UNIVERSITY OF GHANA

REAL ESTATE DEMAND AND SUPPLY ISSUES IN GHANA:

A CRITICAL SURVEY

BY

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A DISSERTATION SUBMITTED TO THE DEPARTMENT OF ORGANISATION AND HUMAN RESOURCE MANAGEMENT, UNIVERSITY OF GHANA BUSINESS SCHOOL, UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF ARTS IN MANAGEMENT AND ADMINISTRATION DEGREE.

AUGUST 2019
DECLARATION

I hereby declare that the dissertation is the result of my own work towards the award of a Master of Arts degree in Management and Administration. As known to me, this work is devoid of previously published material that have been submitted for the award of another degree in any institution. Except where due citations have been made in the text.

SIGNATURE: ........................................  DATE: ..........................

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CERTIFICATION

I duly acknowledge that this work was supervised in accordance with the procedures laid down by the University of Ghana.

SIGNATURE: ...........................................  .................

PROFESSOR DAN OFORI  DATE
(SUPERVISOR)

DEDICATION

I dedicate this work to God, my parents and entire family whose support gave me strength to persevere.
ACKNOWLEDGEMENT

I am grateful to God for the stamina, knowledge and liberties given me throughout the period of my studies and most importantly the successful execution of this project.

A special appreciation to my supervisor, Professor Dan Ofori, for his time and effort in guiding me to produce this study.

I also thank all the lecturers in the Department of Organisation and Human Resource Management for their services and pieces of advice throughout my study in this University.

I wish to thank my friends, Vivian Afrakomaa Boateng, Abigail Amma Serwaa Osafo, Pearl-Mary Nunoofio, Abiba Tornia, Olivia Doe and Linda Aikins for their words of encouragement.

Thank you all and God bless you.
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The study sought to determine land availability, pricing of property, economic situation of a country and the demographic profile of an area as factors that influence demand and supply of real estate property and the extent to which these factors influence demand and supply of real estate property. Purposive and convenience sampling methods were employed in selecting the population sample of 70 for the study. The study employed descriptive and inferential statistics to obtain the stated objectives. The data collected using a questionnaire was coded and analysed using SPSS version 25 and Microsoft excel.

The study relies on the multiple regression theory to establish the linear relationship between the factors that influence demand and supply of real estate property. Specifically, the study evaluates influence of Ghana economic situation, land availability, demographic profile and pricing of property on the demand and supply of real estate property. The finding emanating from study revealed that land availability and price significantly affect demand and supply of real estate. The study concluded that the price of property and land availability of an area are key determinants of supply and demand of realty property in Ghana.

The study recommended Government enact a policy that sets the threshold for property pricing. The pricing policy will be regulated by stakeholders in the real estate industry rather than the individuals pricing by discretion. It was recommended Government set up regulations that will limit the mass use of land in developing self-compound houses, whereas lesser size of land can serve a large population at a cheaper rate.
SECTION ONE
INTRODUCTION

1.1 Background

Real estate is defined as property composing brick and mortar structures, lands, as well as natural resources such as water, minerals or crops that may be obtained on the estate (Mettling & Cusic 2019). The real estate commercial activity entails the purchase, sale and or renting of buildings, land or housing. Historically, the realty market has been used as a tool towards commercial development and the demands of real estate are triggered by growth in population (Kioko, 2014). Real estate, particularly the housing industry, is dynamic with stakeholders such as the central government, county governments, foreign investors, financial institutions, individual developers and investment groups (Tsatsaronis & Zhu, 2013). In Ghana, investors have invested extensively in realty through mortgage (Brueggeman & Fisher, 2011). However, despite the Ghanaian market being sophisticated and robust, the mortgage market only serves 10% of the population (Agyemang & Morrison, 2018). The Bank of Ghana places the housing deficit for the country at 1.6 million units (Owusu, 2010). Rural urban migration, as well as suburban concentration in cities is the major factor that cause housing challenges in Ghana (Owusu, 2010).

Currently, the growth rate of the Ghanaian population (2.7%) is below the urban population growth rate which is about 4.3% per annum (Bloe, 2017). With approximately 22,409,000 for its population size, Ghana has a rate of occupancy of 5 people per household (Ghana Census Department 2010); however, it has a significant housing deficit with the year 2011 recording a
deficit of nearly 1.57 million units. This underscores the need to seek solutions for this (Minister for Water Resources, Works and Housing, 2011).

Ghanaian tradition places a priority on owning houses (Smith & Mazzucato, 2009), yet 35% of Ghanaians will not own houses in their lifetime. The Ghana Real Estate Developers Association (GREDA) suggest that just 5% of potential home owners can afford homes from their personal financial resources while financial assistance will have to be given to 60% (Teye & Anson, 2017). Over the period of the years 1990 and 1998, the Social Security and National Insurance Trust (SSNIT) built over 30,000 blocks of flats—making up a fraction of the 15,000 houses bought over the same time period. An estimated figure of 130,000 units of homes are required annually over a ten-year period in order for Ghana’s growing housing needs to be met (Ghana Statistical Service, 2010).

Due to the urgency to meet the housing demand, the Ghana government is gradually allotting the role of providing realty property to the private sector (Pavlov & Wachter, 2011). The real property market in other economies have proven to be an agent of growth (Glaeser, Huang, Ma, & Shleifer, 2017); thus, making this the motivation of this study to explore the demand and supply phenomenon in Ghana.

1.2 Statement of Problem

Real estate demand and supply is influenced by both short- and long-term determinants. Gradual shifts in demographics, growth in household disposable income, permanent tax feature, investment in the quality of existing housing stock, construction cost, and the availability of land are classified long-term determinants (Pavlov, & Wachter, 2011).
The short-term factors that affect the realty demand and supply system are largely found within constraints like the length of planning and construction phases, as well as, current land planning structures (Pavlov, & Wachtter, 2011). Other factors are prevailing financial provision climate for the purchase of the real estate property, liquidity of the real estate commerce and transaction cost framework as dictated by VAT, stamp and registration duties.

Investment in the housing industry—constituting a large percentage of the real property sector has been dwindling (Agyemang & Morrison, 2018). This arises from factors such as; limited government funding, discouraging business atmosphere for private sector contribution in the process of delivery of housing—typically for low- and middle-income groups, high building costs, high cost of construction materials, high financial costs, and limited serviced land. In Ghana, there are many studies on real estate (Owusu, 2010), but no study has been done to explore the demand and supply issues in the realty sector.

1.3 Research Objectives

The goals of this research are classified under specific objectives and general objectives. Generally the study sought to examine the factors that influence demand and supply issues of realty in Ghana. Specifically, the study sought to:

I. Evaluate if demand and supply of real estate property is influenced by the economic situation of Ghana.

II. Assess the influence of property pricing on the supply and demand of real estate property in Ghana.
III. Assess the influence of demographic profile on supply and demand of real estate property in Ghana.

IV. Examine how land availability impacts on demand and supply of real estate property in Ghana.

1.4 Research Questions

To realise the aforementioned objectives, this research aims to respond to the following questions concerning the demand and supply of realty in Ghana.

I. How does the economic situation indicators influence supply and demand of realty products in Ghana?

II. How does property pricing impact supply and demand of realty products in Ghana?

III. How does demographic profile supply and demand of realty products in Ghana?

IV. How does the availability of land supply and demand of realty products in Ghana?

1.5 Scope of the study

This study focuses on the Ghanaian realty property industry from the estate developers’ perspective. Thus, the views of employees within the real estate industry were primarily sought and used as data. This is because primary data is our focus and the employees in that sector are in better position to provide unbiased first-hand knowledge of the operations of the industry.

1.6 Significance of the study

The rationale for this study is to make a contribution to the limited insight to supply and demand of realty products in Ghana. It is also aimed at informing the buyer of the determinants of the rise
or fall of real estate rates. Moreover, this study highlights the realty challenges in Ghana. Lastly, this work will serve as a backdrop for further studies to be carried out on this subject of study. In achieving this purpose, the study identified the influences of the demand and supply of realty products in Ghana.

1.7 Methodology

This study made use of primary data in a form of questionnaire issued to participants (employees of real estate companies). This study was conducted with a quantitative approach which includes a descriptive and inferential statistics. In the descriptive approach, the study relied on the frequency, mean and standard deviation of the study variables. Also, the study adopted the multiple linear regression model as an inferential statistic; to establish the linear relationship between demand and supply of realty property and the study variables (land availability, economic situation pricing of property and demographic profile of an area).

1.8 Organisation of the Study

The study is comprised of five Sections. The First Section introduces the research by presenting foreknowledge to the subject matter, the research problem, research questions, purpose of the research, study objectives, research importance and the research presentation. The Second Section examines current relevant literature of the subject—forming the foundation and framework for which this study is built. The Third Section highlights the methods adopted to collect and analyse data collected in this study. It highlights the data description, sampling technique and procedure, model specification, research method, and ethical issues in data collection. Section Four presents the data analysis, presentation and discussion of the results.
Section Five presents the summary of findings, the conclusions and recommendations of the study.
SECTION TWO
LITERATURE REVIEW

2.1 Introduction

Extensive work has been done on land acquisition, mortgages and cost of constructions among others in the Ghanaian real estate industry. An overview and definition of key concepts of this study are discussed in this chapter. With these acting as a backdrop, the conceptual framework is posited, and empirical studies examined to know the current studies done on the subject area. The gaps identified in current studies are highlighted and discussed to conclude the chapter. These provide the theoretical foundation for the analysis and discussion of results.

