HEADQUARTERS SITE SELECTION OF PUBLIC LISTED FIRMS: A SELF-EXPLICATED CONJOINT MODEL

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Abstract

The selection of site for headquarters is a decision that any company has to wrestle with at the time of formation of the company and/or at some point in the life cycle of the company. This decision affects not only companies, but also regions, countries, municipalities, and cities that seek to attract headquarters into and retain them in their respective regions. This paper analysed site selection preferences using an online survey which was sent to company executives to understand the trade-offs in site selection decisions. The self-explicated conjoint model was used to understand such trade-offs. The results reveal that security, access by car, parking facilities, backup generators, layout flexibility, and energy efficiency are some of the most preferred attributes in headquarters site selection decisions. There has been limited study on understanding such decisions in a developing country like South Africa, and this study will help policy makers, government, property developers, and investors to understand the preferences of headquarters in the selection of sites for their operation.

1. INTRODUCTION

The selection of sites for headquarters is an essential decision that any company has to deal with in its life cycle. The site selection decision is influenced by such things as the size, goals, nature of operations, and operating costs of the company. This decision is a subset of the headquarters location decision. Site selection is the final step of the interrelated decisions towards finalisation on the parcel of land or building to operate from (Rabianski, DeLisle and 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 and Choo, 2003; Rymarzak and Siemińska, 2012).

Headquarters location is a concern not just for companies, but also for regions, countries, municipalities, and cities that 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. (2008:5) 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 and Allen, 2002). These decisions can affect market share, profitability and shareholder value (Lindholm, Gibler and Levainen, 2006).

This paper focuses on the headquarters site selection decision, which falls within the scope of CREM, with a specific focus on acquisition. The acquisition of real estate from which the company will operate is a strategic decision for any company. Sigler et al. (2016) noted the dominance of developed countries in headquarters research. This is so also considering the desire of multinational enterprises (MNEs) to penetrate developing countries / 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 and Pain, 2014). The emerging markets are slowly receiving attention from international companies (Klein, Wöcke and Hughes, 2014). However, headquarters site selection has received less attention from the developing markets (Pan and Xia, 2014). The location of headquarters has implications for the urban structure and the economy and spatial patterns of the host cities (Ersoy, 2016).

Policy makers are fascinated by issues pertaining to headquarters location; however, this has received limited attention from scholars (Meyer and Benito, 2016; Pan and Xia, 2014). Among the few studies from the South African context, Luiz and Radebe (2016) concluded that South Africa is one of the most favourable countries for MNCs wanting to do business in Africa. Some of the studies on office site selection in South Africa and other parts of the world did not explicitly deal with issues around the trade-offs that headquarters make in site selection decisions. Therefore, this paper intends to advance headquarters research from the perspective of an emerging/developing market of South Africa.

The paper explores the trade-offs that companies make in site selection decisions using the self-explicated conjoint model. The model enables companies to select attributes according to their preference levels. In this paper, companies are regarded as consumers who have varied preferences on products. This topic is of importance to the emerging markets and Africa in general, as there has been limited research in this field. As Luiz and Radebe (2016:89) point out, "Africa is opening up to international business on an unprecedented scale. In many respects it represents a frontier to global capital which is seeking out new, growing and emerging markets." Luiz and Charalambous (2009), as well as Luiz and Stephan (2012), argue that South Africa has become an entry point for companies wanting to do business in Africa, hence the importance of understanding site selection decisions in the South African context.

The paper is structured as follows: the review of relevant literature on site selection decision is followed by the description of the methodology. Thereafter, results and discussion are presented, and the last section concludes the paper.

2. REVIEW OF RELATED LITERATURE

The site is the actual piece of building, its features, and its immediate surroundings in a particular area. The selection of the site has to do with the business needs of a particular organisation. The process is driven by a clear corporate strategy and clear aim to meet the current and future needs of the company. In this process, the company's executives have to be involved to ensure that the site selection process does not undermine the strategic goals of the company, as there is a link between corporate strategy and CRE strategy. As Roulac (2001:129) states,

> A corporate business strategy addresses such critical elements as customers,
> employees, and processors. These elements are profoundly impacted by the

environments in which the company does business – the environments in which the enterprise interacts with customers, houses its people and supports its processors. These are elements of corporate/real estate strategy.

The strategic goals and needs may be of a newly established company, a growing company, an expanding company, or a consolidation. The process involves identification of the site and evaluation of the site against the strategic needs/goals of the company and the fiscal impact of the move (Barovick and Steele, 2001; Bergeron, 2005). It is in the evaluation phase that companies have to decide whether sites are suitable for their corporate headquarters (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.

