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PROJECT FEASIBILITY STUDY COMPONENTS AND PERFORMANCE OF REAL ESTATE PROJECTS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

Feasibility study is a study that is done to determine options and whether the preferred or optimum option for a particular project can achieve the desired objectives given the likely resources available. The feasibility study is one of the critical activities that are done at the first stage, the conceptualization phase of the project cycle. Construction projects in Nairobi City County do not always achieve their set goals. The projects have demonstrated delayed completion time, cost overrun, and poor quality, thus leading to building collapse, high cost of maintenance, disappointed clients, and even un-useful buildings. The general objective of the study was to examine the influence of project feasibility study components on performance real estate projects in Nairobi City County, Kenya. The study's specific objectives were to examine the influence of; market feasibility and operational feasibility on project performance. The study was guided by relation marketing theory and decision theory. This study adopted a descriptive research design. The study targeted 55 property developers and 165 project managers, that is three from each property developer's firm. Census was used since the target population for the property managers is accessible and easily manageable. Questionnaires were used to collect data. A pilot test was conducted with 17 project managers representing 10% of the sample size. The study used face, content and construct validity. Questionnaire reliability was tested using Cronbach's Alpha. Data was analyzed using descriptive and inferential statistics with the help of SPSS Version 28. The descriptive statistics included frequency, percentage, and mean. Inferential statistics on the other hand included regression and correlation analysis. Findings were tabulated. Findings show that; there is a strong significant relationship between market feasibility and project performance and a positive significant relationship between operational feasibility and project performance. The recommendations; the real estate firms should use data based on demand, supply, rental, and vacancy rates levels in Kenya to decide on the most suitable investment area and the project managers should intensify their efforts in research on project location since some locations may change based on environmental factors.

Key Words: Project Feasibility, Real Estate Projects, Market Feasibility, Operational Feasibility, Project Performance

Background of the Study

In the context of project management, a feasibility study is a study that is done to determine options and whether the preferred or optimum option for a particular project can achieve the desired objectives and be sustainable given the likely resources available. Feasibility study helps to predict the outcome of a project (Mukherjee, 2016). Feasibility studies provide answers to questions that help the organization to assess potential, and to predict the likelihood of success and failure. The purpose of a feasibility study is not to provide an exact solution of any problem related to the design and layout of the project but to provide a sense of its desired scopes. During the study of the scope, different aspects of the organization and its implementation costs and desired benefits are estimated with proper accuracy (Krieger, & Martig, 2016).

The feasibility study outlines and analyzes several alternatives or methods of achieving business success. The feasibility study helps to narrow the scope of the project to identify the best business scenario(s). The business plan deals with only one alternative or scenario. The feasibility study helps to narrow the scope of the project to identify and define two or three scenarios or alternatives. The person or business conducting the feasibility study may work with the group to identify the "best" alternative for their situation. Feasibility study occupies a place of importance in contemporary project management. Decisions on whether to go ahead with a project and whether the intended beneficiaries will benefit from a project are informed by findings that emanate from a feasibility study (Munsaka, 2019).

The feasibility study is one of the critical activities that are done at the first stage, the conceptualization phase of the project cycle. Therefore, the feasibility study must be done meticulously so it generates appropriate and relevant information that will help project managers and stakeholders to make informed decisions on a given project. It must also be borne in mind that failure by the feasibility study to generate appropriate and relevant information may result in project managers making costly decisions that may impair the original intention or purpose of a project This study also helps the project manager to see viability of the particular idea which gives the fruitful deliverable from the project within optimal cost, time, resources and also justifying the factors like legal, technical & economical. The purpose of the feasibility study is not to provide an exact solution of any problem related to the design and layout of the plant but to provide a sense of its desired scopes (Kenton, 2020).

Statement of the Problem

A country's economic power and sign of advantage is represented by the component of high-rise buildings investment projects in the country. So many countries have sought to achieve their progress through encouraging preparation of comprehensive plans to establish high rise investment projects to prove its economic power & prestige. Performance of high-rise buildings enhances attractiveness of property to stakeholders (owner, tenant, developer) and represents an extraordinary opportunity to showcase its benefits to generate a higher market value (Mbuthia, 2022). While the Physical Planning Act of 1996 (Cap, 286) of the Laws of Kenya together with other planning laws and regulations were enacted to deal with approvals and licensing of developments in Kenya, there are yet so many cases on buildings particularly those meant for human settlement in the urban areas which lack approval and the required authorization to be put up of which NCA should oversight as projects (NCA, 2021).

