Effects of Project Cost and Time on Market Performance of Urban Housing Projects: A Case of Kilimani Area, Nairobi

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Abstract- The purpose of this research was to investigate on the factors affecting market performance of urban housing projects with specific reference to Kilimani area. The focus was on the project developer, the project architect and the project contractor of the housing projects in Kilimani area, Nairobi County. Although there are many factors that may influence market performance of housing projects, this study delimited itself to project cost and project time. The research designs for this study were correlational and the descriptive research designs. The study targeted 167 respondents who were drawn from 56 housing projects which were randomly selected. A questionnaire was used to collect the data and 114 responses were received representing a 68% response rate. The Pearson Product Moment Correlation test was used to calculate to determine whether there was a linear relationship between the factors under study and the market performance of housing projects in Kilimani. The correlation analysis was done at 0.05 level of significance. To test the hypothesis, if the p value was ≤ 0.05 then a relationship existed and the null hypothesis was then rejected. From the analysis, all the four null hypotheses were rejected. With $r = -0.6124$ and $p = 0.0256 < 0.05$, H1 was rejected and it was concluded that there was a significant relationship between project cost and market performance of housing projects. With $r = -0.5792$ and $p = 0.015 < 0.05$, H2 was rejected and it was concluded that there was a significant relationship between project time and market performance of housing projects. It was recommended that project team members should take measures in monitoring project cost overruns as well as project cost overruns as these two pointers greatly influenced all the three indicators of market performance (number of houses sold, project lead time and house prices).

Index Terms- Project Cost, Project Time, Market Perfomance

I. INTRODUCTION

1.1 Background of the Study

Projects are authorized as a result of market demand and as such, their market performance is key to the success of the project (PMBOK, 2008). Market performance is thus a common and contemporary goal of many development projects in various countries (Chang & Lee, 2008). Numerous housing projects are developed worldwide as housing projects have gone beyond simply providing shelter and protection and moved to the consideration of comfort (Schoenauer, 2000). The development of housing sector necessitates knowledge on urban factors that could have an effect on the market performance of housing schemes.

Since the economic crisis began in the United States and Europe in 2008, the global economy has undergone a massive change. According to Acharya et al. (2009) the United States real estate market is facing its worst hit in two decades due to the slowdown of housing sales. The most affected by this decline were real estate investors and home developers who were struggling to break-even financially on their investments. For these project investors, it is of importance to evaluate the current status of the market and predict its performance over the short-term in order to make appropriate financial decisions (Schoenauer, 2000).

Additionally, Acharya et al. (2009) found that after the depression there was a decrease in the number of units sold as the projects costs had gone up. As a result the market performance of housing projects slowed down as lesser units were sold and they were sold at a longer duration. Investors in the United States were cautious in investing in the industry that was seemingly collapsing as the housing projects were doing poorly in the market which was not good for business. The decrease of prices of housing units raised come concern as it was having a direct effect on the market of housing projects. The study by Potepan (1996) also concluded that house prices increase with project costs which then lead to a sales drop of houses.

Late completion of housing projects will have a significant effect on how the project will perform in the market because it delays what was already planned. The time overrun will affect the project since the developers or investors operate on a time-line where they are supposed to deliver the completed projects to certain stakeholders without delay. Okuwoga (1998) further adds that any delay caused is likely to lead to the stakeholders losing interest or the prices either moving up or down than it was earlier estimated hence effecting how the housing projects will perform at the time that they will be in the market.

For a project to perform well, it exhibits some aspects of competitive advantage in comparison to other similar projects. Porter (2008) concluded that fundamental basis of above-average market performance in the long run is sustainable competitive advantage. A firm is said to have a competitive advantage when it has the capabilities or means to outdo its rivals in the face of their customers. This competitive edge is acquired from company's superior products or services over those of the competition. A study by Kibiru (2013), which featured a housing

project in Kenya, found out that product differentiation added to the competitive advantage of housing projects which influenced the number of houses sold. Blackley (1991) suggested that marketing strategies of a housing project is an important issue as it may affect the selling price and the time taken for the property to be sold - project lead time.

Projects are planned and implemented within certain areas of influence which include the economic environment and political environment (PMBOK, 2008). Hass (2013) revealed a slowdown in the housing market in Kenya during the first quarter of 2013 as purchasers held off in concluding house moves during the election period. There was a decrease in the number of houses sold which affected the housing market. While agreeing with Hass (2013), Kagochi and Kiambigi (2012) further noted that investments in housing projects took longer lead time than earlier planned as a result of the disruption that was caused by the chaos during the 2007 Kenyan election. This is reinforced by the Global Property Guide (2013) which reported that there was a fall in house prices in Egypt during the political tension caused by the ousting of President Mohammed Morsi by a military coup. Economic factors facing a project have a direct impact on their profitability and, therefore, are important to analyze (Lee & Kotler, 2011). These factors include inflation rate, exchange rate, interest rate and mortgage rates. Nellis and Longbottom (1981) and Abelson (2005) all identify the mortgage interest rates influence on house prices which, by extension, affects the housing market. The property market will slow down when the mortgage rates rise. Hass (2013) reported that mortgage rates in Kenya ranged between 17 and 19% with the highest rate being asked by Chase Bank, at 22%. Lending and mortgage rates in some countries are as high as 20%, taking Nigeria for instance. This is sharply contrasted by Mac (2014) who noted that the sales in housing units in the United States were boosted with bank mortgage rates being down to an average of 3.89 % for a 30 year mortgage.

Technological advances also have an effect on the market performance of housing projects. Notably, Malaysia as a developing country has obtained benefits from the development of the housing projects through numerous technologies (Jarad et al., 2010). The shift from conventional building methods to more technological advanced methods has led to improved performances in the market where clients tend to buy more number of houses as better housing units are developed at an affordable cost as a result of their technological applications. Additionally, Shin et al. (2008) observed that more technologically advanced housing units will tend to do better from inception towards completion.

The level of stakeholder support plays a role in the market performance of any project. In any project, and especially in housing projects, many different and sometimes discrepant interests must be considered. According to Olander and Landin (2005) a project affects stakeholders in both positive and negative ways. The positive effects can be better communication, better housing or higher standards of living. A negative attitude to a construction project by stakeholders can severely obstruct its implementation. Such obstruction will cause cost overruns and exceeded time schedules due to conflicts and controversies concerning project design and implementation. This can result in extended project lead times and the fall of house prices which affects the market performance of the project. McElroy and Mills (2007) suggested that relationship with stakeholders must be developed and structured so as to achieve a successful outcome.

Kenya's property market is one of the most active in the East African region, equally rated among the top in the African continent (Knight Frank & Citi Private Bank, 2011). This is best explained by the fast rising demand for good urban housing, thanks to the growing middle class that is now pushing up demand for housing projects especially in places surrounding the capital Nairobi. Hass (2013) reported that in 2008, the Ministry of Nairobi Metropolitan Development estimated that the middle class housing gap in the city would reach a shortfall of 1.6 million by 2030. This triggered the setting of targets for 200,000 housing builds a year. The report further explains that planning approvals by Nairobi City Council in 2013 totaled to 15,337 with most of these projects being in Embakasi and Kilimani, both having more than 1,200 units approved.

