FACTORS AFFECTING THE MARKET PRICE OF COMMERCIAL REAL ESTATES IN NAIROBI. A CASE STUDY OF HURUMA ESTATE

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Abstract

Purpose: The study sought to determine the factors affecting the market price of commercial real estates in Nairobi. A case study of Huruma estate

Methodology: This study employed descriptive survey design. The target population comprised of both managerial rand non-managerial employees in the real estate agencies. The real estate agencies registered by Kenya Property Developers Association (KPDA) and operating in Huruma area are 69 in number. The study sample comprised of 30% of all real estate firms registered by Kenya Property Developers Association (KPDA) in the region. Therefore, the sample size is 21 firms. The use of census survey was employed for statistical research, population count or business marketing purposes. Primary information was gathered by use of a Likert scale questionnaire

Results: The result displays results of responses regarding the first variable which was rent as determinant of market price of commercial real estate. This finding was supported by an overall responses mean of 3.94 which means that more respondents were agreeing with the statements on this objective in the questionnaire. The responses were also spread from the mean at a 0.779 standard deviation. The second objective was to establish the effect of transport infrastructure on the market price of commercial real estate. The findings show that most of the respondents agreed with most of the statements as support by a mean score of 3.89. The responses were also spread from the mean at a 1.045 standard deviation. The third objective was to establish the effect of security on the market price of commercial real estate. The findings show that most of the respondents agreed with most of the statements as support by a mean score of 3.80. The responses were also spread from the mean at a 1.102 standard deviation. The last objective was to establish the effect of social amenities on the market price of commercial real estate. The findings show that most of the respondents agreed with most of the statements as support by a mean score of 3.77. The responses were also spread from the mean at a 1.056 standard deviation.

Unique contribution to theory, practice and policy: The study recommends that investors should invest in a way to ensure fair rent on the tenants so that the worth of such property value is not compromised by their rental charges ensuring the tenants enjoy and experience satisfaction. Adequate transport infrastructure should be ensured in making investment decisions by investors as proper infrastructure increases property value. Security and social amenities should be improved and where necessary increased for such measures are a positive contributor to commercial real property value.

Keywords: *Market Price, Rent, Transport Infrastructure, Real Estate, Social Amenities, Security*

1.0 Background of the Study

Real estate refers to "land at, above and below the earth's surface, plus all things permanently attached to it, whether natural [example, trees and minerals] or artificial [example, houses and roads]" (Galaty, Allaway, & Kyle, 2000). On the other hand, real property (or realty) is a more encompassing term that refers to "the interests, benefits and rights that are automatically included in the ownership of land and real estate" (Galaty, Allaway, & Kyle, 2000). It may also include appurtenance - a right or privilege often related to real estate but may not necessarily form part of the property. In this work, the terms - property, real estate and real property - shall be used interchangeably to convey the same ideas – land, improvements on land and the accompanying bundles of legal rights thereof. Although real estate can be classified into Residential, Commercial, Industrial, Agricultural and Special purpose (Corcoran, 2007; and Galaty, Allaway, & Kyle, 2000), the focus of this work is on residential real properties. This is the property type used for single or multi-family housing in urban, suburban or rural areas - the most popular type in this part of the world.

Property is a multi-dimensional product and the number and nature of factors that influence its value are equally of different kinds (Paz, 2003). Property and land values tend to increase in areas with expanding transportation networks, and increase less rapidly in areas without such improvements. Rapid and continued rise in housing and land prices are expected in cities with transportation improvements and rapid economic and population growth (Goldenberg, 2010). The value of access is capitalized into the land value and access is measured through market participants' willingness to pay. Essentially, this view suggests that accessibility measures may be inferred from land prices. The relationship among accessibility, property values and land use patterns has been the pre-occupation of earliest theorists (Oni, 2009).

Real estate valuation is the practice of developing an opinion of the value of real property, usually its Market Value (Kilpatrick, 2007). Although, there are many concepts of value, value as used in this work refers to a true market value. This may or may not be the same with a market price. A market price is the price a property actually sells for and could represent a true evidence of the current market value if the conditions for arriving at a market value exist. In this work, therefore, a market valueis construed to number of factors affect commercial property values in Africa. These include institutional and economic factors, location, complementary uses, and competition amongst and between uses, design, degree of obsolescence, accessibility, road network, relationship between landlord and tenant, and negative externalities (McCluskey, et al, 2000; Olusegun, 2003; Kauko, 2003; and Omoogun, 2006).No two properties are identical, and all properties differ from each other in their location, which is one of the most important

determinants of their value (Wallace, 2004). The absence of a market-based pricing mechanism determines the need for an expert valuation of real estate/property (Tyagi, 2003).