2.2 Theoretical Framework

2.2.1 The concept of Real Estates

Real estate refers to a piece of land as well as all other property like buildings, trees, and minerals in the soil permanently affixed to the land (Mettling & Cusic, 2019). Realty can also refer to residential property that are traded (Friedman, Harris, & Lindeman, 2017). This study defines real estate as any property in the form of residential buildings that are for lease or for sale. To aid clarity in this study, the difference between real estate property and real property will be clarified with real estate property being a tangible entity; whereas real property refers to a legal concept given to an individual for the control and use of a tangible entity (Smith & Zaibert, 2017). To emphasize, real estate property is immovable and usually impacted by physical, legal, and environmental constraints and interests (Baldwin, 2019).
2.2.2 Housing Unit

Housing is postulated as a heterogeneous and composite good or commodity (Omengo, 2013). There are several macro-economic variables, environmental and spatial distinctions, housing attributes, community features or structural units, and community amenities that influence the housing market (Kim & Park, 2015). It is established through studies that housing characteristics socially influence the well-being of the individual or household positively or negatively (Antwi, 2017). A research done by Zandt, McCarthy, and Rohe (2016) establishes why individuals with satisfactory homes and communities are effective and productive at work.

Catering to an estimated population of 25 million (GLSS, 2012), Ghana’s housing industry is a robust sector with a deficit estimated to be over 1.7 million units, as indicated by the National Housing Policy (2015). An attempt to clear the deficit and make room for new households, Ghana requires provision of approximately 170,000 housing units over the subsequent ten years. The national housing policy also contained a clause that suggests the different units and types of houses common in cities like Kumasi and Accra. African economic growth has demonstrated prospects since 2015 with Ghana being at the top of the countries experiencing rapid economic growth; and this was attributed to the increased oil production. Despite the challenging economic difficulty, it is noteworthy that economic and political landscape has developed and is more stable, relatively. The immigrant inflow has also surged, thereby putting more demand on residential and commercial property in the country. For instance, several smaller departmental stores started springing up after the establishment of the Accra Mall in 2007 (Agyemang and Morrison, 2018).
Antwi (2017) posited that the strong economic growth of Ghana is impacting positively on the residential property industry with present prices of homes being higher than hitherto. This has led to many middle-classed Ghanaian citizens selling off their property to expatriates and other immigrants. To put it in another perspective, the average Ghanaian cannot afford residential property in some Ghanaian neighborhoods such as Cantonment, East Legon, Roman Ridge, Tema community 25 and Airport Hills as a result of the generally low per capita income. In contrast, the World Bank reports that the economic status of a significant population has improved from low income to middle-class income (Ministry of Work and Housing, 2017). The report from Ministry of Work and Housing (2018) further stated that the average Ghanaian cannot afford the price of non-developed land around the Ghana airport which sells for an estimated 800,000 USD. It is economically logical then, to sell one’s property and relocate elsewhere.

According to the Ghanaian population census (GASS, 2010), the current 2.5 million population size of Accra is growing steadily and hence the need for more real estate property to accommodate its citizens. In order to factor in the various needs of realty, the property must include office spaces, domestic residences, warehouses as well as lands for hire. Suitable to the average Ghanaian family are gated communities that offer three or more bedrooms and residential parking (National Housing Policy, 2018). According to Imani Ghana (2016), there are also apartments for short-term renting which come fully furnished and convenient for expatriates. In another development, Ghana real estate developers association stated that to enable clients acquire or rent property in Ghana, the clients must search through listings to have information that will aid him in making a reasonable purchase. There are also 60 USD two-three-bedroom apartments for rent in the outskirts of the capital city. Some areas within the Greater
Accra region such as East Legon, Dome, Ajiringanor, and Spintex have selling prices around 400,000USD (Real Estates developers, 2018).

Typically, the Ghanaian housing system is in two types—the modern house and the traditional house (Antwi, 2017). The choice of housing is determined by factors such as family needs, location and predominantly, the finances (Ghana Real Estates Developers, 2018). This research places the focus on the modern type of housing.

### 2.2.3 Traditional house

The Ghanaian traditional housing units are usually made up of materials such as mud, thatch, grass and other locally available construction agents. This style of houses date back to the 10th century and are still present in the rural communities of the country. The climate pattern in a location determines what make and style a traditional house should consist of. Due to the kind of materials used in constructing the traditional house, it is less durable compared to the modern houses. Currently, some traditional houses are being replaced with eco-housing in some parts of Ghana; Toa House Ghana has built houses from used plastic bottles in a bid to reduce plastic waste through recycling (Toa House Ghana website, 2019).

### 2.2.4 Modern house

In Ghana, modern house includes single room, detached/semi-detached/self -contain, chamber and hall, apartment and townhouses.

*Single room*
This is a one-room unit which is the preferred house for the lower working group, young adults and unmarried individuals. It is the cheapest housing unit in Ghana and can be classified into one-room unit with a shared bathroom and a one-room unit with bathroom inclusive—known as the single room self-contained. Outside Ghana, the term *studio apartment* is used to refer to the single room self-contained. The term *single room self-contained* is the common name for studio apartment in Ghana.

**Chamber and hall**

This type of housing unit is favoured by small families, low-income earners and occasionally by single unmarried individuals. It is a two-room housing unit which either comes with a bathroom and kitchenette enclosed or comes with a shared bathroom and kitchen in a compound house. One of the rooms serves as a bedroom; the other serves as a living room.

**Detached/Semi-detached/Self Contained Houses**

Large well-to-do families in Ghana prefer two- or three- bedroom houses that are usually walled and gated. Homeowners favour these housing units, as well as those who want to rent. In the West, these are known as single family units. Various investors and realtors are concentrating on these housing units giving rise to popular gated community projects include Lakeside Estates, Manet Courts, Regimanuel Gray Estates as well as other estates in the capital.

**Apartment**
Apartment housing units in Ghana are comparable to apartment units in more developed countries but are more expensive in Ghana. Thus, they are preferred by the upper-income class and expatriates working in Ghana. Apartments have shared amenities like gymnasiums, pools, terraces that fit the lifestyle of the upper class and are located in prime locations of the major cities. There are also condominiums—flats that are for sale and they can be found at locations like Cantonments, Ridge, West Hills, Airport Residential Area, East-Legon in Accra and many other cities across the country.

**Townhouse**

Townhouses in Ghana are different from those in the developed world. They are usually two-three-tier buildings with a shared wall and in prime residential locations. This is due to the fact that they are more modern and are normally favoured by the upper-class society of Ghana.

### 2.3 Real Estate Prices and Supply and Demand of Real Estate Property

The real estate market is a major indicator of the cycles of economic booms—periods of market price inflations and busts—periods of market prices plummet (Smith, 2010). Professionals and businesspeople alike take advantage of these cycles; they study the realty industry market until they are able to tell with certainty when either a bust or a boom will happen thereby making a kill (Smith, 2010).

According to Jimmy (2017), the price theory confirms that the price of a market determines how opposing factors interact. Marginal utility determines demand while marginal costs determine
supply; it is necessary for the two factors to be equal. Horton (2010) argued that the value of property can be determined by comparison and contrast between current active listings and old listings since no two items are the same. Expired listings also influence current prices. The discrepancies in the prices of real estate are due to various factors (Cahill, 2010) such as location, accessibility and the developer. The proximity of the land to prime locations make that land expensive. Additionally, the accessibility of vital amenities of a real estate also influences its pricey value, as well as the reputation of the developer affects the price of the property.

Real estate property is valued using market comparison analysis, rental income approach and construction cost approach. The market comparison approach prices the property by comparing competitor prices while the rental income approach values the property with its anticipated rent price. The construction cost approach prices the property by the cost incurred during construction and so a developer will seek return on investment while pricing (Agyemang & Morrison, 2018). The three methods can be used as a multidisciplinary approach to pricing (Omengo, 2013).

According to Edward (2010), the market value of real estate property varies from time to time and real estate property prices are negotiable. A buyer seeks a new home with the knowledge that he or she has a right to bargain. Sharpe (2018) suggested real estate property prices are controlled by factors such as the potential buyer's income, the cost of putting up the building and the ability of a buyer to qualify for a mortgage. These factors influence how high prices can go till they get to the point where majority of potential buyers do not qualify for (Sharpe, 2018). Conversely, Smith (2010) stated that market value is all about geographic location;
recommending the purchase of a bad property in a prime location over a good property in a bad location.

