

Determinants of Commercial Real Estate Market Performance: The Case of Addis Ababa, Ethiopia

Thomas Immanuel¹ & Getie Andualem²

¹ Doctor of Business Leadership, University of South Africa, South Africa

² Associate Professor in Marketing Management, School of Commerce, Addis Ababa University, Ethiopia

Correspondence: Getie Andualem, Associate Professor in Marketing Management, School of Commerce, Addis Ababa University, Ethiopia.

Received: August 26, 2023

Accepted: November 16, 2023

Online Published: November 29, 2023

doi:10.5539/ijms.v15n2p98

URL: <https://doi.org/10.5539/ijms.v15n2p98>

Abstract

Numerous social and economic problems are brought on by urbanisation, including worse-than-ever housing shortages in emerging nations and an increase in the number of people living unlawfully in slums without permits or property rights. This is also applicable to Ethiopia. The investigation of the factors influencing Addis Ababa's commercial real estate market performance was the study's principal goal. Explanatory sequential mixed method design was used in the study, which took a mixed research strategy. Senior specialists, top business leaders, and other professionals from 35 commercial real estate developers active in Addis Abeba made up the study sample for the quantitative phase. It was decided to employ 163 of the 231 structured and self-administered sets of questions that were provided. This resulted in an actual response rate of 71%, which was deemed both necessary and sufficient for running the relevant statistical analyses. 15 key informants from important government ministries or agencies, as well as relevant industrial sectors, were chosen to participate in in-depth interviews for the qualitative phase of the study. Only ten significant informants, however, volunteered to be interviewed. The quantitative study's findings revealed that every factor—firm efficiency, supplier dependability, and customer purchase intentions, as well as credit availability, marketing strategy, legal considerations, land availability, infrastructure development, technological adoption, and leadership quality—had a significant and positive impact on Addis Ababa's commercial real estate market performance. The qualitative analysis found that additional variables such as political and economic instability, the degree of coordination and stakeholder participation, political interference, and house purchasers' purchasing power influenced commercial real estate performance. To improve performance, the researcher suggests that real estate enterprises adopt an effective strategy that focuses on performance-improving variables and collaborate closely with the government and other stakeholders. Finally, the proposed framework for measuring performance in the commercial real estate business should guide commercial real estate developers.

Keywords: Addis Ababa, commercial real estate, determinants, performance

1. Introduction

The global real estate business is one of the most profitable businesses in many economies and an indicator of a society's economic growth (Romer & Romer 2017). "Real property" refers to land and related goods that are permanently a part of it, and the nature and extent of the interest of its owner. Real property may be acquired, owned and transferred by legal entities established and determined by law (Ariyawansa & Udayanthika, 2012). In Africa, real estate (housing) is recognised as becoming an attainable reality in transformative home ownership. However, access to finance, legal frameworks, marketing strategies, infrastructure facilities and advanced technology for real estate development is underdeveloped in many of these economies. These factors clearly affect financial performance and thus property development (Lohri, Camenzind et al., 2014).

Ethiopia's economy has developed fast over the last decade, averaging 10.3% each year from 2006/07 to 2016/17. Construction and services industries, in particular, have been major development drivers over the last two decades (Bank, 2020). Ethiopia's construction industry, which accounted for 12.5% of total GDP in 2018, is expanding and performing well while remaining legally developed. Since the country's economy was liberalised in 1991, the government has launched numerous initiatives aimed at increasing the role of the private sector in

the economy. In other words, the government is fostering a favourable climate for the development of the private real estate sector. On the level of world urbanisation indicates that the world average was 52.1% in that year, with 39.6% in Africa and 17% in Ethiopia (WUP/ UN Report, 2011). Ethiopia's urban population is expected to triple by 2037 (World Bank Group, 2015). Addis Ababa is the home of an estimated 3.24 million people 17% of Ethiopia's total urban population (Tsegaye, 2010). Because of on-going rural-to-urban migration, the city's population is constantly growing, resulting in a housing scarcity. When we look at the trends of housing development in Addis Abeba, however, it is evident that demand and supply are not matched, with the gap between demand and supply growing drastically. This has the effect of raising home prices (Melaku, 2016).

Addis Ababa is not only the capital of Ethiopia, but also the home of many continental and international organisations. It has also served as an economic, manufacturing, and cultural centre from its inception. The term "next generation" refers to the process of creating a new generation of technology. Ethiopia's population is increasing at a rate of roughly 2.7% per year, with no forecast peak year or period of decline. Ethiopia has a birth rate of 36 births per 1,000 inhabitants. The fertility rate is 4.1 children born per woman. Religion, as well as a lack of contraception, has a significant part in Ethiopia's high birth rate. Because of the growing need for more resources, the economy's ability to grow and develop at a faster rate has been hampered by the disproportionate population expansion. Due to its rapid population growth, Ethiopia remains one of the world's poorest countries (World Population Review, 2021).

Previous studies have pointed to evidence that several factors have determined the performance of real estate companies in Ethiopia. The most common issues faced by the real estate industry in Ethiopia are challenges in acquiring land related to lengthy bureaucratic administrative processes; high land lease price; delays in the delivery of finishing material; price escalation; lack of foreign currency; limited access to loans; lack of supervision by municipality expertise; delays in client approval or modification requests; and design changes (Firew, 2013).

Furthermore, research has identified three significant variables that contribute to the difficulty of substantial segments of the population in developing countries such as Ethiopia to obtain home loans (Broussard & Tekleselassie, 2012). These factors are lack of good collateral; informality and volatility of income; and lack of information about borrowers.

Ethiopia's population was 123 million people in 2022. Ethiopia's population has increased significantly during the previous 50 years, expanding from 30.7 million to 123 million people at an increasing yearly rate that peaked at 4.30% in 1991 and then fell to 2.57% in 2022. Ethiopia's female population was roughly 58.9 million in 2021, while the male population was approximately 58.98 million. Ethiopia's population growth rate is significantly higher than the global average, and it is among the highest in Africa.

In Ethiopia, real estate is a major business investment (Abidoye & Chan, 2018). There are around 630 real estate investments companies in Ethiopia of which 125 are located in Addis Ababa with a registered investment capital of 3.5 billion ETB. The real estate industry has played a vital role in domestic economic growth, especially over the past two decades. It has also seen incomes generated from the real estate industry grow each year (Fortune, 2018). However, the average growth rate of the sector has not demonstrated considerable growth since 2011/12. The annual growth of real estate development has become almost stagnant at an average of 4%, declining from the highest growth of 22.1% in 2009/10 to 4.1% in 2016/17. Similarly, the market share of real estate activities as a percentage of GDP has continuously declined, from 18.4% in 2012/13 to 10.9% as at 2016/17 (NBE, 2017).

Low Building Capacity, Inadequate infrastructure, rising land prices/high land lease rates, delays in completing the construction control/housing project delay, limited finishing material supply, a lack of foreign currency to import construction materials and equipment, limited access to financing, Lack of long-term loans; average corporate leadership quality; poor land management administration and corruption, High inflation rate, poorly developed marketing approach that failed to take into account Ethiopian home purchasers' purchasing power, construction material price increases, Lack of dependable local construction material suppliers, as well as a shortage of low-cost, economical construction technology, among other issues, were investigated using fragmented local studies, preliminary surveys, and field visits.

Field visits, discussions with Ethiopian real estate business experts and construction engineers, the existence of weak financial institutions to fiancé real estate sector, land availability, credit availability, and dependable supplier of construction materials, purchasing power of Ethiopian real estate buyers, real estate construction technology adoption, and other factors were used to design this study.

As a result, it is critical to conduct a thorough inquiry into why the growth of real estate development has become nearly static, as well as why the real-estate sector's DGP contribution has been steadily declining. As a result, the

following research questions have been addressed in this study.

- What factors influence the performance of commercial real estate in Addis Abeba, Ethiopia?
- What are the commercial real estate performance constraints and challenges in Addis Ababa, Ethiopia?
- What will be the overarching conceptual model for measuring commercial real estate performance in Addis Ababa, Ethiopia?

Thus, the purpose of this research is too aimed to identify determinant factors that influence the performance and development of real estate investment in Addis Ababa, and to use these elements to construct an integrated real estate Conceptual performance model.

2. Statement of the Problem

Ethiopia is one of the fastest urbanising countries in the world. Urbanisation has seen unprecedented growth in recent years with the development and expansion of cities such as Addis Ababa (Zeluel, Asfaw et al., 2011). While urbanisation poses various social and economic problems, housing shortages are becoming more serious in developing countries than ever before, and the proportion of slum dwellers living illegally in places without permits or property rights is increasing (UNFPA, 2007). This informal expansion requires the establishment of a formal housing system in Ethiopia.

To establish the research gap, local and international studies on the performance of commercial real estate were extensively analysed. The most pertinent Local studies identified by a preliminary literature review were related to challenges encountered by real estate developers in Ethiopia: Land Management, Low Construction Capacity, Inadequate Infrastructure, Poor Borrowing Capacity, Price Escalation and Low Affordability to be the major challenges faced by commercial real estate companies in Ethiopia (Eshete & Teshome, 2010). Acquiring land that result from lengthy bureaucratic administrative processes, high land lease prices, delays in the delivery of finishing material, price escalation, lack of foreign currency, limited access to loans, lack of supervision by municipality expertise, delays in client approvals or modification requests, and design changes were found as the most critical challenges facing real estate developers in Ethiopia (Firew, 2013). Legal challenges, institutional challenges, finance-related challenges and labour-related problems were found as major challenges faced by foreign real estate developers in Ethiopia (Eshete & Teshome, 2010). Lack of loans for house buyers; inflation on construction materials; insufficiency of long-term loans; increments on land-acquisition cost; high level of tax; high bureaucracy involved in obtaining land; and low government encouragement as major challenges faced by real estate commercial developers in Ethiopia using descriptive analysis technique (Gebreyohannes, 2021).

Other local studies focused on single variables like real estate property valuation (Bishaw, 2021); quality management practices of real estates (Markos, 2018); Measurement of real estate affordability (Dinku, 2022); and factors determining the continuing price appreciation (Melesse, 2020); which were purely descriptive. Other local studies on real estate market in Ethiopia, focused on identifying limited number of factors or variables affecting marketing effectiveness of commercial real estate companies such as quality, price fairness, location convenience, brand reliability, salesperson credibility (Ababa, 2018). Organisational planning, project manager goal commitment, project's scope and work Definition, project manager's capabilities and experience, safety precautions and applied procedures and control system were fund to have a significant effect the Project Success in the Ethiopian Real estate industry (Shemekt, 2021). Dependence on the Diaspora group of clients for its demand side, Existing economic downturn; slow and insufficient supply of land, shortage and increased prices of housing construction materials, inflation, the global economic crises (Kiros Aquabamicheal, 2009).

The most relevant Global studies identified in the literature review are summarised below in terms of factors influencing real estate developers in various countries. Research on factors affecting the business performance of construction and real estate enterprises in various countries across the world has been carried out by a number of foreign studies. The real estate market in the sub-Saharan Africa (excluding South Africa) suffers from a lack of or low-quality transaction data and problems associated with transparency, valuation standards and the low level of involvement of international market intermediaries The study further explored that very few markets in the sub-Saharan Africa offer common market development indicators, such as rental growth, capital growth, price and rental indices, yields, total returns and market stock, which are available in mature markets (Anim-Odame, 2015).

Different scholars studied those how five macro-economic factors affected the price of real estate in Nigeria and discovered the GDP, interest rate; inflation rate, exchange rate and crude oil price all have a significant effect on real estate price (Alkali, Sipan et al., 2018). Considering price as one of the measures of real estate performance (Grum & Govekar, 2016) examined macro-economic factors such the unemployment rate, current account, GDP

and industrial production and discovered significant correlations between real estate prices and the distinct cultural contexts of Slovenia, Greece, France, Poland and Norway. Nana Cui, Hengyu GU, Tiyan Shen and Changchun Feng, Shen and Changchun Feng conducted research on micro-level variables in the real estate environment and found a higher-quality living environment; good structural, locational and neighbourhood characteristics and a good school-attendance zone are preferred by homeowners and renters and companies which fulfil these criteria's perform better (Feng, Ouyang et al., 2018). Moreover, they further enquired how higher-priced homeowners or renters differ in their preferences from lower-priced homeowners or renters. Higher-priced homeowners and higher-priced renters prefer property with a larger number of bedrooms, proximity to a major employment centre, park or school, as well as a location in a school-attendance zone with higher school quality. Top-level commitment to quality, employee empowerment and continuous improvement on the organisational performance of the real estate companies were found to have a significant influence on organisational performance of the real estate companies (Bett et al., 2019)

Wainaina looked at how certain macro-economic factors affected the performance of the real estate sector variables, including interest rates, GDP growth rates, capital growth rates, inflation rates, credit growth rates and money supply growth rates (Agwata & Wainaina, 2020). The study found that only GDP and capital growth had a significant impact on performance; the other factors were insignificant. Bo Li and Rita Yi Man (2021) on the other hand investigated the impact of management and operation abilities, human resource (HR) abilities, brand abilities and innovation abilities on the overall competitiveness of large real estate firms in China and discovered that all constructs showed a significant effect on the competitiveness commercial real estates Li, B. et al. (2021). The primary variables influencing the performance of the Vietnamese real estate industry, according to the findings of Ho Nguyen Phi HA's study, are top leaders' dedication, the workplace environment, the ability to use technology, business contacts and incentives, as well as training and fostering (HA, 2022). Lawrence Mbugua, Phil Harris, Holt, and Olomolaiye created a framework based on a thorough literature search and identified four categories of CSFS that are pertinent to the construction industry and influence construction business performance: people factors, project factors, process factors and result factors (Zhang, Harris et al., 1999).

3. Research Gaps

A thorough examination of current local and international studies revealed some theoretical, empirical, methodological, and industrial or contextual limitations/gaps:

★ **Theoretical gaps:** Previous research that looked at how commercial real estate performed either employed one theory or none at all. The success of commercial real estate cannot be adequately predicted by applying just one theory or doing nothing at all. As a result, this study made an effort to use a variety of theories in order to account for more factors that could have an impact on the performance of commercial real estate.