According to Oyebanji (2003), a number of factors affect property values in Nigeria. These include population change, change in fashion and taste, institutional factors (culture, religious belief, and legislation), economic factors, location, complementary uses, transportation and planning control. He stated further that good spread of road network has tendency to increase accessibility with certain areas becoming less accessible as a result of traffic congestion thereby causing value to shift to areas that are accessible. Other factors that determine property values include accessibility relative to location-distance of land uses, change in population, change in fashion and taste, institutional factor, economic factor, location, transportation, complementary uses, road transport network, political factor, planning regulation, environmental quality, aesthetics, and growth pattern of land use. Real estate prices in Kenya has doubled, even tripled in the past few years (Majtenyi, 2010). Demand for housing units continues to outstrip the supply and real estate property market is booming in Kenya especially because of the growth in the mortgage financing in the country (Masika, 2010).Sixty percent of the pension fund is going towards the property market Mwithiga (2010) and they are using it as mortgage security (Okumu, 2010). Kenyan real estate property covers all property categories including single and multi-family residential dwellings, commercial and agricultural land, office space, go-dawns and warehouses, retail outlets and shopping complexes (Masika, 2010).

1.2 Commercial Real Estate in Nairobi

Over the past few years the real estate sector in Kenya has experienced a massive boom this is due to the fact that the property market is responding to demand that has been created by the expanding middle class with disposable income and in which people have become able to service their mortgages. In Nairobi, which is the capital and largest city of Kenya, there is one of the largest expat communities in the continent this is due to the significant number of multinationals who have chosen Nairobi as either their African hub or East and Central African hub. Nairobi's profile as a regional business hub has been growing as seen by the number multinationals, from diverse industries, which have chosen to open shop in the Kenyan capital or decided to choose the city as their base for Africa-wide operations (Knight Frank, 2013).

1.2.1 Huruma Estate

Huruma Estate is a residential estate located in the northeast of Nairobi, the capital of Kenya. It borders Kariobangi and Dandora to the East, Moi Air Base to the south, Mathare to the North and Eastleigh to the West. It is an eastern suburb in Starehe Division of Nairobi. Over the years, some informal settlements (slum) have sprung up in the area. This informal part of Huruma consists of six villages: Kambi Moto, Mahira, Redeemed, Ghetto, Gitathuru and Madoya, all built on land belonging to the Nairobi City Council. The settlements have been in existence for as long as 28 years. The settlements occupy a total land area of 4.117 hectares.

1.3 Statement of the Problem

Real property has no value if it has no utility, if it is not scarce and if it is not effectively demanded. Real property has significance only as it satisfies man's needs and desires. It is this man's collective desire for real property that gives rise to value (Olusegun, 2003). Thus, the ability of a property to satisfy man's needs and desires together with its degree of scarcity and

utility compared with others makes man to ascribe value to it. Property value, therefore, according to Millington (2001) is the money obtainable from a person willing and able to purchase property when it is offered for sale by a willing seller, allowing for reasonable time for negotiation and with the full knowledge of the nature and uses which the property is capable of being put. Real estate prices in Kenya has doubled, even tripled in the past few years (Majtenyi, 2010). Demand for housing units continues to outstrip the supply and real estate property market is booming in Kenya especially because of the growth in the mortgage financing in the country (Masika, 2010). According to Reader (2011), the effects of road infrastructure on property values is great. Both in the positive and the negative, road infrastructure can have a large effect on property values. For this reason road infrastructure is often very controversial and politically charged. Another study done by Casey (2001) found negative and positive impacts of highways on property values. Structural characteristics, location-specific factors, and neighborhood characteristics may define various sub-markets. (Goodman and Thibodeau, (1998).Cloete and Chikafalimani (2001) in a study on property industry in Malawi, identified eight factors that affect property value, which are architectural design, quality of finishing, maintenance condition of the property, size of property, security, condition of the street, and location According to Lindsey (2003) most property owners know from experience that similar properties in different neighborhoods can command vastly different prices.

