DETERMINANTS OF HEADQUARTERS LOCATION AND SITE SELECTION FOR CORPORATIONS LISTED ON THE JOHANNESBURG STOCK EXCHANGE

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Declaration

I declare that this thesis is my own unaided work. It is being submitted to the Degree of Doctor of Philosophy to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.

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Abstract

The location of headquarters presents an opportunity for economic growth in host countries and cities. The determinants of headquarters location and site selection vary in different contexts. Several studies have been conducted in Europe, USA, and recently in Asia documenting the dynamics of office/headquarters location. The variation in findings from different studies reinforces the importance of context. The African market in particular is under-researched, with little information available on the determinants of headquarters location and site selection. This research explored corporate headquarters (CHQs) location and site selection of companies publicly listed in the Johannesburg Stock Exchange (JSE) in South African metropolitan municipalities.

This research explored and described CHQs location and site selection using both secondary and primary data. Location quotient and shift-share analysis was used to understand the competitiveness and specialisation of the metropolitan municipalities and the relationship with the concentration of CHQs. Then, interviews and a survey were undertaken to understand the determinants of CHQs location and site selection. Conjoint analysis, with a particular focus on the self-explicated conjoint model, was used to understand the trade-offs that companies make when making location and site selection decision.

The results indicated that South Africa's cities' historical development tends to influence the concentration of CHQs in certain metropolitan municipalities over others. However, in some instances, the competitiveness and/or specialisation explained the concentration. CHQs highly prefer locations that have developed telecommunication infrastructure and amenities, low operating costs, proximity to supporting industries and service providers, a skilled labour force, frequent and efficient local flights, favourable property taxes, tax incentives, and a favourable legal and regulatory framework. Regarding site selection, CHQs highly prefer facilities that have good security, energy efficiency, including backup generators, low operating costs, parking facilities, a flexible building interior, premises in good

condition, access for the disabled, HVAC, good lease terms, and a reliable water supply.

The findings of this study are beneficial to academics, government, and practitioners in the real estate market. This research helps to bridge the literature gap of headquarters research in the African context. It has open room for meaningful debate and engagement in the academic sphere in terms of unpacking the location and site selection decisions in the African context. The benefit to government is that the research uncovers the preferences of CHQs in location and site selection which can be used as guidelines to attract and retain headquarters. This affects the policy environment, the infrastructure and the general environment considered for headquarters to thrive.

In today's environment, gaining competitive advantage is crucial in industry. Considering the need for companies to be globally competitive, developers have to know the location and site determinants that matters most in real estate. Companies want the most desirable features when making headquarters location and site selection decisions. At the same time, developers and metropolitan municipalities, as well as other spheres of government, want to generate maximum benefits (profits, tax revenues, employment, and clients) from their investments in production and infrastructure developments where applicable.

The findings provided the preference level of the determinants of CHQs location and site selection, which could help in the development of strategies to attract more CHQs to (South) Africa and to strengthen the competitiveness of the different metropolitan municipalities in fostering development and economic growth. The research also made a methodological contribution in that it adopted self-explicated conjoint analysis, which is predominately used in marketing. This study took a consumer behaviour approach in understanding the trade-offs that CHQs make in location and site selection decisions.

Keywords:
Headquarters, corporate headquarters, location, site selection, conjoint analysis, self-explicated conjoint model, metropolitan specialisation and/or competitiveness.

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Abbreviations

ASGI – Accelerated and Shared Growth Initiative

BRICS – Brazil, Russia, India, China and South Africa

CBD – Central business district

CEO – Chief executive officer

CHQs – Corporate headquarters

CRE – Corporate real estate

CREM – Corporate real estate management

FDI – Foreign direct investment

GEAR– Growth, employment and redistribution strategy

GIS – Geographic information system

GVA – Gross value added

HQ – Headquarters

HVAC – Heating, ventilation, and air conditioning

IPD – Investment Property Databank

JSE – Johannesburg Stock Exchange

LOP – Level of preference

LQ – Location quotient

MDB – Municipal Demarcation Board

Metro(s) – Metropolitan municipality (ies)

M-form – Multidivisional–form

MNCs – Multinational corporations

MNEs – Multinational enterprises

MNFs – Multinational firms

NDP – National Development Plan

OECD – Organisation for Economic Co–operation and Development

RDP– Reconstruction and Development Programme

RHQs – Regional headquarters

SIC – Standard industrial classification

StatsSA – Statistics South Africa

Sub-HQ – Subordinate headquarters

UK – United Kingdom

WTO – World Trade Organisation

Chapter 1

Introduction

1.1 Background

Corporations, whether new or established, small or big, in order to gain or maintain competitive advantage have to contend with location decisions, such as where they locate, where they relocate to, and where they can expand to, as well as site selection decisions, such as which real estate property to run the business from and whether to buy, rent, or build. Office location and site selection decisions not only affect the prospects of the company, but also have implications for host countries, cities, and metropolitan areas as they try to position themselves in the global competitive environment. Baumol, Litan, and Schramm (2008:109-110) state,

> Locations hosting vibrant activity and innovation develop largely by serendipity, but once one or two firms in a location in a particular industry (or industries) become successful, they attract labour and entrepreneurs, and other services and suppliers, who build thicker and thicker networks, which in turn help spawn other new firms.

In this study, the focus is on headquarters location, and site selection in particular, of corporate headquarters (CHQs). The literature uses different names to refer to headquarters (HQ): *corporate centre, central administrative office, general office, global headquarters, parent (company), parent firm,* and *headquarters*. The terms *corporate headquarters* and *headquarters* are used interchangeably in this study.

Headquarters location is a concern not just for companies, but also for cities, countries, and regions which seek to attract headquarters into and retain them in their respective regions. Headquarters location decisions are also fundamental to the corporate real estate management (CREM) function. Ali et al. (2008a:5) defined CREM as a "functional unit in an organization…responsible for the real estate asset

holdings and their activities, and supports the organization to achieve its business objectives." The functions of corporate real estate managers include, among other things, acquisition, management, financing, and disposition of real estate assets (Floyd & Allen, 2002; Gibler, 2012). These decisions can affect market share, profitability and shareholder value (Lindholm, Gibler & Levainen, 2006). This study is on the acquisition side of CREM. It is important to understand how corporate real estate (CRE) has gained momentum over time.

It was on the basis of Zeckhauser and Silverman's (1983) ground-breaking study that CRE came to be viewed as an asset to the company and no longer part of overhead costs.[1]

[1] Prior to Zechhauser and Silverman's study, corporate real estate was initially a neglected resource that was often treated as part of overhead costs (Zeckhauser & Silverman, 1983; Gale & Case, 1989; Veale, 1989; Brown et al., 1993). Companies tended to regard CRE as a necessary component of their business activities requiring large capital investment for long periods of time. The capital investment toward CRE was generally regarded as "sunk costs" or "operating costs" (Teoh, 1993; Gale & Case, 1989; Veale, 1989). Zechhauser and Silverman drew attention to real estate as an asset, and they defined corporate real estate (CRE) as "the land and buildings owned by companies not primarily in the real estate [business]." In the 1990s CRE came to receive more attention. Nourse (1990) defined CRE as "the management of real property assets for use in business other than real estate." As Ali et al., (2008a:4) noted, the use of the term "management" in Nourse's (1990) definition reflects "the operational side of real estate assets in a business organization." Following on this, Brown et al. (1993) defined CRE as "properties that are either owned or leased by firms to achieve corporate objectives." Furthermore, CRE management (CREM) has been defined as "the optimum use of all real estate assets utilized by a corporation in pursuit of its primary business mission." The incorporation of the management dimension into CRE puts emphasis on the role of CRE towards the company's mission or objectives, thus reflecting a functional role of CRE. Furthermore, CRE has also come to be viewed as an investment of the corporation. Kooymans (2000) incorporated the word "investment" in his definition of CRE: "real estate owned by [a] corporation whether it is for investment or not. This includes freehold and leasehold real estate that is used by an organization for its own productive purposes, whether or not the corporation also considers the same real estate to be an investment." Real estate is a sound and long-term investment that accrues profit/benefits through lease or sale (Škevin, 2011). Earlier studies showed that CRE comprises 25%–40% of the total assets of many corporations (Zeckhauser & Silverman, 1983). Thus, CRE is one of the corporation's largest capital commitments, and it has to yield appropriate financial returns (Karantonis et al., 2001). In view of these shifts, CRE is defined as land or buildings that are used as a resource or part of production for business purposes. CRE is an important strategic resource that firms have at their disposal; however, it is a difficult resource to duplicate. Furthermore, it is a key component in business operation; it also shapes the urban fabric in that it occupies a piece of land in a particular area. When dealing with CRE, one of the major issues is office space decisions or the use of office space.

CRE is an essential asset, as a company needs a place to run its business (Ebinger & Madritsch, 2012; Škevin, 2011). Thus, CRE is generally viewed as real estate held by a company in order to support its core business (Ali et al., 2008a; Brown et al., 1993; Brueggeman & Fisher, 2001; Gibler & Lindholm, 2012; Nourse, 1990; Park & Glascock, 2010). Real estate assets are some of the largest assets in a company's balance sheets (Bon, Gibson & Luck, 2002). Gibler and Lindholm (2012:25) observed that "real estate operating costs are second only to human resource expenditures for many firms." Furthermore, real estate affects not only companies, but everyone at different levels, including employees, customers, investors, and neighbours, thus making real estate difficult to manage (Apgar IV, 2009). Therefore, the choice of headquarters location and site is part of a strategic or long-term investment decision and reflects a hefty commitment of a company's capital which has to yield appropriate financial returns (Karantonis, Fakorede & Oluwoye, 2001). However, for companies that do not own the properties, location in a particular area and site selection of particular properties still reflect a strategic investment to a company.

The term *location* is used in this study to refer to the local community where the business occupies a site, not the selection of a specific parcel of real estate, which is considered *site selection* (O'Mara, 1999). Companies' location decisions may be divided into two categories: location decision by new firms in search of a first location, and location decision by firms already in business which may want to relocate or to expand (Elgar & Miller, 2009). Location decisions are critical, considering the global, regional, national, and sub-national competitive environment. Site selection is the final step of the interrelated decisions towards finalisation on the parcel of land or building to operate from (Rabianski, DeLisle & Carn, 2001). As Morgan Lovell (2011:1) notes, "Finding the perfect office, in the perfect location, can have a huge impact on your business…nobody wants to be stuck in the wrong office for any amount of time." Suitable location gives a company a competitive edge, as it allows the company to achieve production capacity, expand its business, decrease its manufacturing lead time, reduce costs,

increase stakeholders' wealth, and provide better services to customers (Mazzarol & Choo, 2003; Rymarzak & Siemińska, 2012).

Headquarters location and site selection decisions are complex and are supposed to support the core business strategy, add value to the company, and create a sense of place for the company (Wardner, 2012). In large companies, location and site selection decisions tend to follow complex processes, with multiple phases, persons, departments, and objectives (Mazzrol & Choo, 2003). External factors such as real estate developers and construction staff, city planners, and professional trade agreements also influence the location or relocation of companies (Hu, Cox, Wright & Harris, 2008).

1.2 Research Problem

Headquarters location and site selection are recognised as key to the success of corporations (Ciaramella & Dettwiler, 2011; Morgan Lovell, 2011; O'Mara, 1999; Podolski, 2012; Rabianski et al., 2001; Rymarzak & Siemińska, 2012). Previous research on CHQs location and site selection focused, on the one hand, on the shift from national urban systems to a more globally oriented network of "world cities" (Bartlett & Hedlund, 1996; Carroll, 2007; Phelps, 1993; Taylor, 2004; Taylor et al., 2009; Sassen, 2006); on the other hand, focus has been on the sub-national level—regions and localities and the impact on economic development (Oinas, 1997; Storper, 1997; Yeung, Poon & Perry, 2001). Policy makers are intrigued by issues pertaining to headquarters location; however, it has received limited attention from scholars (Meyer & Benito, 2016; Pan & Xia, 2014). The location of headquarters has implications for the urban structure and the economy of the host cities and spatial patterns (Ersoy, 2016), and on local government and the city (Pan & Xia, 2014; Tonts & Taylor, 2010).

It is also noted that there is interest in headquarters location and site selection; however, these issues have received less attention in research in developing markets (Pan & Xia, 2014). In spite of a shift in the attractiveness of developing countries

in Africa and elsewhere as investment destinations from international companies (Klein, Wöcke & Hughes, 2014), little is known about the factors corporations consider in selecting CHQs locations in South Africa. In addition, previous studies[2] did not explicitly address the trade-offs corporations make in their location decisions.

Therefore, this study intends to examine headquarters location within South Africa, which is a developing country, in order to advance headquarters research from a developing/emerging markets perspective. In 2010, South Africa's national treasury (2010, par. 5.4, part II) noted that

> South Africa is the economic powerhouse of Africa. South Africa's location, sizable economy, political stability and overall strength in financial services make South Africa an ideal location for the establishment of regional holding companies by foreign multinationals. South Africa's network of tax treaties provides ready access to other countries in the region which makes it a natural holding company gateway into the region.

However, South Africa no longer enjoys the status of being Africa's powerhouse in light of the recent shifts, as it has been overtaken by Nigeria and Egypt. In a study of regional headquarters (RHQs), Luiz and Radebe (2016:19) found,

> The dominant criteria used by MNEs (multinational enterprises) to choose their locations for RHQs in Africa are linked to the advantages of agglomeration and the accompanying economies of scale, and a sound institutional framework which provides a predictable business climate.

According to Croome et al. (2013), South Africa's aim to be the gateway to Africa is somewhat distracted by high taxes and strict controls, which tend to repel multinational companies from establishing their headquarters in the country.

[2] Bell & Fageda, 2008; Klier & Testa, 2002, Klier, 2006; Pan & Xia, 2014; Pan, et al. 2015; Rice & Lyons, 2010; Tonts & Taylor, 2010

Considering the shifting economic landscape in Africa, South Africa will have to rejuvenate itself economically if it aims to retain its status as a gateway to Africa.

At a local level, South Africa with its history of apartheid created institutionalised regional disparities in terms of infrastructure and economic specialisation that influence the current real estate investment. Consequently, companies and property developers miss the opportunity to optimise on brand advantage, to maximise returns on investment, and to optimise on the market share, and the government is not aware of the critical investment that will make a particular metropolitan area competitive.

1.3 Aim and Objectives

The aim of the study is to analyse the determinants of corporate headquarters location and site selection in South Africa's metropolitan areas and how these factors interact. To achieve this, the following objectives were pursued:

- To ascertain the influence of the neo-classical, behavioural, and institutional theories on corporate headquarters location and site selection.
- To characterise the location of corporate headquarters of listed firms on the Johannesburg Stock Exchange.
- To explore the existing relationship between the economic specialisation and competitiveness of each metropolitan area and the types of corporate headquarters located within it.
- To evaluate the prioritisation of the determinants in location and site selection decision-making processes.
- To investigate how decisions about trade-offs between the determinants of location and site selection are made.

1.4 Research Questions

The research question addressed by this study is this: What are the determinants that influence corporate headquarters location and site selection for corporations in South Africa's metropolitan areas? This is followed by the following sub-questions:

- How do the neo-classical, behavioural, and institutional theories help in understanding corporate headquarters location and site selection decisions?
- Where are corporate headquarters located in South Africa for the various firms listed on the Johannesburg Stock Exchange?
- What is the relationship between the economic specialization/competitiveness of South Africa's different metropolitan areas and the types of corporate headquarters located within them?
- What determinants are considered in the location and site selection processes, and how are they prioritised?
- How do companies decide to make trade-offs between competing determinants?

1.5 Rationale for the Study

Pan and Xia (2014) recently noted the necessity for more research, specifically on headquarters location in developing/emerging countries. Headquarters research is dominated by studies in North America, Australia, and Europe, with the United States being the dominant one in this field (Sigler, Searle, Martinus & Tonts, 2016; Rice & Lyons, 2010). This is so also considering the desire of multinational enterprises (MNEs) to penetrate emerging markets, where they face complex institutional pressures ranging from entry regulations, investor rights protection, ownership, subsidiary location, management practices (institutional pressures in relation to host country and parent company), and performance (Amirkhany & Pain, 2014; Rosenzweig & Singh, 1991). An MNE's headquarters tends to have two core functions: one is administrative, to monitor the performance of the operating divisions, the other entrepreneurial, to create value through various strategies

regarding the long-term organization's skills, facilities, and capital and resource allocation (Chandler, 1991). Birkinshaw, Braunerhjelm, Holm, and Terjesen (2006) highlight that the location or relocation of MNEs to other countries can be a response to any of a number of factors: changes in the demand for products, which can trigger a change in the internal configuration of the headquarters or a move by a business unit; external factors such as the global financial markets and shareholders, which can cause headquarters to locate or relocate to gain competitive advantage from a (new) host country that allows more efficient direct communication with stakeholders and/or more access to capital markets; strategic benefits or government incentives flowing from policies, taxation, and capital market regulations and intellectual property laws; proximity to amenities such as service providers and a high-quality workforce; or a location's symbolic value that signals to investors, international banks, and markets that the corporation is no longer constrained by local norms. However, another important change in the global economy is that some of the companies within the emerging economies are challenging multinationals in developing countries and even buying companies from developed countries. For example, China's Lenovo purchased IBM in 2004, India's Tata Motors acquired Jaguar and Land Rover in 2008, China's Geely acquired Sweden's Volvo in 2010, Brazil's Mafrig acquired Keystone Foods in 2010, and Brazil's Natura Cosmeticos acquired Australia's Emeis Holding in 2013 (Khanna & Palepu, 2010).

Klein, Wöcke and Hughes (2014) and Jones Lang LaSalle (2013a, 2013b, 2013c) noted that the location advantage of developed countries is slowly but surely weakening as developing countries in Africa and elsewhere have started receiving attention in terms of investments from international companies. On the African continent, South Africa, which is the focus of this study, is competitive in commercial real estate markets (Jones Lang LaSalle, 2013c). In addition, South Africa is part of the BRICS forum (Brazil, Russia, India, China, and South Africa), which opens up more opportunities for investment in the country, and its stock exchange is rated amongst the top 20 in the world. It thus has the strongest market

on the African continent (Besada, Tok & Winters, 2013). Johannesburg in particular is rated the 38th-largest serviced office market in the world (Instant Office, 2011), and also the highest ranked city in Africa (Turok & Borel-Saladin, 2013).

Apart from the financial positioning of South Africa, the global economy has become competitive. As Bel and Fageda (2008) note, headquarters tend to be concentrated in large metropolitan areas for two main reasons: first, metropolitan areas provide a wide range of financial intermediation services, which make it possible for large companies to operate efficiently; second, metropolitan areas provide the spatial sphere for companies to exchange information and develop a heightened sense of market conditions (see Bel & Fageda, 2008; Davis & Henderson, 2008; Henderson & Ono, 2008; Lovely, Rosenthal & Sharma, 2005). Different metropolitan areas tend to provide different locational advantages and disadvantages, which in turn permit competition and specialisation among the metropolitan areas (OECD, 2006). Globalisation has also contributed to the emergence of global centres of corporate control (Sassen, 2006; Taylor et al., 2009). This is due to the shift from national economic systems to a focus on "the global and the local" (Sassen, 2006). Headquarters are also important for economic development: their presence boosts the host countries' global status and competitiveness (Ersoy, 2016; Pan & Xia, 2014; Tonts & Taylor, 2010). This is so because CHQs are generators of investments and employment, and therefore they function as economic powerhouses, which brings prestige to their location (Testa, 2006; Tonts & Taylor, 2010).

However, South Africa's current economic climate should be a cause for concern also for the prospects of headquarters, as it may negatively influence location choice. In 2014 South Africa lost its status as Africa's largest economy when it was overtaken by Nigeria, and in 2016 it slipped to third after being overtaken by Egypt. It is in second place again in 2018 . However, taking a closer look at the largest economy measured by the GDP per capita, none of the countries is in the top five except South Africa. Although the economy is still competitive, South Africa

slipped into technical recession in Quarter two of 2018. Nevertheless, in the third quarter of 2018, the economy picked up again and put an end to the second recession since 1994 (StatsSA, 2018). The decline in South Africa's economy has the potential to inhibit its potential to attract and retain headquarters within its borders. However, the high vacancy rate in Johannesburg (13%) and Durban (14%), as well as the recent water crisis in Cape Town, are sources of concern for businesses, policymakers, and developers as they strive to provide the best office space in strategic locations (Jones Lang Lasalle, 2018). South Africa has eight metropolitan areas that dominate the economic output, contributing 52% of total economic activity, with the three metropolitan areas within Gauteng Province alone contributing 32% towards the national output (Turok, 2012). South Africa's metropolitan areas have to rejuvenate themselves within the current economic climate to retain and attract CHQs, which do serve as key drivers for economic activities.

1.6 Assumptions

This study is premised on the following assumptions:

- First, corporations in making their location and site selection decisions make trade-offs in keeping with their core business strategies in order to increase their competitive advantage and maximise profits.
- Second, the different metropolitan areas compete with each other to attract and retain headquarters in order to enhance their economy and their standing regionally, nationally, and globally.
- Third, it is incumbent on the metropolitan areas to offer incentive packages in order to attract and meet the needs of headquarters as potential investors.

1.7 Scope and Delimitation

The scope of this study is as follows:

- The focus is on the corporate headquarters of firms listed on the JSE and located within the borders of South Africa. Headquarters are regarded as

potential investors which affect the design and the economic prospects of an area, trends of urbanization, and inter-region and global trade.

- The eight metropolitan municipalities in South Africa at the core of this study are Buffalo City, City of Cape Town, City of Johannesburg, City of Tshwane, Ekurhuleni, eThekwini, Mangaung, and Nelson Mandela Bay. The metropolitan municipalities are considered to be the potential hosts competing to attract and retain headquarters as investors.

Delimitations of this study are as follows:

- Corporate headquarters of companies listed on the JSE that are outside the eight metropolitan municipalities were noted but were not subjects of the study.
- Corporate headquarters of companies listed on the JSE but located outside the borders of South Africa were not the focus of this study.

1.8 Research Approach

This research explores, describes, and analyses corporate headquarters location and site selection determinants in the South African context. The study used a sequential mixed-method design that is both qualitative and quantitative, starting with interviews and using the results from the interviews in the survey (Creswell & Clark, 2007). The study also made use of the dataset from the JSE to analyse the location and site selection factors of corporate headquarters.

1.9 Data Collection and Analysis

Potential answers to the research questions are partly descriptive and partly analytical, requiring a number of complementary theories combined with mixed-method research as the primary means of data collection. Both secondary and primary data were used (Table 1.1). The complementary nature of the different theoretical approaches compensated for weaknesses that are inherent in individual theories, thus providing a broader set of variables, the analysis of which increased

the likelihood of providing comprehensive answers to the location and site selection decisions of South Africa's companies.

Table 1.1: The relationship between research questions and sources of data

Theories	Research Objectives	Sources of data		
		Secondary data	**Interviews**	**Survey**
Behavioural theory	Location of corporate headquarters	X		
Behavioural theory, institutional theory and neo-classical theory	Relationship between the economic specialisation of metros and the headquarters location	X		
	Influence of neo-classical, behavioural and institutional theories		X	X
Behavioural theory, institutional theory and neo-classical theory	Prioritisation of factors		X	X
Behavioural theory, institutional theory and neo-classical theory	Trade-offs between competing factors			X

In terms of analysis, conjoint analysis was used, and it determined how data should be collected. The study focussed on the behaviour of CHQs in location and site selection decisions. These decisions involve various stakeholders (internal and external) in order to maximise profit. Therefore, as a consumer behaviour study, conjoint analysis was used to understand how these decisions are made. Conjoint analysis is a technique widely used since the 1970s which has gained considerable attention from scholars and industry as a technique for evaluating preferences and

trade-offs amongst multiple attributes (Green & Rao, 1971; Green & Srinivasan, 1990). Previous studies of headquarters location and site selection choices have used various methodologies in different contexts, but none have used conjoint analysis. Conjoint analysis will be discussed in detail in chapter 3 of this study; however, it is necessary to highlight some aspects about this methodology at this point. It was used in real estate in an exploratory study of property portfolio construction and management strategies in the UK (Jackson & Orr, 2011). That study focused on stock selection by investment fund managers and therefore collected and analysed data using conjoint analysis. This technique is sometimes called "trade-off analysis," which has to do with complex judgements people make in arriving at their preferred option or product (Popović, Kuzmanović & Martić, 2012:19). This is a multivariate technique that uses quantitative techniques for understanding individual preference; it was developed in mathematical psychology and has been widely used in marketing research and product management (Popović et al., 2012). However, almost no literature has applied conjoint analysis to CHQ location and site selection.

Conjoint analysis is useful in this study, as it helped in ranking and understanding trade-offs, as well as in predicting future determinants in location and site selection. The physical attributes of locations are different, and it is plausible to expect that specification of location and site may not be fulfilled. Previous studies have shown criteria and their importance, but they have failed to show the trade-offs or to enable future predictions of the trade-offs; therefore, conjoint analysis was used because it allows the priorities in the market to be tested, the exact trade-offs to be analysed, the future optimal location to be modelled, and future decisions on factors of location and site selection to be predicted. Data were also analysed using location quotient, shift-share analysis and spatial directional trends.

Location quotient is used to quantify the concentration of a particular industry as compared to the nation. It can be used to capture the localisation economies associated with local specialisation. Location quotient is not a new tool; it has been

used since the 1940s in regional economics and economic geography (Miller, Gibson & Wright, 1991). It reveals what makes the region unique.

Shift-share analysis is used to understand the drivers of growth or decline in the local economy. At times the growth or decline in the local economy is attributed to the national trends, while at times it is due to regional factors. Unlike the location quotient that shows local specialisation, shift-share analysis shows the competitive industry within the region. The last analytical tool that was used in this research is the spatial directional trends, which is a form of spatial analysis that is used to gain insight into the data that may not otherwise be visible. The standard deviational ellipse was used to measure the patterns in terms of orientation and direction.

1.10 Ethical Considerations

Ethical issues arise when collecting data from human and animal subjects. This study only deals with human subjects, hence there are ethical considerations. It was essential for the interviews and surveys done as part of this study to guard against known ethical risks such as compromised confidentiality, harm to participants, unclear explanation of the purpose, uninformed or misinformed consent, unassessed risk, inaccessible data, and lack of ownership (Alcser, Antoun, Bowers, Clemens & Lien, 2011; Gray, 2004). Surveys raise fewer ethical questions than experimental research; nonetheless, the following safeguards were in place:

- The research avoided direct government involvement in the collection of data; instead, focus was on publications and related documents that were open to the public. The nature of information needed for this research could have been compromised and the outcome affected if government had been involved in the collection of primary data.
- The data provided is confidential and individual, and names of participating organisations that have given information were not disclosed.

- Where data were collected through interviews and surveys, consent was sought before such interviews proceeded or were conducted. All participation was on a voluntary basis.
- Participants reserved the right not to be recorded.
- Clearance to conduct the study was sought from the Witwatersrand University.

1.11 Structure of the Study

The chapters of this study are as follows:
Chapter 2 provides insight into the issues of headquarters location and site selection through a review of the relevant literature. The studies conducted in different countries providing limited understanding of the behaviour of firms in South Africa. Various factors of headquarters location and site selection choices are analysed, and theoretical frameworks to explain headquarters location and site selection are discussed. The three theories gave a perspective on the behaviour of CHQs in that there is competition, engagement with various stakeholders, need to maximise profit and to base their decisions on reliable information. The factors of headquarters location and site selection are established from prior studies in order to assess how they can help to explain CHQs location in South Africa's metropolitan areas.

Chapter 3 deals with the philosophy, strategy and instruments to address the objectives of this study. In terms of the research paradigm, a pragmatic paradigm is used to unpack the location and site selection. In terms of method, a sequential mixed-method approach was used, starting with interviews and then survey. The analytical techniques used are location quotient, shift-share analysis, spatial directional trend, thematic analysis, descriptive statistics, and self-explicated conjoint analysis.

Chapter 4 attends to issues of corporate headquarters location in South Africa's metropolitan areas. The changing landscape in South Africa's metropolitan areas is highlighted, and the degree of specialization and competitiveness of different metros is analysed in order to assess their influence in corporate headquarters location. The spatial analysis of corporate headquarters of the listed firms is presented and analysed.

Chapter 5 presents and analyses results of both the interviews and the survey. The results from both interviews and the survey are similar in terms of the major determinants of location and site selection. The chapter also indicated the determinants of CHQs location and site selection that are relevant to the South African context.

Chapter 6 draws conclusion from the study and sets out limitations and prospects for future research.

Chapter 2

Exploration of Headquarters Location and Site Selection

2.1 Introduction

The old real estate dictum "location, location, location"[3] has proved important in the location of retail chains, recreational activities, agriculture, and manufacturing. Advances in the telecommunication and Internet infrastructure have led to a refining of the old dictum to "location, bandwidth, location" (Malecki & Moriset, 2008; Tranos, 2012). The location of headquarters and the selection of sites are *inter alia* key factors for a successful business. This chapter seeks to do the following: first, to review the significance of headquarters within a company, types of headquarters, and location and site selection issues; second, to explore the theoretical foundation of headquarters location and site selection; third, to explore country-specific case studies in order to establish some of the prominent determinants of location and site selection; and finally, to identify some gaps in prior studies and formulate a set of propositions based on the different theories.

2.2 The Nature of Corporate Headquarters

In this section, the focus is on the nature and functions of headquarters as the pre-eminent centre within corporations. This study regards headquarters as a specialized entity within a corporation which may or may not be physically separated from the production facility. Therefore, it is important to understand what a headquarters is and the nature of activities that take place there, as this influences locational and site selection decisions.

[3] The true origin of the saying is unknown, but it is closely linked to a 1926 real estate classified ad in the Chicago Tribune: "Attention salesmen, sales managers: *location, location, location,* close to Rogers Park."

Headquarters as a central organizational unit of a company deals with a company's managerial and administrative functions (Chandler, 1991; Collis, Young & Goold, 2007). Thus, headquarters is "the chief decision-making centre of the corporation that houses the CEO and C-level executives who report directly to the CEO" (Bloom & Grant, 2011:214). This centre typically receives its mandate from the board of directors, who represent the shareholders. There are two main types of headquarters, *corporate headquarters* (CHQ) and *subordinate headquarters.* While the CHQ is viewed as the pre-eminent centre of a corporation, the subordinate headquarters is an ancillary corporate centre which performs its functions following the mandates received from the CHQ. Corporations may also establish multiple subordinate headquarters depending on the ancillary needs of their CHQs. When a corporation expands and enters a new geographic market, this gives rise to the need for subordinate headquarters (Bloom & Grant, 2011). The subordinate headquarters can also have their own ancillary headquarters, which Bloom and Grant (2011) refer to as *subsidiary headquarters*. Thus, when a corporation introduces subordinate and subsidiary headquarters, the role of the CHQ is broadened to include the coordination of the overall activities of the firm across the board. However, the corporation would have to clearly define the roles and responsibilities of the CHQ and subordinate headquarters (or other corporate units) in order for high performance to be realized in the life of the corporation. This also implies that the corporation might have to choose the parenting style/structure or the organizational structure for the management of relations between the CHQ and subordinate headquarters or other organizational units (De Waal, 2013; Sadler, 2003). This suggests that the roles, functions, and configuration of the CHQ may vary depending on the nature and the organizational structure of the corporation. The relationship between CHQ and the subordinate and subsidiary headquarters, as Steinberg and Kunisch (2016) argued, is a complex one.

The primary function of the CHQ is to strategize, manage, monitor, evaluate, and coordinate the company's activities (Chandler, 1962; Henderson & Ono, 2008; Hungenberg, 1993; Jakobsen & Onsager, 2003; Yeung et al., 2001). On the

administrative role, legal services are administered from the CHQ. These functions vary widely across different companies (Collis et al., 2007; Menz, Kunisch & Collis, 2015; Kunisch, Menz & Ambos, 2015; Chandler, 1991; Chen, Park & Newburry, 2009; Goold & Campbell, 1987; Semadeni & Cannella Jr., 2011). The other aspect includes the resources and capabilities: the CHQ has to ensure that it adds value, performance improvements, and more importantly understanding of the critical success factors of its business (Alexander, 1992; Campbell, Goold & Alexander, 1995b; Collis & Montgomery, 1997; Adner & Helfat, 2003).

In addition, Hungenberg (1993) makes the following distinctions between functions of headquarters: First, some headquarters function as *operational holding companies*. The focus in these headquarters is on the strategic and operational management of the company. Second, other headquarters function as *management holding companies.* Here the focus is on strategic management; these headquarters do not interfere with the operational management of the company. Third, some headquarters function as *financial holding companies*. In this type of headquarters, the emphasis is on bank-related activities, and such headquarters are not so much involved in the operations and management of the company's different departments or units. With this definition of the different types of headquarters and functions, the research has focused on the CHQ, which is where major decisions of the company are made.

While the expansion of corporations has given rise to subordinate and subsidiary headquarters, it is the growth and development of other countries that has attracted companies into their territories, thereby necessitating the establishment of subordinate or regional headquarters (RHQs; Bloom & Grant, 2011).

2.3 Prior Research on CHQs

Although some research dates back to the 1920s (e.g., Knight, 1921), it was Chandler's (1962) seminal work on CHQs that set a solid foundation for further studies of CHQs and opened up more engagement with this topic. Chandler's work

focused on multidivisional-form (M-form) companies based on the industrial enterprise in America. The M-form organisational structure has separate units (smaller companies), which are controlled by the central management. From this perspective, the function of a CHQ lies in the coordination and integration of the overall business, as well as the provision of specialised services in a central place. This formed the basis through which CHQs came to be viewed. Since then, many scholars have explored CHQs from different perspectives.

Menz et al. (2015) have identified two main streams from which CHQ research is done: multibusiness corporations[4] and multinational corporations (MNCs).[5] The main characteristic of a multibusiness corporation is diversification, as the company creates value by venturing into multimarket activities (Palich et al., 2000; Ramanujam & Vardarajan, 1996). Thus, in contrast to the single-business company, which puts emphasis on specialization, the multibusiness corporation seeks to create value by administering various businesses, thereby generating higher added value across all businesses (Galli, 2011; Goold et al., 1994). Research on multibusiness corporations tended to focus on roles and activities of CHQs, resources and capabilities, and design and staffing issues. The theories utilized *inter alia* in the multibusiness corporation stream are economic theories such as transaction cost economics and financial economics, as well as organizational theories such as agency theory, contingency theory, the resource-based view, and dynamic capabilities (Figure 2.1).

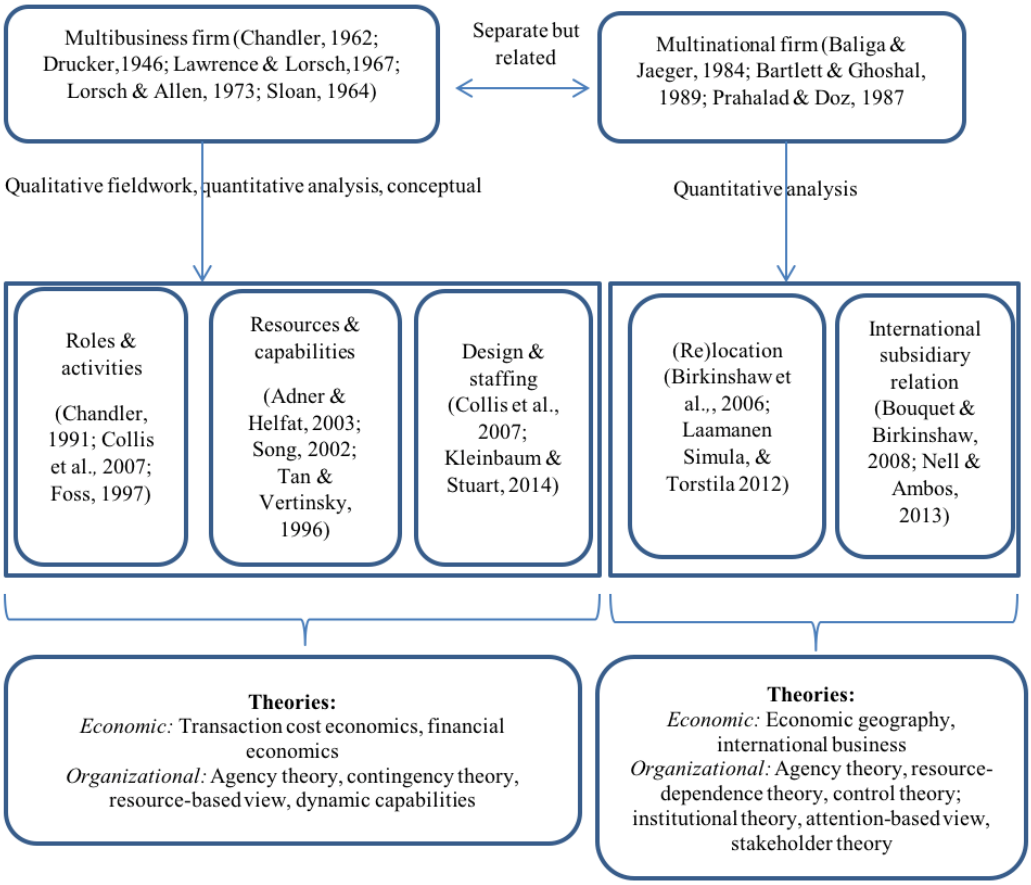
The multinational corporation is characterised by a parent firm and subsidiaries located in different parts of the world. This type of corporation has factories and/or offices in many countries. Therefore, the corporation establishes an international presence; it manages production and delivers services in more than one country

[4] Some of the studies in this stream are Adner & Helfat (2003); Campbell, Goold, & Alexander (1995a); Chandler (1991); Collis & Montgomery (1997); Collis et al. (2007); Goold & Campbell (2002); Goold, Campbell & Goold (1987); Goold, Campbell & Alexander (1994); Hungenberg (1993); Russo (1992); and Semadeni & Cannella (2011).

[5] Some of the studies in this stream are Birkinshaw et al. (2006); Bouquet & Birkinshaw (2008); Chen et al. (2009); Collis, Young & Goold (2012); and Nell & Ambos (2013).

(Bartlett & Ghoshal, 1989; Menz et al., 2015). Research on MNCs has tended to focus on (re)location of CHQs and international subsidiary relationships. Scholars in the MNC stream use both economic and organisational agency theories. Economic theory includes examinations of geography and international business, while organisational theory includes agency theory, control theory, institutional theory, and the attention-based view, as well as stakeholder theory (Figure 2.1)

Figure 2.1: Different research streams of CHQ research (Adapted from Menz et al., 2015)



These two streams of research created what Menz et al. (2015) referred to as disconnected research into CHQs. However, both streams are focused on value creation across either diverse products or geographic markets.

The themes explored in the different streams may be combined to build a cumulative knowledge of CHQs. As Menz et al. (2015:614) observed, "the commonalities and differences between the two research streams both carry the potential for cross-fertilization and point to new directions for research on the CHQs in the multimarket firm."

Understanding these research streams helps to contextualize the current study of the multinational firms. (Re)location issues are addressed in this stream and shed light on previous studies and theories that were used to understand issues around location decisions of firms. This background was a necessary prerequisite to the unpacking of location and site selection decisions for CHQs.

2.3.1 CHQ Location

Decisions on CHQ location are not made on a regular basis; rather, they are commonly made during the establishment of the company or at some point in the life cycle of the company (e.g., if a CHQ relocates or subsidiaries are formed). Corporate location decisions may be divided into two categories: location decisions made by new corporations in search of a first location, and location decisions by corporations already in business wanting to relocate or expand (Elgar & Miller, 2009). CHQs tend to maintain their original location, where the company was originally founded (Baaij, Van den Bosch & Volberda, 2004; Coeurderoy & Verbeke, 2016; Meyer & Benito, 2016; Porter, 1990). CHQ location decisions may be taken at different stages in the life cycle of the company: initial location, locational adjustments due to company growth, location adjustment due to company expansion, relocation to a new place, and mergers between different companies. The location decisions at different stages in the life cycle are discussed in the next section.

Initial location

To gain a better understanding of the initial location of CHQs, it is important to understand the process of firm establishment. Usually the owner of the firm is

inclined to start a company in a familiar environment—for example, the home country—due to the familiarity of the business environment. However, this does not hold true in all instances, as some companies are established in foreign countries due to the perceived services that will be gained.

The historical roots and networks within the local communities are important for a CHQ, and therefore the home country has an advantage for hosting it. The reasons used to establish/locate a CHQ in a particular area later on function as inertia forces against relocation (Ghemawat, 2011). The specialised services offered in a particular area create a lock-in effect for a CHQ, which occurs when a CHQ does not want to move because of the incentives in the area that might not be available in other areas.

Locational adjustment due to company growth

Company growth, whether positive or negative, may necessitate locational adjustment and may also require such restructuring of activities as the reduction or spreading of activities across multiple locations. Factors underlying locational adjustment are a concern from an industrial demographic or economic demographic perspective (Dijk & Pellenberg, 1999). Sometimes the adjustment is done on a site-specific level, where the company adjusts the current building to make it more conducive to the growth of the company.

Location adjustment due to company expansion

The location of its CHQ is important for an expanding company. In the face of a growing and increasing globalized international market, companies want to tap into new markets. When moving to new markets, companies have to explore the prospective new locations which they want to tap into. There are various factors that companies consider when moving to new markets, for example, trade regulations, political risk, incentives, and labour pool. In the international markets and/or new regions, companies may establish new CHQs, subsidiaries, or RHQs.

Issues such as geographical, cultural, and linguistic distance between headquarters and subsidiaries pose challenges to relationships within multinational companies. Studies have particularly focused on the headquarters and subsidiaries relationship, particularly on issues such as headquarters control and the autonomy of the subsidiary headquarters (see Kostova, Marano & Tallman, 2016; Li, Jiang & Shen, 2016). Recently, ul Haq, Drogendijk, and Holm (2017:111) highlighted that the "subsidiaries that are located at a greater distance from the headquarters experience extensive difficulties when it comes to communicating business opportunities with the headquarters and thus attract its attention." This is mainly a challenge when companies from developed markets penetrate into emerging markets.

Relocation

Locational drivers differ according to whether a company is starting up or relocating within the same region or relocating from one country to another or entering a developed market from an emerging one or entering an emerging market from a developed one (Holl, 2004; Kronenberg, 2013; Manjón-Antolín & Arauzo-Carod, 2011). The decision of an existing company to relocate from its current location to another location serves to highlight the regional factors which are likely to pull the company into the new location and also highlight the actual preferences of the company (Conroy, Deller & Tsvetkova, 2016). Relocation of CHQs may also be fuelled by factors such as political risk (Benito, Larimo, Narula & Pedersen, 2002), access to capital markets (Birkinshaw et al., 2006), and the tax and regulatory environment (Egger, Radulescu &, Strecker, 2013; Laamanen et al., 2012; Voget, 2011).

Due to global competitiveness, many world cities provide incentives for companies to relocate into their regions. On the global scale, the relocation movement can be from an emerging to a developed market or from a developed to an emerging market or across developed markets. Some companies from emerging markets tend to use institutional arbitrage to move their assets to developed markets only to return,

having assumed the role of foreign investors. In South Africa's case, in the 1990s companies such as SAB-Miller, Investec Bank, Old Mutual, and Anglo America relocated their CHQs to London to be closer to the stock market of their listing. Similarly, in 1992 HSBC moved its headquarters from Hong Kong to London.

However, there is also an increase in companies relocating their headquarters from developed to emerging markets. ActionAid relocated its headquarters from the UK to South Africa in 2004. In 2006 Coca-Cola announced that it would move its Africa head office group from Windsor in the UK to Johannesburg. In 2016 Fastjet also indicated that it would be moving its headquarters from London to Johannesburg. Carroll, Bloomfield, and Maher (2014:1) noted that "the number of the world's largest companies headquartered in emerging economies has grown from 21 in 2000 to 132 in 2014."

Location and mergers consideration

When companies merge, a discussion needs to take place about where the CHQ will be located. Meyer and Benito (2016) argued that both the internal review process and external events may trigger the need for relocation. The parties have to decide on the new home of the CHQ. This may be based on the location that is best for conducting their business or based on the financial resources, where the party that has more financial capital might have the upper hand in the location decision. Some CHQs may become subsidiary headquarters due to mergers. Apart from understanding the different stages where CHQ location decisions might be taken, the relationship of the CHQ to the production units needs some attention.

2.3.2 The Locations of CHQs and Production Units

One of the functions of CHQs is to deal with the administration of the overall company. As a result, CHQs have to provide support for production units. CHQs of companies with production units are generally geographically located separately from the production facilities (Aarland, Davis, Henderson & Ono, 2007; Bloom &

Grant, 2011; Henderson & Ono, 2008; Menz et al., 2015). In such cases the production units are geographically dispersed, and CHQs tend to be centrally located in order to reduce co-ordination costs (Henderson & Ono, 2008) and also to benefit from the agglomeration economies associated with central locations. CHQs usually locate in larger metropolitan areas to be able to outsource services in the local metropolitan market and to access information on the market conditions for their products, while the production can locate anywhere in rural areas or small towns (Henderson & Ono, 2008). CHQs usually locate in central cities because of the availability of diverse intermediate service suppliers that enables face-to-face interaction.

In some instances, CHQs are co-located with production facilities, a situation Jakobsen and Onsager (2003) refer to as an *integrated head office*. In such cases, traditional CHQ functions are carried out at the same location as production activities. There are different categories of CHQs and production units depending on the nature of companies. Bigger companies tend to separate production and management/administration functions spatially. There are usually many reasons for the separation of functions, such as easier access to information and greater opportunities to outsource certain services (Davis & Henderson, 2008; Lovely et al., 2005). In the current global climate, some companies shift their production units to other countries. For example, companies in the automotive industry such as Volkswagen, Mercedes-Benz, BMW, MAN, and Toyota have their production units in South Africa. The CHQs of these companies are located in other countries (Volkswagen, Mercedes-Benz, and BMW in Germany; Toyota in Japan). Companies tend to establish production units in other countries as a way of tapping into the growth opportunities due to demand for products and services, as well as to gain access to such benefits as import tariff reductions and trade concessions, cheap labour, capital subsidies, and reduced logistics costs. The South African firm Aspern Holdings, with its CHQ in Durban, has manufacturing units in Toluca (Mexico), Vallejo (Mexico), Vitora (Brazil), Sioux City (USA), Bad Oldesloe (Germany), Oss (Netherlands), Brussels (Belguim), Auckland (New Zealand),

Melbourne (Australia), Nairobi (Kenya), and Dar es Salaam (Tanzania). Sasol, with its CHQ in Sandton, also has operations in the United States, Europe (Germany, Italy, and Slovakia), and Asia (China).

The geographic locations of production units and CHQs also differ between industries. The study conducted by Aarland et al. (2007) made some observations concerning headquarters in the different industries. The manufacturing sector usually has a high fixed plant capital, and access to raw materials is critical. The separation of administration and production is usually due to the noise, pollution, and grime attendant to production (Aarland et al., 2007). The same applies to mining and quarrying, as well as wholesale and retail trade, catering, and accommodation. However, industries like construction, transport, storage, and communication usually co-locate production and headquarters in one location; so do electricity, gas, and water, as well as finance, insurance, real estate, and business services.

There is also variation in the distance between headquarters and production units across different industries. Industries such as retail usually locate their headquarters in close proximity to their outlets in large metropolitan areas. Therefore, even if they are not co-located, production and headquarters are located close to each other. The variation in location of CHQs and production units has implications for the local economy.

2.3.3 Economic Impact of CHQs

Different countries are interested in attracting CHQs, and the metropolitan areas have a major role to play in creating a conducive environment (Bloom & Grant, 2011). This interest is especially focussed on the CHQs of large firms that can advance urban and regional economies (Klier & Testa, 2002; Testa, 2006). In addition, the presence of CHQs influences employment (Pan & Xia, 2014; Pan, Guo, Zhang & Liang, 2015). These CHQs tend to employ high-skilled professionals and to purchase high-end professional services such as auditing, management,

consulting, and financial services. In the end, CHQs have a positive impact on the economy through the creation of jobs, as well as giving other indirect economic benefits to their locations (Bloom & Grant, 2011). Pan and Xia (2014) and Pan et al. (2015) noted the positive economic benefits that come through the presence of CHQs in a city. In addition, "governments have the ability to create as well as to restrict opportunities open to a firm in a specific set of businesses" (Prahalad & Ghoshal, 1989:5). In China, the government targeted CHQs through the development and implementation of preferential policies which created a conducive environment for CHQs to thrive (Chan & Poon, 2012). However, the economic history of countries has an influence on the location of firms and their CHQs (Tonts & Taylor, 2010).

CHQs are critical to the economy for various reasons. The presence of CHQs stimulates economic benefits, employment, and local taxes to the host metropolitan area. Those employed in the CHQs are usually the social elites who increase the standard of living in the area; for example, they need better housing, education, and other high-end goods that automatically increase consumption and quality of life (Pan & Xia, 2014). Bloom and Grant (2011) summarise the phenomenon as economic spill-over to the local economy. In this process, the presence of CHQs opens more room for new business formation, attracting other corporations, as well as human and physical resources. As the main decision maker of the overall company, the CHQ makes decisions on outsourcing, purchasing, procurement, and new products and services, all of which act as catalysts for the local service industry and increase demand (Hirai, 2004). Additional economic boost is through the outsourcing of services such as advertising, consulting, and financing (Davis & Henderson, 2008). The location of CHQs is important, considering the economic impact that CHQs have on the economy.

Figure 2.2 shows the relationship between CHQs and the economy. A CHQ as an establishment and an administrative unit renders many services, including decisions on procurement and outsourcing, research, sales, and employment of people and

various service providers to work on the administration of the services required at the CHQ level.

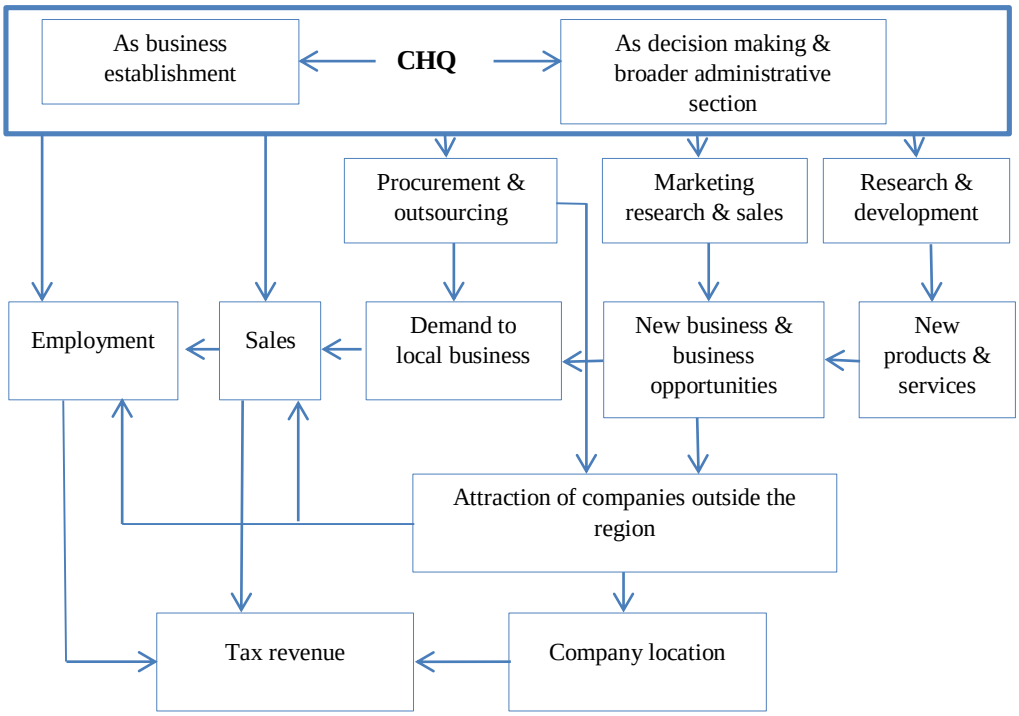


Figure 2.2: Impact of CHQs on the local economy (Adapted from Hirai, 2004)

The type of services required further necessitates the need for additional service providers, creating a multiplier effect and a cycle of income-generating activities, thereby stimulating economic growth in the overall economy. Therefore, decisions on the location of a CHQ impacts other interrelated activities. The success of the CHQ, as part of a broader economy, is affected by the interlinkages of other activities.

The property market is also affected by the clustering of CHQs, as prices tend to go higher when office users bid/compete for better office space. All this consequently makes CHQs engines for economic growth with the benefits of spill-over effects. Moreover, as productivity is raised, national prosperity and well-being also increase. Apart from boosting the economy, a CHQ's location also influences the spatial patterns of office buildings in a city. The high demand for office space in

one area encourages development in adjacent areas. This affects not only office space but other related activities, for instance, housing and retail.

Hosting CHQs of multinational enterprises (MNEs) helps the government to integrate the local (national) economy into the international economy. Countries hosting a number of CHQs strengthen their business environment (Dunning & Lundan, 2008). The ability of countries to retain a number of CHQs may be an indication of a well-functioning economy and institutions (Coeurderoy & Verbeke, 2016). Another point to note is the possibility of some invisible link between economic prosperity and the home-based presence of CHQs. The high level of competency of the management staff of the CHQs may have a valuable impact on the society, thereby increasing the well-being of the community. It is essential for policy makers (government) to understand the drivers of CHQ location and site selection if they are to provide the necessary environment for corporations to locate their CHQs within designated areas.

2.4 Prior Studies on the Location of Headquarters in South Africa

A study conducted in South Africa by Luiz and Radebe (2016) is an important one, since there are limited studies in this field. It adds to the list of determinants from the exploratory study done by Holt et al. (2008) in Europe and the Asian Pacific. The study looked at the location decisions for RHQs of MNEs. Nine decision factors were used with 39 location decision variables that are helpful in understanding the location dynamics, irrespective of whether the study is of RHQs or CHQs or any other type of HQs (Table 2.1).

Table 2.1: RHQs Locational decision factors/determinants in Europe and Asian Pacific (Adapted from Holt et al., 2008)

Factors	Variables
Favourable government incentives	Central and local government establishment and financial incentives Local government infrastructure inputs and tax incentives Attractive corporate tax and regulatory environment
Low operating costs	Low operating costs Competitively priced labour and rent
Low living costs	Low costs of health insurance, schools, and cars High-quality health services
Favourable financial environment	Moderate interest rates and low inflation Access to regional financial centres Attractive dividend withholding taxes Economic stability, including stable exchange rates
Effective regional links	Accessible location, including frequent and efficient international flights Strong cultural links within region Availability of highly skilled staff
Compatibility with home base	English speaking environment, including an English-speaking workforce Commercial and cultural compatibility with home base
Supportive business environment	Availability of reliable suppliers Presence of key technology suppliers Local market growth potential Regional telecommunications hub
Economical IT infrastructure	Competitively priced telecommunications costs Low-priced telecommunications circuitry Reliable communications infrastructure
Favourable employment relations	Flexibility of employment contracts Low level of industrial disputes

The differences in factors between Holt et al. (2008) and Luiz and Radebe (2016) can be attributed to the changes in the business environment over time, especially with the gap from 2006[6] to 2016, as well as to the context in which the two studies were done. However, both studies add valuable information to the current study, bringing forth the factors that need to be looked at when dealing with headquarters location. It is important to note that Luiz and Radebe (2016) concluded that South Africa is one of the most favourable countries for MNCs wanting to do business in Africa. The study looked at regional headquarters location decisions for multinational companies operating in South Africa. Senior executives rated the location factors in terms of their importance and whether South Africa is negative or positive in that factor (Figure 2.3). However, this study was limited in that there are many economic changes both in Africa and in the world that might affect these findings.

[6] Research conducted in 2006 but published in 2008.

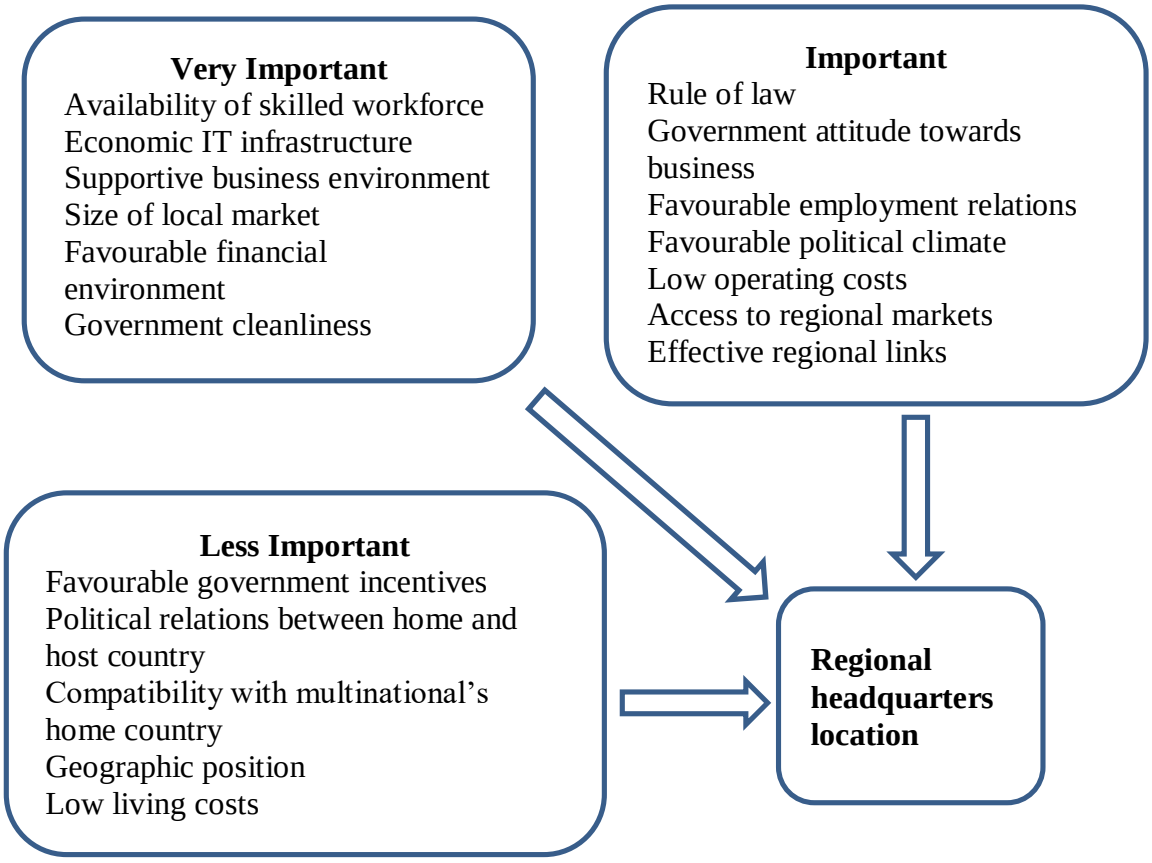


Figure 2.3: Location decision factors in South Africa (Adapted from Luiz and Radebe, 2016)

A study by Harrison et al. (1997) finds that access to amenities and employees is one of the reasons companies decide to locate in certain areas. Access to major highways, the image of the location, and the visibility of the company were seen as important factors in the clustering of companies (Pillay & Geyer, 2016; Rogerson, 1998).

These studies outline some of the important factors in the South African case. However, the study had a small sample size, and further research is needed, according to Luiz and Radebe (2016). The same authors also observed that there is no literature that focusses on location criteria for RHQs and no mentioning if any studies exist that deal with CHQs.

2.5 Determinants of Headquarters Location and Site Selection

The location of its CHQ affects the company's competitiveness in the global market and the success of the company (Birkinshaw et al., 2006). Finding the best possible location and site is fundamental to the success of any corporation (Morgan Lovell, 2011). Decisions about CHQ location and site selection are influenced by various determinants. However, such determinants at times differ, depending on the type of industry and other variables, which may be country specific. Studies conducted in different countries indicated that determinants of location and site selection differ according to context.[7] These studies have used the term *factors* instead of *determinants* in most instances, and these two terms will be used interchangeably in this research.

At the same time, the level of importance given to factors of location and site selection by different companies is not the same. Different industries require different labour skills, management expertise, infrastructure, technical knowledge, and so forth, and the availability of these special determinants influences the decision on where to locate the headquarters. Some companies require high capital intensity and technological complexity, which pushes them toward long-term investments in product-specific skills (Chandler, 1991). However, some companies have no need to invest in research, which makes the location decision much easier to make. Loree and Guisinger (1995) emphasised the importance of infrastructural requirements for different industries. The availability and accessibility of certain

[7] Information from Abraham & Hunt (1999); Adnan & Daud (2010); Adnan, Daud & Razali (2008); Appel-Meulenbroek & Feijts (2007); Appel-Meulenbroek (2008); Archer (1981); Bell (1991); Bottom, McGreal & Heaney (1998); Daniels and Holly (1983); Davis & Henderson, (2008); Dent & White (1998); Dixon, Ennis-Reynolds, Roberts & Sims (2009); Dettwiler (2008); Elgar & Miller (2009); Gibson (2003); Haynes (2008a, b); Haynes (2011); Ho, Newell & Walker (2005); Herrin & Pernia (1987); Leishman, Dunse, Warren & Watkins (2003); Levy & Peterson (2013); Lizieri (2003); Luoma, Niemi, Rothe & Lindholm (2010); Nourse & Roulac (1993); Ono (2006); O'Mara (1999); Pittman & McIntosh (1992); Rabianski et al. (2001); Remøy & van der Voordt (2014); Rothe, Lindholm, Hyvönen & Nenonen (2011); Rymarzak & Siemińska (2012); Sing, Ooi, Wong & Lum (2004); Sing, Ooi, Wong, & Lum (2006); Škevin (2011); Sullivan (1996); Tonts & Tailor (2010); Ulaga, Sharma & Krishnan (2002); Wardner (2012); and Warren, Simmons & Trumble (2007).

factors in certain locations renders some locations more advantageous than others, depending on the needs of the particular industry.

2.5.1 Location Decisions

In location decisions, as O'Mara (1999) and Wilkinson (2005) noted, financial factors play an important role. However, several researchers have noted that location decisions are not and should not be based solely on financial factors, as there are other factors that are also essential to the well-being of a firm (Barnes, 2003; Brouwer, Mariotti & Ommeren, 2004; Greenhalgh, 2008; Leishman & Watkins, 2004; Ulaga et al., 2002). Therefore, non-financial factors may be divided into *internal factors*, which have to do with the status of the business (O'Mara, 1999; Wardner, 2012), and *external factors*, those factors outside of the business itself which can influence the location decisions (Abraham & Hunt, 1999; Adnan et al., 2008; Bell, 1991; Elgar & Miller, 2009; Leishman et al., 2003; Rabianski et al., 2001). Amongst the location determinants, Rymarzak and Siemińska (2012) emphasised the importance of government policies and regulation in terms of tax rates, exemptions, and deductibles, as they impact a corporation's financial status.

The lowering of trade and investment barriers has made room for companies to operate from anywhere in the world (Holt et al., 2008). Globalisation has facilitated the internationalisation of business operations, exportation, and even operations from dispersed locations. With internationalisation, companies have to become multinational firms with CHQs located anywhere in the world. The behaviour of companies varies, with some maintaining CHQs in their home country / country of origin, while some may have relocated to other countries. Table 2.2 summarized some of the determinants of location. In addition, Lunnan, Benito and Tomassen (2011) identified five key factors as driving companies to establish foreign RHQs or what they refer to as a "divisional headquarters." Regional headquarters locate in

- areas that are politically and economically stable and demonstrate competitiveness, that is, mature, safe, and knowledge rich;
- areas in which they can be most effective in terms of creating value;
- areas in which they will operate most effectively;
- areas in which they increase their legitimacy; and
- areas in which there is a need to establish regional headquarters as a way of linking the operational managers and the corporate managers at the global headquarters.