In Nairobi City County, building codes have often been evaded and residential structures are collapsing, killing residents. The collapse of multi-storey buildings in Nairobi County has increased with an escalation in construction of residential buildings at the same time. These edifices have been subject to collapses due to noncompliance of building regulations or poor enforcement strategies. Kwatsima (2017) found that construction projects in Nairobi City County do not always achieve their set goals. The projects have demonstrated delayed completion time, cost overrun, and poor quality, thus leading to building collapse, high cost of maintenance, disappointed clients, and even un-useful buildings. In Nairobi City County, around 48% of projects are currently unfinished, with 10% of these projects fully halted (Musyoka, Gakuu, & Kyalo, 2017). The highest number was recorded in 2015 when 21 buildings collapsed. An estimated 200 people lost their lives in these incidents (National Construction Authority, 2019). The NCA (2019) report shows that poor workmanship contributes to the highest percentage of collapsed buildings at 35%, use of substandard construction materials stood at 28%, and unprofessional and unethical conduct of contractors at 34%. The real estate companies in Kenya have also experienced problems with late project completion, subpar quality of completed projects, misuse of client funds, and legal challenges with their clients (Kamau, 2019). The National Building Inspectorate in 2018 found that, out of 14,895 buildings sampled in Nairobi County, 4.8% were very dangerous; 72.3% were classified as unsafe, 8.2% were found to be in fair condition and 14.7% were categorized as safe. Kitoto (2019) found that at least 70% of the real estate projects are completed late while 50% experience more than 20% budget overrun. The most recent high rise building that has delayed for more than three years is the 88 Nairobi Condominium. The project had stalled following a delay in approvals by Nairobi City County Council. The project was set for completion by mid-2020 but it was completed in 2023.

Various studies exist on feasibility and project performance; Naji (2020) on the effects of feasibility study in construction industry showed that feasibility study is neglected and poor feasibility study lead to cost and time over runs. Willemse (2019) assessed relevance of feasibility studies in the public project sector and found that economic factors still lead the decision-making scheme towards granting projects the green light for construction. Achilike (2017) examined the effect of feasibility studies on project performance and revealed that feasibility studies to a very positive extent improves project performance. Tapang (2020) analyzed impact of feasibility studies on electrical construction project success and found that changes in the success of electrical construction projects are caused by changes in technical, operational and economic feasibility. Findings revealed that quantification and identification of all expected benefits before a project is undertaken are important to be taken into consideration. Most of the above studies were done in developed countries hence a locality gap. In addition, the studies focused on other sectors and none was conducted in the real estate sector hence a contextual gap. There was study limitation on feasibility study and project performance in Kenya. To fill the knowledge gaps, the current study sought to assess the influence of feasibility study components on performance of real estate projects in Nairobi City County, Kenya.

Specific Objectives

i. To assess the effect of market feasibility on performance real estate projects in Nairobi City County, Kenya.
ii. To examine the effect of operational feasibility on performance of real estate projects in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Review

Relationship Marketing Theory

The relation marketing theory was first proposed by Berry (1983) and Jackson (1985). They argued that relationship marketing is a marketing activity of entrepreneurs to obtain, maintain, and promote effective relationships with customers. Relationship marketing theory proposes that as a company delivers value to customers, the strength of its relationship with the customer will improve, increasing customer retention (Halinen, 1994). Relationship marketing ideas might help one comprehend more elements of corporate strategy. According to Matson (1995), the fundamental problem with relationship marketing is buyer-seller relationships. Communication, engagement, and value are the three main processes that make up relationship marketing. These procedures, as well as for long-term success, management is the essential connection with clients (Gronroos, 2005)

Complete customer relationship management requires a plan for regaining customers, though not many firms have a formal guide for reacquisition. Liu et al, (2015) developed a four-step process for regaining lost customers. The first step is the segmentation of lost customers with notable specifics of the company, for example, the industry and country. The second step is to assess the reason for the loss. Third comes the development of reacquisition activities for the segments, loss reasons, or even individual customers. The fourth and final step is the implementation of the strategies for reacquisition. The four-step process gives companies a framework to create guides to policies for regaining customers. According to DeWulf (2011), the strengths of relationship marketing theory are; it ensures customer loyalty and improves efficiency of the market economy, it offers a useful explanation of several processes or dimensions, for example, commitment and cooperation that are significant in studying the inter-relationships between certain phenomena of the buyer-seller relationship such as information sharing. The theory supports the objective on marketing feasibility since it helps the management in understanding various dynamics of the market.

