

**DETERMINANTS OF HOUSING CHOICES AND AFFORDABILITY IN THE
GHANAIAN REAL ESTATE INDUSTRY**

By

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DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any degree or diploma at Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

Housing affordability has become an issue in most countries worldwide. This has given rise to lots of research into the issue. However, in Ghana, there are lots of property overhangs despite the rise in private real estate development. Homebuyers have a perception on the kind of building they want while developers are producing buildings based on their perspectives. Most individuals have concluded on the fact that property prices in Ghana are high without knowing the components that determine the final price of real estate units. Most literatures in Ghana about housing affordability focus on economic factors and policies, not taking into consideration the determinants that influence the choice of homebuyers. This study seeks to add knowledge by identifying the most influential factors that inform homebuyers' decisions when they want to purchase a house and also identify the factors that influence house prices in the real estate industry. This will help bridge the gap between demand and supply of housing units while providing real estate developers with a criteria to ascertain what homebuyer's prefer and incorporate them into their housing framework in order to address their needs. Seventeen (17) choice determinants were used as the criteria to identify the determinants. Convenience sampling technique was used to administer hundred (100) questionnaires to middle and high income Ghanaians with a total of eighty-seven (87) returned to ascertain the choice determinants while the price determinants were also achieved through the administration of hundred (100) questionnaires to Real Estate firms with thirty-six (36) retrieved. The determinants were analysed and ranked based on their level of importance perceived by respondents.

KEYWORDS: Determinants of housing choices, affordability of houses

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DEDICATION

I dedicate this project to my entire family for the trust and motivation they gave me in my pursuit of this course.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The concept of affordable housing and breaching the housing gap has become the challenge of most governments in developing countries. Affordable housing can be defined as a housing that suits the household budget of low income individuals with the cost within the budget of the household (Queensland Affordable Housing Consortium, 2012). Haffner et al., (2010) identified the reduction in housing supply relative to the increase in demand that leads to increase in price. This underlines the fact that housing affordability has become a global issue that requires economic attention. Shortage in houses can be attributed to the increase in the Ghanaian population. With about 100,000 units required annually, the country is only supply at a rate of 35% (Ghana Statistical service, 2014). According to Ghana Statistical Service (2013), the challenges in the supply of housing can be attributed to the following factors;

- (i) complex procedure in acquiring land;
- (ii) poor enforcement of required standards and design codes;
- (iii) lack of a proper housing policy for the rural areas;
- (iv) unplanned expansion of habitats; and
- (v) lack of adequate finance for housing development

Population increase in Ghana has led to numerous informal settlements and slums (Ghana Statistical Services, 2013).The UN-Habitat (2009) assessment outlines that slum

residence had increased in developing countries with a percentage representation of 33% of the population in the urban areas. Accra and Kumasi are the notable areas to slums in Ghana (Ghana Statistical Services, 2013). Wellington (2009) outlines that the housing sector in Ghana has experienced improved modalities in the type of housing and design. According to Ghana Statistical Services (2014), the categories of houses can be grouped into apartments, row houses, detached units with self-compound, containers or kiosk among others.

Ghana adopted the Vision 2020 which had one of its aims to be the supply of low cost housing units for the low income class in society to better their standard of living (Bank of Ghana Research Department, 2007). The plan was to help individuals' access part of their social security to acquire houses (Bank of Ghana Research Department, 2007). Unfortunately, none of the housing strategies under the Medium-Term-Development-Plan were implemented due to lack of funds, private sector participation and political will (Bank of Ghana Research Department, 2007).

1.2 STATEMENT OF THE PROBLEM

The housing deficit in Ghana has led to the up rise of private real estate developers mostly in the urban areas. However, in as much as there are lots of residential developments, the housing deficit in the country has still not improved. This narrative indicates that the real estate industry is producing houses which are not meeting the demand bracket in the country. The housing affordability is an authentic and structural problem on a global scale that will not be solved by existing policies (Aikin et al., 2018). The reduction of cost and provision of affordable housing has become a subject of interest to many researchers (Olanrewaju and Woon, 2017). There have been researches

in Ghana into the affordable housing and its viability. Some of these include; Biltir (2009) who researched into affordable housing for low income groups in the Tamale Metropolitan area, Awuvafoqe (2013) whose research was also into the affordable housing in urban areas, Boamah (2010) researched into housing affordability focusing on Kumasi and Tamale and Kamasa (2017) focused on housing affordability among the working class in Accra. Acquah (2011) explored the challenges residential developers face in financing their projects. Most of these researchers have however not investigated thoroughly into the reasons why homebuyers choose to acquire their homes (Olanrewaju and Woon, 2017) and also ascertain the determinants that influence the prices of houses in Ghana. While reducing construction cost and formulating policies are able to increase the supply of homes, ascertaining the rationale behind homebuyers' choice in Ghana and understanding the critical factors that influence the pricing of houses, is capable of eliminating artificial restrictions (Olanrewaju and Woon, 2017). A review of literature on affordable housing indicates that a lot of studies have tried exploring the determinants of housing satisfactions while ignoring the determinants of housing choices (Olanrewaju and Woon, 2017). A need influences a choice; it does not however define a customer's preference. Literature by O'Sullivan et al., (2013), Karlan and Morduch (2014) and Parkin (2016) stated that consumer may choose a particular option even though there are several alternatives. This paper seeks to explore housing choice and pricing determinants in the real estate sector of Ghana.

1.3 RESEARCH AIM

The aim of this research was to identify the determinants of housing choices and the factors influencing housing prices in the Ghanaian Real Estate Industry.

1.4 RESEARCH OBJECTIVES

This research sought to explore the following objectives;

1. To identify the choice determinants for Real Estate Units in Ghana.
2. To identify the determinants that influence housing prices in Ghana.

1.5 RESEARCH QUESTIONS

Taking into account the above problem statement, this research explored the following question;

1. What influences the choice for Real Estate Units in Ghana?
2. What influences housing prices in Ghana?

1.6 SCOPE OF RESEARCH

The Research was to identify the determinants of house choices and affordability in the Ghanaian real estate industry. The study focused mainly on the middle and high income class Ghanaians and Real Estate firms in the Greater Accra Region. The Greater Accra Region was used because it is a region which boasts a higher percentage of private developers.

1.7 SIGNIFICANCE OF THE STUDY

Real estate developers are producing housing units which are not meeting the demand gap in the country while a lot of homebuyers' have various perceptions on how expensive real estate units in Ghana are, without knowing the rationale behind the pricing of the units. It is therefore important to undertake a study that seeks to explore

and identify the factors that influence homebuyers' decision to purchase a house which will serve as a blueprint for developers in their design to meet their demands. The other justification for undertaking this project is to make homebuyers' aware of how their preferences, economic factors and various attributes influence the pricing of real estate units in Ghana.

1.8 RESEARCH METHODOLOGY

The research adopted the quantitative approach to analyse the determinants of house choices and affordability in the Ghanaian Real Estate industry. This research further reviewed and analysed existing literature on affordable housing issues and the various hindrances it is faced with. Through the review of literature, seventeen (17) choice determinants were used as the selection criteria for respondents to rate their perceptions of the choice and price determinants. Structured questionnaires were designed and directed towards the middle and high income class Ghanaian and Real Estate firms. The data acquired was inputted into the version 23 of the International Business Machines Statistical Package for Social Sciences (IBM SPSS) software and the output was analysed and ranked according to the level of importance and represented in the form of graphs, matrices, tables etc.

