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Research priorities for corporate real estate professionals in South Africa

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RESEARCH PRIORITIES FOR CORPORATE REAL ESTATE PROFESSIONALS IN SOUTH AFRICA

RESEARCH REPORT

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A research report submitted to the Faculty of Engineering and Built Environment, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Science in Building: Property Development.

Johannesburg

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DECLARATION

I Moroke Kgaugelo Jaca (Student number: 0618760E) declare that the research work reported in this research is my own work and the contents herein have been properly referenced and acknowledged. It is submitted for the degree of Masters in Building at the school of Construction, Economics and Management, Faculty of Engineering and Built Environment, University of Witwatersrand, Johannesburg. This research report has not been submitted either in whole or in part, in any previous application for a degree at this or any other university.

Moroke Kgaugelo Jaca

---------- Day of ---------- Year ----------

ABSTRACT

Real estate research priorities were established in different parts of the world. The purpose of the study was to examine property research priorities for professionals in the South African corporate real estate sector. The data collection process started with a pilot study using a questionnaire. Real estate research topics have been generated from previous studies with adjustment of local real estate terminology and market conditions accommodated. Findings reveal that Property and/or Corporate Real Estate Management was the key stakeholder of South African corporate real estate research. The top research topics are location and site selection, technology in corporate real estate management, corporate real estate strategy and the value added from corporate real estate management. It is recommended that further studies be conducted to cover a larger population. The small number of responses limit the work's inferential quality because it is difficult to generalise across the corporate real estate sector.

DEDICATION

I dedicate this research report to my late father Mr Jeremiah Nchabeleng, who always said “lefa la gago ke thuto”. Thank you for everything.

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I would like to thank God for providing me with the knowledge, wisdom and strength to complete this research report.

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CONTENTS **Page**

DECLARATION ..... **ii**

ABSTRACT ..... **iii**

DEDICATION ..... **iv**

ACKNOWLEDGEMENTS ..... **v**

LIST OF FIGURES ..... **ix**

LIST OF TABLES ..... **x**

LIST OF ABBREVIATIONS AND ACRONYMS ..... **xi**

1 INTRODUCTION **1**

1.1 Background 1

1.2 Problem Statement 2

1.3 Aim and Objectives 6

1.4 Research Question 6

1.5 Contribution of the Study 7

1.6 Scope and Limitation 8

1.7 Chapter Layout 8

2 LITERATURE REVIEW **9**

2.1 Introduction 9

2.2 Previous Studies 9

2.3 Corporate Real Estate 13

2.4 Methodologies in Previous Studies 16

2.5 Conclusion 20

3 RESEARCH METHODOLOGY **21**

3.1 Introduction 21

3.2 Goals and Objectives 21
3.3 Methodologies Applied in Similar Studies 22
3.4 Rationale for the Quantitative Approach 22
3.5 The Application of Principal Component Analyses 23
3.6 Research Design 23
3.7 Data Collection 26
3.8 Ethical Considerations 29
4 RESULTS AND DISCUSSION 31
4.1 Introduction 31
4.2 Response Rate 31
4.3 Background Information of Respondents 32
4.4 Analysis of Data 34
4.4.1 Identification of Key Stakeholders of South African CRE Research 34
4.4.2 Identification of Current Sources of CRE Research 35
4.4.3 Research Priorities for CRE Professionals 40
4.4.4 Level of Satisfaction with the Current State of CRE Research in South Africa 45
5 SUMMARY AND CONCLUSIONS 47
5.1 Introduction 47
5.2 Summary of Findings 47
5.3 Comparison to Similar Studies 51
5.4 Conclusion 52
REFERENCES 54
APPENDIX A QUESTIONNAIRE 60

APPENDIX B DATA 67

APPENDIX C ETHICS 87

LIST OF FIGURES

Figure Page

Figure 4.1: Distribution of respondents according to experience in property industry 34
figure 4.2: Research information sources 38

LIST OF TABLES

Table Page

Table 4.1: Response rate of the study 32
Table 4.2: Distribution of respondents according to highest academic qualifications 33
Table 4.3: Distribution of respondents according to discipline 33
Table 4.4: Key stakeholders of South African corporate real estate research 35
Table 4.5: Existence of a property research unit within the organisation 36
Table 4.6: Number of people employed in the property research unit..... 37
Table 4.7: Subscription to academic journals in real estate 39
Table 4.8: Journal subscriptions by CRE professionals 40
Table 4.9: Important research topics for the respondent's organisations..... 41
Table 4.10: Ranking of research topics by respondents 42
Table 4.11: Drivers of the importance of research topic..... 44
Table 4.12: Level of satisfaction with the current state of corporate real estate research in South Africa 45

LIST OF ABBREVIATIONS AND ACRONYMS

CRE	Corporate Real Estate
ERES	European Real Estate Society
GDP	Gross Domestic Product
LPT	Listed Property Trusts
MCSI	Morgan Stanley Capital International
SAPOA	South African Property Owners Association
REITS	Real Estate Investment Trust
PCA	Principal Component Analysis
PRRES	Pacific Rim Real Estate Society

1 INTRODUCTION

1.1 Background

South Africa is one of the major countries in Africa in terms of the size of the economy and real estate market. According to the World Bank (2017), the South African GDP for 2016 totalled $294.8 billion, making it second only to Nigeria with a GDP of $405.1 billion. South Africa's Gross Domestic Product (GDP) growth slowed from 2013 to 2017. Between the first quarters of 2013 and 2017, finance, real estate and business services made the largest contribution to the growth of the GDP. South Africa has undergone a significant political, social and economic transformation after emerging from the apartheid era (Newell, Acheampong and Du Plessis, 2002). South Africa implemented an economic development strategy which included the Reconstruction and Development Programmes (1994). Since 1994, international fund managers have established investment funds, focusing on South African stocks and bonds. Comparing the performance of real estate during the post-apartheid period has shown South African real estate exhibit lower risk than the pre-apartheid period, as well as exhibiting a stronger correlation with the South African stock market in the post-apartheid period.

Since the transformation of South Africa in 1994, there has been a small amount of South African real estate-related research appearing in international journals. Wilson, Du Plessis and Pienaar (2000) focused on real estate tax and land rights. The study of Wilson et al. (2000) focused on the distribution of land and emphasized that it will not be easily reclaimed, especially where agricultural land is concerned, within the three-year period specified by legislation to the point where the proclaimed 30% of the land is alienated from its current owners. It is expected that there will be compensation to current landowners, but it will be at drastically reduced market values. The authors

highlighted that the new dispensation inherited an economic and financial infrastructure functioning similar to and built on the same foundations as the major Western countries. The claims of rights on property and land ownership and the manner in which the created infrastructure is going to deal with the matter will influence and determine the relationships between various population groups. The matter is emotional and must be treated with sensitivity and fairness. Their findings highlight that the property market was uncomfortable with real estate property values in urban areas and will decline, which will consequently discourage international diversification into the South African property market.

Harrison's (1992) study focused on the policies and politics of informal settlements in South Africa and defined informal housing as shelter constructed outside of the formal housing delivery mechanisms. The challenges facing informal settlements within the historical context were highlighted within the framework of the state's changing policies towards urbanization. Informal settlements are excluded from any form of local authority boundaries; the possible solutions may include the extension of local authority boundaries to include informal settlements or the inclusions of such areas within metropolitan authorities.

1.2 Problem Statement

Studies by various scholars including Adewunmi and Olaleye (2011) in Nigeria, Newell, Worzala, McAllister and Schulte (2004); Newell, McAllister and Worzala (2003); Newell, Acheampong and Worzala (2002); Worzala, Gilliland and Gordon (2002); and Lusht (1993) have established that real estate research priorities differ in different parts of the world.

Lusht's (1993) study focused on the performance of real estate as an investment and the efficiency of real markets. The study suggested that there was a high level of public and private sector interest and the list of research questions was growing. Parker (2000) surveyed institutional property investors in Australia. The results indicated that institutional property research was principally applied in nature and that institutions would prefer university research to be pure, focusing on conceptual issues and providing an output that could be understood and applied. The study indicated a need for universities to provide leadership and academia and industry to develop a more formalised research agenda.

Survey findings by Worzala et al. (2002) reported on a web-based survey of real estate portfolio managers in the pension industry. The objective was to ascertain the real estate research interest of pension funds and find out whether research funding should be allocated to various research topics. The top three real estate priorities were performance measures of real estate assets and portfolios, microeconomic factors affecting real estate, and the role of real estate in a mixed-asset portfolio. These findings highlight that the real estate investment is maturing and focusing on the market fundamentals of their investment and their role in the portfolio.

In the same year, Newell et al. (2002) conducted a survey in Australia and compared the findings of Australia with the US. Senior industry participants consisting of institutional property investors, property consultants/analysts and property academics participated in the study. The top three general property research priorities for Australia were the role of property in a mixed-asset portfolio, property and portfolio risk management and performance measures in property. The top three specific real estate research priorities were the impact of capital flows in and out of property markets, the role of indirect property in a mixed-asset portfolio, and Listed Property Trusts as a proxy for

direct property investment. The top three findings of general real estate research priorities for Australia and the United State of America (USA) upon comparison were performance measurement of property, microeconomic factors affecting property and role of property in mixed-asset portfolios. The findings of specific real estate research priorities were the impact of capital flows in and out of property markets, property sales and exit strategies, and the effect of asset management fees on portfolio performance.

A survey conducted in the United Kingdom (UK) by Newell et al. (2003) on investment property forum members compared research priorities between the USA and Australia. The property forum members consisted of investment surveyors, fund managers, academics, bankers, lawyers, actuaries and related professionals. The top three general property research priorities were the role of property in a mixed-asset portfolio, macroeconomic factors affecting property and property risk management. There were differences between UK and USA findings as the top priority for UK members were the lowest priority in the USA. The results were the same for the UK and Australia. The results of the top three specific research priorities in the UK were taxation factors affecting property, the effect of lease structure changes in the property portfolio and existence and predictability of property cycles. There was a high level of inconsistency concerning the UK, Australia and the USA's research priorities.

Previous studies by Newell et al. (2004) compared survey results of general real estate research priorities in the US, the UK, Australia and Germany. Real estate fund managers and real estate researchers participated in the survey. The findings of general real estate research priorities surveys showed that the role of real estate in a mixed-asset portfolio, real estate and portfolio risk management, performance measures for real estate, and diversification within real estate portfolios were given high priority. There were differences among the findings as the role of real estate in a mixed-asset was ranked first in the

UK and Australia. The role of international real estate in a portfolio was the lowest priority in the US, the UK and Australia. There was more variation in the findings of specific real estate research priorities across the four countries. The findings of specific real estate research priorities were the impact of capital flows in and out of real estate markets, existence and predictability of real estate cycles, diversification within a real estate portfolio, forecasting methodologies for markets, results, returns and real estate disposal, and exit strategies. There was a closer alignment of real estate research priorities while comparing the findings of the four countries in the UK, Australia and Germany than in the US.