Decision Theory

The decision theory was propounded by Lehmann (1950). The theory focuses on managerial decision-making and how organizations process and use information in making decisions. As organizations respond to diverse environmental changes, the decision-making process involves the clarification of objectives, the specification of problems and the search for implementation of solutions. Thus, the organization is seen as an information-processing network with numerous decision points. An understanding of how decisions are made helps in understanding behaviour in organizations with mechanisms by which conflict is resolved and choices are made. The decision making in each functional area of management under probabilistic situations is a complex process. For such decisions, the study of the experiences of the executives using experience survey research is required (Pannneerselvan, 2013).

The act of decision making, whether under certainty, uncertainty, risk and ambiguity is founded on both subjective and objective realms of human behavior. The key theoretical issues of decisions under certainty, uncertainty and risky conditions dealing with deterministic and probabilistic (stochastic) outcomes together are very necessary a precursor for optimal value creation in organizations and business (Mullins, 2010). Therefore, the productivity of any business system being a decision-objective function, is the ratio between its output and input. The theory supports the objective on operational feasibility since the management must make key decisions on the staff and the permits required based on the projects that they aim to implement. Decision making process is also determined by the organization structure.

Conceptual Framework

A conceptual framework is a system of concepts, assumptions, expectations, beliefs and theories that support and informs research (Maxwell, 2005, p. 33). It is a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp, 2001). The conceptual framework in Figure 1 presents the nexus between independent and dependent variables. The independent variables are; market feasibility, and operational feasibility. The dependent variable is the performance of commercial real estate projects.

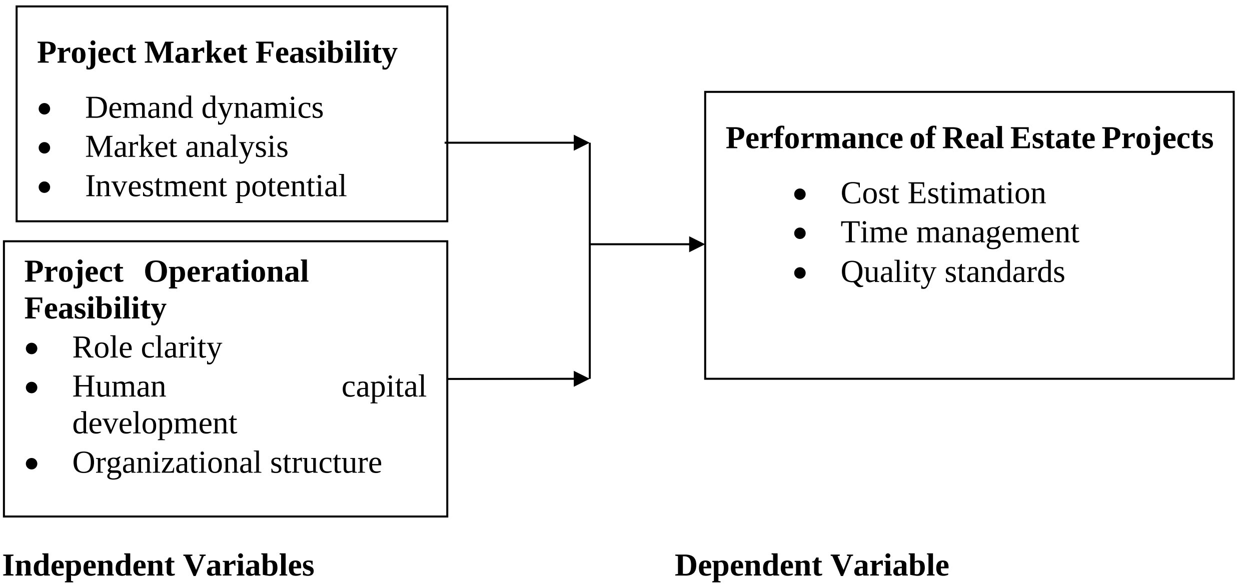

Figure 2. 1: Conceptual Framework

Market Feasibility

The marketing feasibility study includes a study of the market, the size of the demand and the market gap for the project to be introduced in that market, the size of competition and the characteristics of the consumer. Moreover, the marketing study also includes how to estimate the size of the demand and influencing factors on it. The market feasibility study occupies a distinct position when preparing the economic feasibility study for any project, which is reflected in the absolute priority to prepare it when addressing the preparation of the economic feasibility study at different stages. This unique position and absolute priority seem very logical, since it is inconceivable to create a project whose owners or shareholders does not know if its products, commodity or service, whether old or new. A project, that never sells or whose sales are less than certain limits, is exposed to failure within the modern concept of marketing, which differ sharply from its old historical concept in highly competitive, conflict and highly intelligent markets in a highly developed world from many angles (Amin, Bahaa, & El Din, 2016).