1.9 STRUCTURE OF REPORT

The research is divided into five chapters. These were: introduction, literature review, research method, analysis or data presentation and conclusions and recommendations. The introductory chapter gave a description of the topic under review and outlined the aims and objectives of the project. Chapter 2 presented an overview of the housing

scheme in other countries and reviewed the choice and pricing determinants associated with the acquisition of real estate units. This was followed by the methods used to identify the most influential choice and price determinants. Chapter 3 entailed the methods that were used in conducting the research. Chapter 4 deals with the empirical data collected from the survey that answers the various questions raised by the objectives. Chapter 5 depicts the findings, summary, recommendations for the study and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter deals with a general overview of the housing market of some selected countries, the factors that influence the demand for housing units, determinants of housing prices and housing affordability strategies, which sets up a theoretical background for the research analysis and discussion of results. One of the basic human needs is housing, and the impact on lives depends on how sustainable and durable the house is (Sadi et al., 2010). The provision of a sustainable policy that can provide affordable housing to people which will not utterly affect their ability to acquire other life necessities have become an endless battle for most governments (Haffner and Boumeester, 2010). For this reason, most countries have introduced housing reforms to boost the supply of affordable housing which focuses on low-income households (Austin et al., 2014). In a publication by Kalmana and Venkataraman (2015), affordable housing is also important to create targeted policies aimed at making financing more accessible. The concept of affordable housing is subjective to the perceptions of different individuals (Glaeser and Gyourko, 2003). According to Olanrewaju and Woon (2017), the benchmark for affordable housing is the use of a median income. In order to evaluate if the housing provided is affordable or not for a household, policy makers must use the median income as the standard of measurement. Affordable housing can be defined in two forms; the “30/40” principle and the “median multiplier method” (Olanrewaju and Woon, 2017). The “30/40” principle implies that; a household should be able to afford a

house without spending not more than of 30% of their disposable household income. The 30 per cent for rental purposes includes the cost of renting and related interests, electricity bills, water services and sewage collection, while in ascertaining the cost of mortgage, the amount consists of the original payment value and added ancillaries such as tax, utilities and insurance (Olanrewaju and Woon, 2017). This means that when a household spends in excess of 30% household income on accommodation, gives rise to unnecessary cost implications (Olanrewaju and Woon, 2017). The “median and multiplier method” on the hand compares the median household income to the median house price (Olanrewaju and Woon, 2017).

2.2 THEORETICAL PERSPECTIVES INTO THE GENERAL HOUSING ISSUES IN SOME SELECTED COUNTRIES

2.2.1 Ghana

The emphasis on developing the housing industry in Ghana probably commenced in the late fifties to early sixties as Ghana attained independence from colonial rule (Bank of Ghana, 2011). In 1968, the Ministry of Works and housing established a National Housing Policy committee to evaluate the housing conditions in Ghana (Bank of Ghana Research Department, 2007). One of the main objectives of the committee was to establish a policy that will provide decent households to the rural and urban areas. In as much as there are efforts to bridge the housing gap in Ghana, in comparison to other advanced countries, the housing industry in Ghana is still at the primary stage. A rapid population increase of the middle-class together with the high cost of properties in the urban areas have created a critical developmental problem that has warranted the

immediate creation of policies by the government (Ghana Statistical Services, 2014). One of the most critical barriers of the Ghanaian housing policy is the availability of funds to bridge the huge housing demand gap (Ministry of Works and Housing, 2005). Recent developments in the Ghanaian economy indicate an up rise in the housing sector (Bank of Ghana, 2011). The housing sector in Ghana can clearly be identified with the high price of buildings and the rental costs. Ghana has set out a medium-term goal for development by establishing the Vision 2020 agenda (Bank of Ghana, 2011). A segment of the plan is targeted at the provision of low-income housing units which is affordable and within the purview of the poor to improve their living conditions. Unfortunately, none of the housing strategies under the Medium-Term-Development-Plan were implemented due to lack of funds, private sector participation and political will (Bank of Ghana, 2011).

2.2.2 Capetown, South Africa.

A research conducted by Massyn et al., (2015) into the challenge of developing higher density, affordable housing in the inner city of Cape Town described the housing issues in Cape Town as a complete network of issues, specifying the following traits;

1. there is an accumulation of produced houses,
2. the construction of houses in choked areas where it becomes difficult to provide necessities that make an area functional,
3. poor location of settlements away from social amenities

The research concluded that, the deficit in the supply of houses as a whole, are both a source and results of a non-functional housing system. It further stated that while

housing policies are driven by demand and supply side interventions, policy makers in South Africa have tended to apply a fairly narrow arsenal of supply-side and demand side instruments (Massyn et al., 2015). To however increase the accessibility of inner city affordable housing developments, a more precise intercession such as reducing transport costs would impact households (Massyn et al., 2015)

2.2.3 Australia

An estimated 105,000 Australians are homeless according to the Australian Bureau of Statistics (ABS), (2008). 16,375 of this number include individuals who have no shelter but resort to the streets (Australian Bureau of Statistics, 2008). Reynolds (2008) identifies homeless people have opportunities if the government is able to put in place policies that will provide proper funding for affordable housing. In addressing the high increase of homeless people in Australia, the government committed funds to alleviate the homelessness condition and established various national partnerships which try to serve as a tool for curbing out the lack of housing in thr country (Commonwealth of Australia, 2008, p.16).

2.2.4 China

In 1994 the government of China implemented a housing policy with the aim of assisting households who intended to acquire a home (Yi, 2008). Research by Yi (2008), stated that the Chinese policy on affordable housing has become a national forum because of the following;

1. low income families are able to solve their housing issues by purchasing affordable houses. For example the average housing price increased between the periods of 1999 to 2005 in some provinces such as Tianjin, Chong Quin and Beijing, with percentages rising as high as 116 percent (Yi, 2008). A lot of families became accustomed to the purchase of affordable housing after 1999 because the government cancelled the allocation of welfare houses to employees by state owned companies (Yi, 2008).
2. the cost of affordable housing policy is very high. A lot of affordable housing units were completed within the period of 1994 to 2007 with the price of the houses exclusive of tax and the cost of land (Yi, 2008). This was a deliberate attempt by the government to ensure that the prices of affordable houses are lower so that low income households could purchase (Yi, 2008). However, with the availability of limited resources, economists and policy makers are gradually becoming alarmed (Yi, 2008).

Yi (2008), concluded in his paper; “the performance and problems of affordable housing policy in China” that, due to the high cost of commercial housing, more individuals are still not able to afford houses in the Chinese cities.

2.3 FACTORS INFLUENCING THE DEMAND FOR HOUSING UNITS

A number of studies have been conducted to explore the preferences and satisfaction of homebuyers’ in relation to the demand for housing units (Olanrewaju and Tan, 2018). Investigations into how neighborhood actors influence homebuyers’ behavior was conducted by Teck-Hong (2011), Bujang et al., (2010) also conducted an investigation

into the correlation between demography and affordability. Are developers however able to inculcate housing models based on what homebuyers' value which finally interprets as needs and wants (Olanrewaju and Tan, 2018). The value system of the homebuyer can be expressed as the configuration and other specifications of a building (Olanrewaju and Tan, 2018). Designs are outcomes that provide solution to a specific problem or need. Therefore, if the benchmark for a proposal is not filed in a strategic manner, it will lead to poor satisfaction (Olanrewaju and Tan, 2018). Olanrewaju and Tan (2018) further developed the following questions which seek to guide designers in their quest to provide client satisfaction. The questions are as follows;

1. what are the bench mark for design used by developers for the production of affordable housing?
2. is there a correlation between the design team's assessment of affordable housing blue prints and dissatisfaction by users?
3. how can the benchmark for design be assessed by homebuyers to make decisions?

It is however argued by Olanrewaju and Tan (2018) that the benchmark for the design criteria and what homebuyers' desire are not in tuned, therefore causing a high chance of uncompleted projects, unsold units and an unhappy client. Concluding their paper "An exploration into the design criteria for affordable housing in Malaysia", Olanrewaju and Tan (2018) stated that safety and security as well as quality and location played an important factor in the design and demand for housing units in Malaysia. Teck-Hong (2011) in his research findings concluded that, variables which influence homebuyers' decision to purchase houses from developers include the following;

1. accessibility to hospital, distance for public transport and commutation to the work place. This indicates desire for households to have homes nearer to transportation and work.
2. gated and secured neighborhoods with very good horticultural compound works. Homebuyers will pay more to live in secured neighborhoods. This security provides a sense of trust amongst residents.

A good housing project by a developer should be designed to provide homebuyers with a secured a safe environment, integrating amenities in a location that has all the desired necessities for a healthy lifestyle etc (Teck-Hong, 2011).