★ **Empirical gaps:** Rather of considering both macro- and micro-level elements that affect commercial real estate performance, the studies we assessed, both local and international, tended to focus on one or the other. Additionally, a number of researches attempted to evaluate the effects of just one or two variables influencing commercial real estate performance due to an inadequate inventory of factors influencing real estate performance. As a result, this study explored a number of variables that could have an impact on the performance of commercial real estate.

★ **Methodological gap:** Prior studies collected and analysed data on commercial real estate performance using either a qualitative or quantitative research approach. Particularly locally based quantitative researchers used descriptive statistics as opposed to inferential statistics to evaluate the important variables that affected the performance of commercial real estate. In other words, because they did not employ a mixed methodology or inferential statistics, their statistical procedures were less rigorous.

★ **Industry/contextual gaps:** To the best of the researchers' knowledge, there hasn't been any organised, scientific research on real estate performance, save from studies to highlight the opportunities and challenges facing Addis Ababa's commercial real estate performance. This demonstrates how little study there is in this area.

Thus, this study attempted to assess the drivers of real estate performance in Addis Abeba, Ethiopia utilising a mixed research strategy in light of theoretical, empirical, methodological, and contextual research gaps.

4. Research Question

Finding the factors that influence the success of Addis Ababa's commercial real estate market is the main goal of the current investigation. This was accomplished by posing the important research question that follows. The study specifically addresses the following research questions in order to gain a more thorough understanding of

the phenomenon under investigation:

- What factors influence the performance of commercial real estate in Addis Abeba, Ethiopia?
- Which of the aforementioned elements has the biggest effect on the performance of commercial real estate in Addis Abeba, Ethiopia?
- What other elements will affect the performance of commercial real estate in Addis Abeba, Ethiopia?
- What performance limitations and difficulties face commercial real estate in Addis Abeba, Ethiopia?
- What will be the overarching conceptual model for measuring commercial real estate performance in Addis Ababa, Ethiopia?

5. Delimitations of the Study

The scope of a study clearly defines the extent of content that is covered by the study in order to come to more logical conclusions and provide conclusive and satisfactory answers to the research questions. In the current study, setting delimitations enables the researcher to focus on the study area, given the complexity and number of variables that can be considered in the context of real estate performance. The study has the following delimitations: The performance of real estate could be measured in terms of financial (hard data) and non-financial performance measures. However, panel data in the finance sector about the performance of each firm in terms of profit, market share and return on investment (ROI) are not available or are kept under strict constraints. As a result of the lack of financial data, one major drawback of the study is the measuring of financial performance in terms of managers' and employees' perceptions. Geographically, the study is confined to real estate firms operating in Addis Ababa city. Institutionally, the study focuses on private real estate firms. Hence, it does not consider government-owned enterprises, which construct both residential houses and condominiums. This is because government enterprises have neither the capital and land nor marketing challenges that significantly affect the performance of private-sector enterprises. Conceptually, the study is limited to exploring, synthesising and analysing factors that influence the performance of commercial real estate firms. Methodologically, the study is constrained to firm-based cross-sectional data collected from January 2020 to March 2020.

6. Literature Review

This section analyses the previously researched literature, starting with a review of theoretical and empirical studies in the field of real estate performance. It pinpoints important success variables that have an impact on real estate performance. The investigation's theoretical and conceptual foundations are examined, the hypothesis is constructed, and an operationalization of the construct variables is provided.

6.1 Theoretical Review

Real estate is a complex concept that is based on multiple theories across disciplines and with many role players coming to the market for different purposes. For example, there are opposing theories of real estate from neo-classical to Marxist theories and others in between. The most common theories mentioned in various theoretical and empirical studies are the transaction cost theory of real estate, the agency theory and the institutional theory of firms.

Neoclassical Economic Theory

In this economic theory, real estate can be viewed as a market where suppliers and buyers come together to affect a transaction that is a reason-based/rational/decision. The assumption of rational man is based on the existence of abundant information about the products among buyers to make an informed decision and that property ownership can be transferred without any cost. In other words, as per the theory, the market is efficient operationally owing to efficiencies derived from allocation and information (Evans, 2008). Evans argues that prevailing market efficiency is difficult owing to information asymmetry. He further identifies the many factors that create the asymmetric nature of information in the real estate market, which creates market inefficiency in the real estate sector (Evans, 2008).

Agency theory of real estate

Agency theory is primarily associated with theories of transaction costs and property rights (Kusiluka, 2012). According to this theory, by using their power of information asymmetry, agents are in a position to form inefficient institutions to satisfy their personal interest at the expense of principals' resources. This affects the ability of real estate firms to deliver their product or service on time, which in turn leads to higher costs (Okunlola & Ogunkoya, 2015).

Institutional theory of real estate

Although the neo-classical theories strove to achieve market efficiency through information symmetry and avoiding transaction costs, this efficiency has still not been realised. This resulted in the emergence of a newly developed paradigm called institutional theory. Proponents of institutional theory argue that this theory combines all the other main theories, including agency theory, property rights theory and transaction costs theory (Obińska-Wajda, 2016). According to this theory, institutions are affected by formal and informal factors, such as law, property rights, society's culture and traditions (Ankarloo, 2006).

Porter's diamond model

Porter's National Competitive Advantage Theory, also known as his diamond model, was devised in search of answering "why some countries have more international success in particular industries than other countries" (Porter, 1998). "*Demand conditions*" is one element of the diamond model and addresses the issue of market size and the purchasing power of buyers. "*Factor conditions*" is the second element of the diamond model and includes variables such as material resources, HR, and knowledge resources and infrastructure, which directly and indirectly have economic and non-economic values in the country. "*Strategy, structure and rivalry*" is the third factor in Porter's diamond model and is related to the way in which an organisation is established, its corporate goals and its ways of measuring performance. This factor also addresses the relative stand of the firm in comparison with the competition. The final factor in the model is "*related and supporting industries*". This factor relates to the idea that industries complement each other in horizontal and vertical relations and the success of a market depends on the suppliers and related organisations.

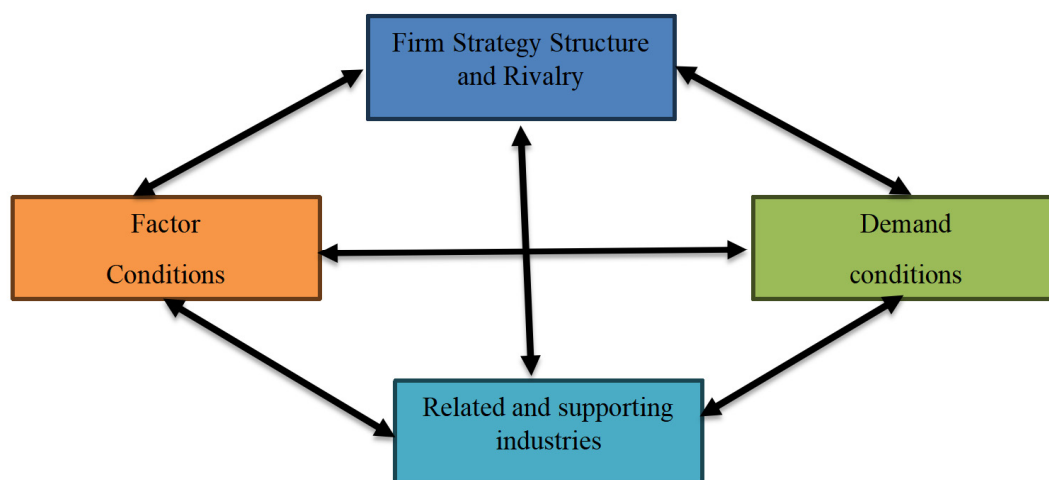


Figure 1. Porter's diamond model

Resource-based view (RBV)

Commercial real estate is an industry and as with other industries uses resources and capabilities to realise its objectives. Thus, the RBV model is also a practical strategic framework for the real estate business. In this model, companies can beat the competition by building core competence or capabilities that their competitors cannot easily imitate or copy and thus cannot be purchased in factor markets. In other words, these are the firm's capabilities, which are difficult-to-imitate by its competitors (Barney, 2001).

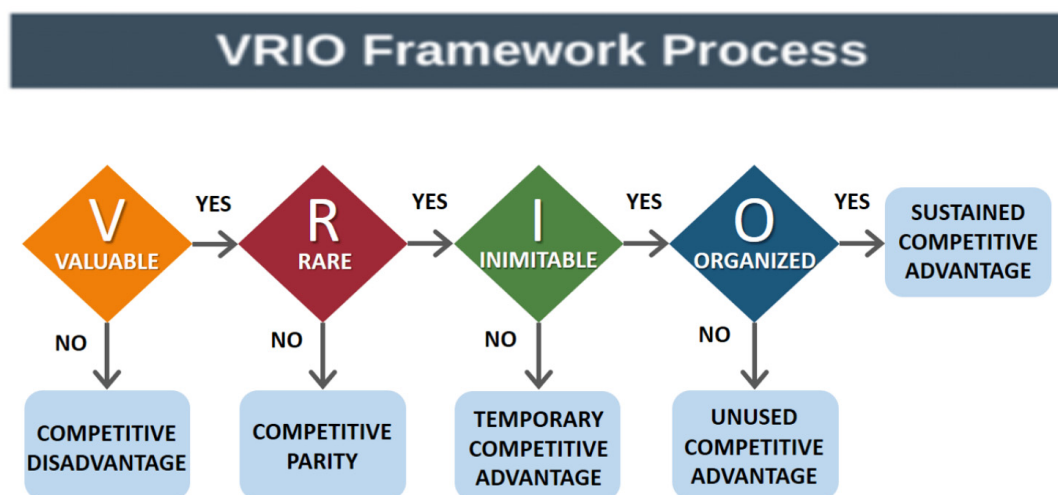


Figure 2. Resource-based View: VRIO – Valuable, Rare, Imperfectly Imitable, and Organisation – Framework Process

Corporate real estate strategy theories

Most recently theories concerned with real estate strategy have evolved. Corporate real estate strategy theories demonstrate layers of associated key action that provide feasible competitive advantage inferred from conceivable sources of maintainable competitive advantage (Kongela, 2013). This model connects various actors as organisational operational techniques through the critical layers of movement and coordination that create organisational competitiveness. The model linking works on two levels. The first level derives from its three sources of sustainable competitive advantage: cost, innovation and differentiation, which constitute an organisation's overall competitive approach or strategy. The second level of connectivity in the model is the functional strategy. This contributes to sustained competitive advantage arising from organisational capabilities created from operational, marketing, financial, HR, information and technology resources.

Certified Commercial Investment Member (CCIM) real estate feasibility model

In looking at the feasibility of real estate, this model considers four factors that both interact with and impact on the real estate business. The model considers real estate as a space to live in, work in, shop in and store things in. According to this model, a four-factor analysis is helpful in improving the performance of real estate (Manning et al., 2015). These factors are demand and supply analysis; financial analysis; location, site and building analysis; and political and legal analysis (Choi, 2008).

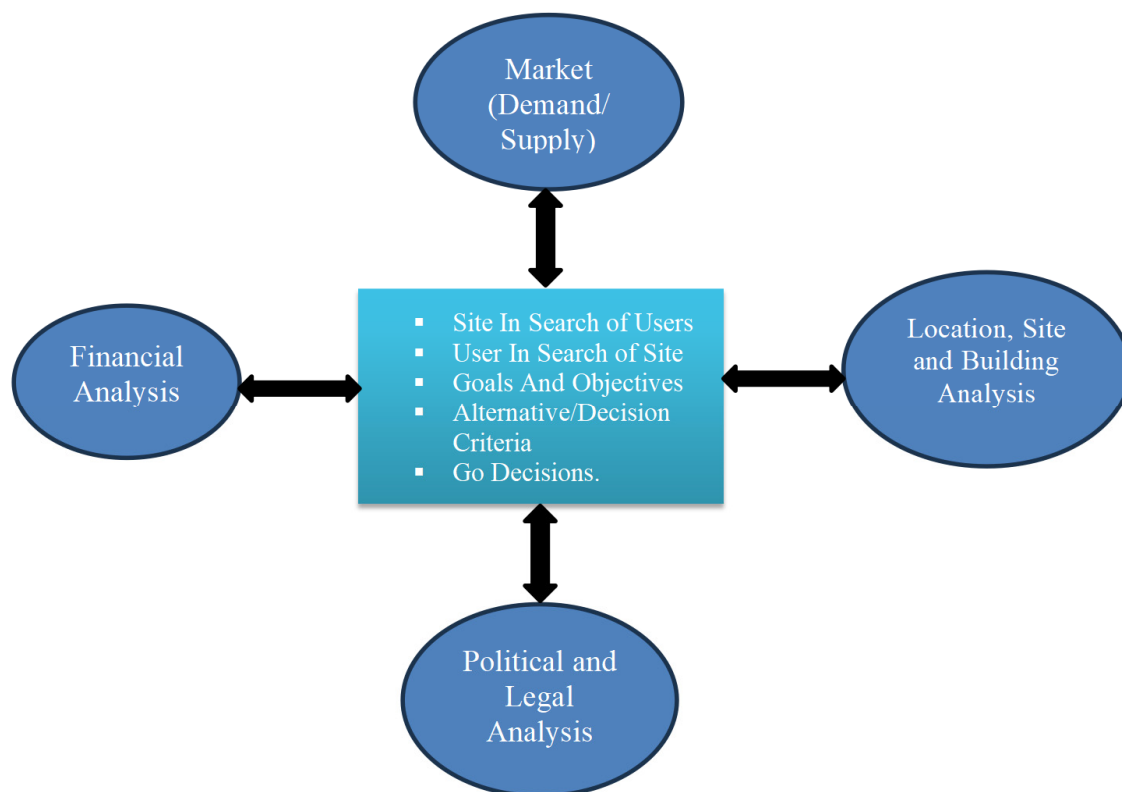


Figure 3. CCIM real estate market analysis and feasibility model (Gary M. Ralston, Ralston, 2015)

Real Estate Maturity Model

The ability of organizations to consistently increase its effectiveness and efficiency is referred to as maturity. In addition to capital, people, technology, and information, the model considers corporate real estate as “a fifth resource of a firm,” outlining a route for the evolution of CREM (Joroff, Lambert et al., 1993).