Lack of capital is a major deterrent of property development. Banks in Ghana are unwilling to lend due to the volatility in interest rates, unstable economic situation, eligibility barriers, and longer repayment periods (BoG 2015). Recently, there have been 19 available 3-year mortgage loans on the market with interest rates as low as 15.6%. Major banks consider mortgage finance as one of the most promising business loans. Also, construction firms can obtain working capital in the form of borrowing and using the property under construction as collateral.

2.4. Demand Sources of Real Estate

The demand for housing has surged with the increase in population making the Ghanaian dream of owning homes almost an impossibility; this is largely due to the limited availability of sources of mortgage financing. The major determinants of the supply and demand of real estate property are land availability, economy, price and demographic profiles (Otieno, 2016). Insignificant number of private developers provide affordable housing for the ordinary Ghanaian with an approximate aggregate demand being between 1.57 million units and 2.76 units by the year 2020 (Minister for Water Resources, Works and Housing 2012); thereby leading to a housing deficit.

2.5 Supply Sources of Real Estate

Ghana’s Government Liberalisation Policy (1992) significantly cut down government’s responsibility in the housing sector by giving the opportunity to the private sector to participate fully in the housing industry. This is a paradigm-shifting policy as compared to the role the
government’s State Housing Corporation has played in delivering housing solutions (Cerutti, Dagher, & Dell’Ariccia, 2017). In a bid to provide secondary mortgage to Ghanaians for the purpose of home purchases from private developers, the government established the Ghana Real Estate Developers Association (GREDA) and the Home Finance Company (HFC). Investment codes, zero rating of machinery and equipment, as well as tax holidays among other policies, were also introduced for the benefit of potential residential property investors (Amponsah-Tawiah, & Dartey-Baah, 2011). In the area of solving land acquisition challenges, the government facilitated housing investors’ development of some 30,000 acres of land. This was done by means of effective regulation and monitoring mechanisms that streamline the land acquisition process. Land size of about four hundred thirty-five hectares (119,435 ha), earmarked for mostly agricultural purposes, has been reserved in the Land Information Bank for prospective real estate investors. The rest has been allotted to real estate development, commercial and industrial purposes as determined by the location (Pivo, & Fisher, 2011).

2.6 Challenges Facing Real Estate Developers

Globally, real estate developers are faced with drawbacks and the situation in Ghana is no different with portfolio optimization, identification of the true economies of scale, business models, product innovation, service orientation, and the control and management of projects being the major challenges.

2.6.1 Portfolio Optimization

Businesses in the real estate industry understand and relate to the business cycle concept (Mera, & Renaud, 2016); however, only few firms are educated on the need for optimizing their
portfolio. The various operational sectors have divergent correlation to the economic cycle but incorporating this theory in an operative model is a challenge to most real estate businesses. An active department managing portfolios is a salient need for all companies; yet is absent in these companies.

2.6.2 Identifying the True Economies of Scale

Every business set up encounter issues in identifying its true economies of scale as the company grows and diversify. Nonetheless, most companies are unable to identify their true economies of scale, given business exposure (Palm, 2013). The economies of scale for a single business could vary as the business grows and attention must be paid to this.

2.6.3 Business Models in Terms of the Investment / Cash Flow Mode

Discovering the appropriate model of cash flow is key to construction investments (Schimmer, Geschuhn, & Vogler, 2015). The economic relationship between the cost structure, financing and payment is a determinant of the cash flow model of the business. Real estate ventures rely on networking as means of financing. This requires a proper balance of the business model with prudent trade-offs between risks and return. The goal of every enterprise is to attain this balance as market changes at the macro-economic levels gravely affect the business model.

2.6.4 Product Innovation

The preferences and necessities of a society changes as the society evolves with individuals having diverse anticipations of communities, offices, malls, apartments, and related amenities.
The dynamics of change are often economic and demographic parameters that inform technological innovation.

2.6.5 Service Orientation

Implementing a strong service orientation is essential in corporate strategies yet many companies fail to incorporate this into their needs (Cohen, 2017). Customer feedback goes a long way in providing sustainability for real estate businesses (Palm, 2013), as relationships with real estate clients are usually long term. Two direct benefits of this are:

(a) the effective commodification of your offerings

(b) robust management system that guarantees satisfaction levels

2.6.6 Control and Management of Projects and Operations

The successful management and control of operations of a business is one of the major challenges business owners face and there is proof of this in the real estate industry as well. Traditionally, the real estate industry is largely not a highly-skilled sector; thereby, such companies require adequate and effective management strategies

2.7 Real Estate Business Models in Ghana

Among the key developments of the Ghanaian housing sector is the establishment of the State Housing Corporation set up by the then government in 1956 to provide affordable accommodation for urban dwellers in Accra (Owusu, 2010). The establishment of the Tema Development Corporation (TDC) was to provide accommodation for people in Tema as part of the industrialization drive by the Ministry of Works and Housing (2012). The maiden Ghana
Building Society, a quasi-government institution, established a rural housing scheme to encourage home ownership mortgage scheme (Owusu, 2010). These provisions were not successful, thus leading to the creation of slums. This situation caused the policy focus to shift from state provision of housing to the private sector participation, production of construction materials and financing. The Bank of Ghana (2012) forecasted that in order to reduce the pressure on urban accommodation, there is the need for about 665,920 housing units to be built.

2.8 Conceptual Framework

For this study, we examine the principal issue that provides a form to the entire phenomenon through the use of diagrammatic depiction of the variables under study (Mugenda, 2008). With current literature being used as a background, it has been established that the determinants of supply and demand of real estate property are land availability, price, demographic profile and the economic situation of a location. Otieno’s (2016) model was adopted to evaluate the factors that impact on real estate demand and supply in Ghana.

![Diagram of Conceptual Framework](image-url)
SECTION THREE
METHODOLOGY

3.1 Introduction

The different methodological approaches used in implementing this study are presented in this section. The methodology employed in a research is important due to its impact on the validity, as well as reliability of the results (Saunders, Lewis & Thornhill, 2007). The approaches include the research design; the population and sample size of the study, the data collection instruments and methods, as well as analysis of data and ethical consideration.

3.2 Research Design

A large number of business-related researches employ the cross-sectional design (Neuman, 2017); this is due to its tendency to describe and explain the relationship of factors involved in the study (Saunders, Lewis & Thornhill, 2017). Thus, in employing the use of the cross-sectional design, the author critically assessed challenges faced by real estate firms. This study adopted both the quantitative and qualitative research methods via the use of questionnaires.
3.3 Population
The population of a study refers to a group of participants with common attributes that are relevant to the researcher (Bell, Bryman and Harley, 2018). Our target population used in this study are real estate business employees within the Greater Accra Region. The researcher took into consideration the scope of the study—the developer’s perspective of demand and supply of real estate property in Ghana; thereby engaging 70 participants from four members of the Ghana Real Estate Developers Association (GREDA). GREDA is a group of real estate firms with a unified front that present recommendations about promoting real estate development in Ghana to the government.

3.4 Sample and Sampling Technique
In selecting the sample for the study, both the purposive and the convenience sampling methods was used. This decision was informed by willingness and availability of subjects during the time of the study. Thus, using any other sampling strategy would not have helped to attain the required sample size for such a study. Practically, the real estate firms were selected via purposive sampling. That is, the study purposively sampled seventy workers from various real estate firms within Accra. The convenience sampling strategy opted for as a result of the availability and willingness of respondents from the population. This helped to ensure easy and quick selection and inclusion of participants.

3.5 Data Collection and Analysis
The research instruments used to collect data were interview guides and questionnaires—open-ended and close-ended questionnaires. A letter requesting for information was hand-delivered to
the real estate businesses used for this study. Hard copy questionnaires were handed over to respondents directly to ensure accountability. Data collected was done from primary sources only—research questionnaires (Creswell and Clark, 2017). The returned questionnaires were cleaned and edited to ensure completeness and accuracy before they were coded, and analysed using STATA version 15.

Using the Chi square test of significance, the data was analysed, as well as simple regression models in order to ensure relevance is established and the strength of the relationship between the independent and dependent variables. Quantitative data was represented by pie charts, frequency tables and bar charts with the significance level at \( p<0.05 \).

### 3.6 Ethical Consideration

In order to maintain mutual respect and promote personal relationships, every research process puts ethics into consideration in the course of the project implementation. The researcher delivered a letter to the target population prior to data collection and consent received from respondents while assuring participants of absolute confidentiality.

### 3.7 Profile of the Study Area

Taking into consideration the scope of the study which focused on demand and supply issues of real estate property in Ghana from the perspective of the real estate developer, the researcher through the aid of the Ghana Real Estate Developers Association (GRED&A) engaged 70 participants from six of it’s member firms. GRED&A is a group of real estate companies which have come together to form a united front in making recommendations to government on ways
of promoting real estate development in Ghana. GREDA also seeks to find solutions to the practical problems in the property market. Again GREDA hopes to promote the development of residential estates and to increase the stock of housing units thereby ensuring adequate provision of affordable housing for all classes of the population.