However, Situma (2014) observed that the market performance of these projects in Kilimani was still very low. Many remain unoccupied with "for sale" signs dangling on the front gates. This study will thus seek to look at the market performance of housing projects in Kilimani Estate.

Africa has some of most of the world's largest cities with population growth rates above 5 % per annum (UN – Habitat, 2011) thus exerting a push for housing projects. Alongside the economic growth rates registers in the past decades, empirical evidence has shown that the African middle class has been growing too. As the middle class grows, so do cities which today host one out of four Africans (Yannis, 2013). Though housing demand in Africa has attempted to respond to these changes, it has been crippled with a number of hurdles. Hass (2013) reports that the estimates in 2008 had put the shortfall in middle class housing in Nairobi at 1.6 million by 2030. This led the government to set a target of 200,000 housing builds per year in the city but planned housing builds in 2013 reached just 15,000, with both Kilimani and Embakasi each having 8 % of these housing projects.

While this demand for housing has led to an increase in housing projects in a number of areas, the market performance of these projects in Kilimani are still very low. Many remain unoccupied with "for sale" signs dangling on the front gates. Situma (2014) further described that some developers have had to reduce the asking price several times and still there are no takers. Worse still, some properties have even been on the market for over 2 years. This is an indication that there has been a reduction in the number of units sold.

The financial and economic crisis of 2007 had a measurable impact on the market performance of housing projects. During this period, Nistorescu and Ploscaru (2010) noted that there was a decline in the number of houses sold. Particularly the case in Ireland, Spain and the United Kingdom, the financial crisis led to a sizeable inventory of unsold newly built houses and a fall in housing prices. A study by the Global Property Guide (2013) reported that there was a fall in house prices in Egypt during the political tension caused by the ousting of President Mohammed Morsi by a military coup.

Like any other investor, the end goal of a housing project developer is to get the optimal return from his investment. The

problem that this study seeks to address the market performance factors of housing projects in Kilimani, Nairobi County.

The general objective of this study was to determine the factors that influence market performance of urban housing projects. The research objectives of this research were; to determine the influence of project cost on market performance of urban housing projects and to examine the influence of project time on market performance of urban housing projects. This study will be useful to the policy makers. It will lead to favourable policies concerning access to finance for developers and housing/ property buyers. The Local Government will also use the findings of this study to understand the extent to which their jurisdiction affects the market performance of housing projects. Project sponsors would also understand the different aspects which come into play when it comes to market performance of housing projects.

The study will also inform on the current market conditions in this sector which will be fundamental to firms as well as upcoming property developers that want their project's output to have the shortest lead time. The findings of this study will thus positively influence investment decision making which will eventually lead to higher contribution to economic growth.

The study will be important to academic and business researchers. The development of the housing market is a very vast one and this research will give rise to key areas of weakness where there will be significant opportunity for further research in an effort to enhance investments in provision of income from housing in the country.

The study focuses on housing projects in particular those located in Kilimani area, Nairobi County. The respondents will be limited to three categories of key personnel who are mainly involved in the project cycle (initiation, planning, implementation, monitoring, evaluation and closure) of a housing project. These include the project developer, the project architect and the project contractor. Although there are many factors to influence market performance of housing projects, this study will delimit itself to project cost, project time, project competitive advantage and project environment.

The extent to which the respondents may be willing share the information may be a limitation to this study. This may be due to the respondents not fully understanding the intent of the study. The researcher intends to overcome this limitation by fully explaining of the purpose of the study. Additionally, the researcher will guarantee the confidentiality of the respondents. The researcher will also make prior appointments to avoid ambushing the respondents.

II. LITERATURE REVIEW

2.1.1 The Theory of Constraints

While analysing Goldratt's (1992) Theory of Constraints (TOC), Mabin (2003) argued that organizational performance is dictated by constraints. Constraints prevent an organization achieving its performance goals. Constraints can involve people, supplies, time, information, equipment, or even policies and they can be internal or external to an organization. The theory states that there is always at least one constraint in a system at any given time that limits the output of the entire system (Tulasi et al., 2012). When one constraint is strengthened, however, the system does not become infinitely stronger. The constraint migrates to a different component of the system. Some other link is now the weakest and all other links are non-constraints. The system is stronger than it was but still not as strong as it could be. TOC uses a focusing process to identify the constraint and restructure the rest of the organization around it. Goldratt originally identified five-step process for the theory (Motwani, 1996). These are identification of the constraint, its exploitation and subordination of everything else to the constraint, its elevation and back to the first step to identify the new most important constraint.

This theory is applicable to project management, not only in scheduling of resources such as time and money but also in extension, determining market performance. Any project link is either a constraint or has the potential to become a constraint. Often, when project risks are identified and assessed at early stages of the project life cycle, the project team prioritizes the risks according to severity (Steyn, 2011). There is a tendency that the lower severity risks are not given much attention and are eventually neglected. However as the project progresses, the less severe risks can change and have a high impact on the project. But according to TOC, once the highest constraint is removed, the process does not end (Motwani, 1996). It immediately starts work on the next highest constraint. This is because the next most severe risk now becomes the highest constraint on the project and it should now be worked on.

The process continues because each risk is a weak part of the chain. Whenever the highest risk in a project is identified, focus should be on that risk with the aim of either eliminating it or reducing either its probability of occurring or its impact to the level it would not be critical anymore. As an example, cost overrun is a constraint that is likely to make the market performance of housing projects poor. Constraints within the system could also be the nature of the political environment.

2.1.2 The 7Ps of Marketing Model

Successful marketing performance depends on addressing a number of major issues. The 7Ps of marketing is a model that was developed from the original four Ps that included product, price, promotion and place of a good (Koontz, 2004). The key reason as to why these aspects were chosen as the main part of marketing mix was the fact that they were specific factors over which the marketing manager ought to be able to exercise a degree of control, depending on the nature of the organizations' resources. When marketing services, managers have control of more factors. This led to the creation of the services marketing mix by Booms and Bitner (1981) which included process, people and physical evidence.

The 7Ps have been employed to drive and analyze marketing activities in a wide range of markets (Kotler & Keller, 2006). The product is viewed as the first and most important of the seven Ps. This is due to the fact that product represents whatever the company sells to its customers. The product possesses interrelationships with all the other aspects of the seven Ps. Aaker (2007) suggests that the quality of a product helps determine the cost to produce, and hence its price. The product will additionally affect the market segments to which it could appeal hence influencing its place as well as promotion necessary to sell it.