On the African continent, the study by Adewunmi and Olaleye (2011) in Nigeria examined the real estate research priorities of developing economies. Real estate managers/estate surveyors participated in the study. The top five findings for general real estate research priorities were development finance, land policy issues and land accessibility, performance measurement of property and property investment strategies. When comparing Nigeria's findings with international findings such as the US, the UK, Australia and Germany, a gap was identified. There was a difference in the outcome between real estate research priorities in Nigeria (except for performance measures of real estate) compared to the US, the UK, Australia and Germany. The results are due to minimal access to capital in Nigeria as opposed to developed countries. Development finance ranked higher in the research priorities due to minimum capital access in Nigeria. This indicated a need for capital for real estate development in developing markets.

Studies such as those of Worzala et al. (2002) focus on real estate fund managers in terms of their research priorities, with equivalent surveys conducted in Australia (Newell et al., 2002), the United Kingdom (Newell et al., 2003) and Germany (Newell et al., 2004). There is limited research on

corporate real estate (CRE) research priorities as previous studies focused on finance, economics and investment. There exists a need for CRE stakeholders to re-assess their research priorities. The development of the corporate research agenda has provided challenges and opportunities for new areas of research in real estate. This has established research directions to provide interesting research subjects. Without the identification of a research direction, the research output in the country will be random and, in some cases, fail to meet the needs of the industry, making it irrelevant.

1.3 Aim and Objectives

This study intends to examine the property research priorities for property investors and professionals in the South African CRE sector. The study aims to address past and future concerns and achieve the following objectives:

1.3.1 To identify the key stakeholders of South African corporate real estate research
1.3.2 To identify their current sources of corporate real estate research
1.3.3 To identify the research priorities of the stakeholders
1.3.4 To establish level of satisfaction with current state of CRE in South Africa

1.4 Research Question

The key research issue is thus – what are the research priorities of key market players in the South African real estate market?

To attend to the main research question, the following research questions were formulated:

1.4.1 Who are the key stakeholders in the South African corporate real estate market?

1.4.2 What are their research priorities?

1.4.3 Are there any differences in the research priorities of the different stakeholders, for example between tenants and landlords?

1.4.4 Where should corporate real estate research be focused on in the future?

1.4.5 Who determines research topics, the academic or the business community?

1.5 Contribution of the Study

Rust contends that contribution occurs when a manuscript clearly adds, embellishes or creates something beyond what is already known (cited in Ladik and Stewart, 2008). There is also a continuum contribution an author can make: from identical replication to developing a new theory that predicts a new phenomenon. This study replicates previous studies and extends them to a new context, real estate management in South Africa. This replication and extension are likely to set an agenda for the CRE practitioner community as well as the international research community in CRE.

This study identifies the different needs of the various stakeholders in the CRE market. There is a need to ensure that stronger collaboration of academic research will be relevant to industry needs. The study justifies research initiatives for funding by local and international funders. The identification of the CRE research priorities for professionals enables more effective development of the CRE research agenda for property researchers in the South African real estate industry.

1.6 Scope and Limitation

The study focuses only on the South African real estate market examining CRE research priorities. South Africa has limited academic literature on the topic. The research depends on having access to people, organizations, documents and other resources necessary to undertake the research.

1.7 Chapter Layout

This introductory chapter provided a general overview and contextualization of the study. The following chapter will theoretically explore the priorities of the South African real estate market. The third chapter will outline the research methodology chosen for the study. The fourth chapter will present the detailed findings of the survey. The fifth, and final chapter, will discuss the findings, conclusions and recommendations of the study.

2 LITERATURE REVIEW

2.1 Introduction

The preceding chapter provided context for the study of real estate research priorities and identified gaps that make it necessary to review the research methodologies of previous studies. It also identified the different needs of different stakeholders in the CRE market. In this chapter, the theoretical framework used in this study will be discussed. The research topics will be assessed according to importance, from the most important to the least important.

2.2 Real Estate Research Priorities

Several studies by academics and researchers in the US, Australia, the UK and Germany have identified research areas and directions for real estate and examined the need for CRE researchers to re-assess their priorities. These studies have revealed research areas and directions. A study by Lusht (1993) examined the efficiency of real estate markets and how real estate, as an investment, has performed. It highlighted that the list of research questions was long and increasing and there was a historically high level of public and private sector interest in the answers that could be provided.

In this context, it is clear that two worlds either collide or divide as professionals and academics fail to agree on who should determine topics to be researched (Souza, 2000). According to Parker (2000), who surveyed institutional property investors in Australia, institutions prefer university research to be pure, focused conceptual issues with output that can be easily understood and applied. The

study suggested the need for universities to provide thought leadership and for the industry to develop a more formalized research agenda.

In 2002, Newell et al. conducted a survey on property research priorities among Australian institutional property investors, analysts and academics. General and specific research topics were prioritized and compared with US property research priorities. It was found that the role of property in mixed-asset portfolio was the top priority among general property research topics, while the impact of capital flows was the top priority property research topic. In another study, Worzala et al. (2002) reported the results of a web-based survey of real estate portfolio managers in the pension fund industry. The focus of the study was to ascertain the real estate research interests of pension funds and find out whether research funding should be allocated to various research topics. The survey found that performance measures of real estate assets and portfolios, microeconomic factors affecting real estate and the role of real estate in a mixed-asset portfolio were the top three real estate research interests.

A later study by Newell et al. (2004) compared real estate fund manager's surveys conducted in the US, the UK, Australia and Germany. Upon comparing the results of the four surveys, the study found that there was a much closer alignment of real estate research priorities in the UK, Australia and Germany than in the US. The result, as in the other studies, suggested that given different market characteristics and economies, real estate research priorities might differ across nations based on economic development.

Furthermore, Newell et al. (2004) compared the survey results for the real estate research priorities in the US, the UK, Australia and Germany and determined that there was more variation for specific real estate research priorities for the four countries. They identified real estate research priorities across countries as future research. Newell et al. (2003) identified property

research priorities in the UK that will give more effective development of a property research agenda for researchers in European Real Estate Society (ERES) and UK. They further identified property research priorities in Australia that would give more effective development of property research agenda for researchers in Pacific Rim Real Estate Society (PRRES).

Changes within the property profession and the structure of tertiary education and how it would influence future research was identified by Hefferan and Ross (2010). They reviewed conference papers of over 15 countries with authors directly involved in Australia. Their findings indicated that certain tertiary institutions tend to focus on specialist areas for property real estate education and there is a demand for property real estate education.

Azasu and Simons (2018), conducted an online survey highlighting that the real estate academy has always prioritized quality of research and research contribution. Their findings suggest that the academics consider theory development and theory application as the most important contributions in the research.

A study by Simmons, Brunkhorst, Lunetta, Penick, Peterson, Pietrucha and Staver (2005) highlighted that the real estate body of knowledge was not aligned with the industry requirements. There was an overlap in the knowledge and skills domain in the body of knowledge domain. Similarly, Brochner, Josephson and Alte (2005) identified a gap between real estate programmes and practice and they also concluded that the real estate body of knowledge was not aligned with the industry requirements.

A survey conducted by Chikafalimani and Cloete (2010) indicated that practitioners consider all topics to be included in the curriculum as it was important for the industry of South Africa. Researchers should target the

distribution of their research differently so that they can have an impact on the industry and to make sure that the industry was aware of their research. The results indicated that the respondents agree on the time to be spent on Masters Real Estate (MRE) topics despite the difference in years of experience. Professionals prefer more time to be allocated to property finance and less time to information technology and corporate strategy.

Research conducted by Adewunmi and Olaleye (2011) noted the new developments in real estate markets of most developing countries and raised a question on what the research needs of the property markets in the developing countries are. Their research for real estate research priorities for developing economics was conducted in Nigeria. A comparison of the survey findings was also conducted in developed countries. This raised the question: What are the differences in research areas/topics in developing and developed countries?

Adewunmi and Olaleye (2011) compared the survey results for real estate manager/estate surveyors in Lagos. The research topics were generated from US, the UK, Australia and Germany where real estate research for general priorities and specific priorities were identified. The results of specific real estate topics priorities reflected a concern for the market with minimal accessibility to cash flow and the need to examine how land accessibility and title registration can be improved. The was a closer alignment of specific real estate research topics compared with a survey conducted in the UK, Australia, Germany and the US. The real estate research priorities identified new developments in real estate markets of most developing countries and raised the question of what the research needs of the property markets in the developing countries are.

This study compared the survey findings of Adewunmi and Olaleye (2011) in Nigeria and the survey findings of developing countries. The development of a research agenda provides challenges and opportunities for new areas of research in real estate. This is with a view of establishing research directions to provide interesting research subjects.

It is safe to conclude that a combined approach of academics and professionals is required in real estate research. In this context, the property research priorities that have been identified provide more effective development of a property research agenda in South Africa. Many studies have made contributions to the area of institutional research directions and the real estate research agenda. Therefore, this section of the study provided a focus on previous research conducted and papers published in leading real estate journals in international and national conference proceedings. The findings of some of the studies have highlighted that the research directions are characterized by different market environments and reflect variation in political systems and economic development. In summary, since previous studies are limited to developed countries with Nigeria being the only developing country, a study of real estate research direction for a developing country such as South Africa has proven useful.

2.3 Corporate Real Estate

Rodriguez and Sirmans (1996) define CRE as the management of real estate investment trust (REITS) portfolios investing in commercial and industrial real property. They assert that ‘‘unless stated otherwise, no difference or distinction was made in this article between CRE defined as real properties that house productive activities of a traditional corporation) and investment real estate (defined as real property held primarily for investment purposes)”.

CRE was defined by Ali, McGrea, Adair and Webb (2008) as properties that are owned or leased by a firm to achieve corporate objectives. While Manning and Roulac (1999) define CRE as industrial, office and/or retail space (such as land, buildings and improvements) in use by businesses, where not only site selection, but also facility design and space utilization decisions, inevitably impact a company's business operations and future cash flow in numerous ways beyond any investment return received from the ownership of the real property (to include leasehold rights). Given this definition, CRE management must include a company's management of the (multi-facility) network of its working spaces, including leased as well as owned properties, to maximise the wealth of its stockholders. Ali et al. (2008) furthermore defined CRE as the use of real estate as part of business operations and associated activities (cited in Brueggeman and Fisher, 2001).

In (1999), Carn, Black and Rabianski examined three major categories of issues facing CRE executives in the future using a Delphi process survey. Their study differed from prior survey research as it looked at future trends, not past or present factors. Another aspect in which the study differed was that it used a Delphi technique to identify issues facing the current and future CRE function and the executives dealing with corporate real estate. They provided CRE researchers with a list of 39 research issues. Their study incorporated the trends and issues that managers are most likely to face in the future.

Manning and Roulac (1999) examined the need for CRE researchers to re-assess their priorities. They sought to answer questions about CRE research. They proposed an alternative CRE research framework that differed from what was followed in the past. As part of their future research plans, they considered prescriptive leadership.

