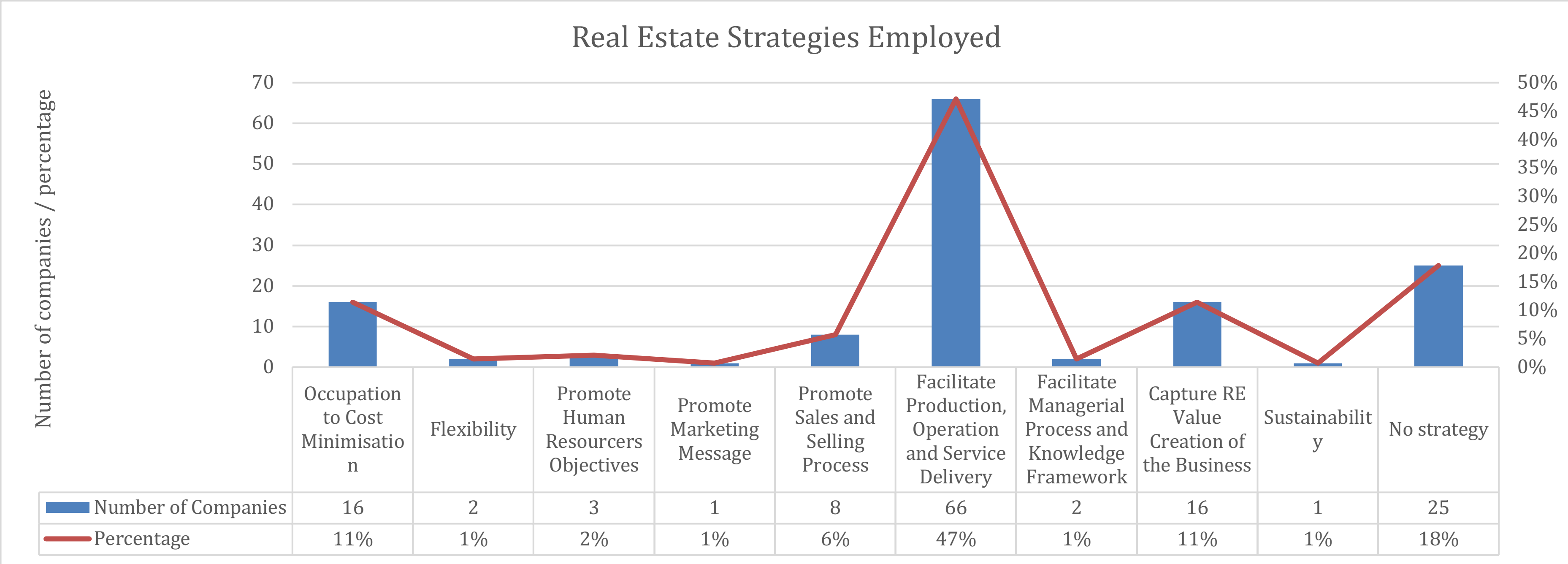
Once the sample size was determined, the next step was to establish the different strategies employed by each of the companies. For this a qualitative process was followed, i.e. the annual reports for each of the companies was analysed to identify the strategy or lack of strategy employed by each company. As noted by Ali et al (2008), for there to be consistency in how the annual reports are interpreted, and "*to apply scientific rigor"* the research employs the Nourse and Roulac framework *"which allowed linkage between real estate operatinbg decisions and corporate strategies".* The analysis of the companies was based on their dominant CRE strategy.