Companies require suitable space/buildings so they can fulfil their mandates. The suitable facilities may act as a pull factor for many businesses (Elgar and Miller, 2009). As companies grow in size, the need to find a suitable office space/building influences the location of firms (Daniels and Holly, 1983; Gibson, 2003). Therefore, the market has to be able to supply suitable office space in response to the demand for space. The particular building that the company chooses as its 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 confirm that flexibility is ranked high in office selection (Dent and White, 1998; Dettwiller, 2008; Gibson, 2003; Lizieri, 2003). The high ranking of flexibility is attributable to the changes in modern work practices that affect the way space is used (Dent and White, 1998; Lizieri, 2003; Nourse and Roulac, 1993; Sullivan, 1996).

Thus, CRE strategies have to respond to the changing needs and be adaptable to different scenarios. As Haynes (2011:98) notes, "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 and 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 buildings, it may influence and affect consumers (in this case the consumers are firms wanting better office space). Daniels and Holly (1983) link suitable building and office location choice. An Australian case study reveals that staff interaction and flexibility of workspace is significant (see Warren et al., 2007).

Building services—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 employees (Leishman et al., 2003; Sing et al., 2006). The conducive work environment is essential to increasing productivity and satisfaction of employees (Haynes, 2008a; 2008b). 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 maximises 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.

Some of the few studies conducted in South Africa on general office location highlighted some factors of location that are worth noting. 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 (Rogerson, 1998). A different study conducted by Turok (2013) gives a developer's perspective on what prospective clients are looking for.

> 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).

This shows that the local environment plays a major role in location decisions and agglomeration processes by firms.

Companies prioritise the factors of site selection differently, and the local environment can play a huge role in 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).

However, 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).

Some of the key site selection factors include the following:

- *Sustainability* of the occupied property may have an 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, Newell and Walker, 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 (Haynes, 2008a; Levy and Peterson, 2013). Layout flexibility, space efficiency, and finishes were considered.

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- *Internal access* is important for some corporations. This includes 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 staircases, and the facilitation of people with disabilities to move inside the building were considered in internal access.
- *Building services* are strategic to the company. These services increase the satisfaction of employees, as well as their productivity (Ciaramella and Dettwiler, 2011; Luoma et al., 2010; Nunnington and Haynes, 2011; Rothe, Lindholm, Hyvönen and Nenonen, 2011; Sing, Ooi, Wong and Lum, 2006). The services include air conditioning and heating, security system, parking facilities, backup generator, fire escapes, fire extinguishers, kitchen, bathrooms, and wall/floor covering.
- *The external appearance* of the building or site that the company occupies acts as a marketing or branding tool for the company (Rogerson, 1998; Škevin, 2011). This includes the general image, prestige, condition, and architecture of the property.
- *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 (Ghemawat, 2011; Leishman, Dunse, Warren and Watkins, 2003; Luoma, Niemi, Rothe and Lindholm, 2010; Sing et al., 2006; Turok, 2013). Security, Internet (Wi-Fi), cleaning services, catering/vending, meeting places, reception, waste management, water supply, and video conferencing were considered as part of the supporting facilities.
- *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, Daud and Razali, 2012). Factors include flexible rent, nature of lease, rental contract, terms of lease, percentage of rent escalation, and multi-tenant buildings.
- *Costs* of doing business in different properties vary, and corporations weight these costs differently (Adnan and Daud, 2010; Holt et al., 2008; O'Mara, 1999). The costs may be from property taxes, utility costs, and building maintenance costs.

Table 1 shows the attributes and attribute levels derived from the literature on the different factors of site selection.

Table 1: Site selection attributes

Sustainability (with five levels)	External appearance (with five levels)
Building interior (with three levels)	Supporting facilities (with nine levels)
Internal access (with three levels)	Lease (with eight levels)
Building services (with ten levels)	Costs (with three levels)

3. DATA AND METHODS

This paper makes use of CHQs of companies listed on the Johannesburg Stock Exchange (JSE) and located within the eight metropolitan municipalities.[1] The data on these public listed companies was obtained on 21 September 2016, with 483 companies listed on the JSE but only 267 companies with their CHQs located within the metros. An online survey was conducted using Qualtrics software to establish the site selection preferences. The survey

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

targeted those in management position or executives who have an understanding of the site selection dynamics of the company. Respondents were given a maximum of four months to complete the survey.[2]