SECTION FOUR
DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This section presents an analysis of results, presentation of findings, and discussion of data gathered from the field. The chapter presents a discussion of the issues plaguing the supply and demand of real estate property. The quantitative data collected under the survey was coded for the analysis with the use of STATA Version 15 for the analysis of the quantitative data. The researcher thoroughly discussed the qualitative data in relation to the study objectives. The analysis is in line with the stated aims of the study. The researcher administered 70 questionnaires which are fully completed and represented in the tables.

4.2 Data Presentation and Analysis

4.2.1 Gender of Respondents

The study categorizes the gender of respondents into male and female. The outcome of the finding indicates that more than half (77.1%, n = 54) of the respondents were male while the females constituted 22.86% (n = 16) of the sampled population.
Table 4.1  Gender of Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>16</td>
<td>22.9</td>
</tr>
<tr>
<td>Male</td>
<td>54</td>
<td>77.1</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019

4.2.2 Years of Experience in the Firm

Table 4.2 below shows the number of years the respondents have worked in their real estate organizations. Majority (57.1%, n = 40) had been there between 6-10 years, 28.6% (n =20) between 1-5years, 7.1% between 10-15 years and the remaining 7.1% had over 16 years at the organization. The implication is that a significant number of the respondents have been with their organisations for a long time and so have more reliable information in relation to the real estate sector.

Table 4.2  Years of Experience in the Firm

<table>
<thead>
<tr>
<th>Years of working</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- 5 years</td>
<td>20</td>
<td>28.6</td>
</tr>
<tr>
<td>6 – 10Years</td>
<td>40</td>
<td>57.1</td>
</tr>
<tr>
<td>10 – 15Years</td>
<td>5</td>
<td>7.1</td>
</tr>
<tr>
<td>Above 16Years</td>
<td>5</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019
4.2.3 Level of Education of Respondents

The study asked the respondents their level of formal education. Table 4.4 shows the results obtained: seventy-one percent (71.4%, n = 50) had graduate qualifications, fourteen percent (14.3%, n = 10) had post graduate qualifications whereas seven percent (7.1%, n = 5) each were certificate and diploma holders. This depicted that most of the respondents interviewed were well knowledgeable to understand and respond to the questionnaire in the manner intended.

<table>
<thead>
<tr>
<th>Educational Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-Graduate</td>
<td>10</td>
<td>14.3</td>
</tr>
<tr>
<td>Degree/Graduate</td>
<td>50</td>
<td>71.4</td>
</tr>
<tr>
<td>Diploma</td>
<td>5</td>
<td>7.1</td>
</tr>
<tr>
<td>Certificate</td>
<td>5</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019

4.2.4 Agreement between Traders in Real Estate Transactions

The study investigates whether the agreement contract between sellers and buyers on real estate transactions protected the interest of their customers. Almost all 95.7% (n = 67) of the respondent indicated that there is agreement contract between sellers and buyers on real estate transactions which protects customers’ interests while only a few (4.3%, n = 3) stated otherwise.

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
</table>

Table 4.4 Agreement between Traders in Real Estate Transactions
The study proceeds to examine whether the agreement between sellers and the buyers meet customer expectations and protects the customer’s interests. The respondents alluded to the fact that agreement meet the customer’s expectation as well as protects the customers’ interest.

### 4.3 Influence of Prices on Demand and Supply of Real Estate Property

The real estate property market has characteristics of predictability of the booms and bust cycles. The study examines how prices influence the demand and supply of real estate property.

#### 4.3.1 Nature of Real Estate sold or Managed

Findings from questionnaires answered by workers of real estate firms revealed that all (100%) of the real estate firms that these subjects work with engage in both selling and rental of real estate property.

| Table 4.5: Influence of Pricing on Demand and Supply of Real Estate Properties |
|-----------------------------------------------|---------------|---------------|-----|
| Price on Demand and Supply                  | Minimum       | Maximum       | Mean |
| Demand for real estate properties is more likely to be affected by the business environment | 2             | 5             | 4.00 |
| Price volatility causes an option value of holding vacant space due to fear of adjustment costs | 2             | 5             | 4.63 |
Increase in land prices lower the external finance premium and improve credit availability for borrowers, hence boosting the demand for real estate assets and driving properties prices even higher.

Sharp increases in the price of some building materials has led to high costs of housing.

Technological change such as online marketing has reduced cost of operation hence boosting supply which meets clientele demand.

High price of market demand can be attributed to frenzy buying of properties.

High cost of properties is as a result of high demand by prospective buyers with high economic status.

Increased demand by middle class clientele has resulted to increment in properties pricing.

Neighboring properties influence the pricing of housing in an area.

People experience challenges when looking for a right place at a reasonable/Moderate price.

Source: Field Work, 2019
4.3.2 Price as a Determinant of the Demand and Supply

Table 4.5 above shows the findings of participants’ agreement level on aspects related to influence of real estate prices on demand and supply of real estate property. Most respondents agreed that price volatility causes an option value of holding vacant space due to fear of adjustment costs shown by mean score of 4.63. This is followed by demand for real estate property, which is more likely to be affected by the business environment. Response to high cost of property is as a result of high demand by prospective buyers with high economic status; this attained the same mean score of 4.0. Subsequently, the respondents agreed that neighboring property influence the pricing of housing in an area by the evidence of a mean score of 3.91. Also, a mean score of 3.81 suggests that an increase in land prices lower the external finance premium and improve credit availability for borrowers, hence boosting the demand for real estate assets and driving prices of property. Sharp increases in the price of building materials has led to high costs of housing as proven by the mean score of 3.09. Respondents’ response to the enquiries as to whether (i) technological change, such as online marketing, has reduced cost of operation hence boosting supply which meets Clientele demand, (ii) increased demand by middle class clientele has resulted to increment in property pricing and high price of market demand resulted in a same mean score of 3.03. Response to people experiencing challenges when looking for the right house at a reasonable price attained a mean score of 2.91.

Table 4.6: Degree of Influence of Price on Demand and Supply

<table>
<thead>
<tr>
<th>Pricing of Properties</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a very great extent</td>
<td>18</td>
<td>25.7</td>
</tr>
</tbody>
</table>
4.3.3 Extent to Which Price Influences Demand and Supply of Real Estate Property

Table (4.6) above presents the findings of the extent to which property prices influence demand and supply of real estate property. About three-fourth (74.3%, n = 52) of the respondents purported that price of property influence demand and supply of real estate to a great extent, whereas 25.7% (n = 18) posited that price influence demand and supply to a very great extent.

4.3.4 Land Availability on Demand and Supply of Real Estate Property

The study sought to discover whether availability of land influences demand and supply of real estate property. The study findings revealed that majority (74.3%, n = 52) of the respondents agreed to this hypothesis while the rest (25.7%, n=18) indicated that there is non-availability of land for developing.

<table>
<thead>
<tr>
<th>Availability</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>18</td>
<td>25.7</td>
</tr>
<tr>
<td>Yes</td>
<td>52</td>
<td>74.3</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019
4.4.1 Influence of Challenges in the Accessibility of Land

The study seeks to confirm or debunk whether difficulty in accessing land influences demand and supply of real estate property. The findings revealed that majority (97.1%, n = 68) of the respondents posited they encounter difficulties in accessing of land for building whereas (2.9%, n=2) indicated that they have no difficulties in accessing land for developing property.

<table>
<thead>
<tr>
<th>Accessibility</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>68</td>
<td>97.1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source: Field 2019**

4.4.3 Degree of influence of Land Availability on Real Estate Development

The respondents were requested to show their agreement level on assertions relating to influence of land availability on supply and demand of realty property. The study rates the respondent assessment of effects of land availability on demand and supply of real estate property, based on the mean rankings. The respondents’ rated land supply in general as not being too problematic, however obtaining land at a reasonable price is a big challenge as proven by the high mean score of 3.90. Also, the respondents rank the likelihood of banks funding housing developments with faster returns over affordable housing developments as second with a mean score of 3.89. More
so, a mean score of 3.17 proves that the exorbitant cost of land in prime locations discourages realty developers to meet the housing market’s demands; this score ranks third on the mean ranking. The fourth mean rank represents the respondents agreeing that realty property acquisition through normal market mechanisms is difficult—this has a mean score of 3.14. Respondents in responding to the statement that “land owners’ interest in developing low cost housing is low as developers do not anticipate quick returns” obtained a mean score of 3.09. Lastly, the statement that “shortage of land at fairly lower price increases the demand for real estate attained a mean score of 2.34. Lastly, a mean score of 2.19 adequately asserts that property developers are unable to develop affordable housing due to lack of suitably priced lands.