The following corporate real estate strategies, as defined by Nourse and Roulac (1993), were identified:

1. Occupation to cost minimisation;
2. Flexibility;
3. Promote human resources objectives;

4. Promote marketing message;
5. Promote sales and selling process;
6. Facilitate production, operation and service delivery;
7. Facilitate managerial process and knowledge framework;
8. Capture real estate value creation of the business

An additional category was added by Ali et al (2008) in Sustainability, and lastly we looked to identify any companies that did not have a distinctive corporate real estate strategy. The results of the above exercise are as follows:



	Occupation to Cost Minimisation	Flexibility	Promote Human Resourcers Objectives	Promote Marketing Message	Promote Sales and Selling Process	Facilitate Production, Operation and Service Delivery	Facilitate Managerial Process and Knowledge Framework	Capture RE Value Creation of the Business	Sustainability	No strategy
Number of Companies	16	2	3	1	8	66	2	16	1	25
Percentage	11%	1%	2%	1%	6%	47%	1%	11%	1%	18%

Graph 2: Real Estate Strategies Employed

From the above graph, we note the following:

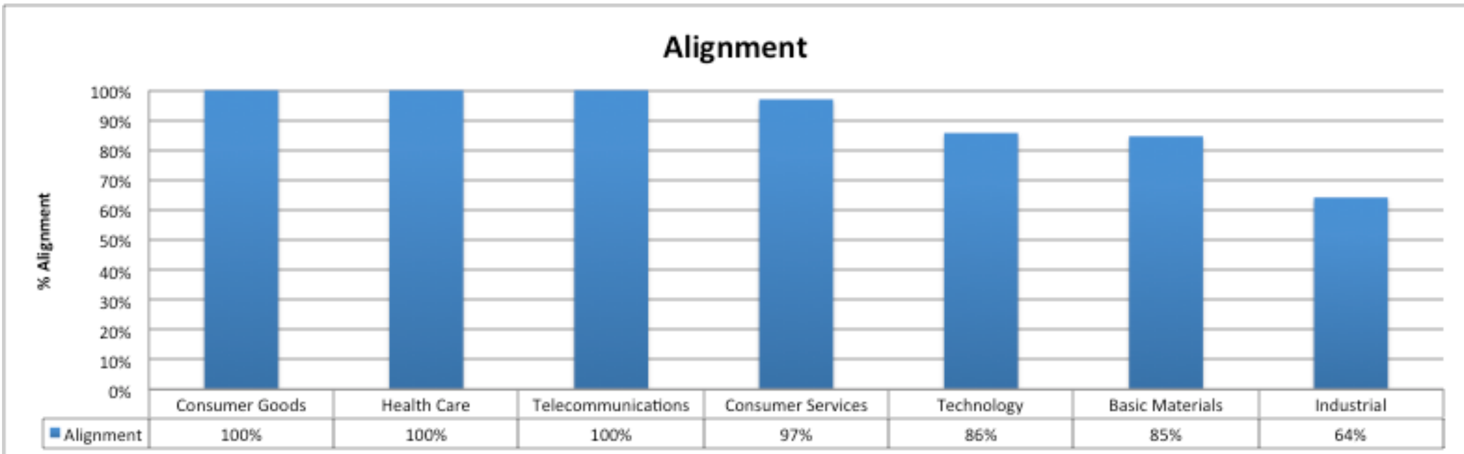
- The top three strategies employed by the 140 firms are:
  - Facilitate production, operation and service delivery (47%) – firms that employ this strategy tend to look for or design premises that facilitate the making or delivering the services of the firm easier, these firms also favour locations that are convenient for customers, and ensure that these locations are convenient to suppliers;
  - No strategy (18%); and
  - Occupation to cost minimisation and capture real estate value creation of the business (11% each)

- All the strategies identified were employed by at least one of the companies; and
- 72% of the companies have a CRE strategy, 71% matched the framework, and 1% matched the CSR strategy identified by Ali et al (2008)

The presence of corporate real estate strategies and operating decisions in this research is in line with the findings of Nourse and Roulac (1993). The results above illustrate that firms can map to the Nourse and Roulac framework.

4. Indicators of the presence of alignment

With respect to the indicators of the presence of alignment, the study has chosen to use the firm's explicit mentioning or ability to deduce a CRE strategy in the firm's annual review as a proxy for the presence of alignment. From the above results we note that 82% of the firms have a CRE strategy that has either been directly communicated or inferred from the firms operating decisions. On further inspection we note the following per sector with regards to alignment:



Graph 3: Indicators of Alignment

- The Consumer Goods, Healthcare and Telecommunications sectors illustrate 100% alignment;
- Consumer Services illustrate 97% alignment;
- Technology and Basic Materials illustrate 86% and 85% alignment respectively; and
- The sector with the lowest level of alignment is the Industrial sector with 64% alignment.