2.4 DETERMINANTS OF HOUSING PRICES

2.41 Homebuyers' Preferences

According to Chin et al., (2004) factors such as structural, neighborhood and locational attributes could have impact on house price. Research by Arimah (1992) highlights structural attributes as; size of living area or dining area, number of bedrooms or bathrooms in a house, car porch and internal or external structure of the house. Neighborhood attributes are quality of public schools, distance to urban park and view of garden, sea, lake and valley (Teck-Hong, 2011). Literatures by Hui et al., (2006), Jim and Chen (2006, 2007, 2009), Redfearn (2009) and Poudyal et al., (2009) attributed Locational features to include; distance to workplace, school, retailing outlets and public transportations. What homebuyers would consider before buying a house is termed as the environmental qualities which are reflected in the property prices (Teck-Hong, 2011). Prices of buildings with a water body view and lots of green areas can be raised

by 13.2% and 7.1% respectively (Jim and Chen, 2006). Tyrvainen and Mitettinen (2000) and Taijima (2003) also concluded that houses that have access to open parks have an extra 5-6 % increase in their prices. A garden bordering house with a good water view has a 28% upward price variance than an ordinary house without it (Luttik, 2000). Tan(2010) established that the most important reasons why homebuyers now want the gated and guarded property is probably because of the status symbol that goes along with owning a home that is protected. The gated-guarded landscape compound neighborhood signifies upper class, wealth and luxury (Tan, 2010). The availability of these features has a strong influence on price (Teck-Hong, 2011). Mohet al., (1995), Tse and Love (2000), Hui et al., (2006) established that amenities such as swimming pools and club houses also have the tendency to influence housing price.

2.42 Socio-economic factors

There are lots of determinants that influence the soaring prices of affordable housing. Factors such as immigration, availability land, demographic characteristics, legal issues and permits, cost of land and the readiness of labour (Sadi et al., 2010). In order to clearly determine affordability, a comparison at the community level must be made to identify the correlation between the household incomes and housing cost (Chatfield et al., 2010). Theoretical literature in Iran by Gholipour (2010), Khaiabani (2010), Asgari and Cgni (2007), Abbasinezhad and Yari (2009) and Hadavani et al., (2011), identified cost of land, fluctuating prices of oil, cost of construction and credit availability as high determinants influencing housing. Vakili (2008), Shami (2011) and Azizianpour (2008) identified that despite the macroeconomic factors surrounding the pricing of houses and

rents, the role of real estate agents also contribute to the increase in property prices. Real Estate agents influence the prices of properties in the following ways;

1. Agents Fees. Vakili (2008), concluded that the motivation for high commission fees by Real estate agents cause them to increase the price of houses.
2. Speculation. When there is decreased demand for houses in a period, real estate agents purchase houses and hedge them with the aim of selling it when their value increases. (Vakili, 2008).
3. Rivalry among real estate agents. Sadi et al., (2010) identified that clients sign on with Real estate agents who are able to sell their prices at very high prices and at a fast pace. This becomes a motivation for these agents to increase the selling prices of units.

It can be concluded that the role of agents in the real estate industry has a strong influence on the selling price of houses (Sadi et al., 2010).

Sadi et al., (2010) identified the top five most cost factors that affect the cost of construction in Iran as the following;

1. Lack of available labour.
2. Material quality.
3. Design standard.
4. Design variations.
5. Poor management of project finance.

Social issues such as crime rate of an area have a strong influence on housing choice in Ghana. The table below shows the statistics of robbery cases recorded by the Ghana police service in 2017;

Table 1: Regional robbery distribution

REGION	YEAR		% CHANGE
	2016	2017	
ACCRA	616	809	31.3
ASHANTI	103	132	28.2
TEMA	183	87	-52.5
EASTERN	106	131	23.6
CENTRAL	77	172	123.4
VOLTA	47	75	59.6
WESTERN	93	56	-39.8
BRONG AHAFO	17	56	229.4
NORTHERN	47	50	6.4
UPPER EAST	38	72	89.5
UPPER WEST	61	104	70.5
C.I.D. HEADQUARTERS	9	28	211.1
TOTAL	1397	1762	31.3

Source: Statistics and Technology Information Unit (STIU), CID Headquarters, Accra, 2017

With the up rise in crime over the years, security has become a great concern for many Ghanaians with respect to the areas they purchase houses. The dramatic depreciation of the cedi over the past periods in Ghana has caused most Real Estate developers to price their units in dollars in order to hedge their profits (Bank of Ghana, 2007). The trade-weighted real effective exchange rate for the cedi in 2004 was 6.5% (CHF international, 2004). Below is a table showing the average price of real estate units in Accra.

Table 2: Typical house prices in Accra

Type of House	Approximate Floor area (m2)	Average Price in US Dollars	Cedi Equivalent
1 Bedroom (semi-detached, expandable)	76	17,500	161,000,000
2 Bedroom (semi-detached, non-expandable)	82	22,000	202,400,000
2 Bedroom (semi-detached, non-expandable)	96	25,500	234,600,000
3 Bedroom (semi-detached, expandable)	120	32,000	294,400,000
3 Bedroom (semi-detached, expandable)	140	36,000	331,200,000

Source; Bank of Ghana survey 2007.

2.5 AFFORDABLE HOUSING STRATEGIES

2.51 IMPLEMENTATION OF FISCAL POLICIES

In a research by Gibb (2011) into affordable housing delivery policy in Scotland highlighted that the Scottish government in 2007 wanted to bridge the gap between supply and demand for housing unit through policy formulations. The policy proposals consisted of the following;

1. A portion of all housing developments in the private sector would be affordable.
2. A reduction of the total cost per unit through the use of operational efficiency.
3. Cheap funding and generation of funds from the public sector and use local resources in the building of houses.
4. A range of interventions to support marginal would-be owners, including a range of grant-funded shared equity initiatives (with housing associations as partners).

In 2010, the Government of Scotland further launched consultation with the sole aim of identifying various way by which housing could be made affordable through the following process (Gibb, 2011);

1. The encouragement of partnerships between councils and developers with the sole aim of building and the renting of affordable units. Councils borrow prudentially for this and the Scottish Government takes up the upfront cost by ensuring that a loan guarantee exists in order to prevent them from the liability of capital losses on any transaction, being it rent or sale.
2. Replacing the main component of housing affordable investments, an establishment of a creative investment fund was put in place by the government.

Wa'el et al., (2011) researched into the development of low income housing for Sana'a in Yemen and proposed the incorporation of the following sub-policies in Yemen as follows;

1. Find a dedicated fund that will be used to support affordable housing project.
2. Implementation of a proper monitoring and evaluation during the implementation of the housing policy by the government.
3. Establish laws which will secure housing investors and an assurance to banks to recover debts.
4. Motivate private investments by providing all the required facilities.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

Kothari (2011) defined research methods as the techniques used in performing all the activities that relate to a particular research. There are two types of research methods, the ‘quantitative research’ and ‘qualitative research’ (Naoum, 1998). Baiden (2006) highlights that, the type of information available and study determines the particular method to adapt. The essence of this research was to provide insight into the ‘why questions’. It seeks to explore the rationale behind homebuyers’ choice (Olanrewaju and Woon, 2017) and what influence the pricing of houses in Ghana. This will create the awareness for developers to ascertain the household requirements that homebuyers depend on in making demand decisions as well as providing homebuyers with an insight into what goes into the pricing of housing units. Considering the aims and objectives of this research, the quantitative approach was used.

3.2 RESEARCH DESIGN

The means of collecting data for the study as well as the consideration of the limitations of the process can fundamentally be defined as research design (Saunders et al., 2009). There are three approaches to research as established by Creswell and Creswell (2017). These are qualitative, quantitative and the mixed approach. The quantitative approach focuses on the use of statistical or numerical analysis to explain a phenomenon while qualitative is one in which the researcher seeks an in-depth understanding of social phenomena via non-statistical data such as interviews, grounded theories or case studies

(Guderson and Aliaga, 2015). The mix method is a combination of both the qualitative and quantitative approach. The choice of research approach, however, depends on what the research seeks to address, the type information required and availability of such information (Baiden, 2006). This quantitative approach was adopted for this study considering the aims and objectives of the study, and a structured questionnaire was used in collecting information. The adoption of a questionnaire allowed the researcher to ask all respondents the same question with planned answers, which permitted impartial facts to be gathered from the survey. Questionnaire survey helped enhance the consistency of the observations due to its inherent standardized measurement and sampling techniques (Oppenheim, 2003).