Joroff, Lambert et al. (1993) claimed that the traditional role of a corporate real estate manager (Stage 1) as taskmaster—providing physical space and technical maintenance by ad hoc interventions—has changed to a more strategic role, with a cumulative integration of minimizing real estate costs and cost efficiency (Stage 2, controller), standardizing building usage (Stage 3, dealmaker), matching real estate with business plans of the units and market options (Stage 4, intrapreneur) and a more integrated management approach, using performance indicators regarding costs and quality (Stage 5, business strategist). Hoendervanger et al. (2017) expanded the CREM maturity model by adding a sixth stage; see Figure 4. The sixth stage adds a user-centered perspective, where the fifth stage concentrated on adding value in connection to company strategy. A CRE manager develops workplaces that promote work practices and encourage behavioral change in accordance with both corporate since they are also company and user strategists.

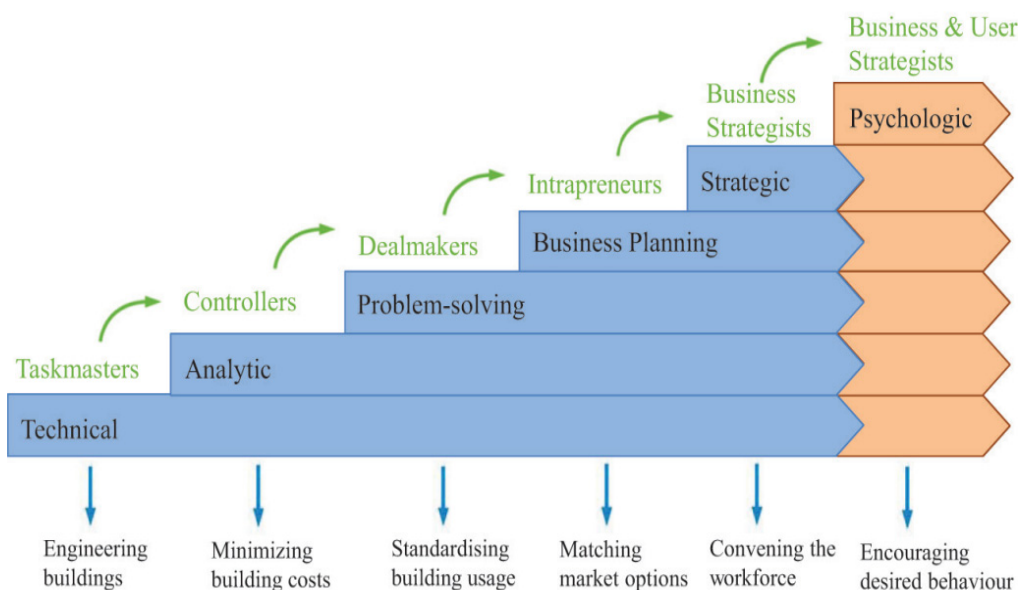


Figure 4. Source: Corporate Real Estate Management Maturity Model (CREM) - Joroff et al. (1993) and had been extended by Hoendervanger et al. (2017a, 2017 b)

6.2 Empirical Literature Review and Hypothesis Development

There have been a limited number of studies conducted in the Ethiopian real estate sector, which are summarised below but are not limited to these:

According to Moges (2008), it is critical for real estate enterprises to understand the concepts and practices of valuation in all choices involving real estate buying, selling, financing, developing, managing, owning, leasing, trading, and income tax issues.

Ethiopia's real estate market is sluggish due to a shortage of inexpensive funding (Kiros, 2009). The Ethiopian real estate market is particularly influenced by the limited availability and high price of building materials (Aqubamicheal, 2009).

According to preliminary research, very few studies on the performance, difficulties, and opportunities of real estate developers have been conducted in Ethiopia (Eshete & Teshome, 2010). Land Management, Low Construction Capacity, Inadequate Infrastructure, Poor Borrowing Capacity, Price Escalation and Low Affordability to be the major challenges faced by commercial real estate companies in Ethiopia (Eshete & Teshome, 2010). In the case of Ethiopia, fraud and corruption caused by a lack of a complete real estate framework impede commerce (Abera, 2010).

The most common issues confronting Ethiopia's real estate industry are difficulties acquiring land due to lengthy bureaucratic administrative processes; high land lease prices; delays in the delivery of finishing material; price escalation; a lack of foreign currency; limited access to loans; a lack of supervision by municipality expertise; delays in client approval or modification requests; and design changes (Firew, 2013).

Lack of funds is the most major impediment in the real estate company, and suppliers also contributed to the success or failure of commercial real estate performance (Kibru et al., 2014). When we look at the patterns in Addis Ababa's housing construction, we can see that demand and supply are not balanced, with the gap between demands and supply rising dramatically, which has the effect of raising house prices (Melaku, 2016).

Other local studies focused on single variables like real estate property valuation (Bishaw, 2021); quality management practices of real estates (MARKOS, 2018). Other local studies on real estate market in Ethiopia, focused on identifying limited number of factors or variables affecting marketing effectiveness of commercial real estate companies such as quality, price fairness, location convenience, brand reliability, salesperson credibility (Ababa 2018).

Floor level, floor area, balcony access, building security, parking space, number of bedrooms, access to a road, a

lift, the finish of the outside walls, and environmental pollution were all shown to be important factors in deciding rent for residential apartments in Addis Ababa, Ethiopia (Belete & Yilma, 2020).

Organisational planning, project manager goal commitment, project's scope and work Definition, project manager's capabilities and experience, safety precautions and applied procedures and control system were found to have a significant effect on the Project Success in the Ethiopian Real estate industry (Tigist Shemekt, 2021). Lack of loans for house buyers; inflation on construction materials; insufficiency of long-term loans; increments on land-acquisition cost; high level of tax; high bureaucracy involved in obtaining land; and low government encouragement as major challenges faced by real estate commercial developers in Ethiopia using descriptive analysis technique (Gebreyohannes, 2021).

Several studies conducted on real estate business in different countries have directed their focus towards certain common constraints. For example, Fidelis and Chinedu conducted research on financial shortfalls, effects of underutilisation of land, institutional factors such as high cost of building materials, and labour and management issues in Nigeria (Fidelis & Chinedu, 2011). The paragraphs below set out the theoretical and empirical supports of the determinants that are hypothesised to affect the performance of commercial real estate in Addis Ababa significantly and positively.

Firm Efficiency and the Performance of Commercial Real Estate

Efficient and effective organisations grow and prosper in their business dealings by implementing well-considered strategies. It is recommended in real estate that cost, flexibility, differentiation, retaining and attracting talented HR, proactive marketing and selling methods, operational efficiency and involvement in corporate social responsibility (Roulac, 2011) are adopted as strategies for improving productivity and profitability in the sector (Lindholm, 2012). Natsvaladze found that cost factors, such as keeping regular office-property prices, greater development costs, as well as costs such as financial capital (interest rates), construction (of labour and materials) and land, reduce investment profitability and do not encourage the construction of offices (Natsvaladze, 2014).

In Kenya it has been found that product-differentiation strategies, location and proximity to infrastructure are key factors in the success of real estate (Kibiru et al., 2014). Companies that have a product-based margin on their competitors have been found to have a relatively better performance. Based on the aforementioned research, it is believed that the dependability of the Firm efficiency has a significant and direct influence on how well the commercial real estate market performs.

H-1: Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa

Suppliers and the Performance of Commercial Real Estate

While Kibru have argued that a major challenge in the real estate industry is lack of finance, suppliers have also contributed to the success or failure of commercial real estate performance (Kibru et al., 2014). For example, 85% of construction tasks are undertaken by sub-contractors. Hinze and Tracey identify continuous sub-contracting as a major problem between suppliers and contractors (Hinze & Tracey, 1994) see also (Okunlola, 2015). Thus, the success or failure of any project is determined by the performance of sub-contractors. The real estate market is also negatively affected by the shortage and increased prices of housing construction materials. This affects the Ethiopian real estate sector (Kiros Aquubamicheal, 2009). According to Egert and Mihalject the real construction cost is the function of wages and salaries of workers, the price of the land, and costs of building materials (Egert & Mihalject, 2007). Based on the aforementioned research, it is believed that the dependability of the Suppliers has a significant and direct influence on how well the commercial real estate market performs.

H-2: Suppliers' dependability has a significant impact on the performance of commercial real estate firms

Buyers and the Performance of Real Estate

Customers play a significant role in whether the performance of real estate increases or decreases. Commercial real estate is constructed for customers either in a lease form or as owned property. A buyer usually has a specific interest when interacting with the space developer, such as to find a location that enhances social value, fulfills the customer's aesthetic needs and brings economic as well as geographic value (Haddad et al., 2011). Li and Chau investigated how heterogeneous buyers on both sides of transactions behave in the housing market when knowledge asymmetry exists (Li & Chau, 2023). In the empirical experiments, two types of customers, informed and uninformed buyers, correspond to local and non-local purchasers. The findings revealed that non-local purchasers, due to the high expenses of decreasing information asymmetry, prefer to buy in the first-hand housing

market; otherwise, they end up paying more than local buyers in the second-hand market for comparable housing units. Based on the above literature, it is hypothesised that the buyers buying intentions has a major and direct impact on how well the commercial real estate market performs.

H-3: The buyers buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa

Credit availability and the performance of commercial real estate

As Kiros explains, a slowdown in real estate development is brought about by a lack of affordable funding (Kiros, 2009). Low interest rates and a stable economy force banks to extend maturities and make more loans available at lower interest rates, lowering the barriers to getting loans, according to Kiros. Most recently, I had a three-year mortgage. More mortgage loans can be taken as a form of financial inclusion in which households gain access to the formal financial system (Morgan & Zhang, 2015). In addition, Li writes that other factors also have an influence on real estate business and recommend that real estate developers need to have unique financial competency (Li et al., 2009). Mortgages play a major role in improving housing affordability, increasing the flow of funds into the housing sector and better diversifying the risks associated with emerging market housing finance (World Bank, 2011). Brown et al. (2008) assert that an increase in disposable income, low mortgage loan interest, high inflation rate, ease of access to mortgage loans, and low Real Property Gains Tax (RPGT) are amongst the major factors that influence property investment in Australia. These factors also happen to be drivers of markets of property investment. In New Zealand also, De Bruin and Flint discovered that certain economic factors strongly influence property investment (Bruin & Flint, 2000). Li et al. (2009) asserted that other factors have an impact on the real estate sector and recommended real estate developers to have specialised financial competency. In the current study, it is hypothesised that the Credit availability has a major and direct impact on how well the commercial real estate market performs.

H-4: Credit availability has a positive and significant impact on commercial real estate performance

Market strategy and commercial real estate performance

Corporate real estate strategy theorises that firms become productive and profitable by minimising costs, being flexible, providing a unique service or product, attracting and retaining professionals, marketing proactively and managing HR effectively (Roulac, 2001). Slow real estate growth is affected by internal inefficiencies and the absence of professionals in different streams (Ramnarian, 2012). According to Adewale the performance of a firm is significantly affected by marketing strategy variables such as advertising, place, price, packaging and after-sales services (Adewale et al., 2013). Competitive advantage is a source of superior performance and is made up of competencies of the firm that are not able to be imitated by competitors (Barney, 1991). In the current study, it is hypothesised that the performance of the commercial real estate market is significantly and directly influenced by the availability of land.

H-5: Market strategy has a statistically significant and positive impact on commercial real estate performance

Legal Factors and the Performances of Commercial Real Estate

Ownership issues, tax and business permit rules have impacted real estate business considerably, especially that of commercial real estate. For example, tax deductions and free economic zones in Latvia have attracted foreign direct investment (Komisarov, 2016), whereas fraud and corruption that result from the lack of a comprehensive real estate framework retard the business in the case of Ethiopia (Admasu, 2010). Governments regulate the real estate business through legislation, taxation, subsidies, the banking system and the zoning of land (Torgomyan & Laskowska, 2016). In the current study, it is hypothesised that the performance of the commercial real estate market is significantly and directly influenced by the availability of land.

H-6: Legal factors have a statistically significant and positive impact on commercial real estate performance

Land Availability and the Performance of Commercial Real Estate

Natsvaladze theorises that land is a physical property with natural ownership rights that can be restricted for a society's good. She further views land as an economic factor that is a source of wealth measured in monetary terms (Natsvaladze, 2014). Where there is no development opportunity and activity, there will be no demand and supply for real estate property and even if there is supply, the property will not be affordable. Muhammad found that the value of land, owing to intangible factors such as that it is free from or experiences a minimum of ethno-religious conflicts, is greater than the value created from the main tangible factors in violence-prone areas and vice versa (Muhammad et al., 2016). Land accessibility, according to Omirin entails land tenure security, land affordability, land availability and the ease with which land is acquired. Indeed, it is now a common

knowledge that due to a variety of factors, informality is the predominant characteristic of urban growth and that a majority of urban residents, especially the poor, access property rights through transactions occurring outside state regulations and formal land markets (Omirin, 2002). Land contributes significantly to production (agriculture, manufacturing and building Construction); and it is a source of power, social prestige, cultural identity and heritage (Lipton, 2009; Odeny, 2013). Land availability is affected by marketing, non-marketing and environmental factors, including political and legal factors (Kuryi-Wysocka et al., 2014). Lack of land availability is one of the main drivers of the urban housing shortage (World Bank, 2015). It is hypothesised in the current study that Land availability has a major direct influence on the performance of the commercial real estate market.

H-7: Land availability positively and significantly affects the performance of commercial real estate firms

Infrastructure and the Performance of Real Estate

Access to infrastructure is critical for real estate success in that the cost of building new roads and other infrastructure is similar to maintaining old roads and infrastructure, and areas with good roads are priced higher than those with poor roads. Good infrastructure is a precondition for developing commercial office real estate and has an impact on the supply of office space (Cahill, 2010). The impact of infrastructure development and improvements on property values has been studied extensively in the literature (Ahlfeldt & Wendland, 2011; Bowes & Ihlanfeldt, 2001; Voith, 1993). The economic impact of infrastructure improvements derives from the bid-rent theory of urban economics which posits that an improvement in accessibility or local amenities increases land and property values due to higher productivity, superior quality of life and lower transportation costs (Vadali, 2014; Mulley et al., 2016). Following the above scholarly support, it seems safe to theorise that development in infrastructure has a significant positive impact on commercial real estate in Addis Ababa.