CRE can be traced back to the early 1980s when researchers began to highlight the significant levels of CRE ownership among companies and the potential impact of CRE on business performance (Park and Glascock, 2010). Pittman and Parker's (1989) study highlighted that there was growing awareness that corporations can profit from more effective management of their real estate assets, yet there was little academic research in the field. Following this, Dasso, Kinnard and Rabianski (1989) constructed a course outline and discussed topics that could be covered in CRE as a college course. The course outline was designed to provide flexibility in topic coverage, student background and instructor preferences toward many topics. Kenley and Heywood (2000) examined how corporate and government organizations in their study differ in their priorities when managing the supply of property to meet their organization objectives. CRE management was seen as contributing to achieving the strategic objective of organizations rather than being a cost to the business. To this end, the development of CRE was reviewed over the past two decades and how real estate assets holdings and activities support business objectives (Ali et al., 2008).

Furthermore, Haynes (2011) explored the workplace implications of the changing workforce demographic. He focused on bringing efficiency into CRE management and reducing workspace inefficiencies in a growing or declining economy. The findings of Haynes (2011) indicated that corporate managers need to establish the different needs of the different generations by creating an environment that allows all of them to coexist in the same workplace.

Since CRE is inherently multi-dimensional and cross-functional in supporting core business activities, academic researchers have tackled the topic of CRE from diverse angles and have drawn upon concepts and theories from a variety of disciplines. The disciplines include economics, finance, architecture,

management, organizational behavior and marketing, among others (Park and Glascock, 2010).

2.4 Methodologies in Previous Studies

Real estate research areas were developed in different parts of the world. Each country that conducted the study identified research priorities for their property market as new forms of real estate were created. Most of the researchers developed a questionnaire to match each countries priorities and needs.
Newell et al. (2002) developed a questionnaire including 12 general property research topics and 28 specific property research topics in Australia. A 5-point rating scale was applied ranging from 1 = not important to 5 = very important. The survey was distributed to institutional property investors, property consultants/analyst and property academics to participate. In total, 96 respondents completed the survey, and the response rate was 64.9%. The survey was based on property research priorities for institutional investors. Property research topics for other groups such as housing or property developers were excluded.

In 2003, Newell et al. developed a questionnaire consisting of 12 general property research topics and 29 specific property research topics. Two additional specific topics were included related to UK lease structure changes and the role of property derivatives in a portfolio. From 1400 members, only 274 completed survey were returned, that was a 19% response rate. Housing and property development research topics were excluded.

In a later study, real estate research priorities were analyzed by Newell et al. (2004), in four countries namely, the UK, Australia, Germany and the US, in which 12 general real estate research topics and 27 specific real estate research priorities were assessed. Real estate research managers assessed

the importance of research topics ranging from 1 = not important to 5 = very important. The principal component analysis (PCA) was used. PCA is a multivariate analysis technique in which the underlying dimensions in the survey data are examined.

Newell et al. (2004) when comparing the study of the four countries, the UK survey was sent out to 274 participants including real estate fund managers, real estate advisers and consultants, real estate companies and real estate academics. A total of 79 fund managers responded to the survey. The Australian survey was sent out to 96 participants including real estate fund managers, real estate advisers and consultants, real estate companies and real estate academics. Here, 59 fund managers responded. In Germany 90 participants including real estate fund managers, real estate advisers and consultants and real estate companies of which 30 fund managers responded. In the USA, 59 fund managers participated and the same 59 responded. The range of factors contributed to the differences in surveys between the US, and the UK, Australia and Germany. Real estate fund managers' scores reflected prioritizing strategic real estate issues rather than the specific real estate topics.

They further compared forty-one questions consisting of 12 general property research topics and 29 specific property research topics were assessed by Newell et al. (2003) for the sample size of 1400. The questions were scored on a 5-point rating scale, ranging from 1 = not important to 5 = very important. The survey was distributed to investment property forum members consisting of investment surveyors, fund managers, academics, bankers, lawyers, actuaries and professionals of which 274 responded. All membership categories were represented. Principal Component Analysis (PCA) was applied to highlight dimension in the real estate research priorities. There was a good agreement on the outcome of general real estate research priorities amongst institutions, property companies, consulting/agency and legal services. There was a good

agreement on the outcome of general property research priorities amongst the holders of different size property portfolios. The agreement amongst the institutions, property companies and consulting/agencies regarding the outcome of the specific property research priorities was also good, with legal services showing lesser agreement with the other three groups. Respondents were requested to identify under-researched and over-researched issues. They identified 179 under-researched issues and 157 over-researched issues. They also identified 25 under-researched topics and 22 over-researched topics. There was a high level of consistency on research priorities across the property industry in the UK.

The last comparison of the four major international real estate survey was forty questions and were assessed by Newell et al. (2002) for the total sample of 227 respondents and three sub-groups of institutional property investors, property consultants/analyst and property academics. A total of 12 general property research topics and 28 specific property research topic questionnaires were distributed to senior property industry participants. Out of these, 96 completed surveys were returned, giving a response rate of 64.9% comprising of institutional property investors at 61.4%, property consultants/analysts at 24% and property academics at 14.6%. The results prove a negligible non-response bias. The performance of sub-groups was assessed with rank correlation and factor analysis was applied. Factor analysis is a multivariate analysis technique in which the underlying dimensions in the survey data were examined (Everitt and Dunn, 2000). There was a weakness identified in the factor analysis for consultants/analysts and academics as there were not enough response for the 28 underlying dimensions in specific property research priorities.

In the analysis by Adewunmi and Olaleye (2011), 15 general real estate topics and 35 specific research topics were assessed. Research topics were

generated from studies conducted in the US, the UK, Australia and Germany and real estate research for previous studies done by Newell et al. (2004). The importance of each research topic was on a 5-point Likert scale that was assessed by practitioners in the real estate field. The points ranged from 1 to 5, with 1 = not important to 5 = very important. The levels of importance were analyzed comparing mean scores. PCA was used to highlight real estate research priorities.

When comparing the results of the four surveys, there was a close alignment of real estate research priorities in the UK, Australia and Germany than found in the US. The results of Nigeria differ compared to developed countries except for performance measures of real estate.

The results of specific real estate research topics reflect concern for the market with minimal accessibility to cash flow and the need to investigate how land accessibility and title registration can be improved. There was a closer alignment of specific real estate research topics compared with survey conducted in the UK, Australia, Germany and the US. The real estate research priorities indicated the new developments in real estate markets of most developing countries and raised the question of what the research needs of the property markets in the developing countries are.

PCA was used to extract 15 general results of dimension in general real estate research priorities. The results identified six real estate components or dimensions in the general real estate research topics. The cumulative variance was 64.57% and was considered sufficient.

Both the strength and weakness of PCA is non-parametric-analysis which means that there are no parameters to estimate or adjust. The answer is data-

driven, not dependent on the user. It also does not take prior knowledge into account as parametric algorithms do.

2.5 Conclusion

This study argues the need for CRE stakeholders to re-assess their research priorities. There is much more research that could be done on CRE research priorities. It is essential that further research be carried out in this area so that professionals, academics and senior management can identify their research priorities. This chapter focused on previous research conducted and papers published in leading real estate journals in international and national conference proceedings.

The literature has revealed the need for real estate to establish its own body of knowledge to further identify its research agenda, especially in CRE. The study has identified the key stakeholders of the CRE and their research priorities. There is limited research on CRE research priorities as previous studies focused on finance, economics and investment.

It is suggested that academic CRE researchers consider a broader perspective of CRE research beyond merely the financial implications in order to afford the academy more opportunities to contribute CRE research that is ‘‘useful’’ to senior management as well as CRE professionals. In addition, the following two questions need to be posed and then answers sought: (1) What CRE issues merit research consideration? and (2) Given the identification of CRE issues that merit research consideration, which research methodologies, databases and statistical tools have enabled CRE researchers to contribute research useful to senior management, as well as CRE professionals?

3 RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chapter details how the research questions presented in this research shall be answered (Rudestam & Newton, 2007). The design of the research is aimed at answering the research questions. Adewunmi and Olaleye conducted a study in 2011 on real estate research directions and priorities for Nigerian institutions. Newell, et al (2004) conducted study on international perspective on real estate research priorities and this study adopted similar approach used in Nigeria and international countries. This study used descriptive approach. Questionnaire was used as a technique of data collection within the survey strategy. Because each respondent was requested to respond to the same set of questions in a predetermined order (deVaus 2002). It also provides an efficient way of collecting responses from a large sample prior to quantitative analysis. This section will discuss the participants and followed by the instruments to be used lastly the procedure followed.

3.2 Goals and Objectives

The primary goal of this study was to examine the property research priorities for property investors and professionals in South Africa. Given how little research has been conducted in South Africa on corporate real estate research priorities, the study attempted to adapt what has been researched internationally to determine real estate research priorities within the South African context and examine CRE research priorities that stakeholders prefer.

The knowledge of research priorities in corporate real estate in South Africa provides an interesting subject. There was a growing need in corporate real

estate education. There is a need for research relevant for the industry by the academic research. The study will identify the real estate CRE role players and enable effective development of corporate real estate research agenda for real estate professionals. The industry focuses on corporate real estate research that is of interest and relevant to their organizational needs. This study is designed to establish corporate real estate research agenda for professionals in South Africa.

3.3 Methodologies Applied in Similar Studies

As indicated in Section 2.4, previous research covered general property research topics and specific property research topics and collected data using questionnaires.

The study follows similar approached conducted in international countries and Nigeria. Whereby prior to collecting data, a questionnaire was developed with property research questions.

3.4 Rationale for the Quantitative Approach

A quantitative research method was selected for this study because quantitative research is objective as it is generally associated with positivism. According to Saunders, Lewis and Thornhill (2007), it analyses data to test or validate theory. The quantitative method has the potential to provide measurable evidence to help to establish probable cause and effect, to yield an efficient data collection procedure and to facilitate the comparison of groups Saunders, Lewis and Thornhill (2007). Examples of collection methods include descriptive surveys, observational studies and case-control studies. The advantage of quantitative research is that it provides precise quantitative numerical data which makes data analysis less time-consuming. The research

results are also relatively independent of the researcher. This method was selected because it was suitable to answer the research question and provide the required evidence to enhance the body of knowledge.

3.5 The Application of Principal Component Analyses

Similar studies by Newell et al. (2004) analysed real estate research priorities for four countries in the UK, Australia, Germany and the US. Principal Component Analysis (PCA) was used to highlight the corporate real estate research priorities. According to Everitt and Dunn (2000). PCA is a multivariate analysis technique in which the underlying dimensions in the survey data are examined. A small number of dimensions are extracted that explain a significant proportion of the total variation. It was often used to reduce the dimensionality of large datasets, by transforming a large set of variables into smaller ones that would contain most of the information in the larger set. It was one of the oldest and almost widely used. Its idea was simple and reduce the dimensionality of the dataset, while preserving as much variability.

The strength and weakness of PCA lie in non-parametric-analysis. There are no parameters to estimate or adjust. The answer was data-driven, not dependent on the user. It does not take prior knowledge into account, as parametric algorithms do.