Table 2.2: Determinants/factors of location

Country	Author	Human resource (skilled labour force)	Labour costs (wage/salary/benefits)	Access to markets, customers, clients, services, and suppliers and information	Favourable sector-specific regulation	Government policies, tax and regulatory environment	Quality infrastructure (telecommunication and transport)	Political risk	Business environment	Economic incentives/favourable financial environment	Availability and cost of support services for employees housing	Same industry specialisation/ agglomeration of same sector	Location of Management/Executive
Klein et al., 2013	South Africa			x		x	x						
Davis & Henderson, 2004	US			x								x	
Lovely et al., 2005	US	x											
Lunnan et al., 2011	Norway			x				x	x				
Klier & Testa, 2002	US	x	x						x				
Wang et al., 2011	China			x	x				x				
Laamanen et al., 2012	Europe	x				x							x
Bel & Fageda, 2008	Europe	x	x	x		x				x			
Strauss-Kahn & Vives , 2009	US		x	x		x	x		x	x		x	
Luiz & Radebe (2016)	South Africa	x		x		x	x	x	x	x			
Coeurderoy & Verbeke, 2016	Multinational								x				
Meyer & Benito, 2016	Multinational	x		x		x		x	x			x	x
Baaij et al., 2004	Multinational								x				
Benito et al., 2002	Finland							x					
Birkinshaw et al., 2006	Sweden			x									
Egger et al., 2013	Multinational					x	x						
Laamanen et al., 2012;	Europe					x							
Holt et al., 2008	Europe & Asian Pacific	x	x	x	x	x	x		x	x	x		
Turok, 2013		x					x				x		

2.5.2 Site Selection Decisions

The *site* is the actual piece of land or building, its features and immediate surroundings. Therefore, it is important to understand the issues around headquarters location and site selection: the right location, combined with appropriate services, is strategic to the success of a company (Ciaramella & Dettwiler, 2011). In terms of site selection, Oladokun (2011) argued that the choice of location is important for business survival, while site selection is a strategic decision for business operations.

The selection of the site has to do with the business needs of a particular organisation. The process is driven by the needs and clear vision of what the company wants to achieve. In this process, executives, in particular the ones in CRE, have to be involved to ensure that the site selection process does not undermine the strategic goals of the company. The strategic goals/needs may be of a newly established company or of a consolidation. The process involves identification of the site and evaluation of the site against the strategic goals/needs of the company and the fiscal impact of the move (Barovick & Steele, 2001; Bergeron, 2005). It is in the evaluation phase that companies have to decide whether sites are suitable for their CHQs. This implies going into the details of the site and unpacking the needs/goals of the business to see if the site is a strategic one.

Suitable space/buildings

Companies require suitable space/buildings for them to fulfil their mandate. The suitable facilities act as a pull factor for many businesses (Elgar & Miller, 2009). As companies grow in size, the need to find suitable office space/building influence the location of firms (Daniels & Holly, 1983; Gibson, 2003). Therefore, the office market has to be able to supply suitable office space in response to the demand for space.

Flexibility

The particular building that the company chooses as their site has to maintain some level of flexibility. Companies can manage the space strategically to meet their needs in different economic times and also when the company is either expanding or downsizing. Several authors confirmed that flexibility is ranked high in office selection (Dent & White, 1998; Dettwiller, 2008; Gibson, 2003; Lizieri, 2003). The high ranking of flexibility is attributable to the changes towards modern work practices that affect the way space is used (Dent & White, 1998; Lizieri, 2003; Nourse & Roulac, 1993; Sullivan, 1996).

Thus, CRE strategies have to respond to the changing needs and be adaptable to different scenarios. As Haynes (2011:98) noted, "The recent recession has brought into focus the demand to establish the linkages between the changing demand for human resources and the impact on the real estate and workplace provision." The provision of office space has to be effective to meet the ever-changing demands of firms. Therefore, flexibility becomes one of the factors that are important for many companies (Levy & Peterson, 2013). This enables the firm to adjust the office space depending on the needs at any given point. If the market has more stock of suitable office building, it may influence and affect consumers (in this case the consumers are firms wanting better office space). Daniels and Holly (1983) linked suitable building and office location choice. An Australian case study revealed that staff interaction and flexibility of workspace is significant (see Warren et al., 2007).

Building services

Building services such as heating, ventilation, and air conditioning (HVAC), as well as security, parking facilities, fire escapes, kitchen, bathrooms, wall and floor coverings, lighting, and so on contribute to a conducive work environment for the employees (Leishman et al., 2003; Sing et al., 2006). The conducive work environment is essential to increasing productivity and satisfaction of employees (Haynes, 2008a; b). According to Rothe et al. (2011), employees are an important

asset to any given firm, and therefore companies need to provide office space that satisfies and maximise employees' productivity. The challenge is that employees have different needs, preferences, and requirements. Therefore, companies need to find areas where needs, preferences, and requirements meet or intersect and work around those areas (Rothe et al., 2011). Haynes (2011) noted that meeting the different needs of employees is a very complex task facing CRE managers. Therefore, CRE managers have to come up with strategies that are appropriate and responsive to different circumstances.

Site selection as an important element in CRE decision making should not be confused with other non-corporate real estate factors. These are factors that have direct impact on the real estate decision and have the potential to render the site selected a success or failure. Some of these factors include marketing, awareness of the brand, and advertising (Fenker, 1999).

In summary, several studies conducted in different countries documented various factors of office location and site selection. Most of these studies emanated from developed countries in Europe, Australia, and the United States. In the literature, *location* and *site selection* are used interchangeably, which makes it at times difficult to separate the factors of location and site selection (Salvesen and Renski, 2003). There are some factors that are a cost to the company or to individuals/employees, while some factors are important for the company as an establishment. From previous studies conducted in different countries, determinants site selection were derived (Table 2.3).

Table 2.3: Determinants/factors of site selection

Author	Country	Operating cost/rental rate	Security and access control	Responsible management and maintenance team	Car park provision/accessibility	Building image/identity.	Modern IT and communication systems	Lease Features(renewal terms, length of the lease and termination clause	Building/floor layout/flexibility	Visibility	Indoor climate	Installation	Proximity to other parties	Accessibility (logistic infrastructure)	Proximity to inner city	Taxes and incentives	Suitable space/building	Functionality
Leishman et al., 2003	UK	x	x		x		x		x		x	x					x	x
Sing et al., 2006	Singapore		x		x				x		x	x						
Ho et al., 2005	Australia		x	x	x	x			x			x		x				x
Dixon et al, 2009	UK	x							x				x				x	
Warren et al., 2007									x									
Levy & Peterson, 2013	New Zealand				x				x					x			x	x
Haynes, 2011	U.S., the U.K., China and India						x		x			x	x	x	x		x	x
Sullivan, 1996									x									
Nourse & Roulac, 1993									x									
Lizieri, 2003									x									
Dettwiller, 2008									x									
Dent & White, 1998	UK								x									
Gibson, 2003	UK						x		x			x					x	x
Daniels & Holly, 1983	North America and Britain																x	
Greenhalgh, 2008	UK		x			x		x	x					x				
Elgar & Miller, 2009	Canada		x			x		x	x					x		x	x	
Adnan & Daud, 2010	Kuala lumpur (Malaysia)	x	x	x	x	x	x	x										
Appel-Meulenbroek & Feijts (2007)					x	x	x		x	x	x	x	x	x				
Appel-Meulenbroek (2008)	Netherlands		x	x		x			x		x				x			

These determinants of office location and site selection are used as a starting point for the analysis of CHQs. This is done because CHQs as specialised offices probably follow traits similar to those of any other office. Although there are some differences in that the CHQ is at the higher end of a business and there will be more distinct factors that are considered beyond the ones for a general office, some factors may be common to all offices.

Companies prioritise the location and site selection determinants differently, and the local environment can play a huge role in location and site selection decisions. For instance, CHQs of firms such as banks, other financial institutions, law firms, and accounting firms usually prefer central locations, whereas the firms providing ancillary services such as secretarial agencies, courier services, office equipment, and routine financial service tend to locate in suburban areas (Clapp, 1993). CHQs with a high need for agglomeration economies associated with central locations bid successfully for the central locations. However, the changing nature of the urban economy as a result of advancement in technology and transportation is impacting the agglomeration economies, as companies no longer have to confine themselves to central locations or city centres (Parr, 2002; Richardson, 1995; Jones, 2013). In a country like South Africa, with eight metropolitan municipalities,[8] it is important to unpack the impact of the local environment in attracting and retaining headquarters. The metropolitan areas are not the same economically or in terms of specialisation, and this has an influence on CHQs' location and site selection.

2.6 Importance of Understanding Location Dynamics

The real estate development industry was dominated by the ideology of "build it and they will follow" during the 1980s, but the supply of real estate does not generally stimulate demand. The fundamental economic principle is against this philosophy. A thorough understanding of the market is essential, and in this case, a

[8] These municipalities are the City of Johannesburg, the City of Tshwane, Ekurhuleni, the City of Cape Town, Mangaung, Buffalo City, eThekhwini, and Nelson Mandela Bay.

better understanding of the South African market and in particular the peculiarities of the metropolitan areas is essential. The section that follows gives a brief economic history of South Africa.

2.7 The Peculiarity of South African Cities

The local environment plays a major role in location decisions and agglomeration processes by firms (Mariotti, Piscitello & Elia, 2014):

> Another explanation offered by developers for this pattern [of spatial transformation] is the need of employers who occupy their property for proximity to their professional, technical and managerial workers, who have the strongest position to dictate the firm's location decisions. Meanwhile, many inner city areas have been written off by investors, reinforcing a spiral of decline and decay. Some blame the uncertain operating environment for business, especially concerns about crime and grime. The townships have generally not attracted much private sector investment, even industrial firms that would benefit from proximity to a manual workforce. On average, residents have low disposable incomes and modest qualifications. Perceptions of insecurity reinforce doubts about these places as locations for commercial development (Turok, 2013:179).

The geography of South African cities still shows the effects of apartheid, and these effects continue to influence real estate investment decisions. The cities are highly segmented by income levels that are highly correlated with race.

During the initial stage of the colonial and apartheid era, the main attraction for corporations was the mining sector, with the lure of diamonds and gold. The next wave reflected South Africa as an industrialised nation: European and American companies with modern products such as automobiles, oil, and pharmaceuticals were attracted (Wilkins, 1989).

In the 1980s, a decline in international investment took place as a number of international corporations started leaving the country due to the political call for the dismantling of the apartheid system (Paul & Duffy, 1988). Following the dismantling of apartheid and the subsequent formation of a democratic government in 1994, the country began to regain and to build its status anew in the global economy. Since 1994, South Africa has undergone such notable economic transformation as enrolment in the World Trade Organisation and shifting economic policies, specifically the Reconstruction and Development Programme (RDP) in 1995, the Growth, Employment and Redistribution Strategy (GEAR) in 1996, the Accelerated and Shared Growth Initiative (ASGI) in 2005, and the National Development Plan (NDP) 2030 in 2013. South Africa has also signed a number of bilateral treaties, thereby increasing the national stock of FDI. Gelb and Black (2004) noted that by 2004 there were more than 35 investment incentive schemes across the country. There is also an indication that in most of Sub-Saharan Africa, CRE has gained momentum in attracting investment in the cities.

Economic activities in South Africa are concentrated in the major cities. This is in line with the situation worldwide: 80% of global output is from cities (Turok & Borel-Saladin, 2013). However, cities in South Africa are still fragmented and unable to reap the fruits of agglomeration. The devolution of built environment functions to the municipalities was a move towards compact cities and integrated development across cities. “Successful cities are sites of intense economic and social interactions involving the exchange of high-level knowledge and technical know-how” (Turok & Borel-Saladin, 2013:8). Therefore, South African cities need to position themselves to retain and attract investment.

South Africa has eight metropolitan areas that dominate its economic output, contributing 52% of the total economic activity, with three metropolitan areas within Gauteng Province contributing 32% towards the national output (Turok, 2012). The metropolitan municipality within Gauteng Province will continue to strive to attract and retain investment, while the other metropolitan areas are also

improving their infrastructure to position themselves to compete both with Gauteng and internationally.

2.8 Metropolitan Area Specialisation and Competitiveness

Metropolitan areas as economic hubs in which services are mainly concentrated are of strategic importance for national growth and development and for competitiveness in the globalizing world (see Klaesson, Johansson & Karlsson, 2013; Kresl & Ietri, 2012). Due to global competition, metropolitan areas strive not only to attract CHQs into their location, but also to retain them. From a sectoral perspective, some argue that diversification and not specialisation tends to enhance economic growth (Glaeser, Kallal, Scheinkman & Shleifer, 1992, Jacobs, 1969, 1984; Quigley, 1998); however, others tend to view the specialisation of a metropolitan area as a major contributor to economic growth (Henderson, Kuncoro & Turner, 1995). The CHQ location pattern is interlinked with economic activity, and therefore CHQs tend to prefer to locate in metropolitan areas. However, certain metropolitan areas tend to attract more CHQs than others or to attract certain types of industries. It is no wonder spatial economists generally tie headquarters location to metropolitan area specialisation (see Marshall, 1890; Schumpeter, 1942; Romer, 1986; Porter, 1990; Drennan, Larsen, Lobo, Strumsky & Utomo, 2002).

Each municipality has a comparative advantage in particular industries. Comparative advantage singles out industries that are competitive due to some structural or unique factors within particular metros. An area has a comparative advantage when it costs less for it to produce certain goods and services. Some metropolitan municipalities are competitive in particular industries, thereby influencing the location of CHQs. The level of specialisation and/or competitiveness in the metropolitan areas of South Africa is influenced by the socio-economic and spatial history of the country. At the same time, the dynamics of location cannot be underestimated.

2.9 Theoretical Explanations of Headquarters Location and Site Selection

Headquarters location and site selection are important investment decisions that have implications for the well-being of the corporation. The acquisitions of the fixed capital stock influence not only the firm's well-being but also the economic future of the corporation, the country, and the metropolitan area in which the corporation is located (Rabianski et al., 2001). Location and relocation studies can be best understood through economic geography theory (refer to Figure 2.2), under which economic activities are unevenly distributed in space; various models have been developed in an attempt to explain this imbalance. There are three schools of thought that seek to explain the CHQ location and site selection decisions used in this study: neo-classical, behavioural, and institutional (see (Brouwer et al., 2004; Levy and Peterson, 2013; Machlup, 1967). These theories explain why economic activities (companies) choose particular locations.

2.9.1 Neo-Classical Theory

The traditional or neo-classical theory focuses on financial factors (Brouwer et al., 2004). The wages in a given area are a reflection of the marginal product of labour (Glaeser, 2010). The area is usually more productive than other areas when it has higher wages. Wilkinson (2005:32) noted that the most common objective of a firm is profit maximization. Wilkinson (2005) argued that the profit-maximization models are based on the following assumptions, which have their limitations: the firm has a single decision maker, the firm produces a single product, the firm produces for a single market, the firm produces and sells in a single location, all current and future costs and revenues are known with certainty, price is the most important variable in the marketing mix, and short-run and long-run strategies are the same.

O'Mara (1999) noted that one of the factors that influence business to move to new geographic areas is a desire to structurally reduce operating costs; this is done by

considering the whole range of costs and benefits. However, O'Mara (1999) also noted that businesses that pick up and go tend to have greater financial capacity than businesses which stay in one place, as this requires major financial and planning commitments and a horizon further than ten years away. In the discussion of business relocations there tends to be a neglect of businesses that may be downsizing.

In neo-classical theory, there is a tendency to view office location through the comparative advantage framework. In both developed and developing countries, there is a common use of subsidies to attract and retain the investment of multinational firms (MNFs; Bond & Samuelson, 1986; Dijk & Pellenbarg, 1999). This move is particularly influenced by the rise in global markets, which tend to push businesses to assume an international configuration for their production (Bolisani & Scarso, 1996). Forte and Brandão (2008) noted the importance of engaging in foreign direct investment (FDI) as a way of assuming the international configuration. The globalization of markets is crucial for business in that the choice to locate in a particular country influences the competitiveness of the business and also opens up more location possibilities, as promoted by the World Trade Organisation (WTO) and the continuous liberalization of FDI regulation (Forte & Brandão, 2008). Location preferences for foreign direct investors tend to be driven by the investment motives and depend on the type of the FDI (Dunning, 1998). Therefore, the preference of one location over others for MNFs would depend on the incentives for investors. This also results in countries competing to attract MNF investments on the basis that FDI produces benefits for the host country, such as transfer of advanced technology, substitution of imports, and creation of jobs (Barros & Cabral, 2000; Forte & Brandão, 2008; Haaland & Wooton, 1999).

From this perspective, CHQs often choose to locate in metropolitan areas due to their locational advantage (Hayter, 1997; Jakobsen & Onsager, 2005). Some of these advantages are

- an ample supply of labour, especially skilled professionals (Hayter, 1997), who prefer to locate in metropolitan areas and to work in more skill-intensive sectors (Davis & Dingel, 2014);
- availability of and access to specialised services such as financial, legal, management, and communication (Chapman & Walker, 1992; Hayter, 1997; Hutton & Ley, 1987; Pred, 2017);
- developed infrastructure such as telecommunication, transport systems, roads, and airports, which increase the attraction of these areas (Hayter, 1997); and
- the tendency to strengthen the image and status of the company in the market (Hutton & Ley, 1987).

As companies try to maximize profit, competition for the best office space arises. With such competition, companies have to bid for space. Within the neo-classical school of thought, bid-rent theory is essential when there is competition for space.

Bid-rent theory

Bid-rent theory deals with parcels of land; however, a CHQ looks at occupying a piece of land that will enable profit maximisation. Land is an important aspect to be considered when exploring location and also an important input in the production of goods and services (Alonso, 1964). Alonso's "bid-rent" refers to the amount the user is willing to pay for a more central location versus the willingness to settle for a peripheral location at lower rental cost. This theory operates under the assumption that retail and commercial businesses are willing to pay higher costs in order to locate in the central business district (CBD). Under this theory, accessibility is a key factor that increases the land value in the CBD, and if accessibility diminishes, the land value becomes lower. Bid-rent theory touches on the issues of access, costs, competition, and the trade-offs that are made between the different costs involved (land costs, direct transportation costs, and consequences to indirect revenues and cost savings). The key objective in bid-rent is to maximise profit, wherein input and output costs are key. According to this theory, land allocation is determined through

a bidding process whereby companies weigh the locational advantages of a particular place against the price. This varies between different locations or areas, and revenues and cost savings are also taken into consideration. This theory presents a classical monocentric city with the CBD as the central point, and the difference between locations is the distance or commute time to the CBD. As corporations bid for space, the issue of proximity is important. Companies as profit maximising agents bid for space in close proximity to resources/infrastructure and/or other complementary companies that might boost their business.

Although still largely accepted as a way of explaining the spatial variation in the demand for property, bid-rent theory tends to ignore factors such as agglomeration forces, spatial interdependence, site characteristics, topographical irregularities, and market forces (Wyatt, 2013).

Agglomeration economies

There are a number of agglomeration forces which lead headquarters to gravitate towards metropolitan areas. Historically, agglomeration economies have created cities through the concentration of corporations in close proximity to each other in city centres (CBDs; Marshall, 1890). However, due to the changes in urban economies, the beneficiaries of agglomeration do not necessarily have to be in close proximity to each other; rather, the beneficiaries can be spread across a broad metropolitan area (Jones, 2013; Parr, 2002; Richardson, 1995). This is because transportation is important in agglomeration economies. The spreading of corporations is not happening just anywhere; rather, it is happening specifically in the urban areas and mega-cities which have become the gateways between the developed and developing countries (Glaeser, 2010).

The agglomeration of headquarters in the metropolitan areas is created through forward and backward linkages. The geographic concentration of CHQs of interconnected companies creates these multidirectional linkages (Porter, 1998). Agglomeration forces cause the metropolitan areas to have higher total factor

productivity (Davis & Dingel, 2014). Jakobsen and Onsager indicated that metropolitan areas are diversified and provide different specialities, which they refer to as "specialised regional metropolitan areas" (2003:14). Glaeser (2010) noted the linkages between agglomeration economies, local wages, robust real estate prices, and a high concentration of people within a given area, while not universal, but their existence does shed light on the issue of agglomeration economies.

There are two types of agglomeration economies, localisation economies and urbanisation economies. The former arises when firms of the same industry cluster together, the latter when firms from different industries cluster. One of the major issues is to try to reduce transport cost for the labour force in agglomeration economies for the development of successful cities. Localisation economies are linked to inputs sharing and competition arising from the same industry cluster, while urbanisation economies are linked to industry diversity that increases the level of innovation (World Bank, 2009). There are three mechanisms through which agglomeration economies occur (Duranton & Puga, 2004, Marshall, 1890).

- *Labour pooling* (Krugman, 1991; Overman & Puga, 2010). Both the firms and the labour force benefit. There is easy access to a labour force with a variety of skills and to firms requiring different skills in the major cities. The mobility of the labour force between firms is higher compared to an area with a minimum-skilled labour force.

- *Sharing of inputs suppliers* (O'Sullivan, 2012). This aids in generating sufficient demand to enable production in bulk. As firms produce in bulk, economies of scale are realized and room for specialization is created, which in turn reduces modification costs. This is more relevant to CHQs that co-locate with production units.

- *Knowledge spill-over* (Baicker & Chandra, 2010; Kerr, 2010; Jacobs, 1969; Rosenthal & Strange, 2010). There is sharing of ideas and knowledge

between firms and employees. At the same time, the level of innovation is usually high in clusters. Communication and exchange of ideas is fast in this setup.

Therefore, firms benefit from proximity to a specialised labour force, complementary suppliers and customers, and access to knowledge spill-overs (Marshall, 1890; Porter, 1990). Economies of agglomeration are assumed to be stronger in a cluster, resulting in companies having positive influences on each other. CHQs also agglomerate because of the economic integration through the comparative advantages and linkages that exist among companies. The advancement of economic geography by Krugman (1991) gives a more comprehensive understanding of CHQs' location and site selection viewed from the global economy. The level of competition increases in the global context as different areas try to attract CHQs.

The focus in neo-classical theory, as Jakobsen and Onsager (2005) noted, tends to be on the static location advantages and the explanatory factors, rather than on the individual determinants. The focus on financial factors has rendered neo-classical theories unrealistic and not helpful in explaining the location behaviour of firms. Corporations are complex, with clear separation between ownership and management; profit maximization is just one goal of the existence of a firm which is not taken into consideration by neo-classical theory. Greenhalgh (2008) argued that features like the culture, status, and structure of the company or organization do have influence. Further, this theory has flawed notions of perfect information and rational individuals, and it does not adequately take into account the heterogeneity of firms, general human behaviour, or problems that occur in resource allocation. It has also been criticised by industrial geographers for its ignorance of history and spatial issues. The South African context cannot be divorced from the colonial and apartheid history which structured the country. History and spatial policies have shaped the landscape along racial lines, which has an impact on the location of CHQs.

2.9.2 Behavioural Theory

Behavioural theory emerged as an improvement on the exclusive focus of neo-classical approaches on the comparative locational advantage by pointing to the complexities involved in the decision-making process (Brouwer et al., 2004; Cooper, 1975; Cyert & March, 1963; Keeble, 1977; Levy & Peterson, 2013; McCann, 1999; North, 1974; Pred, 1961; 1971; Stafford, 1969; Townroe, 1991). Behavioural location theory views location as a complex, long-term investment decision that involves various stakeholders (Hayter, 1997). These stakeholders include government, which wants companies to locate in particular locations, and owners/shareholders, who have different preferences from those of potential employees. This theory recognizes that the choice of location is based on the processes leading to the location decision. In this process, various factors come into play, and they are considered as important to the decision-making processes. These factors may be either internal or external to the firm, but the behavioural theory only focusses on the external ones, neglecting the internal factors, which are important in the decision making of a firm. The major internal reasons include the need for space to expand, the need for favourable premises, and limited representation in the current location. The major external reasons include limited accessibility to the location, the need for labour, high location costs, and environmental considerations (Pellenbarg, van Wissen & van Dijk, 2002).

Behavioural theory tends to be at its most helpful when used to explain the migration of corporations from one location to another. Therefore, a range of issues can influence a corporation's decision to relocate or migrate from its current location. As Keeble (1977) noted, the migration of a corporation from one location to another tends to indicate the shift in locational advantage within the country. However, on the basis of the mutation balances in the economic spatial reports for the years 1986, 1988, 1991, 1993, and 1995, Pellenbarg and Kemper (1997) observed that in the Netherlands the migration of firms tended to be within, rather than between, regions.

The behavioural approach has been used widely since the 1960s to explain the location decision of firms (Keeble, 1977; Townroe, 1972; 1991; Schmenner, 1980). However, as in the case of neo-classical theories, the behavioural location theory has been criticised for treating a firm as a black box, making decisions based on inputs and outputs with no understanding of the internal functioning of the firm.

2.9.3 Institutional Location Theory

From an institutional location theory perspective, a firm's behaviour is linked to socio-cultural institutions and value systems (see Becattini, 2002, 2017; Brouwer et al., 2004; Granovetter, 1985; 1993; Krumme, 1969; Pike, Becattini & Sengenberger, 1990; Stopper & Salais, 1997; Thrift & Olds, 1996). The assumption that undergirds institutional theory is that social and institutional structures underlie economic activity (Brouwer et al., 2004). This theory is most applicable to large corporations, which have the muscle to negotiate with stakeholders such as suppliers, government, and labour unions about prices, wages, taxes, subsidies, infrastructure, and other important factors in the operation of the corporation (Brouwer et al., 2004; Pellenbarg et al., 2002).

The decision on the location of CHQs is influenced by the external and institutional factors embedded within the institutional locational theory. Companies engages with various stakeholders on the basis of trust and also make use of their network relationships in their innovation and learning. However, the focus is not on the behaviour of individual firms but the interaction between firms. In making location decision, CHQs engage with market intermediaries including brokers, developers, financial institutions, location and site specialists, etc. These are the stakeholders who are experts in providing services to CHQs in search of location and site. The real estate market is also noted as an important institution playing a major role in the location and site selection of a firm.

2.9.4 Critique and Application of Theories

Location decision affects not only large corporations operating in national or global markets, but also small businesses. Several scholars have used these economic geography theories—or to be more specific, location theory—to gain insight into the location and site selection decision of a firm (Brouwer et al., 2004; Greenhalgh, 2008; Hu et al., 2008; Leishman & Watkins, 2004; Pellenbarg, van Wissen & van Dijk, 2002). Brouwer et al. (2004) noted that neo-classical theory may be more useful in analysing the behaviour of small businesses; however, large businesses, with their complex structures, which may involve individuals and groups such as managers, shareholders, and workers' representatives in the location decision-making process, require behavioural principles. Hu et al. (2008) also pointed to external factors from city planners, real estate developers, and construction staff to professionals in trade agreements, which may also be involved in the location and relocation of corporations. Small businesses, however, due to limited resources, often make location decisions constrained by information (Greenhalgh, 2008). In large businesses, location decision is a multiphase, multi-person, multi-departmental, and multi-objective process (Mazzarol & Choo, 2003).

Hayter (1997) summarized the three schools of thoughts as follows:

- Neo-classical theory focuses more on calculations than on understanding the complexity of corporation and has unrealistic assumptions that undermine the richness of geography.
- Behavioural theory spends too much time opposing the neo-classical theory and takes the decision-making process and the firms themselves as black boxes. There is a slight increase in the usage of the theory, and it is being revived.
- Institutional theory is difficult to apply in practice, and the current discussion includes clusters/industrial districts and the cultural turn, but there is an increased in interest in this theory.

All these theories help explain location and site selection decisions in different contexts. With regard to headquarters location, the issue is not simply where to locate at the intra-urban level; at times circumstances dictate that interurban location to be taken into consideration (see Armstrong, 1979; Burns, 1977; Evans, 1973).

These theories offer different perspectives from which to study CHQ location and site selection patterns. The bid-rent theory with its assumptions does explain the spatial variation of rent and capital values. However, it can also be that even larger corporations are willing to move to the periphery despite the increase in distance so that they can maintain contact with locations at the periphery. It should also be noted that the competitive bidding for land has also resulted in mixed use of properties (Harvey & Jowsey, 2004). External economies and agglomeration economies also play a great role in office location. External economies include factors such as access to labour, transportation cost, and communication. The agglomeration economies in CHQ locations particularly focus on advantages of concentration of economic activity such as specialized services like finance, accounting, and marketing, and specialized facilities like government offices and the stock exchange. In small businesses, by contrast, location decision is typically the responsibility of the owner of the business.

For large companies and CHQs in particular, the location decisions becomes a team decision. This also has to do with decisions around expansion and mergers which may have impact on the employment within the company. Companies may decides to cut back on their employees when restructuring (in-situ shrinking) or mergers especially during recession (Watts & Stafford, 1986).

In summary, companies want to take advantage of strategic locations that enable them to remain competitive in the market. The location may be defined in terms of its accessibility, suitability of premises, and also costs savings. At the same time, it is important to note that the location and site selection decisions usually involve various stakeholders who are part of the executive team of a company, and the

decisions should factor in the values of the companies, the shareholders, and costs involved. Moreover, in location and site selection decisions, there is co-operation and negotiation with various stakeholders, including government and property developers, among others. However, each company is unique, with unique standards and values; hence location and site selection preference may vary. Therefore, Table 2.4 shows the determinants emerging from the theories described above. These determinants for this study, as explained above, help explain the location and site selection decision of firms.

Table 2.4: Determinants emerging from theories (Adapted from Van Dijk & Pellenbarg, 2000)

Theories	Key concepts	Determinants
Neo-classical theory	Location factors	Occupancy characteristics (owned, rented, single or multi-tenant facilities) Availability of space Accessibility Parking facilities Proximity to suppliers and markets Zoning regulations (local government policy)
Behavioural theory	Internal factors	Organisational structure Management structure Organisational goals (Employee satisfaction)
Institutional theory	Institutional (external) factors	Government policy Regional economic infrastructure Suppliers and business customers Labour market Economic conditions Quality and availability of suitable locations

The study investigated further the concepts derived from the location theories to get a clear understanding on how to proceed in answering the research questions. For example, strategic location varies between companies and industries, and therefore the study needed to understand what types of strategic location is considered for headquarters. In designing the research and analysis, these determinants were taken

into consideration to derive meaningful results for this research. At the same time, the following propositions were made based on the theories explored:

Proposition1: Companies locates CHQs strategically to maximise returns.

Proposition 2: CHQs prefer locating in clusters.

Proposition 3: CHQs compete for best/strategic locations.

Proposition 4: Companies make location decisions based on the information available to them.

Proposition 5: Companies engage various stakeholders in location decisions.

The propositions gave some guidance in achieving the aim of this study. Furthermore, to understand the determinants influencing the spatial distribution of CHQs in different metropolitan areas in South Africa, the study examined how the specialisation and/or competitiveness of the metropolitan area might play a role in attracting and retaining CHQs.

2.10 Chapter Summary and Propositions

CRE is an important investment in any country. South Africa, like other countries, has to wrestle with CHQ location and site selection decisions, so CRE has to be treated as one of the key economic drivers in this country as well.

Beaverstock, Smith, and Taylor (1999) noted the importance of a firm's location and the economic well-being of the region in which it is located. The review by Birkinshaw et al. (2006) gives an overview of previous studies on the dynamics of CHQ location. Sigler et al. (2016:417) summarised the studies done in different parts of the world but with particular reference to the following:

- information technology (Storper & Venables, 2004)
- manufacturing (Hudalah, Viantari, Firman & Woltjer, 2013)
- advanced producer services (APS; Coffey & Shearmur, 2002)

- studies limited to single metropolitan areas (Grant & Nijman, 2002; Lüthi, Thierstein & Goebel 2010; Ó hUallacháin & Leslie, 2007; Rodríguez-Gámez & Dall'erba, 2012; Watkins, 2014)

Furthermore, other studies were done focussed on clustering and agglomeration (Pan & Xia, 2014; Bathelt, Malmberg & Maskell, 2004; Gordon & McCann, 2000; Porter, 1998, 2000; Saxenian, 1996) from different countries, but none of these studies can help understand the behaviour of firms in South Africa with its unique history.

The theories explored in this study—that is, the neo-classical, behavioural, and institutional location theories—shed some insight on some of the important proposition in exploring CHQs location and site selection. This research therefore made the following propositions: Companies locate CHQs strategically to maximise returns; CHQs prefer locating in clusters; CHQs compete for best/strategic locations; companies make location decision based on the information available to them; and lastly, companies engage various stakeholders in location decisions. It is through these theoretical propositions that the research methodology was formulated.

The government of South Africa has put effort into restructuring the political, spatial, and social-economic structure of the past to enable even distribution of wealth in the country. This is wealth in terms of infrastructure development and other services that boost different regions economically. Despite the dismantling of apartheid and the lifting of sanctions, there has been insufficient detailed investigation into the location of corporate headquarters in the metropolitan municipalities of South Africa.

Research focussing on the trade-offs made in CRE location and site selection decisions is still lacking, and this may open up meaningful debate in real estate. This literature review has shown that most of the research has been done in more mature markets, and therefore there is a need for further studies in emerging markets. The following questions arise from the literature review:

- Where in South Africa are CHQs located for the various firms listed on the Johannesburg Stock Exchange?
- What is the relationship between the economic specialisation/competitiveness of South Africa's different metropolitan areas and the types of CHQs located within them?
- How do the neo-classical, behavioural, and institutional theories help in understanding corporate headquarters location and site selection decisions?
- Which are the prioritised determinants in the location and site selection processes?
- How do companies decide on trade-offs between competing determinants?

In addition, the interchangeable use of office location and site selection choices at times is also an indication of an area that needs further exploration. Therefore, some of the major questions to be asked are these:

- What are the criteria used in office location and site selection choices, and how are they similar to and different from the ones in more mature markets?
- What does the ranking of relative importance look like in emerging markets?
- How can the determinants of office location and site selection be clearly differentiated in CRE studies?
- What are the determinants of office location and site selection choices in South Africa?
- In addition, in terms of methodology, how can conjoint analysis help understand CRE managers' decision-making process in office location and site selection choices?

Chapter 3

Research Methodology

3.1 Introduction

This chapter deals with the research philosophy, strategy, and instruments used in the research in pursuit of the objectives set out in the beginning of the study. This study seek to address the following objectives as stipulated in chapter 1: ascertain the influence of the neo-classical, behavioural, and institutional theories on corporate headquarters location and site selection; characterise the location of corporate headquarters of listed firms on the Johannesburg Stock Exchange; explore the existing relationship between the economic specialisation and competitiveness of each metropolitan area and the types of corporate headquarters located within it; evaluate the prioritisation of the determinants in location and site selection decision-making processes; and investigate how decisions about trade-offs between the determinants of location and site selection are made. In light of the above, this chapter discusses the research philosophy, approach, data collection and analysis.

3.2 Research Paradigm

The research paradigm is concerned with the development of knowledge and the nature of knowledge. A paradigm is informed by some philosophical assumptions relating to the nature of reality, ways of knowing, ethics and value systems. These form part of the research paradigm (Healy & Perry, 2000; Guba & Lincoln, 1994) and show that a research paradigm interrelates practice and thinking, indicating the beliefs, values, assumptions of a community of researchers. Epistemology and ontology refer to a researcher's worldview, which can be either objective or subjective. There are various lenses through which a researcher can view the world: positivist, realist, interpretivist,

and pragmatist, among others. There are important assumptions embedded in each research philosophy that underpin the research strategy and the methods. Sometimes these are important to a balanced view of the philosophical positions because some research problems may require the use of a combination of methods that are drawn from more than one position. Table 3.1 shows the lenses (philosophical perspectives) of a research paradigm worldview, which include the nature of knowledge pursued, as well as the means through which knowledge is produced and assessed.

Table 3.1: Summary of research philosophy

	Positivist	Realist	Interpretivist	Pragmatist
Ontology	Reality/Knowledge is objective One single reality	Reality/Knowledge is subjective	Reality/Knowledge is socially constructed and subjective No single reality	Reality/Knowledge is both subjective and objective Reality constantly debated and negotiated
Axiology	Value free: researcher independent of the data	Value laden, researcher is biased	Value bound: researcher is part of what is being investigated	Value plays a role interpreting results
Epistemology	Focus on facts	Focus on explaining within a context	Focus on details of the situations; meaning	Focus on practical applied research, integrating different perspective to interpret data
	Look at causality and law-like generalisation Focus on observable phenomena	Observable phenomena provide credible data and facts	Subjective meaning and social phenomena	Either or both observable phenomena and subjective meanings provide acceptable knowledge
Data Collection Techniques	Large sample Random sample Standardized questionnaires Experimental, survey research Interviews, statistical analysis, focus groups Quantitative but can also use qualitative	Quantitative or Qualitative; must fit the subjective matter	Small sample Purposive sampling Qualitative with in-depths interviews Ethnography, grounded theory, phenomenological research, action research, discourse analysis, observation, case study	Mixed or multiple methods and designs Qualitative and Quantitative Design-based research, action research
Research Approach	Deductive	Abduction	Inductive	Deductive/Inductive

The previous research on headquarters location has been from a positivist perspective using quantitative analysis methods to understand the location dynamics of a firm (Semple, 1973; Wheeler & Mitchelson, 1989; Mitchelson & Wheeler, 1994). This research is set out to uncover what is under the surface, observing patterns in office location and site selection.

This research adopts a pragmatic research paradigm, which holds that there are multiple ways of understanding and interpreting the world, as well as undertaking research. This choice of paradigm is informed by the research questions and objectives of the study. The pragmatist lens does not necessarily require the use of multiple methods; any methods that will yield credible, reliable, and relevant data for the research are permitted. Though this particular study adopts a mixed-method approach, the underlying research philosophy is one of pragmatism (Johnson, Onwuegbuzie & Turner, 2007). Pragmatism is an appropriate philosophy to adopt in a mixed or multiple-method study. In addition, the research took both deductive and inductive approaches, though it leaned towards deduction because of the dominance of the quantitative data. The goal is to test the concept and patterns in deductive study (Bhattacherjee, 2012). The relative importance of headquarters location and site selection determinants are known in different countries, but this study examined the same in the South African context. At the same time, Turok (2013) alluded to some of the major locational determinants, but no empirical study has been done to determine their relative importance.

3.3 Research Approach: Sequential Mixed-Method

Mixed-method research is an attempt to find a middle ground between qualitative and quantitative viewpoints to solve problems (Johnson, et al., 2007; Tashakkori & Creswell, 2007). There are various reasons for using mixed methods, including

development,[9] complementarity,[10] and triangulation[11] (Greene, Caracelli & Graham, 1989). The mixed-method approach helps neutralise the biases and limitations of the methods used (Creswell, 2003). The sequence varies in different studies, and it provides a better understanding of the research problem (Johnson, et al., 2007). There are three types of mixed methods approaches that Creswell (2003) suggested: sequential, concurrent and transformative. In concurrent approaches, data is collected and analysed at the same time and the findings compared, while in sequential methods, the finding from one approach feeds into the next approaches. Transformative approaches advocate for the vulnerable groups and can either be sequential or concurrent.

In a sequential approach, one mixed-method approach is mostly used to compare results of data collected from both qualitative and quantitative methods, to move from exploration (qualitative) to generalisation (quantitative), to use qualitative research to explain quantitative results, and to develop new instruments (Cresswell, 2003).

Prior studies on CHQs location used different methodologies to understand the location decision of CHQs. Most of the studies used secondary data with statistical analysis (Bel & Fageda, 2008; Coeurderoy & Verbeke, 2016; Davis & Henderson, 2008; Henderson & Ono, 2008; Klier, 2006; Klier & Testa, 2002; Meyer & Green, 2003; Pan et al., 2015; Pan & Xia, 2014; Tonts & Taylor, 2010; Wu & Ning, 2010), while the study by Jakobsen and Onsager (2005) used primary data collected through surveys, interviews, and case studies. There are few academic works on CHQs location in terms of the level of published work and the mapping of gaps therein (Menz et al., 2015; Rice & Lyons, 2010). Prior studies show frequent usage of secondary data and statistical analytical tools to explore CHQs location and site selection decision factors. The data are mostly

[9] Using one method to help develop the other method.
[10] To elaborate, enhance, or clarify the results of a method.
[11] Converge or validate results from different methods.

sourced from the stock exchange and other organisations that have data of different companies.

The research methodology used in this study is a sequential mixed method which combined qualitative research methods and quantitative conjoint analysis. The qualitative aspect, as Tuli (2010:101) notes, "treats people as research participants and not as objects as in the positivist research approach. This process emphasis can be an empowering process for participants in qualitative research, as the participants can be seen as the writers of their own history rather than as object of research." The behaviour of CHQs in South Africa when making location and site selection decisions is not clear, hence the need to conduct interviews to gain a better understanding of such decisions. Thereafter, the findings from the interviews helped in understanding the trade-offs made in through an online survey. Therefore, this study used a sequential mixed-methods approach, starting with interviews and using the results from interviews to do the survey.

The research analysed the dataset from the JSE to understand the factors influencing locational and site selection decision of CHQs. In this process, the researcher engaged actively with the dataset and the relevant literature in order to understand the dynamics of particular locations. To further unpack and understand locational and site dynamics, interviews and a survey were conducted to gain an understanding from those who have participated or are likely to participate in the locational and site selection decision-making processes.

3.4 Study Area

This study is particularly interesting in gaining understanding of key determinants of CHQs location and site selection in the South African context. South Africa currently has 284 municipalities that are divided into three categories:

- Category A—metropolitan municipalities (metros; 8)
- Category B—local municipalities (226), and
- Category C—district municipalities (44).

The research focused on the Category A municipalities—the metropolitan municipalities (metros), which in the South African context are defined as "large urban settlements with high population densities, complex and diversified economies, and a high degree of functional integration across a larger geographic area than the normal jurisdiction of a municipality" (White Paper on Local Government, 1998:51).

These metros are also known as unicities, as they have exclusive executive and legislative authority within their jurisdiction. The configuration of the metros came about during the transitional phase from the apartheid state to the democratic state. In 1999, the Municipal Demarcation Board (MDB) was given the mandate to work on the boundaries of the local government for the 2000 elections.[12] This mandate also implied that the MDB had to transform the apartheid settlement patterns. In 1999, six metros were initially created, and in 2011, two were added: Buffalo and Mangaung. The following metropolitan areas were created around the existing cities (Table 3.2):

[12] The establishment of the Municipal Demarcation Board was catered for in the 1996 constitution, and the board was formally established in 1999.

Table 3.2: Current metro configuration

Cities	Metropolitan Area	Year of Establishment
Cape Town	Cape Town	2001
Durban	eThekwini	2001
Ekurhuleni	Ekurhuleni	2001
Johannesburg	Johannesburg	2001
Port Elizabeth	Nelson Mandela	2001
Pretoria	Tshwane	2001
Bloemfontein	Mangaung	2011
East London	Buffalo	2011

Apart from the 3 metros located in close proximity to each other, the rest of the metros are spread throughout the country. One notable feature is that there are three metros concentrated in Gauteng Province and four provinces without a metro within their region (Limpopo, Mpumalanga, Northwest, and Northern Cape; Figure 3.1).[13]

[13] In addition to the metros, South Africa is also divided into nine (9) provinces—Limpopo, Gauteng, Mpumalanga, Northwest, Free State, KwaZulu-Natal, Northern Cape, Eastern Cape, and Western Cape.

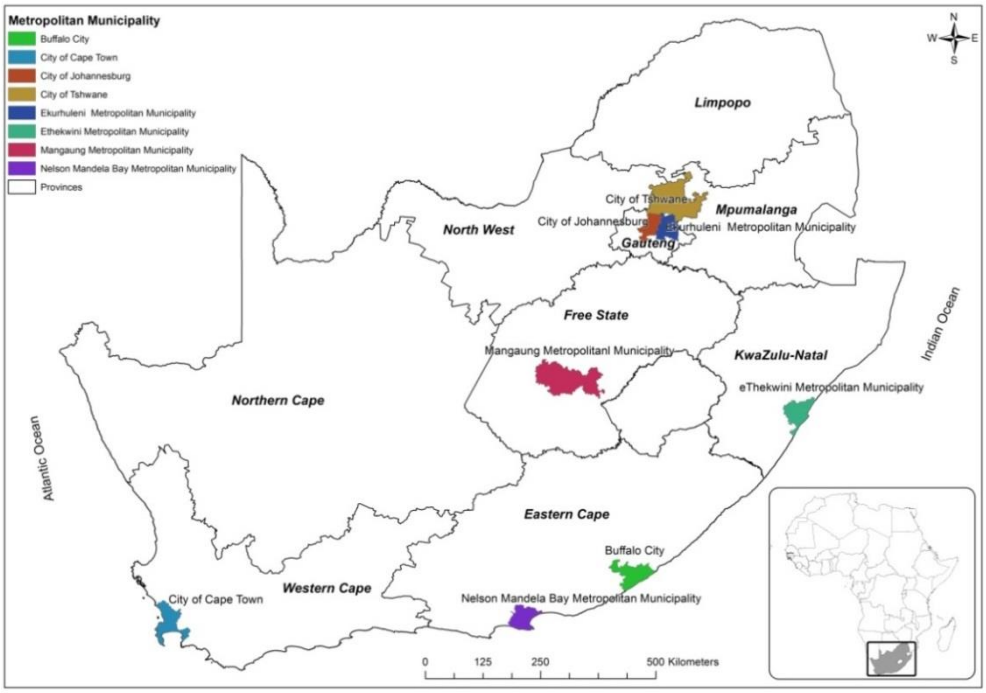


Figure 3.1: The location of Province and Metros in South Africa

3.5 Population

The population for this study was the CHQs listed on the JSE located within the borders of South Africa. There were 483 companies listed on the JSE (Main Board and AltX) on 21st September 2016.

The unit of analysis was each listed CHQs on the JSE across the various metros. The respondents for both the interviews and the survey were the designated personnel as determined by the firm. The preference was always someone involved at management level or sitting in the executive meetings of the company. These would be persons knowledgeable or informed about the company's location and site selection decisions. The following section focuses on the details on how the research was carried out.

3.6 Data Used in the Study

3.6.1 Types of Data

The sequential mixed methodology adopted in this study utilized both qualitative and quantitative approaches, therefore requiring that the study be exploratory and descriptive of CHQs location determinants in South Africa.

3.6.2 Data Sources

Primary and secondary data were used to explore the determinants of CHQs location and site selection in the South African metropolitan municipalities.

Secondary data for this study came from the following three sources as detailed below (Table 3.3):

Table 3.3: Sources of secondary data

Sources	Description
Datasets from JSE	The data collected from JSE contained companies' names, telephone numbers, email addresses, companies' websites and economic sectors which the companies belong to. This information was used to assess where the CHQs of the companies are located. The datasets were used to explore the level of concentration of companies across industries within metros.
EasyData Datasets	These data were utilized for understanding the economic specialisation of the different metropolitan municipalities. Location quotient and shift-share analysis were used to understand the economic specialisation/competitiveness of the metropolitan municipalities in terms of both income and employment. The data were accessed on 7 July 2017.

Secondary data were complemented by the primary data, which were obtained through two approaches: semi-structured interviews and a survey.

Semi-structured interviews

The interviews were conducted to confirm and also find out more attributes for location and site selection that were relevant to the South African case. This was necessary, since, although the literature had highlighted some factors, their applicability to South Africa was not clear.

A purposive sampling technique was used and enabled the researcher to select corporations from different sectors for interview and ensure that there was no duplication of sectors in the interview process. This was done to gain an understanding of the locational dynamics from the different sectors and those who are actively involved in the location decision-making process.

The process of the purposeful interviews unfolded as follows (Table 3.4):

Table 3.4: Interview process

Steps	Description
Step 1: Invitation	Invitation forwarded to companies listed on the JSE requesting participation and delegation of person (preferably from management or executive) who has an understanding of the locational dynamics of the company. Many emails were sent and several calls made to CEOs' secretaries, companies' receptions, and human resources departments.
Step 2: Appointment	In case of acceptance, appointments were set with a delegated person from the company. The participant received the following documentation for preparation for the interview: • Information sheet about the study (appendix A) • Questions that will be asked during the interview (appendix B)
Step 3: Actual Interview	Purposive semi-structured interview conducted. The interviews consisted of a combination of closed-ended questions about the location attributes, with some open-ended questions to allow the respondents to give additional information. • Respondents filled in the consent and assent form (appendix C). • The interview followed the questions sent to the company delegate. • The interviews were recorded where such permission was granted. • The researcher participated in the interview process by guiding and directing the interview and probing deeper to get clarity and to elicit the necessary answers.

The relevant factors from the face-to-face semi-structured interviews were identified. After the interviews, the survey questionnaire was updated.

The survey

The questionnaire was sent to all CHQs listed on the JSE (appendix D). The survey was a self-completed questionnaire distributed electronically using Qualtrics software. All respondents were expected to rate the attributes using a Likert scale from 0–10, with 0 being least preferred and 10 being most preferred. Respondents were given a maximum of 4 months to complete the survey.

The process of the online survey administered through Qualtrics unfolded as follows (Table 3.5):

Table 3.5: Survey process

Steps	Description
Step 1: Invitation	Invitation forwarded to companies listed on the JSE requesting participation and delegation of person (preferably from management or executive) who has an understanding of the locational dynamics of the company. Many emails were sent and several calls made to CEOs' secretaries, companies' receptions, human resources departments, and secretaries (legal personnel) At some point, the researcher went on the website to check for any email addresses and phone numbers so as to get in touch with the companies. Follow-up was done on the interview participants to also take part in the survey.
Step 2: Sending out Survey link	In cases of acceptance, the link to the survey was sent through to the respondents with the information sheet (appendix E).
Step 3: Online survey	The respondents were given an opportunity to fill in the survey in their own time.
Step 4: Reminders and Follow-ups	Reminders were sent after a week of no activity on the survey and reminders thereafter until the survey period ended.

3.7 Analytical Techniques

The data acquired from different sources, both secondary and primary, were analysed using different techniques. Location quotient and shift-share analysis were used for the secondary data, while thematic analysis, descriptive statistics, and conjoint analysis

were used for the primary data. The analytical techniques adopted follow the way data was collected and analysed (Table 3.6).

Table 3.6: Sequence of analytical techniques

Analytical Techniques	Sources of Data	Theoretical Approach
Secondary Data Analysis		
Location quotient	EasyData	Behavioural theory, institutional theory, and neo-classical theory
Shift-share analysis	EasyData	Behavioural theory, institutional theory, and neo-classical theory
Spatial analysis: Spatial directional trends	JSE Data	Behavioural theory
Primary Data Analysis		
Thematic analysis	Interviews results	Behavioural theory, institutional theory, and neo-classical theory
Descriptive statistics	Survey Results	Behavioural theory, institutional theory, and neo-classical theory
Conjoint analysis	Survey Results	Behavioural theory, institutional theory, and neo-classical theory

3.7.1 Location Quotient

This study presumes that the metropolitan municipalities are not just solely focused on developing a competitive and supportive business environment, but they also compete with each other to attract CHQs as potential investors in their local economies. Therefore, the metropolitan municipalities would seek to have a degree of

specialization in certain economic activities, when compared with other metros. Location quotient (LQ) is one of the popular techniques that compares a local economy to a national one (Moineddin, Beyene & Boyle, 2003). In this research, LQ is used to analyse the local economy, which in this case is regarded as metropolitan municipalities. Therefore, in this study LQ is applied to data collected on the number of JSE listed companies located in the eight metros.

LQ has been used since the 1940s in regional economics and economic geography (Miller, Gibson & Wright, 1991). The LQ technique looks at the relative size of a sector (such as employment or output) against the benchmark region (e.g., the national level). In this study, both employment and output were used to calculate the LQ. Any type of data can be used to calculate LQ provided there is comparable data in terms of time frames, classification, regional or larger-area reference, or a benchmark economy. In this way, LQ compares the growth of the local economy to the national one in the specific sector. Measured as a coefficient, it reveals what makes the metro unique or special. At the same time, LQ aids in identifying emerging and endangered industries within metros.

It is calculated by

$$\text{Location Quotient} = \left(e_i / e\right) \Big/ \left(E_i / E\right)$$

where

e_i = metropolitan employment in sector i

e = total metropolitan employment

E_i = national (or reference economy) employment in sector i

E = total national (or reference economy) employment.

In this study, the same formula is also used to analyse GVA.

A score of 1: National and local have identical share of an industry. This implies that the local is self-sufficient in that industry.

A score > 1: The local sector has greater share of earnings than the national one. This implies that the industry is producing more than what is required in the region. A very high LQ for a particular industry indicates a specialisation in that particular industry.

A score < 1: The local economy has a smaller share in the economy as compared to the national in that sector.

Assumptions

There are several assumptions that are made when using LQ. The major assumption that affects the coefficient specialisation is that the local economy moves at the same pace as the national economy across sectors. This argument is flawed because the two are usually at different paces (Isserman, 1977; Wang & Vom Hofe, 2008). Moreover, consumer taste and preferences, labour productivity, and consumption patterns vary across metropolitan areas. Therefore, the coefficient of specialisation may not explain why certain metropolitan municipalities have a comparative advantage; therefore, it is the responsibility of the analyst to make the connections. LQ trends give an indication of the changes over time in terms of the comparative advantages. In addition, the aggregation of data makes it difficult to understand the dynamics of particular industries. Some of the assumptions are not supported by empirical evidence.

Limitations of LQ

The LQ techniques group industries together in such a way that if there is industry that is exporting, it may be clouded by other ones. This is refereed as product mix, which can be eliminated by using a lower-level standard industrial classification. It is also important to note that LQ needs to be interpreted alongside the events and activities

that might affect the outcome (Isserman, 1977). Hence, shift-share analysis is used to explain some of the changes in the metros that LQ cannot explain.

3.7.2 Shift-Share Analysis

Shift-share analysis is used to capture how much each sector contributes to the local economy (job growth), which the LQ does not do. Shift-share analysis is not a new technique; it has been widely used in regional analysis. It can be used to determine the competitive industries within the metropolitan municipality, and this is the main reason for using it. Shift-share analysis compares metropolitan economic changes in terms of its growth or decline at two points in time, for instance, five- or ten-year intervals (Wang & Vom Hofe, 2008). Shift-share analysis examines the causes of change (growth or decline) in the metropolitan industry using three components; national growth share; industry mix share, and regional (metropolitan) growth share.

The shift-share analysis formula combines three components as follows:

$$e_i^{t+n} - e_i^t = \mathrm{NS}_i + \mathrm{IM}_i + \mathrm{RS}_i$$

where

e_i^t and e_i^{t+n} are the beginning and ending values of the economics variables within a particular industry.

The three components are calculated as follows:

- **National Growth Effect (NS_i)**: This explains the relationship between the growth of the metropolitan (regional) industry and the national economy. The assumption made in this instance is that if the national economy grows, the same is expected to happen to the metropolitan (regional) economy. This is calculated by

$$\mathrm{NS}_i = e_i^t(\mathrm{G}) \, .$$

- **Industry Mix Effect (IM_i):** This is the share of the metropolitan (regional) industry growth, and the growth of the specific industry at a national level is used to explain this. It is calculated by

$$IM_i = e_i^t(G_i - G) .$$

- **Regional Competitive Effect (RS_i):** This explored the causes of change in a given industry when the growth taking place in an industry is not explained by the national trends in that industry or the economy.

$$RS_i = e_i^t(g_i - G_i) ,$$

where

G is the total percentage change in the economic variable nationwide for all industries combined

G_i and g_i are the national and metropolitan (regional) industry specific percentage changes respectively.

These three components help in understanding the change in the metropolitan (regional) industry in comparison to the national economy. An additional component was added: expected change. This is the sum of the national growth share and the industrial mix share. It measures the expected growth rate of a metropolitan industry if it follows the growth rate of the same industry at a national level. Through this analysis, one is able to determine if the metropolitan (regional) industry is growing because of the growth in the overall national economy, the growth of specific industries at the national level, or the competitiveness of the metropolitan economy.

Shift-share can be used for historical data and not for forecasting (Galambos and Schreiber, 1978; Wang & Vom Hofe, 2008). It leaves the analyst with the responsibility to uncover the underlying factors for such a change in different industries. It shows which industries are competitive and which ones are underperforming in relation to the national economy.

3.7.3 Spatial Analysis Using Spatial Directional Trends

The datasets from the JSE have all companies listed irrespective of where the CHQs are based. The spatial analysis of the data was useful to locate each company on the map of South Africa and also to determine the CHQs that are located outside the borders of South Africa[14] and also outside the metropolitan municipalities. GIS was used for spatial visualisation of the location of CHQs in South Africa. Apart from checking the physical location of the CHQs, an analysis of the datasets was done to understand the locational factors through spatial mapping of companies alongside the transport infrastructure within the area that might influence the location decision. The datasets also enabled exploring the level of concentration of companies within the metros.

Lefever argued that when mapping points of any activities, "it is very unlikely that locations of any particular kind will be uniformly distributed over the entire map" (1926:88). The distribution can be measured through central tendency or dispersion (Furfey, 1927; Lefever, 1926). These are some of the spatial analytical tools that can be used to measure points in space. The spatial statistics use distance and space, and they look at the spatial relationships to understand the spatial distribution and pattern of a feature. To understand the pattern and trends of CHQs, standard deviational ellipses were used to describe the patterns in terms of orientation and direction of the CHQs. The ellipse is calculated by the standard deviation of the *x*- and *y*-coordinates from the mean centre to check for the orientation of CHQs distribution.

3.7.4 Thematic Analysis

Thematic content analysis is an analytical tool used in qualitative research. The importance of this technique is that it highlights themes emerging from data. In this

[14] See Section 4.2 in Chapter 4.

study, interview data were used for thematic analysis. The collected data were transcribed and coded to enable identification of themes in the data.

3.7.5 Descriptive Statistics

Descriptive analysis was used to enable the description and summarisation of collected data. These data included the industry type, the location, the number of years in the operation, the number of years in the location, the co-location with production, and the metro in which the CHQs are located. The summary of the data was done using frequency distribution. Summary statistics were also used, and together with the descriptive statistics, pave the way for the more extensive statistical analysis.

3.7.6 Conjoint Analysis

The study adopted conjoint analysis, which is an experimental approach that measures customers' preferences for products or services (Kuzmanović, Gušavac & Martić, 2012a; Venkatesh, Chan & Thong, 2012). This multivariate research tool is aimed at "determining the relative contribution of multiple factors to consumer satisfaction" (Kuzmanović et al., 2012a:1699). It measures judgment and perception (Luce and Tukey, 1964) and is used in the consumer choice theory in the field of economics (Lancaster, 1966). Conjoint analysis is now widely used in the field of social sciences and applied sciences in areas such as marketing (Green & Rao, 1971; Gustafsson, Herrmann & Huber, 2003; Raghavarao, Wiley & Chitturi, 2010; Rao, 2014; Cattin & Wittink, 1982), as well as in product management (Bodog & Floriana, 2012; Popović et al., 2012), economics (Kuzmanović & Martić, 2012a; Kuzmanović & Martić, 2012b; Wittink, Vriens & Burhenne, 1994) and health care (Kuzmanović, Vujošević & Martić, 2012b). There are different types of conjoint analysis used in different contexts: full-profile, two-attribute trade-offs, adaptive conjoint, choice-based conjoint, hybrid conjoint, and self-explicated conjoint analysis.

Since gaining momentum in the 1970s, conjoint analysis has continued to be implemented in various fields. Green & Srivinasan (1990:3) noted the usage of conjoint analysis as follows: consumer goods (59%), industrial goods (18%), and financial (9%) and other services (9%). It was used as a technique for measuring and predicting consumer preferences. In the United States and in Europe, conjoint analysis has gained popularity as a preferred method in the commercial sector, especially in new products development (Wittink et al., 1994). Part of the reasons for its popularity is its ability to measure how consumers or industries make trade-offs when confronted with alternative choices (Wittink & Bergesteun, 2001).

The nature of conjoint analysis is that it reveals the way people make complex decisions (Popović et al., 2012). Moreover, it gives room for **con**sidering **joint**ly all the different factors or all factors in making complex decisions, which imply that judgement or decision is conjointly based rather than based on individual attributes (Kuzmanović et al., 2012a).

The basic dependence model expresses conjoint analysis as

$$Y_1 = X_1 + X_2 + X_3 \ldots + X_N$$

where Y_1 can be either nonmetric or metric and X is nonmetric.

There are three main categories of utility estimation methods used in conjoint analysis: full profiles only, self-explicated plus profiles, and self-explicated data only. This study will make use of self-explicated (compositional) data. The self-explicated stage involves the evaluation of the level of each attribute, one at a time on a desirability scale, followed by the evaluation of the attributes on an importance scale.

The research adopted the self-explicated conjoint model, which is a compositional approach derived from psychology (attitude model) by Fishbein-Rosenberg in the 1960s and 1970s. The self-explicated conjoint model employs an additive effect with

no interactions between attributes. In using this model, the following process is followed (Green, Goldberg, and Montemayor, 1981):

1. Respondents were shown a set of attribute and attribute levels. An example for this can be accessibility as a factor, with the possible levels of car, air, bus, train, and maritime port. The levels should generally be limited to four to eight.

2. Respondents were expected to evaluate one attribute and attribute level at a time using a 10-point desirability scale. They were expected to choose the least preferred (0) and the most preferred (10); thereafter, the remaining levels were rated in relation to the least and the most preferred. Ties are allowed on a 0-10 scale. When 0 is used, then the design is allowing an unacceptable attribute level. The level of preference scores were derived from this process.

3. Then the respondents assigned a weight value from 0 to 100 to each factor in terms of its importance. This is how the constant sum of importance scores was calculated.

4. Thereafter, the respondent's self-explicated utility for stimulus was calculated by adding the sum of the products' importance weights and desirability scores. The average utility score of each level was calculated as follows:

$$\text{(average) utility score} = \frac{LOP\ Score \times Importance\ Value}{100}$$

The "importance value" is the value that the respondents gave to each attribute, and it is what differentiates the LOP score from the utility score.

The self-explicated conjoint model is a compositional model that makes use of the part-worth model. The functional form of part-worth model is

$$Y_{j_1\, j_2 \ldots j_p} = \sum_{p=1}^{P} F_p Y_{j_p}$$

where $Yj_1\, j_2 \ldots j_P$ denotes the self-explicated utility of some stimulus profile defined by level *j (j = J, Jj)* of attribute *j(p =1,P);* F_p is the function denoting the self-explicated importance weight of attribute p and Y_{j_p} denotes the desirability score of level j of attribute p. In practice, $F_p Y_{j_p}$ is estimated only for a selected set of levels for Y_{j_p}.

The results are interpreted using the importance weight and desirability scores in the results and discussion sections.

The self-explicated conjoint model has given insight into how individual corporations make location and site selection decisions, how they value different attributes given the overall attributes and the overall evaluation.

In today's environment, gaining competitive advantage is crucial in every industry. The world has become very competitive in such a way that developers have to know the features that matter most in real estate. Companies want the most desirable features when making office location and site selection decisions. At the same time, developers, metropolitan governments, and other spheres of government want to generate maximum benefits (profits, tax revenues, employment, and more clients) from their investments in production and infrastructure developments, where applicable. Most important is to strive to beat competitors, as each metro wants to host CHQs. In order to get a clear understanding of the features that are important in location and site selection, market analysis is necessary, as it helps in delivering the right product. The analysis has to look first on the demand side of the equation; that is, it must first look

at the needs and check if providing for them is feasible or cost effective. From this demand analysis, one is able to understand how companies value different features or attributes of the products that one prefers.

The self-explicated conjoint model can help developers and service providers to understand the impact that each distinct attribute can have on the CHQs decision-making process. This technique provides a better understanding of the preferences as well as the importance level of each preference.

Stimulus development is an important element of conjoint analysis. In this stage, attributes and attribute levels need to be defined.

Attributes and attribute levels are another building block for conjoint analysis. *Attributes* in this instance refer to characteristics of CHQs location and site selection. At the same time, corporations view location and site selection as composed of various attributes and levels. Corporations, when making location and site selection decisions, place a certain utility (value) on each attribute. The total utility is derived from the total utility of the levels of each attribute. Attributes and levels were derived from the literature on office and headquarters location.