4. ANALYTICAL TECHNIQUES

The paper is looking at consumer preference levels, hence the use of a marketing technique to measure customers' preference levels. Conjoint analysis is employed as a technique to evaluate consumers' preferences and trade-offs that can be made amongst multiple competing attributes (Green and Rao, 1971; Green and Srinivasan, 1990). The basic dependence model for conjoint analysis is

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

where Y_1 can either be nonmetric or metric, and X is nonmetric.
There are different types of conjoint analysis,[3] and this paper uses the self-explicated conjoint model. This model enables the respondents to evaluate each attribute and attribute level at a time. The self-explicated conjoint model is a compositional model with a functional form

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

where $Y_{j_1 j_2 \dots j_p}$ denotes the self-explicated utility of some stimulus profile defined by level j ($j = J, J_j$) 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 self-explicated model uses a desirability scale; in this study, a 10-point desirability scale was used, with 0 being the least preferred and 10 being the most preferred. The outcome of this first exercise resulted in the level of preference scores. Thereafter, a weight value was assigned for each attribute from 0 to 100, depending on how the respondents rate the attribute. From these scores, a constant sum of importance scores was calculated. Then the average utility score was calculated:

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

The number of profiles derived from the site selection attribute and attribute levels was 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 486,000 profiles would be tested for all possible combinations. However, this exercise may result in respondent fatigue, hence the use of self-explicated conjoint analysis as opposed to the traditional conjoint analysis. In self-explicated

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[2] See also Škevin (2011), who conducted an online survey over a period of two months, while Zhang (2000) conducted a study over a four-month period with credible results.
[3] These are full profile, choice based / discrete choice, adaptive, max diff, self-explicated, and hierarchical Bayes'.

conjoint analysis respondents are presented with one attribute at a time (Green and Srinivasan, 1990).

5. RESULTS AND DISCUSSION

The respondents were those who are part of the executive, as well as those involved with or have knowledge of site selection decisions within their companies. A response rate of 17% was achieved, which was 45 respondents out of the possible 267. The low response rate still enables the analysis for an exploratory study (Orme, 2014). However, the survey was sent to all listed companies, but for various reasons many of the companies did not take part in the study.[4] In addition, Holt, et al. (2008) argue that site selection decisions are sensitive and complex, so companies may not be interested in disclosing them.

5.1 Characteristics of the Firms

In analysing the JSE data, the paper classified the companies under three economic industries: primary, secondary, and tertiary. 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 2).

**Table 2: 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

The completed survey covers all three industries, as shown in Figure 1 below. Most respondents were from the tertiary sector. This is no surprise, considering the percentage of the tertiary industries as compared to other industries. There are fewer public listed firms in the primary industry, 10.1%, followed by secondary industries with 27.7%, while the tertiary industry has a total of 62.2%. The survey took the form of a census, with all public listed firms that are located within the metropolitan municipalities receiving equal opportunity to

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[4] For some, company restructuring was an issue. Some felt the information was too sensitive to disclose. Some were sceptical that it might affect their share price, some companies were not sure who should respond to the study, and some cited the issue of time needed to take part in the survey.

take part on the survey, as stated before. Therefore, there were more surveys sent to the tertiary industry.

Figure 1: Profile of industries with completed survey
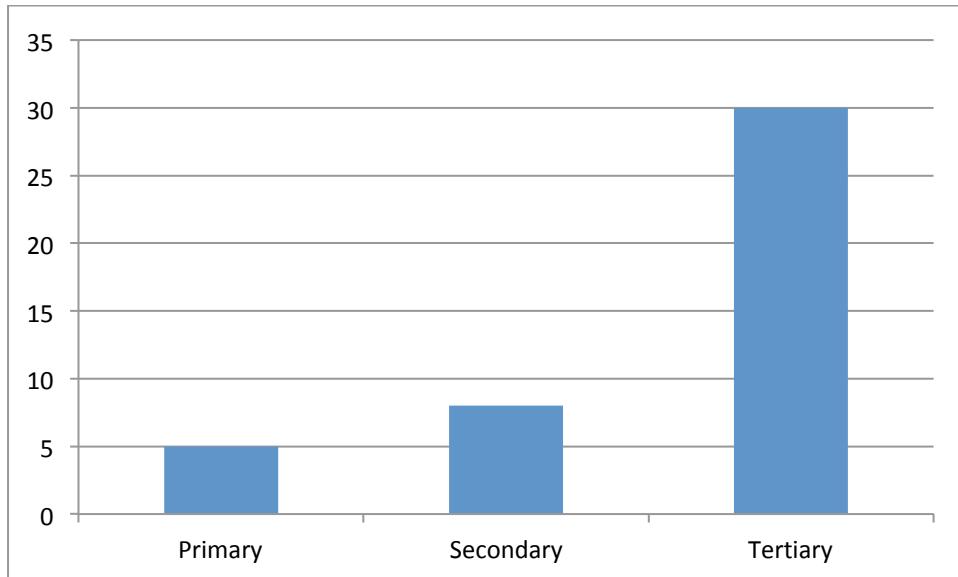
The companies that responded to the survey showed a variation in the number of years they have been in operation. There were 12.8% of the companies that have been in existence for about 5 years, while 35.9% have been in operation for more than 30 years. This gap between the years in operation shows that feedback was received from both fairly new and old companies.