3.6 Research Design

The purpose of research was to describe and explain complex social science phenomena (Bhattacherjee, 2012). There are four research paradigms: positivism, critical theory, constructivism and realism, each with three elements namely, ontology, epistemology and methodology. Ontology is the “reality” that the researchers investigate, epistemology is the relationship between the

reality and the researcher, and the methodology is the technique used by the researcher to investigate the reality (Healy and Perry, 2000).

Research design was defined as the planning of the methods to be used for collecting data and techniques to be adopted to analyze the data collected, keeping in mind the objectives of the research and the availability of staff, time and money (Kothari, 2004). This study was based on positivist epistemology which is aligned with a deductive research approach. Epistemology refers to what was generally known. In this context, the subject topic has been researched before, mainly in developed countries and therefore literature findings were reviewed and empirically tested with statistical methods (deductive approach) on South African data to answer the research questions. According to Saunders, Lewis and Thornhill (2007), positivism refers to observable reality and focuses on casualty and uniformities to create generalizations. A positivist approach to the study means replicating approaches used by other researchers in similar studies in other countries.

Leedy and Ormrod (2001) define research as a systematic process of collecting and analyzing information data to increase our understanding of the phenomenon about which we are concerned or interested. This study focused on previous research conducted, papers published in leading real estate journals in international and national conference proceedings. The existing data and new data were compared with the aim of discovering the differences and similarities in the priorities of the research agenda.

Real estate research has been conducted in developed countries but Nigeria was the only developing country that investigated the real estate research direction. Adewunmi and Olaleye (2011) collected data from 135 real estate practitioners in Lagos who worked in private organizations, government establishments and corporations, private consultants' offices and the academy.

The study compared the survey of previous studies conducted in Nigeria to the survey findings of developing countries. The comparison of the findings enabled the development of a corporate research agenda and provided challenges and opportunities for new areas of research in the real estate industry.

For this study, the same strategy was followed as that of Adewunmi and Olaleye but the data was South African based, investigating the CRE research agenda from the South African perspective. It attempted to adapt what has been researched internationally and in Nigeria to investigate CRE research priorities for South African professionals. The instrumentation in the study allowed quantitative analysis. The research tool that was used was questionnaires and were adapted from the previous study conducted in Nigeria. Bhattacherjee (2012) describes research tool as a set of questions intended to capture responses from respondents in a standardized manner.

A participation information sheet was written to participants. The purpose of the letter was to summarise what the research was about and outlines what was required to the participants and the confidentiality was highlighted. The participation information sheet was prepared to accompany the link for the questionnaire and was emailed to the participants. A follow up request to participants reminding them of the questionnaire link was in a form of a phone call or email. The data collection application used for developing questionnaires was Qualitrics where participants were able to answer the questions. Bhattacherjee (2012) confirms that the Qualitrics method has advantage of being cost effective and has higher response rate over mailed surveys.

Bhattacherjee (2012) notes that response rates for survey studies tend to be notoriously low giving a range of 15-20% for mail surveys even when two to three reminders are made. He suggests a number of strategies to improve the

response rates as follows: advance notification, relevance of content, short respondent content questionnaires, follow-up requests, either by email or telephone, confidentiality and privacy. These strategies were used to improve the response rate.

Likert-style rating scale was used in which respondent are asked how strongly they agree or disagree with a statement or series of statements usually on a four, five, six or seven-point rating scale, Saunders, Lewis and Thornhill (2007). For this study five-point rating scale was used. Questionnaires about the research topic were distributed to property industry stakeholders. The researchers assessed the importance of research topics on a 5-point Likert scale. The points ranged from 1 to 5, with 1 = not important to 5 = very important. The level of importance was analyzed by comparing mean scores.

3.7 Data Collection

According to Pinsonneault and Kraemer (1993), a survey was defined as gathering information about the characteristics, actions or opinions of a large group of people. It was used as a data collection tool for carrying out a survey. This study focused on surveys that were conducted to advance the body of knowledge.

Glasow (2005) argues that the strength of surveys lies in that they are capable of obtaining information from large samples of the population. When selecting participants for the study it was important to determine the size of the sample required. The weakness of the research survey according to the study of Pinsonneault and Kraemer (1993) was that surveys are generally unsuitable where an understanding of the historical context of phenomena was required. Bell (1996) observed that biases may occur in a lack of response from intended participants or in the nature and accuracy of responses received. Sources of

error may include intentional misreporting of behaviors by respondents to confound survey results or to hide inappropriate behavior. Respondents may have difficulty assessing their own behavior.

Pinsonneault and Kraemer (1993) characterized survey research as the provision to research and produce quantitative descriptions of populations under study which applies to individuals, groups, organizations or communities. The survey method of collecting information was by asking people structured and predefined questions which are administered to a subset of the population. Information was collected from a fraction/sample of the study population in a way that allows the researcher to generalize the findings to the population.

It was important that the reliability of a developing questionnaire can be demonstrated. Rattray and Jones (2007) observed that reliability refers to repeatability, stability or internal consistency of a questionnaire. There are various ways to ensure the reliability of a questionnaire. Test-retest reliability can assess the stability of a measure over time. The content validity or face validity refers to an expert opinion concerning whether the scale represents proposed domains or concepts the questionnaire was intended to measure. Furthermore, when developing a questionnaire, it was important to include additional measures with a proven validity to test developing questionnaires. Factor analysis can also contribute to establish construct validity. However, the minimum number of respondents to be able to undertake the analysis for factor analysis was 100.

The study of Pinsonneault and Kraemer (1993) highlighted sampling as a concern with representation in the selection of individual respondents from the sample frame. The choice of the sample frame constitutes a representative subset of the population from which the sample was drawn. The data collection process started with a pilot study using a questionnaire. A pilot study was

conducted as it was important to test the reliability and validity of the measurement instrument to be used to collect the data and can be concluded in preparation for the main study (Teijlingen and Hundley, 2001). This identified items that lack clarity for respondents. The questionnaire was piloted on a smaller sample of intended respondents. The pilot study aimed to check if the questions were relevant to the study, the adequacy of the survey method and to test if the questions would be understood by the respondents. The pilot study was sent out to a group of experts of the market players in the CRE industry to comment on the representativeness and suitability of the questions. The response from the experts provided suggestions on the structure of the questionnaire and assisted in establishing content validity and enable amends prior to testing with a group.

In 2017, Regmi, Waithaka, Simhada and Van Teijlingen observed that ethical concerns about the online design survey are that it was not possible to explain or obtain verbal consent from participants. For this reason, the researcher ensured that all information regarding the study was provided on the first page of the questionnaire. There have also been concerns regarding online tools to facilitate privacy and confidentiality. Furthermore, participants should have the right to withdraw from the survey and the choice to opt out of sharing data provided in an online questionnaire. As a rule, only items relating to the consent form should require a response.

A desktop study was adopted by examining previous research conducted, papers published in leading real estate journals in both international and local papers, and conference proceedings. This was followed by a comparison of research methods and an evaluation of promising research methods to relate findings and suggest further studies. The study focused on several research studies that have been conducted on CRE. The target population comprised of Corporate Real Estate professional and academics in South Africa. The study

was accessible to the population of all Corporate Real Estate professionals due to the fact that this study was never conducted in South African context.

Data were obtained from major real estate research journals and conferences. General research topics and specific research topics were replicated from Nigeria and limitations were indicated to suit the culture of South African researchers. Real estate research topics were generated from previous studies, especially of Newell et al. (2004) and Adewunmi and Olaleye (2011). The adjustment of local real estate terminology and market conditions were accommodated for this study. General areas of concern and sub-topics were examined according to the importance of stakeholders. An analysis of research topics was conducted and the results indicated the top research priorities. The results were compared with the study conducted in Nigeria and developed countries.

All the information volunteered by participants was used for analysis. Importantly, respondents were guaranteed that their responses would be confidential and remain anonymous.

3.8 Ethical Considerations

Ethical considerations are an important part of the research report. Saunders et al. (2007) summarize the following issues that need to be considered:

- The right to privacy of individuals;
- The voluntary nature of participation – and the rights of individuals to withdraw partially or completely from the process;
- Consent and possible deception of participants;
- Maintenance of the confidentiality of data provided by individuals or identifiable participants and their anonymity;

- Reactions of participants to the ways in which researchers seek to collect data;
- Effects on participants of the way in which researchers seek to collect data;
- Effects on participants of the way in which data is analyzed and reported; and
- Behavior and objectivity of the researcher's transport.

The questionnaires have been designed for the specific use and purpose of the study. The respondents and companies involved have not been identified. The data collected from the study will be protected and solely used for the research. The research has adhered to the framework and policies of the School of Construction Economics and Management, University of Witwatersrand.

4 RESULTS AND DISCUSSION

4.1 Introduction

This chapter

The previous chapter presented the research methods that were followed to examine the property research priorities for property investors and professionals in the South African CRE sector. This chapter presents the results that attempted to answer the following research questions:

4.1.1 Who are the key stakeholders in the South African corporate real estate market?

4.1.2 What are their research priorities?

4.1.3 Are there any differences in in the research priorities of the different stakeholders?

4.1.4 Where should corporate real estate research be focused on in the future?

4.1.5 Who determines the research topics, the academy or the business community?

The rest of the chapter covers a description of respondents, their sources of research on CRE management, their research priorities and an exploration of possible differences in their research priorities. The results of this chapter form a basis for the final chapter that deals with conclusions and suggested recommendations as well as suggestions for further study that is informed by the limitations of this study.

4.2 Response Rate

A total of 36 links were shared with potential respondents through emails. However, out of this total, only 19 responded, giving an overall response rate of 52.8% (as depicted in Table 4.1). This is a satisfactory response rate given that in theory return rates of at least 30% are acceptable for most online surveys (Nazarian, 2013).

Table 4.1: Response rate of the study

Experience (years)	No. Participated	Percentage
None	2	50.0
6 - 10 years	5	55.6
10 - 15 years	3	50.0
16 and more	2	50.0
Omission	7	53.8
Total	**19**	**52.8**

4.3 Background Information of Respondents

It is of utmost importance to understand the profile of respondents to have an idea of their relevance in the study especially in terms of knowledge and experience. Therefore, respondents were analysed in terms of academic qualifications, disciplinary background and experience in the property industry.

The distribution of respondents according to the highest academic qualifications is shown in Table 4.2. On the one hand, holders of Master's Degrees were the majority, contributing 41.18% to the total, while Bachelor's Degree holders contributed 23.53% to the total. On the other hand, Honours/Postgraduate Diploma holders and Higher Certificate holders weighed in with contributions of 17.65% and 11.76% respectively. National Diploma holders were the least with a contribution of 5.88%. The high levels of literacy of the respondents were of great value as it is useful in helping to offer

informed views on the subject matter under investigation. The majority of respondents were university graduates with at least a Bachelor's Degree (14 out of 17 respondents).