A product is only worth what customers are prepared to pay for it. The price also needs to be competitive, but this does not necessarily mean the cheapest; the small business may be able to compete with larger rivals by adding extra services or details that will offer customers better value for money (Kotler & Keller, 2006). Additionally, the price of a product tends to possess significant relations with the other aspects of the marketing mix. The fact that the price for a given product or service involves all the decisions that a firm needs to make around the pricing strategy and any discounts that may be offered, shows a strong relationship with promotions that the firm will use (Nagle & Holden, 2001). Price will also be affected by the costs associated with the product; hence showing a relation towards the product characteristics, individuals that are employed to market the product plus the places that the product or service is provided.

Promotion is the way a company communicates what it does and what it can offer customers. It includes activities such as branding, advertising, public relations, corporate identity, sales management, special offers and exhibitions (Armstrong & Kotler, 2013). Notably, promotion is linked to product, price and place. Promotion is viewed as one of the widest aspects of the marketing mix that covers all the marketing communications, encompassing the advertising and publicity around the service. As a result, wide ranging aspects of the promotion will often be dependent on the product, price that is charged, place, characteristics of the individuals that provide it plus the processes that are involved in the service. Additionally, physical evidence and promotion are related as the effectiveness of any promotion will tend to rely on the physical evidence to which it is based (Bitner, 1990).

According to Rafiq and Ahmed (1995), anyone who comes into contact with your customers will make an impression, and that can have a profound effect positive or negative on customer satisfaction. The reputation of your brand rests in the employees' hands. The staff must, therefore, be appropriately trained, well-motivated and have the right attitude. There exists a relation on the processes and the people involved as customers will need some rapid response on questions they may have raised on a product or service (McCarthy, 1960). Hence an efficient system will ensure that the processes are handled by the right people to attain satisfaction which could lead to purchase of the product or service.

The physical evidence go hand in hand with the impression that a customer gets when visiting housing units that one might be willing to purchase; units that are physically appealing will attract customers more (Bitner, 1990). In the housing industry, the value of a housing unit lies in the eyes of the beholder and for continuous performance in the market; the firm ought to give the customers what they want and not what the firm thinks the clients want. There ought to be a system that is in place in the organization that continuously checks what the various stakeholders think of the housing units that have been developed, how efficient are the support services of the organization, whether their need have changed and whether they can see them changing (Rafiq & Ahmed, 1995).

Through efficient systems one is sure that the right price is set for the right commodity in the market hence the customer will attain value for the product. An expensive product will mean that the customer should expect a high quality product. The marketing medium that you position the housing project matters to the consumers. For instance, if it is via the internet the organization should give a clear detail of the housing units in a way that customers will want to have a physical visit to view the houses (Chaffey, 2006). Hence need arises for the physical evidence of the housing units that one will be selling. Additionally, in promotion the organizational promotional activities ought to capture the attention of the customers that are targeted and enable them to understand why they should buy the properties. The people in the organization also should understand what is being offered ensuring that through promotion they explain to the customer the benefits that they get through purchasing and not just the features of the housing units.

2.1.3 PESTEL Model

PESTEL analysis is a strategic tool to analyze the present market condition of a business. It is also useful in understanding market growth or decline, potential and direction for operations. According to Grundy (2006), PESTEL ensures that company's performance is aligned positively with the powerful forces of change that are affecting business environment. The acronym PESTEL stands for Political, Economic, Social, Technological, Environmental and Legal.

Political factor plays a major role in any business venture of an organization. Jobber (2006) observed that the political condition of the country, region or the market has direct effect on the company's outcome there. Apart from the stability, the political factors also taken into account include government policies and tax laws. Housing projects in Kenya have to face a number of statutory fees and levies. Nahinga (2014) reported that the developer will be taxed during the land transactions, while engaging consultants, during construction and through ownership of the property.

Economic factors facing businesses have a direct impact on their profitability and, therefore, are important when you analyse PESTEL (Lee & Kotler, 2011). These factors include inflation rate, market demand, interest rate and disposable income available to end consumers. Levels of economic growth and poor mortgage availability seriously impact the housing market. TMC and Hass (2013) observed that there are about 20,000 mortgages currently in the Kenyan market in a population of over 40 million people. This is very low compared with other nations. The UK for example has 9.2 million mortgages representing 37.3% of households and the US has 44.5 million mortgages representing 59.3% of households. Closer to home, residential mortgages represent 56% of all leading South African households. The report further highlights that mortgage rates remain high in Kenya compared to other countries. For example, the average rate in South Africa stands at 8.5%, while those of the UK and US are at 5.5 and 3.5% respectively.

One social factor which may affect the market performance of a housing project would the brand name of the developer. Credibility of a builder or the company plays an important role in convincing the buyer to buy the house and be sure of the quality of construction work done. A low credibility or image can lead to poor financial performance. A good image is not just built in a day; it takes years of servicing the society through following high standards of work in the process of construction and sale. Factors such as increasing crime, ageing population, and population

growth rates are part of the social dimension. An increase in the ageing population may impact on the types of buildings projects required. Borowiecki (2009) found that a 1 % increase in population growth results in a 2 % higher house price growth.

Environmental impacts in a housing project can include issues such as waste disposal and recycling procedures while the legal factors may encompass planning legislation and building regulations. Technological factors refer to the advances in technology and their adoption in projects. New construction technologies affect working practices in the building industry, constructing more component systems in factories rather than on the building site (Jarad et al., 2010). Over and above the observations of (Jarad et al., 2010), Shin et al. (2008) observed that more technologically advanced housing units will tend to do better from inception towards completion.

2.2 Conceptual Framework

A conceptual framework is a conceptualization of the relationship between the independent variables and the dependent variable in a study and shows the relationship graphically (Mugenda & Mugenda, 2003). The conceptual framework for this study is shown in figure 2.1.