3.3 RESEARCH INSTRUMENT

Structured questionnaires were used in collecting data from the middle and high income Ghanaian and Real Estate Firms. Africa Development bank (2011) defined a middle income Ghanaian as a person who earns between \$2 to \$20 a day, while a high income Ghanaian earns above \$20 a day. Two separate structured questionnaires were used. The first was directed towards the middle and high income Ghanaian to ascertain the important choice determinants while the second was directed towards Real Estate firms to determine the factors that influence the pricing of their estate units. Quigley and Raphael (2004), Wu et al., (2013), Bayoh et al., (2006) and Chin and Foong (2006), established Seventeen (17) determinants of choice which was adopted in the questionnaire. Prior to the commencement of the survey, the questionnaire was piloted and respondents ticked how important every factor affect their choice and ascertained the factors influencing the pricing of housing units on a five-sequence scale, where one

was the least and five was the highest. A 4.20-5.00 mean score represents very important, 3.40-4.19 represents important, 2.60-3.39 represents moderately important, 1.80-2.59 represents slightly important and 1.00 -1.79 represents not important (Olanrewaju and Woon, 2017). The characteristics of respondents were analysed with the mode formula (Olanrewaju and Woon, 2017). SPSS was used to ascertain the average mean of each determinant. The mean values were tested to achieve the standard deviation of the factors. The factors were then ranked in order of their importance in a descending manner.

3.4 POPULATION

A population as defined by Frederic (2010) is the overall study of all individuals, situations and objects which forms the basis for a researcher to conceptualize the findings. The structured questionnaires were targeted at middle and high income Ghanaians, and Real Estate firms. The classes of Ghanaians were selected because they are mostly the targeted group of buyers by Real Estate firms. This was achieved by targeting junior and senior management staff in institutions.

3.5 SAMPLING TECHNIQUE AND SAMPLE SIZE

Webster (1985) defined a sample as a finite part of a statistical population whose properties provide information about the whole population. In other words, sampling procedures presents an indication of how the segment of the population was selected. This research is composed of a literature review and questionnaire. Convenience sampling was used in collecting data. Sekaran and Bougie (2010) defined convenience sampling as a survey which involves participants that are willing and ready to

participate. Where there is not enough data available on the population to be used, this method is very appropriate (Sekaran and Bougie, 2010). The research survey was performed in two forms through personal delivery and online through Google doc within a time frame of 2 weeks. A total of 100 survey forms were administered to the middle and high income class and 87 respondents were received. 100 survey forms were also administered to Real estate firms and a total of 36 respondents were received. The Real Estate firms who were considered under this study were those who are actively involved in the industry and have five years and above experience. The criterion was used because; the nature of the study requires a fore knowledge in design, estimation, pricing and sale of houses. The participants of the study were selected as a subset of the study population (Real Estate firms in Ghana) (Landreneau and Creek, 2008).

3.6 DATA ANALYSIS

This section explains how the quantitative data collected was processed and analysed. In order to analyse data effectively there has to be a prescribed format (Oppenheim, 2013). According to Oppenheim (2013), there should be an established routine and layout. These include: assigning numbers to instruments; giving each entry a name; entering them into the relevant statistical package; producing a simple two-way matrix which includes responses and variables; and coding of the data to allow for statistical analysis. Data collected was entered into version 23 of the Statistical Packages for Social Sciences (SPSS). The use of the software was used to establish the relationship between variables. The demographic data was analysed by means of frequencies and percentages while the research variables were analysed using descriptive statistics and relative importance index

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 INTRODUCTION

This chapter presents the results and analysis from the structured questionnaires. Discussions on the findings indicate the important factors that influence the choice for housing and the factors that influence pricing of houses in Ghana.

4.2 DATA ANALYSIS

4.21 IDENTIFYING THE CHOICE DETERMINANTS

4.211 DEMOGRAPHIC PROFILE OF RESPONDENTS

A total of 87 questionnaires were completed, returned and analysed. The outcome of the analysis are represented graphically in Figures 1,2,3 and Tables 3,4,5. A total of 54 per cent were males (Figure 1), with married respondents representing a total of 39 per cent (Figure 2). 61 per cent of respondents have a Bachelors degree (BSc) as seen in Table 3. 10 per cent that selected others comprises of individuals having other associate degrees or vocational training accreditations. Most of the respondents rent apartments (i.e. 62 per cent), with only 38 per cent owning their homes (Figure 3). A total of 40 per cent earned between Gh¢ 1,000 and Gh¢ 2,000 (Table 4).

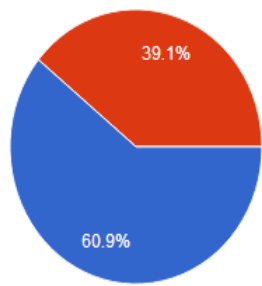


Figure 1; Distribution of gender status

Source: field survey, 2019

● Single
● Married

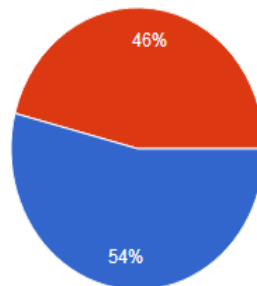


Figure 2; Distribution of Marital

Source: field survey, 2019

● Male
● Female

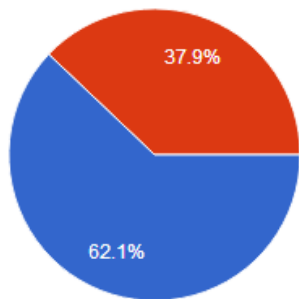


Figure 3; Distribution of the nature of apartments.

Source: field survey, 2019

● Rented
● Owned

Table 3; Educational level

Certification	Diploma	BSc	MSc	PhD	Other	Total
Frequency	3	53	22	0	9	87
(%)	3.4	60.9	25.3	0	10.4	100

Source: field survey, 2019

Table 4; Monthly Income

Monthly Income	GH¢1,000-2,000	GH¢2,100-3,000	GH¢3,100-5,000	Above GH¢5,100	Total
Frequency	36	28	17	6	87
(%)	41.4	32.2	19.5	6.9	100

Source: field survey, 2019

Table 5; Distribution of number of family

Number of family	1-2 members	3-6 members	more than 6 members	Total
Frequency	36	28	17	81
(%)	41.4	32.2	19.5	93.1

Source: field survey, 2019

4.212 ASSESSING THE CHOICE DETERMINANTS

The survey responses were analysed by percentages and presented in tables and figures. Conjoint analysis was used. It is a survey based statistical technique used to determine how different people value different attributes that make up a product (Wittink et al., 1989). The main aim of conjoint analysis is to identify how the individual feel about

certain perceptions that are influential in their decision making. A set of factors and determinants is shown to participating individuals and their responses are analyzed based on their preferences between the stated factors and determinants (Wittink et al., 1989).

Table 6; Respondent report

Determinant	Scale					Total
	1	2	3	4	5	
Type of building	3	4	2	29	49	87
Size of the building	2	3	11	24	47	87
Number of bedrooms	2	5	14	16	50	87
Number of bathrooms	6	7	22	21	31	87
Parking area	7	8	18	32	22	87
Location of the building	2	1	9	10	65	87
Access to health care	0	4	8	17	58	87
Access to School	1	3	9	21	53	87
Location of market and shopping malls	4	4	22	29	28	87
Accessibility to working place	0	2	9	21	55	87
Availability of public transport	1	3	9	16	58	87
Household Income	0	3	7	27	50	87
Family size	2	1	6	18	60	87
Availability of mortgages	8	8	21	23	27	87
Crime rate	3	0	3	6	75	87
Aesthetic view	2	3	21	25	36	87
Infrastructure services (eg. Drains, power and water)	0	1	6	9	71	87

Source: field survey, 2019

A 4.20-5.00 mean score represents very important, 3.40-4.19 represents important, 2.60-3.39 represents moderately important, 1.80-2.59 represents slightly important and 1.00 -

1.79 represents not important. 4.26 was determined as the average mean score for the factors. This shows how important the factors affect the choice of homebuyers/ homeowners in Ghana. Applying the median distribution scale above, it is obvious in Table 7 that twelve (12) determinants were measured as very important and five (5) as important.