Table 4.9  
Degree of Influence of Land Availability on Real Estate Development

<table>
<thead>
<tr>
<th>Land Availability</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land supply in general may not be too problematic, however obtaining land at affordable prices is a challenge</td>
<td>2</td>
<td>5</td>
<td>3.90</td>
<td>0.486</td>
</tr>
<tr>
<td>Banks are likely to fund housing developments with faster returns over affordable housing developments.</td>
<td>1</td>
<td>5</td>
<td>3.86</td>
<td>0.687</td>
</tr>
<tr>
<td>Realty property acquisition through usual market mechanisms is challenging.</td>
<td>2</td>
<td>5</td>
<td>3.14</td>
<td>0.519</td>
</tr>
<tr>
<td>Property developers are unable to develop affordable housing due to lack of suitably priced lands.</td>
<td>2</td>
<td>4</td>
<td>2.19</td>
<td>0.490</td>
</tr>
<tr>
<td>Expensive price of land in prime areas discourage realty property developers from meeting the housing sector demand.</td>
<td>2</td>
<td>5</td>
<td>3.17</td>
<td>0.538</td>
</tr>
<tr>
<td>Shortage of land at fairly lower price encourages realty property demands.</td>
<td>2</td>
<td>5</td>
<td>2.34</td>
<td>0.778</td>
</tr>
<tr>
<td>Landowner interest in developing low cost housing is low as developers do not anticipate quick returns.</td>
<td>2</td>
<td>5</td>
<td>3.09</td>
<td>0.474</td>
</tr>
</tbody>
</table>

Source: Field work, 2019
4.4.3 Degree of Influence of Availability of Land on Demand and Supply

The study further investigates the influence level of availability of land on demand and supply of real estate. According to our findings, 90% (n = 63) of the participants opine that availability of land influences demand and supply of real estate to a moderate extent. 5.7% (n = 4) respondents were of the opinion that availability of land influences supply and demand of realty property to a great extent. 2.9% of the respondents also (n =2) suggest that availability of land influences supply and demand for real estate to a low extent while 1.4% (n = 1) of the respondents indicated that availability of land insignificantly impacts on the supply and demand of realty property.

<table>
<thead>
<tr>
<th>Extent does availability of land</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a great extent</td>
<td>4</td>
<td>5.7</td>
</tr>
<tr>
<td>To a moderate extent</td>
<td>63</td>
<td>90.0</td>
</tr>
<tr>
<td>To a low extent</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>To a very low extent</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019

4.5 Economic situation on Demand and Supply of Real Estate Property

In Ghana, the robust growth in real estate industry is determined largely by increased capital investment in supporting infrastructure. With this as a backdrop, this study examines the influence of economic events on the supply and demand of realty property.
4.5.1 Influence of Economic situation on Demand and Supply

The study examined whether the economic situation of Ghana influences the supply and demand of real estate property. The study results indicate that majority (88.6%, \( n = 62 \)) of the respondents agreed the country’s economic situation influences the supply and demand of real estate property. On the other hand, about 11.4% (\( n= 8 \)) of respondent claimed otherwise.

<table>
<thead>
<tr>
<th>Economic Situation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>62</td>
<td>88.6</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>11.4</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** Field Work, 2019

4.5.2 Has the Economic situation Boosted the Real Estate Sector?

In order to determine if the economic situation within the country has favoured the real estate development industry, a majority (58.6%, \( n = 41 \)) of the respondents indicated that the economic situation within the country has not favoured the real estate sector while 41.4% (\( n = 29 \)) had a contrary opinion compared to the majority.

<table>
<thead>
<tr>
<th>Does Economic situation Boosted the Real Estate Sector?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Situation</td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Source:** Field Work, 2019
4.5.3 Rating the Performance of the Real Estate Sector over the Last Five Years

In responding to the realty sector’s performance over the last five years in relation to the economic situation of the country, more than half (58.6%, n = 41) of the respondents rated the performance of real estate sector as average and 38.6% (n = 27) suggest it is good. However, (2.9%, n = 2) rated the performance of real estate sector to be poor.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>27</td>
<td>38.6</td>
</tr>
<tr>
<td>Average</td>
<td>41</td>
<td>58.6</td>
</tr>
<tr>
<td>Poor</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field work, 2019
respondents strongly agree that the real estate industry is performing averagely, 20% less of that number agree that the sector is performing well with just a few suggesting the sector’s performance is poor. This enquiry attained the highest mean score of 4.63. Secondly the statement that “high taxes by the government have reduced the purchasing power for real estate property” attained a mean score of 3.96. The third highest mean rating was a mean score of 3.79 representing the statement, “I consider all costs as part of the price when I am setting out to purchase or rent a piece of real estate”. The statement, “the development in many infrastructure projects, such as highways, dams, bridges have increased demand of real estate property” achieved a mean score of 3.06. Additionally, the statement, “property taxes, property insurance, regular maintenance, mortgage fee and insurance, higher utilities, as well as sporadic upgrades discourage the supply and demand trend of realty property recorded a mean score of 2.34. The statement, “the greater disposable incomes, at least in a certain segment of the urbanized upper middle-classes, and emergent consumerist attitudes have spurred a retail boom in real estate sector” obtained a mean score of 2.20. Lastly, “improvement in construction, as well as external and internal trade let to the increase in demand or warehousing space” the least mean score of 2.19.

Table 4.14    Factors accounting for the Influence of a Country’s Economic situation

<table>
<thead>
<tr>
<th>Economic situation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing power for realty property have been reduced as a result of high taxes.</td>
<td>1</td>
<td>5</td>
<td>3.96</td>
<td>0.690</td>
</tr>
<tr>
<td>Infrastructural development has encouraged demand for real estate property.</td>
<td>1</td>
<td>5</td>
<td>3.06</td>
<td>0.634</td>
</tr>
</tbody>
</table>
Higher segmental disposable income of the urban upper middle class and emerging consumer behavior have caused a retail boom in the real estate industry.

The demand for warehouse space and improvements in existing construction are as a result of external and internal trade.

Sporadic upgrades, property taxes, mortgage fee and insurance, property insurance, regular maintenance, and higher utilities limits reduces the reality property supply and demand.

Any cost incurred in the course of buying or hiring real estate property is considered as part of the price.

Increase in the number of real estate developers in the market reduces housing and commercial rates.

**Source:** Field work, 2019

### 4.5.5 Degree of Influence of Economic situation on Demand and Supply

The study assessed the extent to which the economic situation influences supply and demand of property. The results revealed that most (81.4%, n = 57) of the respondents said that the economic situation of the country influences demand and supply of real estate to a moderate extent. Also, some of the respondents, constituting 7.1% (n = 5) claimed that economic situation influences demand and supply of real estate to a low extent. However, few (5.7%, n = 4; 4.3%, n = 3) of the respondents posited that economic situation has a significant impact on the supply and demand of reality property. Lastly, only one respondent stated that economic situation barely affects the supply and demand of real estate.
### Table 4.15  Degree of influence of economic situation on demand and supply

<table>
<thead>
<tr>
<th>Extent of Economic situation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a very great extent</td>
<td>3</td>
<td>4.3</td>
</tr>
<tr>
<td>To a great extent</td>
<td>4</td>
<td>5.7</td>
</tr>
<tr>
<td>To a moderate extent</td>
<td>57</td>
<td>81.4</td>
</tr>
<tr>
<td>To a low extent</td>
<td>5</td>
<td>7.1</td>
</tr>
<tr>
<td>To a very low extent</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** Field Work, 2019

### 4.6  Demographic Profile and Demand and Supply of Real Estate Property

The demographic profile suggests future opportunities in developing countries. Household size, for example, is related to several factors which include cultural orientation, history and income levels; thus the study sought to establish the extent to which demographic profile influence demand and supply of real estate property.

#### 4.6.1  Aspects of Demographic Profile on Demand and Supply of Real Estate Property

Findings from this study reported that the first statement “It is noted that when there is increased demand for real estate property in an area, it leads to the building of more housing developments and accelerated growth in supply of property in that area” and the second statement “selection of a house is typically based on what appeals to personal taste and what is felt as the best value based on all of the houses seen by the client” had a mean score of 4.60 and 3.97 respectively. Also the statements, “Clients consider residing in an area due to labor mobility”, “the price of homes and rentals usually increases as people are willing to purchase or rent at a higher price”,
and the third statement “Clients considered housing units due to appropriate pricing and in comparison, with other houses in the neighborhood” all attained a mean score of 3.74, 3.03 and 2.97 respectively. The mean score of 2.26 represents the respondents’ perception of the influence of transformation and growth infrastructure.