These results are consistent with results of research conducted by Nourse and Roulac (1993) and Singer et al (2007) who noted that firms explicitly mention or consider real estate in their corporate strategies.

5. CRE strategy and firm performance

To identify and evaluate the relationship between CRE strategies and share price, as a proxy for financial performance, empirical analysis is required. This empirical analysis is conducted in the form of linear multiple regression analysis with CRE strategies and financial indicators representing the predictor variables. Due to the ordinal nature which CRE strategies present themselves, i.e. in non-parametric format, dummy variables are used to represent CRE strategies. The financial indicators however, present themselves in a more traditional format, i.e. the data in question stems from a population that follows a probability distribution based on a more fixed set of parameters and are applied as control variables to support the analysis. The financial indicators considered are mentioned below.

As noted in chapter 3, the Ali et al. (2008) model was used to determine the effects of CRE strategy employed by the firm on the firm's performance. The CRE strategies were in line with the Nourse and Roulac framework as per below:

- No strategy (CRE0 – NoStrat);
- Occupation to cost minimisation (CRE1 – CostMin);
- Flexibility (CRE2 – Flex);
- Promote Human Resources Objectives (CRE3 – PromHRObj);
- Promote Marketing Message (CRE4 – PromMarkt);
- Promote Sales and Selling Process (CRE5 – PromSaleSell);
- Facilitate Production, Operation and Service Delivery (CRE6 – FacProdOpSerDel);
- Facilitate Managerial Process and Knowledge Framework (CRE7 – FacManProcKnow);
- Capture Real Estate Value Creation of the Business (CRE8 – REValue); and

- Sustainability (CRE9 – Sust);

These CRE strategies represent the independent variables that had an effect on the dependent variable, share price, which represented the financial performance of the firm.

The financial variables that were considered for the study included those that illustrated profitability, gearing, liquidity and investment ratios. As noted by Ali et al. (2008) "The selection of these financial ratios is based on their inter-relationship with share price. Share price represents the financial performance measure of this study, while other variables are used as supporting independent variables"

The independent variables that were used for this study are as follows:

- Return on shareholder funds (ROSF);
- Profit margin (PM);
- Current ratio (CR);
- Liquidity ratio (LR);
- Earnings per share (EPS);
- Solvency ratio (SR);
- Gearing ratio (GR);
- Interest cover ratio (ICR); and
- Dividend payout ratio (DPOR).

The sample for the South African market is made up of firms listed on the Johannesburg Securities Exchange. A noted earlier, 145 firms meet the studies criteria and were used for the correlation and empirical model.