H-8: Infrastructural development has a significant and positive impact on commercial real estate performance

Technology and the Performance of Commercial Real Estate

The influence of technology on commercial real estate seems to run from A to Z. According to Navigant Construction Forum the variety of changes in technology related to the construction industry have the capacity to significantly change the way in which owners, designers, construction managers, contractors and sub-contractors execute their work (Navigant Construction Forum, 2016). Thompson and Dixon suggest that commercial real estate, especially commercial offices, receive two order impacts from information and communication technology (ICT) connectivity. The first order includes changes in space intensity, improvement in design and construction, increment in productivity, better experience of the location and change in the organisational culture. The second order impact is the creation of value and improvements in lease provision and service (Thompson & Dixon, 2005). It is hypothesised in the current study that the adoption of the latest technology has a major direct influence on the performance of the commercial real estate market.

H-9: Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms

Leadership and commercial real estate performance

Organisational performance is the “transformation of inputs into outputs by achieving certain outcomes. With regard to its content, performance informs about the relation between minimal and effective cost (economy), between effective cost and realised output (efficiency) and between output and achieved outcome (effectiveness)” (Chen, 2002, as cited in Karamat, 2013). Daft and Marcic define organisational performance as the measure of when and how an organisation determines its own objectives (Daft & Marcic, 2009). According to Obiwuru, Okwu, Akpa, and Nwankwere one of the reasons why there is a relationship between leadership and organisational performance is that increased performance necessitates innovation-oriented competitiveness within today’s concentrated and dynamic market (Obiwuru et al. 2011). Reduced profit and competencies also need to be dealt with creatively (Santora et al., 1999). Studies suggest that, in the face of such challenges, effective leadership can facilitate performance development (McGrath & MacMillan, 2000). In addition, to understand the effects of leadership on performance, it is important to understand that leadership plays a key role in developing the performance of organisations (Obiwuru et al., 2011). The improvement of organisational performance requires the development of management, and a sustainable competitive advantage requires leadership (Avolio, 1999; Rowe, 2001).

H10: Leadership quality has a positive significant impact on the performance of commercial real estate firms in Addis Ababa

7. Conceptual Framework of the Study

In a research study, a conceptual framework is developed as a tool to guide the researcher's inquiry; it embraces ideas used to organise the research (Holborn, 2008). One of the aims of the current study is to construct an integrated commercial real estate performance measurement model related to Addis Ababa.

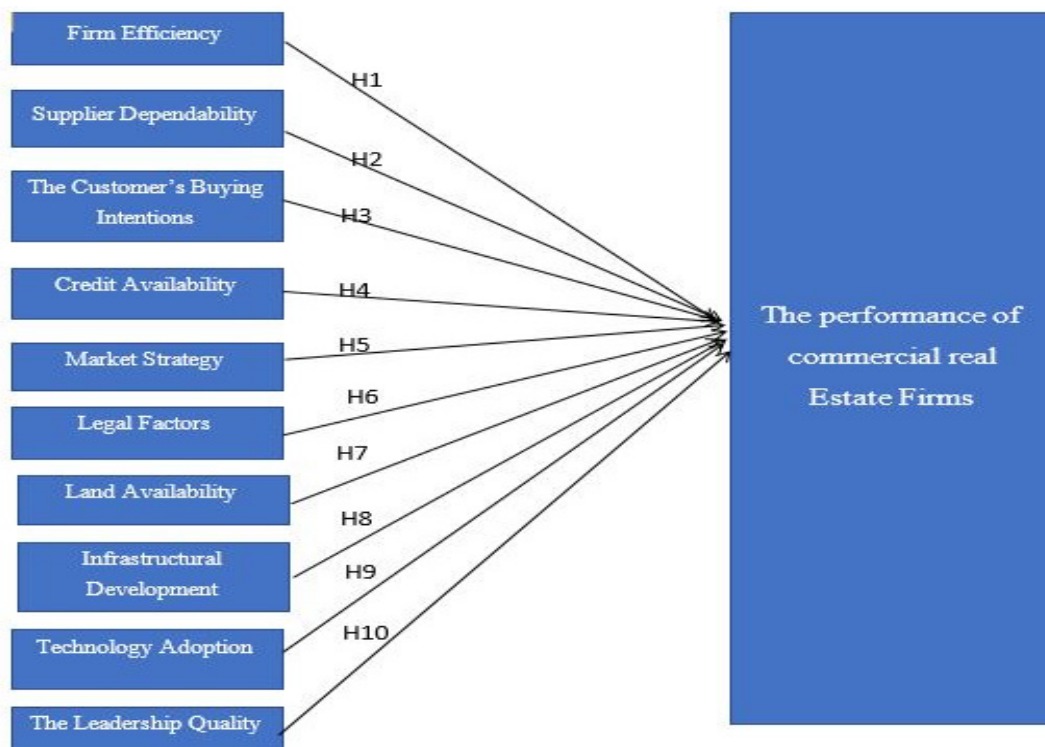


Figure 5. Conceptual framework of the study

8. Research Methodology

8.1 Research Approach and Research Design

This study involved both a structured relationship that could be addressed through quantitative data and an interpretative approach that employed qualitative data. Hence, in order to gain a deeper understanding of the phenomenon under investigation and overcome the limitations of each individual method, the researcher employed a mixed research approach. Bethlehem claimed that mixed research reduces both cost and time demands while increasing response rate (Creswell, 2014). For this study, an explanatory sequential mixed method design was adopted. Using this design, the study started with an explanatory, quantitative phase and moved sequentially to qualitative aspects. In this context, the first phase used a quantitative method in the survey questionnaire. This was followed by the second phase in which a qualitative method was used; that is, interviews with key informants (qualitative) and enhancing the analysis through producing codes or conceptual themes. The results of this analysis were used to improve the quantitative phase (survey questionnaire). In the explanatory design, the researcher first conducts quantitative data collection and analysis, and then supports the findings with qualitative methods (Creswell, 2014).

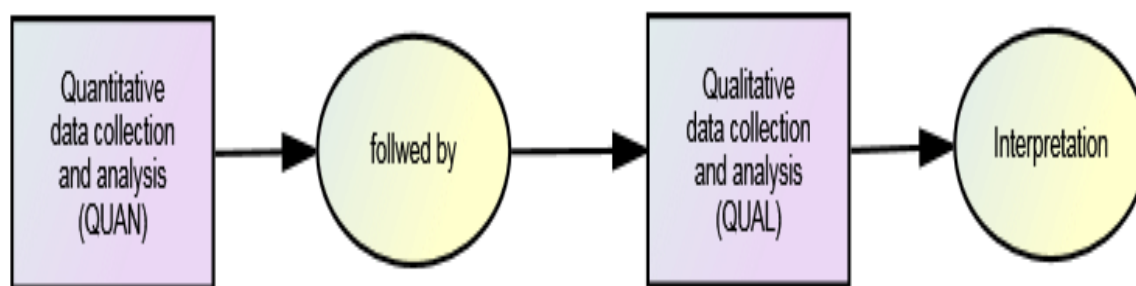


Figure 6. The flow of the explanatory sequential mixed methods research design

8.2 Population and Sample Framework

The study population for this research was all the commercial real estate firms operating in Addis Ababa. The respondents chosen for the study were all employees and managers of the 35 commercial real estate firms operating in Addis Ababa. The employees and managers were selected from the construction or operation, finance, marketing and legal divisions of these firms. These managers of these divisions were sought as they were considered to have knowledge that would be very relevant in responding to the structured questionnaires in this study.

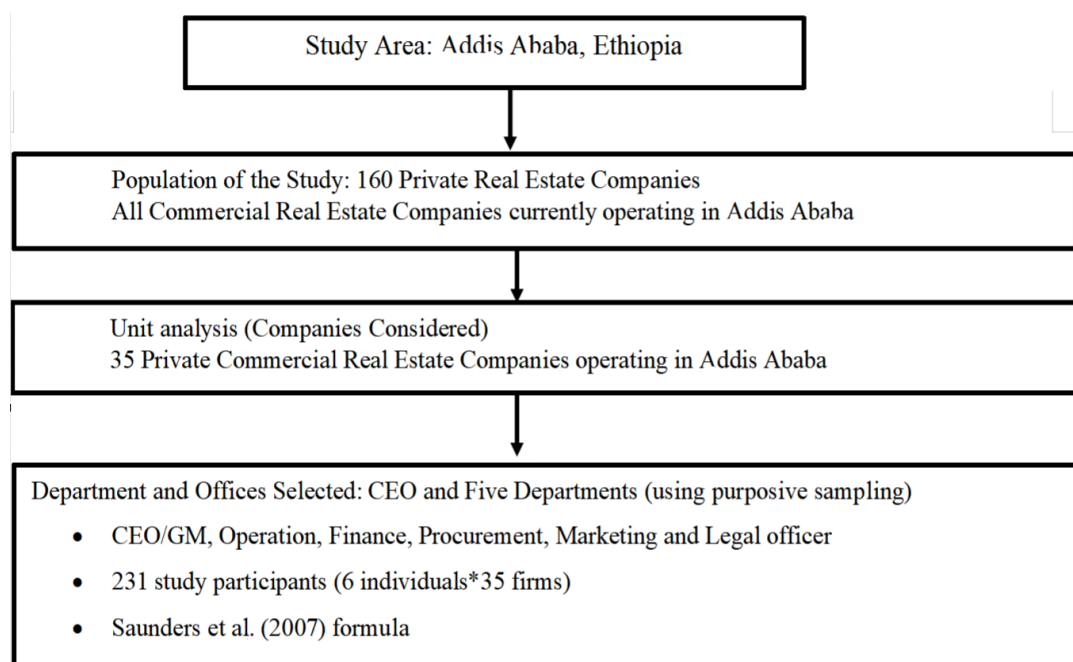


Figure 7. Population and sample frame of the study

Thus, a total of 231 respondents (six individuals from each firm and 10% allowance for non-response) were considered. In the absence of managers or heads of managers were considered. This sample size satisfied the sample size adequacy recommendation by Comrey and Lee (1992) that a sample size of 50 is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1000 or more is excellent.

On the other hand, the qualitative research study used the purposive sampling method. In order to gather relevant responses from specifically chosen respondents for various study issues, this sampling strategy was adopted. According to Saunders and Lewis (2009), this is advised in situations of severe cases, heterogeneity (highest variation), and homogeneity (greatest similarity).

8.3 Data Collection Methods

8.3.1 Quantitative Data-Collection Methods

Quantitative data were collected by means of a structured questionnaire. A self-administered questionnaire was distributed to the following positions in each of the 35 firms: Chief executive officer or general manager (CEO/GM) or deputy general manager; operation (construction) department manager; finance department head; procurement department head; contract and marketing manager and legal advisor/officer of the company. Thus, a total of 231 respondents (six individuals from each firm and 10% allowance for non-response) were considered.

The questionnaire consisted of questions with an interval five-point Likert scale, with the questions aimed at commercial real estate managers and employees. The questionnaire focused on the extent of challenges faced by real estate companies in relation to operation/construction, finance, marketing, and regulatory frameworks, as well as opportunities that might contribute to the development and viability of the sector.

8.3.2 Qualitative Data-Collection Methods

The instrument for qualitative data collection was designed in the form of a set of open-ended questions on the topic of the research. In-depth face-to-face interviews using a discussion guide and interview schedule were carried out with Director, Finance and Economy Analysis at National Bank of Ethiopia, Chief Corporate Loan Officer at commercial Bank of Ethiopia, Team leader, Land Management and Administration at Addis Ababa City Municipality; Ministry of Urban and Infrastructure Devt. Senior officer, Senior Sales manager's construction material suppliers, Taxation expert from ministry of revenue, Investment Licensing and Registration Director, Head, Construction Permission and Control office of Bole sub- city in Addis Ababa. These questions were supported by the literature review and opinions of experts in the area. The interviews mainly focused on challenges and opportunities faced by this sector with respect to operations, finance, marketing and legislative framework. A semi structured interview checklist was used from total of 10 Key informants and 4 other key informants declined to be interviewed.

9. Instrument Validity and Reliability

9.1 Instrument Validity

Validity is often defined as the extent to which an instrument measures what it is intended to measure (Creswell, 2009). A perfectly valid scale will have no measurement error. Before a proposed model can be used in hypothesis testing, the validity of its measurement model must first be checked. Validity can be measured in several ways. Among these, content and construct validity are the major methods. In the current study, a pilot survey of 30 potential respondents was conducted. From this pilot study, feedback was collected, and tools were validated prior to the full data collection.

9.2 Reliability

Reliability refers to the extent to which a data-collection technique or analytical procedure provides consistent results (Creswell, 2009). Finding reliable measures is important when choosing measures to include in a study. Reliability has many facets. One of the main issues affecting scale is internal consistency. This indicates how related the elements are that make up the scale and whether they all measure the same basic structure. The normal range of Cronbach's coefficient alpha value is between 0.0 and + 1.0, with the higher values reflecting a higher degree of internal consistency. A value exceeding 0.7 is assumed to be sufficient and an instrument with such a value is said to be reliable as recommended by Nunnally and Creswell (Nunnally, 1994; Creswell, 2009).

10. Data Analysis Techniques

10.1 Quantitative Data-Analysis Techniques

In order to summarise the study sample and characterise the properties of various variables, descriptive statistics were used. The link between the independent variables (managers' perceptions across ten criteria) and the dependent variable (firms' performance) was investigated using Pearson correlation. To determine which of the predictor factors has the greatest impact on the dependent variable, regression analysis has been used.

Descriptive statistics were used to examine frequencies and percentages, as well as means, standard deviations of responses from target respondents. An independent sample t test was performed to assess the mean difference in real estate performance between the male and female participants in the study. A one-way ANOVA was used to evaluate whether there is a significant mean difference among different demographic groups with respect to commercial real estate performance.

Construct validity focuses on the measurement of individual constructs. Convergent validity assesses the extent

to which the items that constitute the construct converge or share a high proportion of variance in common (Straub, Boudreau, & Gefen, 2004; Hair et al., 2010, 2009). Exploratory Factor Analysis (EFA) is conducted to understand whether a theoretical construct is a one-dimensional or multi-dimensional factor (Holmes-Smith, 2010). It is a method that is used to reduce data to a smaller set of summary variables and to explore the underlying theoretical structure of the phenomena being studied.

After verifying that the full CFA measurement model met the GOF statistics, this research next conducted an analysis to establish discriminant validity. As specified above, discriminant validity assesses the extent to which conceptually related constructs are indeed different (or not identical). Discriminant validity provides evidence that a construct is unique and captures some phenomena that other constructs do not.