Table 4.16  Demographic Profile on Demand and Supply of Real Estate Property

<table>
<thead>
<tr>
<th>Demographic Profile</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>When there is increased demand for real estate property in an area, it leads to higher supply of housing and rapid growth property in that area</td>
<td>2</td>
<td>5</td>
<td>4.60</td>
<td>0.730</td>
</tr>
<tr>
<td>Infrastructural growth and transformation at a location raises the value of a property</td>
<td>1</td>
<td>5</td>
<td>2.26</td>
<td>0.912</td>
</tr>
<tr>
<td>Housing prices increase as willingness to buy housing units increase.</td>
<td>1</td>
<td>5</td>
<td>3.03</td>
<td>0.701</td>
</tr>
<tr>
<td>Selection of a house is typically based on what appeals to personal tastes and also best value relatively as considered by the client</td>
<td>2</td>
<td>5</td>
<td>3.97</td>
<td>0.589</td>
</tr>
<tr>
<td>Appropriate pricing of housing units are preferred by clients in relation to other units in the neighbourhood.</td>
<td>1</td>
<td>4</td>
<td>2.97</td>
<td>0.481</td>
</tr>
<tr>
<td>Client’s choice of a location is motivated by ease of mobility.</td>
<td>1</td>
<td>5</td>
<td>3.74</td>
<td>0.896</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019

4.6.2  Extent to which Demographic Profile Influence Demand and Supply

The study assessed the extent to which the demographic profile impacts on supply and demand of real estate property. The study results revealed that most (51.4%, n = 36) of the respondents purported that economic situation impact on supply and demand of real estate property to a great extent. Also, two sets of respondents which constitutes 24.3% (n = 17) each reported that,
economic situation influences supply and demand of real estate property to a great extent and a moderate extent.

Table 4.17  Extent to which demographic profile influence demand and supply

<table>
<thead>
<tr>
<th>Extent Demographic Profile</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a very great extent</td>
<td>17</td>
<td>24.3</td>
</tr>
<tr>
<td>To a great extent</td>
<td>36</td>
<td>51.4</td>
</tr>
<tr>
<td>To a moderate extent</td>
<td>17</td>
<td>24.3</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Work, 2019

4.7 Demand and Supply of Real Estate Property

The equilibrium between supply and demand informs the wholesome level of real estate asset values in relation to other forms of physical capital in a country Geltner & Miller (2001).

4.7.1 Rate of demand and supply of real estate property

The study evaluates the rate of supply and demand of realty property. The study outcome revealed that majority (74.3%, n = 52) of the respondents indicated that the rate of supply and demand of realty property is average. Also, some (20%, n = 14) of the respondent posited that the rate of supply and demand of realty property y is good while 5.7% (n =4) opined the rate of supply and demand of realty property to be poor.

Table 4.18 Rate of demand and supply of real estate property
### Rate of Demand and Supply

<table>
<thead>
<tr>
<th>Rate of Demand and Supply</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>14</td>
<td>20.0</td>
</tr>
<tr>
<td>Average</td>
<td>52</td>
<td>74.3</td>
</tr>
<tr>
<td>Poor</td>
<td>4</td>
<td>5.7</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source: Field Work, 2019**

#### 4.7.2 Housing Units sold by Real Estate Firms in the Last Five (5) Years

The study explored the number of realty property that have been sold in the last 5 years. The outcome of this finding revealed that most (68.6%, n = 48) of the respondents reported they have sold 1-100 housing units within the last 5 years. However, some (31.4%, n =22) of the respondent posited that they have sold 101-200 units within the last 5 years.

<table>
<thead>
<tr>
<th>Housing Units</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-100</td>
<td>48</td>
<td>68.6</td>
</tr>
<tr>
<td>101-200</td>
<td>22</td>
<td>31.4</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source: Field Work, 2019.**

#### 4.7.3 Target Customers

The study investigates the primary target customers that usually purchase real estate property. The result indicates that more than half (57.1%, n = 40) of the respondents asserted that their main targets are companies. Also, some (17.1%, n = 12) of the respondent stated that their
property is purchased by investors who then sell out on mortgage to customers. Lastly, two sets of respondents (12.9%, n = 9), each sought to target the employed and self-employed individuals as shown in Table 4.2.

<table>
<thead>
<tr>
<th>Targeted Customer</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed individuals</td>
<td>7</td>
<td>14.0</td>
</tr>
<tr>
<td>Self-employed individuals</td>
<td>7</td>
<td>14.0</td>
</tr>
<tr>
<td>Companies</td>
<td>27</td>
<td>54.0</td>
</tr>
<tr>
<td>Investors</td>
<td>9</td>
<td>18.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** Field Work, 2019

### 4.8 Statistics Techniques

The study employed Pearson’s coefficient of correlation, one-way analysis of variance and multiple regression analysis as statistical techniques.

#### 4.8.1 Correlation of study variables.

The study employed Pearson moment product of coefficient correlation to determine the linear association between the study variables. The study variables include dependent variable (demand) and independent variables (land availability, economic situation, pricing of property and demographic profiles)

**Table 4.21 Cross-tabulation of study variables**
<table>
<thead>
<tr>
<th>Correlation</th>
<th>Demand</th>
<th>Land</th>
<th>Price</th>
<th>Profile</th>
<th>Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand and supply</td>
<td>1</td>
<td>0.5297</td>
<td>0.6386</td>
<td>0.1443</td>
<td>0.1118</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2335</td>
<td>0.3567</td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>0.5297</td>
<td>1</td>
<td>0.1202</td>
<td>0.0094</td>
<td>-0.0327</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.000</td>
<td>0.3216</td>
<td>0.9385</td>
<td>0.7879</td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>0.6386</td>
<td>0.1202</td>
<td>1</td>
<td>0.0986</td>
<td>0.0053</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.000</td>
<td>0.3216</td>
<td>0.4168</td>
<td>0.965</td>
<td></td>
</tr>
<tr>
<td>Profile</td>
<td>0.1443</td>
<td>0.0094</td>
<td>0.0986</td>
<td>1</td>
<td>-0.1484</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.2335</td>
<td>0.9385</td>
<td>0.4168</td>
<td>0.2201</td>
<td></td>
</tr>
<tr>
<td>Situation</td>
<td>0.1118</td>
<td>-0.0327</td>
<td>0.0053</td>
<td>-0.1484</td>
<td>1</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.3567</td>
<td>0.7879</td>
<td>0.965</td>
<td>0.2201</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field work, 2019

In Table 4.21 found on previous page, the correlations between each pair of variables is illustrated with the correlation coefficient ranging between -1 and 1; it is for the purpose of measuring strength of linear relationship between two variables. The number of pairs of data values is also represented in the table to compute each coefficient. The P-value also tests the statistical significance of the estimated correlations. The study outcome indicates that supply and demand of real estate property has a positive correlation coefficient with all the independent variables as follows: with land availability for real estate property, it was 0.5297, with price of real estate property the figure is 0.6386, with economic situation of a country the correlation figure is 0.1118, and finally the correlation with demographic profile is 0.1443. However, the p-
value of the correlation between demand and supply, land availability and price is less than 0.05 making it statistically significant.

### 4.8.2 Multiple Regression Model

**Model Summary.**

The adjusted R-Squared statistic, which is more suitable for the use of comparing models or independent variable scored 61.9772. The R-Squared statistic suggests that the model, as fitted, explains 64.1814% of variability in supply and demand of real estate property. The average value of the residuals is a mean absolute error of 0.250643. The residual is examined to determine any significant correlation according to the way they are ordered in the data file; this is done using the Durbin-Watson (DW) statistic. The P-value is greater than 0.05, therefore there is no sign of serial autocorrelation on at the 95% confidence level.

<table>
<thead>
<tr>
<th>Table 4.22 Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-square</td>
</tr>
<tr>
<td>0.642</td>
</tr>
</tbody>
</table>

*Source: Field work, 2019*

### 4.8.3 One-way Analysis of Variance

The study result from the one-way analysis of variance indicates that since the P-value in the ANOVA table is less than 0.05. This proves that there is a relatively significant relationship between the variables at the 95.0% confidence level
Table 4.23   ANOVA of Demand and Supply of Real Estate Property

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>11.1492</td>
<td>4</td>
<td>2.78731</td>
<td>29.12</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>6.22221</td>
<td>65</td>
<td>0.095726</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total (Corr.)</td>
<td>17.3714</td>
<td>69</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field work, 2019

4.8.4 Regression Coefficient

Table (4.24) shows the results of fitting different linear regression models to describe the relationship between Demand and 4 independent variables. The equation of the fitted model is:

\[
\text{Demand and supply} = -8.59667 + 0.882867*\text{land} + 1.94908*\text{Price} + 0.216039*\text{Profile} + 0.236069*\text{Situation}.
\]

The Table (4.24), revealed that land availability and price of real estate significantly determines the demand and supply of real estate. This result confirms with Otieno (2016), who indicate that availability of land plays major role in supply and demand of real estate in Kenya. Jimmy (2017), stated that price of a market determines the demand and supply of goods, hence significantly affect the demand and supply of real estate. Shape (2018), also argued that the demand of real estate can be affected by price and individual ability to owned the real estate property. The demographic profile and economic situation were not significant factors for demand and supply of real estate.

All the four factors have been taken into account in this regression equation. If you hold all the four factors at zero, supply and demand of real estate property will decrease by 8.5967. The findings presented also shows that taking all other independent variables at zero, a unit increase
in price of a real estate property leads to a 1.9491 increase in supply and demand of real estate property; a unit increase in land availability leads to a 0.8829 increase in demand and supply of real estate property; a unit increase in economic situation will lead to a 0.236 increase in demand and supply of real estate property and a unit increase in demographic profile will lead to a 0.216 increase in demand and supply of real estate property.