Table 4. 2: Distribution of respondents according to highest academic qualifications

Qualifications	Response	Percentage (N=17)
Bachelor Degree	4	23.53
Honours/Postgraduate Diploma	3	17.65
Master's Degree	7	41.18
National Diploma	1	5.88
Higher Certificate	2	11.76
Total	**17**	**100.00**

The distribution of respondents according to discipline is shown in Table 4.3. It is observed that half of the respondents were in Real Estate Property while Building Technology/Construction management and the 'Other' unspecified category contributed 18.75% each to the total. Respondents in Facilities Management contributed 12.50% to the total.

Table 4.3: Distribution of respondents according to discipline

Discipline	Response	Percentage (N=16)
Real Estate/Property	8	50.00
Building Technology/Construction	3	18.75
Facilities Management	2	12.50
Other (please specify)	3	18.75
Total	**16**	**100.00**

The distribution of respondents according to experience in the property industry is illustrated in Figure 4.1. The majority (41.2%) of respondents had been working in the property industry for over 16 years while about 29.4% confirmed

that they had been working in the property industry for between 1 and 5 years. However, about 17.6% confirmed that they had been working in this industry for between 6 and 10 years. Again, 11.8% of the respondents declared that they had been working in the property industry between 10 and 15 years.

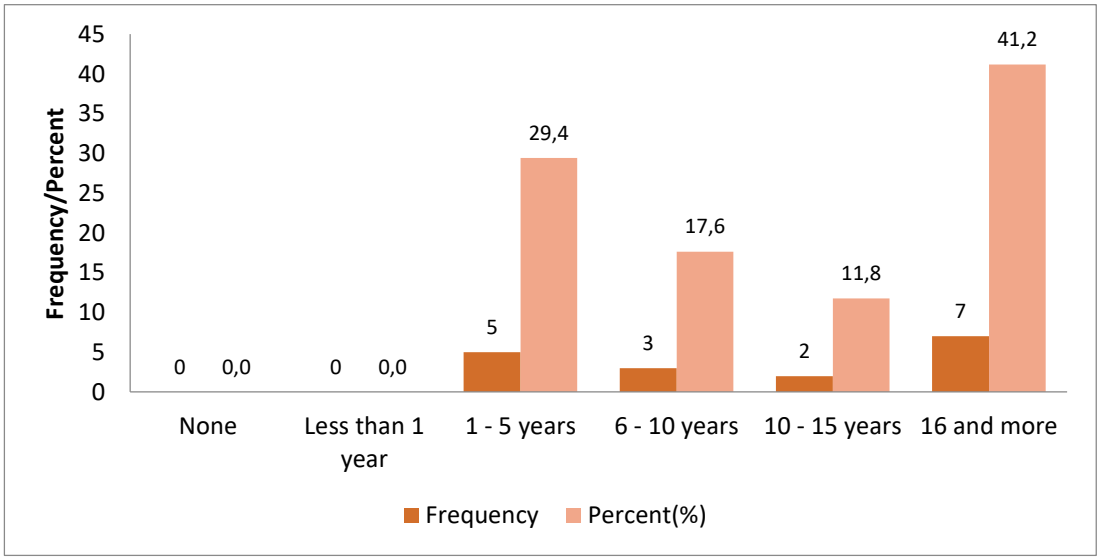


Figure 4.1: Distribution of respondents according to experience in property industry

4.4 Analysis of Data

This subsection presents an analysis of data based on the perceptions of respondents on the property research priorities for property investors and professionals in the South African CRE sector. The data was analysed using descriptive statistics to adequately answer the research questions as shown in the subsequent subsections.

4.4.1 Identification of Key Stakeholders of South African CRE Research

The main stakeholders as suggested by respondents are presented in Table 4.4. About 36.84% of the respondents suggested that Property and/or Corporate Real Estate Management is the key stakeholder of South African

CRE research, while about 31.58% were of the view that Property Consultants were the key interested party in the South African CRE research business. On the other hand, 10.53% of respondents suggested (in each case) that Financial Services (Banking) and Government Institutions were one of the key players in the South African CRE research business. About 5.26% of the respondents suggested that Property Developers are one of the key stakeholders of South African CRE research. Furthermore, about 5.26% of the respondents suggested other stakeholders in the South African CRE research that were not specified.

Therefore, based on the information provided by respondents, the main stakeholders of South African CRE research include Property and/or Corporate Real Estate Managers, Property Consultants, Financial Services (Banking) and Government Institutions.

Table 4.4: Key Stakeholders of South African CRE research

Answer	Response	Percentage (N=19)
Property Consultant	6	31.58
Property Developer	1	5.26
Financial Services (Banking)	2	10.53
Property and/or CRE Manager	7	36.84
Government Institution	2	10.53
Other (please specify)	1	5.26
Total	**19**	**100.00**

4.4.2 Identification of Current Sources of CRE Research

The primary objective of the study was the identification of current sources of CRE research. This was measured (online questionnaire) using the following questions:

- Do you have a property research unit?
  If yes, how many people are employed in the property research unit?
- If no, where do you source your research information from?
- Does your research unit subscribe to academic journals in real estate?
- If yes, which of the following journals does your research unit subscribe to?

Table 4.5 depicts perceptions of respondents of whether they have a property research unit within their organisation. Of the total respondents, 47.06% agreed that they have a property research unit. However, the remaining 52.94% of the respondents confirmed that they do not have a property research unit within their organisation.

Table 4.5: Existence of a property research unit within the organisation

Answer	Response	Percentage (N=17)
Yes	8	47.06
No	9	52.94
Total	**17**	**100.00**

In Table 4.6, the number of people who are employed in the property research unit is presented. This question was only answered by 9 out of the 17 respondents who confirmed in Table 4.5 that they have a property research unit within the organisation. All 9 respondents indicated that they have 50 or fewer people employed in the property research unit as shown in Table 4.6.

Table 4.6: Number of people employed in the property research unit

Number of employees	Response	Percentage (N=9)
50 employees or less	9	100.00
Total	**9**	**100.00**

The remaining 8 respondents disclosed that they acquire research information from various sources (see Figure 4.2). A total of two respondents confirmed that they source research material from various internet sources that include Google Scholar and Google, while the other two respondents indicated that they use the Rode Report as well as Morgan Stanley Capital International (MCSI), Rode and South African Property Owners Association (SAPOA) resources. The remaining four respondents source their research material from varied sources that included Internal Management Software, Market Specialists, Research Consultants and Facilities Division.

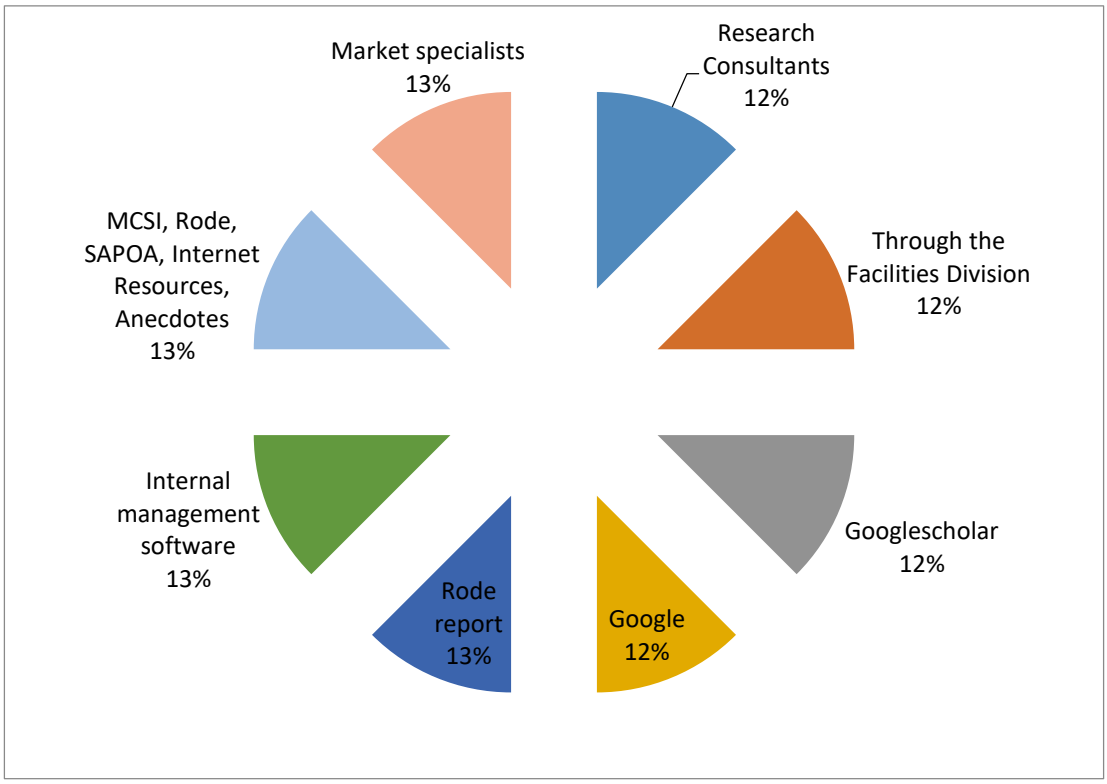


Figure 4.2: Research information sources

Responses of research units subscribed to academic journals in real estate are presented in Table 4.7. Exactly half of the respondents thought that their research units subscribed to academic journals in real estate. However, 31.25% of the respondents confirmed that they have no information on this aspect, while 18.75% of the respondents disclosed that their individual research units subscribe to various academic journals in real estate.

Table 4.7: Subscription to academic journals in real estate

Response	Response	% (N=16)
Yes	3	18.75
Don't know	5	31.25
No	8	50.00
Total	**16**	**100.00**

Respondents who confirmed that their research units subscribe to academic journals in real estate indicated that they use various journals as shown in Table 4.8. Based on the perceptions of respondents, the *Journal of Real Estate Finance and Economics* (80.00%) is the most common journal that professionals in the South African CRE sector subscribe to. However, the *Journal of Property Finance* (40.00%), the *Journal of Real Estate Portfolio Management* (40.00%), the *Journal of Property Management* (40.00%) and the *Journal of Property Research* (40.00%) are the other popular journals that are used by professionals in the South African CRE.

To a lesser extent the *Pacific Rim Property Research Journal*, the *Journal of National Real Estate Investor*, the *Journal of Real Estate Finance and Investment*, the *Journal of Real Estate Practice and Education*, the *Journal of Sustainable Real Estate* and the *Journal of Real Estate Research* are used by organisations through subscriptions.

Table 4.8: Journal subscriptions by CRE professionals

Journal	Response	%(N=x)
Journal of Real Estate Finance and Economics	4	80.00
Journal of Property Finance	2	40.00
Pacific Rim Property Research Journal	1	20.00
Journal of National Real Estate Investor	1	20.00
Journal of Real Estate Portfolio Management	2	40.00
Journal of Real Estate Finance and Investment	1	20.00
Journal of Property Management	2	40.00
Journal of Property Research	2	40.00
Journal of Real Estate Practice and Education	1	20.00
Journal of Sustainable Real Estate	1	20.00
Journal of Real Estate Research	1	20.00
Economic Development Quarterly	2	40.00

4.4.3 Research Priorities for CRE Professionals

The objective of this section of the study is the research priorities of the respondents which were measured (online questionnaire) using the following questions:

- Which of the following research topics is of importance to your organisation?
- How important are the above topics in your research priorities?
- What influences the research priorities in your organisation?