Eq Name:	EQ00	EQ01	EQ02	EQ03	EQ04	EQ05	EQ06	EQ07	EQ08	EQ09
Dep. Var:	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)	LOG(SP)
C	2.282	2.238	2.233	2.220	2.219	2.187	2.168	2.148	2.123	2.117
	(0.3450)**	(0.3484)**	(0.3418)**	(0.3426)**	(0.3406)**	(0.3396)**	(0.3699)**	(0.3739)**	(0.3940)**	(0.3982)**
	[6.62]**	[6.42]**	[6.53]**	[6.48]**	[6.51]**	[6.44]**	[5.86]**	[5.75]**	[5.39]**	[5.32]**
LOG(SP(-1))	0.076	0.072	0.085	0.077	0.066	0.050	0.050	0.049	0.047	0.047
	(0.0780)	(0.0782)	(0.0768)	(0.0775)	(0.0773)	(0.0777)	(0.0780)	(0.0783)	(0.0790)	(0.0797)
	[0.98]	[0.92]	[1.10]	[1.00]	[0.86]	[0.65]	[0.65]	[0.63]	[0.60]	[0.58]
DPOR	0.226	0.228	0.251	0.247	0.246	0.246	0.243	0.244	0.244	0.244
	(0.1483)	(0.1484)	(0.1458)	(0.1461)	(0.1453)	(0.1446)	(0.1461)	(0.1466)	(0.1472)	(0.1477)
	[1.52]	[1.54]	[1.72]	[1.69]	[1.69]	[1.70]	[1.67]	[1.66]	[1.66]	[1.65]
GR	-0.015	-0.013	-0.123	-0.123	-0.112	-0.090	-0.090	-0.092	-0.091	-0.090
	(0.2309)	(0.2310)	(0.2308)	(0.2311)	(0.2299)	(0.2292)	(0.2301)	(0.2308)	(0.2318)	(0.2329)
	[-0.07]	[-0.06]	[-0.53]	[-0.53]	[-0.49]	[-0.39]	[-0.39]	[-0.40]	[-0.39]	[-0.39]
ICR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
	[0.42]	[0.44]	[0.43]	[0.43]	[0.45]	[0.50]	[0.49]	[0.49]	[0.49]	[0.49]
LR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
	[1.61]	[1.64]	[1.61]	[1.61]	[1.66]	[1.74]	[1.72]	[1.72]	[1.71]	[1.71]
OPM	-0.098	-0.074	-0.661	-0.905	-0.850	-0.727	-0.711	-0.774	-0.813	-0.810
	(1.3759)	(1.3768)	(1.3706)	(1.4051)	(1.3975)	(1.3929)	(1.4031)	(1.4151)	(1.4323)	(1.4380)
	[-0.07]	[-0.05]	[-0.48]	[-0.64]	[-0.61]	[-0.52]	[-0.51]	[-0.55]	[-0.57]	[-0.56]
ROSF	3.347	3.434	3.677	3.917	3.891	3.751	3.741	3.775	3.760	3.760
	(0.8731)**	(0.8785)**	(0.8672)**	(0.9172)**	(0.9121)**	(0.9123)**	(0.9190)**	(0.9254)**	(0.9315)**	(0.9351)**
	[3.83]**	[3.91]**	[4.24]**	[4.27]**	[4.27]**	[4.11]**	[4.07]**	[4.08]**	[4.04]**	[4.02]**
CR	-0.053	-0.053	-0.055	-0.050	-0.046	-0.034	-0.035	-0.031	-0.032	-0.032
	(0.0800)	(0.0800)	(0.0785)	(0.0788)	(0.0784)	(0.0785)	(0.0792)	(0.0798)	(0.0802)	(0.0805)
	[-0.66]	[-0.67]	[-0.70]	[-0.64]	[-0.59]	[-0.43]	[-0.44]	[-0.39]	[-0.40]	[-0.40]
CRE1		0.352	0.385	0.415	0.437	0.488	0.510	0.530	0.566	0.573
		(0.3770)	(0.3701)	(0.3723)	(0.3705)	(0.3702)	(0.4056)	(0.4096)	(0.4453)	(0.4511)
		[0.93]	[1.04]	[1.11]	[1.18]	[1.32]	[1.26]	[1.29]	[1.27]	[1.27]
CRE2			2.620	2.662	2.656	2.666	2.686	2.714	2.755	2.760
			(1.0439)*	(1.0465)*	(1.0405)*	(1.0354)*	(1.0498)*	(1.0553)*	(1.0763)*	(1.0812)*
			[2.51]*	[2.54]*	[2.55]*	[2.57]*	[2.56]*	[2.57]*	[2.56]*	[2.55]*
CRE3				0.716	0.744	0.786	0.805	0.839	0.875	0.883
				(0.8829)	(0.8781)	(0.8741)	(0.8885)	(0.8949)	(0.9146)	(0.9207)
				[0.81]	[0.85]	[0.90]	[0.91]	[0.94]	[0.96]	[0.96]
CRE4					2.258	2.351	2.373	2.393	2.433	2.442
					(1.4192)	(1.4134)	(1.4285)	(1.4338)	(1.4514)	(1.4588)
					[1.59]	[1.66]	[1.66]	[1.67]	[1.68]	[1.67]
CRE5						0.797	0.819	0.839	0.879	0.887
						(0.5227)	(0.5507)	(0.5544)	(0.5874)	(0.5933)
						[1.52]	[1.49]	[1.51]	[1.50]	[1.49]
CRE6							0.037	0.055	0.093	0.099
							(0.2759)	(0.2800)	(0.3340)	(0.3401)
							[0.13]	[0.19]	[0.28]	[0.29]
CRE7								0.440	0.479	0.486
								(1.0310)	(1.0509)	(1.0566)
								[0.43]	[0.46]	[0.46]
CRE8									0.098	0.105
									(0.4659)	(0.4713)
									[0.21]	[0.22]
CRE9										0.174
										(1.4553)
										[0.12]
Observations:	145	145	145	145	145	145	145	145	145	145
R-squared:	0.1981	0.2033	0.2391	0.2428	0.2571	0.2700	0.2701	0.2711	0.2714	0.2715
F-statistic:	4.20	3.83	4.21	3.88	3.81	3.73	3.44	3.20	2.98	2.78
Prob(F-stat):	0.0002	0.0002	0.0000	0.0001	0.0001	0.0000	0.0001	0.0002	0.0003	0.0006