- *Accessibility,* this entails among other things access to information, to services, and to the location at which the corporation is located.[15] In terms of accessibility through transportation, companies may prefer different modes of transportation to and from their location, hence the use of different modes of transportation to create attribute levels. These include access by car, train, bus, maritime port and air.

[15] Aarland et al., 2007; Harrison, Todes, & Watson, 1997; Rogerson, 1998; Pan & Xia, 2014

- *Linkages to other markets* are important for some corporations. Corporations prefer locations that enable them to compete in the global market and also to increase their market share.[16] The linkages include frequent and efficient local and international flights, and exports to regional and international markets.
- *Financial factors* are essential to the well-being of a corporation. The corporation exists to make a profit, and therefore, corporations tend explore different ways through which they can maximise profit.[17] Thefore, financial factors were configured in terms of profit maximisation, financial intermediation services, wage levels, competitive advantage, and local market growth potential.
- *Clustering and synergies* of different activities that are essential to the success of companies. Companies choose to locate in close proximity to other companies and services needed to boost their competitiveness.[18] Clustering and synergies tends to be focused on proximity to production, service providers, competing industries, and supporting industries, as well as educational institutions.
- *Specialised services* provide the necessary support to both companies and their employees. The services include institutional investors and investment banks, legal services, management services, communication services and availability of skilled labour force.[19]

[16] Aarland et al., 2007; Birkinshaw et al., 2006; Bolisani & Scarso, 1996; Forte & Brandão, 2008; Harrison et al., 1997; Holt et al., 2008; Pellenberg, van Wissen, & van Dijk, 2002; Rogerson, 1998.
[17] Holt et al., 2008; Meyer & Benito, 2016; O'Mara, 1999; Wilkinson, 2005.
[18] Appel-Meulenbroek & Feijts, 2007; Henderson & Ono, 2008; Rabianski et al., 2001; ul Haq, Drogendijk, & Holm, 2017.
[19] Bloom & Grant, 2011; Overman & Puga, 2010; Turok, 2013.

- *Infrastructure requirements* differ across industries and corporations.[20] It is essential to understand the infrastructure needs of different industries. The focus tends to be on telecommunication, transport systems, and power and energy.
- *Government incentives* may act as pulling factors for certain industries to locate in particular areas. Several authors attested to the importance of incentives in influencing location decisions of corporations.[21] The incentives considered were rebates, property taxes, tax incentives, subsidies, legal and regulatory framework, and provision of supporting infrastructure.
- *Prestige locations* are preferred, as they increase a location's attractiveness with top-class amenities and infrastructure (Appel-Meulenbroek, 2008; Pan & Xia, 2014). Therefore, it is necessary to understand which amenities, services, and infrastructure are required for different industries. In this study, the following things are considered under prestige location: amenities, working-class population, quality housing, educational facilities, and high company market.
- *Operating costs* vary between corporations and industries. However, certain locations have low operating costs that tend to attract companies.[22] In this category the following are considered: low operating costs, competitively priced labour and rent costs.

Furthermore, other factors, such as the growing demand of the company's products or services, the global financial markets, and desires of shareholders, may also influence the location of CHQs.

A list of all the attributes and their respective levels are shown in Table 3.7.

[20] Egger, Radulescu, & Strecker, 2013; Ghemawat, 2011; Holt et al., 2008; Loree & Guisinger, 1995; Mariotti, Piscitello, & Elia, 2014; Pan et al., 2015; Strauss-Kahn & Vives, 2009.
[21] Egger et al., 2013; Chan & Poon, 2012; Ghemawat, 2011; Laamanen et al., 2012; Luiz & Radebe, 2016; Rymarzak & Siemińska, 2012; Voget, 2011
[22] Henderson & Ono, 2008; Holt et al., 2008; Luiz & Radebe, 2016; O'Mara, 1999.

Table 3.7: Location attributes and levels used in the survey

Attribute	Levels
Accessibility	By car
	By train
	By bus
	By maritime port
	By air (proximity to international airports and/or proximity to domestic airports)
Linkages to other Markets	Frequent and efficient local flights
	Frequent and efficient international flights
	Exports to regional markers
	Exports to international markets
Financial factors	Profit maximization
	Financial intermediation services
	Wage levels
	Competitive advantage
	Local market growth potential
Clustering and Synergies	Proximity to production
	Proximity to service providers
	Proximity to competing industries
	Proximity to supporting industries
	Proximity to educational institutions
Specialized Services	Institutional investors and investment banks
	Legal services
	Management services
	Communication services
	Skilled labour
Developed Infrastructure	Telecommunications
	Transport systems
	Power and energy
Government Incentives	Rebates
	Property taxes
	Tax incentives
	Subsidies
	Friendly legal and regulatory framework
	Supportive infrastructure
Prestige Location	Amenities
	Working-class population
	Quality housing
	Educational facilities
	High company market
Operating Costs	Low operating costs
	Competitively priced labour
	Competitively priced rent

The site selection attributes are different from the location attributes. These attributes are strategic to the business operation.

- *Sustainability* of the occupied property may have impact on the running cost of the corporation. Some corporations are cautious about the amount of energy they consume and the environment; hence they opt for energy-efficient properties (Ho et al., 2005). Energy management, desk sharing, indoor climate, hot desking, and green star rating were considered.

- *Building interior* may facilitate the ease of doing business and interaction amongst space users. At the same time, corporations may be interested in occupying properties that have flexible layouts.[23] Layout flexibility, space efficiency, and finishes were considered.

- *Internal access* is important for some corporations. These include the movement of people inside the property that may be strategic to the general operation of some corporations (Ho et al., 2005). Existence of lifts, quality of staircase, and facilitation of people with disabilities to move inside the building were considered.

- *Building services* are strategic to the company. These services increase the satisfaction of employees, as well as their productivity.[24] The services include air conditioning and heating, security systems, parking facilities, backup generators, fire escapes, fire extinguishers, kitchens, bathrooms, and wall and floor coverings.

[23] Dent & White, 1998; Haynes, 2008a; Lizieri, 2003; Gibson, 2003; Dettwiler, 2008; Levy & Peterson, 2013; Nourse & Roulac, 1993; Warren et al., 2007.
[24] Ciaramella & Dettwiler, 2011; Luoma et al., 2010; Nunnington & Haynes, 2011; Rothe et al., 2011; Sing et al., 2006.

- *The external appearance* of the building or site that the company occupies acts as a marketing or branding tool for the company (Fenker, 1999; Rogerson, 1998; Škevin, 2011). This includes the property's general image, prestige, condition, and architecture.

- *Supporting facilities* may aid in increasing the productivity of employees. Although employees may have different needs, some of the needs may be common and essential for their productivity[25]. Security, internet (Wi-Fi), cleaning services, catering and vending, meeting places, reception, waste management, water supply, and video conferencing were considered.

- *The lease agreement* only applies to corporations that do not own the properties. Companies have different preferences for the nature and type of lease (Adnan et al., 2008). Flexible rent, nature of lease, rental contract, terms of lease, percentage of rent escalation, multi-tenant building, and company ownership of the property were considered.

- *Costs* of doing business in different properties vary, and corporations weight these costs differently (Adnan & Daud, 2010; Holt et al., 2008; O'Mara, 1999). The costs may be from property taxes, utilities, and building maintenance.

Table 3.8 provides a summary of the site selection attributes and levels.

[25] Ghemawat, 2011; Leishman et al., 2003; Luoma, et al., 2010; Sing et al., 2006; Turok, 2013.

Table 3.8: Site selection attributes and levels used in the survey

Attributes	Levels
Sustainability	Energy management
	Desk sharing
	Indoor climate
	Hot desking
	Green star rating
Building Interior	Layout flexibility
	Space efficiency
	Finishes
Internal Access	Existence of lifts
	Quality of staircase
	Disabled friendly
Building Services	Air conditioning and heating
	Security system
	Parking facilities
	Backup generator
	Fire escapes
	Fire extinguishers
	Kitchen
	Bathrooms
	Wall/floor covering
External Appearance	Image, prestige
	Condition of the premises
	Building height
	Building shape
	Architecture
Supporting Facilities	Security
	Internet (Wi-Fi)
	Cleaning services
	Catering/vending
	Meeting places
	Reception
	Waste management
	Water supply
	Video conferencing
Lease	Flexible rent
	Nature/terms of lease
	Rental contract
	Percentage of rent escalation
	Multitenant building
	Own the property
	Not applicable
Costs	Property taxes
	Utility costs
	Building maintenance costs

The number of profiles derived from the location attribute and attribute levels is 675,000 (Table 3.9), and it is calculated as follows: five attributes at five levels, one attribute and four levels, two attributes at three levels, and one attribute at six levels ($5^5 \times 4 \times 3^2 \times 6$). The site selection profiles were 486,000, developed from two attributes at five levels, three attributes at three levels, one attribute at ten levels, one attribute at nine levels and one attribute at eight levels ($5^2 \times 3^3 \times 10 \times 9 \times 8$). The implication is that 675,000 and 486,000 profiles would be tested for all possible combinations, but to avoid respondent fatigue, self-explicated conjoint analysis was employed, as opposed to traditional conjoint analysis. The self-explicated conjoint analysis minimises information overload, as respondents are presented with one attribute at a time (Green & Srinivasan 1990).

Table 3.9: Attributes for location and site selection

Location Attributes	Site Selection Attributes
Accessibility (with five levels)	Sustainability (with five levels)
Linkages to other markets (with four levels)	Building interior (with three levels)
Financial factors (with five levels)	Internal access (with three levels)
Clustering and synergies (with five levels)	Building services (with ten levels)
Specialized services (with five levels)	External appearance (with five levels)
Developed infrastructure (with three levels)	Supporting facilities with nine levels)
Government incentives (with six levels)	Lease (with eight levels)
Prestige location (with five levels)	Costs (with three levels)
Operating costs (with three levels)	

3.8 Issues of Validity and Reliability

3.8.1 Reliability

Saunders, Lewis, and Thornhill (2009) defined reliability as the extent to which consistent results are obtained on different occasions through the use of the same tools. Participant error and bias and researcher error and bias pose threats to reliability. The use of standardised interviews and questionnaires also ensures that the instruments are reliable.

3.8.2 Validity

Validity measures the soundness of the research methods and design. This study made use of a mixed method to increase the validity of the results (Bouchard, 1976). Triangulation between the different methods used was necessary to validate the results (Denzin, 1978). Conjoint analysis has a higher validity level, as it evaluates the entire product rather than each element of the product individually. A survey of the headquarters in different sectors is strong in external validity, as the data has a broader generalizability. Therefore, validity is ensured by the use of both an online survey and personal interviews.

3.9 Data Collection Challenges

The researcher faced the following challenges in the data collection process:

- *The unwillingness of companies to participate in research by an early-career researcher:* Some companies were just unwilling to participate in research associated with PhD studies. This is a common challenge associated with early career researchers when collecting primary data (Rimando et al., 2015). Hoskins and White (2013) observed that at times it is hard to convince people to participate.

- *Companies concerned with the research impacting their market share:* Some of the companies were reluctant to participate, thinking that disclosing information from their company might affect their share price. It was hoped that companies listed on the JSE as public companies would be more open to share information, as such can help advance their standing; however, this was not so, as companies were unwilling to participate in the research.
- *Challenges associated with online surveys:* Although the online survey can be interactive with the respondents, and increases accessibility, there are several challenges that were faced in this research:
    - *Low response rate:* From the population of 267 companies, only 43 companies, which accounted for 16 percent, participated in the online survey. The challenge of the low response rate has been reported as a common one with online surveys (McDonald & Adam, 2003). This was so in spite of up to three reminders that were sent to the companies. Zhang (2000) argued that the number of respondents received will decrease with each follow-up.
    - *Limited control of the survey process:* Once the email was sent out requesting the participants to engage on the online survey, the researcher did not have control or oversight as to who was responding to the survey. The limited control of the data collection environment as soon as the email was sent out was also reported (Ye, 2007). The hope was that the relevant person would participate in the survey; however, this could not be validated.
    - *The length of survey:* The survey was intended to take the participant about 20 minutes. There is a possibility that the respondents may have felt that the survey would take too much of their time. Survey data patterns indicate that some respondents started the survey but did not complete it. It was also observed that some respondents tended not to

do the more technical section. It may be that some felt that it was taking them more time than expected or that some could not understand or make sense of the technical questions. Respondents may also have forwarded the link to someone else to fill in the survey, which might have resulted in incomplete surveys (Goree & Marszalek, 1995).

3.10 Chapter Summary

The methodology chapter has outlined in detail how this research was undertaken. Below is a summary of the different phases of this study (Figure 3.2):

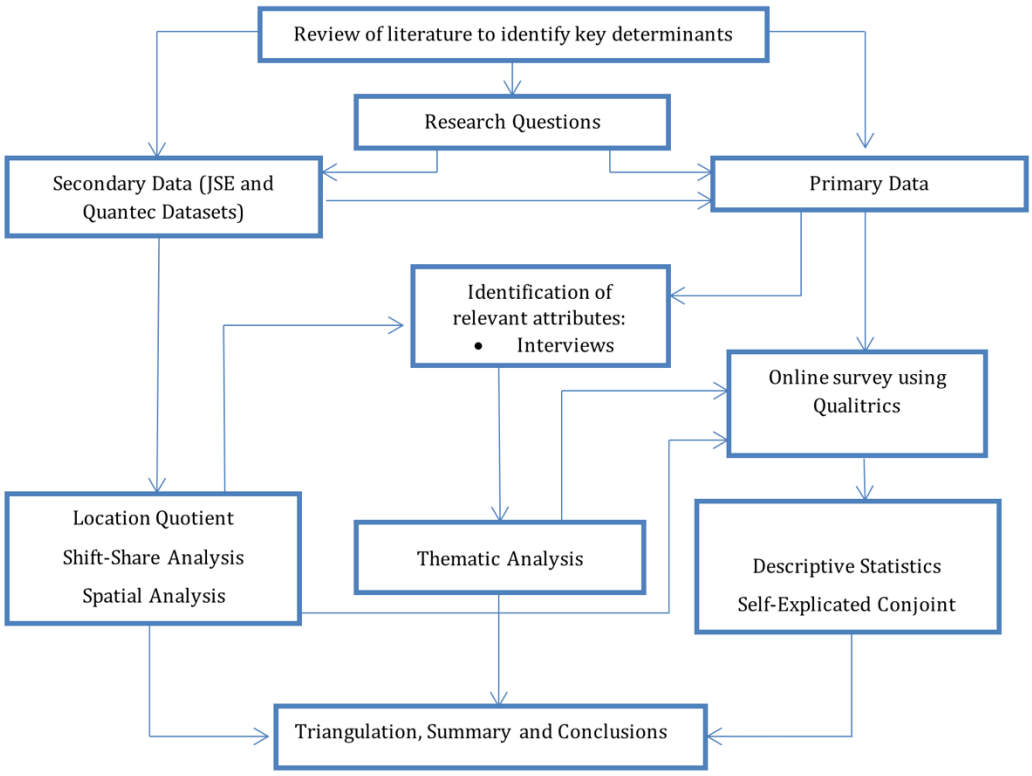


Figure 3.2: Summary of the different phases of the study

There are different ways to understand the underlying factors influencing CHQs location and site selection. Different methods have been used in different contexts to

understand the factors of CHQs location and site selection. Some have yielded similar results while adding new factors that are context specific. In South Africa, just like in other contexts, there are many factors that influence CHQs location and site selection. This chapter has indicated that several techniques may be used to answer such a question. Chapter 4 focusses on the analysis of the secondary data using LQ, shift-share analysis, and the spatial analysis of the JSE data, and chapter 5 focusses on the primary data, which includes thematic analysis, descriptive statistics, and conjoint analysis. These two chapters unpack the location dynamics of CHQs in South Africa's context.

Chapter 4

Secondary Data Analysis: Metropolitan Specialisation, Competitiveness and Spatial Distribution of CHQs

4.1 Introduction

This chapter analyses the specialisation and competitiveness of the metros using both employment and Gross Value Added (GVA) figures. A set of quantitative methods was used to gain a better understanding of the local economy, observing economic trends in each metro in relation to the national economy. The location quotient (LQ) and shift-share analysis as quantitative tools enabled the identification of the industries that contribute the most to the local economy and those that have the potential of advancing the local economy. Therefore, this chapter responds to the research question about the relationship between the economic specialization/competitiveness of South Africa's different metropolitan areas and the types of corporate headquarters located within them.

The chapter is divided into four sections: the first section presents JSE data and associated industries; the second deals with location quotient (LQ) analysis using both employment and GVA for each metro; the third focuses on the shift-share analysis using employment and GVA for each metro; the fourth deals with the spatial analysis of CHQs in all metros; and the fifth synthesizes the different sections covered in this chapter.

4.2 Classification of the JSE Data

In analysing the JSE data, the study classified the companies under three economic industries: primary, secondary, and tertiary industry. Primary industry involves the harvesting of raw materials or natural resources; secondary industry engages in the transformation of raw materials into goods / finished products; tertiary industry distributes the finished products to the market. This tertiary industry focusses on

supplying of services either to consumers or to other businesses. Within these industries, there are 10 economic industries classified using South Africa's standard industrial codes (SICs) version 7 (Table 4.1).

Table 4.1: The standard industrial classification

Industries	Standard Industrial Classification
Primary	Agriculture, forestry, and fishing
	Mining and quarrying
Secondary	Manufacturing
	Electricity, gas, and water
	Construction
Tertiary	Wholesale and retail trade, catering, and accommodation
	Transport, storage, and communication
	Finance, insurance, real estate, and business services
	General government
	Community, social, and personal services

There were 483 listed companies as of 21 September 2016. Some companies were double listed, and therefore one of the listings was eliminated in such cases. The double-listed companies were identified by attention paid to similar names and same telephone numbers, email addresses, websites, and physical addresses. This resulted in the elimination of 128 companies; 70 companies with CHQs outside the borders of South Africa were also eliminated. The companies were eliminated by looking at companies with neither a South African telephone dialling code of +27 nor a South African physical address. This was also verified by searching online to see where the CHQs are located. Eighteen companies also had their CHQs located outside the metros, leaving the population for this study at 267 CHQs (Table 4.2). The following section analysed the LQ and shift-share analysis using the Standard Industrial Classification.

Table 4.2: Distribution of CHQs

SIC	Total September Listing 2016	CHQs in South Africa	CHQs within the Metros	Associated Industries
Finance, Insurance, Real Estate, and Business Services	162	123	120	Support services, travel & leisure, banks, equity investment instruments, financial services, life insurance, non-equity investment, non-life insurance, real estate investment, software and computer services
Community, Social, and Personal Services	12	11	10	Personal goods, health equipment & services, pharmaceutical & biotech
Construction	19	18	18	Construction & material
Electricity, Gas, and Water	4	2	2	Oil & gas production
Manufacturing	66	65	54	Industrial engineering, general industrial, electro & electrical equipment, media, leisure goods, food production, auto & parts, industrial metals & minerals, forest & paper, chemicals, beverage
Mining and Quarrying	47	29	27	Mining
Transport, Storage, and Communication	20	14	14	Fixed-line telephone, mobile telecommunication, industrial transportation
Wholesale and Retail Trade, Catering, and Accommodation	25	23	22	General retail, food & drug retail
Total	**355**	**285**	**267**	

4.3 Location Quotient: Relative Employment and GVA Share of the Metros

The classification of industries into basic and non-basic industries has some challenges in that the consumption, production patterns, and required labour force vary across markets, hence the focus of this study on using LQ to assess the level of concentration. Since both employment and GVA figures were used, the same principles were applied for both of them in the determination of the level of concentration. The dataset from the JSE has neither agriculture, forestry, and fishing nor general government; therefore, these industries were eliminated from the analysis.

In calculating the LQ, each metro was treated as a regional economy. It was necessary to make observations based on the long-term trends of the metropolitan economy to gain a better understanding of the economy over time. Therefore, the study looked at the LQ from 1996–2016 on the basis of 5-year intervals to gain insight into the performance of each industry. However, it is essential to note that the changes in the national or benchmark region will affect the local economy. For instance, if there is an increase in manufacturing employment at the national level with constant sectoral share in the regional economy, the LQ will show a declining sectoral share in the regional economy. The next section analyses the employment and GVA LQ for each metro.

4.3.1 City of Cape Town Metropolitan Municipality

Employment: City of Cape Town has several industries that have employment shares higher than the shares of the same industries in the benchmark economy. These industries are manufacturing; wholesale and retail trade, catering, and accommodation; transport, storage, and communication; and finance, insurance, real estate, and business services. All these industries have an LQ greater than one (Figure 4.1). Wholesale and retail trade, catering, and accommodation decreased to one in 2011, indicating a decrease in concentration of employment. However, between 1996–2006 and 2016, the LQ for this industry has been above one. The

above-one LQs for manufacturing; transport, storage and communication; and Finance, Insurance, Real Estate, and Business Services indicate the continued specialisation over the years. The construction industry has been well above one between 1996 and 2001, just above one between 2006 and 2011, and has continually decreased until reaching one in 2016. The above-one LQ may be an indication of some sort of specialisation of the regional economy in the particular industry during the period 1996–2016. The other industries' employment share has been lower than the national economy. These industries were mining and quarrying; electricity, gas and water; and community, social and personal services.

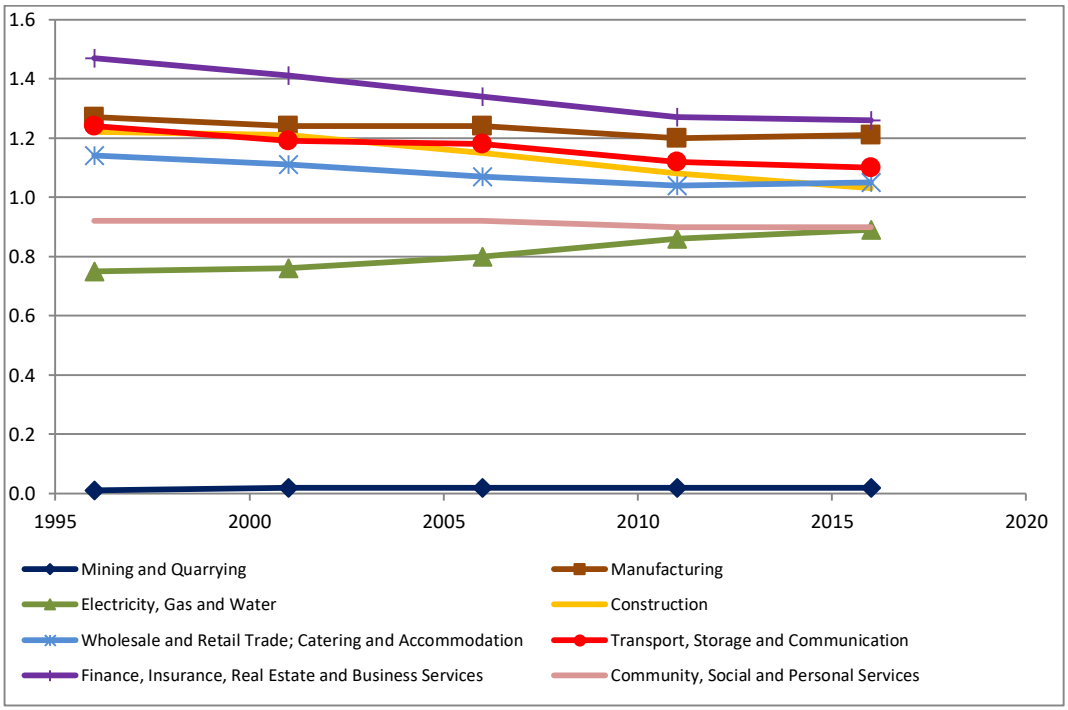


Figure 4.1: City of Cape Town employment LQ

GVA: Figure 4.2 indicates that manufacturing; wholesale and retail trade, catering, and accommodation; transport, storage and communication; finance, insurance, real estate, and business services; and community, social and personal services had a gross value-added share higher than that of the national economy in these industries during the period 1996–2016. The finance, insurance, real estate, and business services industry has an LQ well above one, which may indicate that the industry is important to the metropolitan economy. During 1996 and during the period 2006–

2011, the LQ of the construction industry was above one, but it was below one in 2001. By 2016 in the same industry, the LQ was just above one, indicating a decrease in GVA in this industry relative to national employment. The LQ of the wholesale and retail trade, catering, and accommodation industry was way above one in 2001 but remained above one in the other periods (1996; 2006 and 2011), except in 2016, where it was at one. There was also a steady decline in transport, storage, and communication; finance, insurance, real estate, and business services; and community, social, and personal services, although all these industries were still way above one.

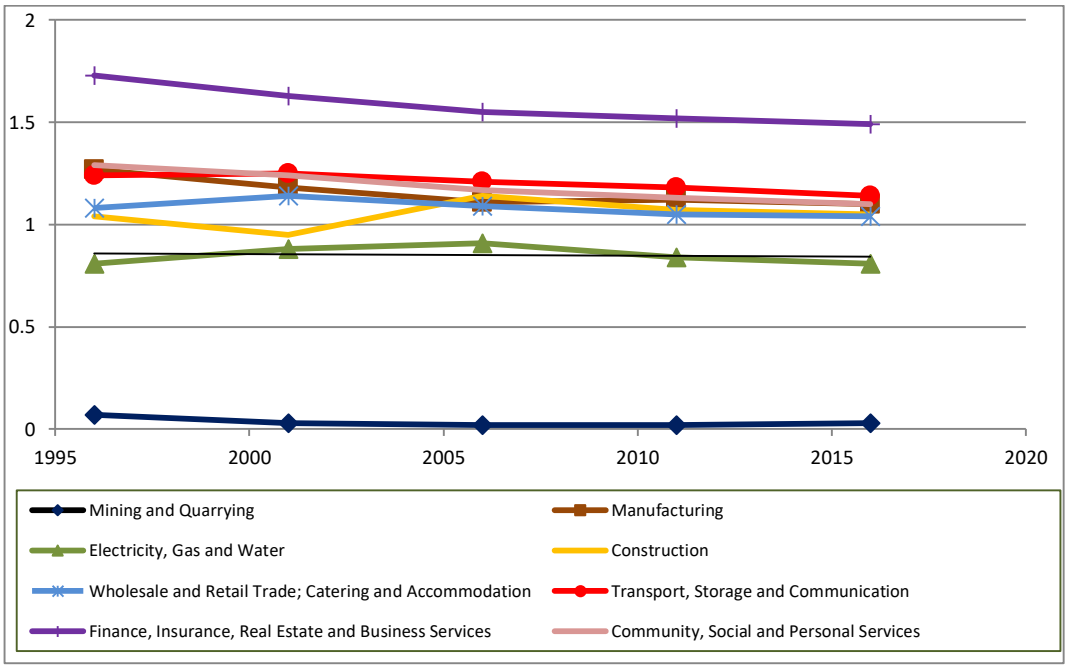


Figure 4.2: City of Cape Town GVA LQ

4.3.2 Buffalo City Metropolitan Municipality

Employment: The employment shares of wholesale and retail trade, catering, and accommodation and of community, social, and personal services are higher than the share of the same industries in the national economy. The LQ of these industries were well above one, indicating some form of specialisation during the period 1996–2016 (Figure 4.3). The manufacturing industry has shown a steady decline since 1996. During the period 1996–2006, the LQ in this industry was way above

one, and it was at one in 2011 and eventually below one by 2016. The employment share of electricity, gas, and water in 2001 was one, indicating that the local economy was self-sufficient; however, it had a share below one in other periods of 1996 and 2006–2016. The LQ for electricity, gas, and water; construction; transport, storage, and communication; and finance, insurance, real estate, and business services industries has been hovering very close to one during the period 1996–2016. The mining and quarrying industry was underrepresented in the local economy, with the LQ close to zero during the period 1996–2016.

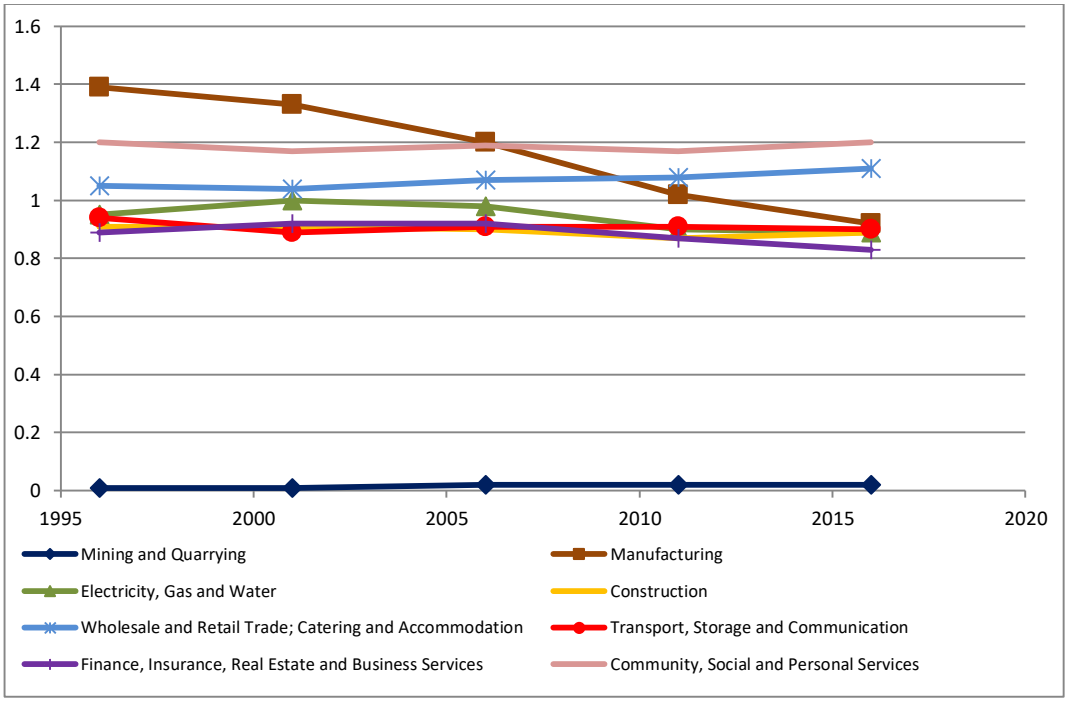


Figure 4.3: Buffalo City employment LQ

GVA: During the period 1996–2016, the GVA share in wholesale and retail trade, catering, and accommodation and in community, social, and personal services has been way above one (Figure 4.4). In 1996 finance, insurance, real estate, and business services had a GVA share higher than the national, but that declined until it reached one in 2016. The construction industry shows a different trend, an LQ just below one in 1996 but gradually increasing throughout the years. Manufacturing had the same share of GVA in 1996 as in 2006–2016. The other

industries are well below one except transport, storage, and communication, which is closer to one.

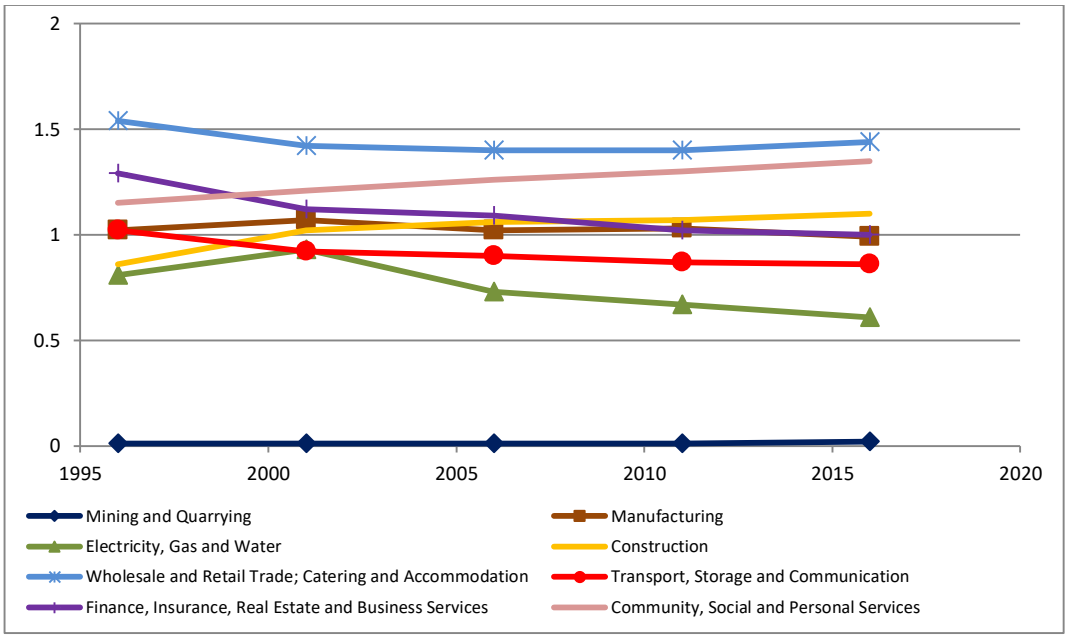


Figure 4.4: Buffalo City GVA LQ

4.3.3 Nelson Mandela Bay Metropolitan Municipality

Employment: The manufacturing industry is the only industry that was over represented in Nelson Mandela Bay during the period 1996–2016 as compared to the national share and other industries. There were several industries with employment share steadily just above one during the period 1996–2016 (Figure 4.5). These were the wholesale and retail trade, catering, and accommodation and the transport, storage, and communication industries. The community, social, and personal services industry had an LQ above one in 1996; it dropped to one during the period 2001–2011, dropped further to below one in 2016, and is gradually becoming insignificant to the local economy as compared to the national share. During 1996–2006, the finance, insurance, real estate, and business services industry had an equal employment share with the national economy, but the local economy's share decreased during 2006–2016. The construction industry has been

lingering just below one since 1996. The mining and quarrying industry has been very insignificant to the local economy, having an LQ near zero since 1996.

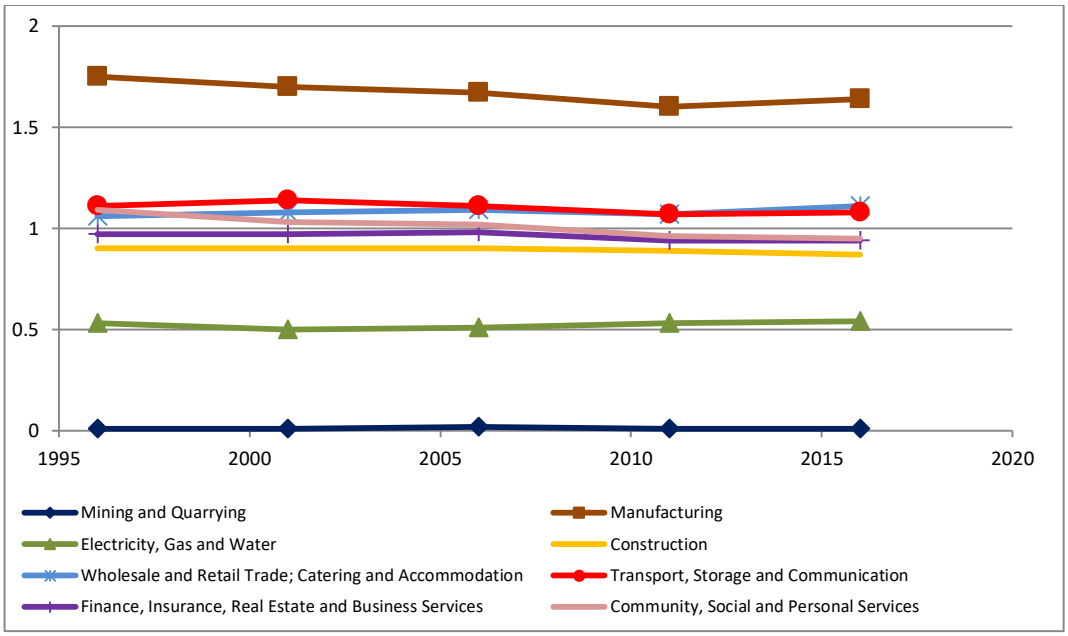


Figure 4.5: Nelson Mandela Bay employment LQ

GVA: The GVA share of the local economy is much higher than one for manufacturing, wholesale, and retail trade, catering, and accommodation and for transport, storage, and communication, as compared to the share in the national economy. The LQs in these industries have been above one over the period 1996–2016 (Figure 4.6). However, there is a noticeable decline in wholesale and retail trade, catering, and accommodation and in transport, storage, and communication over the years, indicating a decrease in the GVA concentration relative to the national in these industries. The manufacturing industry has increased its strength to the local economy over the same period. In 1996 the finance, insurance, real estate, and business services industry had a well-above-average LQ, but that gradually decreased over the years until it reached one in 2016. There is a steady decrease in this sector's contribution to the local economy relative to the national. The community, social, and personal services industry had an LQ very close to one over the period 1996–2016. The mining and quarrying industry has contributed very little to the local economy, indicated by the LQ of close to zero.

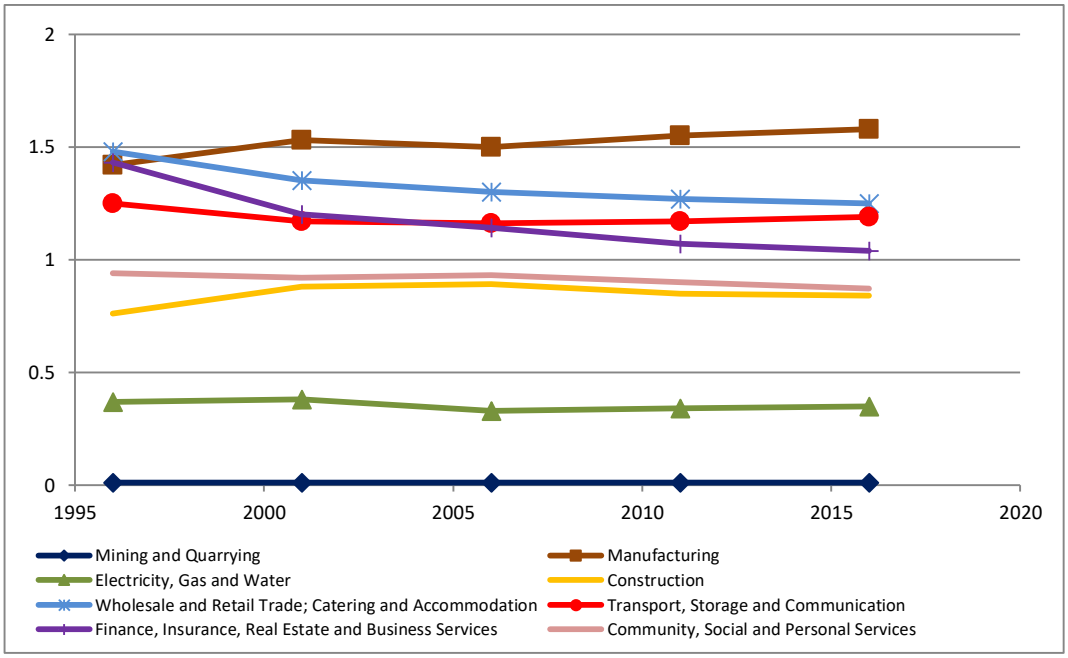


Figure 4.6: Nelson Mandela Bay GVA LQ

4.3.4 eThekwini Metropolitan Municipality

Employment: The employment share of manufacturing; transport, storage, and communication; wholesale and retail trade, catering, and accommodation; and finance, insurance, real estate, and business services is higher than the share in the national economy. Although these industries have an LQ greater than one, manufacturing and transport, storage, and communication are well above one, which may be an indication of specialisation within the local economy (Figure 4.7). Furthermore, in all these industries, there was a decrease in employment concentration over the period 1996–2016 relative to the national employment. The community, social, and personal services industry has been on the decline since 1996. In 1996 this industry remained above one and decreased to one during the period 2001–2006, and then further dropped below one during the 2011–2016 period. It has gradually lost its strength in the local economy relative to the national economy. The construction industry had the same employment share as national in the period 1996–2001; it thereafter decreased during the period 2006–2016. Electricity, gas, and water remained very close to one throughout 1996–2016, while

mining and quarrying had a much lower share in the local economy relative to the national share.

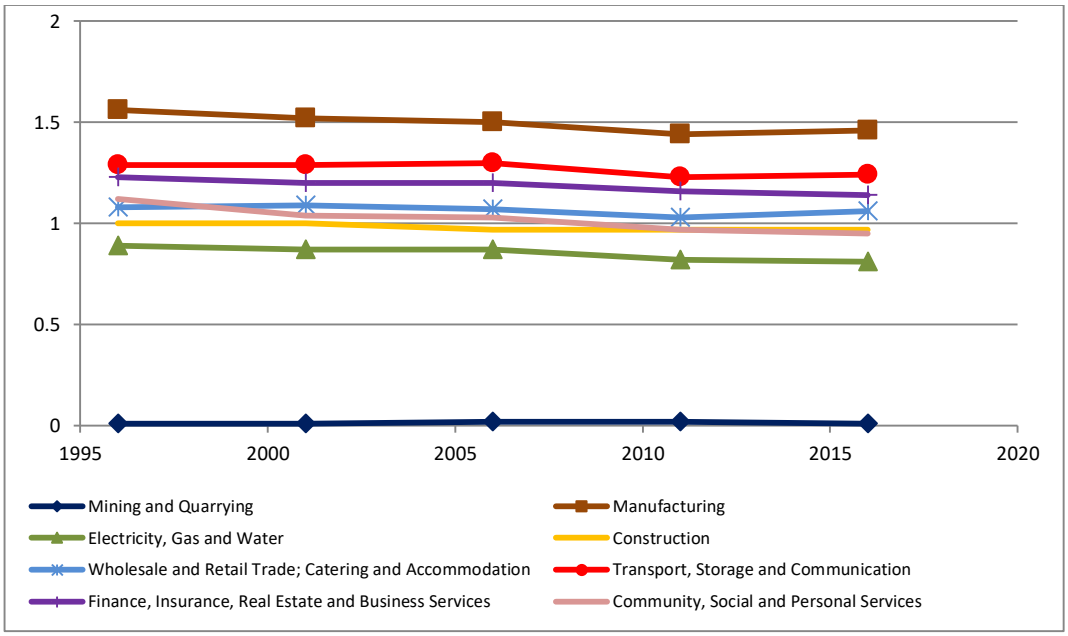


Figure 4.7: eThekwini employment LQ

GVA: The GVA share of manufacturing; construction; transport, storage, and communication; and wholesale and retail trade, catering, and accommodation is higher than the share of the same industries in the national economy. However, manufacturing, construction, and transport, storage, and communication have an LQ well above one, which may be an indication of specialisation in these industries (Figure 4.8). In 1996 electricity, gas, and water had the same share as national, and in 2001, it had a share higher than national. However, from 2006–2016, the GVA share in this industry decreased but remained very close to one over this period. Finance, insurance, real estate, and business services declined over the period 1996–2016. It was only in 2016 that the industry fell fairly below one. Community, social, and personal services decreased over the years; during the period 2006–2016, the LQ in this industry remained close to one.

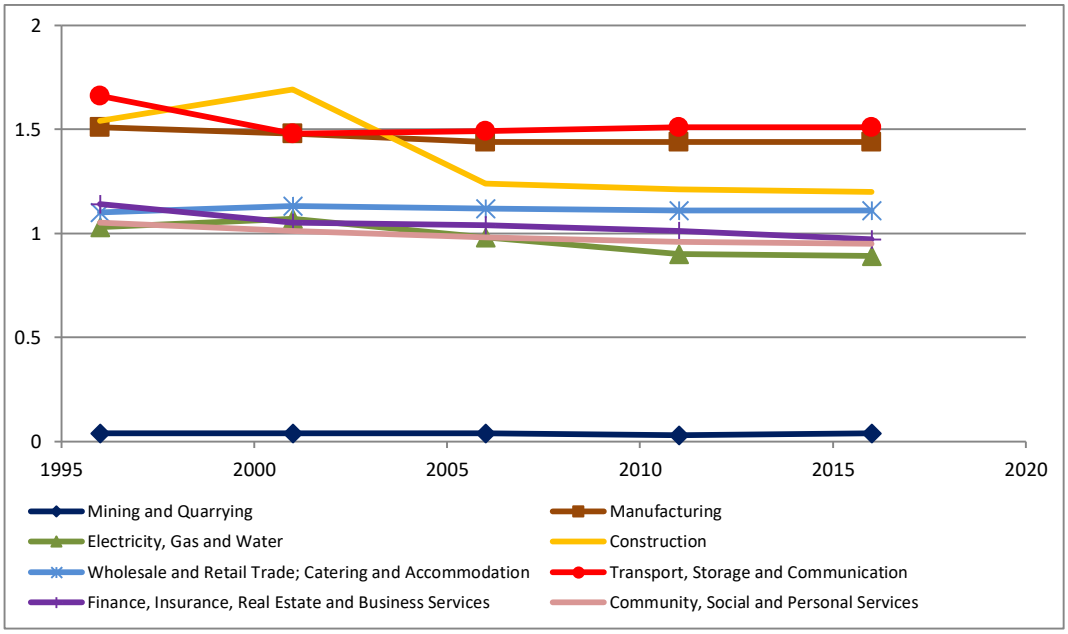


Figure 4.8: eThekwini GVA LQ

4.3.5 Mangaung Metropolitan Municipality

Employment: Community, social, and personal services is the only industry that is overrepresented within the Mangaung economy as compared to the national economy. The LQ well above one is an indication of some specialisation in this industry. This industry remained well above one over the period 1996—2016 (Figure 4.9). Following the community, social, and personal services industry is transport, storage, and communication; wholesale and retail trade, catering, and accommodation; and electricity, gas, and water, having an LQ just above one from 1996–2016 except in electricity, gas, and water, which decreased to one in 2011. The construction industry fluctuated between one and close to one over the period 1996–2016. However, in 1996, this industry had an LQ above one. Manufacturing and finance, insurance, real estate, and business services remained close to one over the period 1996–2016. The mining and quarrying industry employment share is quite lower that the national share, and it is an industry that is underrepresented within the Mangaung local economy relative to the national economy.

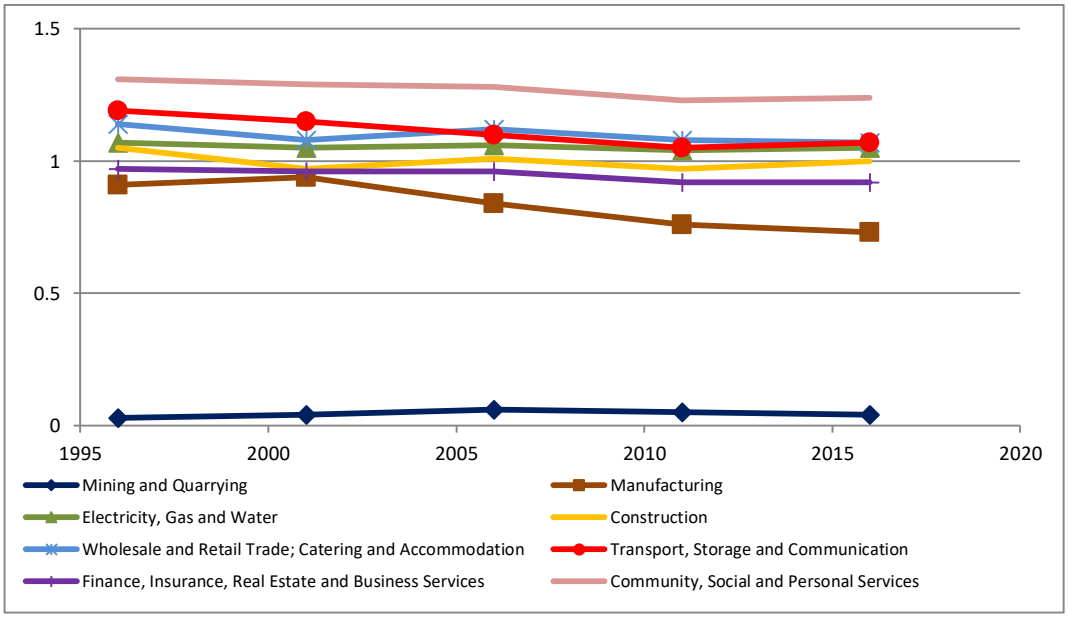


Figure 4.9: Mangaung employment LQ

GVA: During the period 1996–2016, the GVA share of community, social, and personal services; transport, storage, and communication; wholesale and retail trade, catering, and accommodation; and electricity, gas, and water was higher than the share of the same industries in the national economy (Figure 4.10). These industries have an LQ well above one throughout the period, and this might be an indication of specialisation in these industries. The finance, insurance, real estate, and business services industry was very significant during the period 1996——2006 with an LQ way above one. Over time, this industry's GVA decreased, reaching one in 2016. During the 1996–2001 periods, the LQ for the construction industry remained above one and then decreased to close to one during 2006–2016. The manufacturing and the mining and quarrying industries remained low in their GVA share relative to the share in the national economy.

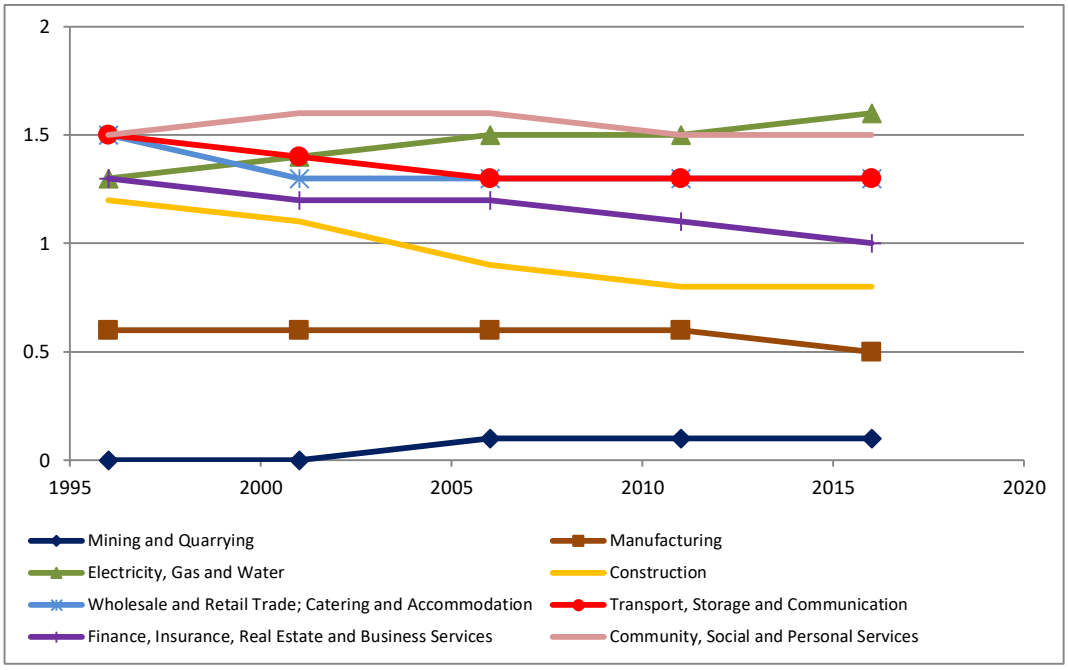


Figure 4.10: Mangaung GVA LQ

4.3.6 Ekurhuleni Metropolitan Municipality

Employment: The transport, storage, and communication; finance, insurance, real estate, and business services; and manufacturing industries had an LQ well above one over the period 1996–2016, signifying specialisation in these industries (Figure 4.11). The employment share in these industries is higher than the share in the national economy in the same industries. At the same time, the electricity, gas, and water and the wholesale and retail trade, catering, and accommodation industries had an employment share higher than the national during the 1996–2006 periods, thereafter decreasing to just above one. In 2016 the wholesale and retail trade, catering, and accommodation LQ was just above one, while that for the electricity, gas, and water industry remained low at one. In the construction industry, the employment share was higher than national during 1996–2001; in 2006 the LQ was one, and thereafter the employment share was lower than the share in the national economy. Community, social, and personal services and mining and quarrying remain low in terms of concentration of employment relative to the national.

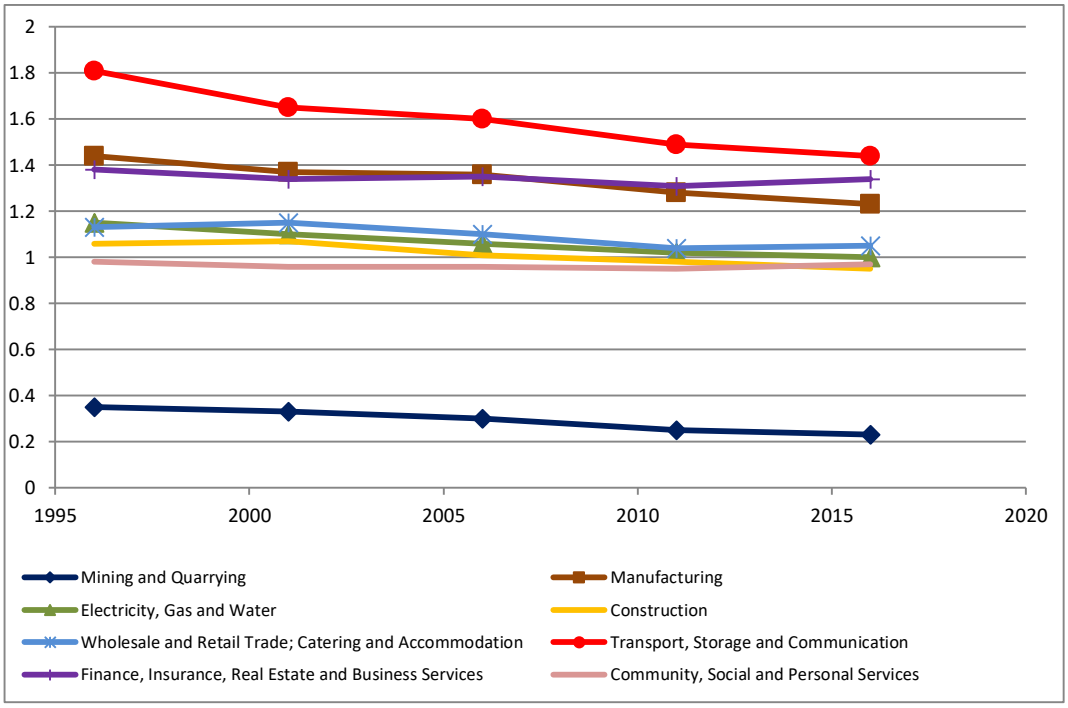


Figure 4.11: Ekurhuleni employment LQ

GVA: The GVA share of the local economy in manufacturing and in transport, storage, and communication is much higher than the share in the national economy. In these two industries, the LQ was much higher than one throughout the period 1996–2016 (Figure 4.12). This may also be an indication of specialisation in these industries. The construction and the wholesale and retail trade, catering, and accommodation industries had a share lower than the national from 1996–2001. On the one hand, in 2006, wholesale and retail trade, catering, and accommodation remained lower than national, but it had equal share for the period 2011–2016 with the national share. On the other hand, the construction industry increased its share, with the LQ just above one in 2006, and it increased to have a GVA share higher than the national in 2011–2016. The finance, insurance, real estate, and business services industry had an LQ lower than one in 1996, but it remained above one during the period 2001–2016. The LQ of the construction industry started lower than one in the period 1996–2001, but it remained above one from 2006–2016. During the 2011–2016 period, the GVA share of wholesale and retail trade, catering, and accommodation started to gain momentum, having equal share

between the local and national economy. Before this period (i.e., 1996–2006), it was lower than the share in the national economy. Community, social, and personal services remained just below one over the same period, while mining and quarrying remained well below one.

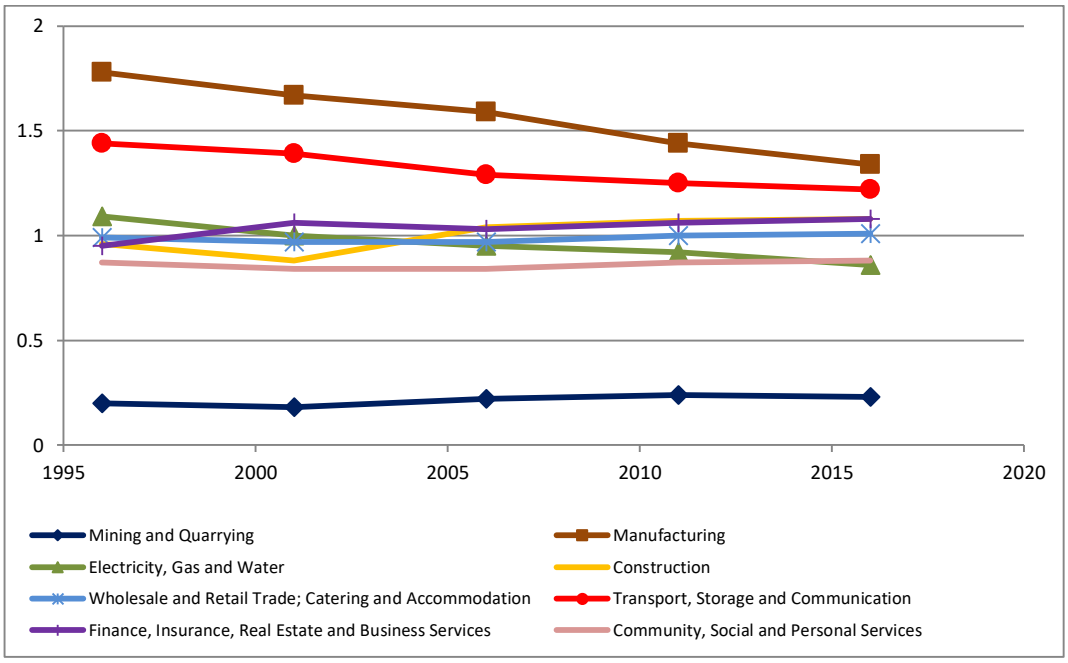


Figure 4.12: Ekurhuleni GVA LQ

4.3.7 City of Tshwane Metropolitan Municipality

Employment: During the period 1996–2016, the share of the finance, insurance, real estate, and business services and the transport, storage, and communication industries was higher than the share of the same industries in the national economy (Figure 4.13). Throughout this period, these industries had an LQ greater than one, but the finance, insurance, real estate, and business services industry maintained a much higher LQ throughout. Transport, storage, and communication had a much higher LQ during the 1996–2006 periods, but that decreased during 2011–2016. The employment share of community, social, and personal services industry was also higher than the share in the national economy throughout the 1996–2016 periods. In 1996 wholesale and retail trade, catering, and accommodation had an LQ greater than one, while the construction industry was at one. Thereafter, these

two industries remained close to one in the period 2001–2006 and then fell below one during 2011–2016. Electricity, gas, and water; manufacturing; and mining and quarrying had a lower employment share than the national.

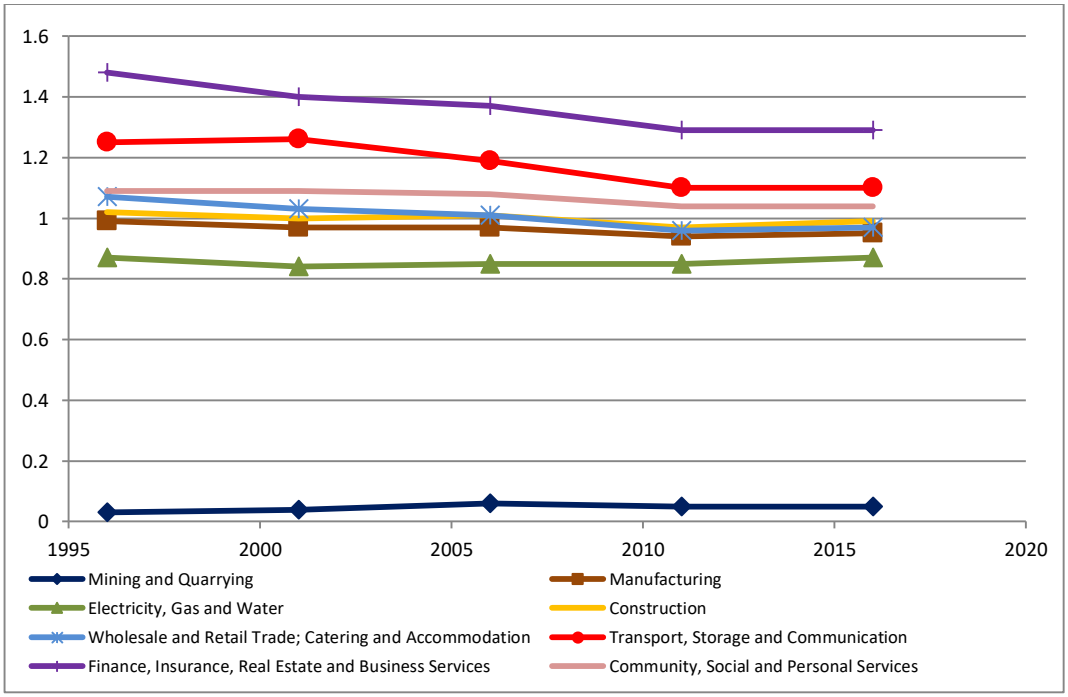


Figure 4.13: City of Tshwane employment LQ

GVA: Finance, insurance, real estate, and business services and transport, storage, and communication were the two industries having an LQ greater than one during the period 1996–2016, but transport, storage, and communication had an LQ of one in 1996 (Figure 4.14). During 1996–2001 periods, the manufacturing and the community, social, and personal services industries had an LQ of one; manufacturing continued with an LQ of one and thereafter remained below one. On the community, social, and personal services industry, from 2006–2016, the LQ of this industry remained below one. The other industries had a GVA share lower than the national economy from 1996–2016.

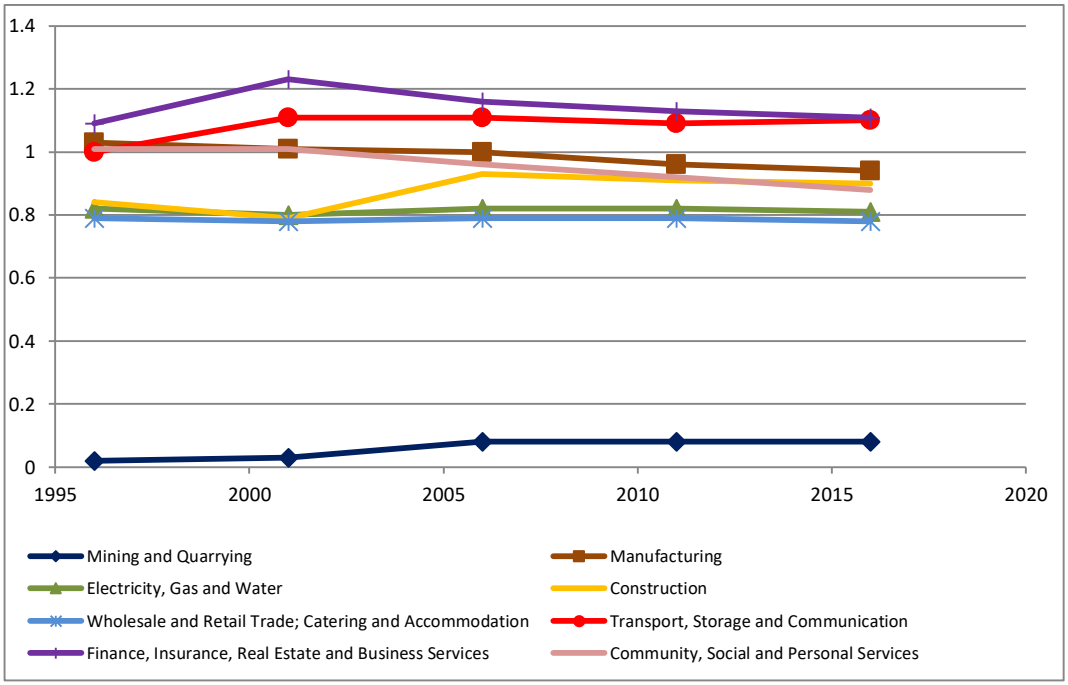


Figure 4.14: City of Tshwane GVA LQ

4.3.8 City of Johannesburg Metropolitan Municipality

Employment: During the period of 1996–2006, the employment share of the finance, insurance, real estate, and business services; construction; wholesale and retail trade, catering, and accommodation; transport, storage, and communication; and community, social, and personal services industries were higher than the share in the national economy (Figure 4.15). During the same period, the construction and the community, social, and personal services industries remained constant, while the finance, insurance, real estate, and business services; wholesale and retail trade, catering, and accommodation; and transport, storage, and communication industries decreased in terms of employment concentration relative to national. During 2011–2016, the construction; wholesale and retail trade, catering, and accommodation; and community, social, and personal services industries had equal share of employment with the national economy while finance, insurance, real estate, and business services and transport, storage, and communication continued with a much higher share than national. In all these industries, finance, insurance, real estate, and business services industry had an LQ well above one throughout the

period 1996–2016, indicating specialisation within the local economy. The manufacturing and the electricity, gas, and water industries had an LQ of one during the period 1996–2016 except for 2001, when electricity, gas, and water was just below one. Mining and quarrying remained underrepresented in the local economy.