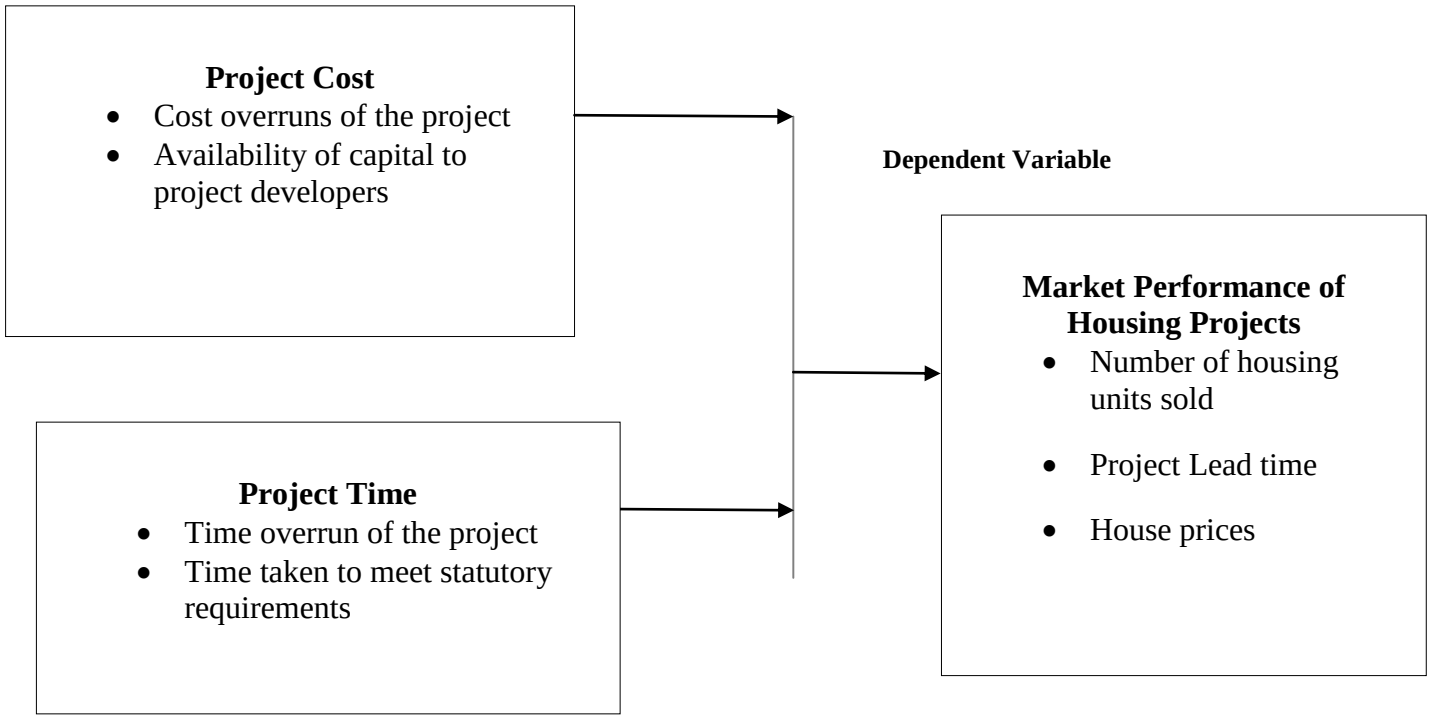

Figure 2.1: Conceptual Framework

This study looked into four independent variables namely project cost and project time. The dependent variable is market performance of housing projects. The indicators of market performance of housing projects will be number of housing units sold, project lead time and house prices. The indicators for project cost are cost overruns of the project and the availability of capital to project developers. The indicators for project time are time taken from project initiation to closure and the time taken to meet statutory requirements.

2.3 Empirical Review

This section examines the relationships between each of the two independent variables and the dependent variable.

2.3.1 Project Cost and Market Performance of Housing Projects

Availability of capital to the stake-holders has been a setback in the market performance of housing projects. In respect to the access to finance for developers, most housing projects are financed primarily through debt. Considering the time needed for construction, potential delays as well as high and fluctuating interest rates, the cost of debt can weigh negatively on the total financing structure of a housing project (Yannis, 2013). In addition, access to equity is in short supply making financing harder as it becomes difficult for developers to become eligible for loans. Yannis (2013) further notes that this limits the development of housing projects delivered to the market, resulting in higher priced housing units which face poor market performance thus threatening the capital introduced by the developer in the first place.

Leah (2012) also cites availability of funding as one of the major cost driver for the developers of houses who in turn have to recoup the same from the final buyers of the houses by charging high prices. Memon (2010) support this finding and stated that in house development, availability and cost of long term funding has a major influence on the final cost of the house. Similarly, the study of Hull et al. (2011) found out that the cost of funding and availability of long term funds influenced house prices in London, UK. These studies, however, did not identify the effect of capital availability on the project lead times.

The financial and economic crisis of 2007 had a measurable impact on the market performance of housing projects. During this period, Nistorescu and Ploscaru (2010) note that developers could not access credit facilities and thus new residential constructions were on a downward trend. This trend, coupled with the householder's lack of confidence in future market prospects, resulted in a decline of the number of houses sold. Particularly the case in Ireland, Spain and the United Kingdom, the financial crisis led to a sizeable inventory of unsold newly built houses and a fall in housing prices.

Cost overruns can result from increasing project costs brought by a change in government policy. Hass (2013) reported that the construction permit fee in Kenya has been increased by a multiple of between 200 and 1250, from 0.001 to 0.006 % of the cost of construction to 1.25 %. At the same time, sharp increases in land rates and the city council construction fees added increased financial disincentives to development. Any additional cost that is passed on to the developer is eventually passed onto the home buyers. This has seen developers raising the unit selling price (Shelter Afrique, 2013). As housing prices go up, many potential home owners will shy away from purchases thus leading to poor market performance.

An investigation of the Swiss housing market by Borowiecki (2009) identified change in construction costs as an important house price determinant. An appreciation of construction costs leads roughly to equal increases in prices of dwellings. Consequently, an increase in construction prices is fully transferred to the buyers. This study, however, did not identify the project lead time as an indicator of market performance of housing projects.

2.3.2 Project Time and Market Performance of Housing Projects

Like any other project, a housing project may run into unforeseeable risks which may lengthen the project time. Assaf and Al Hejji (2006) as well as Stumpf (2000) indicate that a project completed within the specified time is a rare event even with today's advanced technology and management understanding of project management techniques. PMBOK (2008) points out that time overrun is a major risk in any project which may lead to a project having poor performance. It is argued by Shelter Afrique (2013) that time overrun affects the project lead time in that by the time the developer is through with the project, the customers tastes and preferences have changed or there have been new trends in the housing market which are then on demand. This change in preferences may lead to poor market performance of the housing units.

Additionally, any event that lengthens the project time, whether planned or unplanned, adds onto the cost of capital. The longer a loan remains unpaid, the more interest it accrues. If a project was heavily dependent on borrowed capital, then the debt is compounded for any additional period the project takes (Olusegun, 2012). This cost is eventually passed onto the prospective home owners. The bigger the debt, the higher the selling price if the developer wants to maintain a high profit margin (Shelter Afrique, 2013). This affects the market performance of housing projects.

Meeting all the compliance requirements has been a daunting task to many project developers as it takes a considerable amount of time. Mansfield et al. (1994) suggests that excessive bureaucratic checking and approval procedures are responsible for project delays. This makes the project to fall behind delivery schedule which affects the number of houses sold as consumer preferences may have changed. However, the study did not identify how the project environment and its competitive advantage affects market performance of housing projects.

A report by Noppen (2012) supports the findings on Mansfield et al. (1994). The report concluded that the processing time needed to meet the compliance requirements varies greatly between municipalities. The report compared processing times between two municipalities in Kenya and found that approvals in Mavoko can take as little as 30 days, while Nairobi approvals typically take multiple months.