In Table 4.9, the perceptions of respondents on what they believe are important research topics for their organisations is presented. A total of 10 (58.82%) of the respondents suggested that CRE strategy is an important research topic for the organisation, while 8 (47.06%) were of the opinion that leasing, owning,

sale and leaseback is an important topic to focus research on. A total of 7 (41.18%) of the respondents (in each case) thought that sustainable CRE management and CRE performance management were an important research topic for the organisation.

However, for the rest of the other topics that are depicted in Table 4.9, less than 30% of the respondents were of the view that they were important research topics for the organisation.

Table 4.9: Important research topics for the respondent's organisations[1]

Research topic	Response	Percentage (N=x)
Change management strategies	4	23.53
Sustainable CRE management	7	41.18
CRE performance management	7	41.18
CRE strategy	10	58.82
In-house management, outsourcing and co-sourcing	3	17.65
Leasing, owning, sale and leaseback	8	47.06
Space planning	5	29.41
Location and site selection	5	29.41
The nature of CRE and CRE management	4	23.53
The value added from CRE management	4	23.53
How to organise the CRE function	4	23.53
Workplace design and planning	4	23.53
Technology in CRE management	5	29.41
Demand and supply of office space	5	29.41
Other	1	5.88
IFRS 16	3	17.65

[1] These are multiple response items

The level of importance and ranking of the research topics as suggested by respondents are illustrated in Table 4.10 below. The respondents were asked to assess the importance of each of the research topics on a 5-point Likert scale, ranging from 1 to 5; with 1 = not important and 5 = extremely important. The level of importance of each topic was analysed. Respondents suggested that the most important topics were: (1) location and site selection; (2) technology in corporate real estate management; (3) CRE strategy and the value added from CRE management; (5) CRE performance management; (6) demand and supply of office space; (7) sustainable CRE management; (8) workplace design and planning; (9) space planning; (10) leasing, owning, sale and leaseback; (11) change management strategies; (12) IFRS 16; (13) and the nature of CRE and CRE management. However, topics such as (14) how to organise the CRE function, and (15) in-house management, outsourcing and co-sourcing were given low priority by the respondents.

Table 4.10: Ranking of research topics by respondents

Research topic	Extremely Important (5)	Very Important (4)	Moderately Important (3)	Slightly Important (2)	Not at all Important (1)	Weight-ing	Rank
Location and site selection	50.00%	31.25%	18.75%			4.313	1
Technology in CRE management	50.00%	21.43%	21.43%	7.14%		4.143	2
CRE strategy	40.00%	33.33%	26.67%			4.133	3
The value added from CRE management	33.33%	46.67%	20.00%			4.133	3
CRE performance management	37.50%	37.50%	25.00%			4.125	5
Demand and supply of office space	21.43%	21.43%	67.14%			3.943	6
Sustainable CRE management	25.00%	37.50%	37.50%			3.875	7

Research topic	Extremely Important (5)	Very Important (4)	Moderately Important (3)	Slightly Important (2)	Not at all Important (1)	Weight-ing	Rank
Workplace design and planning	35.71%	21.43%	35.71%	7.14%		3.857	8
Space planning	13.31%	53.36%	33.33%			3.800	9
Leasing, owning, sale and leaseback	14.29%	50.00%	28.57%	7.14%		3.714	10
Change management strategies	25.00%	31.25%	37.50%		6.25%	3.688	11
IFRS 16	21.43%	35.71%	35.71%		7.14%	3.643	12
The nature of CRE and CRE management	14.29%	42.86%	28.57%	14.29%		3.572	13
How to organise the CRE function	14.29%	35.71%	42.86%	7.14%		3.572	14
In-house management, outsourcing and co-sourcing	26.67%	6.67%	53.36%	6.67%	6.67%	3.401	15

The below list of items presents the perceptions of respondents on what influences research priorities in their respective organisations. Respondents suggested various aspects that drive research priorities. At the top of the list of the factors that influence research priorities as suggested by respondents were a lack of knowledge and availability of resources, workspace dynamics and space needs. Respondents suggested that the bottom line and client requirements were some of the factors that influence research priorities in their respective organisations. Again, it was suggested that the availability of data, skills and knowledge of analysts and research demand from property stakeholders were some of the factors that influenced research priorities within their organisations.

List of items: Perceptions of respondents on what influences research priorities

Perceptions of what influences research priorities
Lack of knowledge and availability of resources
Workspace dynamics
space needs
Bottom line and client requirements
Availability of data. Skills and knowledge of analysts
Research demand from property stakeholders

The perceptions of respondents on what they believed determine the research topics to investigate is presented in the above list of items. Out of the total number of respondents who provided their opinions on this question, more than half (53.85%) suggested that client needs were one of the factors that determined what research topics to investigate.

Approximately 23.08% of the respondents believed that current market trends were dictating what research topics to investigate. On the other hand, about 15.38% of the respondents were of the opinion that the organisation and research needs were one of the factors that determined what research topics to investigate. Other drivers that dictated what research topics to investigate as suggested by respondents (see Table 4.10) included popularity in the industry.

Table 4.11: Drivers of the importance of research topic

Determinant	Response	% (N=13)
What is popular in industry	1	7.69
What our clients need	7	53.85
Our company & research needs	2	15.38
Current market trends	3	23.08
Total	**13**	**100.00**

4.4.4 Level of Satisfaction with the Current State of CRE Research in South Africa

The level of satisfaction with the current state of CRE research in South Africa as suggested by respondents is shown in Table 4.12. Out of the total respondents, 35.29% suggested that they are slightly dissatisfied with the current state of CRE research in South Africa while 29.41% confirmed that they are slightly satisfied with the same. However, 17.65% of the respondents were neutral as they were neither satisfied nor dissatisfied. Only one respondent was extremely satisfied with the current state of CRE research in South Africa, while 11.76% were moderately satisfied as is evident.

Table 4.12: Level of satisfaction with the current state of CRE research in South Africa

Satisfaction level	Response	%(N=17)
Extremely satisfied	1	5.88
Moderately satisfied	2	11.76
Slightly satisfied	5	29.41
Neither satisfied nor dissatisfied	3	17.65
Slightly dissatisfied	6	35.29
Total	**17**	**100.00**

i. Reasons for the current state of CRE research in South Africa

A total of 10 respondents provided their opinions on this question. However, only one respondent had positive sentiments and shared that there is a lot of visibility of CRE research as it is shared on various platforms. Contrary to this, the other nine respondents expressed adverse opinions. One respondent believed that there is not much research that is done in CRE research in South

Africa and that the available research material is hardly applicable in the work environment. Another respondent was of the view that CRE research in South Africa lacks innovation and transformation, is disaggregated, lacks pure fact research and is highly subjective. Furthermore, one respondent was of the view that the availability of data on CRE research is at best opaque.

It was deduced that there is a need to share factual information in order to improve as well as to professionalise the environment. It was also deduced that there is a need to make CRE research more accessible to the majority of users using various platforms.

ii. What is the most common research undertaken by your firm?

Based on the opinions of the respondents, sales and letting comparable; rental trends; foot count trends and turnover trends; rentals and vacancies; sustainability; and suitability of allocated space are the most common research undertaken by firms. Other research areas that respondents suggested were commonly undertaken included the following:

- Location
- Rent Growth trends and vacancy factors
- Market trends
- Benchmarking of rentals

5 SUMMARY AND CONCLUSIONS

5.1 Introduction

For an accurate assessment of property research priorities for property investors and professionals in the South African CRE sector, the data received from the survey were compared to some of the research findings used in the literature. This chapter attempts to compare the research findings used in the literature review and answer the following questions:

- Identify the key stakeholders of South African CRE research
- Identify their current sources of CRE research
- Identify the research priorities of the different stakeholders
- Establish if any differences exist in the research priorities of the different stakeholders

5.2 Summary of Findings

From the survey conducted it is evident that the respondent's levels of literacy were of great value as it is useful in helping to offer informed views. The highest qualifications are Master's Degrees, followed by Bachelor's Degree holders. Honours/Postgraduate Diploma holders and Higher Certificate holders followed respectively. Half of the real estate professionals were in Real Estate Property. The majority (41.2%) of real estate professionals have been working in the property industry for over 16 years. The survey results suggested that Property and/or CRE Management is the key stakeholder of South African CRE research while about 31.58% were of the view that property consultants were the key parties interested in the South African CRE research business. Based on the information provided, the main stakeholders of South African CRE

research include Property and/or Corporate Real Estate Managers, Property Consultants, Financial Services (Banking) and Government institutions.

The survey results demonstrated that 47.06% of the respondents have a property research unit within their organisation. While the remaining 52.94% confirmed that they do not have a property research unit within their organisation. The survey has shown that 9 respondents indicated that they have 50 or less people employed in the property research unit.

The research study has demonstrated that eight respondents suggested that they acquire research information from various sources (see Figure 4.2). A total of two respondents suggested that they source research material from various internet sources that include Google Scholar and Google, while the other two respondents suggested that they use Rode Report as well as MCSI, Rode and SAPOA resources. The remaining four respondents suggested varied sources that included Internal Management Software, Market Specialists, Research Consultants and Facilities Division.

Exactly half of the respondents were of the opinion that their research units subscribed to academic journals in real estate. However, 31.25% of the respondents confirmed that they have no information on this aspect, while 18.75% of the respondents suggested that their individual research units subscribe to various academic journals in real estate.

The study has shown that research units subscribe to academic journals in real estate and indicated that they use various journals as shown in Table 4.8. Based on the perceptions of respondents, *Journal of Real Estate Finance and Economics* (80.00%) is the most common journal that professionals in the South African CRE sector subscribe to. The *Journal of Property Finance* (40.00%), the *Journal of Real Estate Portfolio Management* (40.00%), the

Journal of Property Management (40.00%) and the *Journal of Property Research* (40.00%) are the other popular journals that are used by professionals in the South African CRE. To a lesser extent, the *Pacific Rim Property Research Journal*, the *Journal of National Real Estate Investor*, the *Journal of Real Estate Finance and Investment*, the *Journal of Real Estate Practice and Education*, the *Journal of Sustainable Real Estate* and the *Journal of Real Estate Research* are used by organisations through subscriptions.

This survey furthermore identified the perceptions of respondents on what they believe are important research topics for their organisations. Five research topics according to importance are (1) location and site selection; (2) technology in corporate real estate management; (3) corporate real estate strategy and the value added from CRE management; and (5) CRE performance management. The real estate research topics needing least priority attention are (15) in-house management, outsourcing and co-sourcing; (14) how to organise the CRE function; (13) the nature of CRE and CRE management; (12) IFRS 16; and (11) change management strategies.