Table 2: Alignment Model

	BEPS	CR	CRE0	CRE1	CRE2	CRE10	CRE3	CRE5	CRE4	CRE6	CRE7	CRE8	CRE9	DPOR	GR	ICR	LR	ROSF	SP	SR
BEPS	1.0000	-0.0387	-0.0848	-0.0406	0.0199	0.1104	-0.0094	0.0128	0.0018	-0.0513	0.6209	-0.0128	-0.0183	0.0156	0.0094	0.0044	0.0340	0.0933	0.1746	0.0297
CR	-0.0387	1.0000	-0.0724	-0.0021	-0.0211	0.0859	-0.0713	-0.0948	-0.0292	0.1326	-0.1012	0.0383	-0.0276	-0.0416	-0.2552	0.1610	-0.0275	0.0427	-0.0654	-0.0084
CRE0	-0.0848	-0.0724	1.0000	-0.1650	-0.0536	-0.7293	-0.0658	-0.1094	-0.0377	-0.4362	-0.0536	-0.1650	-0.0377	-0.0869	0.0169	-0.0378	-0.0393	-0.1272	-0.0805	-0.0457
CRE1	-0.0406	-0.0021	-0.1650	1.0000	-0.0428	-0.4523	-0.0526	-0.0874	-0.0301	-0.3484	-0.0428	-0.1318	-0.0301	-0.0519	-0.0313	-0.0302	-0.0266	-0.1528	-0.0664	0.0114
CRE2	0.0199	-0.0211	-0.0536	-0.0428	1.0000	-0.1045	-0.0171	-0.0284	-0.0098	-0.1131	-0.0139	-0.0428	-0.0098	-0.0190	0.1933	-0.0098	-0.0102	0.0114	0.1271	-0.0118
CRE10	0.1104	0.0859	-0.7293	-0.4523	-0.1045	1.0000	-0.0765	0.0456	-0.0141	0.5259	0.1069	0.4594	0.1349	0.0907	-0.0274	0.0456	0.0452	0.2434	0.0414	0.0288
CRE3	-0.0094	-0.0713	-0.0658	-0.0526	-0.0171	-0.0765	1.0000	-0.0349	-0.0120	-0.1390	-0.0171	-0.0526	-0.0120	0.0331	-0.0180	-0.0121	-0.0125	-0.2280	-0.0030	-0.0146
CRE5	0.0128	-0.0948	-0.1094	-0.0874	-0.0284	0.0456	-0.0349	1.0000	-0.0200	-0.2311	-0.0284	-0.0874	-0.0200	0.0060	-0.0194	-0.0200	-0.0208	0.0913	0.3180	-0.0242
CRE4	0.0018	-0.0292	-0.0377	-0.0301	-0.0098	-0.0141	-0.0120	-0.0200	1.0000	-0.0797	-0.0098	-0.0301	-0.0069	-0.0035	-0.0213	-0.0069	-0.0072	0.0084	0.0745	-0.0083
CRE6	-0.0513	0.1326	-0.4362	-0.3484	-0.1131	0.5259	-0.1390	-0.2311	-0.0797	1.0000	-0.1131	-0.3484	-0.0797	0.1111	-0.0138	0.0866	0.0857	0.1368	-0.0507	0.0706
CRE7	0.6209	-0.1012	-0.0536	-0.0428	-0.0139	0.1069	-0.0171	-0.0284	-0.0098	-0.1131	1.0000	-0.0428	-0.0098	0.0010	0.0407	-0.0098	-0.0102	-0.0270	-0.0293	-0.0118
CRE8	-0.0128	0.0383	-0.1650	-0.1318	-0.0428	0.4594	-0.0526	-0.0874	-0.0301	-0.3484	-0.0428	1.0000	-0.0301	-0.0267	-0.0157	-0.0302	-0.0293	0.1385	-0.0323	-0.0311