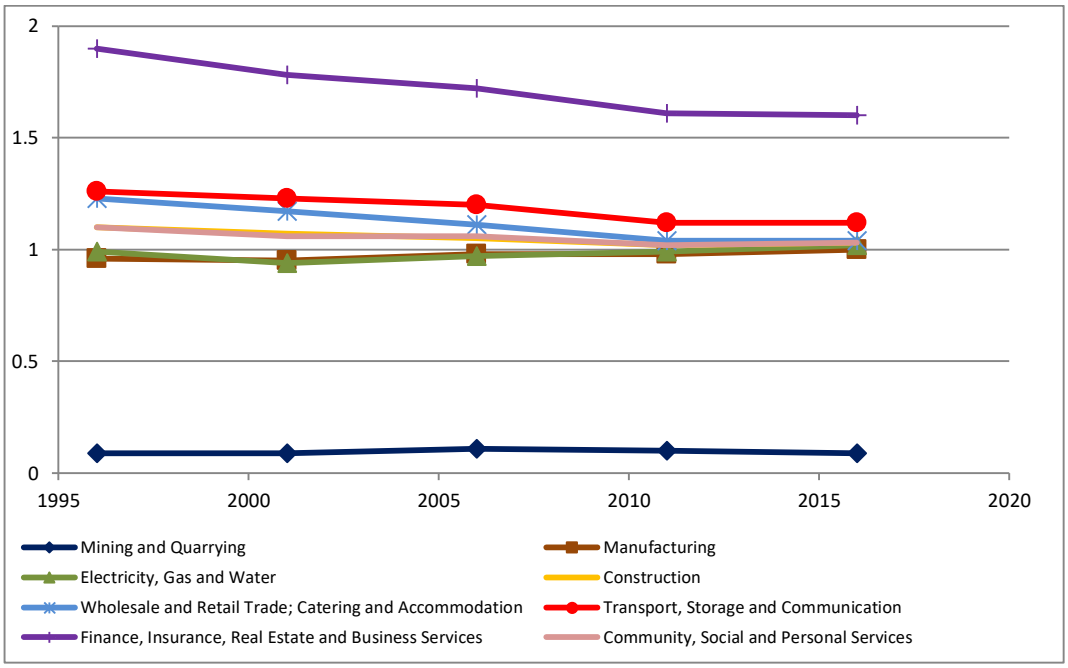


Figure 4.15: City of Johannesburg employment LQ

GVA: During 1996–2006, the share of employment in the manufacturing and the finance, insurance, real estate, and business services industries was higher than the share of the same industries in the national economy. Thereafter, employment share in manufacturing was equal to the national, while in finance, insurance, real estate, and business services it remained higher than that of the national economy. In 1996 the wholesale and retail trade, catering, and accommodation and the community, social, and personal services industries had LQs well above one, while the electricity, gas, and water and the transport, storage, and communication industries had LQs of one. In 2001 transport, storage, and communication had an LQ just above one that thereafter remained at one (Figure 4.16). Community, social, and personal services decreased the GVA share until it was lower than one in 2016. The rest of the industries had GVA shares of lower than one, with mining and quarrying being the lowest.

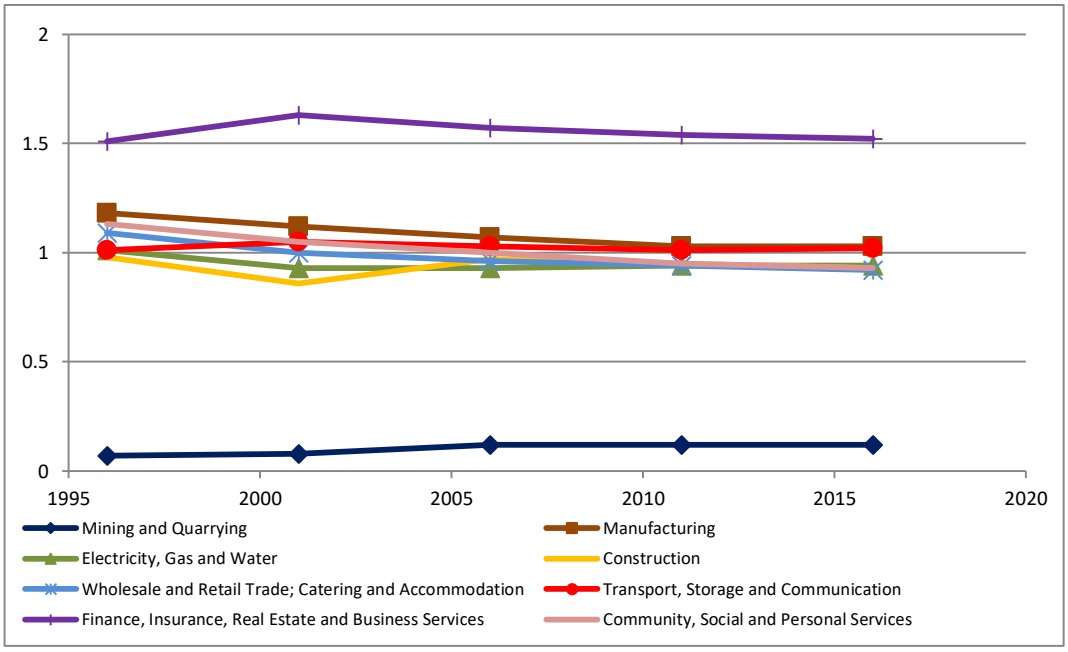


Figure 4.16: City of Johannesburg GVA LQ

An observation of the LQs across all metros shows a steady and noticeable decline in the economy. Most industries have been losing their strength over time. Although some metros had greater shares of both employment and earnings in some industries, special attention is needed to either boost or even maintain their current shares. Many of the industries in the different metros are engaged in non-basic activities, where they are producing just enough to meet the consumption needs within their metros.

Taking a snapshot of the LQs of both the inland and the coastal metros in 2016 indicates that they specialise in several industries. The coastal metros show specialisation across all metros in the wholesale and retail trade, catering, and accommodation industry, while manufacturing also is prominent across the metros except Buffalo City. In the inland metros except Mangaung, there is specialisation across all in finance, insurance, real estate, and business services, as well as in transport, storage, and communication across all metros (Table 4.3). City of Johannesburg is the only metro that shows specialisation in few industries compared to the other metros (inland and coastal).

Table 4.3: Specialisation across industries in 2016

	GVA LQ 2016	Employment LQ 2016		GVA LQ 2016	Employment LQ 2016
Coastal Metros			**Inland Metros**		
City of Cape Town	Manufacturing Transport, storage, and communication Construction Finance, insurance, real estate, and business services Community, social, and personal services	Manufacturing Wholesale and retail trade, catering, and accommodation Transport, storage, and communication Finance, insurance, real estate and business services	**Mangaung**	Community, social, and personal services Transport, storage, and communication Wholesale and retail trade, catering, and accommodation Electricity, gas, and water	Electricity, gas, and water Wholesale and retail trade, catering, and accommodation Transport, storage, and communication Community, social, and personal services
Buffalo City	Wholesale and retail trade, catering, and accommodation Construction Community, social, and personal services	Wholesale and retail trade, catering, and accommodation Community, social, and personal services	**Ekurhuleni**	Manufacturing Construction Transport, storage, and communication Finance, insurance, real estate, and business services	Wholesale and retail trade, catering, and accommodation Transport, storage, and communication Finance, insurance, real estate and business services Manufacturing
Nelson Mandela Bay	Manufacturing Wholesale and retail trade, catering, and accommodation Transport, storage, and communication	Manufacturing Wholesale and retail trade, catering, and accommodation Transport, storage, and communication	**City of Tshwane**	Finance, insurance, real estate, and business services and Transport, storage, and communication	Finance, insurance, real estate, and business services Transport, storage, and communication Community, social, and personal services
eThekwini	Manufacturing Construction Transport, storage, and communication Wholesale and retail trade, catering, and accommodation	Manufacturing Transport, storage, and communication Wholesale and retail trade, catering, and accommodation Finance, insurance, real estate, and business services	**City of Johannesburg**	Finance, insurance, real estate, and business services	Finance, insurance, real estate, and business services Transport, storage, and communication

Although the LQ is showing these trends, it is important to note that LQ has some inherent weakness, as stated in the methodology chapter. The weakness affects the way the data may be interpreted, hence the need to use another quantitative analysis. The following section analysed the competitiveness of the metros using shift-share analysis.

4.4 Shift-Share Analysis

There are various factors that contribute to economic growth and decline within an industry. The national growth share, the industry mix share, and the regional competitive share are the three components that help in understanding the causes of this change (Wang & Hofe, 2008). The shift-share analysis was based on the same data used for the LQ analysis, that from 2011 and 2016. The unique industry mix within a metro may have a positive influence leading to the competitiveness of some industries. The focus is on the metropolitan growth share to see in which industry the metro has a comparative advantage. The metro with a higher growth share in an industry indicates that the industry has been more successful than the same industry in other metros. This success is an indication of a comparative advantage that the metro has in that particular industry. The metropolitan employment change (job change) and the expected change in employment within the metro explain the performance of the industry, which might not be linked to its competitiveness. An industry might be performing well, but if its performance follows national trends of a well-performing industry, the industry's performance has nothing to do with unique metropolitan factors stimulating growth.

The strength on the employment side might be an indication of industries that co-locate production and headquarters, while strength on the GVA side may imply that the production is located outside that metro. The assumption is that all the company's output is reported on the CHQs balance sheet.

4.4.1 City of Cape Town Metropolitan Municipality

Employment: The wholesale and retail trade, catering, and accommodation and the electricity, gas, and water industries are the only ones that have a positive

metropolitan growth share (Figure 4.17). Electricity, gas, and water has a small margin of metropolitan growth share as compared to other industries. The above-one metropolitan growth share is an indication of industries that outperformed the national trends. Electricity, gas, and water has a competitive effect in the metro, while wholesale and retail trade, catering, and accommodation is performing well, and there is potential for growth; at the same time, it is an important industry for City of Cape Town because the city is more competitive in this industry.

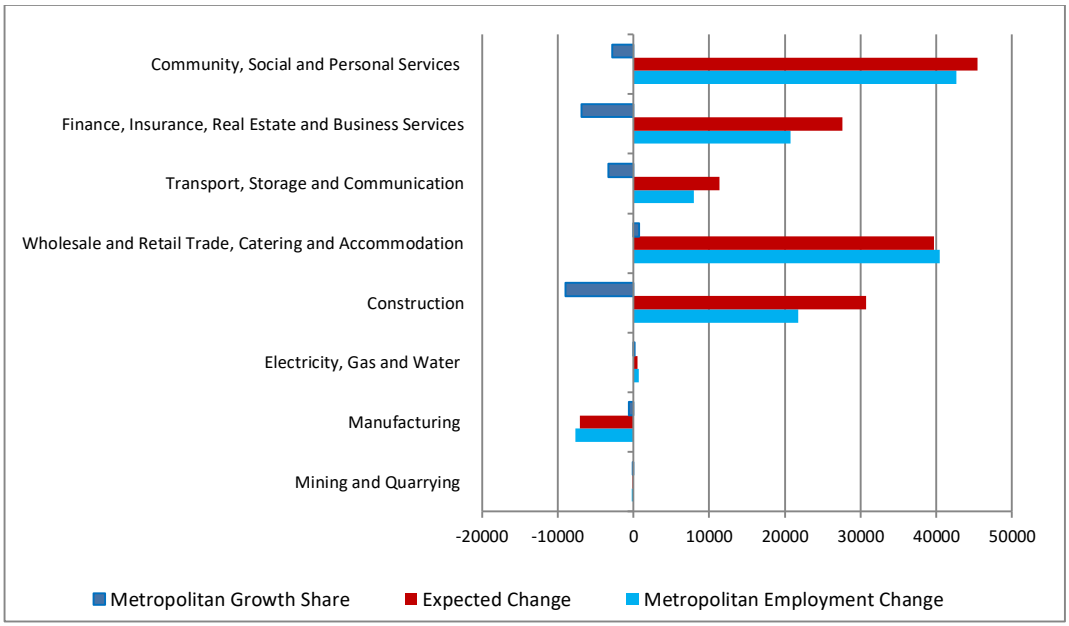


Figure 4.17: City of Cape Town employment shift-share analysis

GVA: On the GVA side, the wholesale and retail trade, catering, and accommodation and the mining and quarrying industries, with a metropolitan growth share higher than one, are prominent within the metros (Figure 4.18).

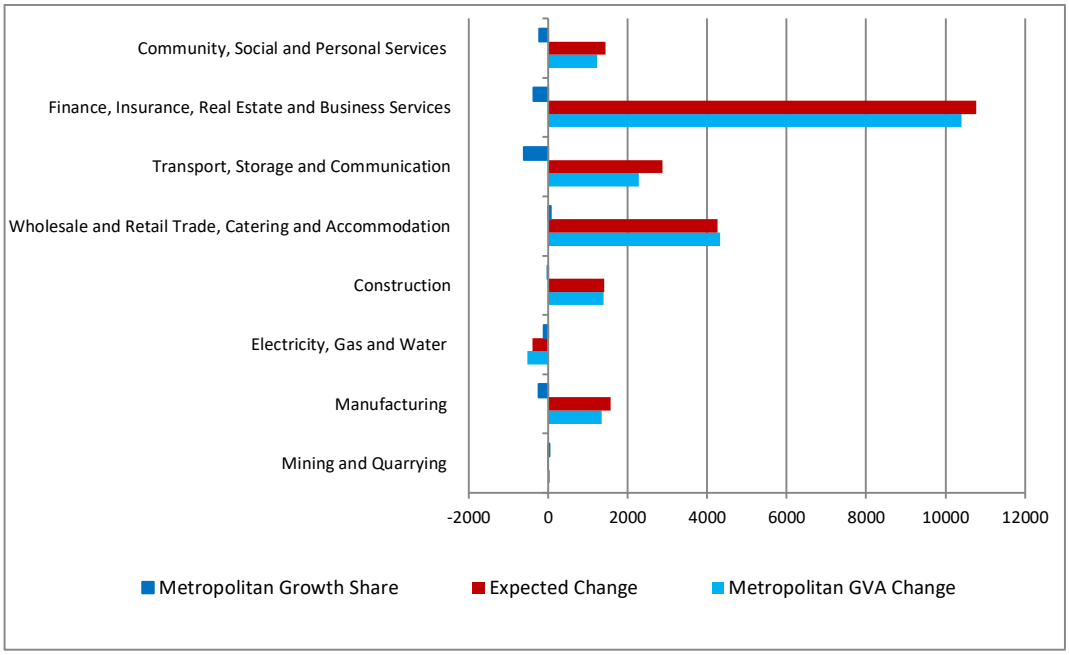


Figure 4.18: City of Cape Town GVA shift-share analysis

Within City of Cape Town Metro, the wholesale and retail trade, catering, and accommodation industry is important in the local economy. This industry indicates growth of both employment and GVA, which is an indication of concentration of CHQs and production unit within the same metro. On electricity, gas, and water, it shows competiveness on the employment side, while mining and quarrying shows competiveness on the GVA side. It seems the strategic location of City of Cape Town close to the harbour is the reason for the competitiveness in these industries.

4.4.2 Buffalo City Metropolitan Municipality

Employment: Wholesale and retail trade, catering, and accommodation is the only industry in which the metro has a comparative advantage (Figure 4.19). The other industries are growing as expected or worse than expected. The LQ of wholesale and retail trade, catering, and accommodation also indicated that this industry is important to the metropolitan economy.

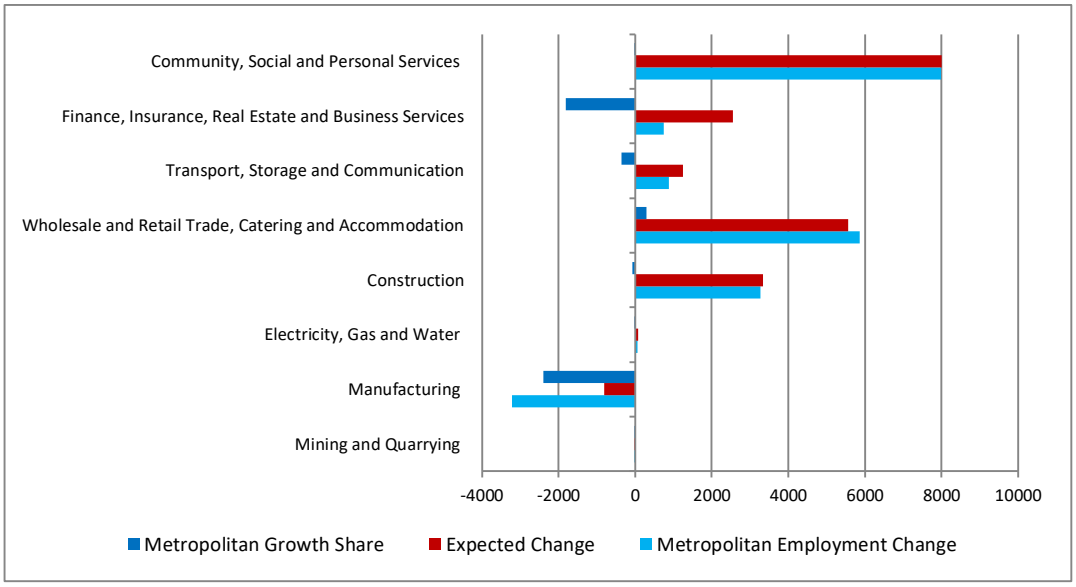


Figure 4.19: Buffalo City employment shift-share analysis

GVA: Mining and quarrying is the only industry that is competitive within Buffalo City (Figure 4.20). Wholesale and retail trade, catering, and accommodation performed well on the employment side but underperformed in terms of income. These two industries also failed to perform as expected based on the national trends.

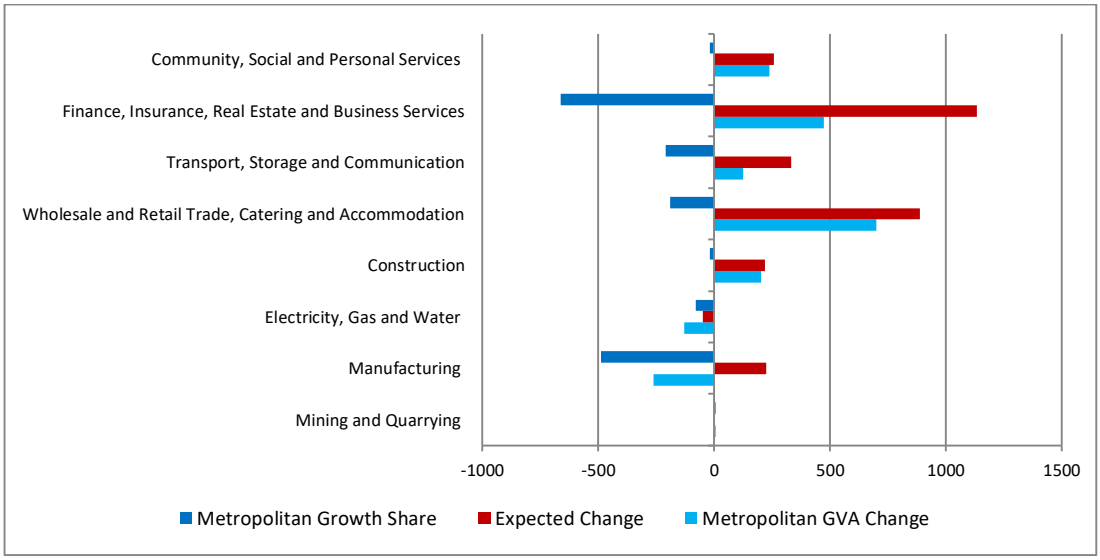


Figure 4.20: Buffalo City GVA shift-share analysis

Therefore, Buffalo City has a comparative advantage in wholesale and retail trade, catering, and accommodation and in mining and quarrying. These two industries are key drivers to the local economy and present an opportunity for further investment, especially mining and quarrying. An analysis of both the employment and GVA outcomes shows that the economy of Buffalo City is focussed on the production side, wholesale and retail trade, catering, and accommodation in particular.

4.4.3 Nelson Mandela Bay Metropolitan Municipality

Employment: This metro has a comparative advantage in wholesale and retail trade, catering, and accommodation (Figure 4.21). There are few other industries that have the potential to be competitive. These industries include mining and quarrying; electricity, gas, and water, and manufacturing with the metropolitan employment change almost equal to the expected change. The expected change and metropolitan employment change are almost the same for the above industries. However, Nelson Mandela Bay has to increase its competitiveness in wholesale and retail trade, catering, and accommodation to boost the other industries within its local economy.

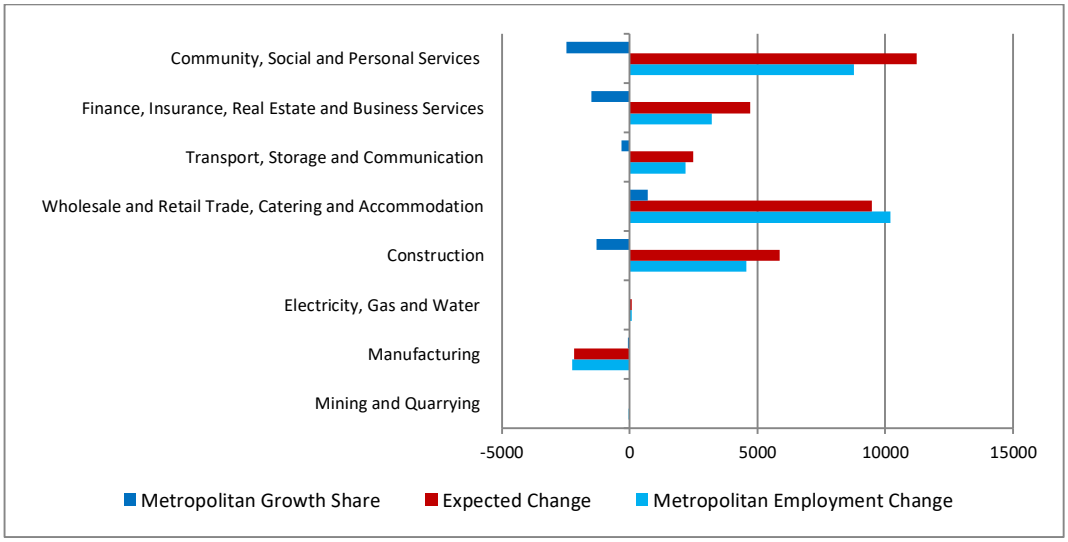


Figure 4.21: Nelson Mandela Bay employment shift-share analysis

GVA: Nelson Mandela Bay, like Buffalo City, is good in mining and quarrying (Figure 4.22). The metro's competitiveness in mining and quarrying is with a small margin, but it is an industry that can be developed further to boost the local economy. Another industry that has potential in this metro is electricity, gas, and water.

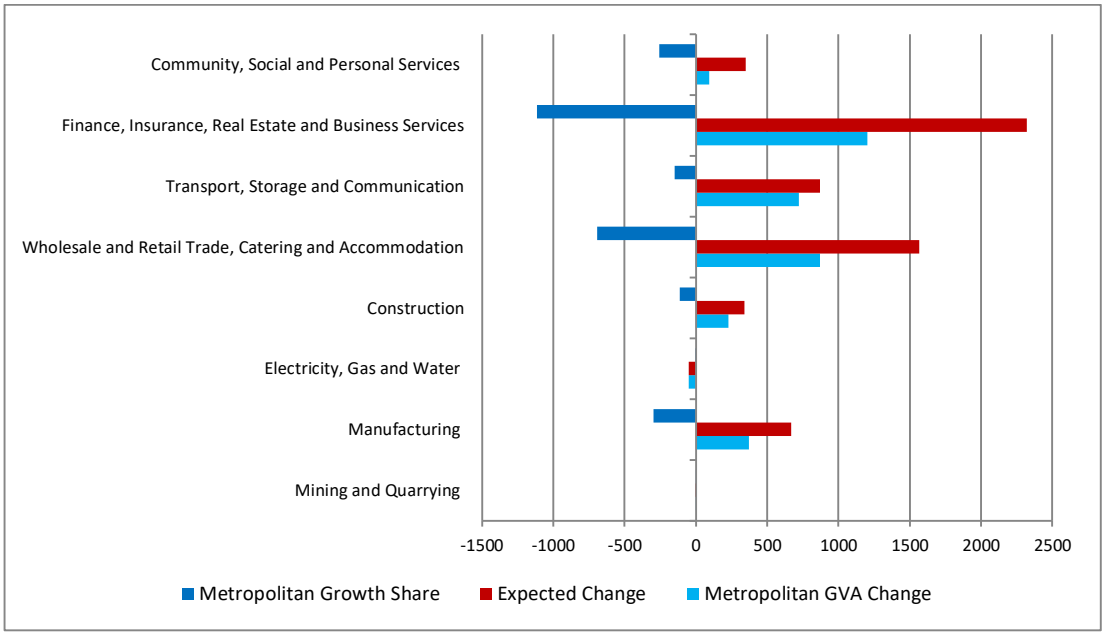


Figure 4.22: Nelson Mandela Bay GVA shift-share analysis

Wholesale and retail trade, catering, and accommodation is therefore an important industry in Nelson Mandela Bay. Strengthening this industry might generate some spill-over effects to stimulate competitiveness and growth in more industries within the local economy.

4.4.4 eThekwini Metropolitan Municipality

Employment: None of the industries within the eThekwini metro show any local competitiveness effects (Figure 4.23). This implies that there is no comparative advantage that exists in any industry within the metro. At the same time, it is rather surprising for this metro to not have any competitive effect in any industry, especially with its strategic location. However, there are two industries that may be targeted, as they show some potential: wholesale and retail trade, catering, and accommodation as well as electricity, gas, and water.

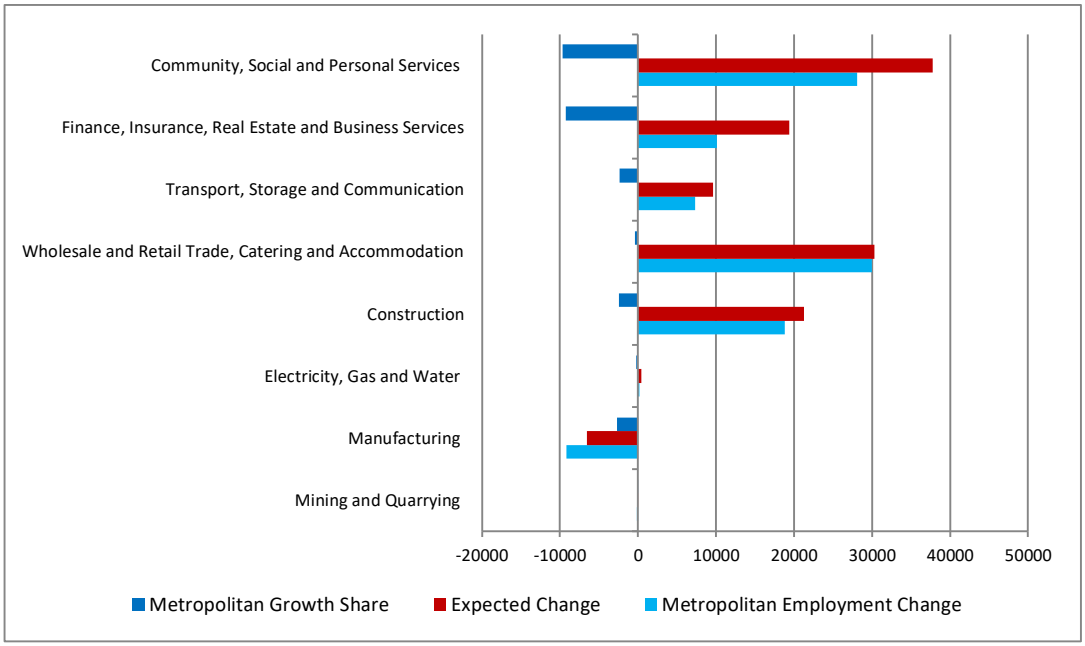


Figure 4.23: eThekwini employment shift-share analysis

GVA: The GVA metropolitan growth share indicates that three industries have a competitive effect in eThekwini. The most prominent one is transport, storage, and communication, followed by mining and quarrying; and the least visible one is manufacturing, with the lowest margin of competitiveness (Figure 4.24). Electricity, gas, and water; wholesale and retail trade, catering, and accommodation; and community, social, and personal services are industries that show potential for competitiveness.

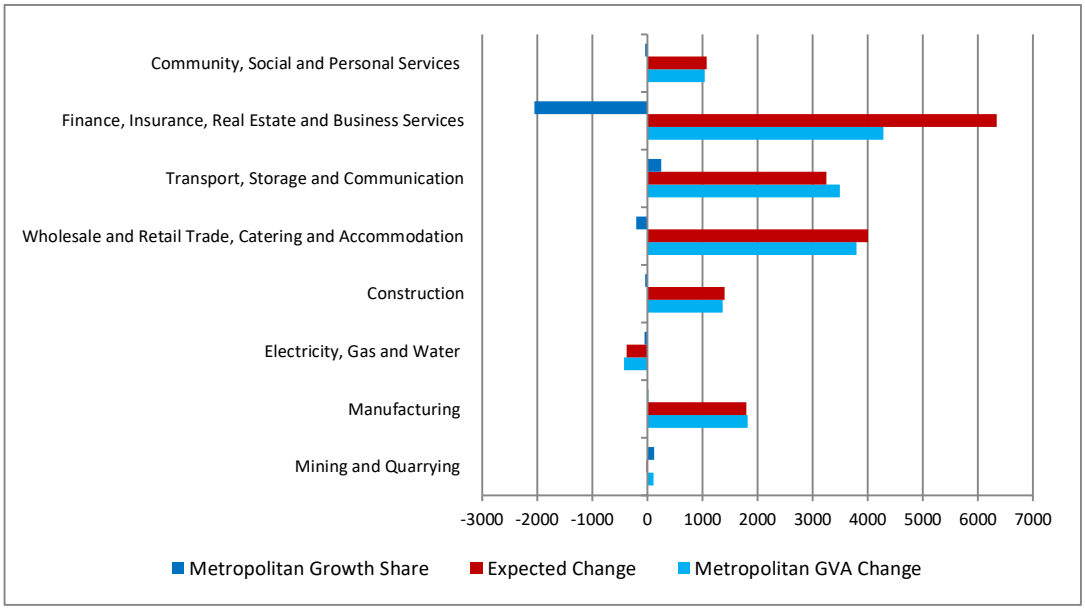


Figure 4.24: eThekwini GVA shift-share analysis

This metro competes on the GVA side rather than on employment. This might be an indication of production taking place outside the metro while the main offices or CHQs are located within the metro.

The coastal metros (City of Cape Town, Buffalo City, eThekwini, and Nelson Mandela Bay) specialise in wholesale and retail trade, catering, and accommodation on the employment side, and mining and quarrying is prominent on the GVA side. These metros have to continue to take advantage of their locations. They have a comparative advantage that can be used to further advance their economic status because they are located by the harbour, which facilitates transportation between countries.

4.4.5 Mangaung Metropolitan Municipality

Employment: Transport, storage, and communication and construction are the important industries within the metro (Figure 4.25). There is also potential in the community, social, and personal services as well as in electricity, gas, and water to become competitive in Mangaung, as seen by the metropolitan growth change, which is close to positive.

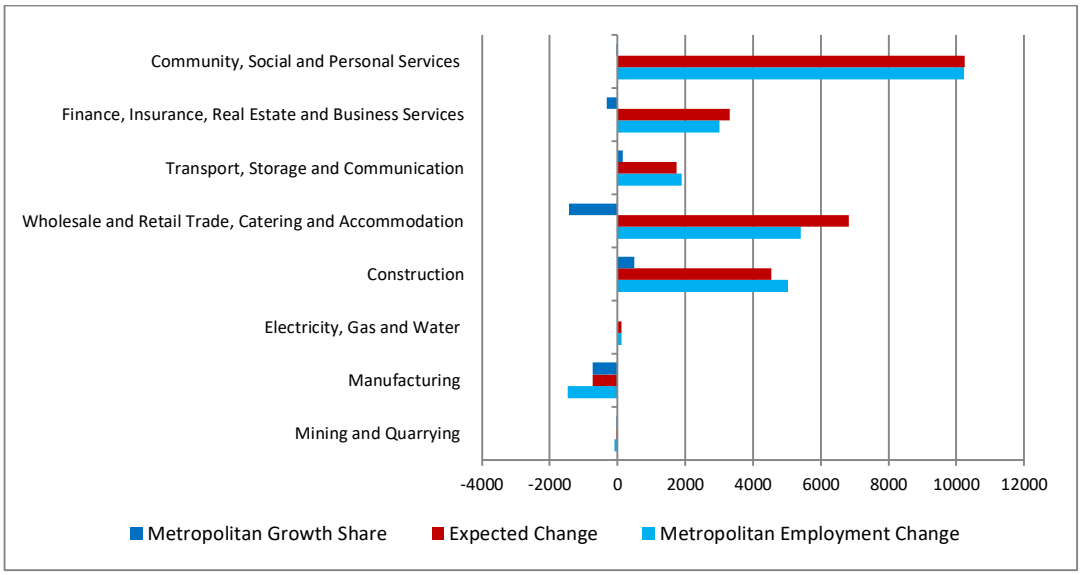


Figure 4.25: Mangaung employment shift-share analysis

GVA: There are three industries that have a high competitive effect within Mangaung. The most dominating one is Wholesale and retail trade, catering, and accommodation followed by Mining and Quarrying (Figure 4.26). Electricity, gas, and water has a lower growth share as compared to the other two industries, but it is important to note that there are few metros that have a comparative advantage in electricity, gas, and water.

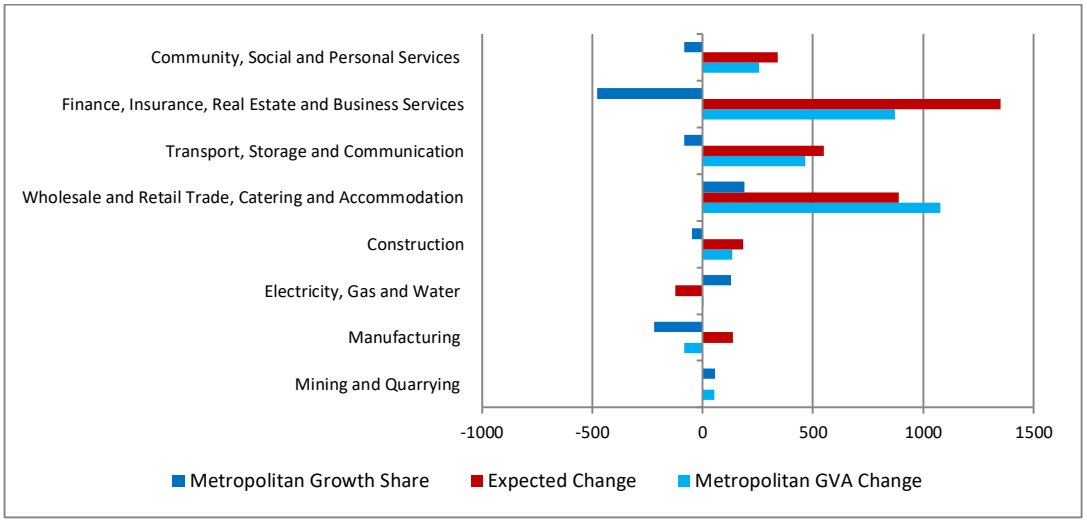


Figure 4.26: Mangaung GVA shift-share analysis

The Mangaung metro is one of the most competitive metros in South Africa. It has a comparative advantage in many industries as compared to other metros. The location of Mangaung almost in the middle of the country and by default of hosting the judiciary of the country may also be playing a role in its competitiveness.

4.4.6 Ekurhuleni Metropolitan Municipality

Employment: This metro boasts a comparative advantage in several industries. Finance, insurance, real estate, and business services is the leading industry within the metro. The metro also has a comparative advantage in community, social, and personal services as well as wholesale and retail trade, catering, and accommodation (Figure 4.27). These industries employ more people as compared to the same industries nationally and have the potential of even employing more people.

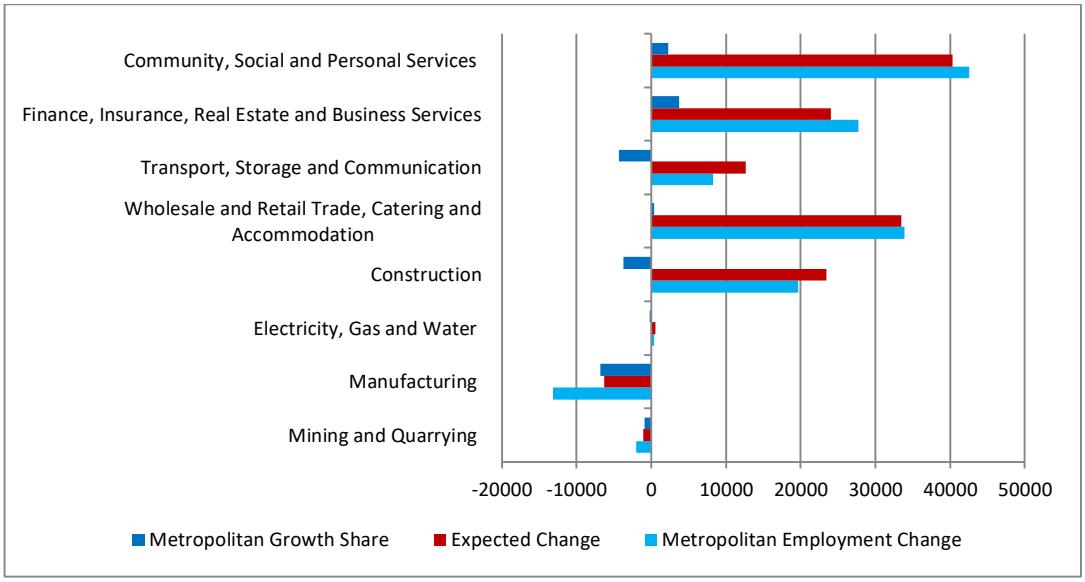


Figure 4.27: Ekurhuleni employment shift-share analysis

GVA: In addition to the wholesale and retail trade, catering, and accommodation; finance, insurance, real estate, and business services; as well as community, social, and personal services, Ekurhuleni also is generating more output from the construction industry as well (Figure 4.28). Therefore, these four industries together are important drivers to the Ekurhuleni metro's economy.

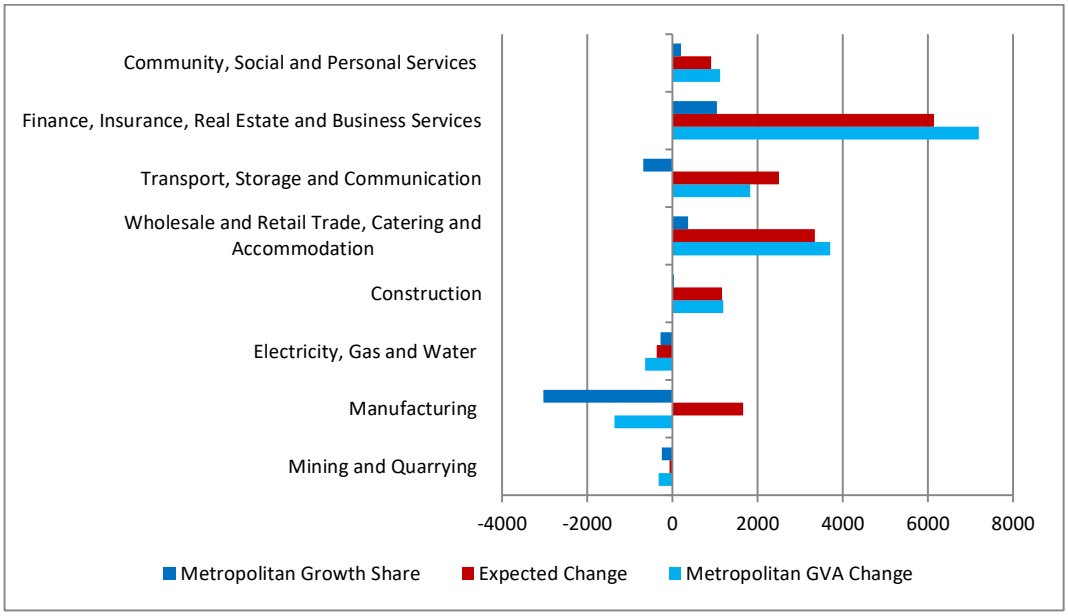


Figure 4.28: Ekurhuleni GVA shift-share analysis

Ekurhuleni is located strategically, making it accessible to many businesses from both the local area and abroad. It is no surprise to see it having a higher competitive effect on many industries. Apart from these industries that Ekurhuleni has a comparative advantage in, it also has potential to expand its competitiveness to more industries through spill-over effects.

4.4.7 City of Johannesburg Metropolitan Municipality

Employment: This is another metro with many industries contributing more to the economy. Unlike other metros, City of Johannesburg has five industries that out-perform the national ones in terms of employment. These industries are: manufacturing; electricity, gas, and water; construction; wholesale and retail trade, catering, and accommodation as well as community, social, and personal services (Figure 4.29). The city has employed more people than expected based on the national trends.

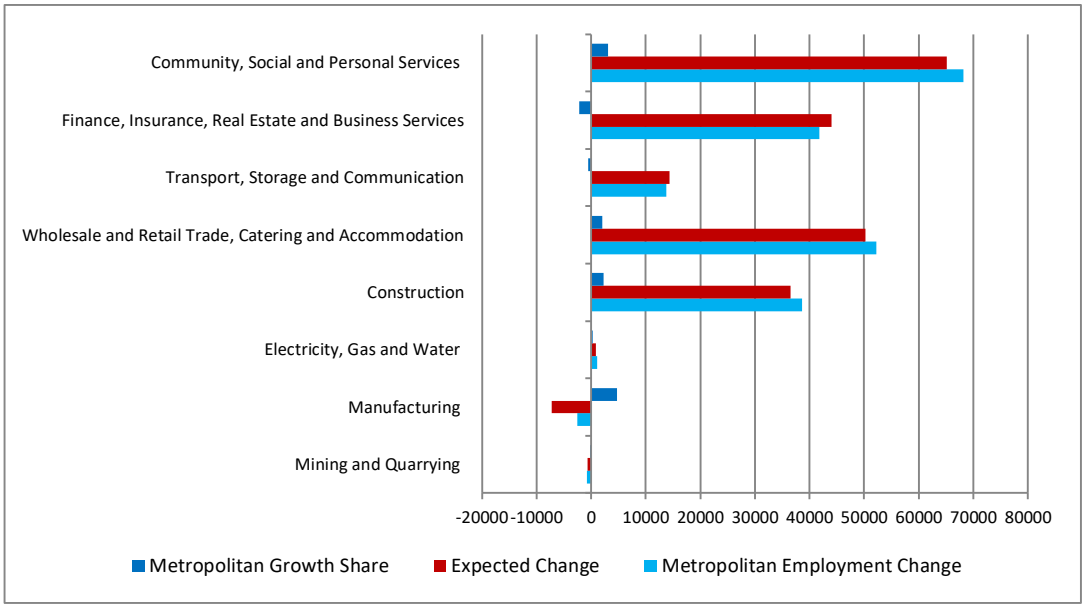


Figure 4.29: City of Johannesburg employment shift-share analysis

GVA: The GVA shift-share analysis indicates that Johannesburg is a key metro in the economy of the country. All the industries are well represented within Johannesburg (Figure 4.30). This implies that City of Johannesburg contributes more to the economy of the country across all industries. This is so looking at the output level shown by the positive metropolitan growth share across all industries.

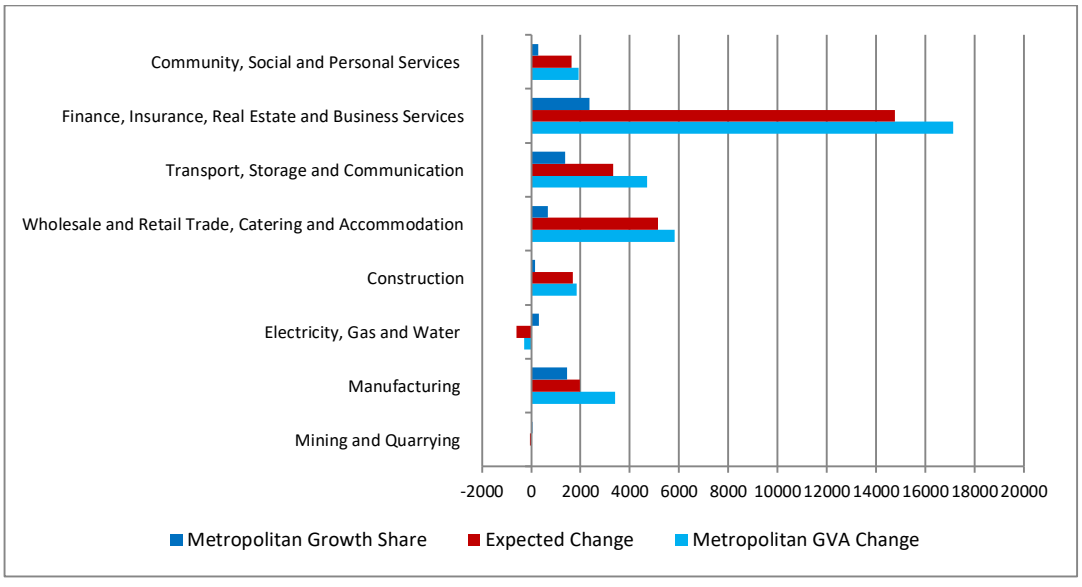


Figure 4.30: City of Johannesburg GVA shift-share analysis

The analysis indicates that City of Johannesburg is the main metro in the country's economy. It is competitive across all industries. Although not all industries are competitive on the employment side, on the GVA side Johannesburg is generating more income than any other metro. The high competitiveness on the GVA may imply that City of Johannesburg hosts many of the CHQs while the production units are not necessarily located within Johannesburg.

4.4.8 City of Tshwane Metropolitan Municipality

Employment: Tshwane employment level is relatively high in almost all the industries except for mining and quarrying (Figure 4.31). All the industries are very competitive nationally, and City of Tshwane has a comparative advantage in these industries. This is the strongest metro in the country in terms of its competitiveness in many industries from the employment side.

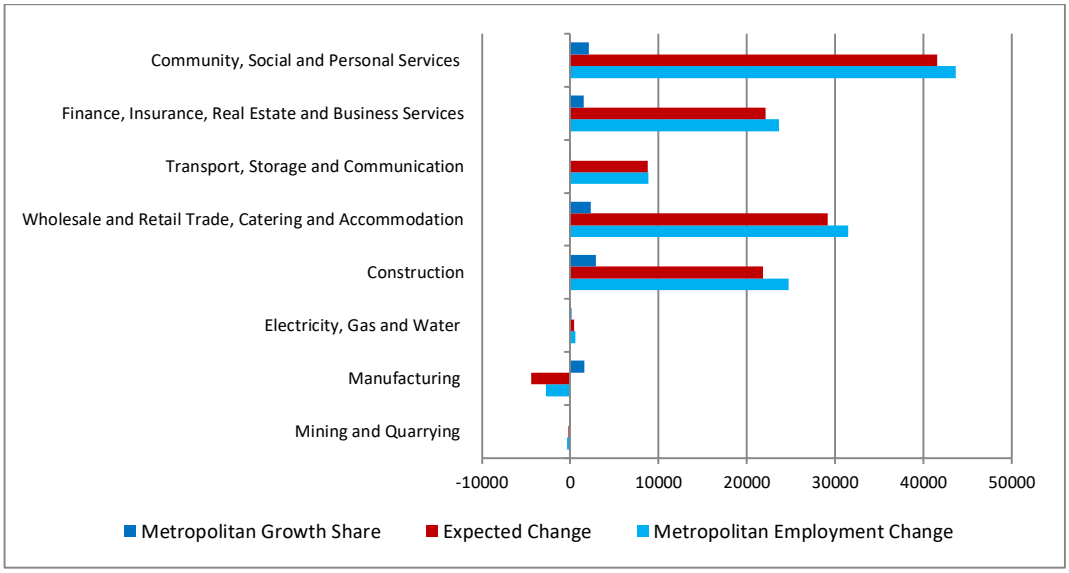


Figure 4.31: City of Tshwane employment shift-share analysis

GVA: Community, social, and personal services is the only industry in which City of Tshwane is under-performing or its performance is in line with the national trends (Figure 4.32). The other industries have a high/positive growth share, implying that Tshwane out-performs national in those industries. Tshwane is second after City of Johannesburg in the level of competitiveness.

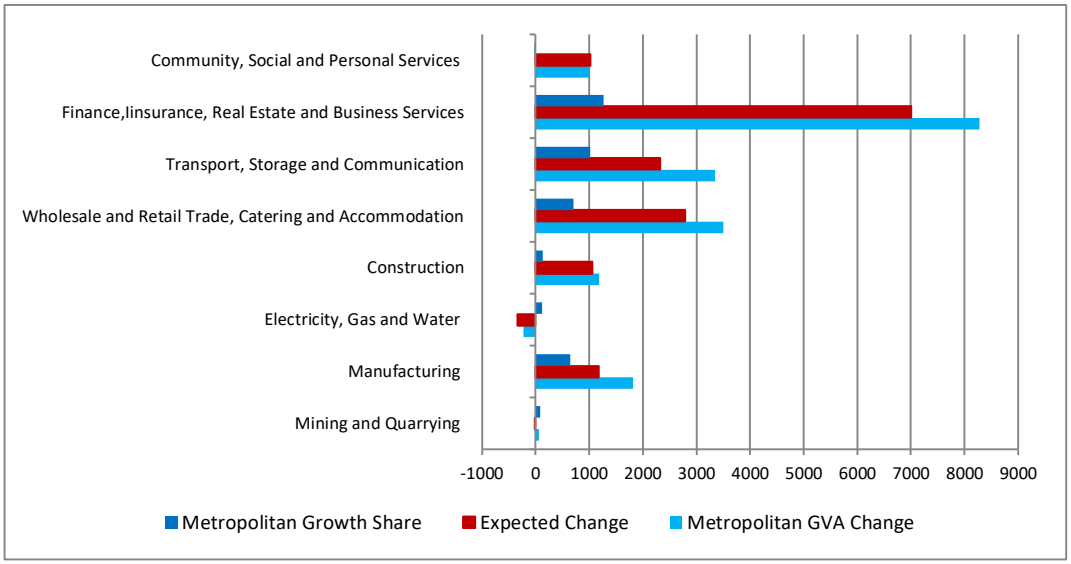


Figure 4.32: City of Tshwane shift-share analysis

City of Tshwane is the second most important metro in the country based on the level of competitiveness across different industries. The location of Tshwane next to the best performing metro might be having some influence on its competitiveness. In addition, its location closer to O.R. Tambo International Airport cannot be discounted. Moreover, the metro occupies a prominent position in the country as the capital of South Africa and home of many embassies, coming second after Washington DC in terms of concentration of international embassies (StatsSa). This may possibly have helped in portraying and branding the metro, thereby increasing business activities.

The inland metros are very competitive across many industries as compared to the coastal metros (Table 4.4). The coastal metros show competitiveness across all industries in the mining and quarrying industry while for the wholesale and retail trade, catering, and accommodation industry, eThekwini is the only metro that is not competitive. Wholesale and retail trade, catering, and accommodation is also showing strength in the inland metros. These metros are therefore important to the national economy, as most of their industries perform better than the same industries nationally.

Table 4.4: Competitiveness across industries from 2011-2016

	GVA S-S 2011-2016	Employment S-S 2011-2016		GVA S-S 2011-2016	Employment S-S 2011-2016
Coastal Metros			**Inland Metros**		
City of Cape Town	Wholesale and retail trade, catering, and accommodation Mining and quarrying	Wholesale and retail trade, catering, and accommodation Electricity, gas, and water	**Mangaung**	Wholesale and retail trade, catering, and accommodation Mining and quarrying	Transport, storage, and communication Construction
Buffalo City	Mining and quarrying	Wholesale and retail trade, catering, and accommodation	**Ekurhuleni**	Wholesale and retail trade, catering, and accommodation Finance, insurance, real estate, and business services Community, social, and personal services, Construction	Finance, insurance, real estate, and business services Community, social, and personal services Wholesale and retail trade, catering, and accommodation
Nelson Mandela Bay	Mining and quarrying	Wholesale and retail trade, catering, and accommodation	**City of Tshwane**	Mining and quarrying Manufacturing Electricity, gas, and water Construction Wholesale and retail trade, catering, and accommodation Transport, storage, and communication Finance, insurance, real estate, and business services Community, social, and personal services	Manufacturing; Electricity, gas, and water Construction Wholesale and retail trade, catering, and accommodation Community, Social and Personal Services
eThekwini	Transport, storage, and communication Mining and quarrying Manufacturing		**City of Johannesburg**	Mining and quarrying Manufacturing Electricity, gas, and water Construction Wholesale and retail trade, catering, and accommodation Transport, storage, and communication Finance, insurance, real estate, and business services	Manufacturing Electricity, gas, and water Construction Wholesale and retail trade, catering, and accommodation Transport, storage, and communication Finance, insurance, real estate, and business services Community, Social and Personal Services

The employment shift-share analysis indicates that the metropolitan municipalities located along the coast have an employment competitiveness which is lower than that of the inland metros (Figure 4.33). The employment level for wholesale and retail trade, catering, and accommodation is the same for both the inland and coastal metros. However, some commonalities exist for all the metros in their competitiveness in the wholesale and retail trade, catering, and accommodation industry. The transportation network is good in all these metros, either by air, road or sea. The mining and quarrying industry is no longer employing more people in the metros. This may be because mining is taking place in remote areas away from the major urban centres.

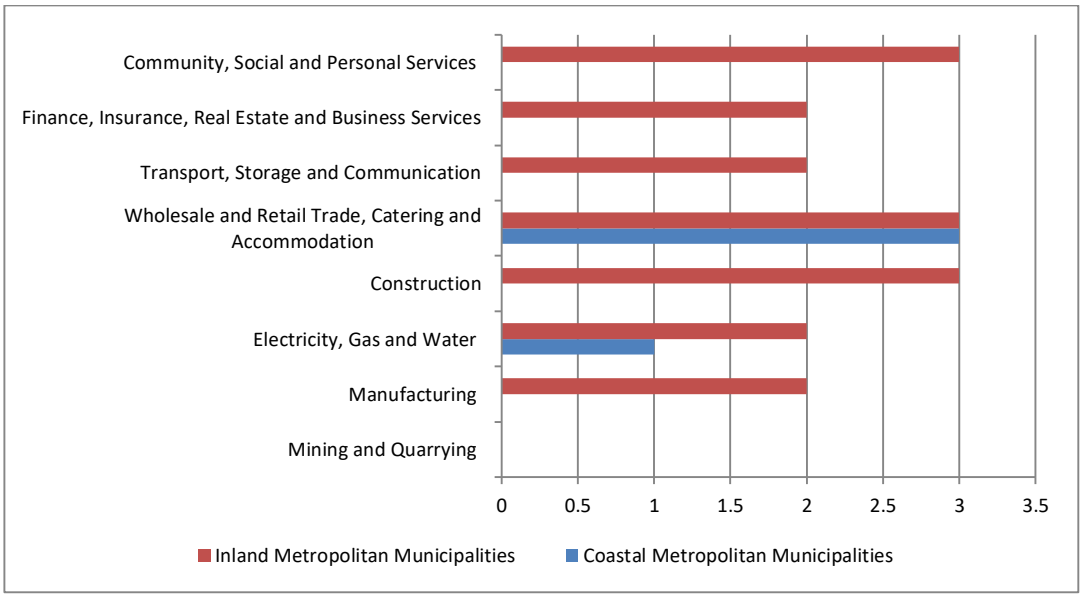


Figure 4.33: Employment competitiveness

The output from the different industries is also concentrated in the inland metros (Figure 4.34). There are some unique factors making the inland metros competitive in many industries. There is another striking observation in the mining and quarrying industry: although it is no longer the key employer in the metros, it is still competitive in terms of output. This implies that mining and quarrying is still important in the economy of the country. The concentration of employment in this industry will reflect

where the production is taking place, rather than in the CHQs that are located in the metros.

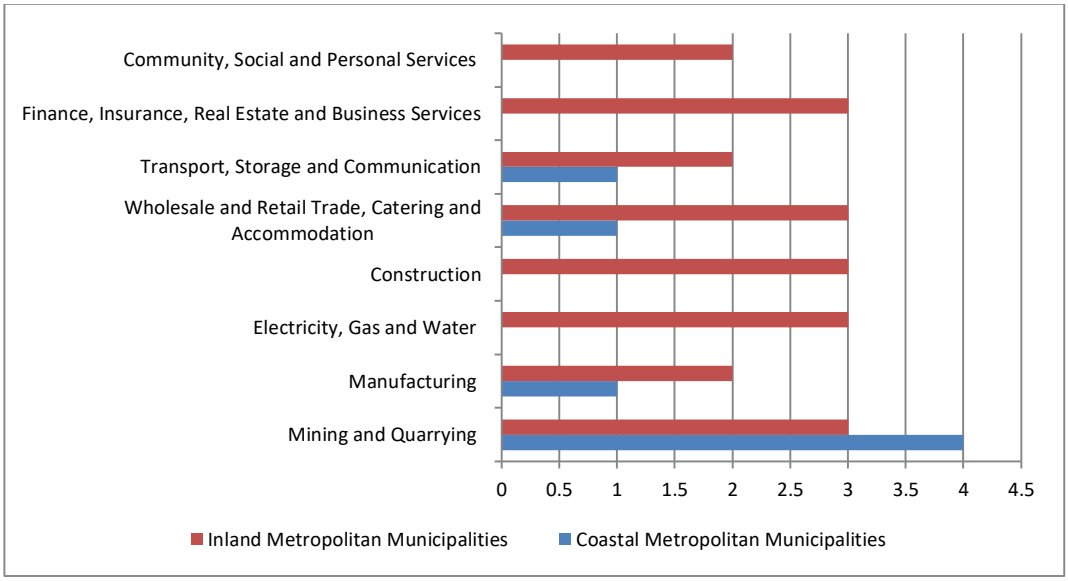


Figure 4.34: GVA competitiveness

In addition, the interrelationships between industries affect the competitiveness and specialisation of certain industries. For instance, in Nelson Mandela Bay, the manufacturing industry has a higher LQ due to its link with the wholesale and retail trade, catering, and accommodation industry. The same can apply to the transport, storage, and communication industry. The competitiveness in the cities of Tshwane, Ekurhuleni, and Johannesburg might be due to the spill-over effects and positive externalities that usually occur when municipalities are located in close proximity to each other. The next section deals with the relationships between the metro specialisation/competitiveness and the spatial location of CHQs.

4.5 Spatial Analysis of JSE Datasets

As noted earlier, there are 267 CHQs located in different metros in South Africa and eighteen (18) located outside the metros. This section focusses more on the CHQs

within the metros but made some observation on the location of the ones located outside the metros.

4.5.1 CHQs Located Outside the Metropolitan Municipalities

The CHQs that are located outside the metros are in the following provinces: Kwazulu-Natal (3), Western Cape (9), Gauteng (4), and Mpumalanga (2). These CHQs are not evenly spread across the provinces but are concentrated in particular areas or district municipalities.

- In Kwazulu-Natal, the CHQs are in the manufacturing industry. They are concentrated in two districts, two (2) in Umgungundlovu and one (1) in Uthungulu District Municipality. These CHQs are located close to major transportation infrastructure (Figure 4.35). In addition, there is deep history behind the formation and current location of these CHQs within their districts.

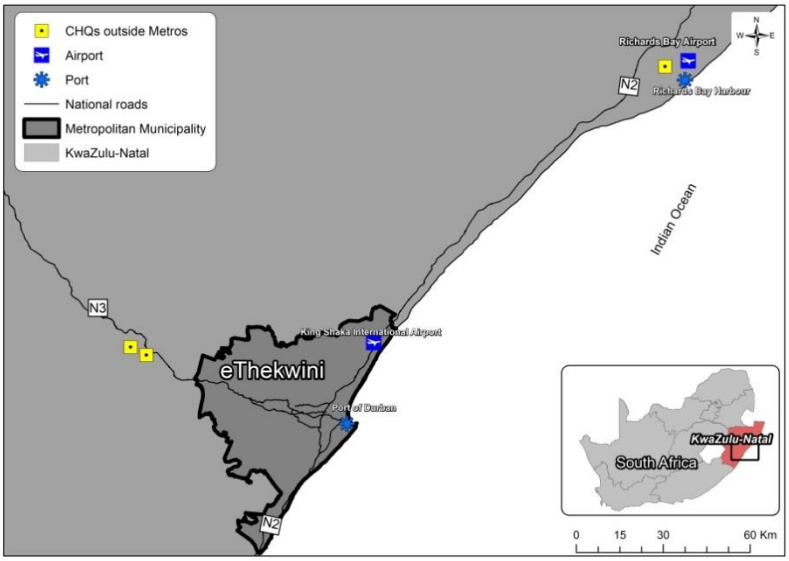


Figure 4.35: CHQs outside the metro in KwaZulu-Natal Province

- In Western Cape, they are all concentrated in Cape Winelands District Municipality (Figure 4.36). There are four (4) in finance, insurance, real estate, and business services, one (1) in community, social, and personal services, and

four (4) in manufacturing. The high proportion of the number of CHQs within the Cape Winelands District is attributed to its soil quality, which makes the manufacturing industry to locate closer to its intermediate inputs. In addition, the wine production in the district has made the area popular in the tourism industry. Therefore, the location of CHQs has to do with the backward and forward linkages to other industries, for example, the links with the agricultural industry.

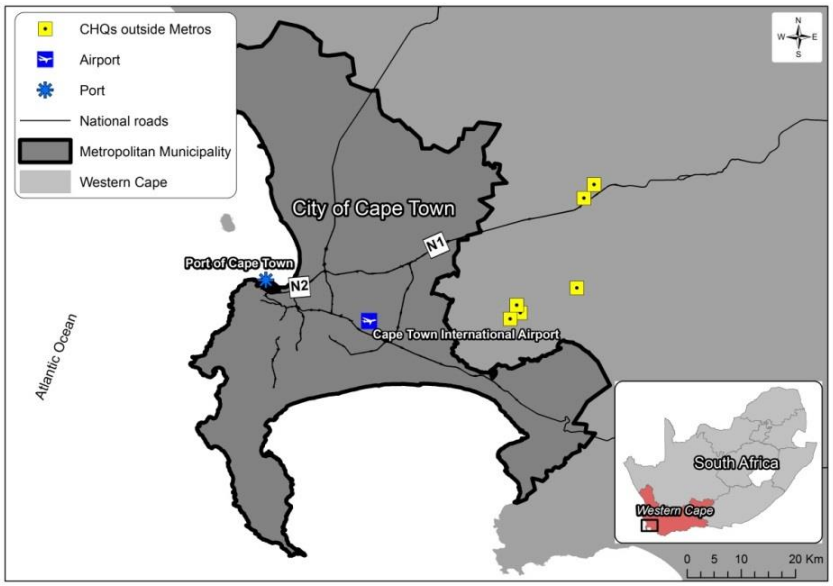


Figure 4.36: CHQs outside the metro in Western Cape Province

- In Mpumalanga, CHQs are concentrated in Ehlazeni District Municipality (Figure 4.37). The two (2) CHQs fall within the manufacturing industry, and the natural resources or minerals within the district municipality are probably the reason for these CHQs location.