Effective marketing strategies are essential to ensure the success of the real estate business. There are several concepts that need to be considered in order to achieve quality and effective marketing goals. However, real estate market demand includes realistic demand and high potential demand. Real estate marketing agents should not only actively meet the needs of real estate users and be aware of the exchange of ownership, but should also focus on the future, actively seek potential demand and strive to transform customer demands into realistic demands and have a profitable investment potential (Gu, 2017). Therefore, an enterprise should carry out all marketing activities by regarding the exchange as the core, realize the value of real estate products through exchanging successfully, and ensure a virtuous cycle of real estate development and reproduction. Moreover, the most important is to realize the exchange of goods and complete sales activities during the real estate marketing (Huang, 2016)

Operational Feasibility

The operational feasibility refers to the assessment of how well a proposed plan fits within the existing business environment, and if developed, whether current purchasers will use it. In addition, the operational feasibility includes any rational compromises project managers (Nandaniya, 2023). Most major projects fall under the scrutiny of least one form of professional, local, state and/or federal regulatory agency regulations. This is especially true for projects in which its implementation of the end product or service involves the safety or security of its stakeholders. For such projects, failure to plan for or meet regulatory requirements can result in a failure to meet the core requirements of the project; even litigation by stakeholders and enforcement actions real estate projects are subject to various regulations, including zoning, building codes, and environmental regulations. Effective project management in real estate ensures that these regulations are adhered to, minimizing the risk of legal and regulatory issues (Anantatmula, 2015)

Staffing a project means the process of selecting and training individuals for specific job functions required by the project, and charging those individuals with the associated responsibilities. The process results in developing a staffing plan. A staffing management plan documents how an organization plans to acquire staff to meet the needs of a particular project, department, or the business as a whole. Ineffective people management can severely hamper other units of a business, while effective people management can help to leverage synergies and drive exceptional results. While building a staffing management plan takes substantial time and effort, using one can be a big help in driving effectiveness. This can be good for the business's bottom-line results and valuable for team members for short-term job satisfaction and longer-term career aspirations (Tucker, 2017).

Project organization structure is considered as an important and critical dimension in the management of construction projects. Organization structure that supports project performance is where individuals interact with each other in an effective design chart that maps team structure, employment relationship, specialization and centralization that impacts the effectiveness of the organization structure parties. Selecting the best and suitable organization structure for the project is considered a critical issue not only for establishment of project organization structure only but also for the project success at all. Furthermore, construction projects are projects with special nature and therefore it deserves effective organization structure (Ling, Dulaimi & Ho 2022).

Empirical Review

Market Feasibility and Project Performance

Wooley (2017) examined market analysis in a feasibility study for a mixed use real estate development project in Santa Cruz, California, USA. The study employed indicators of adequate market analysis specified in the literature such as demographics, employment, occupancy rates and existing supply analysis to evaluate the desirability of the real estate projects. The findings revealed strong potential for realizing returns, thereby making it an attractive investment opportunity. Ciochetti and Malizia (2020) investigated the application of financial analysis and market research to the real estate development process in the United States. Using a case study approach, the study observed that adequate market research specifies the risk associated with real estate projects and helps in making reliable predictions and projections concerning the desirability of real estate development projects.

Mukhtar (2017) focused on the effect of market feasibility study of real estate in the residential sector in Riyadh, Saudi Arabia during 2015 and 2016. The study collected secondary data from real estate companies for a period of two years. The study concluded that market feasibility is essential because it determines the investment opportunities available in the residential sector in Riyadh. Such studies needed accurate and reliable information, which can be used to accomplish precise analysis for the real Estate market. The results also indicated that investment opportunities in the residential sector in Riyadh are extensively available in the north and east of Riyadh. Majority of the residents prefer to reside in villas because they seek privacy whereas others prefer to reside in apartments. The results also revealed that the market feasibility study plays a major role in the analysis of investment opportunities in the residential sector in Riyadh. This is through the analysis of the income level of Saudis, demographics, and analyzing the supply and demand of real estate particularly apartments and villas, which proved that investment opportunities are available in the north and east of the city.

Azzam and Ghaith (2020) explored the nature of relation and effect between market analysis and feasibility of establishing small businesses operating in the services sector in Jordan. A close ended questionnaire was used to collect data. The study concluded that there is a statistically significant relationship between the location, demand, price and competitors and the feasibility of establishing small businesses. Ekemode and Ogunba (2018) evaluated the adequacy of market analysis in feasibility appraisal of property development projects in Lagos, Nigeria. The study data was collected through reviewing One-hundred and seventeen feasibility reports prepared by estate surveying and valuation firms for four years. The study found a low level of compliance by the examined reports with all the six indicators of adequate market analysis considered. The study further established that a majority of the feasibility reports did not incorporate the considered market analysis indicators, making the level of feasibility analysis grossly inadequate. The findings of this study implied that the feasibility appraisal practice could provide inaccurate and wrong predictions which could mislead prospective real estate investors and defeat the realization of their investment goals.