The results identified what the respondents believed determines the research topics to investigate (see Table 4.11). More than half (53.85%) suggested that client needs were one of the factors that determined what research topics to investigate. About 23.08% of the findings indicated that current market trends were dictating what research topics to investigate. On the other hand, about 15.38% of the respondents were of the opinion that company and research needs were one of the factors that determined what research topics to investigate. Other drivers that indicated what research topics to investigate as suggested by the findings (see Table 4.11) included popularity in the industry.

The level of satisfaction with the current state of CRE research in South Africa as suggested by the results in Table 4.12 indicate that 35.29% suggested that

they are slightly dissatisfied with the current state of CRE research in South Africa while 29.41% confirmed that they are slightly satisfied with the same. However, 17.65% of the respondents were neutral as they were neither satisfied nor dissatisfied. Only one respondent was extremely satisfied with the current state of CRE research in South Africa while 11.76% were moderately satisfied.

A total of 10 respondents provided their opinions on this question. However, only one respondent had positive sentiments and shared that there is a lot of visibility of CRE research as it is shared on various platforms. Contrary to this, the other nine respondents expressed adverse opinions. One respondent was of the opinion that there is not much research that is done in CRE research in South Africa and that the available research material is hardly applicable in the work environment. Another respondent was of the view that CRE research in South Africa lacks innovation, transformation and is disaggregated, lacks pure fact research and is highly subjective.

Furthermore, one respondent was of the view that the available data on CRE research is at best opaque. Therefore, this respondent suggested that there is a need to share factual information in order to improve as well as professionalise the environment. It was also suggested that there is a need to make CRE research work more accessible to most users using various platforms.

Based on the opinions of the respondents, sales and letting comparable; rental trends; foot count trends and turnover trends; rentals and vacancies; sustainability; and suitability of allocated space are the most common research undertaken by firms. Other research areas that respondents suggested were commonly undertaken included the following:

- Location
- Rent Growth trends and vacancy factors
- Market trends

  Benchmarking of rentals

5.3 Comparison to Similar Studies

Newell et al. (2004) compared four real estate fund managers' surveys conducted in the US, the UK, Australia and Germany. Real estate research priorities results indicated that the role of real estate in a mixed-asset portfolio and real estate and portfolio risk management are among the general research priorities. The study found that the results of the four international countries surveys were much closer aligned to real estate research priorities in the UK, Australia and Germany than in the US after assessing 15 general real estate research topics and 35 specific research topics.

When the results with Newell et al.'s (2004) survey is compared, a gap is noticeable. In Newell et al.'s (2004) survey, the top four general real estate research priorities were: (1) the role of real estate in a mixed-asset portfolio; (2) real estate and portfolio risk management; (3) performance measures for real estate; and (4) diversification within real estate portfolios. When comparing these results to those of Adewunmi and Olaleye (2011) in Nigeria, the top four general research areas were: (1) development finance; (2) land policy issues; (3) land accessibility; and (4) performance measurement of property. This implies that the real research topics in South Africa differ from more developed countries. This is because the research topics were more focused on CRE while the previous research was more focused on broad topics which addressed general areas of concern in real estate.

One of the key limitations of the study is that since the focus was very narrowly on CRE it is not applicable to the rest of the real estate sector, therefore this is just an analysis of a sub-sector within a broader property sector in South Africa. The findings of the study do not apply to real estate in general, it is only applicable to CRE. The second limitation is that the few responses to this survey limit the inferential quality of the work because it is difficult to generalise across the CRE sector. Given the limitations, further studies to expand the sample size are recommended.

At the time of the study, COVID-19 was not a big issue, but now the impact on the pandemic and workspace arrangement is a big omission. Further studies should explore workplace planning, even though it has not been listed, as the pandemic has made it a research priority. The respondents have not mentioned workspace planning explicitly, but by now the large-scale impact of the pandemic means that millions of people around the world have been forced to work remotely. Remote work and post-pandemic planning are a research priority even though it has not been mentioned in the questionnaire. Workspace planning, remote working and the future of office space have to be considered as research priority of CRE because of the impact of the pandemic.

5.4 Conclusion

This survey has identified CRE research priorities for real estate in South Africa as (1) location and site selection; (2) technology in CRE management; (3) CRE strategy and the value added from corporate real estate management; and (5) CRE performance management. When the results are compared with earlier surveys conducted in the developed world and Nigeria, a clear difference in the outcome due to a focus on broad research topics while this research was more focused on CRE. The results reflect the need for critical attention on issues of in-house management, outsourcing and co-sourcing, how to organise the CRE

function, the nature of CRE and CRE management, IFRS 16 and change management strategies. The study also identified workspace planning, remote working and the future of office space to be considered as research priorities of CRE because of the impact of the pandemic even though it has not been mentioned in the questionnaire.

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APPENDIX A QUESTIONNAIRE

Corporate Real Estate Research Priorities

Q1 Is your firm?

- ☐ Institutional Property Investor
- ☐ Property consultant
- ☐ Academic institution
- ☐ Property Developer
- ☐ Financial Services (Banking)
- ☐ Property and/or Corporate Real Estate Manager
- ☐ IT/Telecoms Company
- ☐ Bank
- ☐ Government institution
- ☐ Industrial company
- ☐ Other (please specify)

Q2 How many employees do you have in your firm?

- ○ Below 20
- ○ 21 - 50
- ○ 51 - 100
- ○ Above 100

Q3 Do you have a property research unit?

- ○ Yes
- ○ No

Q4 If yes, how many people are employed in the property research unit?

- 50 employees or less
- 51-200 employees
- More than 200 employees

If no, where do you source your research information from?

Q5 How many years of property industry experience do you have in total?

- None
- Less than 1 year
- 1 - 5 years
- 6 - 10 years
- 10 - 15 years
- 16 and more

Q6 What is your highest academic qualification?

- Bachelor degree
- Honours/Postgraduate Diploma
- Masters Degree
- National Diploma
- Higher Certificate
- Doctoral degree
- Other (please specify)

Q7 In what discipline did you receive your highest qualification?

- Engineering

- Business Administration
- Law
- Physical/Natural Science
- Real Estate/Property
- Humanities
- Planning
- Architecture
- Building Technology/Construction Management
- Facilities Management
- Other (please specify)

Q8 What is your job title?

Q9 Which of the following research topics is of importance to your organization?

- Change management strategies
- Sustainable corporate real estate management
- Corporate real estate performance management
- Corporate real estate strategy
- In-house management, outsourcing and co-sourcing
- Leasing, owning, sale and leaseback
- Space planning
- Location and site selection
- The nature of corporate real estate and corporate real estate management
- The value added from corporate real estate management
- How to organize the corporate real estate function
- Workplace design and planning
- Technology in corporate real estate management
- Demand and supply of office space

- ☐ IFRS 16
- ☐ Other

How important are the above topics in your research priorities?

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Change management strategies	○	○	○	○	○
Sustainable corporate real estate management	○	○	○	○	○
Corporate real estate performance management	○	○	○	○	○
Corporate real estate strategy	○	○	○	○	○
In-house management, outsourcing and co-sourcing	○	○	○	○	○
Leasing, owning, sale and leaseback	○	○	○	○	○
Space planning	○	○	○	○	○
Location and site selection	○	○	○	○	○
The nature of corporate real estate and corporate real estate management	○	○	○	○	○
The value added from corporate real estate management	○	○	○	○	○
How to organize the corporate real estate function	○	○	○	○	○
IFRS 16	○	○	○	○	○

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Workplace design and planning					
Technology in corporate real estate management					
Demand and supply of office space					

Q10 What influences the research priorities in your organization?

Q11 What determines the research topics your unit investigates?

- What is popular in industry
- What our clients need
- Our company's research needs
- International research priorities
- Current market trends
- Other (please specify)

Q12 Does your research unit subscribe to academic journals in real estate?

- Yes
- Don't know
- No

Q13 If yes, which of the following journals does your research unit subscribe to?

- Journal of Real Estate Finance and Economics
- Journal of Property Finance
- Pacific Rim Property Research Journal

- ☐ Journal of National Real Estate Investor
- ☐ Journal of Real Estate Portfolio Management
- ☐ Journal of Corporate Real Estate
- ☐ Journal of Real Estate Finance and Investment
- ☐ Journal of Property Management
- ☐ Real Estate Economics
- ☐ Journal of Real Estate Literature
- ☐ Journal of Property Research
- ☐ Journal of Real Estate Practice and Education
- ☐ Journal of Sustainable Real Estate
- ☐ Journal of European Real Estate Research
- ☐ Journal of Urban Economics
- ☐ Journal of Real Estate Research
- ☐ Journal of African Real Estate Research
- ☐ International Real Estate Review
- ☐ Economic Development Quarterly
- ☐ The Appraisal Journal
- ☐ Real Estate Finance Journal
- ☐ Other (please specify)

Q14 How satisfied are you with the current state of corporate real estate research in South Africa?

- ○ Extremely satisfied
- ○ Moderately satisfied
- ○ Slightly satisfied
- ○ Neither satisfied nor dissatisfied
- ○ Slightly dissatisfied

Q15 Can you give reasons for the response above?

Q16 What is the most common research undertaken by your firm?

Q17 What is your position in the company?

- Senior Manager
- Middle Manager
- Junior Manager
- Non-Management
- Other (please specify)

Survey Powered By Qualtrics

APPENDIX B DATA

CRE Research Priorities

Is your firm?

Is your firm?

#	Answer	Bar	Response	%
1	Institutional Property Investor	0,00%	0	0,00%
2	Property consultant	35,29%	6	35,29%
3	Academic institution	0,00%	0	0,00%
4	Property Developer	5,88%	1	5,88%
5	Financial Services (Banking)	11,76%	2	11,76%
6	Property and/or Corporate Real Estate Manager	41,18%	7	41,18%
9	IT/Telecoms Company	0,00%	0	0,00%
10	Bank	0,00%	0	0,00%
11	Government institution	11,76%	2	11,76%
12	Industrial company	0,00%	0	0,00%
13	Other (please specify)	5,88%	1	5,88%
	Total	0,00%	19	100,00%

Other (please specify)

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
2	13	5,421053	10,81287	3,288292	19	17

How many employees do you have in your firm?

How many employees do you have in your firm?

#	Answer	Bar	Response	%
1	Below 20	23,53%	4	23,53%
2	21 - 50	11,76%	2	11,76%
3	51 - 100	5,88%	1	5,88%
4	Above 100	58,82%	10	58,82%
	Total	0,00%	17	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	4	3	1,75	1,322876	17	17

Do you have a property research unit?

Do you have a property research unit?

#	Answer	Bar	Response	%
4	Yes	47,06%	8	47,06%
5	No	52,94%	9	52,94%
	Total	0,00%	17	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
4	5	4,529412	0,264706	0,514496	17	17

If yes, how many people are employed in the property research unit?

If yes, how many people are employed in the property research unit?

#	Answer	Bar	Response	%
1	50 employees or less	100,00%	9	100,00%
2	51-200 employees	0,00%	0	0,00%
3	More than 200 employees	0,00%	0	0,00%
	Total	0,00%	9	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	1	1	0	0	9	9

If no, where do you source your research information from?