2.4 Research Gaps

Hull et al. (2011) found out that the cost of funding and availability of long term funds influenced house prices in London, UK. Leah (2012) also cites availability of funding as one of the major cost driver for the developers of houses who in turn have to recoup the same from the final buyers of the houses by charging high prices. These studies, however, did not identify the effect of capital availability on the project lead times. Therefore, this study has identified capital availability as a research gap. Mansfield et al. (1994) suggests that excessive bureaucratic checking and approval procedures are responsible for project delays. This makes the project to fall behind delivery schedule which affects the number of houses sold as consumer preferences may have changed. However, the study did not identify how the project environment and its competitive advantage affects market performance of housing projects. Therefore, this study has identified project environment and project competitive advantage as research gaps.

An investigation of the Swiss housing market by Borowiecki (2009) identified change in construction costs as an important house price determinant. An appreciation of construction costs leads roughly to equal increases in prices of dwellings. Consequently, an increase in construction prices is fully transferred to the buyers. This study, however, did not identify the project lead time as an indicator of market performance of housing projects. This study has, therefore, identified project lead time as a research gap. The study of Chi et al. (2010) suggested that lack of ability to identify which strategy a firm must emphasize more may be a reason for low business performance such as a drop in sales. This study, however, did not fully investigate the effect of marketing strategies on housing projects. This study has, therefore, identified project marketing strategies as a research gap.

The work of Jarad et al. (2010) studied technological advancements in relation to market performance of housing projects in Malaysia. Nevertheless, the study did not identify project lead time as an indicator for market performance of housing projects. A study by the Global Property Guide (2013) reported that there was a fall in house prices in Egypt during the political tension caused by the ousting of President Mohammed Morsi by a military coup. This study did not look at factors which could potentially affect house prices such as project cost

and project time. This study has, therefore, identified project cost and project time as research gaps.

With the exemption of Nigeria, a majority of the studies, such as Mansfield (1994) and Okuwoga (1998), touching on market performance of housing projects have concentrated in the developed countries. This presents a significant research gap considering the fact that the middle class in Kenya, a developing country, is on the rise and that the private sector is the main provider for urban housing projects. This study, therefore, seeks to address a number of issues which have not been adequately addressed especially for the developing countries.

III. RESEARCH METHODOLOGY

The research designs for this study were correlational and the descriptive research designs. Shield and Rangarjan (2013) indicate that descriptive survey is used to describe characteristics of a population or a phenomenon being studied. The arithmetic mean and standard deviation will be used to describe the variables under investigation. While descriptive design will be used to unearth the phenomena in this study, correlational research design will be used to test the extent to which variables in the study relate to each other. The correlational design is mainly used when the researcher wants to determine the relationship that exists between two or more variables of interest (Porter & Carter, 2000). This design is appropriate since the study will adopt a quantitative approach. The correlational design is a quantitative design in which variables are not manipulated; they are only identified and are studied as they occur in a natural setting and relationships between those variables are examined (Sekaran, 2003). This design is suitable since the researcher will not interfere with the variables but will study them as they appear.

The target population of this study was be 285 respondents. The scope of this study will be all the housing projects in Kilimani area. This study targets the housing projects in the area which were approved by Nairobi City Council, Planning Department in the years 2012, 2013 and 2014. These housing projects were 95 in number. From each housing project, the study targets three categories of respondents namely: the project developer, project architect and the project contractor.

The sampling frame for this study is shown in table 3.1.

Table 3.1 Sampling Frame

Number of housing units	Categories of respondents	Target population
95	3	285

The sampling frame is, therefore, 3 respondents * 95 housing projects = 285 respondents. This sampling frame is appropriate for this research as these particular respondents are key participants during the project cycle (initiation, planning, implementation, monitoring, evaluation and closure) of a housing project.

For the study, probability sampling was used. Here each member of the population has a non-zero probability of being selected and people, places and elements are randomly selected. In this research, random sampling will be used. Sekaran (2003) argues that random sampling reduces sampling error and gives a sample size that is more representative. The sample size for this study was drawn from Saunders et al. (2009) who calculated the sample size of 125 respondents from a target population of 200 respondents using the formula:

$$Na = \frac{n * 100}{re\ \%}$$

where:
Na – the desired sample size
n – the minimum responses
re% – is the estimated response rate.

Therefore, the sample size of this study, Na, is calculated as follows:

$$Na = \frac{100 * 100}{60} = 167 \text{ respondents.}$$

This sample size is also supported by Sekaran (2003) who suggests a minimum of 165 respondents when the target population is 290. The 167 respondents represent 56 housing projects which were selected by random sampling.

A questionnaire was used for data collection. Kothari (2004) terms the questionnaire as the most appropriate instrument due to its ability to collect large amount of information in a reasonably quick span of time and economic manner. The questionnaire was close ended for ease of analysis. Additionally, this tool will be suitable as it fits the quantitative approach which the study has adopted. The questionnaire was divided into 2 sections. The first section had the bio data questions which will inform on the demographic characteristics of the respondents. The second part was investigating the relationships between each of the 4 independent variables and the dependent variable.

Prior to the main study a pilot test was conducted with a pre-test sample of 10 % of the population size and are thus twenty eight respondents (Mugenda & Mugenda, 2003). Corrections will thereafter be made before distributing it to the others. This process helps to refine the questionnaire, enhance its readability and minimize the chances of questions being misinterpreted (Saunders et al., 2009). The respondents who took part in the pilot test were not to be used in the main study to eliminate biasness in the research results based on prior knowledge of the contents in the research instrument.

Reliability refers to the measure of the degree to which the research instruments yield consistent results (Mugenda & Mugenda, 2003). In this study, reliability is ensured by pre testing the questionnaire with a selected sample of twenty eight respondents from nine different housing projects to ensure that there will be no possibility of bias. The test – retest technique will be used since the variables being measured are relatively stable. Marnat (2009) proposes the test – retest method when the variables being measured are relatively stable. The time lapse between the two tests will be two weeks. The scores from both testing periods will then be correlated. It was ensured that the reliability of all items in the research instrument will have a minimum coefficient of 0.7 ($\alpha > 0.7$).

The accuracy of data collected largely depended on the data collection instruments in terms of validity. Validity as noted by Robinson (2002) is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. Validity was arrived at by having all the objective questions included in the questionnaire. The validity of the research instruments in this study was tested through the content-related method. This test of validity method is so selected because it is consistent with the objectives of the study which seek to reveal the details of the contents in market performance of housing projects. The validity of the questionnaire was achieved through a focus group discussion between experts in housing projects and the university supervisor. In this forum, the clarity, relevance and appropriateness of the items will be discussed.

Data collection was done through the use of the questionnaire. The questionnaires were hand delivered to all the respondents by the researcher. The researcher then collected the filled questionnaires after a week. Low rate of return of duly filled questionnaires is minimized by follow up through telephone communication and email after the period allowed for completion of the questionnaires is over.