Table 7; Statistics of determinants

Determinant	Weighted Mean	Conjoint %	Standard deviation	Rank
Infrastructure services (eg. Drains, power,water, road)	4.72	6.52	0.640	1
Crime rate	4.72	6.52	0.830	2
Location of the building	4.55	6.28	0.899	3
Family size	4.53	6.25	0.860	4
Accessibility to working place	4.48	6.19	0.776	5
Access to health care	4.48	6.19	0.847	6
Availability of public transport	4.46	6.15	0.900	7
Household Income	4.43	6.11	0.787	8
Access to School	4.40	6.07	0.895	9
Type of building	4.34	6.00	0.986	10
Size of the building	4.28	5.90	0.973	11
Number of bedrooms	4.23	5.84	1.064	12
Aesthetic view	4.03	5.57	1.005	13
Location of market and shopping malls	3.84	5.30	1.076	14
Number of bathrooms	3.74	5.15	1.224	15
Parking area	3.62	5.00	1.193	16
Availability of mortgages	3.61	4.98	1.270	17

Source: field survey, 2019

Infrastructure works was found to be the most crucial determinant. Infrastructure works such as good roads, proper drainage systems, accessibility of water and power have a strong influence on homebuyers' choice. This shows that homebuyers are particular about demarcated roads that lead to the estate as well as the overall drainage layout and power services. Urban flooding in Ghana is a growing challenge that is affecting development. In October 2010, flood displaced 161,000 people through a torrential rain across the country (Asumadu-Sarkodie et al., 2015). Same happened on June 6, 2014, where after 10 hours of rain, areas such as Adabraka, Awoshie, Dansoman, Mallam and North Kaneshie all became flooded (Asumadu-Sarkodie et al., 2015). The issue of flooding has been attributed to poor road and drainage network. Urban water supply as per Ghana Water Company Limited Report in 2008 estimated that only 58% of urban areas have access to the national water grid (Ghana Water Company Limited 2008). Larbi (2010) in accessing the current situation of road networks in Ghana concluded that accessibility to Real estate properties have a strong influence on homebuyers' decision to purchase. The above indicates that an estate should be able to provide proper infrastructure works to be able to entice purchasers. Homebuyers therefore view infrastructure services as a very critical factor in their demand for units in Ghana.

It can be seen from table 1 above that crime rate in urban areas such as Greater Accra and Ashanti region has a percentage increase of 31.3% and 28.2% respectively between 2016 and 2017. The outcome from respondents is not surprising because majority of the data was collected from individuals living in the Greater Accra region. This shows that most homebuyers are very much concerned about the security aspect of a real estate

before they even make a decision to purchase. Increase in crime rate in recent years has made security a very critical factor in the selection of a particular community or estate. A total of one hundred and two (102) robbery victims sustained various degrees of injuries whiles twenty-nine (29) victims lost their lives in 2017 (Ghana police, 2017). With the above statistics, it is understandable and realistic for respondents to rate Crime as the second most important factor that influences their demand for housing. Location of the building was found to be the next important factor with a third placed rank which is not surprising. With the traffic congestion in the urban areas and the poor public transportation system, homebuyers are very skeptical of the location of buildings in relation to work and other amenities. Wu et al.,(2013) found that households regard comfort in commuting as a critical factor because of the location of most houses. Family size also came in as a very important choice determinant. This is consistent with the findings from the Ghana statistical service in 2014 in the assessment of the standard of living in Ghana. The mean household in Ghana is four (4) (Ghana Statistical Service, 2014). The findings from this research indicate that about 41% of respondents have a family size of 1 -2 members' whiles 32 % have a family size of 3-6 members. With the average household size in Greater Accra given as 3.8 persons per household (Ghana Statistical Service, 2014), a homebuyer will rate this factor as very critical factor that determines whether or not a particular type of building will suit the family size. According to Olanrewaju and Woon (2017), one of the major reasons why people choose to buy a house is due to the size of their families.

The type of building came in as the next crucial factor. The nearness of hospitals, work place and school to a household has been identified as a factor which has a strong influence on the decision to buy a house (Olanrewaju and Woon, 2017). The reasons for these are obvious. In order to motivate homebuyers to invest in non-urban areas, the government will have to develop proper infrastructure in these areas. Household income was found to be the next crucial factor that influences demand. The major source of household income in Ghana is from non-farm self-employment, contributing 48.3% to sources of household income (Ghana Statistical Services, 2014). The average annual household income in Greater Accra was given as \$1,402 in 2004 (CHF International 2004) while the average apartment in the Ghanaian Real Estate costs \$50,000.00 (Ghana Real Estate Developers Association, 2014). So it is therefore important for a homebuyer to assess their household income before making a decision to purchase a real estate unit in Ghana.

Housing features such as aesthetics, parking spaces, number of rooms and bathrooms also play an important role in housing choice (Lopez and Van Nes, 2007). This findings support existing literature in some countries (Lopez and Van Nes, 2007). Joseph (1981), found out in Israel that in determining the residential location choice, homebuyers are influenced by the availability of housing facilities that can be obtained in a community. The number of bedrooms is usually based on the degree of privacy and convenience required by a homebuyer (Olanrewaju and Woon, 2017). Fan et al., (2006) in determining house prices in Singapore found that homebuyers are more concerned with social facilities and appealing environments. This suggests that, housing features have

equal weights in choice determinants. Aesthetics and parking area also appeared to make meaningful contribution to homebuyers' choice.

It was found that mortgage availability was the lowest ranked even though it is still an important determinant with a mean score of 3.61. It is not surprising though because financial institutions have made less in part in housing delivery contribution (Boamah, 2010). For example HFC (2001) reported it created about 95% of the total mortgage in Ghana. One of the most challenging issues facing homebuyers is the acquisition of loan from banks (Olanrewaju and Woon, 2017). Treasury bills and bonds are the top priorities of most banks in Ghana rather than providing support for housing development (Akuffo, 2006). Though there is a potentially large market size, the mortgage products in the country are inadequate; only few banks provide funds for housing investment (Boamah, 2010). Ghana currently has a mortgage deficit of about \$50 million (Bank of Ghana, 2007). This clearly indicates the mortgage market is not developed properly.

4.22 IDENTIFYING THE PRICING DETERMINANTS

4.221 RESPONDENT PROFILE

A total of 100 questionnaires were sent to Real estate firms and 37 were completed and returned. The point of contacts in these firms as seen in Table 8 were nine (9) Project managers, five (5) architects, seven (7) quantity surveyors five (5) civil engineers and ten (10) sales executives. This provided an unbiased opinion based on the perspectives of different industry professionals. The highest amongst the professional had over 10 years' experience with the rest having a work experience between 5-10 years (Figure 4).

Table 8; Distribution of Real Estate Contact persons

Contact Person in Firm	Civil Engineer	Architect	Project Manager	Quantity Surveyor	Sales Executive	Total
Frequency	5	5	9	7	10	36

Source: field survey, 2019

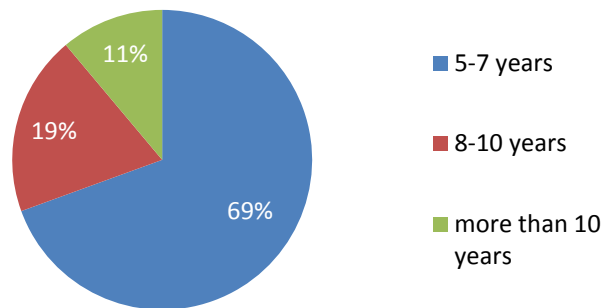


Figure 4; Distribution of years of experience

Source: field survey, 2019

4.222 PROPERTY CAHARACTERISTICS

Out of the 36 Real Estate firms, 13 are into the construction of mixed properties i.e. terraced or row houses, semi-detached units, detached units and multi storey apartment (Figure 5). All the other firms engaged were into units ranging from 1 bedroom to more than three bedrooms (Figure 6). 12 of the firms (i.e. 33%) have their starting price ranging from \$51,000 to \$80,000 (Figure 7).