To measure the convergent and discriminant validity, SPSS-AMOS can assess the effectiveness of construct convergence using one or a combination of the following measures: goodness-of-fit (GOF) measure; squared multiple correlation (SMC), which is a function of the size of the standardised factor loadings (SFL); sampling mean variance (Weaver & Olson, n.d.); and construct reliability (Creswell) (Straub et al., 2004; Hair et al., 2010). If the GOF showed a poor fit to the theorized model, the model was reassigned. Multiple regression analysis was used to determine the cause and effect relationship (Firm efficiency, Suppliers' dependability, Consumer's buying intention, Credit availability, Market strategy, Legal factors, Land availability, Infrastructural development, Technology adoption and Leadership quality with commercial real estate performance)

Pearson Correlation was also used to assess bivariate correlations among study variables because it provides a yardstick for determining the strength of such associations (Bryman & Cramer, 2005). Multiple regression analysis Assumptions including Normality of the error distribution. Linearity, Homoscedasticity, Independence of error terms, Multicollinearity statistics has been carried out and all assumption testes were acceptable to the regression analysis.

The proposed regression model was tested as stated herein under.

$$CREP = \alpha + \beta_{1FEI} + \beta_{2SD} + \beta_{3BI} + \beta_{4CA} + \beta_{5MS} + \beta_{6LF} + \beta_{7LA} + \beta_{8ID} + \beta_{9TA} + \beta_{10LQ} + e$$

Where

α = the constant

β_1 - β_{10} = the parameters

CREP = Real Estate Performance

FE = Firm's Efficiency

SD = Suppliers' Dependability

BI = Customers' Buying Intention

CA = Credit Availability

MS = Marketing Strategy

LF = Legal Factors

LA = Land Availability

ID = Infrastructure Development

TA = Technological Adoption

LQ = Leadership Quality

e = error term

β_0 = is the intercept term-it gives the average value of REP when the stated independent variables are set equal to zero.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ refers to the coefficient of their respective independent variable which measures the change in the mean value of REP, per unit change in their respective independent variables.

ε = Error term

10.2 Qualitative Data-Analysis Techniques

Thematic analysis was employed in this work to identify, organise, analyse, and report on related data sets and topics (Braun & Clarke, 2006). The study determined the five themes of operation, finance, marketing, procurement, and legislative framework before gathering primary data. The researcher attempted to describe the

agreements achieved and the disagreements put forth once these themes were found from earlier empirical findings. To protect against measurement error, bias and personal interpretations were avoided or minimised from the results and outcomes of the interviews of this study.

The study used a deductive and inductive coding approach to analyse the data. Thematic analysis is a method used for analysing qualitative data that entails searching across a dataset to identify, analyse and report repeated patterns (Braun & Clarke, 2006). Hybrid thematic analysis is a method, or process, for identifying and encoding patterns of meaning in primary qualitative research (Braun & Clarke, 2006, 2013). A hybridised coding approach was used in this study for the qualitative-data analysis. However, to adopt a hybrid approach, the researcher begins his analysis with a set of a priori codes (deductive) and then adds new codes (inductive) as he works his way through the data. Essentially, therefore, the hybrid coding approach provides the best of both worlds: deductive and inductive.

A deductive or theory-driven coding approach was used to analyse the qualitative data associated with the 10 constructs of real estate developers' efficiency, real estate suppliers' dependability, real estate consumers' buying intention, credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, land availability for real estate developers, infrastructure development, technology adoption and leadership quality or competency of the real estate developers Prior to the interview, each Construct was defined/operationalized for the interviewee to have the same degree of understanding.

11. Results and Discussion

In these section results of the quantitative and qualitative data analysis methods are summarized and discussed.

11.1 Result of the Quantitative Study

Table 1. Profile of study respondents

Variable		Count	Per cent
Sex	Male	106	65.0%
	Female	57	35.0%
Age group	18–24 Years	9	5.5%
	25–34 Years	79	48.5%
	35–44 Years	60	36.8%
	45–54 Years	8	4.9%
	55–64 Years	7	4.3%
Educational level	College Certificate or Diploma	11	6.7%
	Bachelor's Degree	80	49.1%
	Master's Degree	65	39.9%
	Doctoral Degree	7	4.3%
Work experience	1 to 4 Years	49	31.4%
	5 to 10 Years	68	43.6%
	11 to 20 Years	36	23.1%
	21 to 30 Years	0	0.0%
	Above 21 Years	3	1.9%
Occupation	CEO	7	4.6%
	Deputy	18	11.8%
	Operation Head	36	23.5%
	Finance Head	27	17.6%
	Marketing Head	28	18.3%
	Purchasing and Property Head	30	19.6%
	Legal Officer	7	4.6%
Leadership Style	Democratic	75	52.8%
	Transformational	36	25.4%
	Autocratic	3	2.1%
	Laissez-Faire	27	19.0%
	Others	1	0.7%

Source: Author's Own Survey Result, 2022.

The respondents' demographic data collected for this study, including gender, age, educational background, work experience, occupation and leadership styles, are summarised in Table 1.

Table 2. Description of study variables (n = 163)

Variable	Minimum	Maximum	Mean	Std. Deviation	Rating Status
Firm's Efficiency	2	5	4.396***	0.581	Positive
Suppliers' Construction Materials	2.67	5	4.339***	0.5475	Positive
Customers' Buying Intention	2	5	4.091***	0.6698	Positive
Credit Availability	2.75	5	4.159***	0.6073	Positive
Marketing Strategy	2	5	4.118***	0.6655	Positive
Legal Factors	1.5	5	4.072***	0.7059	Positive
Land Availability	2	5	4.245***	0.6816	Positive
Infrastructure Development	3	5	4.391***	0.5394	Positive
Technological Adoption	2.5	5	4.237***	0.6772	Positive
Leadership Quality	2.43	5.25	4.244***	0.7048	Positive
Real Estate Performance	2	5	4.108***	0.7245	Positive

Source: Author's Own Survey Result, 2022.

The descriptive statistics shown in Table 3 provide a more in-depth analysis of the study's factors, including the Firm's Efficiency (Mean = 4.396***, SD = 0.581); Dependability of its Suppliers (Mean = 4.339***, SD = 0.5475); Customers' Buying Intention (Mean = 4.091***, SD = 0.6698); Credit Availability (Mean = 4.159***, SD = 0.6073); Marketing Strategy (Mean = 4.118***, SD = 0.6655); Legal Factors (Mean = 4.072***, SD = 0.7059); Land Availability (Mean = 4.245***, SD = 0.6816); Infrastructure Development (Mean = 4.391***, SD = 0.5394); Technological Adoption (Mean = 4.237***, SD = 0.6772); Leadership Quality (Mean = 4.244***, SD = 0.7048); and Real Estate Performance (Mean = 4.108***, SD = 0.7245). The mean of a variable is significantly different from the mid-point 3, at the 0.001 significance level. If the mean of a single quantitative variable was equal to a value that was assumed to be representative of the population, one-sample t-tests were utilised.

Table 3. Independent sample t-test for non-response bias

Variable	t-value	df	p-value	Mean			Std. Error Difference
				Earlier	Later	Difference	
Firm's Efficiency	-3.040	78	.080	4.235	4.503	-0.268	.1209
Suppliers' Construction Materials	1.762	78	.082	4.533	4.332	.201	.114
Customers' Buying Intention	2.606	78	.091	4.229	3.838	.391	.150
Credit Availability	1.095	78	.277	4.148	3.981	.167	.152
Marketing Strategy	-.649	78	.518	3.923	4.024	-.101	.155
Legal Factors	1.985	78	.051	4.195	3.865	.329	.166
Land Availability	1.021	78	.310	4.180	4.018	.162	.159
Infrastructure Development	-.828	78	.410	4.325	4.428	-.104	.125
Technological Adoption	-.445	78	.658	4.109	4.178	-.070	.156
Leadership Quality	.939	78	.351	4.254	4.117	.137	.146
Real Estate Performance	1.546	78	.126	4.182	3.939	.243	.157

Source: Author's Own Survey Result, 2022.

In this study, the first 40 responses received (representing 24.5% of the sample) and the last 40 responses received (representing 24.5% of the sample) were selected and an independent sample t-test was performed to compare the results of these responses. Table 4 shows the results of the independent-samples t-test. The results show no significant difference between the before and after responses at the 95% confidence interval for the selected variables. The results show that even where there is non-response bias; it is not statistically significant and therefore does not skew the data and prevent generalisations from the sample to the population.

Mean difference among demographic groups

A Mean Difference among Demographic Groups (age groups, Educational level, Work experience Occupation and Leadership Style, in Relation To RE Performance) was analysed using ONE-WAY ANOVA. According to the ANOVA test results, there was no statistically significant difference in real estate performance among age groups [F (2, 160) = 2.369, p-value = .097]; educational Groups, [F (2, 160) = 1.073, p-value = .345]; work experience [F (2, 153) = 328, p-value = .721]; Occupational groups [F (6, 146) = .411, p-value = .871].

Table 4. ANOVA test on Leadership styles and real estate performance

Multiple Comparisons							
Dependent Variable: Real Estate Performance							
	(I) LEADERSHIP STYLE	(J) LEADERSHIP STYLE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Democratic	Transformational	.32764	.14365	.108	-.0459	.7012
		Autocratic	.97427*	.36357	.041	.0288	1.9198
		Laissez-Fair	.04183	.15901	.994	-.3717	.4554
	Transformational	Democratic	-.32764	.14365	.108	-.7012	.0459
		Authocratic	.64663	.37341	.311	-.3245	1.6177
		Laissez-Fair	-.28581	.18037	.391	-.7549	.1833
	Autocratic	Democratic	-.97427*	.36357	.041	-1.9198	-.0288
		Transformational	-.64663	.37341	.311	-1.6177	.3245
		Laissez-Fair	-.93243	.37958	.072	-1.9196	.0547
	Laissez-Fair	Democratic	-.04183	.15901	.994	-.4554	.3717
		Transformational	.28581	.18037	.391	-.1833	.7549
		Authocratic	.93243	.37958	.072	-.0547	1.9196

Note. *. The mean difference is significant at the 0.05 level.

However, there was a statistically significant real estate performance difference among the categories of leadership style [$F(3, 138) = 3.796$, $p\text{-value} = .012$] as shown in Table 4 above.

Assessment of Construct Validity through CFA

In this study convergent validity was used to measure individual items in a construct.

Table 5. Categories of GOF Indices

Category	Statistics	Definition
Chi-Square	Chi-Square	Difference between observed and estimated covariance matrices
Absolute Fit Measures	GOF Index	Measure indicating how well a model reproduces the variance/covariance matrices of the observed sample
	Root Mean Square Error of Approximation (RMSEA)	Badness-of-fit index measuring how well a model fits a population taking into account both model complexity and sample size
	Root Mean Square Residual (RMSR)	Average of the residuals between individual observed and estimated covariance and variance terms
	Standardised Root Mean Residual (SRMR)	Standardised value of RMSR
	Normed Chi-Square	Ratio of chi-square to degrees of freedom for a model
Incremental Fit Indices	Normed Fit Index (NFI)	Assesses how well a specified model fits relative to some alternative baseline model (often a null model that assumes all observed variables are uncorrelated)
	Comparative Fit Index (CFI)	
	Tucker-Lewis's Index (TLI)	
	Incremental Fit Indices (IFI)	
Parsimony Fit Indices	Parsimony Comparative Fit Index (PCFI)	Evaluates the parsimony ratio of the model compared to the GOF, such as Parsimony comparative or normed fit indices CFI and NFI
	Parsimony Normed Fit Index (PNFI)	

Source: Author's Own Survey Result, 2022.

GOF Indices (Statistics): GOF compares the goodness of fit between theory and reality (Hair et al. 2010). The closer the covariance matrices between the two, the better the theory is said to fit the data. Thus, GOF indices reflect the model's ability to represent the data (Hair et al. 2010). GOF indices are grouped into four general categories: Chi-Square, Absolute Fit Indices, Incremental Fit Indices and Parsimony Fit Indices (see Table 7). In this study, the model fit was evaluated in terms of the selected fit measures as summarised in Table 7: Selected Fit Measures and Established Criteria

In this study, the model fit was evaluated in terms of the selected fit measures as summarised herein under.

Table 6. Summaries of Selected Fit Measures and Established Criteria

Category	GOF Statistics	Acceptable Level	Reference
Chi-Square	Chi-Square	P-Value can be less than 05	Hair et al. (2010, 666); Holmes-Smith (2010, 5, 7)
Absolute Fit Indices	Root Mean Square Error of Approximation (RMSEA)	Values <08	Lewis et al. (2005); Hair et al. (2006, 748); Hair et al. (2010, 672)
	Root Mean-Square Residual (RMR)	Values <09	Hair et al. (2010, 672)
	Normed Chi-Square	Value between 1 and 5	Lewis et al. (2005); Hair et al. (2010, 668)
Incremental Fit Indices	Normed Fit Index (NFI) Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Incremental Fit Indices (IFI)	Values > = 92	Hair et al. (2010, 672)
Parsimony Fit Indices	Parsimony Comparative Fit Index (PCFI) and Parsimony Normed Fit Index (PNFI)	Values > = 5	Hair et al. (2010, 672)

Source: Author's Own Survey Result, 2022.

Discriminant Validity

After verifying that the full CFA measurement model met the GOF statistics, this research next conducted an analysis to establish discriminant validity. The discriminant validity analysis results, as set out in Table 8, show that the AVE values are greater than their respective squared inter-construct correlations in several of the cases. The Values on the diagonal line in Table 8 are the constructs' calculated AVE. The values below the diagonal are the constructs' implied correlations. Values above the diagonal are the squared correlations.