Patricie (2022) aimed to study the extent to which MFS influences the success of business projects in Rwanda. Questionnaires and interviews were used in collecting primary data. Research revealed that it is very important for any business undertaker to draw MFS for his/her business project before its implementation in order to facilitate the implementation of the business project and reduce the probability of business projects failure. This facilitates also the business project evaluation and identification of possible market risks that can happen in the future towards their successfulness. Market feasibility does not only help in making decisions on whether to accept or reject an investment proposal but also to make recommendations as to how it should be reformulated when risks come so as to ensure better market viability of your business project.

Operational Feasibility and Project Performance

Sarhan and Dulaimi (2022) investigated challenges that hinder successful completion of construction projects in the UAE market. The study employed a qualitative methodology. Data was collected through extensive literature review and interviews with ten members of contractor’s project management and senior managers. The main findings indicated that having clear and defined roles and responsibilities have a positive impact on project performance and team effectiveness. Moreover, the contractor’s senior managers have a vital role in establishing, managing the project organization structure and ensuring that any changes to the structure are dealt with effectively. This would enable the project to progress according to plan, reduce project activity reworks and address any weakling communication and cohesiveness between project team members.

Imran, Luqman, and Zaki (2016) examined the effect of human capital practice on project success. This study evaluated the effectiveness of human capital development practices such as training and development, teamwork and trust and their impact on the successful completion of the project. Findings showed a positive relationship between human capital and organizational success. Thus, it is the responsibility of the firm to design such human resource practices that facilitate the development of human capital. It was concluded that the human capital practices such as training and development, teamwork and trust, enhance the development of human capital and ultimately affect the completion of projects successfully in time and efficient manner.

Chantuk, Kulsawat,and Klangburam (2019) analyzed the effect of feasibility analysis on projects in housing development in Thailand. Results showed that real estate entrepreneurs establish salesperson skill training to know business process and condition, especially knowledge about Building Control Act, customer service process, and emphasize on a location of project which was near to public utility, official place, and department store. Moreover, they had to provide sales promotion by giving a discount and gift. The important thing was to refund money back to customers in case that a credit was not valid, and the entrepreneurs put an importance on advertising and making public relations about housing development projects via media such as banners, local radio, television, and local newspapers.

Raziq and Ahmad (2020) studied the relationship among elements of an organizational structure (i.e. formalization, centralisation and integration) with project success in Pakistan. Researchers found that there is limited understanding with regard to how various elements of organizational structure relate to project success. Results showed that formalization and integration are conducive to project success, but centralization is negatively related to project success. Oluwafemi and Adeagbo (2017) studied the analysis of marketing research and feasibility skills needed for successful entrepreneurship development in Oyo State. The study adopted the survey design. The population comprised entrepreneurs in Oyo State out of which 120 entrepreneurs were selected for the study. The instrument for data collection was a structured questionnaire. Results showed that environmental feasibility study skills were much needed and very much needed respectively for effective entrepreneurial development.

Muiruri (2018) investigated the critical factors of real estate development by private developers. Using descriptive research design, the study targeted 280 respondents that consisted of 120 finance managers and 120 engineers drawn from 18 registered real estate development firms as well as 20 land officials and 20 planning officials from Kiambu County. Questionnaires were used to collect data. The study concluded that Offsite infrastructures significantly affect real estate development by private developers and increases in the activities involving offsite infrastructures would most likely reduce real estate development by private developers. The study concluded that land regulations significantly affect real estate development and that increasing land regulations promotes real estate development by private developers. The study further concluded that technical innovation significantly affects real estate development and that increases in technical innovation promote real estate developments by private developers. Pedo, Kabare, and Makori (2018) examined the effect of regulatory frameworks on the performance of Public Private Partnership Road Projects in Kenya. The study used both exploratory and descriptive research designs to study the problem. The population of the study was One Hundred and eleven organizations involved in the road sector PPPs. A self-administered, semi-structured questionnaire was used to collect the data. The study established that from the regression model the regulatory framework had a significant and positive influence on the Performance of public private partnerships in road projects in Kenya. Further, the government policy had a moderating influence on the relationship between regulatory framework and performance of public private partnerships in road projects in Kenya.