In terms of the characteristics of the headquarters, some headquarters may locate close to their production units, locate farther away from production units, or co-locate with their production units. For CHQs that are not in the same location as their production plants, some 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 industries' CHQs co-locate with their production facilities. 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.

5.2 Level of Preference Scores

Respondents were asked to select their preference level, as shown in Table 3. In site selection, some attribute levels were closely scored as the most preferred. 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.

Table 3: Level of preference

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

5.3 Utility Scores

In terms of site selection, the utility scores are presented in Table 4. However, in some instances the preference levels of some attributes levels were closely ranked. Building interior characteristics such as 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 4: Utility scores

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

The results of the utility score for the 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. These include air conditioning, bathroom facilities, building maintenance costs, and percentage of rent escalation. Although these attribute levels 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.

5.4 Constant Sum Importance Scores

The average significant scores for site selection are as follows (Table 5): 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: Constant sum scores

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	10.22	0	20	10	10	5.37

Appearance						
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

Site selection attributes were also ranked during the survey to see which attributes and attribute levels are most preferred. Supporting facilities was rated the most preferred attribute in site selection (Table 6). 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 Africa 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 6: Ranking of CHQs site selection attributes

Attributes	Ranking
Supporting Facilities	1
Building Services	2
Lease	3
Costs	4
Sustainability	5
Building Interior	6
Internal Access	7
External Appearance	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 building.

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 decisions (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 and Peterson, 2013). In this study it was not regarded as a prioritised factor.

CHQs are interested in lowering running costs so they can make a profit (Holt et al., 2008; O'Mara, 1999). The issue of cost runs across many attributes, and given that, corporations seek to maximise profits and 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 prioritise 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 prefer to lease while others prefer to buy.

The internal access to the facilities also affects the functionality of the business. A work environment that facilitates employees' satisfaction and comfort may result in higher productivity (Haynes, 2008a; 2008b). CHQs have to be considerate of all their employees, hence the high preference of facilities that are disabled-friendly. This implies that the ease with which all employees, and in particular disabled people, can move around the facilities is likely to foster employee satisfaction and productivity.

Closely linked to internal access is the building interior attribute. Levy and Peterson (2013) observe, 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 by portraying a good image through the building features and its location (Škevin, 2011). The facilities from which CHQs run their business may be treated as assets to the company. 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 don't realise the importance of real estate in reinforcing their brand.

There was an issue of accessibility to the site, which was measured differently from the site selection attribute. The trade-offs of accessibility were measured alongside the location attributes, and it was the most preferred alternative amongst all other attributes. Among different modes of transportation (car, bus, train, maritime port, or air), CHQs preferred sites that are accessible using car, followed by air transportation.

CONCLUSION

The paper presented the preference levels of site selection for headquarters of public listed firms in South Africa. These are the headquarters that are located within the eight

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metropolitan municipalities in South Africa. The survey included all industries of public listed firms within the JSE. Through the use of the self-explicated conjoint model in the survey, companies indicated the preference levels of different attributes and attribute levels. The trade-offs that companies make across competing attribute levels resembles real-life decisions in site selection processes. The use of the self-explicated conjoint model as a measure of understanding the preference level is somewhat unique in understanding site selection decision. At the same time, understanding these decisions from an emerging market perspective and Africa in particular adds more value to the academic arena.

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. In addition to these preferences, CHQs also prefer sites that are accessible. Further investigation is needed into the relationship between the continuous problems with power outages and the need to have facilities that have backup generators; this does not feature much in reviewed studies. In addition, it was noted that water supply, although not the most preferred (though it was close to the most preferred), is a factor that needs further investigation.

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