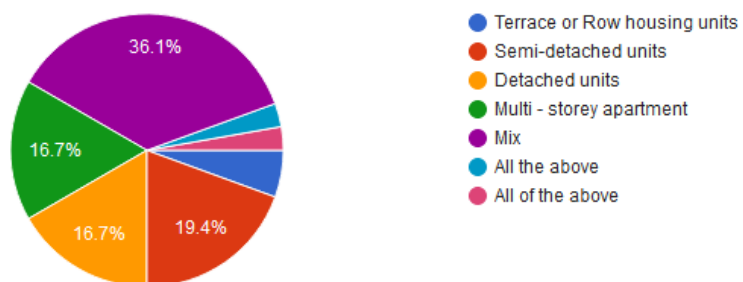


Figure 5; Distribution of housing types

Source: field survey, 2019

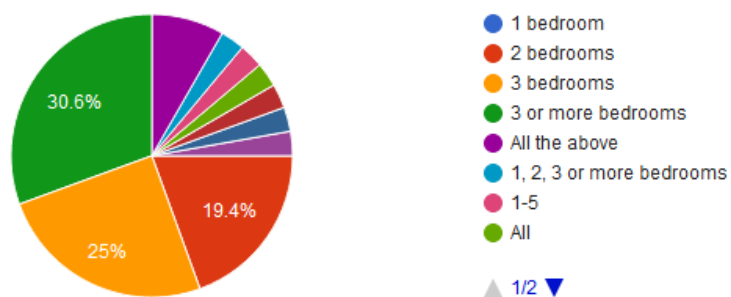


Figure 6; Distribution of number of bedrooms per unit

Source: field survey, 2019

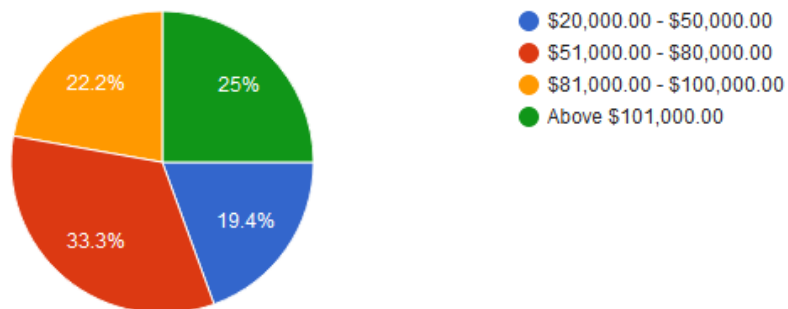


Figure 7; Distribution of housing starting price

Source: field survey, 2019

4.223 PRICING DETERMINANTS

The average score of all the means for the factors is 4.05, which shows that the determinants have a very high influence in the pricing of houses in Ghana. The median distribution scale was also used for this analysis, where a 4.20-5.00 mean score represents very important, 3.40-4.19 represents important, 2.60-3.39 represents moderately important, 1.80-2.59 represents slightly important and 1.00 -1.79 represents not important (Olanrewaju and Woon, 2017). It is obvious in Table 9 that Five (5) determinants were measured as very important and seven (7) as important. None of the determinants were labeled as “not important”.

Table 9; Descriptive statistics of pricing determinants

Determinant	Weighted Mean	Conjoint %	Standard Deviation	Rank
Type of building	4.47	9.19	0.726	1
Infrastructure services (eg. Drains, power and water)	4.47	9.19	0.799	2
Size of the building	4.42	9.09	0.795	3
Location of the building	4.33	8.90	0.849	4
Interest Rates	4.31	8.86	0.699	5
Number of bedrooms	4.06	8.35	0.880	6
On site social amenities (e.g. parks, play areas, swimming pools etc)	3.89	8.00	0.809	7
On site Security	3.89	8.00	0.965	8
Size of building compound	3.81	7.83	0.966	9
Fully fitted/ furnished	3.72	7.65	0.960	10

Common area maintenance (e.g. refuse disposal, lawn maintenance etc)	3.67	7.54	0.961	11
Parking area	3.61	7.42	1.034	12

Source: field survey, 2019

The findings of this research have similar attributes with existing literature on the correlation that exists between preference and price. (Rahadi et al., 2015). The correlation between product quality, location, recreational facilities, serene environment and price was found by Plessis and Saayman (2011). With the high cost of land prices in urban areas, developers tend to vary their house types on a given plot acquired (Rahadi et al., 2015). Hofman et al., (2006) highlighted that most real estate developers offer house variations on the same land in order to have different house types with different prices. From the analysis it can be seen that the type of building determines the type of pricing and as such it is seen as a very important factor.

It is not surprising that infrastructure came in as the next critical factor. Where there is demand, there should be supply to create the required balance. Analysis from the choice determinants above highlighted infrastructure works as a critical choice factor. This indicates that Real estate developers in Ghana consider infrastructure as a key determinant that influence their sales. However the cost of road and drainage works, as well as the provision of water and power in an estate comes at a cost which is approximately 30% of the total construction cost (Olanrewaju and Woon, 2017). This cost is then calculated and added to the overall price of the building to the homebuyer.

Infrastructure characteristics influence the quality of a particular area as well as the price (Rahadi et al., 2015).

The size of the building was also identified as a very important factor. The bigger the floor plan or area the more the construction cost. Table 2 in the literature review above represents typical housing prices in Accra. It can be noted that a one bedroom semi-detached, expandable unit with a floor area of about 76m² has an average price of \$17,500.00 (cedi equivalent of GH¢161,000.00) while a 3 bedroom semi-detached expandable unit with a floor area of 140m² has an average price of \$36,000.00 (cedi equivalent of GH¢331,000) (Bank of Ghana Housing report, 2007). Due to the cedi depreciation, most real estate developers in Ghana state their prices in dollars so as to hedge their profit (Bank of Ghana Housing report, 2007).

It is also not surprising that the location of building has a very important factor on building price. The value of serviced lands in areas such as Tema, East Legon go for \$60,000 and \$18,000 respectively. While in Kumasi cost of land in urban areas ranges between \$20,000 and \$40,000 (Mahama, 2004). The cost of the land translates into the overall selling price of the property.

Interest rate came in as the next important factor. Most Developers tend to borrow money from banks to undertake their construction. The annual growth of credit to private enterprises at the end of 2004 was 41.3% as compared to 12.5% in 2003 (CHF International, 2004). The major recipients of credit included the construction sector with a share of 20% as at 2004 (Bank of Ghana, 2004). Interest rate in Ghana has had a steady rise from 2007 i.e. a percentage of 2.7 to 6.9% in 2016 (African Development

Bank Economic forum, 2008). Even though the overall interest rate has fallen to 6.2% in 2019(African Development Bank Economic forum, 2008), the amount is significant considering the huge capital cost of projects. Estate Developers therefore defray the interest on the capital cost on the prices of units being sold.

High earned facilities such as private tennis courts, golf course, swimming pool, security systems are some of the favourable fixtures that are usually offered by estate developers to boost their sales and to increase housing price (Raymond and Love, 2000; Feng and Humphreys, 2008). This shows that human preferences such as number of bedrooms, amenities, parking area and common maintenance have a strong influence on housing prices. Prices of buildings with a water body view and lots of green areas can be raised by 13.2% and 7.1% respectively (Jim and Chen, 2006). Tyrvainen and Mitettinen (2000) and Taijima (2003) also concluded that houses that have access to open parks have an extra 5-6 % increase in their prices. A garden house with a good water view has a 28% upward price variance than an ordinary house without it (Luttik, 2000).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

This research had the aim of identifying the determinants of housing choices and the factors influencing housing prices in the Ghanaian Real Estate industry.