However, none of these studies focused on Huruma Estate, an area that is bordered by a slum, modern housing as well as a variety of social amenities, security institutions and infrastructure. The diversity of Huruma estate made worth studying the determinants of commercial real estate value. This study therefore attempted to explain how commercial property value is affected by its determinants in Huruma Estate in Nairobi City.

1.4 Objectives of the Study

1.4.1 Specific Objectives

i. To investigate the effect of rent on the market price of commercial real estate in Huruma Estate
ii. To determine the effect of transport infrastructure on the market price of commercial real estate in Huruma Estate
iii. To establish the effect of security on the market price of commercial real estate in Huruma Estate
iv. To investigate the effect of social amenities on the market price of commercial real estate in Huruma Estate

2.0 LITERATURE REVIEW

2.1 Hedonic Pricing Theory

Hedonic price analysis is a technique in which the values of independent variables are determined implicitly through regression analysis. Hedonic regression analysis is a statistical technique, which may be applied to a series of property values, together with their associated characteristics, to identify and quantify the significant determinants of value (Neil & Colin, 1998). Goodman (2000) states "A general hedonic form of analysis may be expressed as a function of housing in a given sub-market at a given time". These hedonic prices are not

necessarily long run equilibrium supply prices, in other words market prices may not have been stable throughout the time period of the study. However, a set of market prices reflects the composition and location of existing of residences and the neighborhood component. Therefore, hedonic analysis has been widely applied to housing market analysis and has become a well-established technique. The current analysis involves a dependent variable (House price) and several independent variables (such as physical attributes of a property and location influences). Property values consist of a bundle of attributes, each of which is integral to house prices. Each property owner is assumed to derive value directly from the property characteristics. The physical attributes and location influences may be described as "the fundamental factors" of property value, in that all individuals receive utility or disutility from these influences over their entire expected tenure (Norman, 2002).

Physical attributes may be described as building area, type of structure and so on. Location influences pertain to off- site neighborhood attributes such as parks, health care facilities and so on. A problem associated with the application of the ordinary least squares technique isgenerally a violation of one or more of the classical assumptions1. Moreover, withhedonic modeling methods, problems include variable selection, functional form, and theinstability of housing characteristic coefficients over time and sample selection bias(Marvin and Jimmy, 2000). Property value structure has been much subjected to hedonic analysis. Work by John (1998) collected the data on the transaction prices value, which were based on valuations by professional valuers and advertised asking prices. If sufficient data is to be assembled then transaction prices spanning significant periods have to be used.

A study of the influence of transport on house prices was examined by So *et al.* (1997). He notes that the major risk of using hedonic price regression is the presence of the multicollinearity between housing attributes and the consequent instability of estimates. Another study by Marvin (2000) studied the sales of 56 residential, mountainside view lots located in Tucson, Arizona, occurring over the 1989 to 1991 period. He used thedata that was restricted to a relatively small geographic area with little variation inhousehold income to investigate the relationship between residential lot price, and theamount of view amenity and lot size. All the sale properties were located within the samepublic school area, and were subject to the same government jurisdiction, property taxrates, and were equally distant from major employment nodes. This suggests that thecharacter and quality of the data, which underpinned the hedonic analyses variedmarkedly. A study by James and Wesley, (2001) analyzed that the use of proxymeasures of neighborhood amenities may degrade the accuracy of hedonic valuationmodels. The result showed that direct subjective measures yield only modestimprovements in price prediction. Careful use of proxy measures for neighborhood.

2.2 Demand and Supply Theory

In economic theory, the law of supply and demand is considered one of the fundamental principles governing an economy. It is described as the state where as supply increases the price will tend to drop or vice versa, and as demand increases the price will tend to increase or vice versa. Basically this is a principle that most people intuitively grasp regarding the relationship of goods and services against the demand for those goods and services. When supply and demand are in balance, the economy is said to be in equilibrium between price and quantity (Adam, 2009)

Many studies have examined the theory of housing demand (e.g., Megbolugbe, Marks, & Schwartz, 1991). Some of these studies have discussed demand from the perspective of service and investment (e.g., Henderson and Ioannides, 1983, 1987; Berkovec, 1989; Brueckner, 1997; Lin and Lin, 1999; Arrondela and Lefebvreb, 2001; and Cassidy, Dennis, and Yang, 2008). These studies suggest that owner-occupied housing has both a consumption role in providing housing services and an investment role. Henderson and Ioannides (1983) appear to be the first authors to clearly present a model designed to illuminate the dual role of housing as both a consumption and investment good. Berkovec (1989) developed an applied general equilibrium model for analyzing the effects of tax policy on housing consumption and investment. Brueckner (1997) investigated the portfolio choices of homeowners, taking into account the investment constraint proposed by Henderson and Ioannides (1983) that requires housing investment by homeowners to be at least as large as housing consumption.