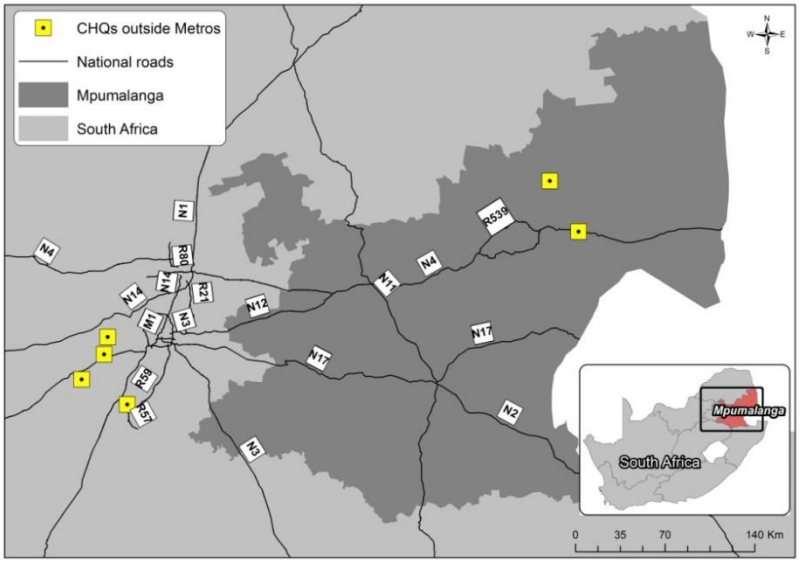


Figure 4.37: CHQs outside the metro in Mpumalanga Province

- In Gauteng, there are three (3) CHQs in West Rand and one (1) in Sedibeng District Municipality (Figure 4.38). Two (2) of the CHQs are in mining and quarrying, while the other two (2) are in manufacturing. These CHQs have chosen their location due to the presents of minerals and raw materials for production.

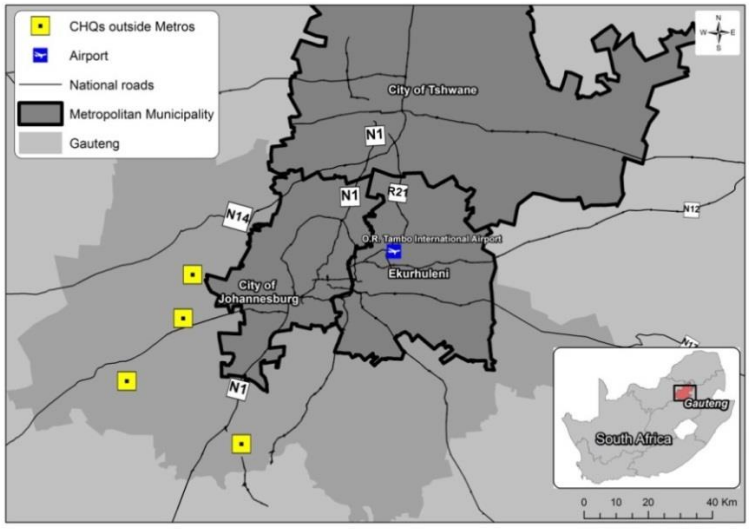


Figure 4.38: CHQs outside the metro in Gauteng Province

Therefore, in most instances the CHQs are resource-oriented firms that locate closer to resources / inputs / raw materials. These types of CHQs predominantly co-locate production and CHQs or locate the CHQs in close proximity to the production units. Almost all the district municipalities where these CHQs are located are rich with natural resources that companies are there to exploit.

4.5.2 The Distribution of CHQs in the Metropolitan Municipalities

The 269 CHQs in South Africa are not equally distributed across the eight metros. Table 4.5 indicates the high concentration of CHQs of certain industries in particular metros. The JSE data were used to analyse where the CHQs are located.

Table 4.5: Distribution of CHQs across metros

	Metropolitan Municipality	Mining and Quarrying	Manufacturing	Electricity, Gas and Water	Wholesale and Retail Trade, Catering and Accommodation	Transport, Storage and Communication	Finance, insurance, Real Estate and Business Services	Construction	Community, Social and Personal Services	Total	%	Total
Inland	City of Johannesburg	22	36	1	7	6	74	6	7	159	**59.6**	202
	City of Tshwane	2	3		1	2	10	2		20	**7.5**	
	Ekurhuleni	2	4			3	7	6	1	23	**8.6**	
	Mangaung		0							0	**0.0**	
Coastal	City of Cape Town	1	6	1	11	1	26	3		49	**18.4**	65
	Nelson Mandela Bay		1							1	**0.4**	
	Bufallo City						1			1	**0.4**	
	eThekwini		4		3	2	2	1	2	14	**5.2**	
	Total	27	54	2	22	14	120	18	10	267	**100.0**	
	%	**10.1**	**20.2**	**0.7**	**8.2**	**5.2**	**44.9**	**6.7**	**3.7**	**100.0**		

4.5.3 Concentration of CHQs in Metros

City of Johannesburg has the largest number of CHQs, leading in five (5) industries; it shares the lead with City of Cape Town and Ekurhuleni in one (1) industry and takes second place in one (1) industry. Cape Town leads in one (1) industry apart from the one in which it shares the lead with Johannesburg. Cape Town is in second place in three (3) industries and third place in one (1) industry, while Ekurhuleni shares the lead in one industry with City of Johannesburg and is in second place in one (1) industry, but it shares another second place with City of Tshwane and third place in two (2) industries. City of Tshwane and eThekwini both take second in one (1) industry and

third place in one (1) industry with Tshwane, while eThekwini is in third place in two (2) industries (Table 4.6). Two metros do not appear in Table 4.5, as there are either no CHQs or few located there. This comes as no surprise considering the argument made by Bel and Fageda (2008) on that headquarters normally concentrate in large metros. These are metros with the necessary infrastructure for headquarters to thrive including market condition, conducive environment to exchange information and availability of wide range of financial intermediation (Davis & Henderson, 2008; Henderson & Ono, 2008; Lovely, Rosenthal & Sharma, 2005).

Table 4.6: Ranking of metropolitan municipality by total CHQs hosted

Industry	First Place	No. of CHQs	Second Place	No. of CHQs	Third Place	No. of CHQs
Mining and quarrying	CoJ[26]	22	CoT[27] & Ekurhuleni	2	CoCT[28]	1
Manufacturing	CoJ	36	CoCT	6	Ekurhuleni & eThekwini	4
Construction	Ekurhuleni & CoJ	6	CoCT	3	CoT	2
Wholesale and retail trade, catering, and accommodation	CoCT	12	CoJ	7	eThekwini	3
Transport, storage, and communication	CoJ	6	Ekurhuleni	3	CoT & eThekwini	2
Finance, insurance, real estate, and business services	CoJ	74	CoCT	26	CoT	10
Community, social, and personal services	CoJ	7	eThekwini	2	CoT	1
Electricity, gas, and water	CoJ & CoCT	1				

[26] City of Johannesburg
[27] City of Tshwane
[28] City of Cape Town

4.5.4 CHQs Concentration, Coefficient Specialisation and Competitiveness

The concentration of CHQs in different metros may be explained by the specialisation and or competitiveness of metros in particular industries. However, there is also a possibility that some other unique structures within the metros may explain the concentration. The research only looked at the LQ and the shift-share analysis to understand the level of concentration in the different metros.

Mining and quarrying

The LQ did not show any form of specialisation in any metro. This is an industry that is under threat, and Ekurhuleni is the only metro that shows any activity taking place there. Therefore, the level of concentration, and in particular for City of Johannesburg, cannot be explained using the LQ. However, the GVA shift-share analysis shows that several metros have a comparative advantage in this industry. In terms of level of competitiveness, eThekwini comes first, but there are no CHQs located there. City of Tshwane is even more competitive than City of Johannesburg; however, the latter has more concentration in this industry. This industry is concentrated in four metros, namely, City of Johannesburg, City of Tshwane, Ekurhuleni, and City of Cape Town (Figure 4.39; Figure 4.40). Although the competitiveness is skewed to the GVA metropolitan growth share, it gives an indication of an important industry that has potential to grow and the metros that have some uniqueness and potential to do well in this industry.

The high concentration of CHQs in this industry in City of Johannesburg may partly be explained from the competitiveness side; however, there should be more explanation of the behaviour of this industry. Johannesburg was established due to the discovery of minerals, and it is probably due to this history that the high concentration still exists. Along the mining and quarrying companies, other support industries emerged boosting

the city with a link of interrelated industries (Wilkins, 1989). This has created a conducive environment for the mining CHQs to remain within the City of Johannesburg. This is in line with the international phenomenon on the behaviour of headquarters (Bel & Fageda, 2008; Davis & Henderson, 2008; Henderson & Ono, 2008; Lovely, Rosenthal & Sharma, 2005). Moreover, some scholars[29] argue that CHQs tend to maintain their original location hence the high concentration of the mining and quarrying CHQs in the City of Johannesburg.

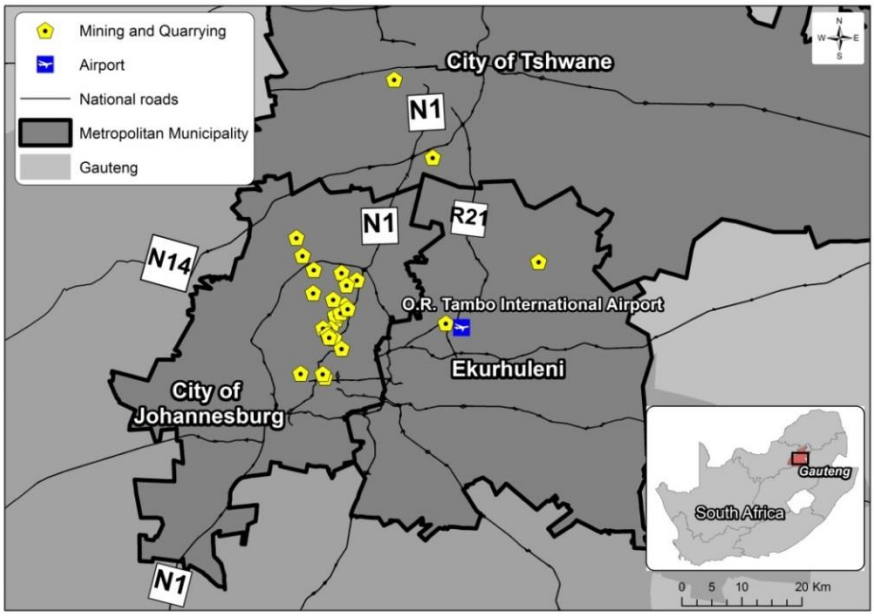


Figure 4.39: Concentration of mining and quarrying in City of Johannesburg, Tshwane, and Ekurhuleni

[29] Baaij, Van den Bosch and Volberda (2004); Coeurderoy and Verbeke (2016); Meyer and Benito (2016) and Porter (1990)

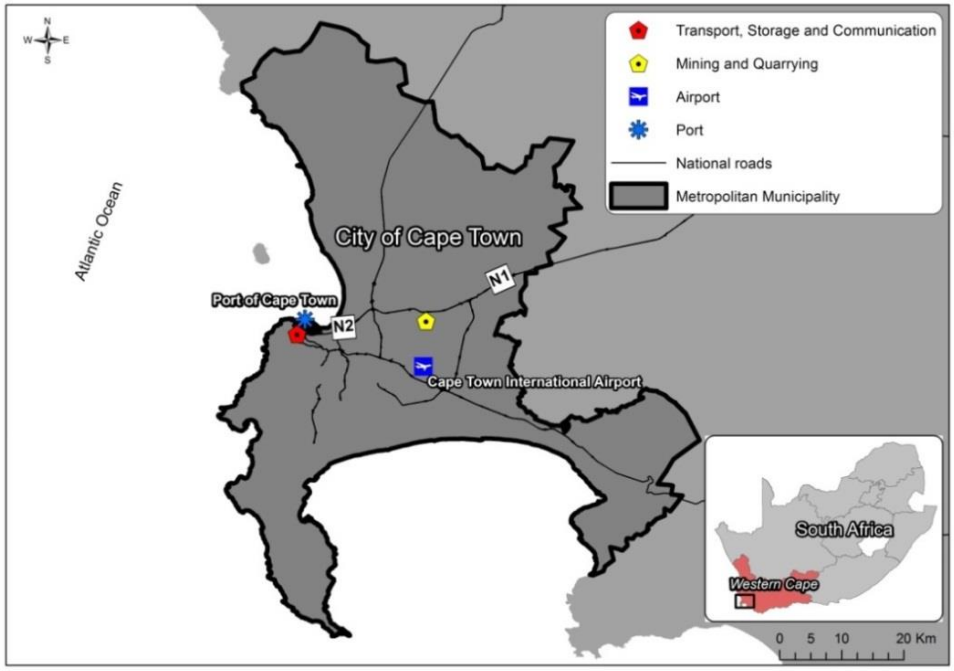


Figure 4.40: Concentration of mining and quarrying and of transport, storage, and communication in City of Cape Town

Transport, storage, and communication

Only three metros are competitive in this industry, and they are all located inland. None of the coastal metros has shown any competitiveness or specialisation in this industry. City of Johannesburg has the highest concentration in this industry, accompanied by evidence of both specialisation and competitiveness. Ekurhuleni follows after Johannesburg, but this metro is not competitive in this industry. The only thing that was visible from the LQ is specialisation. Both City of Tshwane and eThekwini metros showed competitiveness and specialisation, hence no surprise to see some CHQs located there (Figure 4.41; Figure 4.42). City of Cape Town showed specialisation and competitiveness in this industry, but there is only one CHQs located there (see Figure 4.40). These CHQs are more concentrated along major routes, major ports and airports which shows the importance of access to both local and international markets (Holt et

al., 2008; Rogerson, 1998). At the same time, looking at the history of South Africa, it is possible that some companies have maintained their original location (Baaij, Van den Bosch & Volberda, 2004; Coeurderoy & Verbeke, 2016; Meyer & Benito, 2016; Porter, 1990)

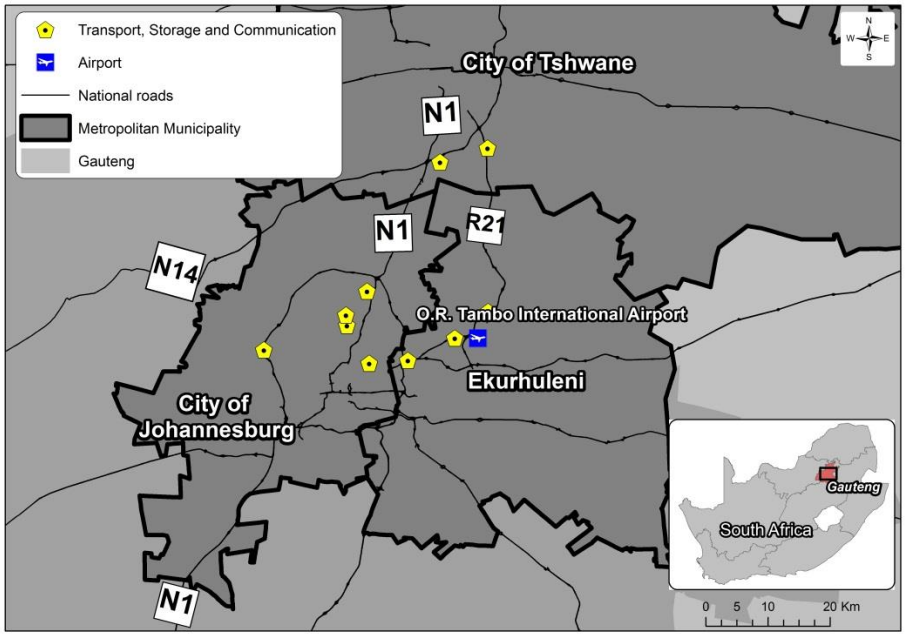


Figure 4.41: Concentration of transport, storage, and communication in City of Johannesburg, Tshwane, and Ekurhuleni

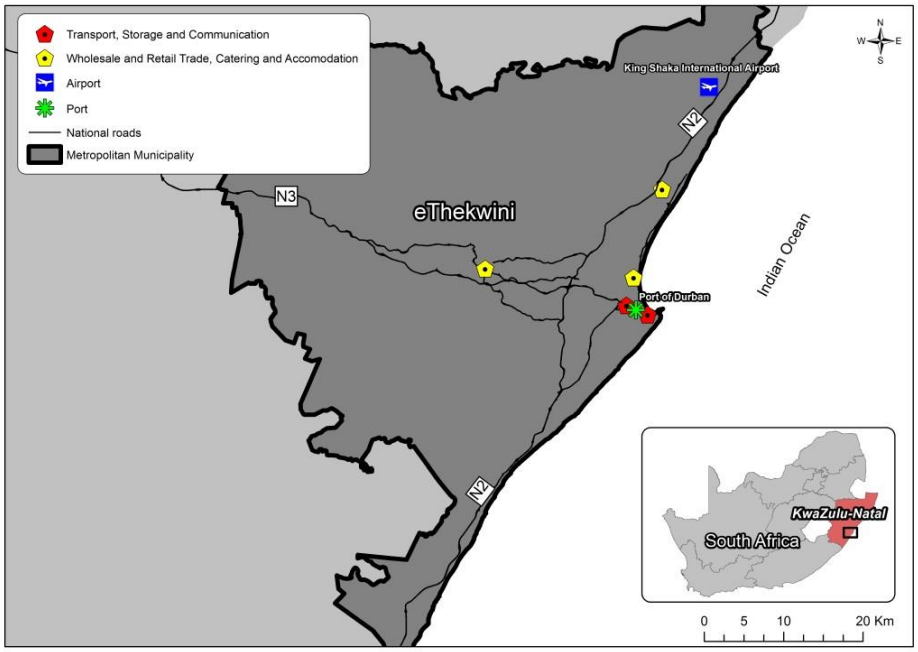


Figure 4.42: Concentration of transport, storage, and communication in eThekwini

Wholesale and retail trade, catering, and accommodation

City of Cape Town is the dominating metro in terms of the level of concentration in the wholesale and retail trade, catering, and accommodation industry and so is expected to show some specialisation and competitiveness in this industry, followed by City of Johannesburg (Figure 4.43; Figure 4.44). The LQ for Cape Town indicated a metro which is highly specialised, and on the shift-share analysis, it showed competitiveness from the output side. There is specialisation and competitiveness in this industry in City of Johannesburg and eThekwini, hence the concentration in eThekwini also (see Figure 4.42). However, there should be something else to explain this concentration because some metros that are more competitive and specialised are not hosting any CHQs in this industry. If the argument is around transportation, Ekurhuleni should be hosting more CHQs. There is also a possibility of linkages with other industries, favourable environment within the metros, and the level of support given to this

industry, which might be a contributing factor to the level of concentration. Literature also revealed that the historical roots and network within the local communities may act as inertia forces for CHQs (Ghemawat, 2011), which might be the case in the City of Cape Town. In addition, CHQs in the wholesale and retail trade, catering, and accommodation require the ports for imports and export of goods and services (Bel & Fageda, 2008), hence the concentration in City of Cape Town.

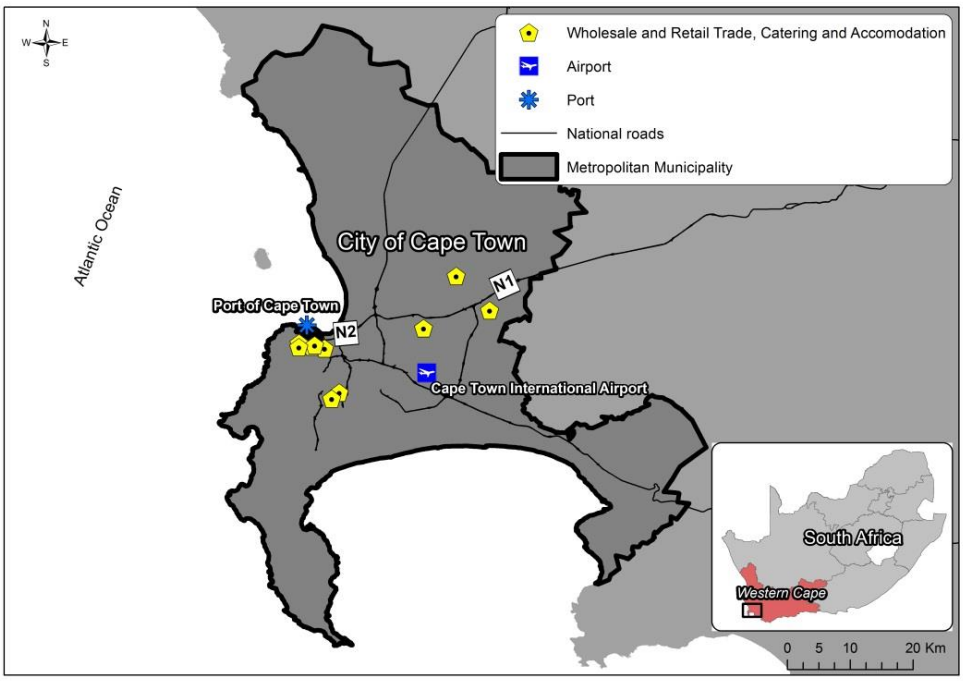


Figure 4.43: Concentration of wholesale and retail trade, catering, and accommodation in City of Cape Town

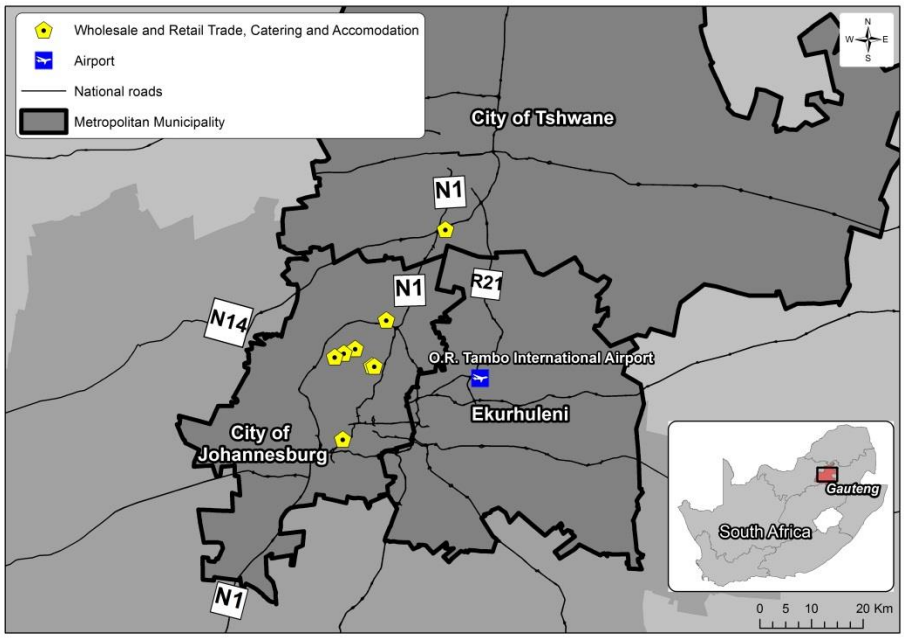


Figure 4.44: Concentration of wholesale and retail trade, catering, and accommodation in City of Johannesburg and Tshwane

Manufacturing

City of Johannesburg has the highest concentration in manufacturing, followed by Cape Town, Tshwane, and eThekwini (Figure 4.45; Figure 4.46; Figure 4.47). Manufacturing was one of the supporting industries for mining and quarrying, hence the concentration in City of Johannesburg, Tshwane and Ekurhuleni. It is through the economic history of South Africa that the concentration is explained (Tonts & Taylor, 2010). Therefore, the government has a role to play in attracting and creating an enabling environment for the supporting industries to emerge (Chan & Poon, 2012; Prahalad & Ghoshal, 1989). The LQ indicated that the metros that are highly specialised in this industry are Nelson Mandela Bay and eThekwini. City of Johannesburg and Cape Town are still above one on average, and Tshwane's GVA is on the decline. In City of Johannesburg, the LQ on both employment and GVA indicated that the metro is just self-sufficient. However, on the GVA side, it showed a

decline from being specialised and slowing down since 2011. The concentration therefore is explained by the GVA LQ. This is also an indication that many of the manufacturing companies do not necessarily co-locate their CHQs with production units, hence reflecting on the output rather than on employment. However, a problem arises when comparing the LQ of Johannesburg with that of other metros. There is no relationship between metros having the highest LQ and the concentration of CHQs within their borders. Nelson Mandela Bay has by far the highest LQ for both employment and GVA but only one CHQ located there (Figure 4.48). This CHQ started as a family business in Nelson Mandela Bay and has continued in the same metro until today and this is supported by literature (Baaij, Van den Bosch & Volberda, 2004; Coeurderoy & Verbeke, 2016; Meyer & Benito, 2016).

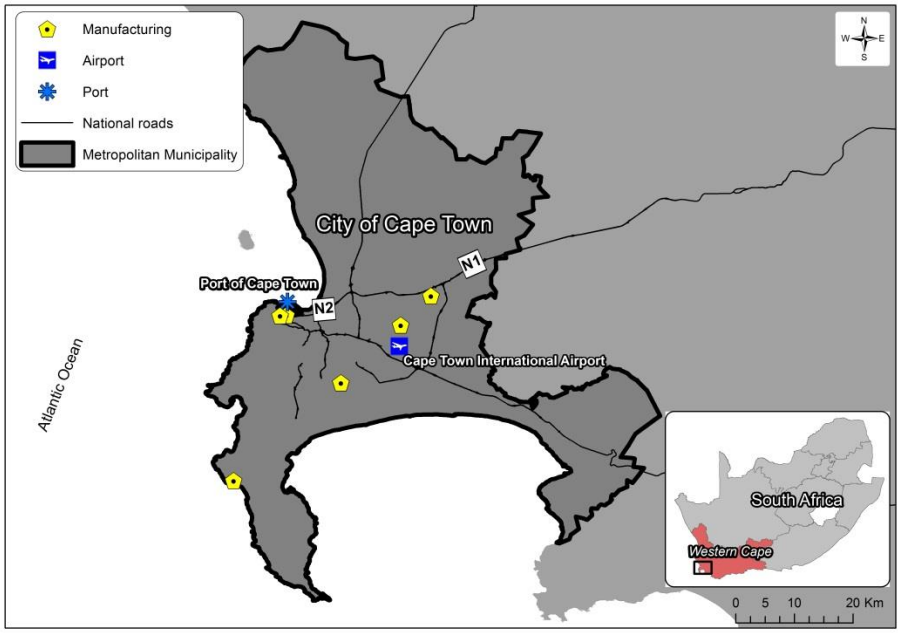


Figure 4.45: Concentration of manufacturing in City of Cape Town

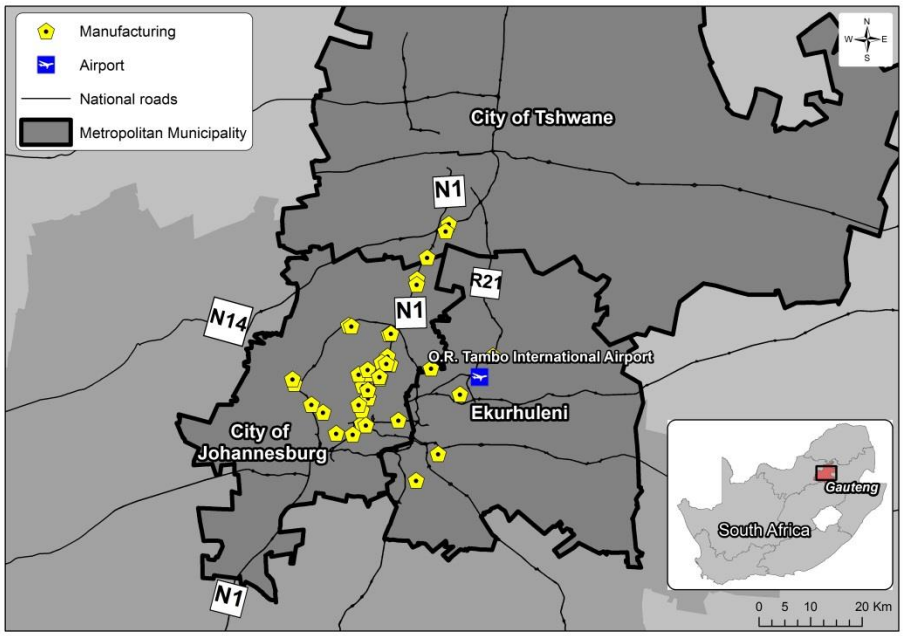


Figure 4.46: Concentration of manufacturing in City of Johannesburg, Tshwane and Ekurhuleni

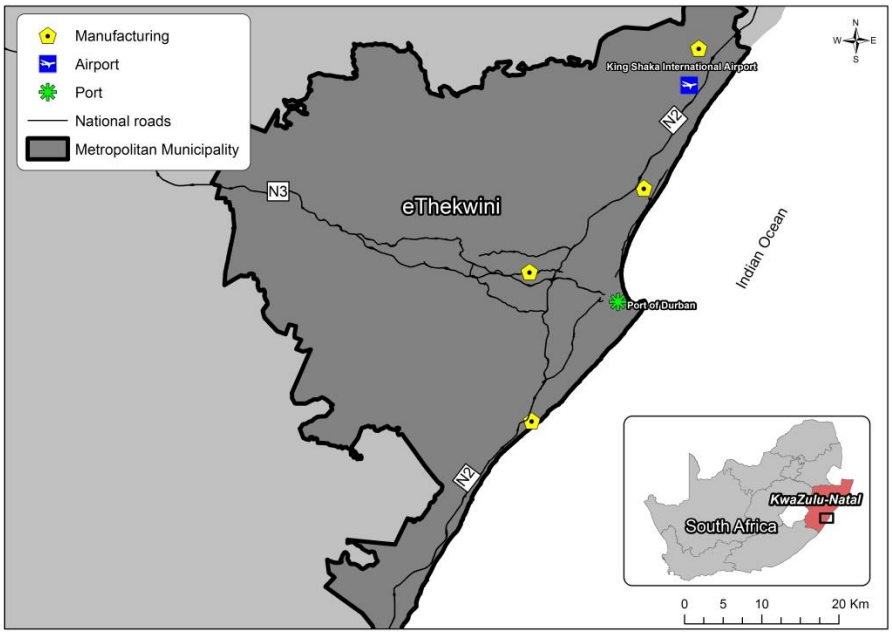


Figure 4.47: Concentration of manufacturing in eThekwini

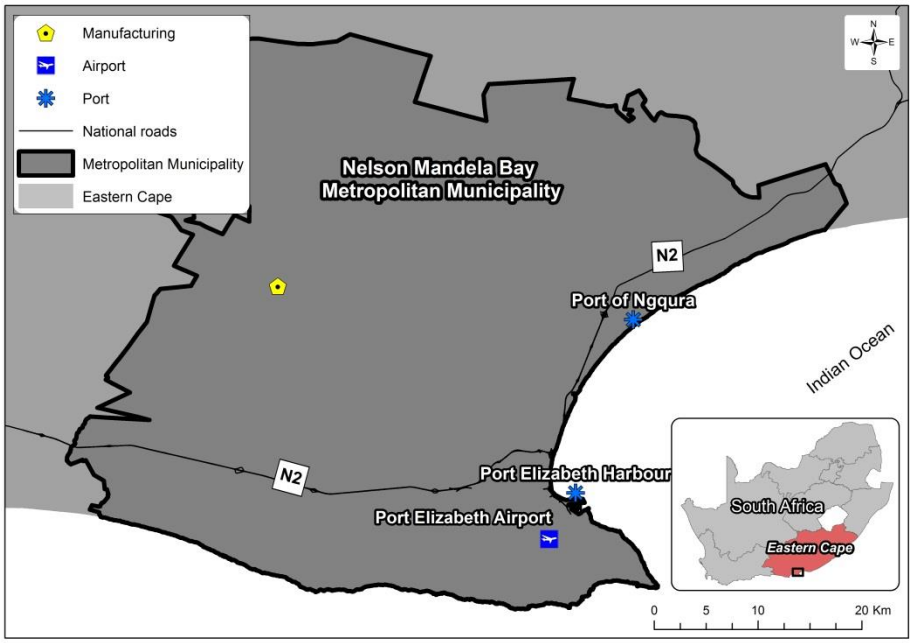


Figure 4.48: Concentration of manufacturing in Nelson Mandela Bay

Nonetheless, observing the competitiveness of the metros with the highest concentration, all metros are highly competitive in manufacturing except City of Cape Town. While eThekwini shows strength on the GVA side, Tshwane and Johannesburg are competitive in both employment and GVA. This is an indication of comparative advantage in these metros. eThekwini shows a metro that has a well-established manufacturing industry boosting the economy and still has potential to contribute more to the local economy. This has to do with eThekhwini being the home to one of the largest and busiest harbour in sub-Saharan Africa. This harbour provides important regional and international links as well as supportive business environment (Holt et al., 2008).

The City of Cape Town was the first city to be established in South Africa. Major investment went into the city during its establishment and continued to be maintained, making the city attractive to manufacturing. Furthermore, this has created a conducive business environment with well-established infrastructure (Luiz & Radebe, 2016). At the same time, the city has a well-established wholesale and retail trade, catering, and

accommodation industry that might be creating a spill-over effect to the manufacturing industry. Therefore, the linkage that manufacturing has with the best performing industry in the metro might be the reason for the high concentration of manufacturing.

Electricity, gas, and water

Electricity, gas, and water is one of the industries with a limited number of CHQs within the metros, a total of two (2) for all the metros (Figure 4.49; Figure 4.50). The LQ for City of Johannesburg showed specialisation in this industry on the employment side, while in Cape Town it was below one in both employment and GVA.

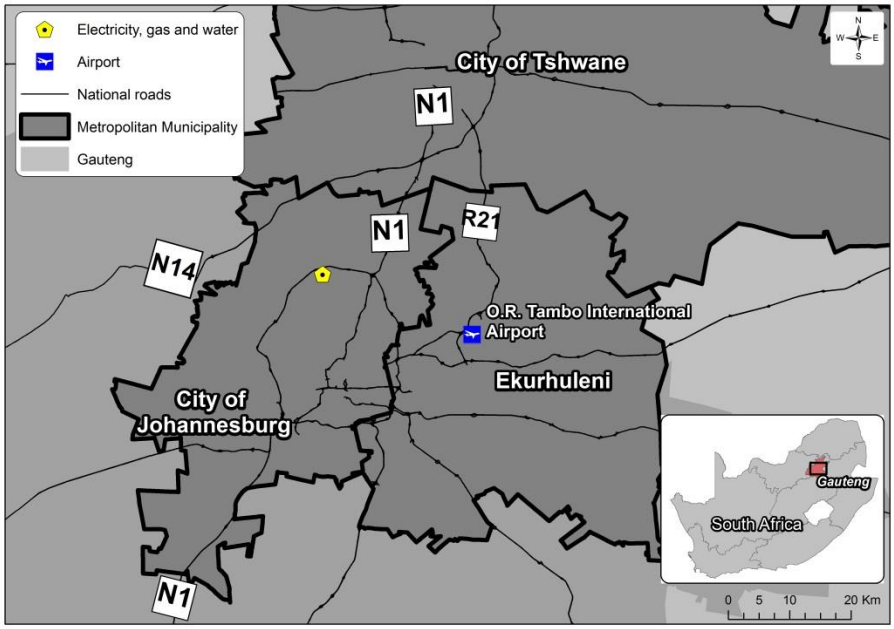


Figure 4.49: Concentration of electricity, gas, and water in City of Johannesburg

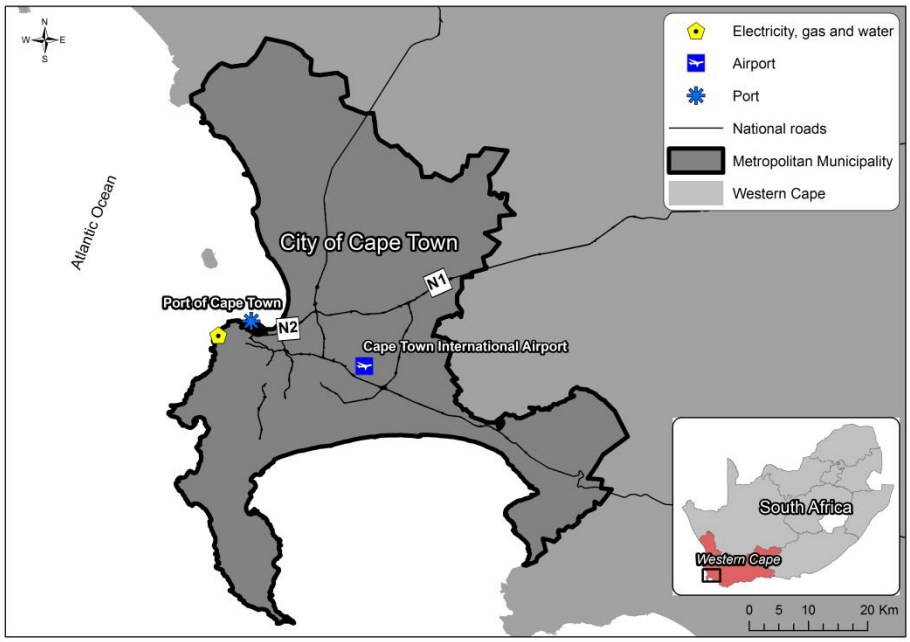


Figure 4.50: Concentration of electricity, gas, and water in City of Cape Town

However, these two metros show some competitiveness in electricity, gas, and water. Hence, the concentration of this industry can be explained either by specialisation or competitiveness, although other metros are competitive and also show some specialisation, but no CHQs are located there. These are metros that have potential to grow their local economy from this industry in the future.

Construction

The specialisation of construction is prevalent across different metros, all of them inland; none of the coastal metros has shown any competitiveness. Ekurhuleni metro has the highest concentration in this industry, and the LQ indicated that it is a specialisation for this metro both from GVA and employment (Figure 4.51). The metropolitan growth share also indicated a metro which is competitive on the GVA side. City of Johannesburg revealed both competitiveness and specialisation in construction; the same goes for Tshwane. The Gauteng Province in which the three

inland metros are located dominate in economic output (Turok, 2012), hence the high concentration of companies in the construction industry. However, Cape Town and eThekwini show some concentration, and these metros only displayed specialisation and not competitiveness (Figure 4.52; Figure 4.53). The location and the level of development that increases the need for construction companies might be one of the reasons for the concentration in these metros. Economic activities in South Africa is concentrated in major cities were the construction industries are concentrated in line with the situation worldwide (Turok & Borel-Saladin, 2013).

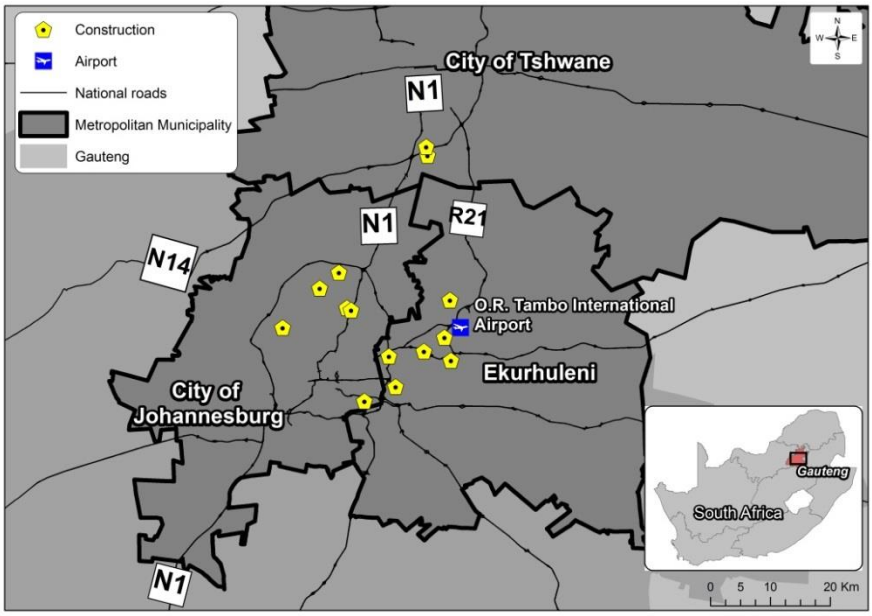


Figure 4.51: Concentration of construction in City of Johannesburg, Ekurhuleni and Tshwane

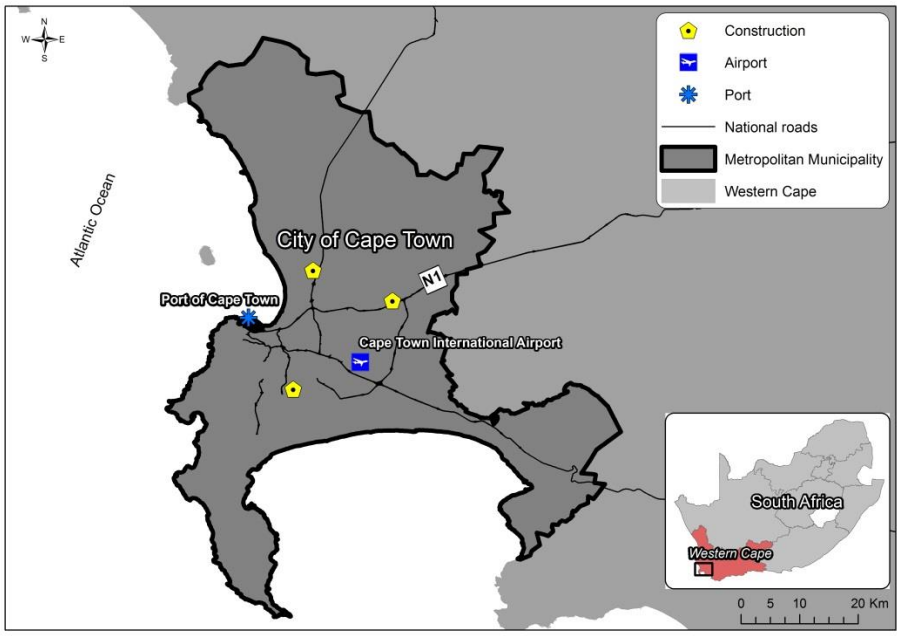


Figure 4.52: Concentration of construction in City of Cape Town

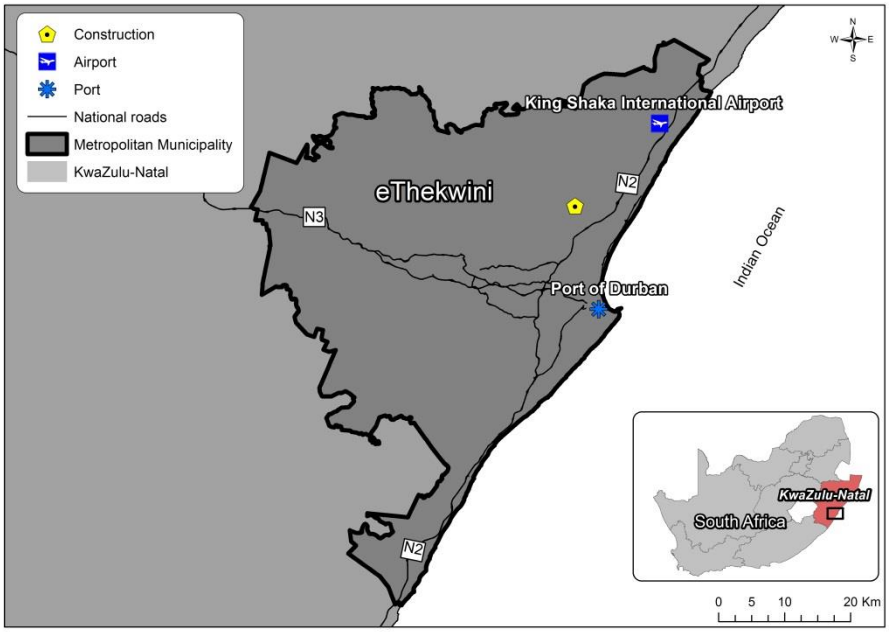


Figure 4.53: Concentration of construction in eThekwini

Finance, insurance, real estate, and business services

City of Johannesburg's main economic driver is the finance, insurance, real estate, and business services industry (Figure 4.54), reflected in both the employment and GVA LQ. The GVA shift-share analysis indicates a positive competitiveness in this industry. It may be argued that this industry normally co-locates CHQs and production units, hence the higher LQ on both employment and GVA. But in terms of its competitiveness, it was evident on the output side. This specialisation and competiveness is also visible on the concentration of CHQs within the metro. City of Johannesburg has the highest concentration of finance, insurance, real estate, and business services, accounting for more than 60% of those businesses in the country. It is also the case in Ekurhuleni and Tshwane, where there is a higher concentration in this industry.

City of Cape Town has the second highest concentration of CHQs in this industry, but no competitiveness exists (Figure 4.55). It shows specialisation in this industry both from employment and earnings. In Buffalo, Nelson Mandela, and Mangaung, there is some activity on the GVA side that is generating some income, but it has been declining over the years, while eThekwini shows specialisation. Buffalo City and eThekwini have few CHQs that are located within their boundaries (Figure 4.56; Figure 4.57).

Finance, insurance, real estate, and business services industries emerged as a supporting industry towards the mining and quarrying industry in South Africa. Since the mining and quarrying was concentrated in the Witwatersrand basin in Gauteng Province, it comes as no surprise to have a high concentration of the finance, insurance, real estate, and business services. This also imply that CHQs in this industry maintained their original location (Coeurderoy & Verbeke, 2016; Ghemawat, 2011; Meyer & Benito, 2016), and also the availability of supporting infrastructure for this industry to thrive in these metros (Holt et al., 2008; Luiz and Radebe, 2016).

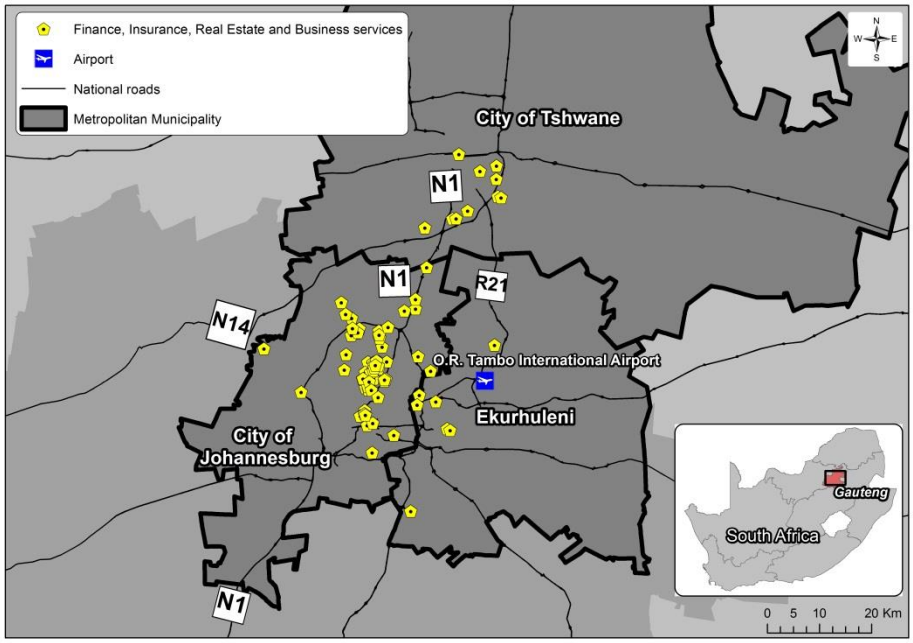


Figure 4.54: Concentration of finance, insurance, real estate, and business services in City of Johannesburg, Tshwane and Ekurhuleni

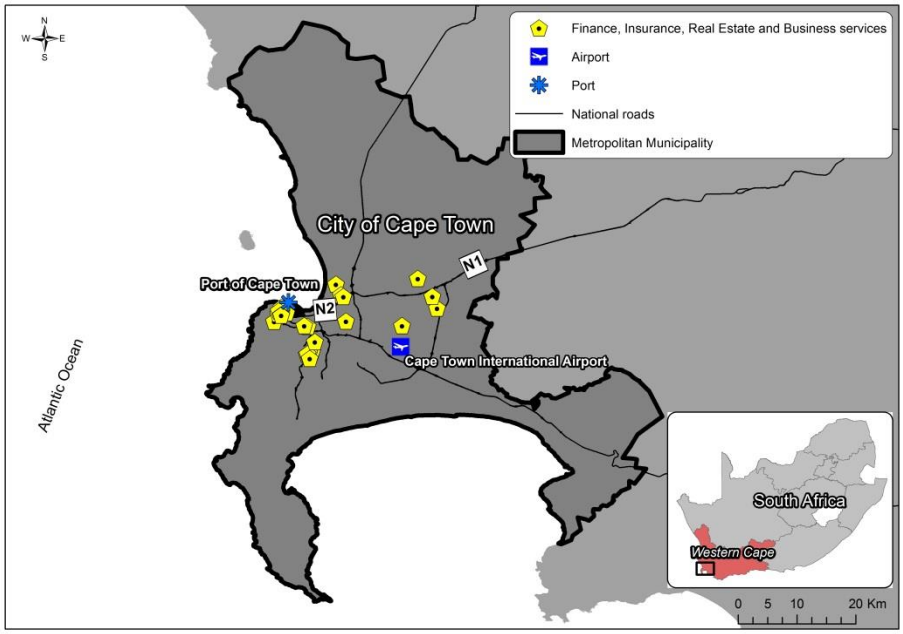


Figure 4.55: Concentration of finance, insurance, real estate, and business services in City of Cape Town

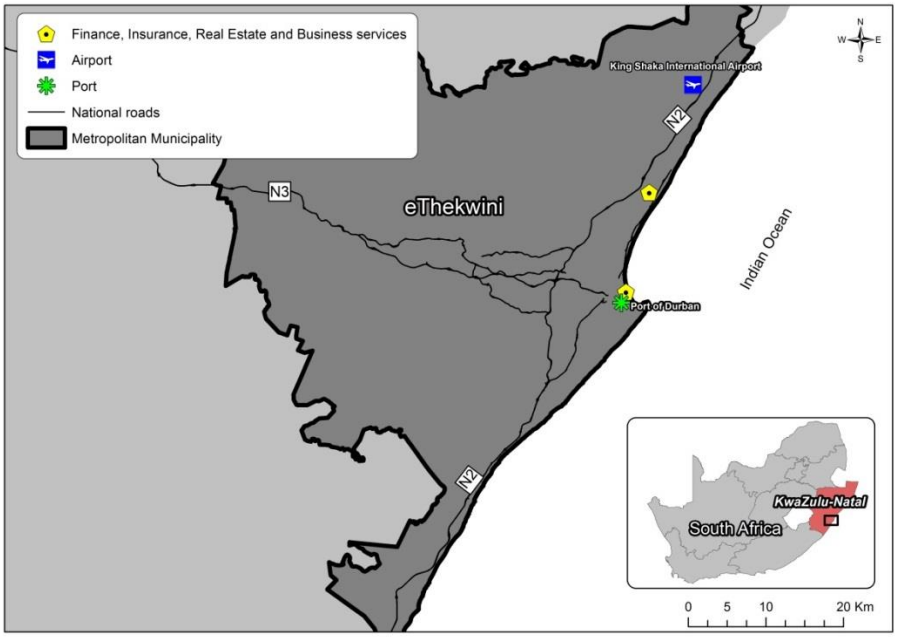


Figure 4.56: Concentration of finance, insurance, real estate, and business services in eThekwini

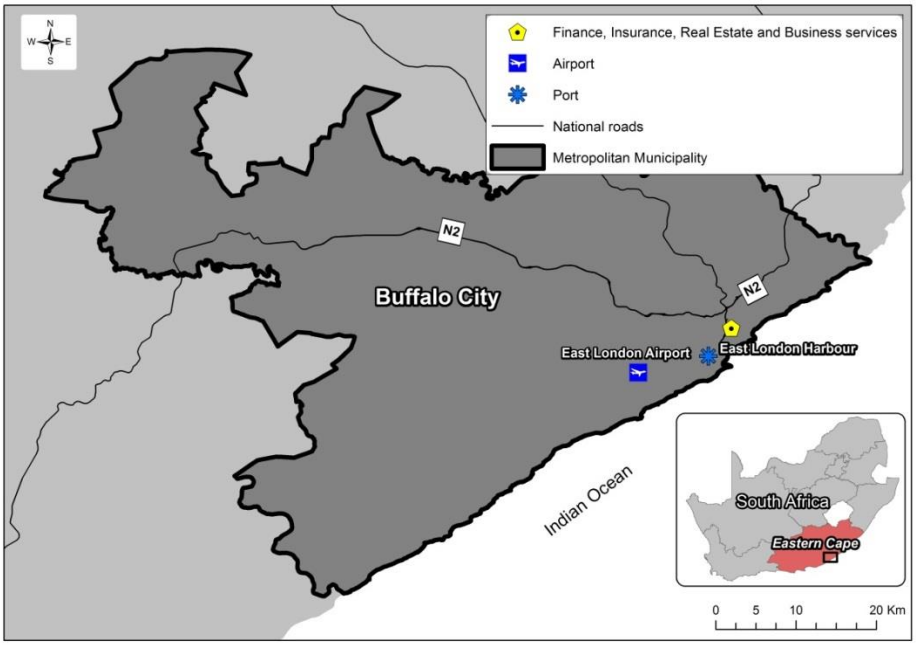


Figure 4.57: Concentration of finance, insurance, real estate, and business services in Buffalo City

Community, social, and personal services

The community, social, and personal services industry is concentrated in City of Johannesburg and eThekwini Metros. City of Johannesburg has shown both specialisation and competitiveness, while eThekwini shows only specialisation. In Ekurhuleni and Tshwane Metros, there was evidence of both specialisation and competitiveness in this industry. If the focus is only on the level of specialisation and competitiveness, City of Tshwane should be the one with the highest concentration of CHQs instead of Johannesburg (Figure 4.58). Mangaung Metro shows both competitiveness and specialisation, but there are no CHQs located there. This may indicate that the metro has more potential for growth in the future. However, eThekwini Metro shows neither specialisation not competitiveness but has some CHQs located there (Figure 4.59).The locational advantages in these metros make them attractive to the community, social, and personal services industry (Hayter, 1997; Jakobsen & Onsager, 2005). This industry provides supporting services to other industries and the general population.

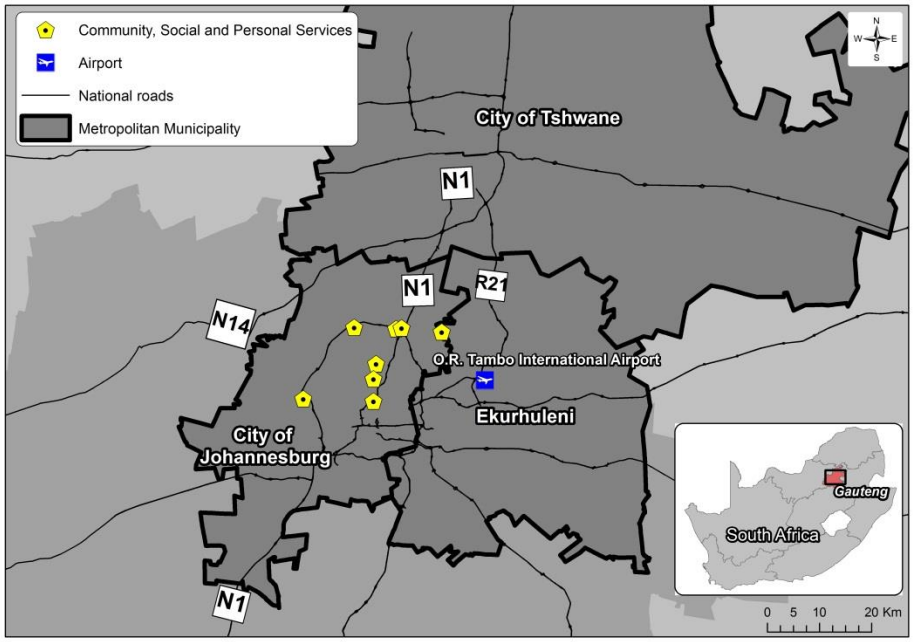


Figure 4.58: Concentration on community, social, and personal services in City of Johannesburg and Ekurhuleni

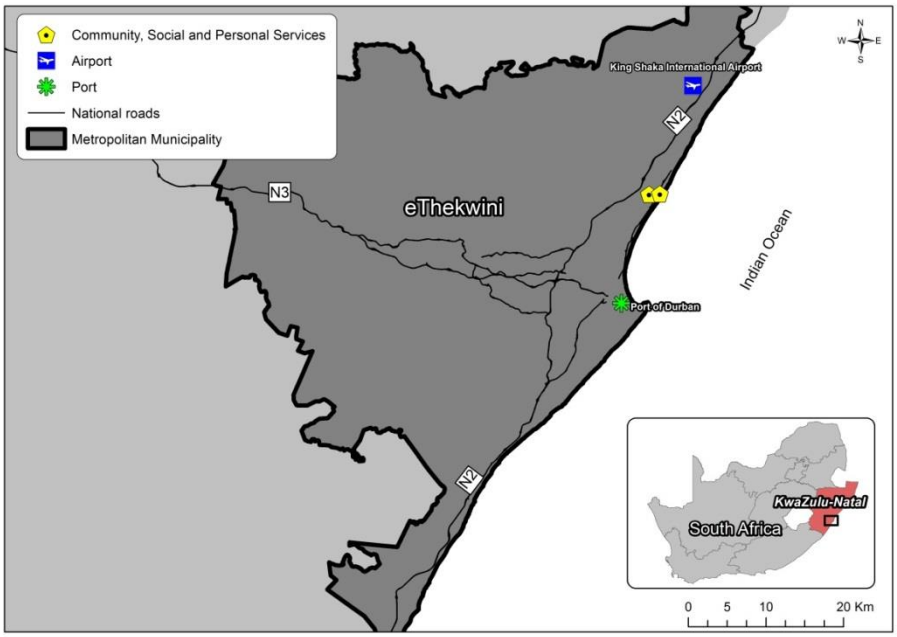


Figure 4.59: Concentration on community, social, and personal services in eThekwini

This was just a snapshot of industries that show high concentration to see if there is some relationship between the economic specialisation and/or competitiveness of the metro and the concentration of CHQs. The analysis of the metropolitan specialisation and employment/GVA LQ indicates that a direct relationship between the metro specialisation/competitiveness and the type of CHQs located within it is not a given. Nevertheless, even where there is no specialisation, the metro has shown to be competitive in the particular industries. One point to note is that when the economy is on the decline, it becomes hard to explain the behaviour of the firms. There is also a possibility that companies were located in these metros because of the specialisation and or competitiveness in earlier years. Several scholars have noted that the decision on location of CHQs is a long-term decision taken either during the establishment of

the company or when the company is expanding or considering relocation (Baaij et al., 2004; Coeurderoy & Verbeke, 2016; Elgar & Miller, 2009; Meyer & Benito, 2016; Porter, 1990). With this in mind, many CHQs are reluctant to relocate.

In some metros, some industries are still employing more people, and this was reflected by the employment LQ/shift-share analysis, while some industries are generating/contributing more income than others, which was reflected by the GVAN LQ/shift-share analysis. However, the sluggish economy warrants investigation into other drivers of location that keep the CHQs in the current location and establish if they are planning to relocate to other areas. It is possible that the concentration of CHQs in different metros may be explained by some of the historical events in the country.

4.5.5 Spatial Directional Analysis

City of Johannesburg, Tshwane, Cape Town, Ekurhuleni, and eThekwini were selected for spatial directional trend analysis. The other three metros (Nelson Mandela Bay, Buffalo City, and Mangaung) have few CHQs for this type of analysis. Figures 4.60, 4.61, and 4.62 show the outcome of the spatial directional trend analysis using standard deviational ellipses at 1, 2, and 3 standard deviations.

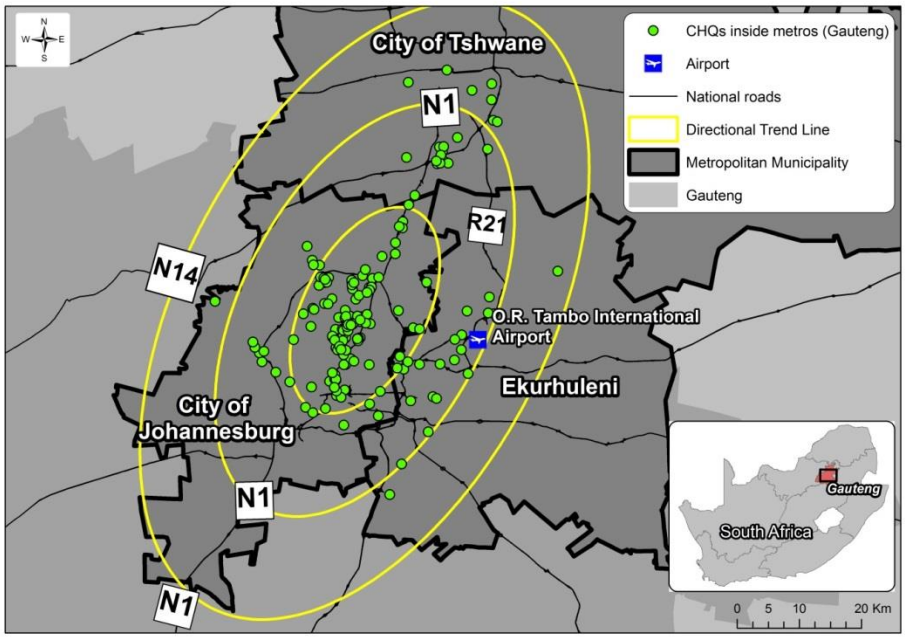


Figure 4.60: Directional trend for City of Johannesburg, Tshwane and Ekurhuleni

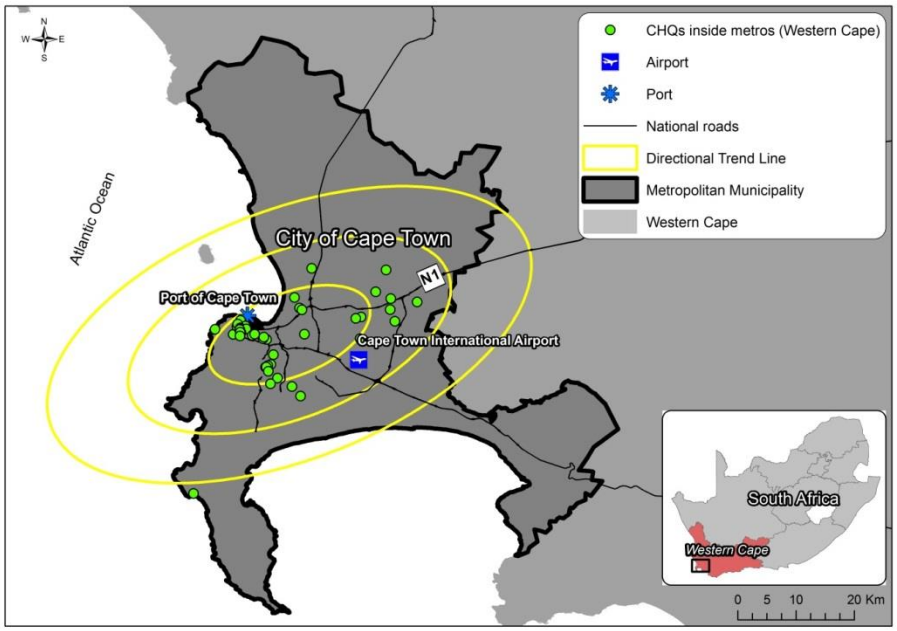


Figure 4.61: Directional trends for City of Cape Town

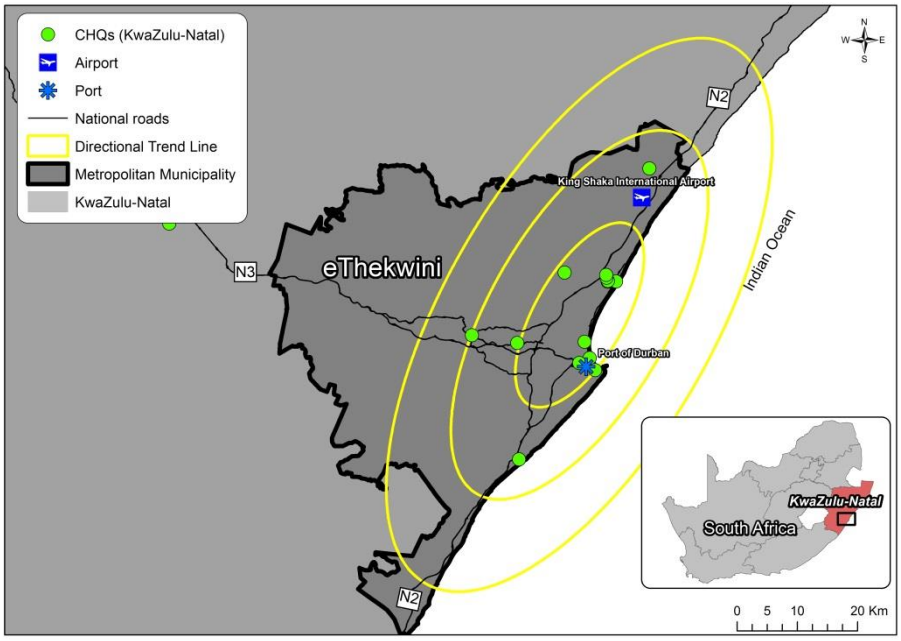


Figure 4.62: Directional trends for eThekwini

The standard directional ellipses show that CHQs in Gauteng (City of Tshwane, Ekurhuleni, and City of Johannesburg), Western Cape (City of Cape Town), and KwaZulu-Natal (eThekweni) are clustered and aligned along national roads; that is, most of CHQs are located along N1 in Gauteng and in Western Cape, and along N2 in KwaZulu-Natal (eThekweni). Pillay and Geyer (2016) also concluded in their studies that business tends to cluster along major roads to increase visibility, brand exposure and accessibility. This might be the case in the concentration of CHQs along the major roads.