In line with the quantitative approach adopted for this study, the data collected will be analysed both descriptively and inferentially. Descriptive data will be analysed by use of arithmetic mean and standard deviation. The Likert type scale will be used using a scale of SD – Strongly Disagree; D – Disagree; N –Neutral; A – Agree; and SA – Strongly Agree as recommended by Alan (2001). During analysis of data collected by Likert scale, Carifio and Rocco (2007) indicates Strongly Disagree (SD) $1 < SD < 1.7$; Disagree (D) $1.8 < D < 2.5$; Neutral (N) $2.6 < N < 3.3$; Agree (A) $3.4 < A < 4.1$; and Strongly Agree (SA) $4.2 < SA < 5.0$. These propositions were followed in data analysis in this study in the interpretation of descriptive data obtained by use of Likert scale.

Inferential statistics was analysed using the Pearson Product Moment Correlation, r. Mugenda and Mugenda (2003) notes that correlation is used to analyze the degree of relationship between two variables. The Pearson Product Moment Correlation is appropriate for analyzing the data since the relationships between the variables are linear. The correlation was done at a 0.05 level of significance. According to Shirley et al. (2005), the strength of the relationship was considered weak for $0.1 \leq r \leq 0.29$, moderate for $0.3 \leq r \leq 0.59$ and strong if $0.6 \leq r \leq 0.9$. To test the hypothesis, if the p value ≤ 0.05 then a relationship exists and the null hypothesis was then to be rejected.

Based on the hypotheses formulated in this study, the following correlation models were developed whereby:

y	–	Dependent Variable
X_1, X_2, X_3, X_4	–	Independent Variables
β_0	–	Constant term
$\beta_1, \beta_2, \beta_3, \beta_4$	–	Beta terms
ε	–	Error term

Model 1

Hypothesis 1: Project cost does not influence market performance of urban housing projects.
Market Performance = f (Project cost)

$$y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Model 2

Hypothesis 2: Project time does not influence the market performance of urban housing projects.
Market Performance = f (Project time)

$$y = \beta_0 + \beta_2 X_2 + \varepsilon$$

Model 3

Hypothesis 5: Project time and project cost do not influence the market performance of housing projects.
Market Performance = f (Project time, project cost)

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

IV. DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Response Rate

A randomly selected sample of 167 respondents was chosen and a questionnaire was used to collect the data. A total of 114 responses were received, representing a 68% response rate. According to Mugenda and Mugenda (2003) a 50% response rate is adequate, 60% good and above 70% rated very good. This implies that basing on this assertion; the response rate in this case of 68% was good enough to make statistical generalizations.

4.2 Demographic Information of the Respondents

The general information on the respondents comprised of questions about their age, which profession they were in and the number of years they had worked in their profession.

4.2.1 Age bracket of the respondents

The respondents were asked to indicate their age bracket. Age was not a consideration in the selection of the respondents in this study. Thus, this question helped to ascertain that the ages of respondents were normally distributed. From the results in table 4.1, 6.1 % were below 30 years old; 29.8% were aged between 31 and 40 years; 40.4% were aged between 41 and 50 years while 23.7% were aged between 51 and 60 years old.

Table 4.1 Respondents' Age

Age	Frequency	Percentage
Below 30	7	6.1%
31 – 40	34	29.8%
41 – 50	46	40.4%
51 – 60	27	23.7%
Total	**114**	**100%**

4.2.2 Profession of the Respondents

The respondents were asked to indicate their profession. The results are shown in table 4.2

Table 4.2 Respondents' Profession

Profession	Frequency	Percentage
Project architect	43	37.7%
Project developer	33	28.9%
Project contractor	38	33.3%
Total	**114**	**100%**

From the research findings, 37.7% of the respondents were project architects; 28.9% were project developers; while 33.3% were project contractors. This question helped to determine whether the respondents were normally distributed across the three professions. This data was important because the study equally involved all the three categories of respondents.

4.2.3 Years Worked by the Respondents

The respondents were asked to indicate their profession. This information was considered important to responding to the questionnaire in terms of understanding the items which the questionnaire sought to measure. The results are shown in table 4.3

Table 4.3 Number of years worked in the profession

No of years worked	Frequency	Percentage
Below 5 years	14	12.3%
6 – 10 years	18	15.8%
11 – 15 years	27	23.7%
16 – 20 years	33	28.9%
More than 20 years	22	19.3%

Total	**114**	**100%**

The research findings indicated that 12.3% of the respondents had worked below 5 years; 15.8% had worked between 6 and 10 years in their profession; 23.7% indicated 11 to 15 years; 28.9% of the respondents indicated 16 to 20 years; while 19.3% had worked for more than 20 years in their profession.

4.3 Analysis of Market Performance of Housing Projects

Market performance was identified in this study as the dependent variable. Theoretical and empirical review of this study showed that number of houses sold, the project lead time and the change in house prices are pointers of market performance. Data was, therefore, collected to measure these aspects of market performance. This was achieved by having three items each addressing the indicators of market performance of housing projects.

4.3.1 Percentage of the Houses Sold Since Project Inception

The respondents were asked to indicate what percentage of the houses had been sold since the inception of the project. From extensive theoretical and empirical literature reviewed in the study, the number of houses sold indicated how the project was performing in the market. This information was considered important in respecting to assessing how many houses were yet unsold. The results are shown in table 4.4

Table 4.4 Houses Sold Since Project Inception

% of houses sold since project inception	Frequency	Percentage
Below 20%	17	14.9%
21 – 40 %	27	23.7%
41 – 60 %	33	28.9%
61 – 80 %	28	24.6%
Above 80 %	9	7.9%
Total	**114**	**100%**

4.3.2 Time taken for the houses to be sold after project completion

The respondents were asked to indicate much time it took for all the houses to be sold when the housing project was completed. This question was considered important in determining the project lead time. The results are shown in table 4.5

Table 4.5 Time Taken for the Houses to be Sold After Project Completion

Time taken for the houses to be sold after project completion	Frequency	Percentage
Below 6 months	15	13.2%
7 – 12 months	42	36.8%
13 – 18 months	26	22.8%
18 – 24 months	20	17.5%
Above 24 months	11	9.6%
Total	**114**	**100%**

From the data findings, 36.8% of the respondents indicated that the project lead time was between 7 – 12 months, 22.8% indicated 13 – 18 months, 17.5% indicated 18 – 24 months, 13.2 % of the respondents indicated that the lead time was below 6 months while 9.6 % indicated that the project lead time was above 24 months. Project lead time is important in this study since a project investor wants to recoup the investment in the shortest time possible. From the results, a project has a 50 % chance is selling all the housing units within the one year and an equal 50 % chance in selling the units within a period of more than one year.