It is an observed reality that asset prices and demand are often positively related, since in many cases an asset is purchased for no other reason than selling it later on at a higher price. Price increases can act a signal for later price increases, and the opposite is also true. Hence, we will posit a positively sloped demand curve for this model. This relationship will also be exponential: at low prices, the effects will be relatively small, but as prices spiral, the effect will get larger and larger. Since the supply of assets is relatively inelastic (in the case of land, perfectly inelastic), the supply curve will be a steep upward sloping line (Sraffa, 2003)

2.3 Empirical Review

2.3.1 Effect of Rent on Commercial Real Estate

Carreras-i-Solanas et al (2004) studied the relationship between house prices and rents in Barcelona, Spain. They found periods when house prices were high corresponded with periods of increased demand for investor housing and rentals were an important variable in determining house prices. Gallin (2004) used US data to explore the long run relationship between house prices and rents. Gallin concluded that house prices do correct back to rents rather than rents correcting to house prices. Changes in property rents and values may arise with increased access, lower commuting costs, and/or potential changes in property utilization. Changes in value are important because they typically occur faster than changes in land use and may thus influence or change urban form. From this standpoint, our study of the D.C. Metrorail's effect on property rents and, therefore, on values is interesting. Because such a transportation system can influence development, policymakers and planners can employ it as a means to influence growth and revitalize certain areas rather than simply follow growth patterns. Such was the case with the Miami Metrorail system (Gatzlaff & Smith, 2003). The relationship between rent and occupancyis less clear. In a market of high or excess demand (a surplus of renters), occupancy (demand) should drive rent and a positive relationship would result. However, if occupancy is a function of rent (as in a market with an excess supply of apartments), there would be an inverse relationship between rent and occupancy (Gatzlaff & Smith, 2003).

2.3.2   Effect of Infrastructure on Commercial Real Estate

A study by John (1998) examined how new transport infrastructure influenced property values in the South Yorkshire (UK). John found that anticipation of the construction of a super tram acted to reduce house prices. This is possibly because of expectations of disruption during the building

of the system. However, on completion of the super tram, the negative impact has disappeared. Moreover, this study has also shown that the type of neighborhood was a major influence on house price, which was statistically significant at a rate less than 1 percent. Pollakowski (2002) indicates that house prices are not determined only by accessibility but also by the environmental attributes of the location. The environmental factors, such as neighborhood amenity, parks, and levels of neighborhood security have to be taken into account. Moreover, the analyzed location is also relevant to the overall urban structure. To consolidate urban structure and the cost of providing urban infrastructure, existing infrastructure is more effectively utilized in the built-up urban areas. The infrastructure includes services such as sewerage and drains, roads, and public transport, as well as social infrastructure such as health care facilities, education facilities and other community services. These attributes are usually provided by the State government and by the municipal council through its policies and services.

Since infrastructural facilities are regarded as booster to social well-being of city dwellers hence the choice of infrastructural facilities as factors that may likely affect the rental value of properties in Nigerian cities is considered to be appropriate (Megbolugbe, 2007). The road infrastructure can also have a negative impact on property values. This effect, according to Casey (2012) was seen on single family residences. The key factor here is the increasing volume of traffic, leading to environmental pollution. It has however positive impact on multifamily residential and commercial properties, where proximity to the road is one of the most important factors.

2.3.3 Effect of Security on Commercial Real Estate

The infrastructural facilities available in properties include watch day-security services and watch night-security services, electricity, water supply, access road, burglary proof, refuse disposal facility, toilet kitchen, drainage channel, and wall-fence. The levels of provision of these facilities vary from building to building and from one zone to the other. The provision of watching-day security services in the residential property are not unpopular in commercial property is provided with these infrastructure; such property would enjoy high patronage and consequently attract high rental value (Pollakowski, 2002). Han (1996) concludes from his survey that real estate investment opportunities, demographic attributes, and market structure are important selection criteria for investment decisions. The security of property is a critical factor in real estate investment due to the close link between risk and safety. Liang and Gordon (2003) estimate the availability of higher quality, non-owner-occupied commercial real estate based on GDP estimations. Kurzrock et al. (2009) find via cross-sectional regression, that a high degree of agglomeration affects property valuations.