4.5.6 CHQs in Inland and Coastal Metropolitan Municipalities

The highest concentration of CHQs is in the inland metros, with 202 CHQs accounting for 75.7% of CHQs, as compared to the coastal metros, with 65 CHQs accounting for 24.3%. This serves as an indicator that most economic activity is happening within the inland metros rather than coastal ones. However, this does not imply that CHQs in the inland metros are evenly distributed. City of Cape Town has more CHQs than most of

the inland metros with the exception of City of Johannesburg, which has the highest number of CHQs within its borders, with 159 CHQs (Table 4.2). These metros has the highest ranked city in Africa (Turok & Borel-Saladin, 2013) which might act as a pull factor for CHQs. It is worthy to note that Johannesburg has the highest number of CHQs across all industries with the exception of wholesale and retail trade, catering, and accommodation. Overall, wholesale and retail trade, catering, and accommodation is the only industry that is concentrated in the coastal metros (Figure 4.63). This may have something to do with the transportation mode of goods in and out of the country through the port.

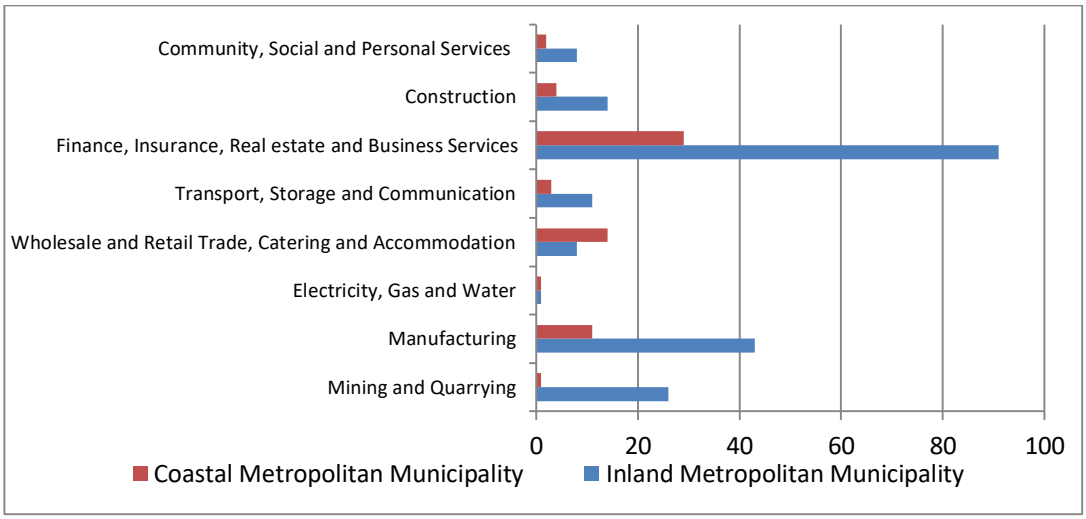


Figure 4.63: Concentration of CHQs between coastal and inland metros

4.5.7 Distribution of CHQs Inland

CHQs of the inland metros are concentrated in one province, Gauteng, which has three metros within its boundary. City of Johannesburg dominates the inland metros with the highest proportion of CHQs, 59.6%; Ekurhuleni has 23 CHQs, 8.6%, and Tshwane has 20 CHQs, 7.5%. Mangaung Metro, which is in Free State Province, has no CHQs within its borders.

Three of the inland municipalities—Johannesburg, Tshwane, and Ekurhuleni—are all within Gauteng Province, which is the economic hub of South Africa and the smallest province in the country in terms of land mass. The three metros are in close proximity to each other, and they share borders. Therefore, it can be reasonably assumed that the three metros would share positive externalities with each other. However, this has not translated into CHQs being evenly distributed in the three metros.

4.5.8 Distribution of CHQs along the Coast

CHQs in the coastal metros are distributed mainly in two municipalities, Cape Town (49) and eThekwini (14). Eastern Cape Province has two metros within its borders: Buffalo City and Nelson Mandela Bay, and although it hosts two metros, it hosts only two (2) CHQs. Thus, the two metros within the Eastern Cape Province account for the lowest number of CHQs as compared to other provinces.

The argument is that CHQs in South Africa are mainly concentrated in 5 metropolitan municipalities—Johannesburg, Cape Town, eThekwini, Ekurhuleni, and Tshwane, which reflects on the one hand the uneven spatial development that resulted from apartheid spatial planning and on the other hand the concerted efforts from the current regime to sustain development in the key economic areas. However, this research assumes that there are many complex factors that influence CHQs location choices and decisions and that a country's social, economic, and political environment also play a crucial role.

The metros may specialise/compete in particular industries, but when it comes to CHQs, they are usually diverse within a particular location. This may be because corporations generate spill-over effects (Storper, 1997; Oinas, 1997; Yeung et al., 2001) that attracts other industries offering complementary services. The spatial concentration of CHQs makes the metros to be economically influential and powerful nationally (Chandler, 1990; Rice & Pooler, 2009; Rice, 2010; Tonts & Taylor, 2010).

4.6 Discussion

The spatial patterns of the CHQs analysed is based on the Johannesburg Stock Exchange data as of September 2016, as already mentioned. The factors of CHQs location are usually similar across the metros (Klier & Testa, 2002). The public firms are easily accessible, and information is public. At the same time, these companies are large, and they have much influence to the local economy.

4.6.1 Concentration

Of the 267 CHQs, almost 50% (44.9) are in the Finance, Insurance, Real Estate, and Business Services industry (Table 4.1). CHQs are concentrated in a few metros, with the majority of the Finance, Insurance, Real Estate, and Business Services CHQs located in City of Johannesburg (Table 4.2). CHQs are notably concentrated in the inland (202) metros as compared to the coastal (65) metros. Within these two categories, there are two metros having a larger proportion of CHQs within their jurisdiction. The concentration of CHQs in City of Johannesburg is at 59.6% and City of Cape Town with 18.4%. In fact, City of Johannesburg hosts more than half of the total number of CHQs within the country. The resources that the metros have may act as catalysts for companies to locate there.

There is significant spatial bias of CHQs in the metros in that the concentration is between the two metros. There is also a tendency of CHQs belonging to the same industry to concentrate in particular metros. For instance, wholesale and retail trade, catering, and accommodation are concentrated in Cape Town, and this may be so because they want to be closer to their production plants, while construction is in Ekurhuleni. The rest of the industries are more concentrated in Johannesburg. The distribution of CHQs is biased towards one metro (Figure 4.64).

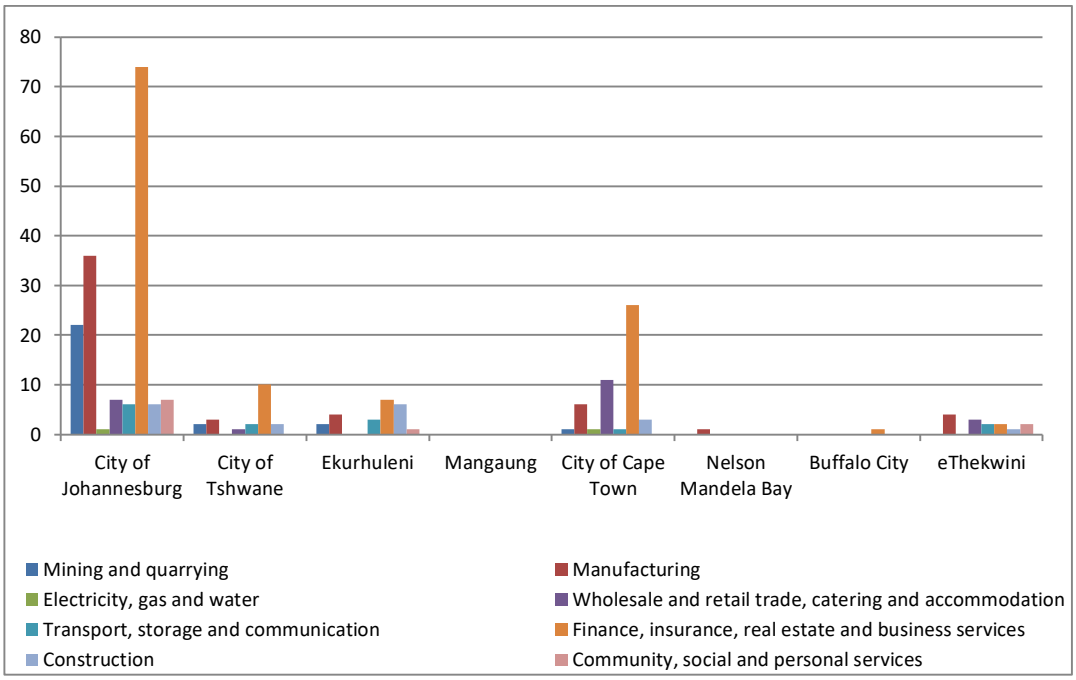


Figure 4.64: Spatial skewing of CHQs

The JSE is located in City of Johannesburg, and it is probable that most companies are located in close proximity as a way of benefiting from agglomeration economies. Most of these companies that are in close proximity with the JSE are in the Finance, Insurance, Real Estate, and Business Services industry. Urban planning has played a major role in the spatial distribution of CHQs. The movement of businesses from the Central Business District (CBD) to Sandton, which started in the 1980s, facilitated the movement of other CHQs to the same area (Pillay & Geyer, 2016). This was convenient for the executives, and safety was the driving force behind this move. A study conducted by Turok (2013) also drew similar conclusion on convenience of location to executives. Sandton, which has become the second CBD, has attracted many firms; hence it makes business sense for most CHQs to locate there.

4.6.2 Human Capital

The spatial concentration of human capital is a crucial resource required for economic growth and regional development (Growe, 2010). Human capital, however, is not an

evenly distributed resource. In the South African context, among the provinces with the most CHQs, the province with the highest density of human capital is Gauteng. Second is KwaZulu-Natal, which has the second highest population and a population growth that has basically remained at 19,9% between 2002 and 2015 (StatsSA, 2015). However, it has 15 CHQs, placing it in fifth place instead of second place, if it is looked at from a population or human capital point of view. The Western Cape population in 2002 was 11% and in 2015 it had increased to 11,3%. The provinces which have received the highest number of migrants from other provinces are Gauteng and Western Cape, which are the two provinces which host the most CHQs. The high population should be accompanied by the high literacy level and skilled labour force that CHQs are looking for.

It should be noted, however, that the increase in human capital in these provinces does not necessarily equate to greater improvement of the standard of living, despite the developments. For example, in 2011 Gauteng province had 16,5% of households who did not earn income, which implied that about two (2) million of the total population of over twelve (12) million are living below the poverty line (see StatsSA, 2011). However, in terms of employment by skills level, all the metros within Gauteng experienced an increase in the highly-skilled employment between 2003 and 2013 (Republic of South Africa, SA Gauteng, 2015).

4.6.3 Access

There are more CHQs along the major highways and surprisingly only within a certain area instead of consistent concentration among metros (see Maps 4.1–4.25). Some CHQs are located in close proximity to the port, while some prefer locations closer to airports. This may imply that it is more than just access that is making the CHQs to locate along this highway. The concentration of CHQs has created several clusters within and across the metros. Aarland et al. (2007); Birkinshaw et al. (2006); Harrison et al, (1997); Holt et al, (2008); Pillay and Geyer (2016); Rogerson (1998) to name but

a few, have shown that CHQs choose their locations based on different needs. The issue of location along major routes have different implications for different CHQs.

4.6.4 Infrastructure

The concentration of CHQs of the industry or related industry may be due to the need for face-to-face interaction between the companies. In these interactions, CHQs benefits from knowledge/information spill-over (O'Sullivan, 2012; Pan et al., 2015). Urbanisation economies play an important role, especially in the metros, where there is a high concentration of CHQs belonging to the same or related industries. Economies of agglomeration play a major role in those firms that concentrated in the same area. The concentration of these CHQs attracts more CHQs into the area, thereby making a much larger pool of CHQs. This has probably added to the population, as more and more people are employed and moving in in search of employment. In some of the metros where there is high concentration, there is well-developed infrastructure, and other related economic activities are also there (Pan et al., 2015). The metro in turn improves the infrastructure to retain these CHQs, and also there is more money that the metro generates from hosting many of the CHQs. This is no surprise when one observes where the CHQs are concentrated in most metros: it is in the most developed part of the metro.

4.6.5 Operating Costs

Land value (price) in the CBD is quite high, as is rent, so only CHQs of big companies may choose to locate there. As more CHQs locate in one area, it builds up competition, thereby increasing the value of land. This, however, does spill over to increase housing and the overall living standard in those areas with higher space demand. The metro has to ensure that the standard of services provided matches the development in the area. In the end, these areas became top class and continue to attract more business in the area. This is best explained using the bid-rent theory (Alonso, 1964, see section 2.9.1 for an explanation of bid-rent theory).

4.7 Chapter Summary

The level of specialisation and/or competitiveness in the different metros measured by both employment and GVA reveals the dynamics that exist within the metros. The LQ was used to measure the level of specialisation, while shift-share analysis was used to measure the level of competitiveness using employment and GVA figures from 1995–2016. There was an indication of declining economic activities in different industries based on the LQ results, making it difficult to explain the current concentration of CHQs. This is an area that requires further investigation, especially into the relationships with the concentration of CHQs. Location and siting of CHQs is a long-term decision; therefore many of the CHQs have been in the location for many years. In terms of competitiveness, the inland metros are more competitive compared to the coastal metros, which are predominately competitive in wholesale and retail trade, catering, and accommodation. In terms of the concentration of CHQs, there are more CHQs in the inland than the coastal metros, with City of Johannesburg and Cape Town taking a lead. The spatial analysis revealed that CHQs tend to agglomerate close to each other in proximity to major transportation infrastructure.

Chapter 5

Results of Primary Data and Analysis: The Trade-offs in Location and Site Selection

5.1 Introduction

This chapter presents the results of the primary data: the interviews and the survey. Thematic analysis is presented first, followed by the descriptive statistics and conjoint analysis. The previous chapter presented some of the factors of CHQs location and site selection based on the spatial analysis of CHQs in different metros in conjunction with the specialisation and competitiveness of the metros. Since factors of CHQs location and site selection were identified using both secondary and primary data, this chapter continues the discussion from chapter 4. There are three questions that this chapter addresses: what determinants are considered in the location and site selection processes, how are they prioritised, and how do companies decide to make trade-offs between competing determinants?

5.2 Interviews Results

Gauteng Province has the highest concentration in almost all sectors; therefore, it was purposively selected for the interviews to represent all other metropolitan municipalities. The researcher interviewed 10 companies. The interviews lasted from 30 minutes to 60 minutes. All interviews were conducted in either the respondent's office or the boardroom, except for one interview, which was conducted in the coffee shop inside the company's premises.

The researcher made attempts to secure interviews with all sectors but could not secure an interview with the mining and quarrying sector. The companies in this sector did

not supply the researcher with the relevant persons who could respond to the interview, hence there is no representation from this sector (Table 5.1).

The research used an inductive approach in the data collection process. The data were then transcribed and coded/categorised for analysis. The data were coded using an Excel spreadsheet with numbers allocated to each theme and sub-theme.

Table 5.1: Characteristics of respondents

Identification code	Sector	Position
1	Transport, storage, and communication: industrial transportation	HR manager
2	Community, social, and personal services: health equipment and services	HR manager
3	Manufacturing: forest and paper	HR manager
4	Manufacturing: chemicals	Outsourced property company personnel
5	Wholesale and retail trade, catering, and accommodation: general retail	Property analyst
6	Community, social, and personal services: pharmaceuticals & biotechnology	Group legal affairs manager
7	Construction: construction and material	Finance director
8	Finance, insurance, real estate, and business services: life insurance	Director: real estate services
9	Community, social, and personal services: personal goods	PA to CEO
10	Wholesale and retail trade, catering, and accommodation: general retail	Property executive

From the companies interviewed, 40% of the respondents were directly involved in the property division of their respective companies, while the other 60% were not (see Table 5.1 above). This is understandable, as some companies do not have property divisions/positions, and therefore in such cases, it is other portfolios or divisions which

handle issues related to location and site selection. Almost all respondents knew and understood the location and site selection decisions irrespective of the position held.

5.2.1 Location Factors of CHQs

This section presents an analysis of data from the interviews relating to location factors.

Access by employees

All respondents highlighted accessibility to CHQs as one of the key factors considered in their location. There are two aspects to accessibility: easy access for employees and for customers and business partners. This came out in different ways, for example, "Transportation for employees; proximity to train station; close to highway; central location to employees; accessible by both public and private transport and location along transport routes."

The companies, in this case, considered easy access of their employees as key to their functioning. The idea is that a company should locate in an area where employees can easily access it using either public transport (train or buses or minibus taxis) or private cars.

> When we were looking we got (name of company). They do it for a living. They looked at all the addresses of all the people that are working in the head office and then they plot what are the areas that will be most convenient for most of the people. They looked at it not from a grade or a seniority point of view; they looked at the place of residence and what will be the mode of transport and what will be the most convenient.[30]

Another company also said, "[I]t does not matter where you live; it is easy to get here. It does not matter the transport you need; it is easy to get here." A study conducted in

[30] Edited transcript of recorded response.

the UK using telephonic interviews found that access by car is important for the corporate occupiers (Dixon et al., 2009). Sing et al., (2006) also concluded that access by public transportation was highly valued based on the survey of office occupiers' decision. Access by employees seemed to be critical to location of CHQs. Locating the company closer to the residential area was also linked to issues of access by employees. The importance of employees in CHQs location explains the direct involvement of human resources personnel in the decision-making processes.

During the interviews, some respondents also highlighted the issue of easy access to the airport. In Gauteng Province there are three international airports: O. R. Tambo International Airport, Lanseria Airport, and Wonderboom Airport. However, there are other key airports in other provinces, as shown in chapter 4. The presence of three airports in Gauteng Province, all having international status, also highlights the centrality of this province as an economic hub.

Linkage to the other markets

Locating near an airport, as some of the respondents highlighted, is important for linkage to other markets. Only 30% of the companies noted that the link to the international airport is good for their business; rather, such a location made it easier for the executive when having to attend meetings in different places. Luiz and Radebe (2016) in their interview-based study of RHQs location in South Africa concluded that linkage and access to regional markets are important.

Clustering and synergies

Clustering also featured as an important aspect driving location decision, with 40% of companies highlighting the need to locate closer to other business units which complement or support their business. The clustering of certain services in a particular area may yield better results for companies. Rogerson (1998) in his research on location of technology firms noted that high-technology firms clustered along the Pretoria-

Witwatersrand region due to the supportive infrastructure. In some instances, the clustering of companies in one area facilitated the provision of support services. Forty percent (40%) of the companies highlighted the importance of support services for their employees. This includes but is not limited to entertainment areas, shopping outlets, and other facilities that are essential for the well-functioning of employees outside the work environment.

> Obviously, there are services for people; there are shops, restaurants…. So for the people in this building, if they want to, they can leave the building and go have lunch. There are lots of choices; there are lots of shops they can go buy from, which we also see as an advantage.[31]

One retail company specified that their choice of location was driven by the desire for proximity to customers and partners:

> We need access to all the banks [and] legal advice, and our main clients are based here in Johannesburg, so it makes sense for us to be located where our clients base is and where all our partners and service providers are also located.[32]

These support services can be the banks and legal services that provide essential support to the business. An individual company does not have control over where these services locate, hence they locate where there is easy access to them.

Infrastructure

The general environment in the neighbourhood also plays a role in the location of the corporation. Rogerson (1998) cited infrastructure as one of the main driving factors in the location of firms. Either the area continues to keep up a good standard for

[31] Edited transcript of recorded response.
[32] Edited transcript of recorded response.

corporations to remain there or it starts deteriorating and companies move to other areas. Sometimes the companies were specific in that they value IT/telecommunication infrastructure the most (Holt et al., 2008; Luiz & Radebe, 2016).

The listed companies have an image to protect, and they need to ensure that their shareholders are happy with the image they are portraying for continuous investment. Therefore, some companies mentioned a pleasant environment and nice areas as some of the factors they consider in a location. Therefore, for CHQs the issue of a prestigious location seems to be a factor in location decisions. The prestige of a location would in this case also relate to other factors such as support service, clustering, and synergies.

Historical

Literature revealed that CHQs location and site selection is a long-term investment decision (Karantonis et al., 2001). The respondents indicated that only 40% of the companies have been in the same location for less than ten years, while 60% have been there for more than ten years. Some companies have been in the same location for such a long time that the respondents had to refer to the company's records. As was established from the literature, some companies maintain their original location (Meyer & Benito, 2016). Furthermore, CHQs tend to remain in the same location due to the already-established specialised services in the area (Ghemawat, 2011).

The researcher asked the respondents if their respective companies have relocated before or are planning to relocate, and 30% of the respondents were not aware of any previous relocation of their respective companies. Some companies have been in the same place for a long time, and probably no documentation is available on any relocation, or the companies were still in their original location. For those companies that have relocated, sometimes the move took place long before the respondent joined the company.

For the companies that have relocated, some of the reasons given were the need for more space, separation of companies, and expiration of lease. This shows that sometimes external factors do influence the location decisions especially when it comes to lease agreements (Hu, Cox, Wright & Harris, 2008). This can be external when CHQs has to relocate, for instance, if they cannot renew their lease. In terms of relocation, 20% of the companies are not considering any relocation, while 60% are considering relocation, and the other 20% are not sure yet. One respondent alluded to relocation as follows: "I think to move it's a nightmare, and to go through all of the logistic and all of the staff changes, and once people are used to their routes and their lift clubs…. We are not envisaging any move."

Relocation of CHQs is a decision that affects both the company and the employees; however, changes in the economy may positively or negatively impact the company. One respondent indicated that the negative economic conditions in the country led to retrenchments, and as a result, the company now has a massive building with few employees.

The analysis shows that 60% of the companies are in their current location due to historical reasons. Some of them have been in the same location since the company's establishment. However, some companies changed buildings within the same neighbourhood, which has to do with the company's attachment to the location. In such historical cases, the metropolitan municipality has no role to play in the location, since the companies have been there since long before the establishment of the metropolitan municipalities.

5.2.2 Site Selection for CHQs

This section presents an analysis of data from the interviews relating to factors of site selection.

Image (interior, access, external appearance)

The practical/external appearance of the building says much about the company. The image of the company is essential, especially for a listed company. A company that occupies a distinct building communicates to both investors and potential investors, and therefore its message needs to be right if it is to attract investment or business. Some of the respondents highlighted that occupation of an upmarket, modern facility contributes to the image of the company. The image and prestige of the location have been cited as the most preferred attributes in occupiers' space decision (Sing et al., 2006).

Building interior

The building should have enough space for all the employees. One company mentioned an instance where they had to reject an offer, as they wanted to operate from one building rather than have to deal with the logistical difficulties of running two facilities. Another company had to remodel the building so that they merged two buildings into one. Another company also was in the process of constructing central CHQs to avoid having the executive sitting in different buildings. CHQs also prefer to have spacious buildings in order to cater to the large pool of employees who work at the CHQs. This is an indication that CHQs need suitable space/buildings to fulfil their mandate (Elgar & Miller, 2009).

Supporting facilities

Thirty percent of the respondents indicated that parking is a major consideration in choosing a facility. In a study in Helsinki Metropolitan Area, parking space was amongst the most highly valued attribute for occupiers and users of buildings (Luoma et al., 2010). Considering the high rate of crime in South Africa, companies tend to prefer buildings with secure parking facilities for the safety of their employees. If CHQs occupy a building which does not have enough parking or has no parking at all,

the company has to be concerned with the security of the employees. The preference of most companies is to have a building with either underground parking or open parking as part of the same facility.

Lease

Half of the companies interviewed own their facilities. Those who own facilities had special needs and wanted to custom design the buildings for themselves to suit their needs, or they understand the importance of property value. One respondent said, "When you are renting, one is held hostage to an annual lease escalations, but when you own your building as an asset, over time it appreciates in value." Although none of the companies interviewed was in the real estate business, some of them take their properties as an investment. Some of the companies that are renting their facilities own their production plants where other operations take place, and it was not necessary to own the main office. The companies preferred to own the production plants, as they are specialised entities of the companies. Some companies prefer to purchase their CHQs property or to co-own their properties and in turn lease to their business. This strategy helps the companies to manage their cash flow and in turn reap the tax advantages of such an arrangement.

Some companies avoid owning properties to evade maintenance costs. In so doing, the company transfers the maintenance costs to the landlord. Although the maintenance costs are embedded in the monthly rental, this strategy allows for the companies to focus on their core business rather than worry about the property and maintenance. One respondent highlighted that the rental strategy helped their company to employ more staff to focus on the core business, which helps them to grow the business.

Safety

The respondents flagged the issue of safety as a concern both for office location and site selection—the safety of the area and the safety at the premises. Safety then

translated to the safety of employees at two levels, getting to the area and also once inside the premises. Sixty percent of the respondents argued that this is a major societal concern in South Africa which society should address. One company mentioned that they had two options regarding security, to improve the safety of the area or to relocate to another area. Most companies have access control to their premises and in some cases even block off certain parking spaces and parts of the building for certain personnel as an additional protective measure. Some companies provide shuttle services for the employees who utilise public transport, the train in particular, as a safety measure and also as an incentive for employees to use public transport. The study by Pillay and Geyer (2016) highlighted the risk of crime as one of the reason companies moved from the Johannesburg's CBD.

Sustainability

Some of the respondents (20%) highlighted that energy efficiency is one of their concerns. One of the respondents indicated that their building was custom designed to meet their energy efficiency needs. One of the companies described their building as follows:

> It's a five star green-rated building (very green conscious company). So from the simple stuff, which is the lighting … comes on and off by itself. We have the chillers in the basement, so all our HVAC are controlled by chillers. They make ice overnight, and in the morning that ice is used to cool the space, so the air condition[ing] that you are feeling now is made by ice that is supposed to be made by electricity. So all our glass is very environmentally friendly. The design of our layout of our building allows maximum sunlight into the building. The walls facing the street, all are glass, performance glass, that keeps it cool and yet brings in the light. We use a lot of green products in the construction of the building, so we actually won an award for a 5-star green rating because of

> our green building. … So the actual design until completion achieved a 5-star green accredited process. The utility costs are low.[33]

Luoma et al. (2010) concluded that companies valued HVAC factors in a facility from the Internet-based survey in Helsinki Metropolitan Area. However, interviews about commercial occupiers' building choices in New Zealand concluded that a sustainable building might not be the most valued factor in a location decision (Levy & Peterson, 2013). For some CHQs, the main reason for choosing the building was the promise by the landlord to remodel the buildings to meet the companies' specifications. CHQs were also looking for better ways to cut operating costs in that when the buildings are energy efficient, electricity and water usage is lower.

5.2.3 Summary

The interview highlighted some of the determinants of CHQs location and site selection in South Africa. The interview results confirmed that the determinants of location and site selection in the South African context are somewhat similar to the ones raised from different studies. However, CHQs in different contexts may prioritise these determinants differently. Therefore, the next section analysed the trade-offs that CHQs make on competing determinants when making location and site selection decision.

5.3 Survey Results

As already mentioned in the methodology chapter, the researcher sampled the whole population for the survey purposes. A link was sent to all the listed companies requesting their participation in the study.

5.3.1 Descriptive Statistics

Descriptive statistics was used to present the background information on the CHQs that took part on the survey. The respondents' rate of the survey was 16%, representing 43

[33] Edited transcript of recorded response.

respondents out of the possible 267. Several attempts were made to get more CHQs to complete the survey. However, the low response rate is considered sufficient for an exploratory study owing to the sensitivity and complexity of location and site selection decisions (Holt et al., 2008).[34] Orme (2010) also confirmed that the low response rate is acceptable for an exploratory study to understand the behaviour of CHQs. The completed survey does not include all the industries, lacking specifically construction and electricity, gas, and water.

The researcher sent several reminders to respondents through emails, and in some cases telephonic calls were made to give each company the opportunity to participate in the study. Other respondents, however, did share their reasons for not participating in the survey, some of the reasons offered being lack of time, concern with share price, company restructuring, unwillingness to participate, and in some instances, uncertainty on the part of the contact person as to who should be responsible to fill in the survey. In large companies, location decisions are not individual decisions and if those involved are no longer with the company, sometimes it may be difficult to recover the information (Watt and Stafford, 1986). Some respondents promised to complete the survey but never did. Towards the end of the survey period, the study drew attention to the industries that were not represented, but this did not yield any positive results.

Respondent profile

The researcher's preference was for the survey to be completed by the relevant staff within the companies who are directly involved in the location and site selection decision or have the knowledge and understanding of such decisions. However, once the email link was sent out to the company, the researcher had no control over who completed the survey.

[34] For their study, a 10% response rate was achieved.

For those who responded to the survey, 25% had been with the company for more than 10 years, 46% of them had been with the company for less than 5 years. The assumption was that those who have been with the company for a number of years, especially in positions where decisions are made on company's location, have better understanding of these decisions.

Company profile

There are 10 industries represented on the Standard Industrial Classification (using South Africa's standard industrial codes [SICs] version 7), as stated in chapter 4. Within the 10 industries, only eight were used in the study, which excludes general government and agriculture, forestry, and fishing. From the eight industries, only six industries responded to the survey, as mentioned earlier (Figure 5.1). Most of the industries who responded to the survey were in finance, insurance, real estate, and business services (33%), manufacturing (18%), and community, social and personal services (16%).

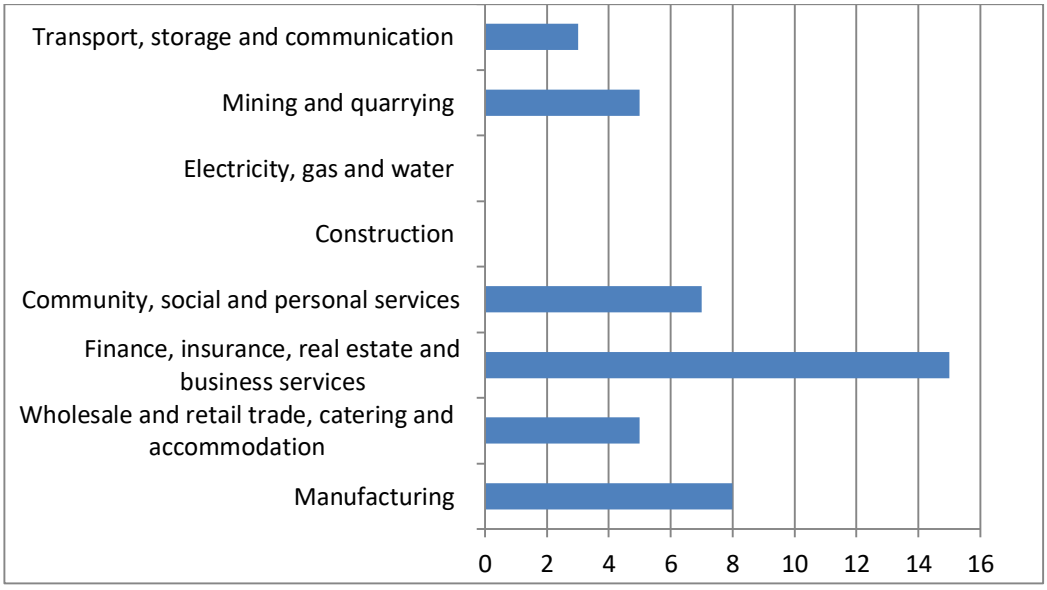


Figure 5.1: Profile of industries with completed survey

The number of years the companies have been in operation differs. There is a mixture of young companies with old ones: 36% of the companies had been in existence for more than 30 years, and of these, 77% (i.e., 28% of the total) have been in operation for more than 50 years. This is an indication that in terms of location, there is a combination of matured and emerging companies (Figure 5.2). Having many companies in the same location for a long time may imply that many of the current personnel were not there when the location decisions were made. This is a limitation in that they relied on assumptions or documented information on how those decisions were made, if such documents were accessible.

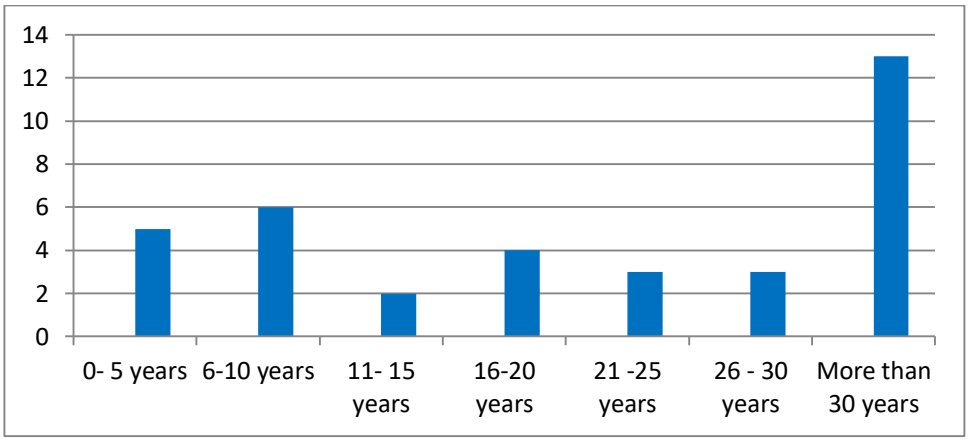


Figure 5.2: Number of years in operation

However, there was a difference between the number of years the CHQs has been in operation and the number of years the CHQs has been in the same location. Sometimes companies relocate from their original location for various reasons, as indicated by the study in the Netherlands (Kronenberg, 2013). In this instance, 52% of the CHQs have been in the same location for less than 11 years while only 8% were in the same location for more than 30 years, and 40% were in the same location between 11–30 years (Figure 5.3). Referring back to the respondent profile, an argument can be that some of the respondents had first-hand information on the location decisions of the CHQs.

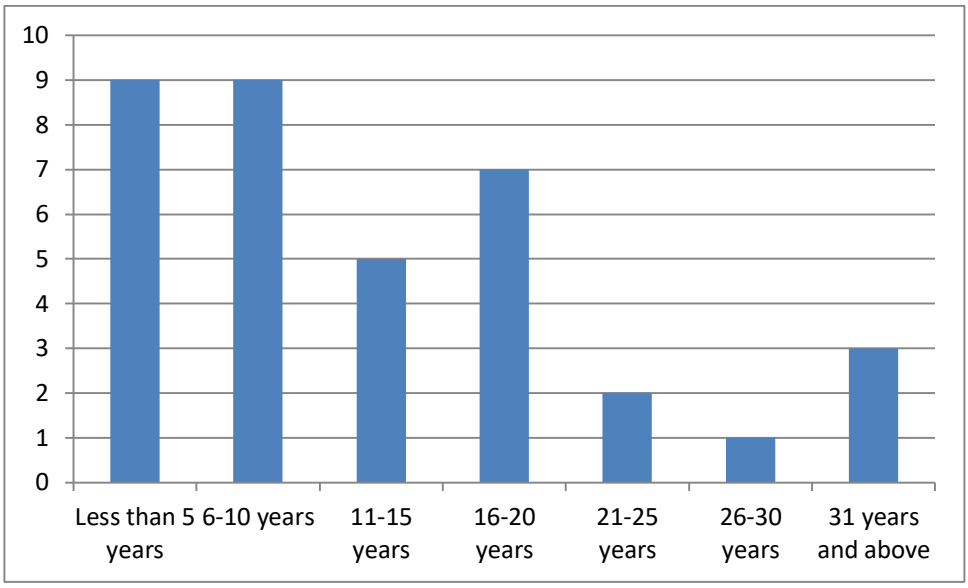


Figure 5.3: Number of years CHQs in the same location

CHQs and production units

The literature review revealed that some industries co-locate production plants/units with CHQs while some are separated (Aarland et al., 2007; Jakobsen & Onsager, 2003). For CHQs that are not in the same location as their production plants, some CHQs keep their production plants in close proximity. Of the respondents, 83.3% indicated that their CHQs are not co-located with production facilities. It is also important to cross check which CHQs co-locate with production facilities or from which industry. The results of CHQs that co-locate with production facilities are inconclusive. The 16.7% who indicated co-location are in different industries, making it difficult to conclude that certain industries are co-located. For such a decision to be made, further investigation is needed.

Geographic distribution of CHQs

In chapter 4, the analysis of the JSE data, it was noted that there is a high concentration of CHQs in City of Johannesburg. The response rate from different metropolitan

municipalities shows that there was higher probability of receiving a response in City of Johannesburg based on the number of CHQs located there. The results show a direct relationship between the level of concentration of CHQs and the response rate (Figure 5.4). The three (3) metropolitan municipalities with no completed survey are the metros with either one CHQs or none.

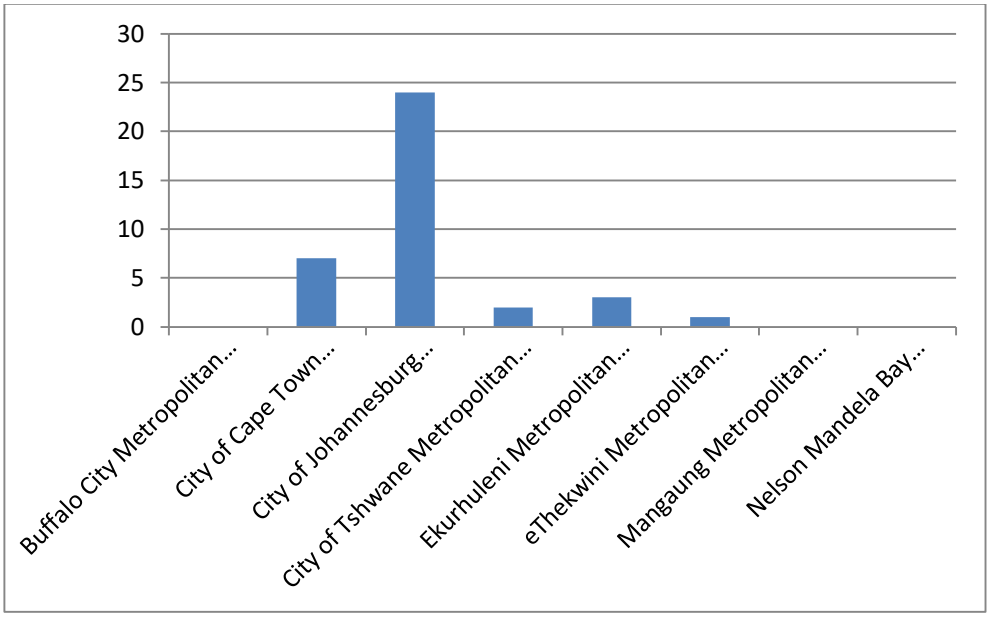


Figure 5.4: Response rate from different metropolitan municipalities

Relocation

The results indicate that 49% of the CHQs have relocated before; the current location is not their original location. Some CHQs have moved within the same metropolitan municipalities, while some have moved to different metropolitan municipalities. The relocation is not limited to the metropolitan municipalities, as CHQs may shift from a nonmetropolitan municipality or move to a nonmetropolitan municipality. Companies have relocated their CHQs within the same metropolitan municipalities, with the exception of one company, which relocated its CHQs from Mangaung to City of Johannesburg. Most of the companies that have not relocated their CHQs are happy

with their current locations; 14.7% of companies have indicated that they might relocate in the future. There are many reasons for the relocation of CHQs. Different studies in the literature have also highlighted some of the reasons for relocations (Benito et al., 2002; Conroy et al., 2016; Egger et al., 2013).

Most important factors

There are certain factors that attract CHQs to locate in particular areas. Some CHQs have relocated to get the services required or to gain competitiveness that only certain areas can facilitate. However, some CHQs chose their location and site due to other activities taking place in the neighbourhood and to having the most suitable accommodation as well as room for expansion of the existing facilities. Respondents chose the five most important factors that were important to their location, as shown in Figure 5.5. Historical roots, as well as quality and availability of infrastructure, are some of the most important factors considered in the location of CHQs. Meyer and Benito (2016) argued that some CHQs remain in the same location for historical reasons. In South Africa, many CHQs remained either in the same location or the same metros for historical reasons. Transportation system, labour force, and level of development in the areas influence location decision. Sometimes CHQs decides on the location that is familiar to the founder or CEO. However, incentives provided in particular metros are not influential in location decision. This implies that the metros need to focus on those factors that CHQs are looking for when choosing a location.

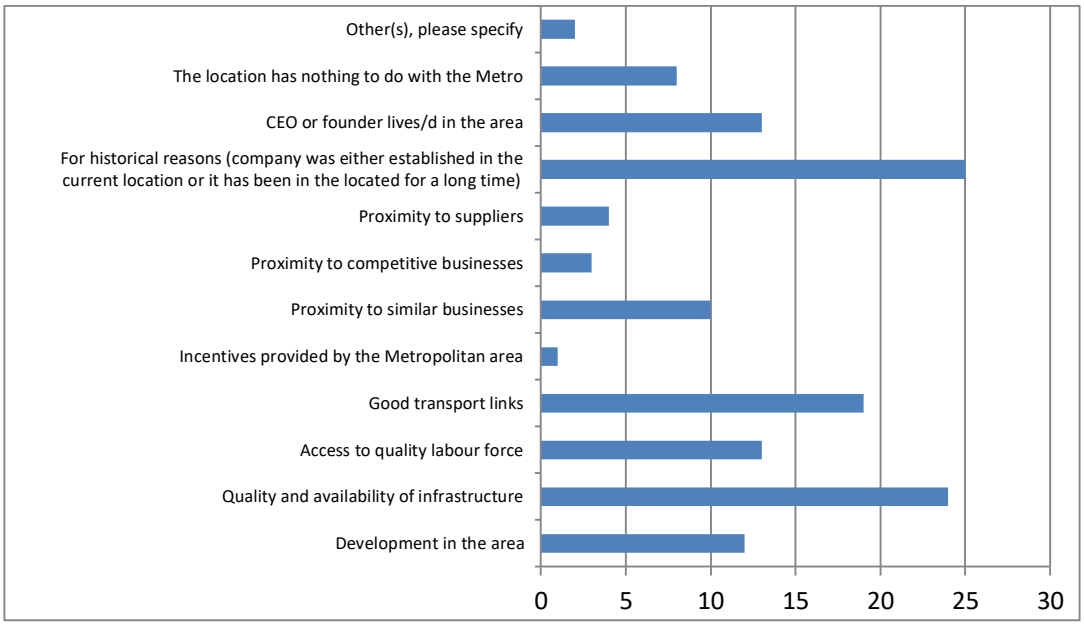


Figure 5.5: Important factors that influence location decision

After establishing the list of the five most important factors as shown in Figure 5.5, respondents were asked to rank these location factors in terms of their importance. From the responses, it is clear that quality infrastructure, accessibility, safety, and quality labour force are very important, while the issue of proximity to competitive business, suppliers and similar businesses was not important to the location of CHQs (Figure 5.6). The incentives provided in the area play a minimal role in the location of CHQs.

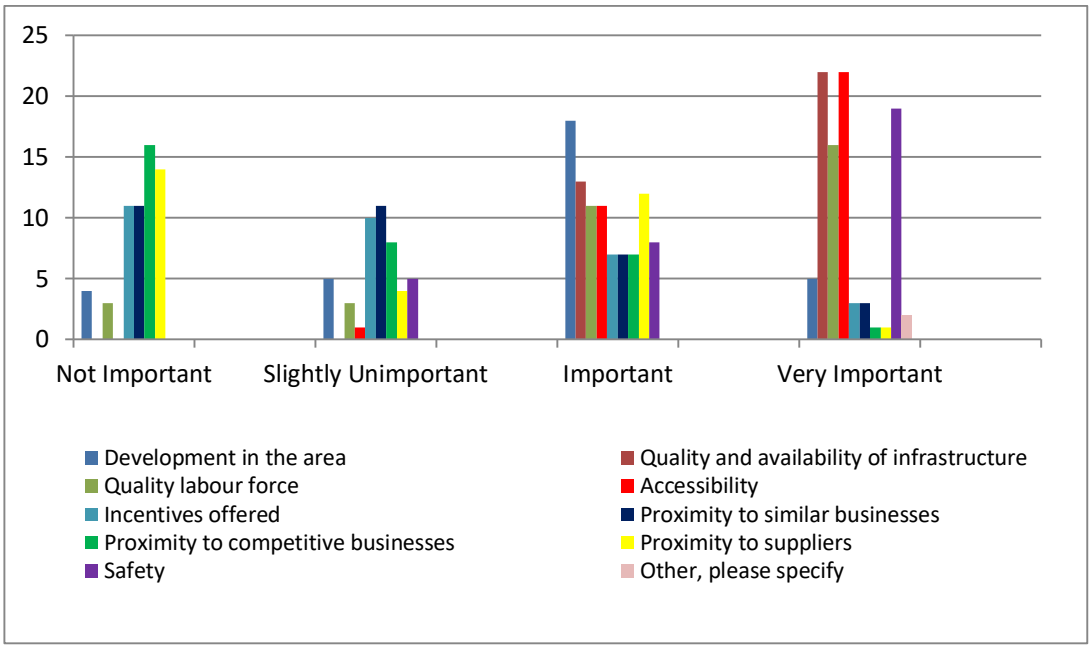


Figure 5.6: Importance level of location factors

The national government, as well as municipalities, may provide different incentives to attract major companies. Although incentives were ranked amongst the least favoured factors of location, CHQs were asked about specific incentives that are provided in different areas. CHQs regarded the level of services and infrastructure as one of the most important incentives that can be provided. Rates rebates were also considered, while other CHQs felt that the issue of incentives is not relevant to their location decision, hence the selection of "others" (Figure 5.7).

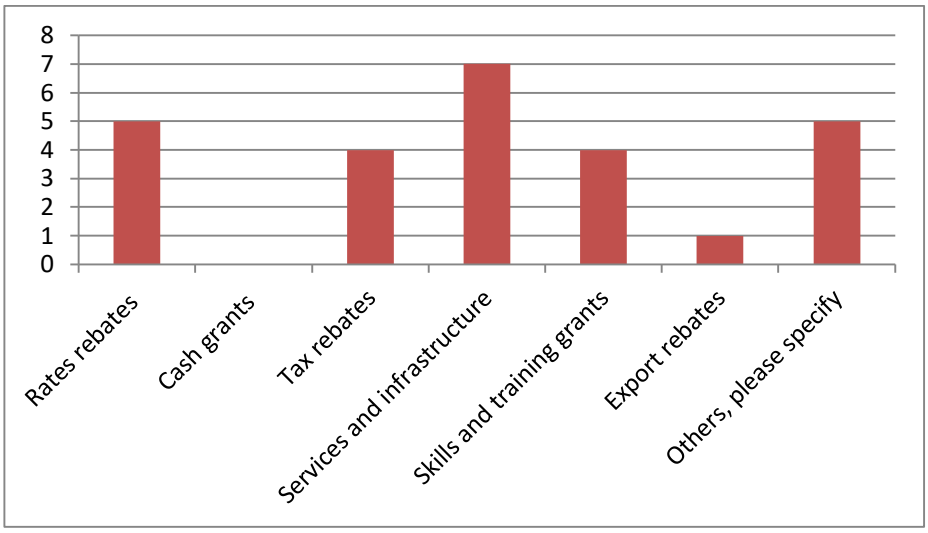


Figure 5.7: Incentives provided in different areas

The next section expands on the descriptive statistics and looks at the way CHQs make trade-offs of the competing determinants of location and site selection.

5.3.2 Conjoint Analysis: Level of Preference for Location and Site Selection

The analysis is divided into two sections, location and site selection analysis. The first section presents data from the location attributes and levels, and the second section presents the site selection attributes. Data tables were derived from the survey data to calculate the mean, minimum, maximum, median, mode, and standard deviation to evaluate the most preferred factors of location and site selection.

Level of preference scores

Table 5. 2 presents the results of respondents being asked to indicate their LOP for each attribute and attribute level. From the LOP scores, the mean, minimum (Min), maximum (Max), median (Med), mode, and standard deviation (Std Dev) were derived (see Table 5.2). The table shows the most preferred levels for the location attribute, and they are highlighted in bold. Some attribute levels were closely scored as most

preferred, as seen in Table 5.2. For example, proximity to supporting industries and service providers were both closely scored as the most preferred for clustering and synergies, while property taxes, tax incentives, and legal and regulatory framework were closely scored in terms of government incentives.

Table 5.2: Level of preference score for CHQs location

Attribute	Levels	Mean	Min	Max	Med	Mode	STD Dev
Accessibility	By car	**9.79**	7	10	10	10	0.74
	By air	6.41	0	10	7	8	2.63
	By bus	5.37	0	9	6	6	2.77
	By train	5.16	0	10	6	1	3.36
	By maritime port	0.53	0	6	0	0	1.48
Linkages to other Markets	Frequent and efficient local flights	**9.06**	0	10	10	10	2.49
	Frequent and efficient international flights	6.10	0	10	7	0	3.26
	Exports to regional markers	4.13	0	10	3	0	3.69
	Exports to international markets	2.00	0	9	0	0	3.01
Financial Factors	Profit maximization	**8.80**	0	10	10	10	2.64
	Competitive advantage	6.29	0	10	7	10	3.15
	Local market growth potential	5.91	0	10	7	0	3.52
	Financial intermediation services	4.72	0	10	5	0	3.81
	Wage levels	4.16	0	9	5	0	3.52
Clustering and Synergies	Proximity to supporting industries	**7.87**	4	10	8	10	2.01
	Proximity to service providers	**7.66**	0	10	8	10	2.57
	Proximity to production	4.43	0	10	4	0	4.34
	Proximity to competing industries	3.84	0	10	5	5	2.97
	Proximity to educational institutions	3.48	0	10	3	0	3.47
Specialized Services	Availability of skilled labour	**7.41**	0	10	9	10	3.44
	Institutional investors and investment banks	6.75	0	10	8.5	10	3.87
	Management services	5.94	0	10	7	5	3.14
	Legal services	5.52	0	10	7	7	3.43
	Communication services	4.00	0	10	5	0	3.83
Developed Infrastructure	Telecommunications	**6.94**	0	10	9.5	10	4.24
	Power and energy	6.21	0	10	8	10	4.14
	Transport systems	4.13	0	10	0	0	4.54
Government Incentives	Tax incentives	**6.58**	0	10	7	5	2.49
	Legal and regulatory framework	**6.53**	0	10	7	10	3.56
	Property taxes	**6.41**	0	10	7	5	2.98
	Subsidies	4.81	0	10	5	0	3.34
	Rebates	4.03	0	10	4.5	0	3.51
	Provision of supportive infrastructure	5.93	0	10	8	0	4.23
Prestige Location	Amenities	**8.32**	3	10	9	10	1.92
	Working-class population	5.52	0	10	6	10	3.88
	High company market	5.34	0	10	6	10	4.03
	Quality housing	5.19	0	10	6	0	3.50
	Educational facilities	4.07	0	10	3.5	0	3.41
Operating Costs	Low-operating costs	**7.33**	0	10	9	10	3.59
	Competitively priced rent	5.75	0	10	7	10	4.54
	Competitively priced labour	3.58	0	10	0	0	4.25

The following table (Table 5.3) summarised the ranking of most preferred attributes levels from the LOP scores.

Table 5.3: Location attribute levels with highest LOP scores

Attribute	Most Preferred Attribute Levels
Accessibility	By car
Linkages to other markets	Frequent and efficient local flights
Financial factors	Profit maximization
Clustering and synergies	Proximity to supporting industries and service providers
Specialized services	Availability of skilled labour
Developed infrastructure	Telecommunications
Government incentives	Property taxes
	Tax incentives and legal and regulatory framework
Prestige location	Amenities
Operating costs	Low operating costs

This summary of most preferred attribute levels indicates the choices that CHQs make in location decision. CHQs site selection looks at attributes different from the ones for location.

Table 5.4 presents the results of the site selection LOP scores. In site selection also, some attribute levels were closely scored as the most preferred attribute levels. For instance, layout flexibility and space efficiency were closely scored on the building interior, while parking facilities, backup generators, and security were also closely ranked in building services. The last attribute levels that were closely ranked were flexible rent and nature and terms of lease under the lease attribute. The list of the most preferred attribute levels is presented in Table 5.5.

Table 5.4: Level of preference for CHQs site selection

Attributes	Levels	Mean	Min	Max	Med	Mode	STD Dev
Sustainability	Energy management	**9.32**	5	10	10	10	1.31
	Indoor climate	6.92	2	10	7	7	1.91
	Green star rating	5.68	0	10	6	0	3.42
	Hot desking	3.48	0	10	3	0	3.38
	Desk sharing	2.58	0	10	0	0	3.35
Building Interior	Layout flexibility	**7.04**	0	10	10	10	4.06
	Space efficiency	**7.04**	0	10	9	10	3.82
	Finishes	2.93	0	10	0	0	3.97
Internal Access	Disabled friendly	**7.93**	0	10	10	10	3.28
	Existence of lifts	6.46	0	10	8.5	10	4.15
	Quality of staircase	2.54	0	10	0	0	3.93
Building Services	Parking facilities	**8.19**	5	10	8	10	1.55
	Backup generator	**8.16**	5	10	8	8	1.46
	Security system	**8.04**	0	10	8.5	9	2.13
	Air conditioning	7.88	5	10	8	7	1.53
	Bathrooms	7.48	5	10	7	7	1.33
	Fire extinguishers	6.84	0	9	8	8	2.23
	Fire escapes	6.48	0	10	7	9	3.04
	Kitchen	6.00	0	9	7	7	2.87
	Heating	5.89	0	10	7	7	3.05
	Wall/floor covering	2.80	0	8	0	0	3.43
External Appearance	Condition of the premises	**9.25**	7	10	10	10	1.11
	Image, prestige	6.08	0	10	7	10	3.86
	Architecture	4.59	0	10	5	0	3.42
	Building shape	4.04	0	10	5	0	3.32
	Building height	4.00	0	9	5	0	3.16
Supporting Facilities	Security	**9.36**	7	10	10	10	0.99
	Internet (Wi-Fi)	8.41	5	10	8	8	1.37
	Water supply	7.76	5	10	8	9	1.45
	Cleaning services	6.68	0	9	7	8	2.25
	Meeting places	6.32	0	10	7	7	2.56
	Reception	6.32	0	9	7	7	2.32
	Waste management	5.80	0	9	7	7	2.80
	Video conferencing	4.96	0	9	7	0	3.61
	Catering/vending	3.70	0	9	5	0	3.51
Lease	Terms of lease	**6.52**	0	10	7	9	3.03
	Flexible rent	**6.35**	0	10	6.5	10	3.05
	Nature of lease	**6.35**	0	10	7	7	3.27
	Percentage of rent escalation	6.08	0	10	6	6	3.16
	Own the property	5.78	0	10	7	10	4.53
	Rental contract	5.76	0	10	6	7	3.06
	Not applicable	4.16	0	10	5	1	3.82
	Multi-tenant building	2.48	0	8	1	0	2.80
Costs	Utility costs	**7.69**	0	10	9	10	3.22
	Building maintenance costs	6.28	0	10	7	10	4.29
	Property taxes	3.56	0	10	0	0	4.42

Table 5.5: Site selection attribute levels with highest LOP scores

Attribute	Most Preferred Attribute Levels
Sustainability	Energy efficiency (management)
Building interior	Layout flexibility and space efficiency
Internal access	Disabled friendly access
Building services	Parking facilities; backup generator and security
External appearance	Condition of the premises
Supporting facilities	Security
Lease	Flexible rent; nature and term of lease
Costs	Utility costs

5.3.3 Conjoint Analysis: Utility Scores for Location and Site Selection

Table 5.6 shows the utility scores for the different attributes, with the most preferred attributes in bold. The utility score takes into consideration all the features of the conjoint analysis. The average utility scores of some attribute levels were closely ranked as most preferred. This relates to clustering and synergies, where proximity to supporting industries and service providers were both closely scored as the most preferred. In terms of government incentives, levels closely scored as most preferred included property taxes, tax incentives, and legal and regulatory framework.

Table 5.6: Utility score for CHQs location

Attribute	Levels	Mean	Min	Max	Med	Mode	STD Dev
Accessibility	By car	**1.27**	0	6.00	1.03	0	1.41
	By air	0.81	0	4.50	0.71	0	1.04
	By train	0.72	0	3.60	0.48	0	0.87
	By bus	0.69	0	4.20	0.53	0	0.90
	By maritime port	0.05	0	0.90	0	0	0.17
Linkages to Other Markets	Frequent and efficient local flights	**0.54**	0	2.00	0.5	0	0.57
	Frequent and efficient international flights	0.37	0	1.35	0.25	0	0.43
	Exports to regional markers	0.26	0	1.80	0	0	0.44
	Exports to international markets	0.14	0	1.80	0	0	0.34
Financial Factors	Profit maximization	**0.79**	0	3.50	0.5	0	0.89
	Competitive advantage	0.54	0	2.25	0.35	0	0.61
	Local market growth potential	0.53	0	3.00	0.18	0	0.74
	Financial intermediation services	0.43	0	2.00	0	0	0.59
	Wage levels	0.42	0	2.25	0	0	0.56
Clustering and Synergies	Proximity to service providers	**0.56**	0	8.10	0.3	0	1.26
	Proximity to supporting industries	**0.55**	0	8.10	0.45	0	1.24
	Proximity to production	0.44	0	9.00	0	0	1.41
	Proximity to competing industries	0.39	0	8.10	0	0	1.25
	Proximity to educational institutions	0.18	0	1.20	0	0	0.29
Specialized Services	Availability of skilled labour	**0.53**	0	2.00	0.35	0	0.63
	Institutional investors and investment banks	0.42	0	2.50	0.06	0	0.58
	Legal services	0.38	0	1.75	0	0	0.50
	Management services	0.37	0	1.60	0.18	0	0.47
	Communication services	0.29	0	2.50	0	0	0.56
Developed Infrastructure	Telecommunications	**0.70**	0	3.00	0.20	0	0.85
	Power and energy	0.54	0	2.50	0	0	0.74
	Transport systems	0.45	0	3.00	0	0	0.79
Government Incentives	Property taxes	**0.30**	0	1.05	0.20	0	0.36
	Legal and regulatory framework	**0.28**	0	1.50	0.05	0	0.38
	Tax incentives	**0.27**	0	1.20	0.20	0	0.32
	Provision of supportive infrastructure	0.20	0	1.35	0	0	0.34
	Rebates	0.18	0	1.00	0	0	0.28
	Subsidies	0.16	0	0.80	0	0	0.22
Prestige Location	Amenities	**0.46**	0	2.10	0.3	0	0.56
	High company market	0.38	0	3.00	0	0	0.62
	Quality housing	0.34	0	2.10	0.15	0	0.47
	Working class population	0.25	0	2.10	0	0	0.42
	Educational facilities	0.17	0	1.00	0	0	0.26
Operating Costs	Low operating costs	**0.60**	0	2.50	0.24	0	0.73
	Competitively priced rent	0.45	0	2.00	0	0	0.59
	Competitively priced labour	0.29	0	2.25	0	0	0.52

The following table (Table 5.7) summarised the ranking of most preferred attributes levels of the utility scores.

Table 5.7: Attribute levels with highest utility scores for location

Attribute	Most Preferred Utility Levels
Accessibility	By car
Linkages to other markets	Frequent and efficient local flights
Financial factors	Profit maximization
Clustering and synergies	Proximity to supporting industries and service providers
Specialized services	Availability of skilled labour
Developed infrastructure	Telecommunications
Government incentives	Property taxes; Tax incentives and legal and regulatory framework
Prestige location	Amenities
Operating costs	Low operating costs

The results of the LOP scores and the utility scores shows that when CHQs are given a set of attribute levels, they are able to make trade-offs between the competing factors. CHQs were able to select the most preferred attribute levels, and the results of both the LOP score and the utility score are conclusive on the most important factors of CHQs location.

In terms of site selection, the utility scores are presented in Table 5.8. The most preferred attributes are presented in Table 5.9. However, in some instances the preference levels of some attribute levels were closely ranked. This applies for building interior where layout flexibility and space efficiency were closely scored, while parking facilities, backup generators, security, air conditioning, and bathrooms were also closely ranked in building services. The last attribute levels that were closely ranked were percentage of rent escalation, flexible rent, and nature and terms of lease under the lease attribute, as well as building maintenance and utility costs under the costs attributes.