CRE9	-0.0183	-0.0276	-0.0377	-0.0301	-0.0098	0.1349	-0.0120	-0.0200	-0.0069	-0.0797	-0.0098	-0.0301	1.0000	-0.0149	-0.0350	-0.0069	-0.0072	-0.0384	-0.0256	-0.0083
DPOR	0.0156	-0.0416	-0.0869	-0.0519	-0.0190	0.0907	0.0331	0.0060	-0.0035	0.1111	0.0010	-0.0267	-0.0149	1.0000	0.0559	0.0339	0.0090	0.1987	0.0726	0.0111
GR	0.0094	-0.2552	0.0169	-0.0313	0.1933	-0.0274	-0.0180	-0.0194	-0.0213	-0.0138	0.0407	-0.0157	-0.0350	0.0559	1.0000	-0.0656	-0.0683	0.1503	0.0122	-0.0793
ICR	0.0044	0.1610	-0.0378	-0.0302	-0.0098	0.0456	-0.0121	-0.0200	-0.0069	0.0866	-0.0098	-0.0302	-0.0069	0.0339	-0.0656	1.0000	-0.0068	0.1076	0.0085	-0.0013
LR	0.0340	-0.0275	-0.0393	-0.0266	-0.0102	0.0452	-0.0125	-0.0208	-0.0072	0.0857	-0.0102	-0.0293	-0.0072	0.0090	-0.0683	-0.0068	1.0000	0.0370	0.1299	0.9859
ROSF	0.0933	0.0427	-0.1272	-0.1528	0.0114	0.2434	-0.2280	0.0913	0.0084	0.1368	-0.0270	0.1385	-0.0384	0.1987	0.1503	0.1076	0.0370	1.0000	0.1236	0.0316
SP	0.1746	-0.0654	-0.0805	-0.0664	0.1271	0.0414	-0.0030	0.3180	0.0745	-0.0507	-0.0293	-0.0323	-0.0256	0.0726	0.0122	0.0085	0.1299	0.1236	1.0000	0.1238
SR	0.0297	-0.0084	-0.0457	0.0114	-0.0118	0.0288	-0.0146	-0.0242	-0.0083	0.0706	-0.0118	-0.0311	-0.0083	0.0111	-0.0793	-0.0013	0.9859	0.0316	0.1238	1.0000

Table 3: Correlation Matrix

From the results of the correlation and the model we note the following:

ROSF has a significant correlation with the share price (0.867, $p < 0.01$). The analysis shows that this variable has the potential to be a good predictor variable in determining share price. Although one model would be sufficient based on this conclusion, we have run nine models with seven variables to ensure that we have covered all eventualities.

All the models run comprised of 145 observations. The model we were most concerned with was the one which involved ROSF as the variable; the explanatory power of the model exhibits a R^2 of 24%, indicating that ROSF, our variable explains 24% of the variation in share price, with the remainder of the explanatory power, i.e. 76% being explained by other variables other than ROSF.