2.3.4 Effect of Social Amenities on Commercial Real Estate

It is well known that there are many unobservable characteristics that can affect market value: proximity to amenities (waterfront, mountain view) and disamenities (railroad, highways, power lines, telecom towers, traffic conditions and adjacent negative land uses) are but a few examples. Some of these unobservable factors are directly related to geographic location, while others, such as curb appeal, add errors to the model and also uncertainty in the valuation of the property by buyers and sellers. It is critical to be able to explicitly model these unobservable factors as well to allow for model realism

With similar approach, Simons, Quercia and Maric (1998) in the study of value impact of new residential construction and neighborhood disinvestment on residential sales price also found that the neighborhood variables included demographic, location and economic attributes have the expected sign and are statistically significant.

In the same vein, the following property characteristics and attributes have commonly been used by experts as useful variables in real estate valuation. These are the number of bedrooms, building size, age of building, land size, location convenience (distance from main road or city centre) and quality of building materials. Other useful variables sometimes include road type, car park facility, number of bathrooms, number of toilets, number of floors in the building, neighborhood attractiveness, physical condition, space arrangement, structural quality, house interior, and recreational facilities, among others (Paracharavanich et al, 2000; Lokshina et al, 2003).

2.4 Summary

Kamali, Hojjat and Rajabi (2008) group the variables determining property values into; environmental variables, neighborhood variables, accessibility (location) variables and property variables. In the same vein, the following property characteristics and attributes have commonly been used by experts as useful variables in real estate valuation. These are the number of bedrooms, building size, age of building, land size, location convenience (distance from main road or city centre) and quality of building materials. Other useful variables sometimes include road type, car park facility, number of bathrooms, number of toilets, number of floors in the building, neighborhood attractiveness, physical condition, space arrangement, structural quality, house interior, and recreational facilities, among others (Paracharavanich et al, 2000; Lokshina et al, 2003). Bello and Bello (2007) stated that the factors affecting property values are generally classified into external and internal factors such as accessibility measured in terms of travel distance and cost, neighborhood, structural (property) and location characteristics on residential property value. Udo (2007) on a study of factors influencing the rental value of properties in Nigerian cities observed that many factors interplay to create property values. These could be economic, institutional or environmental. Factors that negatively affect the value of real property injure ownership motives and goals. They also damage the investor's interest and discourage subsequent investment. For instance, Udo and Egbenta have examined the effects of domestic waste dumpsites on rental values of residential properties in Enugu, Nigeria. They confirmed that contrary to popular belief, waste dumpsite does not necessarily affect property values negatively. However, other factors could be harnessed to boost rental values of properties in the cities.

Land value does not only depend on the physical characteristics of a building but also the environment that surrounds the building. Developments of various transportation modes have become pivotal to physical and economic developments. Access to major roads provides relative advantages to residential users. Modern business, industries, trades and general activities depend on transport and transport infrastructures, with movement of goods and services from place to place becoming vital and inseparable aspects of global and urban economic survival.

3.0 RESEARCH METHODOLOGY

This study employed descriptive survey design. The target population comprised of both managerial and non managerial employees in the real estate agencies. The real estate agencies registered by Kenya Property Developers Association (KPDA) and operating in Huruma area are 69 in number. The study sample comprised of 30% of all real estate firms registered by Kenya Property Developers Association (KPDA) in the region. Therefore, the sample size is 21 firms. The use of census survey was employed for statistical research, population count or business marketing purposes. Primary information was gathered by use of a likert scale questionnaire

4.0 RESULTS AND DISCUSSIONS

4.1.1 Age

The respondents were asked to indicate their age and the findings were presented in Figure 1.Majority of the respondents (52.4%) were persons aged between 36 to 50 years. Above twenty eight percent (28.6%) were 51 years and above while 9.5% were aged between 21 to 35 years. Respondents who were below 20 years were also 9.5%.From the results, majority of the respondents were aged above 36 years which implies that they had exposure in relation to the determinants.
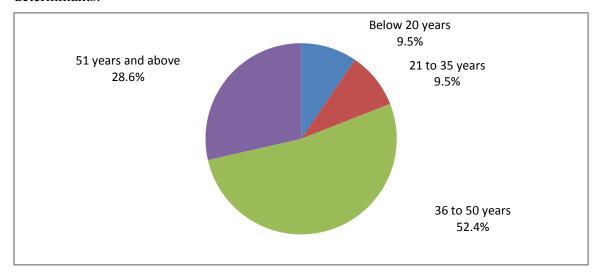