5.11 Objective 1: To identify the choice determinants for Real Estate Units in Ghana

Analyzing the respondents received from the middle and high income class, the standard deviations of the means were calculated and the factors ranked according to their level of importance. It was identified that the availability of proper infrastructural services, the crime rate in an area, location of a house, family size and accessibility to working place were the top five (5) determinants that influenced a homebuyers' decision to purchase a unit from a real estate developer. While the findings were consistent with literature, individuals also attached importance to non-financial factors such as accessibility, location and aesthetics.

5.12 Objective 2: To identify the determinants that influence housing prices in Ghana

After obtaining the choice determinants, respondents from thirty-six (36) real estate firms were also analysed and ranked according to their level of influence on price. The type of building, provision infrastructure services, size of building, location of the building and interest rates were found to be the most influential factors that influence the pricing of real estate housing units.

5.2 CONCLUSION

Many determinants influence housing choice and prices. This research provides a good view of homebuyers' perception while providing an insight into the factors that influence the pricing of houses in Ghana. Infrastructure and crime rate in an area appears to be the highest consideration for homebuyers in Ghana before they make a decision to buy a house. On the other hand, infrastructure and the type of building were found to be the highest determinants of pricing units in Ghana by Developers. This research has successfully achieved its objectives through the data collated with regards to the proposed factors influencing the choice and affordability of housing products. There are evidences of positive correlation and responses between the consumers and producers in relation with demographic conditions, choice preferences and environmental factors.

Most real estate developers often focus on their experience in sales and marketing of their products (Olanrewaju and Woon, 2017). This study can become the blue print for developers to strategize the sales and marketing of their housing product. The outcome of this study will also help inform homebuyers to know what goes into the pricing of real estate houses. Lastly with the pricing determinants provided and their respective rank influence, this research can be useful to the government in their bid to provide affordable housing in the country.

5.3 RECOMMENDATIONS

Based on this research, the following recommendations are proposed;

- **Proper implementation of infrastructure policies**

It can clearly be identified in the research that infrastructure has a crucial effect on both the demand and supply side of buildings. It is therefore recommended that the government of Ghana expand infrastructure services just not in the urban areas but localities that are far from the central point of amenities (i.e. Accra, Kumasi etc.). This is because failure for the government to expand infrastructure will burden private developers who will intend translates the huge cost of infrastructure they incur on the homebuyers.

- **Encouragement of researches on choice and price determinants as part of the affordable housing scheme program.**

The government of Ghana is constantly developing models to bridge the gap between demand and supply of housing units in the country. Most of these policies drive on economic factors rather than focusing on the individual and their preferences. There should be researches into price and choice determinants so as to provide the blue print that will help in the successful implementation of any housing scheme.

5.4 LIMITATIONS OF THE STUDY

The quest to get participants involved in the research in order to acquire the information required was difficult and this affected the response rate. Another limitation of the study was the small size of the sample. The result would improve greatly if the study is to be carried out again with larger sample size. This research was also limited to the Accra metropolis and the results might have been more comprehensive if the research had been extended to other regions in Ghana.

5.5 DIRECTIONS FOR FUTURE STUDIES

This study covers only the Accra. Similar studies should be repeated in the other cities such as Kumasi, Tamale, Sunyani etc. to identify if the results are repetitive.

6.0 REFERENCES

Abbasinezhad, H. and Yari, H. (2009), "The effect of oil shocks on housing prices", *Faslnameh Pazhoheshaye Eghtesadi (Quarterly Economic Research)*, Vol. 1, Spring, pp. 59-77.

AbdulLateef Olanrewaju, SeongYeow Tan, (2018) "An exploration into design criteria for affordable housing in Malaysia", *Journal of Engineering, Design and Technology*, Vol. 16 Issue: 3, pp.360-384, <https://doi.org/10.1108/JEDT-12-2017-0125>

AbdulLateef Olanrewaju, Tan Chai Woon, (2017) "An exploration of determinants of affordable housing choice", *International Journal of Housing Markets and Analysis*, Vol. 10 Issue: 5, pp.703-723,

Abdul-Rahman, H., Wang, C., Wood, L.C. and Khoo, Y.M. (2014), "Defects in affordable housing projects in Klang Valley, Malaysia", *Journal of Performance of Constructed Facilities*, Vol. 28 No. 2, pp. 272-285.

African Development Bank Report(2011), "Private Sector Development as an Engine of Africa's Economic Development.

Arimah, B.C. (1992), "An empirical analysis of the demand for housing attributes in a third world city", *Land Economics*, Vol. 68, pp. 366-79.

Asgari, H. and Chegeni, A. (2007), "Determinants of housing prices in urban area, using panel data over the 1370-1385", *Faslnameh Elmi Eghtesade Maskan (Quarterly Housing Economics)*, Vol. 40, pp. 19-36.

Akin Öztürk, Yunus Emre Kapusuz, Harun Tanrıvermiş, (2018) "The dynamics of housing affordability and housing demand analysis in Ankara", *International Journal of Housing Markets and Analysis*, <https://doi.org/10.1108/IJHMA-08-2017-0079>

Akuffo, A. (2006). HFC'S Pioneering Role and Rational for Conversion to Full Banking Activities: Sustainability of Specialised Lenders. The World Bank/International Finance Corporation (IFC), Housing Finance Conference, 16-17 March, Washing DC, USA.

Austin, P.M.; Gurran, N.; Whitehead, C.M.F (2014), Planning and affordable housing in Australia, New Zealand and England: Common culture; different mechanisms. J. Hous. Built Environ. Vol 29, pp 455–472.

Australian Bureau of Statistics (ABS) (2008), “Australian Census Analytic Program, counting the homeless, Australia, 2006: ABS Catalogue No. 2050.0”, available at www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2050.02001?OpenDocument

Awuvafoqe Samson Apable (2013), “Affordable housing in urban areas in Ghana; issues and recommendations, Research paper submitted to the graduate school of Ball State University, Muncie, Indiana.

Aziz, A.A.F. (2011), “Causality of residential properties price movements in Malaysia”, MPRA Paper No. 47682

Azizianpour, M. (2008), “Immigration is the most important factor of high housing price in the province of Qazvin”, available at: www.shasa.ir/newsdetail-46217-fa.html

Bank of Ghana research department (2007). *The Housing Marketing in Ghana*

Baiden, B.K., (2006), Framework for the integration of the project delivery team, unpublished Doctoral Thesis submitted in partial fulfilment of the requirement for the award of Doctor of Philosophy at Loughborough University, Loughborough, United Kingdom.

Bayoh, I., Irwin, E.G. and Haab, T. (2006), “Determinants of residential location choice: how important are local public goods in attracting homeowners to central city locations?”, Journal of Regional Science, Vol. 46 No. 1, pp. 97-120.

Boamah Nicholas Addai (2010), “Housing Affordability in Ghana: A focus on Kumasi and Tamale”, *Ethiopian Journal of Environmental Studies and Management* Vol.3 No.3

Bujang, A.A., Zarin, H.A. and Jumadi, N. (2010), “The relationship between demographic factors and housing affordability”, Malaysian Journal of Real Estate, Vol. 5 No. 1, pp. 49-58.

CaiWenjie and Lu Xinhai (2015). *Housing affordability: Beyond the income and price terms, using China as a case study*. *Habitat international*, 47, 169-175.

Chatfield, D., Shaw, M. and Warnock, A. (2000), “The challenges of affordable housing”, Proceedings of the 2000 APA National Planning Conference.

CHF International (2004), “strategic assessment of the affordable housing sector in Ghana”

Chin, T.L., Chau, K.W. and Ng, F.F. (2004), “The impact of the Asian financial crisis on the pricing of condominiums in Malaysia”, *Journal of Real Estate Literature*, Vol. 12, pp. 33-50.

Commonwealth of Australia (2008), “The road home, a national approach to reducing homelessness”, available at: www.fahcsia.gov.au/sa/housing/progserv/homelessness/whitepaper/Documents/default.htm

Creswell, J.W. and Creswell, J.D., 2017. *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Department of Statistics (2016a), “Population distribution and basic demographic characteristic report 2010”, available at: www.statistics.gov.my Foundation, York.