Text Entry
Research Consultants
Through the Facilities Division
Googlescholar
Google
Rode report
Internal management software
MCSI, Rode, SAPOA, Internet Resources, Anecdotes
Market specialists

Statistic	Value
Respondents	8

How many years of property industry experience do you have in total?

How many years of property industry experience do you have in total?

#	Answer	Bar	Response	%
1	None	0,00%	0	0,00%
2	Less than 1 year	0,00%	0	0,00%
3	1 - 5 years	29,41%	5	29,41%
4	6 - 10 years	17,65%	3	17,65%
5	10 - 15 years	11,76%	2	11,76%
6	16 and more	41,18%	7	41,18%
	Total	0,00%	17	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
3	6	4,647059	1,742647	1,320094	17	17

What is your highest academic qualification?

What is your highest academic qualification?

Other (please specify)

#	Answer	Bar	Response	%
1	Bachelor degree	23,53%	4	23,53%
2	Honours/ Postgraduate Diploma	17,65%	3	17,65%
3	Masters Degree	41,18%	7	41,18%
4	National Diploma	5,88%	1	5,88%
5	Higher Certificate	11,76%	2	11,76%
6	Doctoral degree	0,00%	0	0,00%
7	Other (please specify)	0,00%	0	0,00%
	Total	0,00%	17	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	5	2,647059	1,617647	1,271868	17	17

Other (please specify)
Philosophy
Town and Regional Planning
None

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
5	11	7,5	7,066667	2,65832	16	16

What is your job title?

What is your job title?

Text Entry
Global Head of Facilities
Corporate Real Estate Consultant
Property Manager
General Manager: Infrastructure and logistics
Director
Chartered Surveyor
Developer
Divisional Director
Development Economist
Head FM

Statistic	Value
Respondents	17

Which of the following research topics is of importance to your organization?

Which of the following research topics is ofimportance to your organization?

#	Answer	Bar	Response	%
1	Change management strategies	23,53%	4	23,53%
2	Sustainable corporate real estate management	41,18%	7	41,18%

	3	Corporate real estate performance management	41,18%	7	41,18%				
	5	Corporate real estate strategy	58,82%	10	58,82%				
	6	In-house management, outsourcing and co-sourcing	17,65%	3	17,65%				
	7	Leasing, owning, sale and leaseback	47,06%	8	47,06%				
	8	Space planning	29,41%	5	29,41%				
	9	Location and site selection	29,41%	5	29,41%				
	10	The nature of corporate real estate and corporate real estate management	23,53%	4	23,53%				
	11	The value added from corporate real estate management	23,53%	4	23,53%				
	12	How to organize the corporate real estate function	23,53%	4	23,53%				

	19	Workplace design and planning	23,53%	4	23,53%				
	43	Technology in corporate real estate management	29,41%	5	29,41%				
	44	Demand and supply of office space	29,41%	5	29,41%				
	45	Other	5,88%	1	5,88%				
	46	IFRS 16	17,65%	3	17,65%				
		Total	0,00%	79	100,00%				

	Other
	Implementaton of Strategy

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	46	13,59494	220,1415	14,83717	79	17

How important are the above topics in your research priorities?

#	Question	Extremely important	Very important	Moderately important	Slightly important	Not at all important	Response	Average Value
1	Change management strategies	4	5	6		1	16	12,3125
16	Sustainable corporate real estate management	4	6	6			16	12,125
17	Corporate real estate performance management	6	6	4			16	11,875
18	Corporate real estate strategy	6	5	4			15	11,8666667
19	In-house management, outsourcing and co-sourcing	4	1	8	1	1	15	12,6
20	Leasing, owning, sale and leaseback	2	7	4	1		14	12,2857143
21	Space planning	2	8	5			15	12,2
22	Location and site selection	8	5	3			16	11,6875
23	The nature of corporate real estate and corporate real estate management	2	6	4	2		14	12,4285714

	24	The value added from corporate real estate management	5	7	3			15	11,8666667	
	25	How to organize the corporate real estate function	2	5	6	1		14	12,4285714	
	26	Workplace design and planning	5	3	5	1		14	12,1428571	
	27	Technology in corporate real estate management	7	3	3	1		14	11,8571429	
	28	Demand and supply of office space	3	3	8			14	12,3571429	
	29	IFRS 16	3	5	5		1	14	12,3571429	

How important are the above topics in your research priorities?										
Statistic	**Change management strategies**	**Sustainable corporate real estate management**	**Corporate real estate performance management**	**Corporate real estate strategy**	**In-house management, outsourcing and co-sourcing**	**Leasing, owning, sale and leaseback**	**Space planning**	**Location and site selection**	**Demand and supply of office space**	**IFRS 16**
Min Value	11	11	11	11	11	11	11	11	11	11
Max Value	15	13	13	13	15	14	13	13	13	15
Mean	12,3125	12,125	11,875	11,86667	12,6	12,28571	12,2	11,6875	12,35714	12,35714
Variance	1,1625	0,65	0,65	0,695238	1,4	0,681319	0,457142857	0,62916667	0,708791	1,17033
Standard Deviation	1,078193	0,806226	0,806226	0,833809	1,183216	0,82542	0,676123404	0,79320027	0,841897	1,081818
Total Responses	16	16	16	15	15	14	15	16	14	14
Total Respondents	16	16	16	15	15	14	15	16	14	14

What influences the research priorities in your organization?

What influences the research priorities in your organization?

Text Entry
Lack of knowledge and availability of resources
Workspace dynamics
space needs
Bottom line and client requirements
Availability of data. Skills and knowledge of analysts.
Research demand from property stakeholders

Statistic	Value
Respondents	6

What determines the research topics your unit investigates?

What determines the research topics your unit investigates?

#	Answer	Bar	Response	%
1	What is popular in industry	7,69%	1	7,69%
2	What our clients need	53,85%	7	53,85%
3	Our company 's research needs	15,38%	2	15,38%
4	International research priorities	0,00%	0	0,00%
5	Current market trends	23,08%	3	23,08%
6	Other (please specify)	0,00%	0	0,00%
	Total	0,00%	13	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	5	2,769231	1,858974	1,363442	13	13

Other (please specify)

Does your research unit subscribe to academic journals in real estate?

Does your research unit subscribe to academic journals in real estate?

#	Answer	Bar	Response	%
1	Yes	18,75%	3	18,75%
2	Don't know	31,25%	5	31,25%
3	No	50,00%	8	50,00%
	Total	0,00%	16	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	3	2,3125	0,629167	0,7932	16	16

If yes, which of the following journals does your research unit subscribe to?

If yes, which of the following journals does your research unit subscribe to?

#	Answer	Bar	Response	%
1	Journal of Real Estate Finance and Economics	80,00%	4	80,00%
2	Journal of Property Finance	40,00%	2	40,00%
4	Pacific Rim Property Research Journal	20,00%	1	20,00%

	5	Journal of National Real Estate Investor	20,00%	1	20,00%			
	6	Journal of Real Estate Portfolio Management	40,00%	2	40,00%			
	7	Journal of Corporate Real Estate	0,00%	0	0,00%			
	8	Journal of Real Estate Finance and Investment	20,00%	1	20,00%			
	9	Journal of Property Management	40,00%	2	40,00%			
	10	Real Estate Economics	0,00%	0	0,00%			
	11	Journal of Real Estate Literature	0,00%	0	0,00%			
	12	Journal of Property Research	40,00%	2	40,00%			
	13	Journal of Real Estate Practice and Education	20,00%	1	20,00%			

	14	Journal of Sustainable Real Estate	20,00%	1	20,00%			
	15	Journal of European Real Estate Research	0,00%	0	0,00%			
	17	Journal of Urban Economics	0,00%	0	0,00%			
	18	Journal of Real Estate Research	20,00%	1	20,00%			
	20	Journal of African Real Estate Research	0,00%	0	0,00%			
	21	International Real Estate Review	0,00%	0	0,00%			
	23	Economic Development Quarterly	40,00%	2	40,00%			
	24	The Appraisal Journal	0,00%	0	0,00%			
	27	Real Estate Finance Journal	0,00%	0	0,00%			
	28	Other (please specify)	0,00%	0	0,00%			
		Total	0,00%	20	100,00%			

Other (please specify)

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	23	8,5	49,52632	7,037494	20	5

How satisfied are you with the current state of corporate real estate research in South Africa?

How satisfied are you with the currentstate of corporate real estate research in South Africa?

#	Answer	Bar	Response	%
1	Extremely satisfied	5,88%	1	5,88%
2	Moderately satisfied	11,76%	2	11,76%
3	Slightly satisfied	29,41%	5	29,41%
4	Neither satisfied nor dissatisfied	17,65%	3	17,65%
5	Slightly dissatisfied	35,29%	6	35,29%
	Total	0,00%	17	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	5	3,647059	1,617647	1,271868	17	17

Can you give reasons for the response above?

Can you give reasons for the response above?

Text Entry
you can see this on open job descriptions
Inaccessibility of this research
I need research that I can practically apply to my work.
Not much on current market condition
need to professionalize the invironment
Additional research could be provided
Avalability of data is at best opaque. Thee is little pure fact rer=search, most is liberally dosed with subjectivity
Lacking innovation and transformation
It's disaggregated and highly subjective
We can always improve and be thorough in sharing factual information.

Statistic	Value
Respondents	11

What is the most common research undertaken by your firm?

What is the most common research undertaken by your firm?

Text Entry
None
Location
sales and letting comparables
rental trends. foot count trends. turnover trends.
Not apply
sustainability and suittability of allocated space
Rentals and vacancies
Rent Growth trends, vacancy factors,
Market trends
Benchmarking of rentals

Statistic	Value
Respondents	12

What is your position in the company?

What is your position in the company?

#	Answer	Bar	Response	%
1	Senior Manager	50,00%	8	50,00%
2	Middle Manager	25,00%	4	25,00%
3	Junior Manager	6,25%	1	6,25%
4	Non-Management	18,75%	3	18,75%
5	Other (please specify)	0,00%	0	0,00%
	Total	0,00%	16	100,00%

Min Value	Max Value	Average Value	Variance	Standard Deviation	Total Responses	Total Respondents
1	4	1,9375	1,395833	1,181454	16	16

Other (please specify)

APPENDIX C ETHICS

School of Construction Economics & Management

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SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER CEM/15/08/PR2**
PROJECT TITLE	Research priorities for corporate real estate professionals in South Africa
INVESTIGATORS	Moroke Kgaugelo Jaca (0618760E)
SCHOOL/DEPARTMENT	**SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT**
DATE CONSIDERED	20th September 2018
DECISION OF THE COMMITTEE	Approved conditionally with respect to the declaration
EXPIRY DATE	20th September 2019
DATE 31/Jan/2018	**CHAIRPERSON** Dr. Kola Ijasan

cc: Supervisor: Prof Sam Azasu

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **ONE COPY** returned to the Secretary Mrs. M. Sithole at the CEM reception desk.

I/~~We~~ fully understand the conditions under which I am/~~we are~~ authorized to carry out the abovementioned research and I/~~we~~ guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature Jaca. Date 21/09/2018