Figure 1: Age

4.1.2 Position

The study sought to establish the position of the respondents in their companies. The findings were presented in Figure 2.Eighty one percent of the respondents were in managerial positions while 19 percent were in non managerial position. These findings imply that majority of the respondents had access to the information sought by the researcher
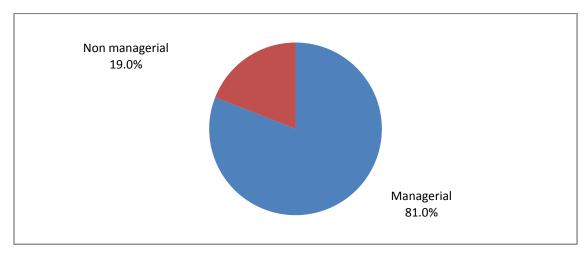
Figure 2: Position

4.1.3 Work Experience

The study sought to establish the work experience of the respondents. The findings were presented in Figure 3.About fifty seven percent (57.1%) had experience of 4 to 10 years while 23.8% had work experience of above 10 years. Nineteen percent of the respondents had experience below 4 years. These findings imply that majority of the respondents had substantial exposure to how real estate property market value is affected by its determinants.
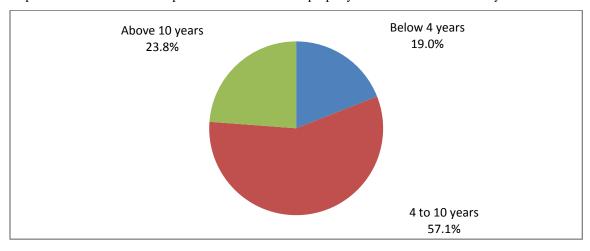

Figure 3: Work Experience

4.1.4   Duration of Employment in the Company

The study sought to establish the respondents had been employed in the company. The findings were presented in Figure 4.About thirty eight percent (38.1%) had been employed for a period of 6 to 10 years while 33.3% of the respondents had been employed for 3 to 6 years. Above fourteen percent (14.3) had been employed for over ten years, while another 14.3% had been employed for a period below 3 years.
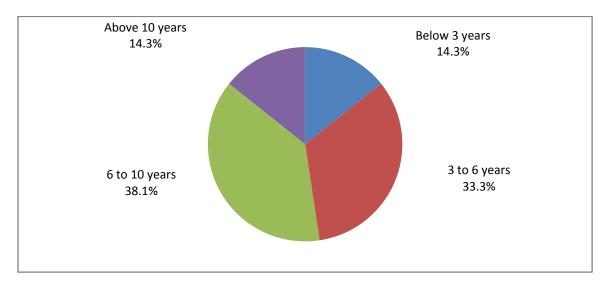
Figure 4: Work Experience

4.1.5 Rent and the Value of Commercial Real Estate

The study sought to establish the effect of rent on the market price of commercial real estate. The findings were presented in Table 4.1.Above ninety percent (90.5%) agreed on the statement that commercial properties with high rent also fetch a higher market price. Ninety point four percent agreed that higher rent rates attract more of investors in commercial real estate. Above eighty five percent (85.7%) agreed on the statement that there has been an increase in the construction of properties with high rent. Above sixty six percent (66.7%) agreed on the statement that rental charges in commercial properties have gradually gone up in the last five years. Above seventy one percent (71.4%) agreed that commercial properties with high rent imply that the quality of the property is higher. The overall likert mean was 3.94 with a standard deviation of 0.779 and this implies that rent greatly influences the market price of commercial real estate.

These findings agree with those of Carreras-i-Solanas et al (2004) who studied the relationship between house prices and rents in Barcelona, Spain. They found periods when house prices were high corresponded with periods of increased demand for investor housing and rentals were an important variablein determining house prices.