Table 4.24   Regression co-efficient.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>standard Error</th>
<th>T-Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>-8.59667</td>
<td>1.15746</td>
<td>-7.42722</td>
<td>0.0000</td>
</tr>
<tr>
<td>Land</td>
<td>0.88287</td>
<td>0.142197</td>
<td>6.20878</td>
<td>0.0000</td>
</tr>
<tr>
<td>Price</td>
<td>1.94908</td>
<td>0.256217</td>
<td>7.60714</td>
<td>0.0000</td>
</tr>
<tr>
<td>Profile</td>
<td>0.21604</td>
<td>0.156402</td>
<td>1.38131</td>
<td>0.1719</td>
</tr>
<tr>
<td>Situation</td>
<td>0.236069</td>
<td>0.127182</td>
<td>1.85616</td>
<td>0.0680</td>
</tr>
</tbody>
</table>

Source: Field work, 2019
SECTION FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This section summarizes the findings, conclusions, and recommends ideas in line with the study objectives.

5.2 Summary
This study investigated the factors that affects the supply and demand of real estate property in Ghana. The study sought to analyse if demand and supply of real estate property is influenced by land availability, property pricing, economic situation and the demographic profile of an area. Looking at the demographic profile, the number of years of working experience in the real estate industry, many of the participants have worked in their respective organizations for a period between six to ten years. This time period is indicative of the fact that the respondents have adequate experience and thus are equipped with the necessary information the researcher sought. It was also discovered that more than two-thirds of respondents had obtained a first degree; implying the respondents were capable of answering the questionnaires satisfactorily. In addition, the study investigated whether the agreement contract between sellers and buyers on real estate transactions protected the interest of their customers. The outcome of findings indicated that virtually all respondents stated there was an agreement contract between the sellers and buyers on real estate transactions which protects customers’ interests.

The study further examined how prices impact on the supply and demand of realty property. All respondents indicated that they sell and manage both rental and commercial real estate property.
This shows that the respondents’ agreement level on aspects related to influence of price on demand and supply of real estate was valid to a large extent. Most respondents agreed that price volatility causes holding of vacant spaces in anticipation of adjustment costs. Also, majority of the respondents purported that price of property influences demand and supply of real estate to a great extent.

The study also sought to find out whether difficulties were encountered in accessing lands for real estate developments and about two-thirds of respondents answered in the affirmative. The respondent’s assessment of the effect of the availability of land on supply and demand of realty property showed that the influence is moderate.

Based on the ratings of the respondents mean ranking, land supply in general may not be too problematic, however the cost of land is usually a challenge. Furthermore, respondents opined that availability of land moderately influences the supply and demand of real estate; implying the existence of other influences.

Our findings also posited that the country’s economic situation impacts significantly on the supply and demand of real estate property; this impact is, however, negative. Ultimately, respondents suggest that the realty industry performs averagely in the economy. Results revealed that the influx of real estate developers in the market leads to a decrease in price of real estate property; hence making this a major determinant of the influence of the economic situation on supply and demand of real estate in Ghana.
On the subject of demographic profiling, findings from respondents agreed to the hypothesis that an increase in population in a particular location gives rise to an increase in demand of real estate property in that location that matches their personal taste and social status.

To ascertain the objective related to demand, the study evaluated the rate of supply and demand of real estate property—average. The study explored the number of real estate property sold within the last 5 years. The outcome of this finding revealed that most of the respondents reported to have sold 1-100 housing units per year within the last 5 years. We also investigated the primary target customers and results indicated that more than half of main targets were companies.

The study employed Pearson’s moment product of coefficient correlation to determine the linear association between the study variables. The study variables included the dependent variable (demand) and independent variables (economic situation, land availability, pricing of property and demographic profiles). The Pearson correlation result between demand and supply and land availability and price is significant with a p-value less than 0.05. Therefore, the independent variables (land availability and price of the property) are statistically independent and as such satisfy the assumption to build a regression model. The study result from the one-way analysis of variance indicates the P-value of less than 0.05 in the ANOVA of demand and supply of real estate table implies the statistical significance of the ANOVA model.
5.3 Discussion

The study examined the influence of the price of real estate property on the supply and demand of real estate, the influence of land availability on demand and supply of realty property, the impact of the economic situation on supply and demand of real estate property, as well as the influence of demographic profile on the demand and supply of real estate.

5.3.1 Influence of Pricing on Supply and Demand of Real Estate Properties

Real estate property are tangible assets made up of structures and the land on which it sits. Like other assets, real estate property is also subject to demand and supply. The prices of homes, like stocks and bonds, depend heavily on the law of demand and supply.

5.3.2 Influence of land availability on supply and demand of real estate properties

This research found that availability of land impacts significantly on the supply and demand of realty property. Acquiring affordable land that eventually encourages affordable housing development in prime locations is a challenge that needs to be tackled by stakeholders of real estate industry (Satsangi et al, 2017). This leads to price hikes of real estate property making them unaffordable for the masses to patronize. According to Shucksmith et al. (2018), the housing development system and the government policies available have not favoured social housing but encouraged private housing market to thrive. Fixed asset policies are yet to be fine-grained in policy terms to attract more investors to tap into this market.
5.3.3 Influence of Economic situation on Real Estate Demand and Supply

The real estate market is complicated as a result of the complex relationships between economic and “extra-economic” factors that go into determining economic outcomes (Hyman, 2019). According to the findings of the study, performance of real estate sector for the last five years in relation to the economic situation of the country has been good.

According to Conner and Halle (2017), greater disposable incomes and new consumer attitudes as well as competition among the urbanized upper middle class have encouraged a retail boom; thereby increasing local and international trade and globalization, leading to increased demand for commercial spaces. Taxes such as stamp duty, mortgage facility fee, property insurance, higher utilities, frequent maintenance and occasional upgrades of property limit the supply and demand of real estate property as they are seen as additional expenses. As a result of increased revenue to the government through taxes and revenue from development partners, the government currently does more development of infrastructural projects; thus opening up areas leading to increased demand of real estate (Liang, 2018).

Again, according to the findings of the study, increase in real estate developers in the market does not automatically lower the price of housing and commercial real estate rates significantly.

5.3.4 Influence of demographic profile on real estate demand and supply

To assess how demographic profile influences the supply and demand of real estate property in Ghana, the research established that a surge in the demand for real estate property in an area, leads to the development of more housing units and a surge in supply of property in that area. The demographic profile in many of the developing countries is quite promising when forecasted (Edwards, 2017). Clients preferred real estate property with relatively reasonable prices in
comparison to other property in the neighbourhood. According to Edwards (2017), demographic change also greatly affects the price of property within a neighbourhood—whether negative by decay or positive by growth. Development and infrastructural improvement in a location increases the value of property, in that, clients considered labor mobility before residing in an area. According to Torto (2018), the real estate firms began responding to these opportunities in various of ways.

5.4 Conclusion

Based on the findings and discussion above, the study concludes that the price of real estate property impacts on the supply and demand of real estate property. Competition for limited key resources and abrupt increases in the cost of construction equipment has led to high costs of housing unit in the country. Similarly, buyers face difficulties in the such for the right house at a reasonable price and also neighbouring property influence the pricing of housing in an area. Price volatility causes a phenomenon where developers withhold vacant spaces in anticipation of adjustment costs. Prices reduce when there is low demand and high supply in the market. Also, the housing industry depends on demand and supply. Therefore any price volatility will impact significantly on real estate property. Nonetheless, a rise in demand with low supply causes price hikes, whereas low interest rates generally impact demand to rise, while natural disasters, changing lifestyles, and the lack of available lots affect supplies.

The availability of land influences demand and supply of realty property. The study revealed non-availability of land, as well as, encountering difficulties in accessing land for building or development as some of limitations in the industry.
The influence of economic situation on the supply and demand of realty property in Ghana is semi-significant. It was also discovered that the economic situation in the country does not necessary boost the real estate sector. The study concludes that demand increment in an area leads to the increment of supply and accelerates growth. It was also concluded that the selection of a house is typically based on what appeals to personal tastes and also what is felt as the best buy by the client.

In conclusion, the price of property, economic situation, land availability, of a country and demographic profile of an area are key determinants of supply and demand of realty property in Ghana.

5.5 Recommendations

The importance of securing property market is important to Ghana’s economy especially in view of the MGD goals, which sets the real estate sector as one of the key pillars and an important resource for the socio-economic development of the Ghanaian economy.

First, with reference to influence of pricing real estate property on demand and supply in Ghana, the government must enact a policy that sets the threshold for property pricing that will be regulated by stakeholders in the realty industry rather than the individuals using their discretion to price property.
With regards to the influence of land availability on supply and demand of realty property in Ghana, the researcher proposes that the government sets up regulations that limits the mass use of land in developing self-compound houses whereas lesser size of land could be used to produce a high number of flats at a cheaper rate. If land use is not regulated, it tends to pressurize property prices upwards as such, demand is expected to keep on increasing and further aggravated by the holding of vacant land also known as 'land banking'. Holding undeveloped land when land itself is scarce in anticipation of capital gains, further hinders land supply and bids up prices of houses.