4.3.3 Significant Changes in the Selling Price of the Houses

The respondents were asked whether there was a significant change in the selling price of the houses after the completion of the housing project. The results are shown in table 4.6

Table 4.6 Significant Changes in Selling Price of the Houses

Significant change in selling price	Frequency	Percentage
Yes	101	88.6%
No	13	11.4%
Total	**114**	**100%**

From the findings, 88.6% indicated that there was a significant change in the selling price while only 11.4% indicated that there was no change in the selling price. The theoretical and empirical literature reviewed in the study revealed that during the life cycle of the housing project, the selling price of the housing units may be affected by certain factors which may significantly cause a change in the selling price. The information obtained from this sold indicated that a majority (88%) of the projects had a significant change in the selling price.

4.4 Analysis of Project Cost

In this section, descriptive and inferential statistics on the influence of project cost on market performance was analysed. In this study, project cost was identified as an independent variable with its indicators being project cost overruns and the availability of capital. Data was, therefore, collected to measure these aspects of project cost by use of six items in the questionnaire.

4.4.1 Descriptive Analysis of Project Cost on Market Performance of Housing Projects

The descriptive analysis of project cost on market performance of housing projects is shown in table 4.7. Six items were developed to measure the extent of this relationship.

Table 4.7: Means and Standard Deviations of Project Cost and Market Performance

No	Item	N	Mean	Std. Dev.
7a	Cost overruns of the project influences the number of houses sold	114	4.701754	.4595077
7b	Cost overruns of the project influences the project lead time	114	4.640351	.4820163
7c	Cost overruns of the project influences the house prices	114	4.868421	.3395249
7d	Availability of capital to project developers influences the number of houses sold	114	2.482456	.8747435
7e	Availability of capital to project developers influences the project lead time	114	3.859649	.9395649
7f	Availability of capital to project developers influences the house prices	114	3.298246	1.28937
	Composite Mean = 3.975146 Composite Standard Deviation = 0.58305			

Item 7a sought to establish the extent to which cost overruns of the project influences the number of houses sold. The mean score was 4.701754 while the standard deviation was 0.4595077. This result indicates that the majority of the respondents strongly agreed the cost overruns of the project influences the number of houses sold. Item 7b sought to establish the extent to which cost overruns of the project influences the project lead time. The mean score was 4.640351 while the standard deviation was 0.4820163. This result indicates that the majority of the respondents strongly agreed that the cost overruns of the project influences the project lead time. Item 7c sought to establish the extent to which cost overruns of the project influences the house prices. The mean score was 4.868421 while the standard deviation was 0.3395249. This result indicates that the majority of the respondents strongly agreed that the cost overruns of the project influences the house prices.

Item 7d sought to establish the extent to which availability of capital to project developers influences the number of houses sold. The mean score was 2.482456 while the standard deviation was 0.8747435. This result indicates that the majority of the

respondents disagreed that the availability of capital to project developers influences the house prices. Item 7e sought to establish the extent to which availability of capital to project developers influences the project lead time. The mean score was 3.859649 while the standard deviation was 0.9395649. This result indicates that the majority of the respondents agreed that the availability of capital to project developers influences the project lead time. Item 7f sought to establish the extent to which availability of capital to project developers influences the house prices. The mean score was 3.298246 while the standard deviation was 1.28937. This result indicates that the majority of the respondents were neutral that the availability of capital to project developers influences the house prices.

The composite mean score for these items was 3.975146 while the composite standard deviation was 0.58305. In respect to the study, the implication of this result meant that the respondents agreed that project costs influence the market performance of housing projects.

4.4.2 Inferential Analysis of Project Cost on Market Performance of Housing Projects

Research objective 1 of this study was designed to determine the influence of project cost on market performance of urban housing projects. The hypothesis formulated and tested for this objective was:

Hypothesis 1

H_0: Project cost does not influence market performance of urban housing projects.

H_1: Project cost influences market performance of urban housing projects.

The corresponding correlational model was:

Market Performance = f (Project cost)

$y = \beta_0 + \beta_1 X_1 + \varepsilon$

The data that was used to test this hypothesis were collected using items 7a to 7f measuring the influence of project cost on market performance. In the Likert type scale that was used, each item consisted of a statement that measured the extent to which project cost influenced market performance. Respondents were asked to indicate by way of ticking the appropriate statement using a scale of 5 to 1 where 5 represented SA – Strongly Agree; 4 represented A –Agree; 3 represented N – Neutral; 2 represented D – Disagree; while 1 represented SD – Strongly Disagree.

The results arising from running an ordered probit on Stata analysis software are presented in table 4.8. The analysis was done at 0.05 level of significance.

Table 4.8: Ordered Probit Results for Project Cost

Market Performance of Housing Projects	Coef.	Std. Err.	P value
Project Cost	-0.8695866	0.7663129	0.0477

r = - 0.6024

The calculated correlation coefficient shows that r = - 0.6124. According to Shirley et al. (2005), the strength of the relationship will be considered weak for $0.1 \leq r \leq 0.29$, moderate for $0.3 \leq r \leq 0.59$ and strong if $0.6 \leq r \leq 0.9$. It can, therefore, be concluded that there is a strong negative correlation between project cost and market performance of housing projects. Therefore, an increase in project costs lead to a negative impact on market performance of housing projects. Additionally, a unit % increase in project costs would result to 86.95% decrease in market performance. Therefore, project costs significantly influence market performance of housing projects. The P value was 0.0477. This value being less than 0.05, the null hypothesis was, therefore, rejected and it was concluded that there was a significant relationship between project cost and market performance of housing projects.

4.5 Analysis of Project Time

In this section, descriptive and inferential statistics on the influence of project time on market performance was analyzed. In this study, project time was identified as an independent variable with its indicators being project time overruns and the time taken to meet statutory requirements. Data was, therefore, collected to measure these aspects of project cost by use of six items in the questionnaire.

4.5.1 Descriptive Analysis of Project Time on Market Performance of Housing Projects

The descriptive analysis of project time on market performance of housing projects is shown in table 4.9. Six items were developed to measure the extent of this relationship.

Table 4.9: Means and Standard Deviations of Project Cost and Market Performance

No	Item	N	Mean	Std. Dev.
8a	Time overruns of the project influences the number of houses sold	114	3.938596	1.184599
8b	Time overruns of the project influences the project lead time	114	4.236842	.8015762

8c	Time overruns of the project influences the house prices	114	4.359649	.6115003
8d	Time taken to meet statutory requirements influences the number of houses sold	114	2.289474	.9931062
8e	Time taken to meet statutory requirements influences the project lead time	114	3.377193	1.131921
8f	Time taken to meet statutory requirements influences the house prices	114	2.842105	1.373446
	Composite Mean = 3.50731 Composite Standard Deviation = 0.44668			

Item 8a sought to establish the extent to which time overruns of the project influences the number of houses sold. The mean score was 3.938596 while the standard deviation was 1.184599. This result indicates that the majority of the respondents agreed the cost overruns of the project influences the number of houses sold. Item 8b sought to establish the extent to which time overruns of the project influences the project lead time. The mean score was 4.236842 while the standard deviation was 0.8015762. This result indicates that the majority of the respondents strongly agreed that the cost overruns of the project influences the project lead time. Item 8c sought to establish the extent to which time overruns of the project influences the house prices. The mean score was 4.359649 while the standard deviation was 0.6115003. This result indicates that the majority of the respondents strongly agreed that the time overruns of the project influences the house prices.