Table 1 Rent and the Value of Commercial Real Estate

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Commercial properties with high rent also fetch a higher market price	0.0%	0.0%	9.5%	66.7%	23.8%	4.14	0.573
Higher rent rates attract more of investors in commercial real estate	0.0%	4.8%	4.8%	57.1%	33.3%	4.19	0.750
There has been an increase in the construction of properties with high rent	4.8%	4.8%	4.8%	61.9%	23.8%	3.95	0.973
Rental charges in commercial properties have gradually gone up in the last five years	0.0%	9.5%	23.8%	42.9%	23.8%	3.81	0.928
Commercial properties with high rent imply that the quality of the property is higher	0.0%	9.5%	19.0%	71.4%	0.0%	3.62	0.669

						3.9	
Total						**4**	**0.779**

4.2 Transport Infrastructure and the Value of Commercial Real Estate

The study sought to establish the effect of transport infrastructure on the market price of commercial real estate. The findings were presented in Table 2.Above ninety percent (90.5%) agreed on the statement that commercial properties with high rent also fetch a higher market price. Ninety point four percent agreed that higher rent rates attract more of investors in commercial real estate. Above eighty five percent (85.7%) agreed on the statement that there has been an increase in the construction of properties with high rent. Above seventy one percent (71.4%) agreed that access to major roads and highways has led to an increase in property value. Eighty point nine percent agreed on the statement that accessibility to infrastructure has opened up new opportunities for development of property and this has pushed up values. Above seventy one percent (71.4%) agreed on the statement that road networks have improved the access of existing commercial properties thereby pushing up the market price. Eight point nine percent agreed on the statement that access to the railway transport has led to an increase in commercial real estate property values. Eighty one percent agreed on the statement that property located far from road networks receive lower attention from investors compared to those situated near roads. The overall likert mean was 3.89 with a standard deviation of 1.045 and this implies that transport infrastructure is a key determinant of the market price of commercial real estate.

These findings agree with a study by John (1998) who examined how new transport infrastructure influenced property values in the South Yorkshire (UK). John found that transport infrastructure was a major influence on house price, which was statistically significant at a rate less than 1 percent.

Table 2 Transport Infrastructure and the Value of Commercial Real Estate

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Access to major roads and highways has led to an increase in property value	9.5%	4.8%	14.3%	47.6%	23.8%	3.71	1.189
Accessibility to infrastructure has opened up new opportunities for development of property and this has pushed up values.	4.8%	9.5%	4.8%	61.9%	19.0%	3.81	1.03
Road networks have improved the access of existing commercial properties thereby pushing up the market price	4.8%	9.5%	14.3%	38.1%	33.3%	3.86	1.153
Access to the railway transport has led to an increase in commercial real estate property values	4.8%	4.8%	9.5%	47.6%	33.3%	4.00	1.049
Property located far from road networks receive lower attention from investors compared to those situated near roads	0.0%	4.8%	14.3%	52.4%	28.6%	4.05	0.805
Total						**3.89**	**1.045**

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4.3 Security and the Value of Commercial Real Estate

The study sought to establish the effect of security on the market price of commercial real estate. The findings were presented in Table 3.About seventy six percent (76.2%) agreed that community policing has led to a higher value in real properties in the area. Majority of the respondents, 71.4% agreed on the statement that more commercial properties are coming up in areas surrounding administrative locations like police stations. About seventy six percent (76.2%) agreed that the military presence in the neighborhood has led to an increase in property values. About seventy six percent (76.2%) agreed on the statement that investors frequently ask about the security condition of the area the prospective property is located. Majority of the respondents, 71.4% agreed on the statement that increases in regular security and police patrols have led to more developments of new business premises. The overall likert mean was 3.80 with a standard deviation of 0.102 and this implies that security is a strong determinant of the market price of commercial real estate.

These findings agree with those of Han (1996) who concludes from his survey that the security of property is a critical factor in real estate investment due to the close link between security and safety.

Table 3 Security and the Value of Commercial Real Estate

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Community policing has led to a higher value in real properties in the area	9.5%	4.8%	9.5%	52.4%	23.8%	3.76	1.179
More commercial properties are coming up in areas surrounding administrative locations like police stations.	4.8%	14.3%	9.5%	52.4%	19.0%	3.67	1.111
The military presence in the neighborhood has led to an increase in property values	9.5%	0.0%	14.3%	42.9%	33.3%	3.90	1.179
Investors frequently ask about the security condition of the area the prospective property is located	4.8%	4.8%	14.3%	47.6%	28.6%	3.90	1.044
Increase in regular security and police patrols have led to more developments of new business premises	4.8%	4.8%	19.0%	52.4%	19.0%	3.76	0.995
Total						3.80	1.102