When more variables are added, the explanatory power only improves to 27%, but the F-statistic drops to 2.78 from 4.21; when looking at ROSF as the only variable, the F-statistic is 4.21 as is significant at $p<0.01$. We note that there is a positive relationship with share price, as indicated by a positive b-value (3.67), with a t-value of 4.24 (significant at $p < 0.01$). We can expect this positive relationship, as the increase in shareholder return will increase the share price.

All of the strategies, except for S0 – No strategy were involved in the analysis. The results show that S2 – Flexibility, appears to contribute when all strategies are used as reference strategies. In all instances S2 has a positive regression coefficient indicating a positive relationship with share price and is significant at $p < 0.10$. Therefore, the results propose that firms with S2 increase share price compared to firms using all other strategies.

The results of the regression model are not directly comparable with the Ali et al (2008) research as this study identified different independent variables, financial and corporate real estate strategies that explained firms' performance. Although not comparable they highlight the importance of alignment in the South African context.

CHAPTER 5 – SUMMARY AND CONCLUSION

1. Introduction

As stated in Chapter 1, this study has been undertaken to investigate the attributes of corporate strategy, corporate real estate strategy, the alignment of the two strategies and the impact of the corporate real estate strategy employed by the firm on the financial performance of the firm, as illustrated by share price. Central to achieving these objectives, the study investigates the CRE strategies of firms listed on the JSE and establish whether a relationship exists between CRE strategy and firm financial performance.

The following key questions are posed in the study:

I. Which CRE strategies are employed by firms listed on the JSE;
II. Is there alignment between CRE and firm strategies?
III. Which indicators of alignment exist within the respondent firms?; and
IV. What is the link between CRE strategy and firm performance?

2. Summary of findings

Question 1 – Which CRE strategies are employed by firms listed on the JSE

In order to answer this first questions, the study firsts understand the landscape of CRE strategies and their use in the firm. Literature tells us (Roulac (2001) and Marting and Black (2006)) that it widely recognized that every business employs an overall strategy, yet it is rare occurrence for a corporate strategy to include a CRE strategy. There are however contrasting views expressed by Singer et al (2007), Ramakers (2008) and Ali et al (2008) who posit that there is a more explicit strategic approach to CRE as it has the ability to communicate and reinforce the firms competitive position in the market, when aligned with the corporate strategy has the ability to add maximum value to the firm, and have a direct impact on shareholder wealth. A clear unresolved controversy between authors.

Nourse and Roulac (1993) begin to balance the CRE and CS drivers by developing a framework that takes into consideration CRE strategies and corporate driving forces. This framework is designed to cater for the fact that not all business are the same and their real estate needs will be different, and therefore the strategies may not all be appropriate. This framework is also designed to reduce the frustration experienced from using generalized strategies that lead to less than optimal real estate decisions.

The results of the study support the literature. By using the Nourse and Roulac (1993) framework we note that 82% of firms study do employ a CRE strategy with the remaining 18% having no discernable strategy.

Question 2 and 3 – Is there alignment between CRE and firm strategies, and which indicators of alignment exist within the respondent firms?

Manning and Roulac (2001) suggest that the relevance and impact of CRE strategies can only be felt when there is a long-term linkage between CRE strategies and overall corporate objectives. Allard and Barber (2003) however note that proactive and strategic planning and management of CRE and workplace infrastructure continues to be a challenge for many firms. Lindholm et al (2006) suggest that the reason for the difficulty brought to the fore by Allard and Barber (2003) is due to the fact that the field lacks research that develops theoretical models of the relationship between strategic management and CRE decisions, and there is a dearth of empirical testing using well-defined models to quantify the value CRE brings to the firm.

The results show that in the main, that the presence of alignment is strong. This is illustrated by all sectors showing over 60% alignment as determined by their explicit mention or deduction of a CRE strategy in their annual reports which relate to corporate strategy.

Question 4 – What is the link between CRE strategy and firm performance?