RESEARCH METHODOLOGY

This study adopted a descriptive research design. According to the Kenya Property Developers Association [KPDA] (2024), there are a total of 55 registered property developers. Therefore, the unit of analysis was these 55 property developers. The unit of observation were the project managers employed by these companies. Each company has at least three project managers. Therefore, the target population for the study was 165 project managers (55 companies * 3 project managers per company). Project managers were selected as the unit of observation because they possess comprehensive knowledge and firsthand experience of the feasibility study components and performance metrics of real estate developments. Since the target population for the building consultants is accessible and easily manageable the study used census. The sample size was hence 165 respondents. The study used close-ended questionnaires. A pilot test was conducted with 17 project managers representing 10% of the sample size as recommended by Neff and Germer (2013). Data was analyzed using descriptive and inferential statistics with the help of SPSS Version 28.

RESEARCH FINDINGS AND DISCUSSION

The sample size was 165 respondents and 17 respondents who were used for piloting did not take part in the actual study. Questionnaires were administered to 148 respondents and 120 questionnaires were successfully answered. The response rate was 81.1%. This is an adequate response rate as recommended by Fincham (2008) that a response rate of 60% and above should be the target of every social science researcher.

Market Feasibility

The first objective was to assess the effect of market feasibility on performance of real estate projects in Nairobi City County, Kenya. Respondents were asked to tick on the extent to which they agree/disagree with statements related to market feasibility. Findings are presented in Table 1.

Table 1: Market Feasibility

Key: SD=Strongly disagree, D=Disagree, NS=Not Sure, A=Agree, SA= Strongly agree, M=Mean.

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Thorough market research is conducted to determine marketability of the projects	0	0	26	21.7	6	5.0	12	10.0	76	63.3	4.15
There is unhealthy competition in real estate development projects industry	20	16.7	3	2.5	9	7.5	34	28.3	54	45.0	3.82
There is low demand of real estate assets in the county	79	65.8	15	12.5	6	5.0	9	7.5	11	9.2	1.83
The purchasing ability of the target market affect their ability to rent/buy office spaces	0	0	12	10.0	9	7.5	34	28.3	65	54.2	4.33
Customers prefer to develop their own projects than buy ready developed projects in the market	11	9.2	6	5.0	3	2.5	42	35.0	58	48.3	4.08
Customers prefer cheaper alternatives for office premises than high rise buildings	6	5.0	6	5.0	6	5.0	12	10.0	90	75.0	4.45
The industry is shifting towards modern construction designs to meet client’s needs	6	5.0	3	2.5	3	2.5	34	28.3	74	61.7	4.39

N=120

Findings show that the respondents strongly agreed that; customers prefer cheaper alternatives for office premises than high rise buildings (M=4.45), the industry is shifting towards modern construction designs to meet client’s needs (M=4.39), and the purchasing ability of the target market affect their ability to rent/buy office spaces (M=4.33). Respondents also agreed that thorough market research is conducted to determine marketability of the projects (M=4.15), customers prefer to develop their own projects than buy ready developed projects in the market (M=4.08), and there is unhealthy competition in real estate development projects industry (M=3.82). Respondents disagreed that there is low demand of real estate assets in the county (M=1.83).

The results demonstrate a high demand for real estate assets in Kenya, coupled with intense competition, which necessitates delivering projects that cater to clients' needs to gain a competitive edge and achieve rapid returns on investment. Market feasibility is instrumental in this process, allowing companies to segment customers based on preferences, such as those who desire fully developed projects versus those who prefer to undertake development themselves. This finding aligns with Ciochetti and Malizia (2020), who noted that comprehensive market research identifies risks and aids in making reliable projections about real estate project viability. Supporting this view, Patricie (2022) emphasized that market feasibility studies help refine investment strategies, reduce project failure risks, and ensure market alignment. Azzam and Ghaith (2020) further illustrated that companies adept at analyzing market demand, pricing, and competition are better positioned to meet customer expectations and secure success. Thus, market feasibility plays a pivotal role in guiding strategic decisions that enhance project performance and competitive positioning in the dynamic Kenyan real estate sector.

Operational Feasibility

The fourth objective sought to examine the effect of operational feasibility on performance of real estate projects in Nairobi City County, Kenya. Respondents were asked to tick on the extent to which they agree/disagree with statements related to operational feasibility. Findings are presented in Table 2.