Table 7. Discriminant validity and reliability of the full CFA measurement model

No.	Variable	1	2	3	4	5	6	7	8	9	10	11	No. of items	Cronbach's Alpha
1	Firm's Efficiency	0.609	0.062	0.109	0.115	0.203	0.089	0.123	0.138	0.323	0.214	0.402	5	0.868
2	Suppliers	0.248	0.543	0.149	0.144	0.031	0.045	0.099	0.061	0.084	0.187	0.303	3	0.776
	Construction Materials													
3	Customers' Buying Intention	0.331	0.386	0.452	0.205	0.135	0.092	0.149	0.036	0.189	0.207	0.403	4	0.735
4	Credit Availability	0.339	0.38	0.453	0.452	0.204	0.154	0.219	0.112	0.266	0.169	0.464	4	0.776
5	Marketing Strategy	0.451	0.175	0.368	0.452	0.469	0.063	0.222	0.106	0.257	0.203	0.412	5	0.817
6	Legal Factors	0.299	0.212	0.303	0.392	0.251	0.544	0.191	0.05	0.154	0.103	0.318	4	0.841
7	Land Availability	0.351	0.314	0.386	0.468	0.474	0.437	0.518	0.118	0.291	0.3	0.494	4	0.815
8	Infrastructure Development	0.371	0.246	0.189	0.335	0.325	0.231	0.343	0.562	0.259	0.154	0.324	5	0.869
9	Technological Adoption	0.568	0.29	0.435	0.516	0.507	0.392	0.539	0.509	0.64	0.298	0.441	4	0.892
10	Leadership Quality	0.463	0.433	0.455	0.411	0.451	0.321	0.548	0.393	0.546	0.624	0.445	4	0.873
11	Real estate performance	0.634	0.55	0.635	0.681	0.642	0.564	0.703	0.569	0.664	0.667	0.748	7	0.948

Source: Author's Own Survey Result, 2022.

Correlation analysis

Correlation was used for the analysis of bivariate relationships to gauge the intensity or strength of such relationships between the Dependent and the Independent Variables. Bivariate analysis was conducted between each independent variable with the dependent variable to assess initial significant predictors (Hair et al., 2010; Field, 2009).

Table 8. Correlations between the dependent variable and the independent variables

		1	2	3	4	5	6	7	8	9	10
1	Firm's Efficiency	-									
2	Suppliers' Construction Materials	.248**	-								
3	Customers' Buying Intention	.331**	.386**	-							
4	Credit Availability	.339**	.380**	.453**	-						
5	Marketing Strategy	.451**	.175**	.368**	.452**	-					
6	Legal Factors	.299**	.212**	.303**	.392**	.251**	-				
7	Land Availability	.351**	.314**	.386**	.468**	.474**	.437**	-			
8	Infrastructure Development	.371**	.246**	.189**	.335**	.325**	.231**	.343**	-		
9	Technological Adoption	.568**	.290**	.435**	.516**	.507**	.392**	.539**	.509**	-	
10	Leadership Quality	.463**	.433**	.455**	.411**	.451**	.321**	.548**	.393**	.546**	-
11	Real estate performance	.634**	.550**	.635**	.681**	.642**	.564**	.703**	.569**	.664**	.667**

Source: Author's Own Survey Result, 2022.

The findings set out in Table 9 show that the associations between the independent variables and the dependent variable range from strongly positive to very strong. The results shown in Table 9 indicate that there is a positive relationship between Firm's Efficiency and real estate performance with a value of 634** ($r=634^{**}$, $p < 0.01$); the relationship between Suppliers' Construction Materials and real estate performance has a value of 550** ($r=550^{**}$, $p < 0.01$); the relationship between Customers' Buying Intention and real estate performance has a value of 635** ($r=.635^{**}$, $p < 0.01$); Credit Availability and real estate performance has a value of 681** ($r=.681^{**}$, $p < 0.01$); Marketing Strategy and real estate performance has a value of 642** ($r=.642^{**}$, $p < 0.01$); Legal Factors and real estate performance has a value of 564** ($r=.564^{**}$, $p < 0.01$); Land Availability and real estate performance has a value of 703** ($r=.703^{**}$, $p < 0.01$); Infrastructure Development and real estate performance has a value of 569** ($r=.569^{**}$, $p < 0.01$); Technological Adoption and real estate performance has a value of 664** ($r=.664^{**}$, $p < 0.01$); and Leadership Quality and real estate performance has a value of 667** ($r=.667^{**}$, $p < 0.01$).

Regression analysis

Regression is a powerful tool that summarises the nature of the relationship between variables and assists in making predictions of the likely values of the dependent variable (Bryman and Cramer 2005). The model summary of the regression analysis indicates that the total number of independent variables considered in this study (leadership quality, legal considerations, infrastructure development, suppliers' construction materials, marketing strategy, customers' buying intentions, firm's efficiency, technological adoption, land availability, and credit availability) can explain 78.7% of the variation in real estate performance. The overall significance of the regression model is good, as indicated by the statistical significance ($F(10, 152) = 60.774$, $p\text{-value}.0001$), which suggests that all of the independent variables included in the multiple linear regression model have a statistically significant impact on the real estate performance.

Table 9. Coefficients table

Model	Unstandardized Coefficients		Standardised Coefficients	T-value	P-value
	B	Std. Error	Beta		
(Constant)	-1.934	.275	-	-7.039	<.0001***
Firm's Efficiency (Fe)	.137	.062	.110	2.205	.029**
Suppliers' dependability (SD)	.146	.061	.110	2.395	.018**
Customers' Buying Intention (BI)	.138	.053	.128	2.614	.010***
Credit Availability (CA)	.143	.064	.120	2.236	.027**
Marketing Strategy (MS)	.118	.056	.108	2.104	.037**
Legal Factors (LF)	.138	.045	.135	3.068	.003***
Land Availability (LA)	.159	.056	.150	2.847	.005***
Infrastructure Development (ID)	.140	.061	.104	2.287	.024**
Technological Adoption (TA)	.117	.056	.110	2.088	.038**
Leadership Quality (LQ)	.191	.050	.186	3.800	<.0001***

Source: Author's Own Survey Result, 2022.

Note. * Dependent Variable: Real estate performance: Significance codes: *** (Sig. at 0.01), ** (Sig. at 0.05).

The real estate data were analysed by using the multiple linear regression model as shown in Table 10. The results showed that all the independent variables considered were statistically significant predictors of real estate performance: Firm's Efficiency (beta = .137; t-value = 2.205; p-value = .029); Suppliers' Dependability (beta = .146; t-value = 2.395; p-value = .018); Customers' Buying Intention (beta = .138; t-value = 2.614; p-value = .010); Credit Availability (beta = .143; t-value = 2.236; p-value = .027); Marketing Strategy (beta = .118; t-value = 2.104; p-value = .037); Legal Factors (beta = .138; t-value = 3.068; p-value = .003); Land Availability (beta = .159; t-value = 2.847; p-value = .005); Infrastructure Development (beta = .140; t-value = 2.287; p-value = .024); Technological Adoption (beta = .117; t-value = 2.088; p-value = .038); and Leadership Quality (beta = .191; t-value = 3.8; p-value <0001).

The regression model in this study is illustrated as below:

$$CREP = 1.934 + .137FE + .146SD + .138BI + .143CA + .118MS + .138LF + .159LA + .140ID + .117TA + .191LQ + e$$

Table 10. Summary of Hypotheses tests

Hypothesis #	Research Hypothesis	Beta Value	T-Value	P-Value	Decision
H-1	Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.	Beta=.137	T-Value=2.205	P-Value=.029	Supported
H-2	Suppliers' dependability has a significant impact on the performance of commercial real estate firms.	Beta=.146	T-Value =2.395	P-Value=.018	Supported
H-3	The buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa.	Beta=.138	T-Value=2.614	P-Value=.010	Supported
H-4	Credit availability has a positive and significant impact on commercial real estate performance.	Beta=.143	T-Value=2.236	P-Value=.027	Supported
H-5	Market strategy has a statistically significant and positive impact on commercial real estate performance.	Beta=.118	T-Value =2.104	P-Value=.037	Supported
H-6	Legal factors have a statistically significant and positive impact on commercial real estate performance.	Beta=.138	T-Value =3.068	P-Value=.003	Supported
H-7	Land availability positively and significantly affects the performance of commercial real estate firms.	Beta=.159	T-Value=2.847	P-Value=.005	Supported
H-8	Infrastructural development has a significant and positive impact on commercial real estate performance.	Beta=.140	T-Value =2.287	P-Value=.024	Supported
H-9	Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms.	Beta=.117	T-Value=2.088	P-Value=.038	Supported
H-10	Leadership quality has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.	Beta=.191	T-Value=3.8	P-Value <0001	Supported

11.2 Discussion of Results

The following ten constructions were found to have a substantial effect, as addressed below.

* *H-1: Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.* The relationship between firm efficiency and performance of commercial real estate was shown to be positive and significant (beta = .137; t-value = 2.205; p-value = .029) confirming Hypothesis 1. This result is in line with the assertion made by Lindholm (2012) and Roulac (2011) that successful businesses grow and thrive in commercial transactions by putting plans into practice.

* *H-2: Suppliers' dependability has a significant impact on the performance of commercial real estate firms.* The research suggests that the performance of commercial real estate firms is positively and significantly correlated with the dependability of suppliers to provide construction materials (beta = .146; t-value = 2.395; p-value = .018). The results of this study confirm those of Mirawati (2015), who found that real estate enterprises' quality, reputation and productivity are all enhanced by a relationship-based connection between the supplier and the contractor. The results also support those of Ramnarian (2012), who claims that unreliable suppliers have an impact on real estate expansion.

* *H-3: The buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa.* The results suggest that there is a significant and positive relationship between customers' intentions to buy and the performance of commercial real estate (beta = .138;

t-value = 2.614; p-value = .010). This finding is consistent with Brophy and Haddad et al. (2011), who assert that when deciding to purchase real estate, buyers consider aesthetic, economic, marketing, geographic and social factors.

* *H-4: Credit availability has a positive and significant impact on commercial real estate performance.* The relationship between credit availability and performance of commercial real estate was shown to be positive and significant (beta = .143; t-value = 2.236; p-value = .027), supporting H-4. The findings of this study are in line with those of (Okidim & Ellah, 2013), who claim that access to credit for financing is essential since it enables individuals and firms to meet the population's housing needs.

* *H-5: Market strategy has a statistically significant and positive impact on commercial real estate performance.* The relationship between marketing strategy and the performance of commercial real estate was shown to be positive and significant (beta = .118; t-value = 2.104; p-value = .037). This finding is consistent with Adewale (Adewale et al., 2013), who argue that the performance of a firm is significantly affected by the marketing strategy variables of advertising, place, price, packaging and after-sales services. It is also consistent with the position put forward by Barney that competitive advantage is a source of superior performance, and it is made up of competencies of the firm that cannot be copied by competitors (Barney, 1991).

* *H-6: Legal factors have a statistically significant and positive impact on commercial real estate performance.* The relationship between legal factors and the performance of commercial real estate was shown to be positive and significant (beta = .138; t-value = 3.068; p-value = .003), which supports H-6. This conclusion supports Komisarov's claim that tax breaks and free economic zones encourage foreign direct investment, citing Latvia as an example (Komisarov's, 2016). This is in contrast to Ethiopia, where a lack of a complete real estate framework has resulted in fraud and corruption that has slowed operations (Admasu, 2010).

* *H-7: Land availability positively and significantly affects the performance of commercial real estate firms.* The availability of land was revealed to be positively and significantly correlated with the performance of commercial real estate (beta = .159; t-value = 2.847; p-value = .005), supporting H-7. The study's results for this hypothesis are in line with those of Kuryi-Wysocka et al. (2014), who contend that while land supply is stable, demand is rising steadily, driving up prices and occasionally having an impact on land prices as well, reducing the amount of available land. According to Kuryi-Wysocka et al. (2014), environmental, political and legal variables, as well as marketing and non-marketing elements, have an impact on land availability (Kuryi-Wysocka, Wysocka et al., 2014). Lastly, this study's findings are in line with a report by the World Bank (2015), which identified the shortage of land as one of the primary causes of urban housing scarcity.

* *H-8: Infrastructural development has a significant and positive impact on commercial real estate performance.* The relationship between infrastructural development and the performance of commercial real estate was shown to be positive and significant (beta = .140; t-value = 2.287; p-value = .024), supporting H-8. The findings of this study are consistent with those of (Cahill, 2010), who discovered that infrastructure access is essential for real estate profitability. The findings of this study are likewise in line with those of Igbinsosa (Igbinsosa, 2011), who contends that the more connections a site has to the metropolis, the more investment it draws. It is also consistent with the findings of Seo (2016), who claims that the success of commercial real estate has been influenced by transportation facilities of various models.

* *H-9: Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms.* The relationship between technology adoption and the performance of commercial real estate was shown to be positive and significant (beta = .117; t-value = 2.088; p-value = .038), supporting H-9. The study's findings are in line with those of Navigant Construction Forum (Navigant Construction Forum, 2016; Thompson & Dixon, 2005), who suggest that technology increases construction efficiency by utilising ICT (such as AutoCAD), digital selling and marketing, and involving customers in the design process to reduce the likelihood of frequent changes from the initial design.

* *H-10: Leadership quality has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.* Leadership quality was revealed to be positively and significantly correlated with the performance of commercial real estate (beta = .191; t-value = 3.8; p-value < .0001), supporting H-10. This finding of the study is consistent with the view of McGrath and MacMillan (2000) who proposes that in the face of current challenges faced by the real estate sector effective leadership can facilitate performance development. According to the research, management development is crucial for enhancing organisational performance and leadership is required for long-term competitive advantage. (Avolio, 1999; Rowe, 2001).

All the 10 variables used in the study were found significant effect on the performance of the real estate sector.

The coefficient tables show the contribution of each independent variable toward the endogenous variable (real estate performance). Out of the ten variable leadership was contributing most (Beta = .191) followed by Land availability (Beta = .159) and construction material Suppliers' dependability stand third ((beta = .146). however, Technology adoption's contribution was found to be the least contributor though significant (Beta = .117; t-value = 2.088; p-value = .0).

From the regression analysis results one can infer observe the following facts and implications.