Work done by Kaplan and Norton (2005) proposes that "Financial performance measures indicate whether the company's strategy, implementation and execution are contributing to the bottom-line improvement". That being the case, Lindholm et al (2006) find that in the strategic management field, researchers have struggled to identify and quantify how specific policies and decisions help the firm achieve its financial goals, especially with respect to decisions and policies related to CRE. Ali et al (2008) highlight that due to past practices of focusing on links between value of the firm and previously identified CRE strategies, there has been a lack of empirical research conducted that links the CRE employed by the firm and the effects on the firms financial performance.

The results are based on, and are consistent with a model similar to the one used by Ali et al (2008). From the results we are able to establish that ROSF best explains the variation in share price and ROSF has a positive relationship with share price. This is to be expected, as shareholders receive superior returns, so to increases the demand for the firms stock and its share price. The results of the regression also infer that, those firms that employ S2 – Flexibility, will have a better effect on share price than those firms not using a strategy or those using the other Nourse and Roulac (1993) strategies.

3. Conclusions

In conclusion, CRE strategy, which considers the requirements and needs of the firms, has a higher possibility of adding to shareholder wealth. The results and outcomes of this study support the hypothesis that a firm that strategically manages its CRE holdings in relation to the broader firm strategy could theoretically enhance shareholders wealth.

4. Implications of the study

For the body of knowledge this study adds the South African context to a phenomenon that has been explored in the Asian and European markets

In terms of the body of knowledge, the main contribution of this study establishes the linkage between CRE strategy and financial performance of firms in South Africa. The outcome from this study is vital as it provides the point of departure for firms to examine the application of their CRE strategies when incorporated within the broader corporate strategy. It provides firms with a tool to test if they have a CRE strategy and if that strategy speaks to maximizing shareholder return, and performance of the firm.

This behavior by the firm's management will affect owners and developers of real estate which is occupied by corporates. Landlords will be required to better understand the corporate strategy of the firms which they are looking to attract to better ensure that the are providing a product that maximizes shareholder return and enhances performance of the firm. Landlords could also find themselves competing with corporates as they look to develop, occupy and own their own real estate as they are better place to understand their own strategy and can react in an more optimal manner, than entrusting the implementation of this CRE strategy to third party landlords and developers.

One example of the presence of alignment and an implication of the results of the study, would be the real estate decisions the firm makes in uncertain times such as what pertains in the current South African economy at the time of writing this paper. The uncertainty around economic growth and political stability would imply that firms' might have to move away from owning to leasing – the benefit of which would be to reduce their financial exposure, become agile and free up capital for other critical investments.

5. Limitations and directions of future studies

The study is limited only to firms that are listed, as the proxy for the firms performance is the share price, which is only available to publicly traded firms. A direction for further study would be to look at firms in the unlisted space and government and state-owned enterprise space. This would require the formulation of a proxy for the firm or organizations performance, this could be in the form of internal rate of return for unlisted firms and attainment of a clean audit for government and state-owned enterprises.

The study is also limited to firms who are domiciled in South Africa and whose revenues are reported in South African Rands. By opening up the population, we can better understand the CRE strategy implications of those listed firms who are domiciled outside of South Africa but are listed in South Africa. Secondly, we can gain a better understand of how firms whose earnings are in foreign currency deal with their CRE strategy in line with their corporate strategy.

The study is based on annual reports of firms who had full years' results as at August 2015. To see the effects of timing on these results, the study would need to be expanded similarly to the Ali et al (2008) research to be conducted across different time lines.

6. Recommendations

This study recommends that CRE strategy be dynamic and assessed accordingly. Importantly CRE strategies should always align to corporate strategy for maximum effect. Alignment should act as a co-contributor to company strategies designed to enhance shareholder value, as opposed to reactionary measures designed to limit the damage done by misaligned strategy formulation processes. CRE is still a substantial contributor to the asset base of corporations, and should be treated with the same attention as the human resource, information technology and economic considerations taken into account by companies when developing their strategies.

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