Table 4.6: Operational Feasibility

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Adequate legal framework, rule of law, and a regulatory framework are proven drivers for project success	8	6.7	18	15.0	3	2.5	18	15.0	73	60.8	4.08
Building materials are cheaply and readily available within the county and its environs	6	5.0	20	16.7	17	14.2	68	56.7	9	7.5	3.83
The developers enjoy readily available support infrastructure such as roads and other transport networks	16	13.3	6	5.0	6	5.0	18	15.0	74	61.7	4.07
Weather and climate conditions affect demand for real estate projects	20	16.7	6	5.0	9	7.5	18	15.0	67	55.8	3.88
Real estate development areas enjoy good safety and security and thus attract customers	6	5.0	22	18.3	6	5.0	12	10.0	74	61.7	3.95
There is easy accessibility of real estate development sites from the city center	19	15.8	9	7.5	6	5.0	6	5.0	80	66.7	3.99
The project manager emphasizes on human capital practices such as training and development, teamwork and trust	0	0	16	13.3	18	15.0	38	31.7	48	40.0	4.18

Results show that respondents agreed that; the project manager emphasizes on human capital practices such as training and development, teamwork and trust (M=4.18), adequate legal framework, rule of law, and a regulatory framework are proven drivers for project success (M=4.08), the developers enjoy readily available support infrastructure such as roads and other transport networks (M=4.07), real estate development areas enjoy good safety and security and thus attract customers (M=3.95), there is easy accessibility of real estate development sites from the city center (M=3.99), weather and climate conditions affect demand for real estate projects (M=3.88)., and building materials are cheaply and readily available within the county and its environs (M=3.83).

The findings reveal that firms conduct operational feasibility studies to evaluate the working environment, ensuring compliance with legal and regulatory frameworks essential for the safety of project implementers and beneficiaries. Kenya's strong legal regulations guide real estate management, while project managers ensure their teams are competent to effectively execute projects. Adequate security measures and accessible infrastructure in Nairobi County enhance project attractiveness to investors, although the limited availability of building materials within the county poses challenges, necessitating sourcing from nearby regions. These results align with Imran, Luqman, and Zaki (2016), who emphasized that human capital practices like training and teamwork are crucial for project success. Similarly, Sarhan and Dulaimi (2022) underscored the importance of clear roles and effective management in ensuring smooth project implementation, highlighting the critical role of operational feasibility in real estate development.

Project Performance

Respondents were asked to tick on the extent to which they agree/disagree with statements related to performance of real estate projects in Nairobi City County, Kenya. Findings are presented in Table 3.

Table 3: Project Performance

Key: SD=Strongly disagree, D=Disagree, NS=Not Sure, A=Agree, SA= Strongly agree, M=Mean.

Statements	**SD**		**D**		**N**		**A**		**SA**		**M**
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	
The projects are delivered on time	56	46.7	16	13.3	20	16.7	20	16.7	0	0	2.47
Projects are delivered within set budget	84	70.0	3	2.5	9	7.5	12	10.0	12	10.0	1.88
The projects meets the desired quality	21	17.5	3	2.5	6	5.0	9	7.5	81	67.5	4.05
There is regularly inspection of projects	20	16.7	12	10.0	21	17.5	21	17.5	46	38.3	3.49
Project beneficiaries are satisfied	17	14.2	6	5.0	12	10.0	15	12.5	70	58.3	3.86
Project resources are availed on time	83	69.2	9	7.5	6	5.0	6	5.0	16	13.3	1.96
Project resources are distributed fairly	16	13.3	6	5.0	6	5.0	34	28.3	58	48.3	3.57
Financers and customers are satisfied with project outcome	0	0	13	10.8	16	13.3	48	35.8	48	40.0	4.44
There are less or no defects identified in the projects since completion	3	2.5	9	7.5	16	13.3	40	33.3	52	43.3	4.18

N=120

Findings show that; financers and customers are satisfied with project outcome (M=4.44), there are less or no defects identified in the projects since completion (M=4.18), the projects meet the desired quality (M=4.05), project beneficiaries are satisfied (M=3.86), project resources are distributed fairly (M=3.57), and there is regularly inspection of projects (M=3.49). The projects are however not delivered on time (M=2.47), resources are delayed (M=1.96) and the projects experience budget overruns (M=1.88). Findings indicate that although majority of the real estate firms deliver quality projects, they however face time and cost overruns. Findings support Kwatsima (2017) that construction projects in Nairobi City County do not always achieve their set goals. The projects have demonstrated delayed completion time, cost overrun, and poor quality. Kitoto (2019) also found that at least 70% of the real estate projects are completed late while 50% experience more than 20% budget overrun.

Correlation Analysis

Correlation analysis was conducted to establish the strength of relationship between the independent and dependent variable. The significance level for significant relationship was <=0.05. Correlation results are presented in Table 4.