- To establish a suitable marketing strategy for their particular organisations, real estate developers must select business leaders with excellent and solid leadership skills and knowledge.
- Credit and land availability are critical factors in improving real estate performance, and the government must revisit credit and land policy in close consultation with land management experts and financial institutions to address such challenges and constraints. Credit and land policies must be updated together with the real estate sector.
- One of the key deficiencies identified in the study is the shortage of construction materials. Materials provide structural strength, durability, utility, beauty, and regulatory compliance, assuring safe and long-lasting constructions. Real estate developers should conduct comprehensive study to find construction materials from both domestic and international sources.
- The Ethiopian government and the ministry of construction industry must pay close attention to affordable low-cost construction technology transfer from other industrialized countries in order to adopt an appropriate technology.
- Ethiopia only has three or four foreign real estate investors; thus, conducive real estate development policy frameworks are required to attract foreign direct investment in the real estate industry.
- Private equity, both as a contracting strategy and an industry, is relatively young in Africa internal and Ethiopia in particular. Most funds have a regional or sectoral focus, and those with an East Africa focus are heavily invested in Kenya, Uganda, and Tanzania (AVCA, 2016).
- The Ethiopian mortgage market is not functioning effectively, and this has created difficulties for home buyers. The country's lack of a mortgage market has hampered the establishment of either investment institutions or long-term financing options.
- Land, among other things, is the most important input for real estate developers. But the lease price of land is quite expensive for real estate developers. Land is currently the property of the state and may only be acquired through leasing. Land lease prices are expensive, and land supply is limited.
- There is no comprehensive and clear legal framework for foreign real estate investors; and there is lack of legislative support to provide incentives to real estate developers.
- There is effectively organised financial institution that provides housing finance, the scarcity of skilled labour compared to other sectors.

In sum, poor Land Management, Low Construction Capacity, Inadequate Infrastructure, Poor borrowing Capacity, low credit availability, challenge of accessing foreign currency to buy construction materials, low purchasing capacity of real estate customers, corruption at different levels of the system, and the lack of a proper legal framework. low equity capital inflow, poorly designed real estate marketing strategies, Price Escalation of land, Low Affordability of houses, shortage of construction materials, misguided housing policies, high level of taxation ; high bureaucracy low commitment to quality, employee empowerment and continuous improvement on the organisational performance of the real estate companies by real estate leaders are few of the critical factors adversely affecting the performance the real estate sector in Ethiopia.

11.3 Result of the Qualitative Study

The interview questions dealt with factors identified in the quantitative phase of the study as affecting the performance of commercial real estate developers. The factors identified included the real estate developer's efficiency, real estate suppliers' dependability, real estate consumers' buying intention, credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, land availability for real estate developers, infrastructure development, technology adoption and leadership quality or competency of the real estate developers. The findings of the qualitative study are presented as follows. Firm efficiency of real estate developers, the dependability of the real estate suppliers, the buying intent of the real estate consumers, the availability of credit for real estate developers, the marketing strategy, the legal and policy frameworks pertaining to real estate, the availability of land for real estate developers, the development of infrastructure, the

adoption of technology, and the leadership quality or competency of the real estate developers were found to significantly affect the performance of Commercial Real estate Firms.

In addition to the pre-established constructs, the following additional constructs were identified in the interview process with the key informants: 1) Current Political and Economic Instability; 2) Coordination and Participation of Stakeholders; 3) Purchasing Power of Home Buyers; and 4) Political Interest and Intervention. The current political and economic volatility in the country may have an impact on the supply of building materials, as well as the delays experienced by developer businesses in obtaining these materials. It may also have an impact on the timely completion of construction by real estate developers. Coordination and participation of players in the industry are also seen as critical for the sector's development and efficiency. The purchasing power of home buyers was identified as having a major influence on commercial real estate performance. Finally, for the real estate development sector, political interest, involvement and intervention, and influence are critical issues.

Thus, based on the quantitative and qualitative results of the study, an integrated commercial real estate performance research model was proposed in Figure 8:

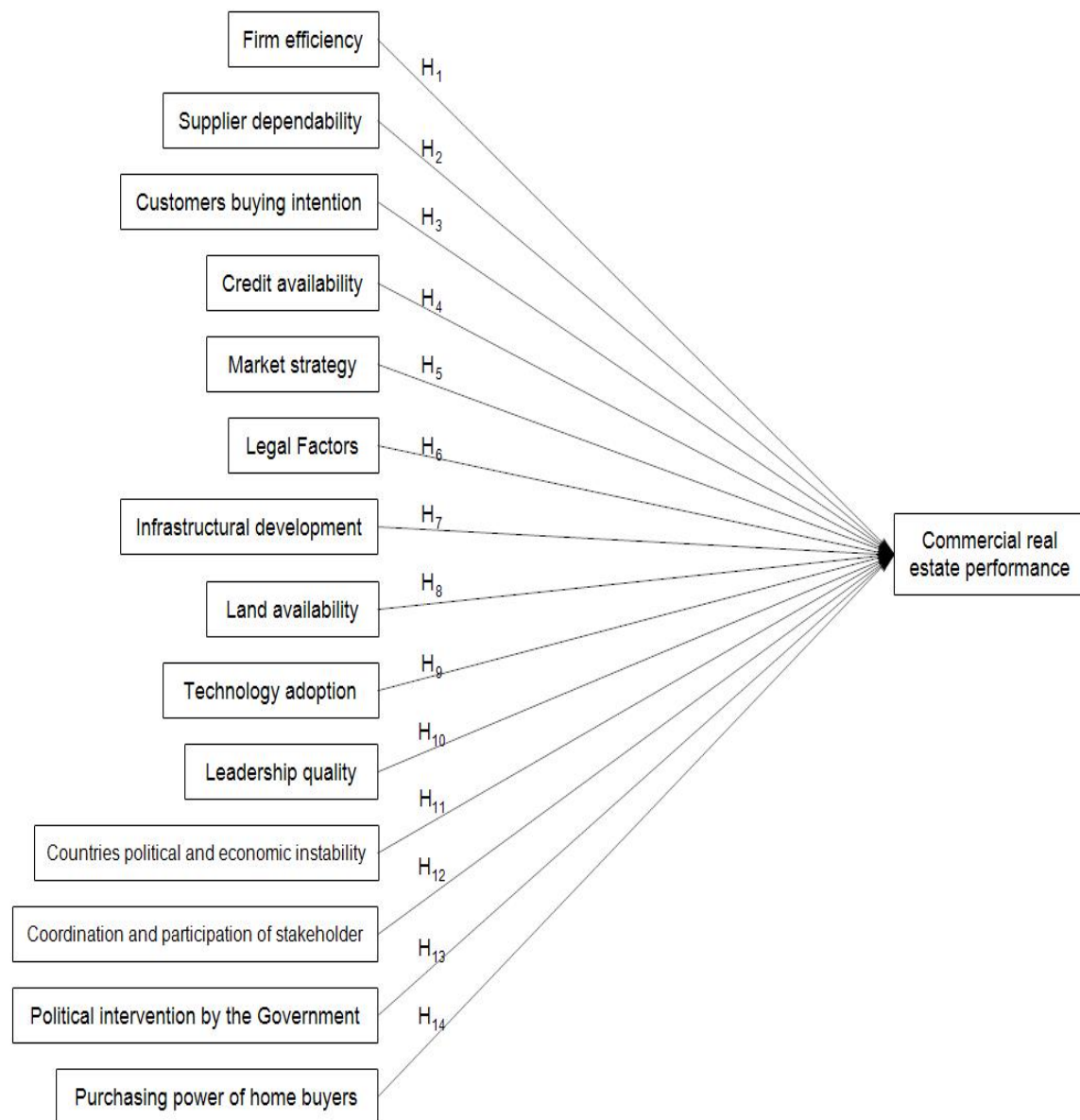


Figure 8. Proposed commercial real estate performance measurement framework

12. Conclusion

The global real estate business is one of the most profitable undertakings for many economies and one of the ways of gauging a society's economic growth. Real estate refers to land and associated elements made permanently a part of it and the nature and extent of one's interest in it (Romer, 2017). The real estate industry plays a pivotal role in the social, political and economic development of a country (Kauškale & Geipele, 2019). The real estate market in Addis Ababa, Ethiopia, has been evolving into a varied mix of extensive government-built condominiums (for lower-income groups), mid-market developments by housing cooperatives, and largely high-end homes built by real estate developers and/or homeowners themselves. An initial literature review revealed that Addis Ababa's real estate sectors are confronting a multitude of challenges that include long bureaucratic administrative processes; high land-leasing prices; material supply delays; shortage of foreign currency; limited credit availability; inadequate infrastructure; a lack of long-term loans for buyers; increases in land acquisition costs; a high level of taxation; inflation on construction materials; a lack of government encouragement; and unreliable brokers, among others. As a result, this research set out to determine the key variables that have a significant impact on Addis Ababa's commercial real estate performance. The following sub-research questions were investigated in this study to get a thorough grasp of the phenomenon being studied:

- * What are the determinants of commercial real estate performance in Addis Ababa, Ethiopia?
- * Which of the identified factors has the most significant impact on commercial real estate performance in Addis Ababa, Ethiopia?
- * What other factors will have an impact on the success of commercial real estate operating in Addis Ababa, Ethiopia?
- * What are the commercial real estate performance constraints and challenges in Addis Ababa, Ethiopia?
- * What will be the overarching conceptual model for measuring commercial real estate performance in Addis Ababa, Ethiopia?

The efficiency of real estate developers, the dependability of real estate suppliers, the purchasing intentions of real estate consumers, credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, land availability for real estate developers, infrastructure development, technology adoption, and the leadership quality or competency of real estate developers all had a significant impact on the commercial real estate sector. Furthermore, current political and economic instability; stakeholder coordination and participation; home buyer purchasing power; and political interest and intervention have been identified as major factors to real estate performance by key informants using thematic analysis.

All the research questions were answered and an integrated model for measuring commercial real estate performance was proposed.

Limitations

Various limitations were identified in this study, which present opportunities for future research.

- It was not possible to obtain a genuine and complete secondary data compiled on the performance measures of organisations after conducting a preliminary survey to ascertain their availability. The study was conducted using the opinions of five important professional target organisations and commercial real estate professionals. Empirical data would be more relevant because people's perceptions as revealed in the responses may be impacted by a variety of factors, including prior experiences, preconceived conceptions and current situations.
- Another drawback of this study was the availability and voluntariness of managers and executives, which is often the biggest impediment, which may be due to respondents' stringent work schedules and that the research culture is seen negatively in the country.
- This research was carried out at Addis Ababa. Although the majority of real estate firms are located in cities, the study's conclusions could not be applied to the entire nation because regional states within the nation may vary. As a result, the study's external validity was impacted.
- The key informants identified and used for the study were from various sectors, with varying levels of expertise and experience, and there were some divergent views on issues such as land policy and credit policy, as well as the importance of marketing strategy in the real estate sector.
- The study planned to include 15 key informants to capture an extensive range of perspectives and opinions regarding the variables influencing the real estate sector, however five of them declined to participate.

Recommendation

On the basis of the research conclusions, the researcher offers the following recommendations to enhance Addis Ababa's commercial real estate performance.

* To improve commercial real estate performance, real estate developers should pay close attention to all the factors analysed in the study (firm efficiency; dependability of its suppliers; customer purchasing intentions; credit availability; marketing strategy; legal factors; land availability; infrastructure development; technological adoption; and leadership quality).

* Because real estate developers refused to offer secondary data on their performance, subjective metrics (perceptions of professionals) were employed to assess real estate performance. If real estate developers are willing to provide performance data, objective measurements (performance financial data) could be used to measure commercial real estate performance.

* To further investigate the relationships between determinants and commercial real estate performance, the researcher recommends looking at the revised model that was developed based on a combined assessment of quantitative and qualitative study.

Implication for real estate developers

The study established a comprehensive framework for the effective measurement of real estate performance. The commercial real estate framework provides a clear direction that real estate developers and marketers can follow while measuring their performance and can be used as a practical tool.

The Government of Ethiopia

The Ethiopian government must devise a strategy to control all the key elements of the real estate market, including housing costs and land availability. It should also make loans available with affordable interest rates. The policy must include fees for new land development, stringent building codes, and zoning and land use regulations to control the supply and cost of real estate. Ethiopian banks should be urged to accept "reasonable risk" in vetting loan applications from small and medium-sized Real estate businesses. In urging banks to take "reasonable risk", it is suggested that government should institute some form of tax incentives to banks involved in RE lending. This will encourage others to consider the option of lending to this sector.

Financial institutions

Commercial real estate developers must be provided with loans from financial institutions such as central banks, retail and commercial banks, internet banks, credit unions, savings and loan associations, investment banks, investment companies, brokerage firms, insurance companies and mortgage companies at reasonable interest rates. Despite the fact that banks suffer limits, it is proposed that they engage in active banking by mobilising resources and allocating them to needy REs.

Improving Registration Process

Ethiopia may proactively prepare itself for, and promote, the flow of private equity capital into the country by establishing the necessary policy and regulatory environment. In order to exploit the opportunities associated with private equity investments, it must think very strategically about the development of a robust private sector. Ethiopia must consider the following minimal prerequisites for a thriving private equity and venture capital sector while building a framework. Ethiopia's private equity Investment is underdeveloped. , on the other hand. Investors make repeated journeys over a ten-day to two-month period to register capital. To improve this procedure, government officials responsible for registering foreign investments should be trained to make consistent choices and instructions, and the number of entities responsible for approving investments should be reduced.

Implication for research methodology

In order to conduct the study's many phases, an explanatory sequential mixed methods research design was used, with quantitative data collection and analysis in the first part of the investigation and qualitative data collection and analysis in the second half to support and complement the quantitative results and findings. This study provides a real-world illustration of how combining quantitative and qualitative methods can provide a more thorough understanding than using either a quantitative or qualitative method alone. The outcomes of the analyses of the quantitative and qualitative data were complementary. The study's internal validity is undoubtedly improved by this design as well.

References

Ababa, A. (2017). *The Effect of After sales service quality on customer satisfaction in the Ethiopian Automotive*

industry: The case of MOENCO, Nyala Motors and Yang Fan Motors.