Table 5.8: Utility score for CHQs site selection

Attributes	Levels	Mean	Min	Max	Med	Mode	STD Dev
Sustainability	Energy management	**0.66**	0	2.50	0.29	0	0.79
	Indoor climate	0.54	0	2.40	0.13	0	0.68
	Green star rating	0.46	0	3.00	0	0	0.66
	Hot desking	0.28	0	1.60	0	0	0.48
	Desk sharing	0.16	0	1.50	0	0	0.40
Building Interior	Space efficiency	**0.46**	0	2.00	0.1	0	0.57
	Layout flexibility	**0.44**	0	2.00	0	0	0.61
	Finishes	0.26	0	2.00	0	0	0.53
Internal Access	Disabled friendly	**0.49**	0	2.00	0.03	0	0.63
	Existence of lifts	0.44	0	2.00	0	0	0.58
	Quality of staircase	0.16	0	1.50	0	0	0.40
Building Services	Parking facilities	**0.65**	0	2.40	0.6	0	0.69
	Backup generator	**0.65**	0	2.70	0.7	0	0.69
	Security system	**0.64**	0	2.70	0.6	0	0.72
	Air conditioning	**0.62**	0	2.10	0.6	0	0.64
	Bathrooms	**0.61**	0	2.70	0.55	0	0.66
	Fire escapes	0.56	0	3.00	0	0	0.71
	Fire extinguishers	0.55	0	2.70	0.35	0	0.64
	Heating	0.52	0	2.10	0.25	0	0.59
	Kitchen	0.49	0	2.40	0	0	0.62
	Wall/floor covering	0.22	0	1.40	0	0	0.40
External Appearance	Condition of the premises	**0.55**	0	2.00	0.55	0	0.58
	Image, prestige	0.39	0	2.00	0	0	0.54
	Building shape	0.25	0	1.40	0	0	0.41
	Building height	0.24	0	1.40	0	0	0.37
	Architecture	0.32	0	2.00	0	0	0.48
Supporting Facilities	Security	**0.93**	0	3.00	1	0	0.91
	Internet (Wi-Fi)	0.82	0	3.00	0.85	0	0.82
	Water supply	0.76	0	2.10	0.8	0	0.73
	Cleaning services	0.65	0	2.40	0.7	0	0.69
	Meeting places	0.65	0	2.40	0.65	0	0.71
	Reception	0.60	0	2.10	0.65	0	0.64
	Waste management	0.56	0	1.80	0.4	0	0.62
	Video conferencing	0.48	0	2.10	0	0	0.65
	Catering/vending	0.38	0	2.40	0	0	0.58
Lease	Percentage of rent escalation	**0.50**	0	3.00	0.18	0	0.70
	Flexible rent	**0.49**	0	2.00	0.25	0	0.60
	Terms of lease	**0.49**	0	1.80	0.23	0	0.60
	Nature of lease	**0.47**	0	2.00	0.1	0	0.62
	Rental contract	0.43	0	1.80	0.13	0	0.57
	Own the property	0.35	0	2.50	0	0	0.71
	Not applicable	0.18	0	1.62	0	0	0.38
	Multi-tenant building	0.15	0	1.20	0	0	0.27
Costs	Building maintenance costs	**0.51**	0	3.00	0	0	0.79
	Utility costs	**0.49**	0	1.80	0.15	0	0.55
	Property taxes	0.26	0	3.00	0	0	0.58

Table 5.9: Attribute levels with highest utility scores for site selection

Attribute	Most Preferred Attribute Levels
Sustainability	Energy efficiency (management)
Building interior	Layout flexibility and space efficiency
Internal access	Disabled friendly
Building services	Parking facilities, backup generator, security, air conditioning, and bathrooms
External appearance	Condition of the premises
Supporting facilities	Security
Lease	Percentage of rent escalation; flexible rent, nature and terms of lease
Costs	Building maintenance and utility costs

The results of the utility score for site selection does not differ from the LOP score. However, the utility score indicates that there are more attribute levels that CHQs value the most when making site selection decision. This includes air conditioning, bathroom facilities, building maintenance costs, and percentage of rent escalation. Although these attributes level were not the most preferred in the LOP scores, their ranking was not far off from the most preferred ones. Therefore, the results of the LOP score and the utility score are in agreement.

5.3.4 Conjoint Analysis: Constant Sum Importance Score

Table 5.10 presents the average importance scores of CHQs location. These reflect respondents' relative importance for each attribute out of the possible 100 points. The respondents were presented with all the attributes at once. Results show more points were allocated to accessibility, followed by developed infrastructure, financial factors, operating costs, clustering and synergies, specialised services, and linkages to other markets. The prestige of the location, as well as government incentives, received the lowest importance score.

Table 5.10: Constant sum scores for CHQs location

Attribute	Mean	Min	Max	Median	Mode	STD Dev
Accessibility	18.76	0	60	15	15	13.35
Linkages to Other Markets	8.67	0	20	10	10	4.91
Financial Factors	13.55	0	35	10	10	8.71
Clustering and Synergies	10.07	0	90	8	10	15.90
Specialized Services	9.55	0	25	10	5	6.82
Developed Infrastructure	14.00	0	30	12	10	8.10
Government Incentives	5.66	0	15	5	5	4.14
Prestige Location	8.16	0	30	5	5	6.77
Operating Cost	11.59	0	25	10	10	5.94

The average significant scores for site selection are as follows (Table 5.11): Supporting facilities received the highest score, followed by lease and building services, then costs, sustainability, and building interior. Internal access and external appearance received the lowest importance score.

Table 5.11: Constant sum score for CHQs site selection

Attribute	Mean	Min	Max	Median	Mode	STD Dev
Sustainability	11.92	0	30	10	10	7.78
Building Interior	11.32	2	20	10	10	5.65
Internal Access	10.54	0	20	10	15	5.64
Building Services	13.48	0	30	15	15	6.38
External Appearance	10.22	0	20	10	10	5.37
Supporting Facilities	16.76	10	30	15	20	6.33
Lease	13.20	0	30	12	5	7.67
Costs	12.28	0	30	10	10	7.20

5.3.5 Summary Discussion of Overall Results

The level of importance given to each attribute varied across different contexts. The results of the LOP and utility scores indicated the trade-offs that companies make when making CHQs location decisions.

CHQs location

Accessibility was rated the most preferred location attribute. Accessibility proved to be a broad attribute, as it cuts across site-specific attributes and also on a broader scale. Access can be interpreted in terms of access to raw materials (Aarland et al., 2007), access by employees (Harrison et al., 1997), and access to major highways (Rogerson, 1998). It can also be looked at from a different angle, as having a location easily accessible (Pellenberg et al., 2002). From the LOP score, the utility score, and the constant sum importance score, accessibility was regarded as the most preferred attribute for CHQs.

Other studies in different contexts confirm these findings; for instance, Holt et al. (2008) concluded that accessibility is a key factor for executives in making location decisions in the study of regional headquarters in Europe and the Asian Pacific region. This study used emailed survey to CEOs. The same conclusion was drawn for the study that made use of publicly listed firms in the People's Republic of China, which highlighted the importance of access by private transportation, as the majority of employees in the CHQs are the social elites (Pan & Xia, 2014). In South Africa, the best and most efficient mode of transportation is private transportation; hence access by car was most preferred. A majority of CHQs personnel rely on their cars as their main mode of transportation. CHQs consider the link to the highways when deciding on their location, more so on facilitating the mobility of their employees. Whether access from a broader perspective or site-specific access is considered, companies are looking at locating their CHQs in areas that are accessible.

Access by air was valued second after by car, probably because few employees make use of this mode of transportation. Accessibility by air enables the linkage to other markets on a national, regional, and international scale. The studies of Bolisani and Scarso (1996) and Forte and Brandão (2008) noted the importance of the linkage to other markets, considering the international nature of certain types of production. Holt et al. (2008), as well as Luiz & Radebe (2016), noted the importance of effective regional linkages in their separate studies of the location of regional headquarters. In addition, Egger et al. (2013) noted that airport infrastructure may increase the likelihood of headquarters choosing particular locations.

Developed infrastructure was rated as the second most preferred attribute of location (Table 5.12). Developed infrastructure may function as a pull factor on drawing CHQs into particular locations. Pan et al. (2015) argued that the high quality of infrastructure in certain locations may create regional advantages for headquarters location. It can also be argued that CHQs look at certain infrastructure when deciding on their location. Transport infrastructure is amongst the top priorities and is directly linked to issues of accessibility addressed earlier. Another infrastructure that is considered important is telecommunication, hence it was rated the most preferred infrastructure in the survey. Telecommunication infrastructure enables CHQs to communicate effectively to their subsidiaries, production facilities, and other business partners.

Table 5.12: Ranking of CHQs location attributes

Factor	Mean	Ranking
Accessibility	18.76	1
Developed Infrastructure	14.00	2
Financial Factors	13.55	3
Operating Costs	11.59	4
Clustering and Synergies	10.07	5
Specialized Services	9.55	6
Linkages to Other Markets	8.67	7
Prestige Location	8.16	8
Government Incentives	5.66	9

Accessibility is closely linked to infrastructure, since accessibility can only be achieved with certain infrastructure in place. Companies may maintain locations in the same locality if the infrastructure is well kept. At the same time, some CHQs may gravitate towards locations that have well-developed infrastructure. Thus, the concentration of CHQs in particular metropolitan municipalities may be due to the level of infrastructure in the area. Mariotti et al. (2014) noted that the level of infrastructure in certain locations may create a pleasant environment in which CHQs can thrive. Infrastructure such as major roads, airports, and ports are some of the necessary backdrop for the success of CHQs.

Similar to infrastructure is the importance of a prestigious location. Although this is not as highly ranked as infrastructure, CHQs gravitate towards areas with amenities (Strauss-Kahn & Vives, 2009). The level and access to amenities in certain locations render certain areas more prestigious than others, as these amenities are not uniformly distributed even within the same metro. At the same time, the amenities may probably influence the type of CHQs that locate within the areas. However, amenities was amongst the lowest ranked attributes in terms of importance in office building quality in the study looking at property-specific attributes in office building quality in the CBD (Ho et al., 2005).

CHQs prefer locations with available skilled labour to service the CHQs. Skilled professionals are the core of the success of any corporation. The reason for the high concentration of CHQs in major cities and metros has been found to be the availability of a skilled labour force (Overman & Puga, 2010; Turok, 2013). In addition, companies want to locate closer to supporting services and service providers. CHQs may benefit more when sharing input suppliers, hence preferring locations in close proximity to supporting services and service providers of the companies resulting in agglomeration economies.

Regarding government incentives, government at the national, provincial and metropolitan levels are able to offer a wide range of incentives to attract CHQs. A case study of Pudong and Shenzen in China showed that the government used policies and reform to attract CHQs and so build a strong economy (Chan & Poon,

2012). A review of the factors affecting the location of real estate concluded that government policies and regulatory framework affect the location decision of real estate (Rymarzak & Siemińska, 2012). Therefore, the government has to put in place favourable policies/incentives to attract CHQs.

CHQs are interested in locations that enable them to minimise costs. Rymarzak and Siemińska (2012) argue that the interest in government policies and regulatory framework is a way of looking at factors that will positively affect the corporation's financial status. JSE companies, just like any other company, exist to make a profit. The study that looked at the location of manufacturing headquarters using micro-level data from the U.S. Census Bureau concluded that companies use various strategies to try to minimise the production costs (Henderson & Ono, 2008). However, a study on the strategic location drivers of information-age companies found that economic incentives were not a top priority (O'Mara, 1999). All other location attributes revolve around profit maximisation. CHQs as profit maximisation agents put more weight on those attributes that are deemed necessary for the business to run efficiently.

CHQs site selection

Site selection attributes were also ranked during the survey to see which attributes and attribute levels are most preferred. Supporting facilities were rated the most preferred attribute in site selection (Table 5.13). Supporting facilities are critical to the well-being of the CHQs, as they support the day-to-day functioning of the company. The high level of crime in South is a concerning issue for CHQs. The high crime levels affect investors' confidence in the South African market (Turok, 2013). The higher the crime levels, the higher the demand on CHQs to provide security not simply for their premises but also for their staff. The need for security and security upgrades add on to the running cost of the company. Therefore, it comes as no surprise that CHQs would prefer locations that are secure.

Other support services include Internet access which helps with efficient communication, cleaning services and waste management. In addition, water

supply also forms part of the supporting services that never received much attention in previous studies. Although not most preferred, it shows some level of importance to CHQs.

Table 5.13: Ranking of CHQs site selection attributes

Attribute	Mean	Ranking
Supporting Facilities	16.76	1
Building Services	13.48	2
Lease	13.20	3
Costs	12.28	4
Sustainability	11.92	5
Building Interior	11.32	6
Internal Access	10.54	7
External Appearance	10.22	8

Regarding building services, CHQs prioritised backup generators, parking facilities and security systems. In recent years South Africa started experiencing power outages due to the failure of the electricity service provider to meet the electricity demand. Load shedding was becoming the order of the day, which affected business operations. The uncertainty about the supply of electricity also puts a burden on companies to have backup generators so that their businesses can continue to run even when the power supply is down. Backup generators are intended for use in rare cases and cannot be a permanent solution. Therefore, CHQs also have to prevent energy wastage by utilising or constructing energy efficient buildings.

The need for parking facilities is due to the employees' use of private cars as the main mode of transportation. Luoma et al. (2010) in their study on occupiers' preference rated parking space as one of the highly valued attributes. Other studies conducted in other countries also highlighted parking as an important factor in site selection based on two separate surveys on occupiers' preference and office occupiers' space decision (Leishman et al., 2003; Sing et al., 2006).

The issue of energy management was most favoured under sustainability attributes. CHQs are in favour of energy management to reduce costs. Some CHQs indicated that the issue of sustainability was important in deciding on the building to occupy. However, the study on sustainability concluded that sustainability might be the ultimate driving factor in headquarters location (Levy & Peterson, 2013). In this study it was not regarded as a prioritised factor.

CHQs are interested in lowering the running costs to be able to make profit (Henderson & Ono, 2008; Holt et al., 2008; O'Mara, 1999). The issue of cost runs across many attributes, and given that corporations seek to maximise profits, they sometimes make trade-offs to cut costs. As a result, CHQs should prefer facilities with low maintenance and utility costs to reduce their production costs. In addition, the results show CHQs prefer lease arrangements that reduce the overall production costs. CHQs are in favour of the percentage of rent escalation, terms of lease and nature of lease which all may impact CHQs cash flow. In addition, CHQs differ in their preferences; some CHQs preferred to lease while others preferred to buy.

The internal access to the facilities also affects the functionality of the business. The work environment that facilitates employees' satisfaction and comfort may result in higher productivity (Haynes, 2008a, 2008b). CHQs have to be considerate to all their employees, hence the high preference of facilities that are disabled-friendly. This implies that the ease with which all employees can move around the facilities and in particular, disabled people, is likely to foster employee satisfaction and productivity. Closely linked to internal access is the building interior attribute. Levy and Peterson (2013) made an observation based on the commercial occupiers that preference is for flexible buildings that can be adjusted to meet the needs of the employees. Ho et al., (2005) viewed the functionality of the facility as important in the daily running of the business based on the study on office building quality. It comes as no surprise that CHQs would prefer that their building interiors be space efficient and allow for layout flexibility. Modern work practices require CHQs to adjust and adapt to the way employees use their workspaces to encourage productivity (Haynes, 2008a).

The least preferred attribute was external appearance. The condition of the premises was seen as most important when choosing premises for the CHQs. Companies want to create a brand, portray a good image through the building features and its location (Škevin, 2011). The facilities which CHQs run their business from may be treated as asset to the company (Zeckhauser & Silverman, 1983). However, some companies prefer not to own any real estate (facilities), hence the low ranking of external appearance. Part of the reason might be that companies do not realise the importance of real estate in reinforcing their brand.

5.4 Chapter Summary

This chapter set out to explore the factors of location and site selection in the South African metros and the trade-offs amongst these competing factors. It should be noted that conjoint analysis uses the term "attribute," which is similar to the term "determinants" used in this study. Therefore, this chapter presented the attributes of CHQs location and site selection in South Africa based on the interviews and survey of different industries. The results from the interviews provided useful information for the survey, which was carried across all CHQs listed on the JSE. CHQs located within the metropolitan municipalities of South Africa provided the preference level of the determinants of CHQs location and site selection. CHQs indicated the way they evaluate different attributes and attribute levels conjointly. The trade-offs that CHQs make, may also reflect on the real-life decision-making process. In this research, the respondents were given choices, as they are in real life, and they had to decide which choice is more preferred amongst competing choices. As a result, the determinants of location and site selection were identified using the self-explicated conjoint model. The results of both the interviews and the survey highlighted some of the important determinants of location and site selection in South Africa. It should be noted that even though the literature confirmed most of the findings, different measures were used and the context was also different. None of the previous studies that were reviewed in this study used the self-explicated conjoint model. This chapter concludes that CHQs make location decisions based on profit maximization and the involvement of various role players in the decision-

making process. At the same time, CHQs, as well as employees and shareholders, have specific needs that forms part of the decision process. The preference level of different factors confirms that having accessible locations with well-developed infrastructure is a way of preferring locations that support the business activities. In addition, CHQs by all means showed higher preference for factors that reduce operating costs, such as location in close proximity to supporting industries and service providers; areas that have a skilled labour force; a favourable legal and regulatory framework, which also includes the tax environment that may have financial implications on the CHQs. In some instances, CHQs remain in the same location irrespective of the changes that take place in their current location. In this instance also, the historical factor related to the values and socio-structural issues within companies dictates whether the CHQs remain in the same location or relocate. Moreover, the continuous problems of power cuts forced CHQs to think of backup plans to ensure that the daily functioning of the companies is not disrupted, hence the need for backup generators which do not feature much in the reviewed studies. It was also noted that water supply, although not the most preferred, is nevertheless a factor that needs further investigation.

Chapter 6

Conclusions, Implications for Future Research, and Policy Recommendations

6.1 Introduction

This study investigated CRE market in the South African context. The study was motivated by the following: a) The limited of studies on office location addressing the South African context, this considering that Real Estate research is dominated by studies focused on the US, Europe, Australia and some of the Asian countries., and b) interest in exploring the factors which underpin headquarters location and site selection decisions.

This chapter concludes the study as follows: it presents a synopsis of the study as a whole followed by the findings, and then draws implications and recommendations for further studies.

6.2 Summary of the Study and Key Findings

This study was particularly interested in gaining an understanding of key determinants of CHQs location and site selection in the South African context.

The sample for the study was as follows:

- CHQs of Companies listed on the JSE.
- CHQs located in the Metropolitan Municipalities.

The reason for choosing the metropolitan municipalities was that the literature (see for example, Bel & Fageda, 2008; Davis & Henderson, 2008; Henderson & Ono, 2008; Lovely, Rosenthal & Sharma, 2005) explicitly argued that CHQs are highly concentrated within the metros. This is partly explained by the fact that metropolitan municipalities in South Africa have better infrastructure and service appealing to large

companies than many of the non-metros. The thesis now turns to provide the overall summary of the study and the key findings.

6.2.1 Overall Summary

This study explored and described the determinants of CHQs location and site selection in South Africa. The terms "factor(s)," "determinant(s)," "attribute(s)" were used interchangeably, assuming similar meaning. In conjoint analysis the commonly used term is "attributes," while in many studies on HQs/CHQs/office location the terms "factor(s)" and "determinant(s)" are more common. The study was aimed at ascertaining the key determinants driving the location of CHQs location in the South African context as an emerging market. Therefore, the study focused on the JSE-listed CHQs, specifically those located within the eight metropolitan municipalities in South Africa: City of Tshwane, City of Johannesburg; Ekurhuleni, Mangaung, Buffalo City, Nelson Mandela Bay, City of Cape Town, and eThekwini. Consequently, a total of 267 JSE-listed CHQs located within the metros informed the analysis of the study.

The literature review provided sufficient background information to understand location and site selection decisions. In addition, it helped to establish the various determinants of location and site selection across industries from studies conducted in both developed and emerging markets. In turn, the scope of this study cuts across different industries, as this would help explain the concentration of certain industries in particular areas. However, there is still a need for further research in each of the industries in order to ascertain key determinants for location and site selection.

Notable from the literature review is that the area of CHQs location and site selection in the (South) African context is under-researched; therefore, the necessity exists for African scholars to pay attention to the behaviour and influence of CHQs, considering that CHQs do play an important role as one of the economic drivers. More studies on CHQs in the African continent would help African countries to draw from each other's experiences. CHQs, as it became evident from the literature review, tend to have

positive economic implications for the locality or region in which they locate (Bloom & Grant, 2011; Hirai, 2004; Pan et al., 2015). Other benefits to metros that host CHQs are that they attract a high-skilled labour force and related firms both local and multinational, resulting in agglomeration economies. They become more competitive by attracting high-quality companies and enhancing the quality of life for those companies' employees. Consequently, it is no wonder that some countries have targeted policies to attract CHQs due to the foreseen economic benefits (Chan & Poon, 2011).

Apart from the economic benefits, this study noted that some of the determinants tend to be country or region specific, although many of the determinants tend to be similar across countries and regions. One of the main objectives of this study was to identify some of the key determinants driving location and site selection in the South African context. This study was thus an attempt to understand the dynamics of CHQs in South Africa: how many there are, where they are located, why they are located there, and which determinants are most preferred. In the African continent still more study needs to be done of the context-specific determinants driving location and site selection decisions of CHQs.

This study also relied on and unpacked three location theories to understand the behaviour of firms: neo-classical, behavioural, and institutional location. The three theories further aided in identifying possible determinants of CHQs location and site selection. Table 6.1 shows the variables adopted from the three location theories.

Table 6.1: Variables adapted as determinants in the research

• Occupancy characteristics (owned, rented, single or multi-tenant facilities) • Availability of space • Accessibility • Parking facilities • Proximity to suppliers and markets • Zoning regulations (local government policy) • Organisational structure	• Government policy • Regional economic infrastructure • Suppliers and business customers • Labour market • Economic conditions • Quality and availability of suitable locations • Organisational goals (Employee satisfaction) • Management structure

The findings from the review of theories indicated that in CHQs location and site selection, there is competition for space from which to operate and also for resources; therefore, CHQs, just like any company, bid for the most profitable land and also to strategically position themselves around other businesses and the international market. In addition, this location decision involves various stakeholders, and the way in which these decisions are taken indicates the values of the companies. The location and site selection are indeed based on the information available to the companies. Therefore, the three theories can be used to understand the behaviour of CHQs in making location and site selection decisions.

Regarding the methodology, the study made use of a sequential mixed-method approach to explore the determinants of CHQs location and site selection. The analysis of the secondary data revealed that other unique factors within the metros influence the concentration in addition to specialisation and competitiveness. These unique factors include the historical events that might have influenced the location of CHQs in certain metros. Therefore, to understand the relationships between the concentration of CHQs

and competitiveness/specialisation within the metro, further research is needed to understand the dynamics of each metro. Then, the interview results were used to confirm the determinants of CHQs location and site selection from previous studies and also to identify the determinants that are peculiar to the South African market. In this regard, issues such as history and safety came out.

The survey, which made use of both descriptive statistics and conjoint analysis, analysed the trade-offs that CHQs make when deciding on the location and site selection for their companies. Conjoint analysis measures consumers' preferences for products or services, and there are different types of conjoint analysis used in different contexts: full-profile, two-attribute trade-off, adaptive, choice-based, hybrid, and self-explicated. The hybrid conjoint analysis combines the self-explicated with the full-profile conjoint analysis. This study made use of the self-explicated model to understand the trade-offs and preference level which companies make in the CHQs location and site selection decisions.

In terms of data collection, there was consistency in the results obtained. The same standardised interviews and questionnaire were used throughout the data collection stage. At the same time, the results from the secondary data analysis, interviews, and survey all yielded complementary results.

6.2.2 Summary of Key Findings

In analysing the location of CHQs, the metropolitan municipalities in South Africa were classified considering the landscape of the country as either inland or coastal, therefore making it possible to compare the two. The findings of this study, in line with the propositions and objectives of the study, pertain to the concentration of headquarters in South African metros, the competitiveness of metros, and decision prioritisation. In addition, the interview process indicated that the location decisions and site selection involved various stakeholders in support of proposition 5.

Location of CHQs in South African Metros

This study classified 267 CHQs according to the Standard Industrial Classification. Finance, insurance, real estate, and business services was the dominant industry, accounting for 45% of the total CHQs in the metros, while electricity, gas, and water had the lowest, with 0.7%. A spatial analysis of the location of CHQs was done using GIS to assess the level of concentration in the different metros. The results revealed that the JSE-listed CHQs are concentrated more in the inland metros than in the coastal metros. The inland metros host a total of 76% of the CHQs, amounting to 202 CHQs, while the coastal metros host a total of 24% of CHQs, amounting to 65 CHQs (Table 6.2).

Table 6.2: Concentration of CHQs

Inland Metropolitan Municipalities		**Coastal Metropolitan Municipalities**	
City of Johannesburg	59.6%	City of Cape Town	18.4%
Ekurhuleni	8.6%	eThekwini	5.2%
City of Tshwane	7.5%	Nelson Mandela Bay	0.4%
Mangaung	0%	Buffalo City	0.4%
Total	**75.7%**	**Total**	**24.3%**

For the inland metros, City of Johannesburg hosts most of the CHQs, whereas City of Cape Town hosts most of the CHQs for the coastal metros. Thus, the two metros may properly be regarded as the economic hubs of South Africa. These two metros would certainly continue to enjoy a competitive advantage as compared to the other metros.

City of Johannesburg, which hosts most of the CHQs, has only Lanseria as the main airport within its borders; however, this metro is mainly serviced by O. R. Tambo International Airport, which is within Ekurhuleni Metropolitan Municipality. This is due to historical factors, as O. R. Tambo International Airport remains a key linkage to

international and local markets. For a long time in South Africa, O. R. Tambo was the only international airport and it was only recently that Cape Town Airport gained the status of an international airport with direct flights from other countries.

The majority of CHQs are in the finance, insurance, real estate, and investment service industry, with 45% of the CHQs. City of Johannesburg hosts 62%, while City of Cape Town hosts 22% of companies in this sector. Finance, insurance, real estate, and investment service is the dominant industry in the two hubs. However, the dominance of City of Johannesburg in this sector may also be explained by the fact that the JSE is located within this metro.

It is also notable that City of Johannesburg hosts 82% of CHQs in the mining and quarrying industry. However, there are limited mining activities currently happening within City of Johannesburg. The concentration of CHQs in this sector within City of Johannesburg is best explained by the historical developments of the city, as it was famously known as "the City of Gold." Historically, it was the mining and quarrying industry which facilitated the development of the city of Johannesburg and the agglomeration of companies within this metro. However, it is no longer the mining and quarrying industry that is dominant in City of Johannesburg; rather, it is the finance, insurance, real estate, and investment service industry that is currently the dominant one.

City of Johannesburg hosts 67% of CHQs in the manufacturing industry and as such is the dominant one in this industry. The concentration of manufacturing may be explained by the historical events that took place in the development of the city. Although mining and quarrying was the main driver in the formation of the city, manufacturing facilitated the growth of the city. The linkages of manufacturing to other industries to meet their demand can also explain the current concentration in the city of Johannesburg.

City of Cape Town hosts 50% of CHQs in wholesale and retail trade, catering, and accommodation, while City of Johannesburg hosts 32% of CHQs. The dominance of City of Cape Town is likely due to its coastal location and consequent function as one of the key ports in South Africa. Surprisingly, the Durban port, which is the largest and busiest port in sub-Saharan Africa, only hosts 14% of JSE-listed CHQs. While City of Cape Town and eThekwini enjoy the benefit of sea trade routes, O. R. Tambo International Airport for the longest time served as the main entry through the air, which likely explains Ekurhuleni's share in this industry.

The metros with less than 10% share of CHQs have the potential to attract more CHQs to challenge the dominant two. The metros with less than 1% share of CHQs are probably not on the same scale relating to developed infrastructure and economic activity, and therefore, these metros would have to develop long-term strategies to enable them to attract CHQs into their areas gradually.

This study also revealed that while CHQs mostly concentrated in the metros, there are also some district municipalities that are hosting CHQs. These CHQs account for 7% of the total JSE-listed CHQs located in South Africa. Therefore, there is a need to understand the location dynamics of such companies. CHQs are more concentrated in major cities with well-established infrastructure and proximity to other businesses. However, few CHQs prefer to locate close to their production units, instead of locating in close proximity to their intermediate inputs. In analysing the concentration of CHQs, propositions 1, 2, and 3 are supported in that strategically these CHQs choose to cluster in certain metros and in particular sites closer to one another. The descriptive statistics also indicated that CHQs that have relocated, in City of Johannesburg in particular, have moved north of the old CBD, and there is no doubt that there is competition for the best space.

Relationship between Economic Specialisation-Competitiveness and CHQs Location

Location quotient and shift-share analysis were used to calculate the level of competitiveness and specialisation for each. The coastal metros are more specialised as compared to the inland metros; however, this is not reflected by the level of concentration in the coastal metros. In terms of competitiveness, the inland metros are more competitive than the coastal metros. The competitiveness and specialisation of both the inland and the coastal metros tell a story based on the overall economy of the different metros. It might be helpful to use CHQs of both listed and non-listed firms to get a clear picture of the relationship between the level of concentration and specialisation and competitiveness of the metros.

However, the findings from this analysis in Chapter 4 indicated that some relationships exist between the specialisation and/or competitiveness of the metros and the concentration of certain industries. However, for some industries, the high concentration may be explained by historical factors. CHQs location is a long-term decision, and some companies have been in the same location since their establishment. In this instance, the current competitiveness and/or specialisation may not show any relationship because of the economic changes that might have taken place over time; therefore, inferences from the economic history of the metros helped to explain the concentration. This is also supported by behavioural theory, in that the costs of relocation are considerable for bigger companies, and in this instance CHQs of big companies (Van Dijk & Pellenbarg, 2000). In some cases, the relationship exists through linkages to other industries; for example, a well-established wholesale retail trade, catering, and accommodation industry might trigger growth in the manufacturing and the transportation, storage, and communication industries. Further analysis focused on each metro may explain these relationships better.

Trade-offs and Preference Levels

Several determinants were highlighted from the literature review from both developed and emerging markets. In addition, the interviews raised the issues of infrastructure: access (both by employees, business partners, and customers), safety, energy efficiency, proximity (to clients, service providers, and/or other business units), image, building interior, and parking facilities, as well as rental versus leasing. The spatial analysis also shed some light on some of the determinants of CHQs location and site selection, including developed infrastructure, access, and historical events. Consequently, the determinants from different sources were taken as key determinants of CHQs location and site selection irrespective of context, and they were all consolidated for the survey. It was prevalent in the literature that CHQs work with the information that is available to them to make location decisions, which supported proposition 4.

A survey was created that allowed the respondents to make trade-offs between the competing key determinants. Respondents showed how when making their CHQs location decisions they make trade-offs the way they do in real-life decisions. They needed to pick the least preferred (0) and the most preferred (10) on a 0-10 Likert scale. This helped in understanding the prioritisation made by CHQs when making location and site selection decisions. The self-explicated conjoint model enabled the respondents to rank the attribute and level according to their preference. In this process, CHQs show their prioritisation amongst competing attributes and attributes levels (Table 6.3).

Table 6.3: Most preferred determinants of location and site selection

Determinants of CHQs Location		Determinants of CHQs Site Selection	
Attribute	***Attribute level***	***Attribute***	***Attribute Level***
Developed Infrastructure	Telecommunications	**Accessibility**	By car
Financial Factors	Profit maximization	**Supporting Facilities**	Security
Operating Costs	Low operating costs	**Building Services**	Parking facilities Backup generator Security Air conditioning and bathrooms
Clustering and Synergies	Proximity to supporting industries and service providers	**Lease**	Percentage of rent escalation Flexible rent Nature and terms of lease
Specialized Services	Availability of skilled labour	**Costs**	Building maintenance and utility costs
Linkages to Other Markets	Frequent and efficient local flights	**Sustainability**	Energy efficiency (management)
Prestige Location	Amenities	**Building Interior**	Layout flexibility and space efficiency
Government Incentives	Property taxes Tax incentives and legal and regulatory framework	**Internal Access**	Disabled friendly
		External Appearance	Condition of the premises

Although this study was only interested in the most preferred determinant of location and site section, the data collected shows more than the most preferred determinants. As shown in Table 5.2, Table 5.4, Table 5.6, and Table 5.8, the respondents ranked the

determinants/attributes level in such a way that the mean values for each attributes level show that there is more to tell about the determinants. Since the respondents ranked from most to least preferred, therefore, the mean values can also be used to indicate the different preference level. This information can be used to understand the prioritisation of determinants in the different industries.

It was noted that the preference level for different industries may vary because their needs are also different. However, this variation was not recorded in this study, as the study was looking more at the overall preference level than at the individual industries. This opens an opportunity for further studies to unpack the trade-offs and preference levels by industries.

The preference level and trade-offs application proved to be difficult for personnel who are not hands on in location and site selection decisions within the company. This was probably the reason that some respondents struggled to finish the survey, especially the conjoint analysis part. It was noted as one of the limitations of the online survey that companies delegate personnel who have limited information on the issue under investigation.

Through this research, it was clear that copy and paste from the studies done in other countries might obscure some unique results that are context specific. Although some commonality exists in the business environment, the peculiarity of the South African CRE market needed some attention.

The results indicated that South Africa's cities' historical development tend to influence the concentration of CHQs in certain metropolitan municipalities over others. However, in some instances, the competitiveness and/or specialisation explained the concentration. CHQs highly prefer locations that have developed telecommunication infrastructure and amenities, low operating costs, proximity to supporting industries and service providers, a skilled labour force, frequent and efficient local flights, favourable property taxes, tax incentives, and a favourable legal and regulatory

framework. On the site selection, CHQs highly prefer facilities that have good security, backup generators, low operating costs, parking facilities, a flexible building interior, premises in good condition, HVAC, leases with favourable terms, and an efficient water supply, and which are energy efficient and disabled friendly.

This research has added new information on the African CRE market. Although some of the findings might not apply to other African countries directly, the research gave some understanding to the existing literature on CHQs location and site selection. The exploration of CHQs location and site selection using spatial analysis, interviews, and a survey also gave a comprehensive picture of the South African CHQs market. The use of all the metropolitan municipalities in South Africa gave some understanding on the spatial and economic dynamics of the different metropolitan municipalities. Many of the studies on the metropolitan municipalities only work with some metros.

In terms of methodology, the use of conjoint analysis in CRE research is limited. This research revealed that conjoint analysis can be explored even further and give meaningful results in terms of understanding the choices that companies make. Of particular importance is the understanding of the preference level and trade-offs amongst competing choices that can be achieved through the use of conjoint analysis.

6.3 Contribution of Study

Office/headquarters/CHQs location and site selection research is under-investigated in Africa and in South Africa. This study adds to the body of knowledge in understanding the behavioural decisions of companies in location and site selection particularly within the South African context.

In addition, this study adds to knowledge through the use of conjoint analysis in the field of CRE considering that this analytical tool is mainly used in marketing and health sciences. The use of conjoint analysis was useful in establishing consumer preferences in the CRE market as it relates to CHQs. Companies, like any other consumers, when

making decisions do so by making trade-offs between competing attributes. Therefore, conjoint analysis was used without it being subsumed by the common location theories such as the neo-classical, behavioural and institutional. In so doing, conjoint analysis was a deliberate step of regarding companies or headquarters as clients or consumers who are interested at certain attributes of location and site that will enable them to be competitive. Therefore, it is not surprising that certain locations and sites are highly preferred over others.

Conjoint analysis proved to be a useful tool also in real estate research. While previous studies have used various methods, none of them captured the consumer decision choices than conjoint does. This study's findings thus provide testimony of the usefulness of conjoint analysis in real estate research. Policy wise, the findings are important for the CHQs, governments, property professionals and other role players in understanding location and site selection decisions of corporations.

6.4 Implication for Future Research

This research provides a starting point for further research in CHQs location and site selection in emerging markets, particularly in the South Africa context. The study explored the behaviour of CHQs in general within (South) Africa. This study is amongst the first studies exploring the CHQs location and site selection in South Africa; therefore, further studies are necessary in this field.

There is more to be uncovered in CHQs location without zooming into the site and have a separate study on site selection. This study provided a skeleton of location and site selection within the metros; however, to gain a better understanding of the dynamics of the different metros and the CHQs located there, separate studies on each metro might yield better results. The study also provided a better understanding of the metros and the dynamics which influence the CHQs location and site selection.

This study also established that there are several CHQs located outside the metropolitan municipalities. A study on the local or district municipalities would help to provide a

holistic picture of the determinants of CHQs location and site selection. At the same time, a study on the provinces is essential for understanding why certain provinces have a higher concentration of CHQs than others. Some inland provinces, such as the North West, Limpopo, and Mpumalanga, have no metropolitan municipalities.

It might also be beneficial to undertake a study that looks at CHQs of private companies. Such a study would provide information on the behaviour of private CHQs. There is a possibility that some metros may have a low concentration of public listed companies but may have a higher concentration of the private companies. It is also necessary to compare the determinants of listed versus non-listed companies to see how they vary.

The current study used the self-explicated conjoint model with potential to do a hybrid conjoint analysis. However, separate studies may also be done in each industry to understand their location dynamics. This research explored all industries; therefore, it does not provide industry-specific determinants of CHQs location and site selection.

6.5 Looking Forward: Policy Recommendations

South Africa, just like any other country in the world, competes to attract and retain CHQs. Therefore, it is essential to have policies that facilitate and enable a conducive environment for business to thrive. Since the literature review revealed that CHQs is important for the economy, South Africa has to do likewise and have policies in place that favour businesses and in particular CHQs of major companies.

The government and policy makers may also benefit through the understanding of how CHQs rank the different determinants of location and site selection. The different municipalities may start creating an enabling environment for CHQs to locate and eliminate some of the barriers preventing investment within their metros. The main provision that should be in place is investment in infrastructure that enables businesses

to run efficiently. CHQs prefer safe environments for both their clients and their employees, as well as peace of mind for investors.

Metropolitan municipalities need to look at alternative ways for energy efficiency to combat the power shortage problems. The same goes for property developers and managers, who have to ensure that there is enough stock in the office market to meet the requirements of CHQs, taking into consideration their preference level for different determinants. However, some of the CHQs prefer to build their own facilities to satisfy their company's needs in both the short and long term.

The exploration of CHQs location and site selection using spatial analysis, interviews and survey also gave a comprehensive picture of the South African CHQs market. The use of all the metropolitan municipalities in South Africa gave some understanding on the spatial and economic dynamics of the different metropolitan municipalities. Many of the studies on the metropolitan municipalities limit their research to particular metros. Furthermore, there is limited, if any, research that has used conjoint analysis in CRE research and in particular on understanding the location and site selection decisions. It should be noted that conjoint analysis could be explored even further and could give meaningful results with regards to understanding the choices that company make. Conjoint analysis helps in the understanding of the preference level and trade-offs amongst competing choices which companies make.

6.6 Limitations

The limitations of this study, on the basis of the scope and design, were as follows:

- Access and reliability of information were limited. It was difficult to get the relevant respondents from some companies to complete the survey or to do the interviews. In some instances, some respondents viewed the information requested as classified or sensitive, and hence they were reluctant to participate

and also to disclose such information. In addition, it was difficult to monitor if the relevant personnel filled in the online survey

- The reliability of the information received cannot be guaranteed completely, as it depends on the level of the respondents' honesty and the time they were willing to invest in the online survey.
- The study could not predetermine the participation of any corporation in the online survey, as participation was voluntary.
- The study preferred that companies delegate respondents at management level who are involved in location and site decisions or knowledgeable and informed about their companies' location and site selection decision; however, this preference could not be guaranteed. In some instances, those who were involved in the location decision-making process were no longer involved in the company to provide such information.
- Inferences drawn in this study may not necessarily apply to firms not listed in the JSE.

To the extent possible the researcher employed caution to minimise the encountered limitations.

6.7 Concluding Statement

This study used JSE-trading companies located within the metropolitan municipalities in South Africa. There are only 7% of CHQs that falls outside the metropolitan municipalities; therefore the findings of the study may apply to majority, if not all, publicly-listed CHQs in South Africa. However, there is a need to do further study focussing on the private firms not listed on the JSE to establish if the determinants are the same.

On the basis of literature review and findings based on data analysed using conjoint analysis (i.e. self-explicated model) and other analytical techniques, the following conclusions may be drawn:

- CHQs location and site selection decisions play a major role in advancing the positioning of companies within the international and local markets. Companies want to increase their share in the stock exchange and boost investors' confidence.
- Companies' location and site selection decisions are strategic decisions made by such companies. Therefore, CHQs purposively and strategically choose locations and sites that not only speak to the values of the company, but also the values of the shareholders.
- The study reveals that location and site selection decisions tend to take time and are not decisions that are regularly made these decisions tend to be long-term. In making location and site selection decisions, therefore, companies engage various stakeholders and make checks and balances to ensure that the decisions made are best given companies' long-term strategies.

- The research highlights the much needed role that government has to play regarding the provision and maintenance of necessary infrastructure in given location so as to retain and attract CHQs and other supporting businesses.
- Property developers and management companies are also major role players in that they can provide the required facilities in the right locations. As a result a positive engagement with CHQs to custom design the facilities and the general upkeep as per company's specifications is paramount.
- Companies strategically decide on the location and site based on the preconceived short and long-term investment decisions. Depending on the company, CHQs decides on locations closer to other supporting services, this can be either their intermediate inputs, suppliers, consumers or other related businesses.
- CHQs are also able to rank determinants according to their preference levels when given a set of them at the same time. In this way, the study highlighted which determinants are most preferred for location and site selection.

The findings of this study has some similarities with the studies done in other context where access, infrastructure, proximity to other business and support services, favourable legal framework, parking, suitable facilities, etc., were considered important. At the same time, some context-specific determinants emerged including safety and security, power supply (backup generators) and water supply. This was not much of a surprise considering the current state of South Africa with load shedding and water restrictions. Therefore, the internal, external and location-specific factors do play an important role in CHQs location and site selection decision.

7. References

Aarland, K., Davis, J. C., Henderson, J. V., and Ono, Y. (2007). Spatial Organization of Firms: The Decision to Split Production and Administration. *The RAND Journal of Economics* 38(2):480–494.

Abraham, J. H., and Hunt, J. D. (1999). *Firm Location in the MELPLAN Model of Sacramento*. Paper presented at the 78th Annual Meeting of the Transportation Research Board, Washington, DC.

Adnan, Y. M., and Daud, M. N. (2010). *Identification of Important Factors for Office Space Decision by Tenants in Kuala Lumpur City Centre, Malaysia: Experts' View.* Paper Presented at the 16th Pacific Rim Real Estate Society Conference 2010, Wellington, New Zealand.

Adnan, Y. M., Daud, M. N., and Razali, M. N. (2008). Property Specific Criteria for Office Occupation by Tenants of Purpose Built Office Buildings in Kuala Lumpur, Malaysia. *Property Management* 30(2):114–128.

Adner, R., and Helfat, C. E. (2003). Corporate Effects and Dynamic Managerial Capabilities. *Strategic Management Journal* 24:1011–1025.

Alcser, K., Antoun, C., Bowers, A., Clemens, J., and Lien, C. (2011). *III. Ethical Considerations in Surveys: Cross-Cultural Survey Guidelines.* University of Michigan. Retrieved from http://ccsg.isr.umich.edu/ethics.cfm. Accessed 01/02/2017.

Alexander, M. (1992). Disintermediation: Redefining the Role of Corporate Headquarters. *Long Range Planning* 25(6):110–112.

Ali, Z., McGreal, S., Adair, A., and Webb, J. R. (2008a). Corporate Real Estate Strategy: A Conceptual Overview. *Journal of Real Estate Literature* 16(1):3-21.

Ali, Z., McGreal, S., Adair, A., Webb, J. R., and Roulac, S. C. (2008). Corporate Real Estate Strategies and Financial Performance of Companies. *Journal of Property Research* 25(3):241–267.

Alonso, W. (1964). *Location and Land Use*. Cambridge, MA: Harvard University Press.

Amirkhany, A., and Pain, G. (2014). Multinational Enterprises as Institutional Entrepreneurs in Emerging Countries. In E. V. Chrysostome and R. Molz (eds), *Building Businesses in Emerging and Developing Countries: Challenges and Opportunities* (pp. 144–157). London: Routledge.

Apgar, M. (2009). What Every Leader Should Know about Real Estate. *Harvard Business Review*, 87(11):1–9.

Appel-Meulenbroek, R. (2008). Managing "Keep" Factors of Office Tenants to Raise Satisfaction and Loyalty. *Property Management* 26(1):43–55.

Appel-Meulenbroek, R., and Feijts, B. (2007). CRE Effects on Organizational Performance: Measurement Tools for Management. *Journal of Corporate Real Estate* 9(4):218–238.

Archer, W. R. (1981). Determinants of Location for General Purpose Office Firms within Medium Size Cities. *AREUEA Journal* 9:283–297.

Armstrong, R. B. (1979). National Trends in Office Construction, Employment and Headquarters Location in US Metropolitan Areas. In P. W. Daniels (ed), *Spatial Patterns of Office Growth and Location* (pp. 61–94). Chichester: Willey.

Baaij, M. G., Van Den Bosch, F. A. J., and Volberda, H. W. (2004). The International Relocation of Corporate Centres: Are Corporate Centres Sticky? *European Management Journal* 22(2):141–149.

Baicker, K., and Chandra, A. (2010). Understanding Agglomerations in Health Care. In E. L. Glaeser (ed), *Agglomeration Economics* (pp. 211–236). Chicago: University of Chicago Press.

Baliga, B. R., and Jaeger, A. M. (1984). Multinational Corporations: Control Systems and Delegation Issues. *Journal of International Business Studies* 15(2):25–40.

Barnes, T. J. (2003). The Place of Locational Analysis: A Selective and Interpretive History. *Progress in Human Geography* 27(1):69–95.

Barovick, B., and Steele, C. (2001). The Location and Site Selection Decision Process: Meeting the Strategic and Tactical Needs of the Users of Corporate Real Estate.*Journal of Corporate Real Estate* 3(4):356–362.

Barros, P. P., and Cabral, L. (2000). Competing for Foreign Direct Investment.*Review of International Economics* 8(2):360–371.

Bartlett, C. A., and Ghoshal, S. (1989). *Managing across Borders: The Transnational Solution*. Boston, MA: Harvard Business School Press.

Bartlett, C., and Hedlund, G. (eds). (1996). *Managing the Global Firm*. London: International Thomson Business Press.

Bathelt, H., Malmberg, A., and Maskell, P. (2004). Clusters and Knowledge: Local Buzz, Global Pipelines and the Process of Knowledge Creation. *Progress in Human Geography* 28(1):31–56.

Baumal, W. J., Litan, R. E., and Schramm, C. J. (2007). *Good Capitalism, Bad Capitalism, and the Economics of Growth and Prosperity*. New Haven, CT: Yale University Press.

Beaverstock, J. V., Smith, R. G., and Taylor, P. J. (1999). A Roster of World Cities. *Cities* 16(6):445–458.

Becattini, G. (2017). The Marshallian Industrial District as Socioeconomic Notion. *Revue d'économie Industrielle* 1:13–32.

Becattini, G. (2002). From Marshall's to Italian "Industrial Districts": A Brief Critical Reconstruction. In A. Q. Curzio and M. Fortis (eds), *Complexity and Industrial Clusters* (pp. 83-106). Heidelberg: Physica.

Bel, G., and Fageda, X. (2008). Getting There Fast: Globalization, Intercontinental Flights and Location of Headquarters. *Journal of Economic Geography* 8:471–495.

Bell, D. A. (1991). Office Location—City or Suburbs? Travel Impacts Arising from Office Relocation from City to Suburbs. *Transportation* 18:239–59.

Benito, G. R., Larimo, J., Narula, R., and Pedersen, T. (2002). Multinational Enterprises from Small Economies: Internationalization Patterns of Large Companies from Denmark, Finland, and Norway. *International Studies of Management and Organization* 32(1):57–78.

Bergeron, C. (2005). Making Site Selection Decisions in the Worldwide Economy. *Handbook of Business Strategy* 6(1):89–94.

Besada, H., Tok, E., and Winters, H. (2013). South Africa in the BRICS: Opportunities, Challenges and Prospects. *Africa Insight* 42(4):1–15.

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices*. Zurich: Jacobs Foundation.

Birkinshaw, J., Braunerhjelm, P., Holm, U., and Terjesen, S. (2006). Why Do Some Multinational Corporations Relocate Their Headquarters Overseas? *Strategic Management Journal* 27(7):681–700.

Bloom, M., and Grant, M. (2011). Valuing Headquarters (HQs): Analysis of the Role, Value and Benefit of HQs in Global Value Chains. In A. Sydor (ed), *Global Value Chains: Impacts and Implications* (pp. 211–40). Ottawa: Foreign Affairs and International Trade Canada, Government of Canada.

Bodog, S. A., and Florian, G. L. (2012). Conjoint Analysis in Marketing Research. *Journal of Electrical and Electronics* (1):19–22.

Bolisani, E., and Scarso, E., 1996. International Manufacturing Strategies: Experiences from the Clothing Industry. *International Journal of Operations & Production Management* 16(11):71–84.

Bon, R., Gibson, V., and Luck, R. (2002). Annual CREMRU-JCI Survey of Corporate Real Estate Management Practices in Europe and North America: 1993–2001. *Facilities* 20(11/12):357–373.

Bond, E. W., and Samuelson, L. (1986). Tax Holidays as Signals. *The American Economic Review* 76(4):820–826.

Bottom, C., McGreal, S., and Heaney, G. (1998). The Suitability of Premises for Business Use: An Evaluation of Supply/Demand Variations. *Property Management* 16(3):134–144.

Bouchard Jr, T. J. (1976). Unobtrusive Measures: An Inventory of Uses. *Sociological Methods & Research* 4(3): 267–300.

Bouquet, C., and Birkinshaw, J. (2008). Weight Versus Voice: How Foreign Subsidiaries Gain Attention from Corporate Headquarters. *Academy of Management Journal* 51(3):577–601.

Brouwer, A. E., Mariotti, I., and van Ommeren, J. N. (2004). The Firm Relocation Decision: An Empirical Investigation. *The Annals of Regional Science* 38(2):335–347.

Brown, K., Arnold, A. L., Rabianski, J. S., Carn, N. G., Lapides, P. D., Blanchard, S. B., and Rondeau, E. P. (1993). *Managing Corporate Real Estate*. New York: John Wiley.

Brueggeman, W. and Fisher, J. (2001). *Real Estate Finance and Investments*. New York: McGraw Hill.

Burns, L. S. (1977). The Location of the Headquarters of Industrial Companies: A Comment. *Urban Studies* 14:211–14.

Campbell, A., Goold, M., and Alexander, M. (1995a). Corporate Strategy: The Quest for Parenting Advantage. *Harvard Business Review* 73(2):120–132.

Campbell, A., Goold, M., and Alexander, M. (1995b). The Value of the Parent Company. *California Management Review* 38(1):79–97.

Carroll, B., Bloomfield, K., and Maher, M. (2014). The Changing Headquarters Landscape for Fortune Global 500 Companies.EY. Retrieved from http://www.ey.com/Publication/vwLUAssets/EY-the-changing-headquarters-landscape-for-fortune-global-500-companies/$FILE/EY-the-changing-headquarters-landscape-for-fortune-global-500-companies.pdf. Accessed 01/02/2017.

Carroll, W. K. (2007). Global Cities in the Global Corporate Network. *Environment and Planning* 39:2297–2323.

Cattin, P., and Wittink, D. R. (1982). Commercial Use of Conjoint Analysis: A Survey. *Journal of Marketing* 46(3): 44–53.

Chan, C. P. and Poon, W. K. (2012). The Chinese Local Administrative Measures for Building up the "Headquarter Economy": A Comparison between Pudong and Shenzhen. *Journal of Contemporary China* 21(73):149–167.

Chandler, A. (1991). The Functions of the HQ Unit in the Multi Business Firm. *Strategic Management Journal* 12(S2):31–50.

Chandler, A. D. (1962). *Strategy and Structure: Chapters in the History of the American Industrial Enterprise* Cambridge MA: MIT Press.

Chapman, K., and Walker, D. F. (1992). *Industrial Location* (2nd ed.). Oxford: Blackwell.

Chen, D., Park, S. H., and Newburry, W. (2009). Parent Contribution and Organizational Control in International Joint Ventures. *Strategic Management Journal* 30(11):1133–1156.

Ciaramella, A., and Dettwiler, P. (2011). A Relocation Model of European Manufacturing Firms: Cases from Italy and Sweden. *Journal of Corporate Real Estate* 13(4):233–246.

Clapp, J. M. (1993). *Dynamics of Office Markets: Empirical Findings and Research Issues*. AREUEA Monograph Series (1). Washington, DC: Urban Institute.

Coeurderoy, R., and Verbeke, A. (2016). The Unbalanced Geography of the World's Largest MNEs: Institutional Quality and Head Office Distribution across Countries. *Global Strategy Journal* 6(2):127–148.

Coffey, W. J., and Shearmur, R. G. (2002). Agglomeration and Dispersion of High-Order Service Employment in the Montreal Metropolitan Region, 1981–96. *Urban Studies* 39(3):359–378.

Collis, D. J., and Montgomery, C. A. (1997). *Corporate Strategy: Resources and the Scope of the Firm*. Boston: McGraw-Hill.

Collis, D. J., Young, D., and Goold, M. (2007). The Size, Structure, and Performance of Corporate Headquarters. *Strategic Management Journal* 28(4):383–405.

Collis, D. J., Young, D., and Goold, M. (2009). *International Differences in the Size and Roles of Corporate Headquarters: An Empirical Examination*. Harvard Business School Working Paper 10-044. http://www.hbs.edu/faculty/Publication%20Files/10-044_0d3fa897-d039-41d2-a4ea-35dab4a5a27e.pdf. Accessed 12/03/2017.

Collis, D. J., Young, D., and Goold, M. (2012). The Size and Composition of Corporate Headquarters in Multinational Companies: Empirical Evidence. *Journal of International Management* 18(3):260–275.

Conroy, T., Deller, S., and Tsvetkova, A. (2017). Interstate Relocation of Manufacturers and Business Climate. *Review of Urban and Regional Development Studies* 29(1):18–45.

Cooper, M. J. M. (1975). *The Industrial Location Decision Making Process*. Birmingham: Centre for Urban and Regional Studies, University of Birmingham.

Creswell, J. (2003). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (2nd ed.). Los Angeles: Sage.

Creswell, J. W. and Clark, P. V. L. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage.

Croome, B. J., Oguttu, A. W., Muller, E., Legwaila, T., Kolitz, M., Williams R. C., and Louw, C. (2013). *Tax Law: An Introduction*. Cape Town: Juta and Co.

Cyert, R. M., and March, J. G. (1963). *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.

Daniels, P. W., and Holly, B. P. (1983). Office Location in Transition: Observations on Research in Britain and North America. *Environment and Planning* 15(10):1293–1298.

Davis, D. R., and Dingel, J. I. (2014). The Comparative Advantage of Cities. NBER Working Paper 20602. Retrieved from http://www.nber.org/papers/w20602. Accessed 03/12/2014.

Davis, J. C., and Henderson, J. V. (2008). The Agglomeration of Headquarters. *Regional Science and Urban Economics* 38(5):445–460.

De Waal, A. (2013). *Strategic Performance Management: A Managerial and Behavioral Approach.* New York: Palgrave Macmillan.
Dent, P., and White, A. (1998). Corporate Real Estate: Changing Office Occupier Needs—A Case Study. *Facilities* 16 (9/10):262–270.
Denzin, N. K. (1978). *The Research Act: A Theoretical Introduction to Sociological Methods*. New York: Praeger.
Dettwiler, P. (2008). Virtual and Real Boundaries of Growth Firms: Office Space and Implications of Outsourcing and Mergers and Acquisition. *Facilities Management* 6(2):110–119.
Dijk, J. V., and Pellenbarg, P. H. (1999).*Demography of Firms: Spatial Dynamics of Firm Behaviour*. Koninklijk, Nederlands: Aardrijkskundig Genootschap.
Dixon, T., Ennis-Reynolds, G., Roberts, C., and Sims, S. (2009). Is There a Demand for Sustainable Offices? An Analysis of UK Business Occupier Moves (2006–2008). *Journal of Property Research* 26(1):61–85.
Drennan, M., Larsen, S., Lobo, J., Strumsky, D., and Utomo, W. (2002). Sectoral Shares, Specialisation and Metropolitan Wages in the United States, 1969–96. *Urban Studies* 39(7):1129–1142.
Drucker, P. (1946). *The Concept of the Corporation*. New York: John Day.
Dunning, J. H. (1998). Location and the Multinational Enterprise: A Neglected Factor? *Journal of International Business Studies* 40(1):5–19.
Dunning, J. H., and Lundan, S. M. (2008). *Multinational Enterprises and the Global Economy*. Cheltenham: Edward Elgar.
Duranton, G., and Puga, D. (2004). Micro-Foundations of Urban Agglomeration Economies. *Handbook of Regional and Urban Economic*, 4:2063–2117.
EasyData. (2017). *RSA Regional Indicators*. Pretoria: Quantec. Retrieved from http://www.quantec.co.za/. Accessed 07/07/2017.
Ebinger, M., and Madritsch, T. (2012). A Classification Framework for Facilities and Real Estate Management: The Built Environment Management Model. *Facilities* 30(5/6):185–198.
Egger, P., Radulescu, D., and Strecker, N. (2013). Effective Labor Taxation and the International Location of Headquarters. *International Tax and Public Finance* 20(4):631–652.
Elgar, I., and Miller, E. J. (2009). How Do Office Firms Conduct Their Location Search Process? An Analysis of a Survey from the Greater Toronto Area. *International Regional Science Review* 33(1):60–85.
Ersoy, A. (2016). Exploring Economic Development through Headquarters: The Spatial Distribution of Turkey's Large Industrial Enterprises and Its Implications for Urban Systems. *The Professional Geographer* 68(1):138–148.
Evans, A. W. (1973). The Location of the Headquarters of Industrial Companies. *Urban Studies* 10:387–96.

Fenker, R. (1999). The Location Mystique: Understanding Why Companies with Great Sites Fail and What to Do about It. *Journal of Corporate Real Estate* 1(3):270–277.

Floyd, C. F., and Allen, M. T. (2002). *Real Estate Principles* (7th ed.). Chicago: Dearborn Financial.

Forte, R., and Brandão, A. (2008). A Signalling Model of Firms' Foreign Direct Investment Relocation Decision. *International Journal of the Economics of Business*, 15(3):339–357.

Foss, N. J. (1997). On the Rationales of Corporate Headquarters. *Industrial and Corporate Change* 6(2):313–338.

Furfey, P. H. (1927). A Note on Lefever's "Standard Deviational Ellipse."*American Journal of Sociology* 33(1):94–98.

Galambos, E. C., and Schreiber, A. F. (1978). *Making Sense out of Dollars: Economic Analysis for Local Government*. Washington DC: National League of Cities.

Galli, E. B. 2011. *Building Social Capital in a Multibusiness Firm: Lessons from a Case Study*. Gabler: Springer Science and Business Media.

Gelb, S., and Blacel, A. (2004). Globalisation in a Middle Income Economy: FDI, Production and the Labour Market in South Africa. In W. Milberg (ed), *Labour and the Globilisation of Production* (pp. 179–206). London: Palgrave McMillan.

Ghemawat, P. (2001). Distance Still Matters. *Harvard Business Review*, 79(8):137–147.

Gibler, K. M. (2012). *The Role of Corporate Real Estate Management in Wealth Maximization of the Firm*. Lecture slides.

Gibler, K. M., and Lindholm, A-L. (2012). A Test of Corporate Real Estate Strategies and Operating Decisions in Support of Core Business Strategies. *Journal of Property Research* 29(1):25–48.

Gibson, V. (2003). Flexible Working Needs Flexible Space: Towards an Alternative Workplace Strategy. *Journal of Property Investment and Finance* 21(1):12–22.

Glaeser, E. L. (2010). Introduction. In E. L. Glaeser (ed), *Agglomeration Economics* (pp. 1–14). Chicago: University of Chicago Press.

Glaeser, E. L., Kallal, H. D., Scheinkman, J. A., and Shleifer, A. (1992). Growth in Cities. *Journal of Political Economy* 100(6):1126–1152.

Goold, M., and Campbell, A. (2002). *Designing Effective Organizations: How to Create Structured Networks*. San Francisco: Jossey-Bass.

Goold, M., Campbell, A., and Alexander, M. (1994). *Corporate-Level Strategy: Creating Value in the Multi Business Company*. New York:Wiley.

Goold, M., Campbell, A., and Goold. (1987). *Strategies and Styles: The Role of the Centre in Managing Diversified Corporations*. Oxford: Basil Blackwell.

Gordon, I. R., and McCann, P. (2000). Industrial Clusters: Complexes, Agglomeration and/or Social Networks? *Urban Studies* 37(3):513–532.

Goree, C. T., and Marszalek III, J. F. (1995). Electronic Surveys: Ethical Issues for Researchers. *College Student Affairs Journal* 15(1):75–79.

Granovetter, M. (1985). The Strength of Weak Ties. *American Journal of Sociology* 78:1360–1380.

Granovetter, M. (1993). Economic Institutions and Social Constructions: A Framework of Analysis. *Acta Sociologica* 35:3–12.

Grant, R., and Nijman, J. (2002). Globalization and the Corporate Geography of Cities in the Less-Developed World. *Annals of the Association of American Geographers* 92(2):320–340.

Gray, D. E. (2004). *Doing Research in the Real World.* London: SAGE Publications.

Green, P. E., and Rao, V. R. (1971). Conjoint Measurement for Quantifying Judgmental Data. *Journal of Marketing Research* 8:355–363.

Green, P. E., and Srinivasan, V. (1990). Conjoint Analysis in Marketing: New Developments with Implications for Research and Practice. *Journal of Marketing Research* 54(4):3–19.

Green, P. E., Goldberg, S. M., and Montemayor, M. (1981). A Hybrid Utility Estimation Model for Conjoint Analysis. *The Journal of Marketing* 45:33–41.

Greene, J. C., Caracelli, V. J., and Graham, W. F. (1989). Toward A Conceptual Framework for Mixed-Method Evaluation Designs. *Educational Evaluation and Policy Analysis* 11(3):255–274.

Greenhalgh, P. (2008). An Examination of Business Occupier Relocation Decision Making: Distinguishing Small and Large Firm Behaviour. *Journal of Property Research* 25(2):107–126.

Growe, A. (2010), Human Capital in the German Urban System–Patterns of Concentration and Specialization. *European Journal of Spatial Development* 40:1–23.

Guba, E. G., and Lincoln, Y. S. (1994). Competing Paradigms in Qualitative Research. In N. K. Denzin and Y. S. Lincoln (eds), *Handbook of Qualitative Research* (pp. 105–117). Thousand Oaks, CA: Sage.

Gustafsson, A., Herrmann, A., and Huber, F. (2003). *Conjoint Measurement: Methods and Applications*. Berlin: Springer.

Haaland, J. I., and Wooton, I. (1999). International Competition for Multinational Investment. *The Scandinavian Journal of Economics* 101(4):631–649.

Harrison, P., Todes, A., and Watson, V. (1997). Transforming South Africa's Cities: Prospects for the Economic Development of Urban Townships. *Development Southern Africa* 14(1):43–60.

Harvey, J., and Jowsey, E. (2004). *Urban Land Economics* (6th ed.). New York: Palgrave Macmillan.

Haynes, B. P. (2008a). Impact of Workplace Connectivity on Office Productivity. *Journal of Corporate Real Estate* 10(4):286–302.