Table 4: Coefficient of Correlation

Variables		Project performance	Market feasibility	Operational feasibility
Project performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Market feasibility	Pearson Correlation	.618**	1	
	Sig. (2-tailed)	.000		
Operational feasibility	Pearson Correlation	.448**	.073	1
	Sig. (2-tailed)	.000	.429	

** Correlation is significant at the 0.05 level (2-tailed).

The results indicate a strong and significant relationship between market feasibility and project performance (r=0.618, p=0.000). This suggests that thorough market feasibility studies are crucial in determining the success of a project. The findings align with the literature by Wooley (2017), who highlighted the importance of market analysis indicators such as demographics and occupancy rates in evaluating the desirability of real estate projects. Similarly, Mukhtar (2017) demonstrated that market feasibility is essential in identifying viable investment opportunities in the residential sector of Riyadh, confirming that market analysis significantly influences project performance.

Operational feasibility was also found to have a positive significant relationship with project performance (r=0.448, p=0.000). This supports the findings of Sarhan and Dulaimi (2022), who demonstrated that well-defined roles and responsibilities significantly enhance project performance and team effectiveness in the UAE construction sector. Imran et al. (2016) further confirmed the importance of operational feasibility by showing how human capital practices, such as training and teamwork, contribute to project success, highlighting the positive impact of operational feasibility on overall project outcomes.

Regression Analysis

Table 5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant/Y Intercept	1.541	.590		2.613	.000
Market feasibility	0.585	.088	.486	6.643	.001
Operational feasibility	0.548	.057	.536	9.542	.000

The regression analysis indicates that holding market feasibility and operational feasibility constant, the performance of real estate projects in Nairobi City County, Kenya, would be at a baseline factor of 1.541. This finding suggests that even without specific improvements in these feasibility areas, project performance would maintain a certain level of stability. However, the study revealed that a unit change in market feasibility would significantly enhance the performance of real estate projects, as shown by the equation (Y = 1.541 + 0.585X1, t = 6.643, p = 0.001). This underscores the crucial role market feasibility plays in driving project success. The literature by Azzam and Ghaith (2020) aligns with these findings, emphasizing the critical impact of market analysis variables like location, demand, and competition on the feasibility and success of business projects.

Operational feasibility had a substantial effect on project performance, second only to market feasibility, with a unit change significantly enhancing project outcomes (Y = 1.541 + 0.548X4, t = 9.542, p = 0.001). These results indicate that well-organized operational processes and clear roles and responsibilities are critical to ensuring smooth project execution. The findings are consistent with Sarhan and Dulaimi (2022), who found that defined roles and effective management structures significantly enhance project performance in construction projects.

Conclusion

The real estate firms conduct market feasibility which enables them to understand the market needs. The firms are able to implement projects that meet the financial ability of the target market. This also helps the firms to implement projects that meet the needs of the market since the market is shifting towards modern construction designs. Market feasibility is very important especially in Nairobi County whereby the estates have laws which sometimes determine the type of real estate projects to be developed. This applies mostly to areas with controlled development. The stiff competition in the real estate sector in Kenya is due to the high demand of real estate assets hence the need to be customer centric to sail through the highly concentrated market.

Operational feasibility enables the real estate firms to understand the operating environment. This includes the legal framework and rules that guides on real estate sector in Kenya, accessibility, security, and social amenities such as water and electricity. Investment in competent human resources ensures that projects are implemented by competent and skilled human resources. Infrastructure such as road, power, and water are also key to performance of real estate sector since they are the main concerns of investors in the real estate sector. Security is also an attractive characteristics of real estate assets. Customers are more concerned about security and everyone would like to invest in a secure area to protect his life and property.

Recommendations

The real estate firms should use data based on demand, supply, rental, and vacancy rates levels in Kenya to decide on the most suitable investment areas. The firms should also invest in research especially on customer preferences in the real estate sector to develop projects that suits the market needs.

The project managers should intensify their efforts in research on project location since some locations may change based on environmental factors. They should also collaborate with the leadership of proposed project location to facilitate availability of power, water, and road infrastructure which may improve marketability of the real estate estates. There should be training of project staff to improve their project management skills.

Areas for Further Study

The findings have shown that there are other project feasibility study components that this study did not focus. The components contribute to 27.7% of project performance. The researcher hence suggests a study focusing on other project feasibility study components that were not part of this study. A similar study could also be conducted in another county in Kenya for comparison purposes since this study was conducted in Nairobi County which is an urban county and findings may differ if similar study was conducted in a rural or sub urban county.

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