- Abera, A. (2012). *Factors affecting the performance of micro and small enterprises in Arada and Lideta Sub-Cities, Addis Ababa*. MBA Thesis unpublished, School of Graduate Studies, Addis Ababa University, Ethiopia.
- Adewale, A., & Oyewale, I. O. (2013). Impact of Marketing Strategy on Business Performance A Study of Selected Small and Medium Enterprises (SMES). In *Oluyole Local Government, Ibadan, Nigeria*. Ibadan, Nigeria. <https://doi.org/10.9790/487X-1145966>
- African Venture Capital Association. (2016). *Annual African private equity data tracker with Regional Spotlights*. Retrieved from <http://www.avca.africa.org>
- Anim-Odame, W. (2015). *Investment Focus On Real Estate Markets In Africa* (No. afres2015_115). African Real Estate Society (AfRES). https://doi.org/10.15396/afres2015_115
- Ankarloo, D. (2006). December. New Institutional Economics and Economic History: A Case of Economics Imperialism. In *Historical Materialism Conference* (pp. 8–10). London.
- Ariyawansa, R. G. (2009). *Management of Real Estate: Principles of Real Estate Development & Management*. Published by the author.
- Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Thousand Oaks, CA: Sage.
- Barney, J., Wright, M., & Ketchen Jr, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625–641. <https://doi.org/10.1177/014920630102700601>
- Belete, M., & Yilma, M. (2020). Market Rent Determinants of Residential Apartments in Addis Ababa, Ethiopia. *Journal of African Real Estate Research*, 5(1), 77–97.
- Bo, Li, R. Y. M., & Wareewanich, T. (2021). Factors influencing large real estate companies' competitiveness: a sustainable development perspective. *Land*, 10(11), 1239. <https://doi.org/10.3390/land10111239>
- Bowes, D. R., & Ihlanfeldt, K. R. (2001). Identifying the impacts of rail transit stations on residential property values. *Journal of Urban Economics*, 50(1), 1–25. <https://doi.org/10.1006/juec.2001.2214>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. *Successful Qualitative Research*, 1–400.
- Brophy, & Haddad et al. (2011). *Real Estate Marketing and Factors Impacting Real Estate Purchasing: An Application on Turkey*.
- Brown, R. M., Schwann, G., & Scott, C. (2008). Personal residential real estate investment in Australia: Investor characteristics and investment parameters. *Real Estate Economics*, 36(1), 139–173. <https://doi.org/10.1111/j.1540-6229.2008.00210.x>
- Cahill, D. (2010). 'Actually, existing neoliberalism' and the global economic crisis. *Labour and Industry: A Journal of the Social and Economic Relations of Work*, 20(3), 298–316. <https://doi.org/10.1080/10301763.2010.10669405>
- Choi, J. (2008). *Feasibility study of Korea biocluster with real estate perspectives*. Massachusetts Institute of Technology.
- Comrey, A. L., & Lee, H. B. (1992). *A First Course in Factor Analysis* (2nd ed.). Hillsdale, NJ: L: Erlbaum Associates.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications, Inc.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches*. Los Angeles: sage publications ltd.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Daft, R. L., & Marcic, D. (2009). *Management: The new workplace, South Western*. International Student Edition.

- Egert, M. (2007). *Determinants of House Prices in Central and Eastern Europe*. The William Davidson Institute At The University Of Michigan. <https://doi.org/10.1057/palgrave.ces.8100221>
- Eshete, Z. S., & Teshome, K. (2010). *Performance, Challenges, and Prospects of Real Estate Financing in Addis Ababa*. SSRN 2335525. <https://doi.org/10.2139/ssrn.2335525>
- Evans, A. W. (2008). *Economics, real estate and the supply of land*. John Wiley and Sons.
- Feng, X. et al. (2018). Thermal runaway mechanism of lithium ion battery for electric vehicles: A review. *Energy Storage Materials*, 10, 246–267. <https://doi.org/10.1016/j.ensm.2017.05.013>
- Fidelis, I. E., & Chinedu, C. N. (2011). Critical Issues in Real Estate Finance as an Index in Building Contract Project Management Success in Nigeria. *American Journal of Social and Management Sciences*, 2(1), 76–90. <https://doi.org/10.5251/ajsms.2011.2.1.76.90>
- Firew, M. (2003). *Institutional Interfaces and Actors behavior In Transitional Real Estate Markets of Addis Ababa* (Ethiopia).
- Gebreyohannes, M. M. (2021). *The Impacts Of Financial Challenges In Case Of Real Estate Developers In Ethiopia*.
- Haddad, M., Judeh, M., & Haddad, S. (2011). Factors affecting buying Behavior of an apartment an empirical investigation in Amman, Jordan. *Research Journal of Applied Sciences, Engineering and Technology*, 3(3), 234–239.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall, Upper Saddle River, NJ.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall, Upper Saddle River, NJ.
- Hinze, J., & Tracey, A. (1994). The contractor-subcontractor relationship: the subcontractor's view. *Journal of Construction Engineering and Management*, 120(2), 274–287. [https://doi.org/10.1061/\(ASCE\)0733-9364\(1994\)120:2\(274\)](https://doi.org/10.1061/(ASCE)0733-9364(1994)120:2(274))
- Hoendervanger, J. G. et al. (2017). *Organisatie-en mensgericht managen van smart workplaces*. Smart Workplace 1(Janssen & ROY1).
- Holmes-Smith, P. (2010). *An applied introductory course in structural equation modelling using AMOS*. In SREAM.
- Igbinsosa, S. O. (2011). *Determinants of Real Property Value in Nigeria*. A Neural Network. <https://doi.org/10.4314/afrev.v5i5.13>
- Joroff, M. L. et al. (1993). *Strategic management of the fifth resource: corporate real estate*. International Development Research Council.
- Karen, M. G., & Anna-Liisa, L. (2012). A test of corporate real estate strategies and operating decisions in support of core business strategies. *Journal of Property Research*, 29(1), 25–48. <https://doi.org/10.1080/09599916.2011.608470>
- Kauškale, L., & Geipele, I. (2019). Sustainable development of real estate market and its assessment opportunities: case study of Latvia. *European Journal of Sustainable Development*, 8(1), 375. <https://doi.org/10.14207/ejsd.2019.v8n1p375>
- Kibiru, L. N. (2014). *Effect of Union Membership on Private Sector Wages in Kenya*. Doctoral dissertation, University of Nairobi.
- Kiros, A. (2009). *Factors Affecting the Real Estate Market: the case of Addis Ababa City*. Unpublished MA thesis, Addis Ababa University, Ethiopia.
- Komisarov, V., Kauškale, L., & Lepkova, N. (2016). Positive influencing factors of commercial property development: case of Lithuania. *Baltic Journal of Real Estate Economics and Construction Management*, 48–60. <https://doi.org/10.1515/bjreecm-2016-0004>
- Kongela, S. M. (2013). *Framework and Value Drivers for Real Estate Development in Sub-Saharan Africa: Assessment of the Tanzanian Real Estate Sector in the Context of the Competitiveness Model* (Vol. 65). Immobilien Manager Verlag IMV.
- Kuryj-Wysocka, O., Kuryj, J., & Wisniewski, R. (2014). The dynamics of properties' 'valuable areas'. *Real*

- Estate Management and Valuation*, 22(4), 105–113. <https://doi.org/10.2478/remav-2014-0041>
- Li, B., et al. (2021). Factors Influencing Large Real Estate Companies' Competitiveness: A Sustainable Development Perspective. *Land*, 10(11), 1239. <https://doi.org/10.3390/land10111239>
- Lipton, M. (2009). *Land Reform in Developing Countries: Property Rights and Property Wrongs*. New York: Routledge. <https://doi.org/10.4324/9780203876251>
- Lohri, C. R. et al. (2014). Financial sustainability in municipal solid waste management – Costs and revenues in Bahir Dar, Ethiopia. *Waste Management*, 34(2), 542–552. <https://doi.org/10.1016/j.wasman.2013.10.014>
- Manning, C., O'Neill, J. W., Singh, A. J., Hood, S., Liu, C., & Bloom, B. A. N. (2015). The emergence of hotel/lodging real estate research. *Journal of Real Estate Literature*, 23(1), 1–26. <https://doi.org/10.1080/10835547.2015.12090392>
- Markos, F. (2018). *Assessment on the implementation of quality management practices in real estate construction in addis ababa: the case of flintstone and afro tsion real estate*. Addis Ababa University.
- McGrath, R. G., & MacMillan, I. C. (2000). *The Entrepreneurial Mindset*. Boston, MA Harvard Business School Press.
- Melese. (2020). Factors Determining the Continuous Price Appreciation of Condominium Units in Addis Ababa Factors Determining the Continuous Price Appreciation of Condominium Units in Addis Ababa. *World Journal of Civil Engineering and Construction Technology*, 4(1), 064–078.
- Menen, A. A. (2010). *Regulation of Real Estate Business in Ethiopia*. Unpublished thesis, Addis Ababa University School of law, Addis Ababa.
- Mengistu, F., & van Dijk, M. P. (2018). Credibility of institutions in Addis Ababa (Ethiopia), effects of government policies on real estate developers. *Land Use Policy*, 79, 913–921. <https://doi.org/10.1016/j.landusepol.2016.12.031>
- Mirawati, N. A., Othman, S. N., & Risyawati, M. I. (2015). Supplier-Contractor Partnering Impact on Construction Performance: A Study on Malaysian Construction Industry. *Journal of Economics, Business and Management*, 3(1), 29–33. <https://doi.org/10.7763/JOEBM.2015.V3.150>
- Morgan, P. J., & Zhang, Y. (2015). *Mortgage Lending and Financial Stability in Asia*. ADBI Working Paper Series No. 543. Asian Development Bank Institute. <https://doi.org/10.2139/ssrn.2672776>
- Muhammad, U. (2016). Impact of land use/land cover changes on groundwater resources in Al Ain region of the United Arab Emirates using remote sensing and GIS techniques. *Groundwater for Sustainable Development*, 14(2021), 100587. <https://doi.org/10.1016/j.gsd.2021.100587>
- Mulley, et al. (2016). Residential property value impacts of proximity to transport infrastructure: An investigation of bus rapid transit and heavy rail networks in Brisbane, Australia. *Journal of Transport Geography*, 54, 41–52. <https://doi.org/10.1016/j.jtrangeo.2016.05.010>
- Navigant Construction Forum. (2016). *Trends in construction technology – the potential impact on project management and construction claims*. Navigant Construction Forum.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill, New York.
- Obińska-Wajda, E. (2016). The new institutional economics-main theories. *e-Finanse*, 12(1), 78–85. <https://doi.org/10.1515/fiqf-2016-0138>
- Obiwuru, T. C., Okwu, A. T., Akpa, V. O., & Nwankwere, I. A. (2011). Effects of leadership style on organizational performance: A survey of selected small scale enterprises in Ikosi-Ketu council development area of Lagos State, Nigeria. *Australian Journal of Business and Management Research*, 1(7), 100.
- Odeny, M. (2013). *Improving access to land and strengthening women's land rights in Africa*. Paper prepared for presentation at the Annual World Bank Conference on Land and Poverty. Washington DC: The World Bank Group.
- Okidim, I. A., & Ellah, G. O. (2013). Enhancement of economic growth through mortgage financing and capitalization. *Global Journal of Commerce and Management Perspective*, 2(5), 8–11.
- Okunlola, A., & Ogunkoya, T. O. (2015). *Acetylated starch of Ofada rice as a sustained release polymer in microsphere formulations of repaglinide*.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Simon and

Schuster.

- Ramnarian. (2012). Influence of Supplier Appraisal on Procurement Performance in the Real Estate Industry in Kenya: A case study of International House Ltd. *International Journal of Operations and Logistics Management*, 3(3), 250–262.
- Romer, P. (2017). *Economic growth*. *The Library of Economics and Liberty*. Retrieved from <https://www.econlib.org>
- Roulac, S. (2001). Corporate property strategy is integral to corporate business strategy. *Journal of Real Estate Research*, 22(1/2), 129–151. <https://doi.org/10.1080/10835547.2001.12091062>
- Rowe. (2001). Creating wealth in organizations: The role of strategic leadership. *Academy of Management Perspectives*, 15(1), 81–94. <https://doi.org/10.5465/ame.2001.4251395>
- Santora, J. C., Seaton, W., & Sarros, J. C.(1999). Changing times: Entrepreneurial leadership in a community-based non-profit organization. *Journal of leadership Studies*, 6(3–4), 101–109. <https://doi.org/10.1177/107179199900600308>
- Saunders, M. L., Lewis, P., & Thornhill, A.(2009). *Research methods for business students 4*.
- Shemekt, T. (2021). *The Determinant factors to Project Success in the Ethiopian Real estate industry*. ST. MARY'S UNIVERSITY.
- Straub, D. W., Boudreau, M. C., & Gefen, D. (2004). Validation guidelines for IS positivist research. *Communications of the Association for Information Systems*, 13, 24. <https://doi.org/10.17705/1CAIS.01324>
- Thompson, D. (2005). The impact of information and communications technology on commercial real estate in the new economy. *Journal of Property Investment & Finance*, 23(6), 480–493. <https://doi.org/10.1108/14635780510626529>
- Tigist, S. (2021). *The Determinant factors to Project Success in the Ethiopian Real estate industry*. Unpublished MA thesis, Addis Ababa University, Ethiopia
- Tsegaye, G. (2010). *The State of Housing and Private Real Estate in Addis Ababa: Performance, challenges and Prospects* (Draft). Ethiopian Development Research Institute (EDRI), Addis Ababa.
- UNFPA. (2007). *State of World Population 2007 – Unleashing the potential of Urban Growth*. Retrieved November 09, 2010, from United Nations Population Fund.
- Vadali. (2014). *On the Impact of Infrastructure Improvement on Real Estate Property Values: Evidence from a Quasi-natural Experiment in an Emerging Market IIM Bangalore Research Paper No. 646*.
- Voith, R. (1993). Changing capitalization of CBD-oriented transportation systems: Evidence from Philadelphia, 1970–1988. *Journal of Urban Economics*, 33(3), 361–376. <https://doi.org/10.1006/juec.1993.1021>
- World Bank (2011). *Financial Access and Stability A Road Map for the Middle East and North Africa*. The International Bank for Reconstruction and Development.
- World Bank. (2015). *The World Bank Annual Report 2015*. Washington, DC. © World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/22550License:CCBY30IGO>.”
- World Bank Group. (2019). *Unlocking Ethiopia's Urban Land and Housing Markets: Urban Land Supply and Affordable Housing Study*. World Bank, Washington, DC. © World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/32756License:CCBY3.0IGO>
- Zeluel, A. et al. (2011). *Assessment of Urban Development Practices on Business Expansion in Ethiopia*. Chamber of Commerce and Sectoral Association.
- Zhang, P. et al. (1999). Location optimization for a group of tower cranes. *Journal of Construction Engineering and Management*, 125(2), 115–122. [https://doi.org/10.1061/\(ASCE\)0733-9364\(1999\)125:2\(115\)](https://doi.org/10.1061/(ASCE)0733-9364(1999)125:2(115))

Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).