Furthermore, on the evaluation of the impact of demographic profile on supply and demand of real estate property, the study found that major shifts in the demographics of a nation can have significant impacts in the real estate market for years. Existing planning regulations should be amended in order to permit construction of high-rise residential spaces. This would meet the increased demand of residential property. It is also advised that sub-division of lands should be allowed for property development.

5.6 Further Studies

The study has explored factors influencing the supply and demand of real estate property in urban areas. The real estate property in Ghana, however, is comprised of established real estate property developers that manage their companies differently and target different markets. This necessitates the need for more studies that would generalize the findings of study for the over 100 real estate firms and open up ways for new policies to be made to boost the activities of the real estate sector. This study thus recommends that a similar study be conducted from the
customer’s perspective in order to give adequate assessment of the factors that influence demand and supply in the real estate industry from the perspective of the customer. Also, future studies should consider macroeconomic variables in determining the price of the property and land availability.
REFERENCES


APPENDICES

QUESTIONNAIRE FOR RESPONDENTS

REAL ESTATE DEMAND AND SUPPLY ISSUES IN GHANA, A CRITICAL SURVEY

I am studying Master of Management and Administration at University of Ghana Business School, Legon and I have designed the following questionnaire about the above topic. Kindly answer all the questions to the best of your knowledge. Indicate with a tick or filling in the space(s)

SECTION A: GENERAL INFORMATION

1) Kindly indicate the real estate you work for………………………………………

2) Kindly indicate your gender?
   i. Male [   ]     ii. Female[   ]

3) Indicate the position that you hold in the organization? ……………………

4) How long have you worked with the organisation?
   i. 1 - 5 years [    ]
   ii. 6 – 10Years [    ]
   iii. 10 – 15Years [    ]
   iv. Above 16Years [    ]

5) What is your highest level of academic qualification?
   i. Post Graduate [    ]
   ii. Graduate [    ]
   iii. Diploma [    ]
   iv. Certificate [    ]
   v. Primary level [    ]

6) Is there agreement contract between sellers and buyers that covers concern of buyers for real estate transactions? Eg. Defect liability agreement.
   i. Yes [    ]     ii. No [    ]
7) If Yes in No. 6. Do you think the agreement between sellers and the buyers meet customer expectations and protects the customer’s interests?
   i. Yes [   ]    ii. No [   ]

SECTION B

PART I: Price and Demand and Supply of Real Estate Property

10) What is the nature of the real estate you sell, rent or manage?
   i. Rental [ ]   ii. Sale [ ]   iii. i & ii [ ]   iv. Contract Execution

11) If for sale, what is the average selling price of your property? ...........

12) If rental, how much is the monthly rental fees for the rental property per unit? ............

13) Kindly indicate the level of agreement with the following statements relating to the price and its influence to demand and supply of real estate. Use a scale of 1-5. Where 5-strongly agree, 4- agree, 3=neutral, 2- disagree and 1=strongly disagree.

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Demand for real estate property is more likely to be affected by the business environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Price volatility causes an option value of holding vacant space due to fear of adjustment costs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Increase in land prices lower the external finance premium and improve credit availability for borrowers, hence boosting the demand for real estate assets and driving property prices even higher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Sharp increases in the price of some building materials has led to high costs of housing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v. Technological change such as online marketing have reduced cost of operation hence boosting supply which meets clientele demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi. High price of market demand can be attributed to frenzy buying of property.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii. High cost of property is as a result of high demand by prospective buyers with high economic status.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
viii. Increased demand by middle class clientele has resulted to increment in property pricing.

ix. Neighboring property influence the pricing of housing in an area

x. People experience challenges when looking for a right place at a reasonable/Moderate price

14) To what extent do you think pricing of property influence demand and supply of real estate?
   i. To a very great extent [ ]
   ii. To a great extent [ ]
   iii. To a moderate extent [ ]
   iv. To a low extent [ ]
   v. To a very low extent [ ]

PART II: Land Availability and Demand and Supply of Real Estate Property

15) Does availability of land influence supply or demand of real estate?
   i. Yes [ ]
   ii. No [ ]

16) Do you find it difficult to access land for building?
   i. Yes [ ]
   ii. No [ ]

17) To what extent do you agree with the following statements relating to land availability and its influence to demand and supply of real estate property? Use a scale of 1-5. Where: 5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree.

<table>
<thead>
<tr>
<th>STATEMENTS</th>
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<th>4</th>
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<tbody>
<tr>
<td>i. Land supply in general may not be too problematic, however obtaining land at a price that allows affordable housing development is a big challenge</td>
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<td>ii. Banks are likely to fund housing developments with faster returns over affordable housing developments.</td>
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<td>iii.</td>
<td>It is difficult to acquire adequate real estate through normal market mechanisms</td>
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<td>iv.</td>
<td>Property developers are unable to develop affordable housing due to lack of suitably priced lands</td>
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<td>v.</td>
<td>High cost of land in areas profiled as prime lands hinders real estate developers to meet the demand of the housing market or sector.</td>
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<td>vi.</td>
<td>Shortage of land at fairly lower price increases the demand for real estate</td>
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<td>vii.</td>
<td>Land owner interest in developing low cost housing is low as developers do not anticipate quick returns</td>
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</tbody>
</table>

18) To what extent does availability of land influence demand and supply of real estate?

i.   To a very great extent [   ]

ii.  To a great extent [   ]

iii. To a moderate extent [   ]

iv.  To a low extent [   ]

v.   To a very low extent [   ]

PART III: Economic Situation and Demand and Supply of Real Estate Property

19) Does economic situation of a country influence the demand and supply of real estate property?

i.   Yes [   ]

ii.  No [   ]

21) Has the economic situation within the country favoured real estate sector?

i.   Yes [   ]

ii.  No [   ]

22) How would you rate the performance of real estate sector for the last five years in relation to the economic situation of the country?

i.   Good [   ]

ii.  Average [   ]

iii. Poor [   ]

23) Indicate your level of agreement with the following aspects relating to economic situation of country and its influence to demand and supply of real estate property?
Use a scale of 1-5. Where 5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree.

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<tr>
<td>i. High taxes by the government have reduced the purchasing power for real estate property</td>
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<td>ii. Development in many infrastructure projects, such as highways, dams, bridges has increased demand of real estate</td>
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<td>iii. Greater disposable incomes, at least in a certain segment of the urbanized upper middle-classes, and emergent consumerist attitudes have spurred a retail boom in real estate sector</td>
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<td>iv. Internal and external trade have led to increased demand for warehousing space, as well as improvements in existing and construction of new modern houses</td>
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<td>v. Property taxes, property insurance, mortgage fee and insurance, regular maintenance, sporadic upgrades and higher utilities limits the demand and supply of real estate property</td>
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<td>vi. I consider all costs as part of the price when I am setting out to purchase or rent a piece of real estate</td>
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<td>vii. Increase in real estate developers in the market lowers the price of housing and commercial real estate rates.</td>
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</table>

24) To what extent does economic situation of a country influence demand and supply of real estate?
   i. To a very great extent [ ]
   ii. To a great extent [ ]
   iii. To a moderate extent [ ]
   iv. To a low extent [ ]
   v. To a very low extent [ ]
PART IV: Demographic Profile and Demand and Supply of Real Estate Property

25) Indicate your level of agreement with the following aspects relating to demographic profile and its influence to demand and supply of real estate property? Use a scale of 1-5. Where 5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree.

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<tr>
<td>i. When there is increased demand for real estate property in an area, it leads to the building of more housing developments and accelerated growth in supply of property in that area</td>
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<td>ii. Transformation and growth of infrastructure in an area raises the value of a property</td>
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<td>iii. The price of homes and rentals usually increases as people are willing to purchase or rent at a higher price.</td>
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<td>iv. Selection of a house is typically based on what appeals to personal tastes and also what is felt as the best value based on all of the houses seen by the client</td>
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<td>v. Clients considered housing units due to appropriate pricing and in comparison with other houses in the neighbourhood</td>
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<td>vi. Clients considered residing in an area due to labour mobility</td>
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</table>

26) To what extent does demographic profile influence demand and supply of real estate?
   i. To a very great extent [ ]
   ii. To a great extent [ ]
   iii. To a moderate extent [ ]
   iv. To a low extent [ ]
   v. To a very low extent [ ]

PART V: Demand and Supply of Real Estate Property

27) How would you rate the demand and supply of real estate property?
   i. Good [ ]
   ii. Average [ ]
   iii. Poor [ ]

28) For the last five years, how many new housing units have you managed to sell per year?
   i. 1-100 [ ]
29) Who are your targeted customers?
   i. Employed individuals [ ]
   ii. Self-employed individuals [ ]
   iii. Companies [ ]
   iv. Investors [ ]

30) How would you recommend to be done to enhance demand and supply of real estate property in Ghana?

THANK YOU FOR YOUR PARTICIPATION