Item 8d sought to establish the extent to which time taken to meet statutory requirements influences the number of houses sold. The mean score was 2.289474 while the standard deviation was 0.9931062. This result indicates that the majority of the respondents were neutral that the time taken to meet statutory requirements influences number of houses sold. Item 8e sought to establish the extent to which time taken to meet statutory requirements influences the project lead time. The mean score was 3.377193 while the standard deviation was 1.131921. This result indicates that the majority of the respondents agreed that the time taken to meet statutory requirements influences the project lead time. Item 8f sought to establish the extent to which time taken to meet statutory requirements influences the house prices. The mean score was 2.842105 while the standard deviation was 1.373446. This result indicates that the majority of the respondents were neutral that time taken to meet statutory requirements influences the house prices.

The composite mean score for these items was 3.50731 while the composite standard deviation was 0.44668. In respect to the study, the implication of this result meant that the respondents agreed that project time influence the market performance of housing projects.

4.5.2 Inferential Analysis of Project Time on Market Performance of Housing Projects

Research objective 2 of this study was designed to determine the influence of project time on market performance of urban housing projects. The hypothesis formulated and tested for this objective was:

Hypothesis 2

H_0:Project time does not influence market performance of urban housing projects.

H_1:Project time influences market performance of urban housing projects.

The corresponding correlational model was:

Market Performance = f (Project time)

$y = \beta_0 + \beta_2 X_2 + \varepsilon$

The data that was used to test this hypothesis were collected using items 8a to 8f measuring the influence of project time on market performance. In the Likert type scale that was used, each item consisted of a statement that measured the extent to which project time influenced market performance. Respondents were asked to indicate by way of ticking the appropriate statement using a scale of 5 to 1 where 5 represented SA – Strongly Agree; 4 represented A –Agree; 3 represented N – Neutral; 2 represented D – Disagree; while 1 represented SD – Strongly Disagree.

The results arising from running an ordered probit on Stata analysis software are presented in table 4.10. The analysis was done at 0.05 level of significance.

Table 4.10: Ordered Probit Results for Project Time

Market Performance of Housing Projects	Coef.	Std. Err.	P value
Project Time	-0.6848026	0.2813609	0.015

r = -0.5792

The calculated correlation coefficient shows that r = -0.5792. According to Shirley et al. (2005), the strength of the relationship will be considered weak for $0.1 \leq r \leq 0.29$, moderate for $0.3 \leq r \leq 0.59$ and strong if $0.6 \leq r \leq 0.9$. It can, therefore, be

concluded that there is a moderate negative correlation between project time and market performance of housing projects. Therefore, an increase in project time leads to a decrease in market performance of housing projects. Additionally, a unit % increase in project time would result to 68.5% decrease in market performance. Therefore, project time significantly influences market performance of housing projects. The P value was 0.015. This value being less than 0.05, the null hypothesis was, therefore, rejected and it was concluded that there was a significant relationship between project time and market performance of housing projects.

V. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Findings

This study aimed to investigate the factors affecting market performance of housing projects. Four hypotheses were formulated and tested using the Pearson Product Correlation Moment since the relationships under investigation were linear. From the analysis, all the four null hypotheses were rejected. Where p <0.05, the null hypothesis was rejected and it was concluded that a correlation model existed implying that a significant relationship was established between the variables under consideration. The strength of the established relationship was considered weak for $0.1 < r < 0.29$; moderate for $0.3 < r < 0.59$; and strong for $0.6 < r < 1.0$. The positive or negative sign of the 'r' values denoted the direction of the relationship under investigation.

For H_1, r = -0.6124 and the p = 0.0477 < 0.05 meant that the null hypothesis was rejected and it was concluded that there was a significant relationship between project cost and market performance of housing projects. The null hypothesis was rejected for H_2, when r = -0.5792 and p = 0.015 < 0.05. It was concluded that there was a significant relationship between project time and market performance of housing projects. For H_3, r = - 0.1979 and p = 0.03156 < 0.05 meant that the null hypothesis was rejected and it was concluded that there was a significant relationship between project environment and market performance of housing projects. Finally, the null hypothesis was rejected for H_4, when r = 0.4872 and p = 0.0424< 0.05. It was concluded that there was a significant relationship between project competitive advantage and market performance of housing projects. The summary results of this analysis are presented in table 5.1.

Table 5.1 Summary of Results and Tests of Hypothesis

Research Objective	Hypothesis	Results	Table	Remarks
To determine the influence of project cost on market performance of urban housing projects.	**H_0** : Project cost does not influence market performance of urban housing projects	r = -0.6124 p = 0.0477 < 0.05	4.8	H_0 rejected
To examine the influence of project time on market performance of urban housing projects.	**H_0**: Project time does not influence the market performance of urban housing projects	r = -0.5792 p = 0.015 < 0.05	4.10	H_0 rejected

5.2 Conclusions

This study consisted of two main independent variables: project cost and project time. The dependent variable was market performance of housing projects whose indicators were numbers of houses sold, project lead time and house prices. Research objective one sought to determine the influence of project cost on market performance of urban housing projects. The indicators of project cost were project cost overruns and availability of capital. With the null hypothesis rejected, it was concluded that there was a significant relationship between project cost and market performance of housing projects. Furthermore, the correlational analysis indicated that an increase in project costs lead to a negative impact on market performance of housing projects. This supports the findings of Potepan (1996) as well as Borowiecki (2009) who concluded that an increase in project cost would lead to increase in house prices.

Research objective two in this study was to examine the influence of project time on market performance of urban housing projects. The indicators of project time were project time overruns and time taken to meet statutory requirements. With the null hypothesis rejected, it was concluded that there was a significant relationship between project time and market performance of housing projects. Moreover, the correlational analysis indicated that an increase in project time leads to a negative impact on market performance of housing projects. This supports the findings of Okuwoga (1998) who proposed that any delay caused is likely to lead to the stakeholders losing interest or the prices either moving up or down than it was earlier estimated hence effecting how the housing projects will perform at the time that they will be in the market.

5.3 Recommendations

The recommendations of this study are derived from the conclusion that all the independent variables significantly influence market performance of urban housing projects. Increases to three of the independent variables (project cost, protect time and project environment) had a negative impact on market performance of housing projects. In regards to project costs, this study, therefore, recommends that measures should be taken to reduce the project cost overruns which highly influenced all the three indicators of market performance (number of houses sold, project lead time and house prices).

In regards to project time, this study, therefore, recommends that measures should be taken to reduce the project time overruns which highly influenced all the three indicators of market performance. Additionally, if the time taken to meet statutory requirements were to be shortened, this would in return shorten the project lead time of housing projects.

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