4.4 Social Amenities and the Value of Commercial Real Estate

The study sought to establish the effect of social amenities on the market price of commercial real estate. The findings were presented in Table 4.4.Eighty one percent of the respondents agreed on the statement that investors frequently consider the availability of health and care facilities when making their decision to invest. Majority of the respondents, 57.2% agreed that the prevalence of education institutions has high impact on the value of commercial property. Eighty one percent of the respondents agreed on the statement there have been an increase in new recreation and leisure facilities in the area and this has led to an increase in property values. Seventy six point two percent of the respondents agreed that prospective investors in commercial real estate frequently take into consideration the libraries and community services in the area and this has led to an increase in property values. Above sixty six percent (66.6%) of the respondents agreed that the existence of places of worship such as churches and mosques have led to an increase in the value of real estate. The overall likert mean was 3.77 with a standard deviation of 1.056 and this implies that social amenities are a key determinant of the market price of commercial real estate.

These findings agree with those of Simons, Quercia and Maric (1998) who conducted a study of value impact of new residential construction and neighborhood disinvestment on residential sales price also found that the neighborhood variables included demographic, location and economic attributes have the expected sign and are statistically significant.

Table 4 Social Amenities and the Value of Commercial Real Estate

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Investors frequently consider the availability of health and care facilities when making their decision to invest.	4.8%	0.0%	14.2%	57.2%	23.8%	3.95	0.921
The prevalence of education institutions has high impact on the value of commercial property	0.0%	23.8%	19.0%	42.9%	14.3%	3.48	1.030
There has been an increase in new recreation and leisure facilities in the area and this has led to an increase in property values	4.8%	4.8%	9.5%	38.1%	42.9%	4.10	1.091
Prospective investors in commercial real estate frequently take into consideration the libraries and community services in the area and this has led to an increase in property values	9.5%	9.5%	4.8%	47.6%	28.6%	3.76	1.261

			5			
		19	7.		3.	
The existence of places of worship such as churches and		9.5	.0	1	5	0.97
mosques have led to an increase in the value of real estate	4.8%	%	%	%	9.5%	7	8
					3.	
					7	1.05
Total					7	6

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter comprises of summary key findings of the study based on results from data analysis and the objectives of the study. Conclusions and recommendations are also included and they are aligned to the findings.

5.2 Summary of Findings

The objective of the study was to study the factors affecting the market price of commercial real estates in Nairobi, a case study of Huruma Estate.

The result displays results of responses regarding the first variable which was rent as determinant of market price of commercial real estate. This finding was supported by an overall responses mean of 3.94 which means that more respondents were agreeing with the statements on this objective in the questionnaire. The responses were also spread from the mean at a 0.779 standard deviation.

The second objective was to establish the effect of transport infrastructure on the market price of commercial real estate. The findings show that most of the respondents agreed with most of the statements as support by a mean score of 3.89. The responses were also spread from the mean at a 1.045 standard deviation.

The third objective was to establish the effect of security on the market price of commercial real estate. The findings show that most of the respondents agreed with most of the statements as support by a mean score of 3.80. The responses were also spread from the mean at a 1.102 standard deviation.

The last objective was to establish the effect of social amenities on the market price of commercial real estate. The findings show that most of the respondents agreed with most of the statements as support by a mean score of 3.77. The responses were also spread from the mean at a 1.056 standard deviation.

5.3 Conclusions

Based on the findings of the study, it can be concluded that rent is a key determinant of the market price of commercial real estate. Transport infrastructure is also an important factor in determining the market price of commercial real estate. It can also be concluded from the results

that security and social amenities were both key determinants of the market price of commercial real estate

5.4 Recommendations

From the study the following recommendations can be made, investors should invest in a way to ensure fair rent on the tenants so that the worth of such property value is not compromised by their rental charges ensuring the tenants enjoy and experience satisfaction. Adequate transport infrastructure should be ensured in making investment decisions by investors as proper infrastructure increases property value. Security and social amenities should be improved and where necessary increased for such measures are a positive contributor to commercial real property value.

5.6 Suggestions for Further Study

This study was not exhaustive by any means and therefore it is suggested that another study be conducted in other institutions like residential, industrial or even retail real estates. The study should use the same variables so as to establish whether the findings of this study will hold true in a different context.

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