Haynes, B. P. (2008b). The Impact of Office Comfort on Productivity. *Journal of Facilities Management* 6(1):37–51.
Haynes, B. P. (2011). The Impact of Generational Differences on the Workplace. *Journal of Corporate Real Estate* 13(2):98–108.
Hayter, R. (1997). *The Dynamics of Industrial Location. The factory, the Firm and the Production System*. New York: Wiley.
Healy, M., and Perry, C. (2000). Comprehensive Criteria to Judge Validity and Reliability of Qualitative Research within the Realism Paradigm. *Qualitative Market Research: An International Journal* 3(3):118–126.
Henderson, J. V., and Ono, Y. (2008). Where Do Manufacturing Firms Locate Their Headquarters?. *Journal of Urban Economics* 63(2):431–450.
Henderson, V., Kuncoro, A., and Turner, M. (1995). Industrial Development in Cities. *Journal of Political Economy* 103(5):1067–1090.
Herrin, A. N., and Pernia, E. M. (1987). Factors Influencing the Choice of Location: Local and Foreign Firms in the Philippines. *Regional Studies* 21(6):531–541.
Hirai, T. (2004). Corporate Headquarter Function in Osaka: Is It Still Shifting to Tokyo? Retrieved from http://www.pref.osaka.lg.jp/attach/1949/00103312/ronsyu18-06.pdf. Accessed 21/08/2016.
Ho, D., Newell, G., and Walker, A. (2005). The Importance of Property-Specific Attributes in Assessing CBD Office Building Quality. *Journal of Property Investment and Finance* 23(5):424–444.
Holl, A. (2004). Start-Ups and Relocations: Manufacturing Plant Location in Portugal. *Papers in Regional Science* 83(4):649–668.
Holt, J., Purcell, W. R., Gray, S. J., and Pedersen, T. (2008). Decision Factors Influencing MNEs' Regional Headquarters Location Selection Strategies. In A. Y. Lewin., S. T. Cavusgil., G. T. M. Hult, and D. A. Griffith (eds), *Thought Leadership in Advancing International Business Research* (pp. 104–133). London, UK: Palgrave Macmillan.
Hoskins, M. L., and White, J. (2013). Relational Inquiries and the Research Interview: Mentoring Future Researchers. *Qualitative Inquiry* 19(3):179–188.
Hu, W. Cox, L. J., Wright, J., and Harris, T. R. (2008). Understanding Firms' Relocation and Expansion Decisions Using Self-Reported Factor Importance Rating. *The Review of Regional Studies* 38(1):67–88.
Hudalah, D., Viantari, D., Firman, T., and Woltjer, J. (2013). Industrial Land Development and Manufacturing Deconcentration in Greater Jakarta. *Urban Geography* 34(7):950–971.
Hungenberg, H. (1993). How to Ensure that Headquarters Add Value. *Long Range Planning* 26(6):62–73.

Hutton, T., and Ley, D. (1987). Location, Linkages and Labour: The Downtown Complex of Corporate Activities in a Medium Size City, Vancouver, British Columbia. *Economic Geography* 63:125–140.

Instant Offices. (2011). *Global Office Review.* Retrieved from http://www.instantoffices.com/corporates. Accessed 11/09/2014.

IPD. (2012). *SA Property Market: Trends Report*. Retrieved from http://www.ipd.com/southafrica. Accessed 11/10/2014.

Isserman, A. M. (1977). The Location Quotient Approach to Estimating Regional Economic Impacts. *Journal of the American Institute of Planners* 43(1):33–41.

Jackson, A., and DeCormier, R. (1999). E-Mail Survey Response Rates: Targeting Increases Response. *Marketing Intelligence and Planning* 17(3):135–140.

Jackson, C., and Orr, A. (2011). Real Estate Stock Selection and Attribute Preferences. *Journal of Real Estate Research* 28(4):317–339.

Jacob, J. (1984). Cities and the Wealth of Nations: Principles of Economic Life. *New York: Vintage*.

Jacobs, J. (1969). *The Economy of Cities.* New York: Vintage.

Jakobsen, S-E., and Onsager, K. (2003). *The Role and Functions of Head Offices: Towards Increased Complexity?* SNF-working paper 32/03, Samfunns-og næringslivsforskning, Bergen.

Jakobsen, S-E., and Onsager, K. (2005). Head Office Location: Agglomeration, Clusters or Flow Nodes?. *Urban Studies* 42(9):1517–1535.

Johnson, R. B., Onwuegbuzie, A. J., and Turner, L. A. (2007). Toward A Definition of Mixed Methods Research. *Journal of Mixed Methods Research* 1(2):112–133.

Jones Lang LaSalle. (2013a). Advance: Top Issues Affecting Real Estate Trends in South Africa. Retrieved from http://www.jll.co.za/south-africa/en-gb/research. Accessed 26/12/2013.

Jones Lang LaSalle. (2013b). Advance: Location Dynamics for Distribution Centres in Johannesburg. Retrieved from http://www.jll.co.za/south-africa/en-gb/research. Accessed 26/12/2013.

Jones Lang LaSalle. (2013c). The African Century: Twelve Pillars of Africa's Future Success. Africa Cities Research. Global Foresight Series 2013. Retrieved from http://www.joneslanglasalle.co.za/southafrica/EN-GB/pages/ResearchDetails.aspx?ItemID=12654. Accessed 26/12/2013.

Jones, C. (2013). *Office Markets and Public Policy*. Oxford: Wiley-Blackwell.

Karantonis, A. C., Fakorede, A., and Oluwoye, J. O. (2001). Corporate Real Estate Asset Management: A Conceptual Framework. *Pacific Rim Property Research Journal* 7(1):18–34.

Keeble, D. (1977). *Industrial Location and Planning in the United Kingdom*. London: Metheun.

Kerr, W. R. (2010). The Agglomeration of US Ethnic Inventors. In E. L. Glaeser (ed), *Agglomeration Economics* (pp. 237–276). Chicago: University of Chicago Press.

Khanna T., and Palepu K. (2010). *Winning in Emerging Markets: A Road Map for Strategy and Execution*. Boston: Harvard Business Press.

Klaesson, J., Johansson, B., and Karlsson, C. (eds) (2013). *Metropolitan Regions: Knowledge Infrastructures of the Global Economy*. Heidelberg: Springer Science and Business Media.

Klein, A., Nihalani, K., and Krishnan, K. S. (2010). A Comparison of the Validity of Interviewer-Based and Online-Conjoint Analyses. *Journal of Management and Marketing Research* 4:1–15.

Klein, S., Wöcke, A., and Hughes, J. M. (2014). Leaving Home: Relocation Choices of South African Multinational Enterprise (MNEs). *African Journal of Business Management* 8(8):253–269.

Kleinbaum, A. M., and Stuart, T. E. (2014). Inside the Black Box of the Corporate Staff: Social Networks and the Implementation of Corporate Strategy. *Strategic Management Journal* 35(1):24–47.

Klier, T., and Testa, W. (2002). Location Trends of Large Company Headquarters during the 1990s. *Economic Perspectives-Federal Reserve Bank of Chicago* 26(2):12–26.

Klier, T. H. (2006). Where the Headquarters Are: Location Patterns of Large Public Companies, 1990–2000. *Economic Development Quarterly* 20(2): 117–128.

Knight, F. H. (1921;1965). *Risk, Uncertainty and Profit*. New York: Augustus M. Kelley.

Kostova, T., Marano, V., and Tallman, S. (2016). Headquarters–Subsidiary Relationships in MNCs: Fifty Years of Evolving Research. *Journal of World Business* 51(1):176–184.

Kresl, P. K., and Ietri, D. (eds) (2012). *European Cities and Global Competitiveness: Strategies for Improving Performance*. Cheltenham: Edward Elgar Publishing.

Kronenberg, K. (2013). Firm Relocations in the Netherlands: Why Do Firms Move, and Where Do They Go? *Papers in Regional Science* 92(4):691–713.

Krugman, P. (1991). *Geography and Trade*. Cambridge, MA: MIT Press.

Krumme, G. (1969). Towards a Geography of Enterprise. *Economic Geography* 45(1):30–40.

Kunisch, S., Menz, M., and Ambos, B. (2015). Changes at Corporate Headquarters: Review, Integration, and Future Research. *International Journal of Management Reviews* 17:356–381.

Kuzmanovic, M., and Martic, M. (2012a). An Approach to Competitive Product Line Design Using Conjoint Data. *Expert Systems with Applications* 39(8):7262–7269.

Kuzmanovic, M., and Martic, M. (2012b). Using Conjoint Analysis to Create Superior Value to Customers. *Metalurgia International* 17(2):93–99.

Kuzmanovic, M., Gusavac, B. A., and Martic, M. (2012a). Using Conjoint Analysis to Identify Key Factors Influencing Customer Value. *Technics Technologies Education Management-TTEM*7(4):1698–1706.

Kuzmanovic, M., Vujosevic, M., and Martic, M. (2012b). Using Conjoint Analysis to Elicit Patients' Preferences for Public Primary Care Service in Serbia. *HealthMED* 6(2): 496–504.

Laamanen, T., Simula, T., and Torstila, S. (2012). Cross-Border Relocations of Headquarters in Europe. *Journal of International Business Studies* 43:187–210.

Lancaster, K. J. (1966). A New Approach to Consumer Theory. *Journal of Political Economy* 74(2):132–157.

Lawrence, P. R., and Lorsch, J. W. (1967). *Organizations and Environment*. Boston: Harvard University Press.

Lefever, D. W. (1926). Measuring Geographic Concentration by Means of the Standard Deviational Ellipse. *American Journal of Sociology* 32(1):88–94.

Leishman, C., and Watkins, C. (2004). The Decision-Making Behaviour of Office Occupiers. *Journal of Property Investment and Finance* 22(4):307–319.

Leishman, C., Dunse, N. A., Warren, F. J., and Watkins, C. (2003). Office Space Requirements: Comparing Occupiers' Preferences with Agents' Perceptions. *Journal of Property Investment and Finance* 21(1):45–60.

Levy, D., and Peterson, G. (2013). The Effect of Sustainability on Commercial Occupiers' Building Choice. *Journal of Property Investment and Finance* 31(3):267–284.

Li, J., Jiang, F., and Shen, J. (2016). Institutional Distance and the Quality of the Headquarters–Subsidiary Relationship: The Moderating Role of the Institutionalization of Headquarters' Practices in Subsidiaries. *International Business Review* 25(2):589–603.

Lindholm, A. L., Gibler, K. M., and Levainen, K. I. (2006). Modelling the Value-Added Attributes of Real Estate to the Wealth Maximization of the Firm. *Journal of Real Estate Research* 28(4):445–475.

Lizieri, C. (2003). Occupier Requirements in Corporate Real Estate Markets. *Urban Studies* 40 (5/6):1151–1169.

Loree, D. W., and Guisinger, S. E. (1995). Policy and Non-Policy Determinants of US Equity Foreign Direct Investment. *Journal of International Business Studies* 26(2):281–299.

Lorsch, J. W., and Allen, S. A. (1973). *Managing Diversity and Interdependence: An Organizational Study of Multidivisional Firms*. Boston: Graduate School of Business Administration, Harvard University.

Lovely, M. E., Rosenthal, S. S., and Sharma, S. (2005). Information, Agglomeration and the Headquarters of U. S. Exporters. *Regional Science and Urban Economics* 35:167–191.

Luce, R. D., and Tukey, J. W. (1964). Simultaneous Conjoint Measurement: A New Type of Fundamental Measurement. *Journal of Mathematical Psychology* 1(1):1–27.

Luiz, J. M., and Radebe, B. (2016). The Strategic Location of Regional Headquarters for Multinationals in Africa: South Africa as a Host Country. *Economics and Management* 19 (3):75–91.

Lunnan, R., Benito, G. R., and Tomassen, S. (2011). Moving Abroad: Factors that Motivate Foreign Location of Headquarter Activities. In C. G. Asmussen., T. Pedersen., T. M. Devinney and L. Tihanyi (eds), *Dynamics of Globalization: Location-Specific Advantages or Liabilities of Foreignness?* Advances in International Management (24) (pp. 127-151). United Kingdom: Emerald Group.

Luoma, T., Niemi, J., Rothe, P., and Lindholm, A. (2010). Office Occupiers' Real Estate Attributes–Identifying Occupiers' Preferences. Paper presented at the FIG Congress 2010, Sydney, Australia, 11–16 April 2010.

Lüthi, S., Thierstein, A., and Goebel, V. (2010). Intra-Firm and Extra-Firm Linkages in the Knowledge Economy: The Case of the Emerging Mega-City Region of Munich. *Global Networks* 10(1):114–137.

Machlup, F. (1967). Theories of the Firm: Marginalist, Behavioral, Managerial. *The American Economic Review* 57(1):1–33.

Malecki, E. J., and Moriset, B. (2008). *The Digital Economy*, New York, Routledge

Manjón-Antolín, M. C., and Arauzo-Carod, J. M. (2011). Locations and Relocations: Determinants, Modelling, and Interrelations. *The Annals of Regional Science* 47(1):131–146.

Mariotti, S., Piscitello, L., and Elia, S. (2014). Local Externalities and Ownership Choices in Foreign Acquisitions by Multinational Enterprises. *Economic Geography* 90(2):187–211.

Marshall, A. (1890). *Principles of Economics*. London, UK: Macmillan.

Mazzarol, T., and Choo, S. (2003). A Study of the Factors Influencing the Operating Location Decisions of Small Firms. *Property Management* 21(2):190–208.

McCann, P. (1999). A Note on the Meaning of Neo-Classical Location Theory and Its Usefulness as a Basis for Applied Research. Papers in Regional Science. *Journal of the Regional Science Association International* 78(3):323–331.

McDonald, H., and Adam, S. (2003). A Comparison of Online and Postal Data Collection Methods in Marketing Research. *Marketing Intelligence and Planning* 21(2):85–95.

Menz, M., Kunisch, S., and Collis, D. J. (2015). The Corporate Headquarters in the Contemporary Corporation: Advancing a Multimarket Firm Perspective. *The Academy of Management Annals* 9(1):633–714.

Meyer, K. E., and Benito, G. R. (2016). Where Do MNEs Locate Their Headquarters? At Home! *Global Strategy Journal* 6(2):149-159.

Meyer, S. P., and Green, M. B. (2003). Headquarters in Canada: An Analysis of Spatial Patterns. *Urban Geography* 24(3):232–252.

Miller, M. M., Gibson, L. J., and Wright, N. G. (1991). Location Quotient: A Basic Tool for Economic Development Analysis. *Economic Development Review* 9(2): 65.

Mitchelson, R. L., and Wheeler, J. O. (1994). The Flow of Information in a Global Economy: The Role of the American Urban System in 1990. *Annals of the Association of American Geographers* 84(1): 87–107.

Moineddin, R., Beyene, J., and Boyle, E. (2003). On the Location Quotient Confidence Interval. *Geographical Analysis* 35(3):249–256.

Morgan Lovell. (2011). Choosing the Right Office Space: A Checklist. Retrieved from http://www.morganlovell.co.uk/uploads/checklists/downloads/choosing-the-right-office-space-checklist-2014.pdf. Accessed 27/06/2014.

National Treasury, Republic of South Africa (2010). Explanatory Memorandum on the Taxation Laws Amendment Bill. Retrieved from http://www.treasury.gov.za/public%20comments/Draft%20Explanatory%20Memorandum%20on%20the%20Taxation%20Laws%20Amendment%20Bill%202010%20-%206%20Sep%202010.pdf. Accessed 21/10/2015.

Nell, P. C., and Ambos, B. (2013). Parenting Advantage in the MNC: An Embeddedness Perspective on the Value Added by Headquarters. *Strategic Management Journal* 34(9):1086–1103.

North, D. J. (1974). The Process of Locational Change in Different Manufacturing Organizations. In F. E. I. Hamilton (ed), *Spatial Perspectives on Industrial Organisation and Decision-Making*. London: John Wiley and Sons.

Nourse, H. O. (1990). Corporate Real Estate Ownership as a Form of Vertical Integration. *Real Estate Review* 20(3):68.

Nourse, H. O., and Roulac, S. E. (1993). Linking Real Estate Decisions to Corporate Strategy. *Journal of Real Estate Research* 8(4):475–494.

Nunnington, N., and Haynes, B. (2011). Examining the Building Selection Decision-Making Process within Corporate Relocations: To Design and Evaluate a Client Focused Tool to Support Objective Decision Making. *Journal of Corporate Real Estate* 13(2):109–121.

Ó hUallacháin, B., and Leslie, T.F. (2007). Producer Services in the Urban Core and Suburbs of Phoenix, Arizona. *Urban Studies* 44(8):1581–1601.

O'Mara, M. A. (1999). Strategic Drivers of Location Decision for Information-Age Companies. *Journal of Real Estate Research* 17(3):365–386.

OECD. (2006). Competitive Cities in the Global Economy. *OECD Territorial Reviews*. OECD Publishing.

Oinas, P. (1997). On the Socio-Spatial Embeddedness of Business Firms. *Erdkunde* 51:23–32.

Oladokun, T. T. (2011). Corporate Site Selection and Acquisition in a Nigerian GSM Communication Company. *Journal of Corporate Real Estate* 13(4):247–260.

Ono, Y. (2006). What Do Census Data Tell Us about Headquarters Location? *Economic Development Quarterly* 20(2):129–141.

Orme, B. (2010) *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research* (2nd ed.). Madison, WI: Research Publishers LLC.

O'Sullivan, A. (2012).*Urban Economics* (8th ed.). New York: McGraw-Hill.

Overman, H. G., and Puga, D. (2010). Labor Pooling as a Source of Agglomeration: An Empirical Investigation. In E. L. Glaeser (ed), *Agglomeration Economics* (pp. 133–150). Chicago: University of Chicago Press.

Palich, L. E., Cardinal, L. B., and Miller, C. C. (2000). Curvilinearity in the Diversification-Performance Linkage: An Examination of Over Three Decades of Research. *Strategy Management Journal* 21(2):55–174. DOI: 10.1002/(SICI)1097-0266(200002)21:2<155::AID-SMJ82>3.0.CO;2-2.

Pan, F., and Xia, Y. (2014). Location and Agglomeration of Headquarters of Public Listed Firms within China's Urban System. *Urban Geography* 35(5):757–779.

Pan, F., Guo, J., Zhang, H., and Liang, J. (2015). Building a "Headquarters Economy": The Geography of Headquarters within Beijing and its Implications for Urban Restructuring. *Cities* 42:1–12.

Park, A., and Glascock, J. L. (2010). Corporate Real Estate and Sustainable Competitive Advantage. *Journal of Real Estate Literature* 18(1):3–19.

Parr, J. B. (2002). Agglomeration Economics: Ambiguities and Confusions. *Environment and Planning* 34:717–731.

Paul, K., and Duff, S. (1988). Corporate Responses to the Call for South African Withdrawal. *Research in Corporate Social Performance and Policy* 10: 211–240.

Pellenbarg, P. H., and Kemper, N. J. (1997). *Industrial Mobility in the Netherlands.* SOM Research Report, Groningen.

Pellenberg, P. H., van Wissen, L. J. G., and van Dijk, J. (2002). Firm migration. In P. McCann (ed), *Industrial Location Economics* (pp. 110-148). Cheltenham: Edward Elgar Publishing.

Phelps, N. (1993). Branch Plants and the Evolving Spatial Division of Labour: A Study of Material Linkage in the Northern Region of England. *Regional Studies* 27:87–101.

Pike, F., Becattini, G., and Sengenberger, W. (1990). *Industrial Districts and Inter-Firm Cooperation in Italy*. Geneva: IILS.

Pillay, X., and Geyer, H. S. (2016). Business Clustering Along the M1-N3-N1 Corridor Between Johannesburg and Pretoria, South Africa. *South African Journal of Geomatics* 5(3): 340-357.

Pittman, R., and McIntosh, W. (1992). Determinants of Tenant Movements within Office Markets. *Journal of Property Management* 57(6):55–59.

Podolski, B. M. (2012). Real Estate Decisions: Making National Site Selection Strategy Work for Local Industrial Transactions. *Smart Business Detroit* March, 20.

Popović, M., Kuzmanović, M., and Martić, M. (2012). Using Conjoint Analysis to Elicit Employers' Preferences towards Key Competencies for a Business Manager Position. *Management Journal for Theory and Practice Management* 63:17–26.

Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: The Free Press.

Porter, M. (1998). Clusters and the New Economics of Competition. *Harvard Business Review* 76(6):77–90.

Porter, M. E. (2000). Location, Competition, and Economic Development: Local Clusters in a Global Economy. *Economic Development Quarterly* 14(1):15–34.

Prahalad, C. K., and Doz, Y. (1987). *The Multinational Mission: Balancing Local Demands and Global Vision*. New York: Free Press.

Pred, A. (1961; 1971). *Behavior and Location Part I and II*. Lund: University of Lund.

Pred, A. (2017). *City-Systems in Advanced Economies. Past Growth, Present Processes and Future Development Options*. New York: Routledge.

Quigley, J. M. (1998). Urban Diversity and Economic Growth. *The Journal of Economic Perspectives* 12(2):127–138.

Rabianski, J. S., DeLisle, J. R., and Carn, N. G. (2001). Corporate Real Estate Site Selection: A Community-Specific Information Framework. *Journal of Real Estate Research* 22(1/2):165–197.

Raghavarao, D., Wiley, J. B., and Chitturi, P. (2010) *Choice-Based Conjoint Analysis: Models and Designs*. Boca Raton: CRC Press.

Ramanujam, V., and Vardarajan, R. (1996). Research on Diversification. In M. Goold, and K. Sommers Luchs (eds), *Managing the Multibusiness Company* (pp. 263-284). New York: Routledge.

Rao, V. R. (2014). *Applied Conjoint Analysis*. New York: Springer.

Rymarzak, M., and Siemińska, E. (2012). Factors Affecting the Location of Real Estate. *Journal of Real Estate* 14(4):214–225.

Remøy, H., and van der Voordt, T. J. M. (2014). Priorities in Accommodating Office User Preferences: Impact on Office Users Decision to Stay or Go. *Journal of Corporate Real Estate* 16(2):140–154.

Republic of South Africa (1998).*The White Paper on Local Government*. Ministry for Provincial Affairs and Constitutional Development, Pretoria. Retrieved from http://www.cogta.gov.za/cgta_2016/wp-

content/uploads/2016/06/whitepaper_on_Local-Gov_1998.pdf. Accessed 12/07/2016.
Republic of South Africa (2015). Gauteng Province. Socio-Economic Review and Outlook. Retrieved from http://www.treasury.gpg.gov.za/Documents/Socio-Economic%20Review%20and%20Outlook%202015.pdf. Accessed 12/07/2016.
Rice, M. D. (2010). The Urban Geography of Subsidiary Headquarters in North America: Explorations by Sector and Foreign Linkage. *Urban Geography* 31(5):595–622.
Rice, M. D., and Pooler. J. A. (2009). Subsidiary Headquarters: The Urban Geography of the "Second Tier" of Corporate Decision-Making Activity in North America. *Urban Geography* 30(3):289–311.
Rice, M. D., and Lyons, D. I. (2010). Geographies of Corporate Decision-Making and Control: Development, Applications, and Future Directions in Headquarters Location Research. *Geography Compass* 4(4):320–334.
Richardson, H. W. (1995). Economies and Diseconomies of Agglomeration. In H. Giersch (ed), *Urban Agglomeration and Economic Growth* (pp. 123–155). Berlin: Springer.
Rimando, M., Brace, A., Namageyo-Funa, A., Parr, T. L., Sealy, D. A., Davis, T. L., Martinez, L. M., and Christiana, R. W. (2015). Data Collection Challenges and Recommendations for Early Career Researchers. *The Qualitative Report* 20(12):2025.
Rodríguez-Gámez, L., and Dallerba, S. (2012). Spatial Distribution of Employment in Hermosillo, 1999–2004. *Urban Studies* 49(16):3663–3678.
Rogerson, C. M. (1998). High-Technology Clusters and Infrastructure Development: International and South African Experiences. *Development Southern Africa* 15(5):875–905.
Romer, P. M. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy* 94(5):1002–1037.
Rosenthal, S. S., and Strange, W. C. (2010). Small Establishments/Big Effects: Agglomeration, Industrial Organization and Entrepreneurship. In E. L. Glaeser (ed), *Agglomeration Economics* (pp. 277–302). Chicago: University of Chicago Press.
Rosenzweig, P. M., and Singh, J. V. (1991). Organizational Environment and the Multinational Enterprise. *The Academy of Management Review* 16(2):340–361.
Rothe, P., Lindholm, A. L., Hyvönen, A., and Nenonen, S. (2011). User Preferences of the Office Occupiers: Investigating the Differences. *Journal of Corporate Real Estate* 13(2):81–97.
Russo, M. V. (1992). Bureaucracy, Economic Regulation, and the Incentive Limits of the Firm. *Strategic Management Journal* 13(2):103–118.
Sadler, P. (2003). *Strategic Management* (2nd ed). London: Kogan Page.

Salvesen, D., and Renski, H. (2003). *The Importance of Quality of Life in the Location Decisions of New Economy Firms*. Technical Report. North Carolina: University of North Carolina, Center for Urban and Regional Studies.

Sassen, S. (2006). *Cities in a World Economy* (3rd ed.) Thousand Oaks, CA: Pine Forge Press.

Saunders, M. L., Lewis, P., and Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Harlow, United Kingdom: FT Prentice Hall.

Saxenian, A. (1996). Inside-Out: Regional Networks and Industrial Adaptation in Silicon Valley and Route 128. *Cityscape* 2(2):41–60.

Schmenner, R. W. (1980). Choosing New Industrial Capacity: On-Site Expansion, Branching, and Relocation. *The Quarterly Journal of Economics* 95(1):103–119.

Schumpeter, J. A. (1942). *Socialism, Capitalism and Democracy*. USA: Harper and Brothers.

Semadeni, M., and Cannella, A. A. (2011). Examining the Performance Effects of Post Spin-Off Links to Parent Firms: Should the Apron Strings Be Cut? *Strategic Management Journal* 32(10):1083–1098.

Semple, R. K. (1973). Recent Trends in the Spatial Concentration of Corporate Headquarters. *Economic Geography* 49(4):309–318.

Sigler, T., Searle, G., Martinus, K., and Tonts, M. (2016). Metropolitan Land-Use Patterns by Economic Function: A Spatial Analysis of Firm Headquarters and Branch Office Locations in Australian Cities. *Urban Geography* 37(3):416–435.

Sing, T. F., Ooi, J. T. L., Wong, A. L., and Lum, P. K. K. (2004). Influence of Occupiers' Characteristics in Office Space Decision. Research Working Paper. Retrieved from http://www.rst.nus.edu.sg/research/workingpaper/2005-004.pdf. Accessed 26/06/2014.

Sing, T. F., Ooi, J. T. L., Wong, A. L., and Lum, P. K. K. (2006). Network Connectivity and Office Occupiers' Space Decision: The Case of Suntec City. *Journal of Property Investment and Finance* 24(3):221–238.

Škevin, P. (2011). Commercial Real Estate Marketing–The Importance of Office Location on Corporate Image. *Trziste / Market* 23(2):227–246.

Sloan, A. P. (1964). *My Years with General Motors*. Garden City, NY: Doubleday.

Song, J. (2002). Firm Capabilities and Technology Ladders: Sequential Foreign Direct Investments of Japanese Electronics Firms in East Asia. *Strategic Management Journal* 23(3):191–210.

Sproull, L. S. (1986). Using Electronic Mail for Data Collection in Organizational Research. *Academy of Management Journal* 29(1):159–169.

Stafford, H. A. (1969). An Industrial Location Decision Model. *Proceedings of the Association of American Geographers, Association of American Geographers*, 1:141–5.

Statistics South Africa. The recession ends as GPD climbs by 2.2%. Retrieved from http://www.statssa.gov.za/?p=11817. Accessed 5/12/2018.

Statistics South Africa. City of Tshwane. Retrieved from http://www.statssa.gov.za/?page_id=1021&id=city-of-tshwane-municipality. Accessed 3/10/2017.

Steinberg, A. S., and Kunisch, S. (2016). The Agency Perspective for Studying Headquarters-Subsidiary Relations: An Assessment and Considerations for Future Research. In *Perspectives on Headquarters-Subsidiary Relationships in the Contemporary MNC* (Vol. 17) (pp. 87–118). United Kingdom: Emerald Group Publishing Limited.

Stopper, M., and Salais, R. (1997). *Words of Production: The Action Frameworks of the Economy*. Cambridge, MA: Harvard University Press.

Storper, M. (1997). *The Regional World: Territorial Development in a Global Economy*, New York: Guilford.

Storper, M., and Venables, A. J. (2004). Buzz: Face-To-Face Contact and the Urban Economy. *Journal of Economic Geography* 4(4):351–370.

Strauss-Kahn, V., and Vives, X., 2009. Why and Where Do Headquarters Move? *Regional Science and Urban Economics* 39(2):168–186.

Sullivan, K. (1996). Changing Technology and Forecasting Office Space Requirements. *Property Management* 14(1):24–29.

Tan, B., and Vertinsky, I. (1996). Foreign Direct Investment by Japanese Electronics Firms in the United States and Canada: Modelling the Timing of Entry. *Journal of International Business Studies* 27(4):655–681.

Tashakkori, A., and Creswell, J. W. (2007). Exploring the Nature of Research Questions in Mixed Methods Research. *Journal of Mixed Methods Research* 1(30):207–211

Taylor, P. (2004). *World City Network: A Global Urban Analysis*. London: Routledge.

Taylor, P. J., Ni, P., Derudder, B., Hoyler, M., Huang, J., Lu, F., Pain, K., Witlox, F., Yang, X., Bassens, D., and Shen, W. (2009). The Way We Were: Command and Control Centres in the Global Space-Economy on the Eve of the 2008 Geo-Economic Transition. *Environment and Planning* 41:7–12.

Testa, W. A. (2006). Headquarters Research and Implications for Local Development. *Economic Development Quarterly* 20(2):111–116.

Thrift, N., and Olds, K. (1996). Refiguring the Economic in Economic Geography. *Progress in Human Geography* 20:261–272.

Tonts, M., and Taylor, M. (2010). Corporate Location, Concentration and Performance: Large Company Headquarters in the Australian Urban System. *Urban Studies* 47(12):2641–2664.

Townroe, P. M. (1972). Some Behavioural Considerations in the Industrial Location Decision. *Regional Studies* 6(3):261–272.

Townroe, P. M. (1991). Rationality in Industrial Location Decisions. *Urban Studies* 28(3):383–392.

Tranos, E. (2012). The Causal Effect of the Internet Infrastructure on the Economic Development of European City Regions. *Spatial Economic Analysis* 7(3):319–337.

Tuli, F. 2010. The Basis of Distinction between Qualitative and Quantitative Research in Social Science: Reflection on Ontological, Epistemological and Methodological Perspectives. *Ethiopian Journal of Education and Sciences* 6(1):97–108.

Turok, I. (2012). Urbanisation and Development in South Africa: Economic Imperatives, Spatial Distortions and Strategic Responses. *Urbanization and Emerging Population Issues Working Paper* (8). London: Human Settlements Group, International Institute for Environment and Development.

Turok, I. (2013). Transforming South Africa's Divided Cities: Can Devolution Help? *International Planning Studies* 18(2):168–187.

Turok, I., and Borel-Saladin, J. (2013). The Spatial Economy: Background Research Report for the Integrate Urban Development Framework (Draft). HSRC

Tuten, T. L., Urban, D. J., and Bosnjak, M. (2002). Internet Surveys and Data Quality: A Review. *Online Social Sciences* 1:7–26.

ul Haq, H., Drogendijk, R., and Holm, D. B. (2017). Attention in Words, Not in Deeds: Effects of Attention Dissonance on Headquarters-Subsidiary Communication in Multinational Corporations. *Journal of World Business* 52(1):111–123.

Ulaga, W., Sharma, A., and Krishnan, R. (2002). Plant Location and Place Marketing: Understanding the Process from the Business Customer's Perspective. *Industrial Marketing Management* 31(5):393–401.

Van Dijk, J., and Pellenbarg, P. H. (2000). Firm Relocation Decisions in the Netherlands: An Ordered Logit Approach. *Papers in Regional Science* 79(2): 191–219.

Venkatesh, V., Chan, F. K., and Thong, J. Y. (2012). Designing E-Government Services: Key Service Attributes and Citizens' Preference Structures. *Journal of Operations Management* 30(1):116–133.

Voget, J. (2011). Relocation of Headquarters and International Taxation. *Journal of Public Economics* 95(9):1067–1081.

Wang, X., and Hofe, R. (2008). *Research Methods in Urban and Regional Planning*. Berlin: Springer Science and Business Media.

Wardner, P. (2012). Understanding the Role of "Sense of Place" in Office Location Decisions. Paper Presented at the 18th Annual Pacific-Rim Real Estate Society Conference, Adelaide, Australia, 15–18 January 2012. Retrieved from http://www.prres.net/papers/Wardner_Sense_%20of_place.PDF. Accessed 24/06/2014.

Warren, C. M. J., Simmons, J., and Trumble, N. (2007). The Future @ Work: Delivering Effective Corporate Real Estate. *Facilities* 25(11/12):463–72.

Watkins, A. R. (2014). The Spatial Distribution of Economic Activity in Melbourne, 1971–2006. *Urban Geography* 35(7):1041–1065.

Watts, H.D. and Stafford, H.A., 1986. Plant closure and the multiplant firm: some conceptual issues. *Progress in Human Geography*, *10*(2), pp.206-227.

Wheeler, J. O., and Mitchelson, R. L. (1989). Information Flows among Major Metropolitan Areas in the United States. *Annals of the Association of American Geographers* 79(4):523–543.

Wilkins, M. (1989). The Impact of Multinational Corporations. *The South African Journal of Economic History* 4(1):4–20.

Wilkinson, N. (2005). *Managerial Economics: A Problem-Solving Approach*. Cambridge: Cambridge University Press.

Wittink, D. R., and Bergestuen, T. (2001). Forecasting with Conjoint Analysis. In J. S. Armstrong (ed), *Principles of Forecasting:* A *Handbook for Researchers and Practitioners* (vol. 30) (pp. 147–167). New York: Springer Science and Business Media, US.

Wittink, D. R., Vriens, M., and Burhenne, W. (1994). Commercial Use of Conjoint Analysis in Europe: Results and Critical Reflections. *International Journal of Research in Marketing* 11(1):41–52.

World Bank, (2009). *Scale Economies and Agglomeration*. World Bank.

Wu, Q., and Ning, Y. M. (2010). Headquarter Locations of Top 500 Enterprises of Chinese Manufacturing Industries. *Acta Geographica Sinica* 65(2):139–152.

Wyatt, P. (2013). *Property Valuation* (2nd ed.). Oxford: Wiley-Blackwell.

Ye, J., (2007). Overcoming Challenges to Conducting Online Surveys. In R. R. Woods, R., and J. Baker (eds), *Handbook of Research on Electronic Surveys and Measurements* (pp. 83–89). London: Idea Group.

Yeung, H. W. C., Poon, J., and Perry, M. (2001). Towards a Regional Strategy: The Role of Regional Headquarters of Foreign Firms in Singapore.*Urban Studies* 38(1):157–183.

Zeckhauser, S., and Silverman, R. (1983). Rediscovering Your Company's Real Estate. *Harvard Business Review* 61(1):111–117.

Zhang, Y. (2000). Using the Internet for Survey Research: A Case Study. *Journal of the Association for Information Science and Technology* 51(1):57–68.

8. Appendices

8.1 Appendix A: Participant Information Sheet for Interviews

24 February 2016

Dear Sir/Madam,

Empirical Research on Headquarters Listed on the Johannesburg Stock Exchange

I am a PhD candidate and Associate Lecturer at the University of the Witswatersrand doing research on "Determinants of Site Selection and Headquarters location of Corporations Listed on the Johannesburg Stock Exchange". The study is in two phases, in Phase One of the research, select companies are identified from the different sectors with which interviews are conducted for information solicitation. I would appreciate the opportunity for an interview with a delegate from your company. The information solicited would help in designing a survey questionnaire that would be used in Phase Two of the study, which would be an online survey for all corporations listed on the Johannesburg Stock Exchange. The overall results from this study will clarify the needs of corporations and enable the metropolitan areas to position themselves to meet the needs of businesses like yours.

Your company has been selected from the listed companies on the Johannesburg Stock Exchange. Two-three companies have been selected from each sector to get clarity on the determinants per sector. The date, time and place for the interview that will be convenient to you is preferred. Your confidentiality is guaranteed in that only the analysis will be presented on the report with no mentioning of company's names. However, the data will only be reported as an aggregate with other sectors. Your identity will never be divulged in any other manner. Your participation in this study is also voluntary and you may decide to withdraw your consent at any time during the process with no penalties.

The final results of the study will be used in the thesis, published articles and presented at conferences. The coded data will be kept in safe storage (password protected file and locked data) for 5 years as required by the University and thereafter shredded and wiped from the system.

I estimate this interview will take no more than 30 minutes (average time) to complete. You will receive a summary of research results upon request. We (my supervisor and

I) would be happy to answer any question you might have. I therefore ask that you delegate a person who will respond on behalf of your company.

I anticipate a positive response from your company.

Sincerely yours,

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8.2 Appendix B: Semi-Structured Interview Questions

Determinants of headquarters location and site selection for corporations listed on the Johannesburg Stock Exchange

Semi-structured interview – First stage of data collection

General

1. What type of headquarter do you have at this location/in this metro?
2. Is this the only headquarters you?
    a. If there are other headquarters, what type of headquarters are they?
    b. Where are they located?
    c. Why are they located there?

Headquarters location and metropolitan area specialisation

3. For how long has your company headquarter been in the current location?
4. Why did you locate in this metropolitan area?
    a. What are the opportunities offered by this metropolitan area?
    b. How is this metropolitan area different from other metros in terms of your business advantages?
5. Did you relocate to the current location from somewhere else?
    a. If the answer to the above is, yes, which metro were you located in?
    b. What influenced the relocation of you headquarter to the current metro?
6. Is your company considering relocating its headquarters to another metropolitan area?
    a. If the answer to the above is, yes, where do you intend to locate? Do you want give name of the metro and the specific site in that metro?

Locational factors

7. What is the specific location of your headquarters?
8. Why did you choose to locate your company's headquarters at this particular location?
    a. What are the advantages of the current location?
    b. What are the disadvantages of the current location?
9. Is your company considering relocating its headquarters to another location?
    a. If the answer to the above is yes, where do you intend to locate?
        i. Why this location?

Site Selection

10. Why did you choose to locate your company's headquarter in this particular building?
    a. What are the locational advantages of the current building?
    b. What are the locational disadvantages of the current building?
11. Does your company own or lease the facility?
    a. If you own the facility what are the advantages and disadvantages of owning the facility?
    b. If you lease the facility what are the advantages and disadvantages of owning the facility?
12. Is crime/safety an issue?

8.3 Appendix C: Consent Form for Interviews

Interviews

Consent Form for Participation in a Research Study

Please tick (√) Box

1. I confirm that I have read and understand the purpose of the research and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I may withdraw at any time from the study with no penalties, without giving any reason. ☐
3. I agree to take part in the above study on behalf of my company. ☐
4. I agree to be part of the study ☐
5. I confirm that all response given represent the company's view (not personal opinion) ☐

6. I agree to the use of anonymised quotes in publications ☐

7. I agree to be recorded Y N

Name of Participant

…….

Date ……..

Signature …….

8.4 Assent form for Companies

Interviews

Assent Form for Participation in a Research Study

	Please Tick Box
1. We confirm that we have read and understand the purpose of the research and have had the opportunity to ask questions.	☐
2. We understand that participation is voluntary and that we may withdraw at any time from the study with no penalties, without giving any reason.	☐
3. We agree to take part in the above study as a company.	☐
4. We confirm that all response given by the delegated personnel represent the company's view (not personal opinion)	
5. We agree that when submitting the completed survey online, the agreement to participate in the research is assumed.	☐
6. We agree to the use of anonymised quotes in publications.	☐

Name of Company …….

Date ……..

Signature …….

8.5 Appendix D: Questionnaire

Headquarters Location and Site Selection in SA

Survey Flow

Block: Default Question Block (17 Questions)
Conjoint: Feature Importance Allocation **Conjoint: cj** **Conjoint: Site selection attribute importance allocation** **Conjoint: Site selection**
Standard: Block 3 (4 Questions)
EndSurvey:
Standard: Block 3 (0 Questions)
Conjoint: Conjoint
Standard: Block 3 (0 Questions)

Page Break

Start of Block: Default Question Block

Qi I hereby consent to my participation in the research titled "Determinants of headquarters location and site selection for corporations listed on the Johannesburg Stock Exchange" being conducted by Thabelo Ramantswana for partial fulfillment of the Phd (Building) Degree being conducted within the School of Construction Economics and Management at the University of the Witwatersrand. I agree to take part in the study on behalf of my company and the use of anonymised quotes in publications

Q1 To which sector does your company belong? (please tick (√) as many as applies)

○ Manufacturing (Industrial Engineering, General Industrial, Electro & electrical Equipment, Media, Leisure Goods, Food Production, Auto & Parts, Industrial Metals & Mineral, Forest & paper, Chemicals, Beverage) (1)

○ Wholesale and retail trade, catering and accommodation (General Retail, Food & drug Ret) (2)

○ Finance, insurance, real estate and business services (Support Services, Travel & Leisure, Banks, Equity Investment Instruments, Financial Services, Life

insurance, Non-equity Investment, Non-life insurance, Real Estate Investment, Software and Computer Services) (3)

○ Community, social and personal services (Personal goods, Health Equipment's & Services, Pharmaceutical & Biotech) (4)

○ Construction (Construction & Material) (5)

○ Electricity, gas and water (Oil & Gas Production) (6)

○ Mining and quarrying (Mining) (7)

○ Transport, storage and communication (Fixed-Line Telephone, Mobile Telecommunication, Industrial Transportation) (8)

○ Other, please specify (9)

_____

Q2 For how long has the company been in operation?

- ○ 0- 5 years (1)
- ○ 6-10 years (8)
- ○ 11- 15 years (3)
- ○ 16-20 years (4)
- ○ 21 -25 years (5)
- ○ 26 - 30 years (6)
- ○ Other, Please specify (7) _____

Q3 What type of headquarters does your company operate from? (Corporate headquarters is defined as the chief decision making center which houses the CEO and C- level executives. Subordinate Headquarters: receives its mandate from the corporate headquarters. Subsidiary Headquarter: receives its mandate from the subordinate headquarters).

- ☐ Main/Corporate (1)
- ☐ Subordinate (2)
- ☐ Subsidiary (3)
- ☐ Other, Please specify (4) _____

Q4 Is your headquarters co-located with a production facility?

- ○ Yes (1)
- ○ No (2)

Q5 In which metropolitan area is your headquarters located?

- ○ Buffalo City Metropolitan Municipality (34)
- ○ City of Cape Town Metropolitan Municipality (35)
- ○ City of Johannesburg Metropolitan Municipality (36)
- ○ City of Tshwane Metropolitan Municipality (37)
- ○ Ekurhuleni Metropolitan Municipality (38)
- ○ eThekwini Metropolitan Municipality (39)
- ○ Mangaung Metropolitan Municipality (40)
- ○ Nelson Mandela Bay Metropolitan Municipality (41)
- ○ Other Municipality, please specify (42) _____

Q6 Choose the five most important factors that influenced your decision to locate in this metropolitan area.

	Factors (1)
Development in the area (1)	○
Quality and availability of infrastructure (2)	○
Access to quality labour force (3)	○
Good transport links (4)	○
Incentives provided by the Metropolitan area (5)	○
Proximity to similar businesses (6)	○
Proximity to competitive businesses (7)	○
Proximity to suppliers (8)	○
For historical reasons (company was either established in the current location or it has been in the located for a long time) (10)	○
CEO or founder lives/d in the area (13)	○
The location has nothing to do with the Metro (11)	○
Other(s), please specify…….. (9)	○

Q7 For how many years has the headquarters been in the current location?

- ○ Less than 5 years (1)
- ○ 6-10 years (2)
- ○ 11-15 years (3)
- ○ 16-20 years (4)
- ○ 21-25 years (5)
- ○ 26-30 years (6)
- ○ 31 years and above (7)

Q8 The following are some of the factors that affects location choices, rank the importance level of each of the factors.

	Not Important (1)	Slightly Unimportant (2)	Important (3)	Very Important (4)
Development in the area (1)	○	○	○	○
Quality and availability of infrastructure (2)	○	○	○	○
Quality labour force (3)	○	○	○	○
Accessibility (4)	○	○	○	○
Incentives offered (5)	○	○	○	○
Proximity to similar businesses (6)	○	○	○	○
Proximity to competitive businesses (7)	○	○	○	○
Proximity to suppliers (8)	○	○	○	○
Safety (10)	○	○	○	○
Other, please specify…… (9)	○	○	○	○

Q9 If the location depends on incentives, which incentives are provided by the Metro/Local Government/Provincial Government?

- [ ] Rates rebates (1)
- [ ] Cash grants (2)
- [ ] Tax rebates (3)
- [ ] Services and infrastructure (5)
- [ ] Skills and training grants (6)
- [ ] Export rebates (7)
- [ ] Others, please specify (4)

_____

Q10 Did you relocate to your current location?

- ○ Yes (1)
- ○ No (2)

Skip To: Q12 If Q10 = 2

Display This Question:
If Q10 = 1

Q11 Which metropolitan area were you previously located?

- ○ Buffalo City Metropolitan Municipality (1)
- ○ City of Cape Town Metropolitan Municipality (2)
- ○ City of Johannesburg Metropolitan Municipality (3)
- ○ City of Tshwane Metropolitan Municipality (4)
- ○ Ekurhuleni Metropolitan Municipality (5)
- ○ eThekwini Metropolitan Municipality (6)
- ○ Mangaung Metropolitan Municipality (7)
- ○ Nelson Mandela Bay Metropolitan Municipality (8)
- ○ Other Municipality, please specify (9)

_____

Q12 If you have not moved, are you considering relocating?

- ○ Yes (1)
- ○ No (2)

Skip To: Q14 If Q12 = 2

Display This Question:

If Q10 = 1

Or Q12 = 1

Q13 If Yes in questions 10 and 12 above, which of the following factors motivated/will motivate the move?

- ☐ Development in the area (1)
- ☐ Quality and availability of infrastructure (2)
- ☐ Quality labour force (3)
- ☐ Accessibility (4)
- ☐ Incentives offered (5)
- ☐ Proximity to similar businesses (6)
- ☐ Proximity to competitive businesses (7)
- ☐ Proximity to suppliers (8)
- ☐ Safety (10)
- ☐ Re-branding the company (12)
- ☐ Expansion of the company (13)
- ☐ Current location no longer suitable for the company (14)
- ☐ Other, Please Specify (9)

_____

Q14 Do you have other type(s) of headquarters in other location(s)?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Block If Q14 = 2

Q15 Where are they located?

- ☐ In South Africa (1)
- ☐ Outside South Africa (2)

Skip To: End of Block If Q15 = 1

Q16 If they are outside South Africa, in which country are they located?

_____

Please select your most preferred and least preferred for each set shown below:

Location Importance Allocation	**Least Preferred**	**Most Preferred**
1. Accessibility (car, train, bus, airport)	○	○
2. Linkages to other Markets (Frequent and efficient local flights, frequent and efficient international flights, exports to regional markets, exports to international markets)	○	○
3. Financial Factors (profit maximization, financial intermediation services, wage levels, competitive advantage)	○	○
4. Clustering and Synergies (proximity to production, proximity to service providers, proximity to competing industries, proximity to supporting industries, proximity to educational institutions, etc.)	○	○
5. Specialized Services (institutional investors and investment banks, legal services, management services, communication services, availability of skilled labour)	○	○
6. Developed Infrastructure (telecommunications, transport systems, power and energy)	○	○
7. Government Incentives (rebates, property taxes, tax incentives, subsidies, legal and regulatory framework, provision of supportive infrastructure)	○	○
8. Prestige Location (amenities—working class population, quality housing, educational facilities, high company market)	○	○

>>

Considering the concepts you've just seen, please indicate your preference for the following:

Location Importance Allocation	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
1. Accessibility (car, train, bus, airport)	◉										
2. Linkages to other Markets (Frequent and efficient local flights, frequent and efficient international flights, exports to regional markets, exports to international markets)		○	○	○	○	○	○	○	○	○	
3. Financial Factors (profit maximization, financial intermediation services, wage levels, competitive advantage)		○	○	○	○	○	○	○	○	○	
4. Clustering and Synergies (proximity to production, proximity to service providers, proximity to competing industries, proximity to supporting industries, proximity to educational institutions, etc.)		○	○	○	○	○	○	○	○	○	
5. Specialized Services (institutional investors and investment banks, legal services, management services, communication services, availability of skilled labour)		○	○	○	○	○	○	○	○	○	
6. Developed Infrastructure (telecommunications, transport systems, power and energy)		○	○	○	○	○	○	○	○	○	
7. Government Incentives (rebates, property taxes, tax incentives, subsidies, legal and regulatory framework, provision of supportive infrastructure)		○	○	○	○	○	○	○	○	○	
8. Prestige Location (amenities—working class population, quality housing, educational facilities, high company market)											◉

Please select your most preferred and least preferred for each set shown below:

Accessibility	**Least Preferred**	**Most Preferred**
By Car	○	○
By Train	○	○
By Bus	○	○
By Maritime port	○	○
Air (proximity to international airports and/or proximity to domestic airports)	○	○
Linkage to other markets	**Least Preferred**	**Most Preferred**
Frequent and efficient local flights	○	○
Frequent and efficient international flights	○	○
Exports to regional markers	○	○
Exports to international markets	○	○
Financial factors	**Least Preferred**	**Most Preferred**
Profit maximization	○	○
Financial intermediation services	○	○
Wage levels	○	○
Competitive advantage	○	○
Local market growth potential	○	○
Clustering and Synergies	**Least Preferred**	**Most Preferred**
Proximity to production	○	○
Proximity to service providers	○	○
Proximity to competing industries	○	○
Proximity to supporting industries	○	○
Proximity to educational institutions	○	○

5. Specialized Services	**Least Preferred**	**Most Preferred**
Institutional investors and investment banks	○	○
Legal services	○	○
Management services	○	○
Communication services	○	○
Availability of skilled labour	○	○
6. Developed Infrastructure	**Least Preferred**	**Most Preferred**
Telecommunications	○	○
Transport systems	○	○
Power and energy	○	○
Government Incentives	**Least Preferred**	**Most Preferred**
Rebates	○	○
Property taxes	○	○
Tax incentives	○	○
Subsidies	○	○
Legal and regulatory framework	○	○
Provision of supportive infrastructure	○	○
Prestige Location	**Least Preferred**	**Most Preferred**
Amenities	○	○
Working class population	○	○
Quality housing	○	○
Educational facilities	○	○
High company market	○	○
Operating Costs	**Least Preferred**	**Most Preferred**
Low operating costs	○	○
Competitively priced labour	○	○

Operating Costs	Least Preferred	Most Preferred
Competitively priced rent	◉	

Considering the concepts you've just seen, please indicate your preference for the following:

Accessibility	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
By Car	◉										
By Train		○	○	○	○	○	○	○	○	○	
By Bus		○	○	○	○	○	○	○	○	○	
By Maritime port		○	○	○	○	○	○	○	○	○	
Air (proximity to international airports and/or proximity to domestic airports)											◉

Linkage to other markets	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Frequent and efficient local flights	◉										
Frequent and efficient international flights		○	○	○	○	○	○	○	○	○	
Exports to regional markers		○	○	○	○	○	○	○	○	○	
Exports to international markets											◉

Financial factors	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Profit maximization	◉										
Financial intermediation services		○	○	○	○	○	○	○	○	○	
Wage levels		○	○	○	○	○	○	○	○	○	
Competitive advantage		○	○	○	○	○	○	○	○	○	

Financial factors	**Least Preferred**										**Most Preferred**
	0	1	2	3	4	5	6	7	8	9	10
Local market growth potential											◉

Clustering and Synergies	**Least Preferred**										**Most Preferred**
	0	1	2	3	4	5	6	7	8	9	10
Proximity to production	◉										
Proximity to service providers		○	○	○	○	○	○	○	○	○	
Proximity to competing industries		○	○	○	○	○	○	○	○	○	
Proximity to supporting industries		○	○	○	○	○	○	○	○	○	
Proximity to educational institutions											◉

5. Specialized Services	**Least Preferred**										**Most Preferred**
	0	1	2	3	4	5	6	7	8	9	10
Institutional investors and investment banks	◉										
Legal services		○	○	○	○	○	○	○	○	○	
Management services		○	○	○	○	○	○	○	○	○	
Communication services		○	○	○	○	○	○	○	○	○	
Availability of skilled labour											◉

6. Developed Infrastructure	**Least Preferred**										**Most Preferred**
	0	1	2	3	4	5	6	7	8	9	10
Telecommunications	◉										
Transport systems		○	○	○	○	○	○	○	○	○	

6. Developed Infrastructure	Least Preferred										Most Preferred
	0	1	2	3	4	5	6	7	8	9	10
Power and energy											◉

Government Incentives	Least Preferred										Most Preferred
	0	1	2	3	4	5	6	7	8	9	10
Rebates	◉										
Property taxes		○	○	○	○	○	○	○	○	○	
Tax incentives		○	○	○	○	○	○	○	○	○	
Subsidies		○	○	○	○	○	○	○	○	○	
Legal and regulatory framework		○	○	○	○	○	○	○	○	○	
Provision of supportive infrastructure											◉

Prestige Location	Least Preferred										Most Preferred
	0	1	2	3	4	5	6	7	8	9	10
Amenities	◉										
Working class population		○	○	○	○	○	○	○	○	○	
Quality housing		○	○	○	○	○	○	○	○	○	
Educational facilities		○	○	○	○	○	○	○	○	○	
High company market											◉

Operating Costs	Least Preferred										Most Preferred
	0	1	2	3	4	5	6	7	8	9	10
Low operating costs	◉										
Competitively priced labour		○	○	○	○	○	○	○	○	○	
Competitively priced rent											◉

In the previous questions, you rated the following as your most preferred. Please allocate 100 percentage points showing the relative importance of each:

Feature	Level	Importance
Accessibility	Air (proximity to international airports and/or proximity to domestic airports)	0
Linkage to other markets	Exports to international markets	0
Financial factors	Local market growth potential	0
Clustering and Synergies	Proximity to educational institutions	0
5. Specialized Services	Availability of skilled labour	0
6. Developed Infrastructure	Power and energy	0
Government Incentives	Provision of supportive infrastructure	0
Prestige Location	High company market	0
Operating Costs	Competitively priced rent	0
Total:		0

Please select your most preferred and least preferred for each set shown below:

Site Selection Importance Allocation	Least Preferred	Most Preferred
1. Sustainability (Energy management, desk sharing, indoor climate, hot desking, green star rating)		
2. Building Interior (layout flexibility, space efficiency, finishes)		
3. Building Services (air conditioning, heating, security system, parking facilities, backup generator, fire escapes, fire extinguishers, kitchen, bathrooms, wall/floor covering)		
4. Internal Access (existence of lifts, quality of staircase, disability friendly)		
5. External Appearance (image, prestige,, condition of the premises, building height, building shape, architecture)		
6. Supporting Facilities (security, internet (Wi-Fi), cleaning services, catering/vending, meeting places, reception, waste management, water supply, video conferencing)		
7. Lease (flexible rent, nature of lease, rental contract, terms of lease, percentage of rent escalation, multi-tenant building, own the property, not applicable)		
8. Costs (property taxes, utility costs, building maintenance costs)		

Considering the concepts you've just seen, please indicate your preference for the following:

Site Selection Importance Allocation	Least Preferred										Most Preferred
	0	1	2	3	4	5	6	7	8	9	10
1. Sustainability (Energy management, desk sharing, indoor climate, hot desking, green star rating)	◉										
2. Building Interior (layout flexibility, space efficiency, finishes)		○	○	○	○	○	○	○	○	○	
3. Building Services (air conditioning, heating, security system, parking facilities, backup generator, fire escapes, fire extinguishers, kitchen, bathrooms, wall/floor covering)		○	○	○	○	○	○	○	○	○	
4. Internal Access (existence of lifts, quality of staircase, disability friendly)		○	○	○	○	○	○	○	○	○	
5. External Appearance (image, prestige,, condition of the premises, building height, building shape, architecture)		○	○	○	○	○	○	○	○	○	
6. Supporting Facilities (security, internet (Wi-Fi), cleaning services, catering/vending, meeting places, reception, waste management, water supply, video conferencing)		○	○	○	○	○	○	○	○	○	
7. Lease (flexible rent, nature of lease, rental contract, terms of lease, percentage of rent escalation, multi-tenant building, own the property, not applicable)		○	○	○	○	○	○	○	○	○	
8. Costs (property taxes, utility costs, building maintenance costs)											◉

Please select your most preferred and least preferred for each set shown below:

1. Sustainability	**Least Preferred**	**Most Preferred**
Energy management	○	○
Desk sharing	○	○
Indoor climate	○	○
Hot desking	○	○
Green star rating	○	○
2. Building Interior	**Least Preferred**	**Most Preferred**
Layout flexibility	○	○
Space efficiency	○	○
Finishes	○	○
3. Internal Access	**Least Preferred**	**Most Preferred**
Existence of lifts	○	○
Quality of staircase	○	○
Disable friendly	○	○
4. Building Services	**Least Preferred**	**Most Preferred**
Air conditioning	○	○
Heating	○	○
Security system	○	○
Parking facilities	○	○
Backup generator	○	○
Fire escapes	○	○
Fire extinguishers	○	○
Kitchen	○	○
Bathrooms	○	○
Wall/floor covering	○	○
5. External Appearance	**Least Preferred**	**Most Preferred**
Image, prestige	○	○
Condition of the premises	○	○

5. External Appearance	Least Preferred	Most Preferred
Building height	○	○
Building shape	○	○
Architecture	○	○

6. Supporting Facilities	Least Preferred	Most Preferred
Security	○	○
Internet (Wi-Fi)	○	○
Cleaning services	○	○
Catering/vending	○	○
Meeting places	○	○
Reception	○	○
Waste management	○	○
Water supply	○	○
Video conferencing	○	○

7. Lease	Least Preferred	Most Preferred
Flexible rent	○	○
Nature of lease	○	○
Rental contract	○	○
Terms of lease	○	○
Percentage of rent escalation	○	○
Multi-tenant building	○	○
Own the property	○	○
Not applicable	○	○

8. Costs	Least Preferred	Most Preferred
Property taxes	○	○
Utility costs	○	○
Building maintenance costs	○	○

Considering the concepts you've just seen, please indicate your preference for the following:

1. Sustainability	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Energy management	◉										
Desk sharing		○	○	○	○	○	○	○	○	○	
Indoor climate		○	○	○	○	○	○	○	○	○	
Hot desking		○	○	○	○	○	○	○	○	○	
Green star rating											◉

2. Building Interior	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Layout flexibility	◉										
Space efficiency		○	○	○	○	○	○	○	○	○	
Finishes											◉

3. Internal Access	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Existence of lifts	◉										
Quality of staircase		○	○	○	○	○	○	○	○	○	
Disable friendly											◉

4. Building Services	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Air conditioning	◉										
Heating		○	○	○	○	○	○	○	○	○	
Security system		○	○	○	○	○	○	○	○	○	

Parking facilities		○	○	○	○	○	○	○	○	○	
Backup generator		○	○	○	○	○	○	○	○	○	
Fire escapes		○	○	○	○	●	○	○	○	○	
Fire extinguishers		○	○	○	○	○	○	○	○	○	
Kitchen		○	○	○	○	○	○	○	○	○	
Bathrooms		○	○	○	○	○	○	○	○	○	
Wall/floor covering											●

5. External Appearance	**Least Preferred**										**Most Preferred**
	0	1	2	3	4	5	6	7	8	9	10
Image, prestige	●										
Condition of the premises		○	○	○	○	○	○	○	●	○	
Building height		○	○	○	○	○	○	●	○	○	
Building shape		○	○	○	○	○	○	○	○	○	
Architecture											●

6. Supporting Facilities	**Least Preferred**										**Most Preferred**
	0	1	2	3	4	5	6	7	8	9	10
Security	●										
Internet (Wi-Fi)		○	○	○	○	○	○	○	○	○	
Cleaning services		○	○	○	○	○	○	○	○	○	
Catering/vending		○	○	○	○	○	○	○	○	○	
Meeting places		○	○	○	○	○	○	○	○	○	
Reception		○	○	○	○	○	○	○	○	○	
Waste management		○	○	○	○	○	○	○	○	○	
Water supply		○	○	○	○	○	○	○	○	○	

6. Supporting Facilities	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Video conferencing											◉

7. Lease	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Flexible rent	◉										
Nature of lease		○	○	○	○	○	○	○	○	○	
Rental contract		○	○	○	○	○	○	○	○	○	
Terms of lease		○	○	○	○	○	○	○	○	○	
Percentage of rent escalation		○	○	○	○	○	○	○	○	○	
Multi-tenant building		○	○	○	○	○	○	○	○	○	
Own the property		○	○	○	○	○	○	○	○	○	
Not applicable											◉

8. Costs	Least Preferred 0	1	2	3	4	5	6	7	8	9	Most Preferred 10
Property taxes	◉										
Utility costs		○	○	○	○	○	○	○	○	○	
Building maintenance costs											◉

In the previous questions, you rated the following as your most preferred. Please allocate 100 percentage points showing the relative importance of each:

Feature	Level	Importance
1. Sustainability	Green star rating	0
2. Building Interior	Finishes	0
3. Internal Access	Disable friendly	0

Feature	Level	Importance
4. Building Services	Wall/floor covering	0
5. External Appearance	Architecture	0
6. Supporting Facilities	Video conferencing	0
7. Lease	Not applicable	0
8. Costs	Building maintenance costs	0
Total:		0

End of Block: Default Question Block

Start of Block: Block 3

Q17 How long have you been working in this position?

- 0 - 5 years (1)
- 6 - 10 years (2)
- 11 - 15 years (3)
- 16 -20 years (4)
- 21 years and above (5)

Q18 Are you directly employed by the company?

- ○ Yes (1)
- ○ No (2)

Q19 Do you want a copy of the survey results?

- ○ Yes (1)
- ○ No (2)

Q20 To which address do you want me to send the results?

_____

End of Block: Block 3

Start of Block: Block 3

Start of Block: Block 3

8.6 Appendix E: Participant Information Sheet for the Survey

24 February 2016

Dear Sir/Madam,

Empirical Research on Headquarters Listed on the Johannesburg Stock Exchange

I am a PhD candidate and Associate Lecturer at the University of the Witwatersrand doing research on “Determinants of Site Selection and Headquarters location of Corporations Listed on the Johannesburg Stock Exchange". The study is in two phases, in phase one; interviews were conducted with selected companies from different sectors. The information solicited was used in designing a survey questionnaire, which is an online survey for all corporations listed on the Johannesburg Stock Exchange. The online questionnaire to this effect has been designed to collect information on the determinants of location and site selection for corporations listed on the Johannesburg Stock Exchange. The overall results from this study will clarify the needs of corporations and enable the metropolitan areas to position themselves to meet the needs of businesses like yours.

Your company is among the companies listed on the Johannesburg Stock Exchange and therefore important for this study. In order for the study to be representative, it is important to survey all the listed companies. Your confidentiality is guaranteed in that only the analysis will be presented on the report with no mentioning of companies' names. However, the data will only be reported as an aggregate with other sectors. Your identity will never be divulged in any other manner. Your participation in this study is also voluntary and you may decide to withdraw your consent at any time during the process with no penalties.

The final results of the study will be used in the thesis, published articles and presented at conferences. The coded data will be kept in safe storage (password protected file and locked data) for 5 years as required by the University and thereafter shredded and wiped from the system.

I estimate this interview will take no more than 30 minutes (average time) to

complete. You will receive a summary of research results by checking the box at the end of this survey. We (my supervisor and I) would be happy to answer any question you might have. I therefore ask that you delegate a person who will respond on behalf of your company.

Follow this link to the Survey:
Take the survey

Or copy and paste the URL below into your internet browser:
https://witsscem.eu.qualtrics.com/jfe/form/SV_eX6HbGp0ds5nCTP?Q_DL=9ozgx0TrnZSbM4R_eX6HbGp0ds5nCTP_MLRP_00PZhJuktFdU3T7&Q_CHL=email

Follow the link to opt out of future emails:
Click here to unsubscribe

I anticipate a positive response from your company before the the 30th of November.

Sincerely yours,

Thabelo Ramantswana, Phd Candidate
Tel.: 079 1178300
Email: 9810774p@wits.student.ac.za

Prof Samuel Azasu, Supervisor
Tel.: 011 717 7676
Email: samuel.azasu@wits.ac.za