Fan, G., Ong, Z.S.E. and Koh, H.C. (2006), “Determinants of house price: a decision tree approach”, *Urban Studies*, Vol. 43 No. 12, pp. 2301-2315.

Feng, X. and Humphreys, B.R. (2008), “Assessing the economic impact of sports facilities on residential property values: a spatial hedonic approach”, Working Paper Series No 08-12, International Association of Sports Economists, International Association of Sport Economics (IASE), Daytona, Ohio.

Ghana Police service annual report (2017).

Ghana Statistical Service (2014). *2010 Population and Housing Report in Ghana*

Ghana Statistical Service (2014). *Ghana living Standards survey round 6*

Gholipour, H.F. (2010), "Analysis of fluctuation in housing prices in Iran", Housing Finance International, Winter, pp. 19-22.

Gibb Kenneth, (2011),"Delivering new affordable housing in the age of austerity: housing policy in Scotland", International Journal of Housing Markets and Analysis, Vol. 4 Iss 4 pp. 357 – 368 Permanent link to this document: <http://dx.doi.org/10.1108/17538271111172157>

Glaeser, E.L. and Gyourko, J. (2003), "The impact of building restrictions on housing affordability", FRB New York - Economic Policy Review, Vol. 9 No. 2, pp. 21-39.

GSS (Ghana Statistical Service), 2012. 2010 Population and Housing Census: Summary of Final Results, Accra: GSS

Hadavandi, E., Ghanbari, A., Mirjani, S.M. and Abbasian, S. (2011), "An econometric panel data-based approach for housing price forecasting in Iran", International Journal of Housing Markets and Analysis, Vol. 4 No. 1, pp. 70-83.

Haffner, M.E.A.; Boumeester, H.J.F.M, (2010), The affordability of housing in the Netherlands: An increasing income gap between renting and owning? vol25,pp 799–820.

Hall, D. and Gibb, K. (2010), Increasing Supply within the Social Rented Sector: A Discussion Paper for the Joseph Rowntree Foundation Housing Market Task Force, Joseph Rowntree

Permanent link to this document: <http://dx.doi.org/10.1108/IJHMA-02-2016-0013>

Hassan Gholipour Fereidouni, (2012),"The role of real estate agents on housing prices and rents: the Iranian experience", International Journal of Housing Markets and Analysis, Vol. 5 Iss 2 pp. 134 – 144 Permanent link to this document: <http://dx.doi.org/10.1108/17538271211225896>

Hassan Gholipour Fereidouni, (2012),"The role of real estate agents on housing prices and rents: the Iranian experience", International Journal of Housing Markets and

Analysis, Vol. 5 Iss 2 pp. 134 – 144 Permanent link to this document:
<http://dx.doi.org/10.1108/17538271211225896>

High Level Task Force on Affordable Housing for All. (December 2008). Report of the High Level Task Force on Affordable Housing for All. New Delhi: Government of India. <http://www.naredco.in/pdfs/report-high-level-task.pdf>.

Hitchcock, G. and Hughes, D. (1995), *Research and the Teacher: A Qualitative Introduction to School Based Research*, 2nd ed., Routledge, London

Hui, E.C.M., Chau, C.K., Pun, L. and Law, M.Y. (2006), “Measuring the neighboring and environmental effects on residential property value: using spatial weighting matrix”, *Building and Environment*, Vol. 42, pp. 2333-43.

Jewkes, D., M. and Delgadillo, M., L. (2010), “Weaknesses of housing affordability indices used by practitioners”, *Journal of Financial Counselling and Planning*, Vol. 21 No. 1, pp. 43-52.

Jim, C.Y. and Chen, W.Y. (2006), “Impacts of urban environmental elements on residential housing prices in Guangzhou (China)”, *Landscape and Urban Planning*, Vol. 78, pp. 422-34.

Jim, C.Y. and Chen, W.Y. (2007), “Consumption preferences and environmental externalities: a hedonic analysis of the housing market in Guangzhou”, *Geoforum*, Vol. 38, pp. 414-31.

Jim, C.Y. and Chen, W.Y. (2009), “Value of scenic views: hedonic assessment of private housing in Hong Kong”, *Landscape Urban Planning*, Vol. 91 No. 4, pp. 226-34.

Kalpana Gopalan, Madalasa Venkataraman, (2015), *Affordable housing: Policy and practice in India*, [IIMB Management Review 27, 129e140](#)

Karlan, D. and Morduch, J. (2014), *Macroeconomics*, MCGraw Hill Education, New York

Kamasa Kelvin (2017), “Perceptions on Housing Affordability among the working class in Accra”, undergraduate thesis submitted to the department of business administration, Ashesi University College.

Khiabani, N. (2010), "How important are oil and money shocks in explaining housing market fluctuations in an oil-exporting country? Evidence from Iran", paper presented at the Conference on Iran's Economy, Chicago, IL, USA, October 15-17.

Kothari, C. R., and Garg, G., (2014), *Research methodology, methods and techniques, methods and techniques*, 3rd Edition, New Age International (P) Limited, Publishers, New Delhi, India

Landreneau, K. J., and Creek, W., (2008), Sampling strategies, Retrieved on 12 August 2015 from www.natcol.org/research/files/SamplingStrategies.pdf

López, M.J.J. and Van Nes, A. (2007), "Space and crime in Dutch built environments: macro and micro scale spatial conditions for residential burglaries and thefts from cars", in Kubat, A.S., Ertekin, Ö., Güney, Y. _I. and Eyüboğlu, E. (Eds), Proceedings, 6th International Space Syntax Symposium, Technical University, Cenkler, pp. 026.01-026.14.

Luisa Ingaramo and Stefania Sabatino, (2011), "Social housing: new demand, new tools: Affordable finance for affordable housing through real estate ethical funds, International Journal of Housing Markets and Analysis, Vol 4 No.4, Iss 4 pp 369-393

Luttik, J. (2000), "The value of trees, water and open spaces as reflected by house price in The Netherlands", Landscape and Urban Planning, Vol. 48, pp. 161-7.

Mark William Massyn, Robert Mc Gaffin, Francois Viruly, Nicole Hopkins , (2015),"The challenge of developing higher density, affordable housing in the inner city of Cape Town", International Journal of Housing Markets and Analysis, Vol. 8 Iss 3 pp. 412 – 428 Permanent link to this document: <http://dx.doi.org/10.1108/IJHMA-11-2014-0049>

Moh, H.M.K., Chan, P.P.K. and Cho, Y.S.A. (1995), "Hedonic price model for private properties in Hong Kong", Journal of Real Estate Finance & Economics, Vol. 10, pp. 37-48.

Mohit, A.M., Ibrahim, M. and Rashid, R.Y. (2010), “Assessment of residential satisfaction in newly designed public low-cost housing in Kuala Lumpur, Malaysia”, *Habitat International*, Vol. 34 No. 1, pp. 18-27.

Naoum, S. G., (1998), *Dissertation Research and Writing for Construction Students*, Elsevier Butterworth Publications, London

National Property Information Centre (NAPIC) (2013), “Property Market Status Report. Fourth Quarter/ Q4 Year 2013 [Property Overhang Q4 2013]”, Ministry of Finance Malaysia.

National Property Information Centre (NAPIC) (2014), “Property Market Status Report. Fourth Quarter/ Q4 Year 2014 [Property Overhang Q4 2014]”, Ministry of Finance Malaysia.

National Property Information Centre (NAPIC) (2015), “Property Market Status Report. Fourth Quarter/ Q4 Year 2015 [Property Overhang Q4 2015]”, Ministry of Finance Malaysia.

O’Sullivan, A., Sheffrin, S. and Perez, S. (2013), *Microeconomics: Principles, Applications, and Tools*, 8th Ed., Prentice Hall, San Francisco, CA.

Olanrewaju, A., Lee, L.T., Tan, S.T., Naoto, M., Nizamani, Z. and Aziz, A.A. (2016b), “Analysis of economic determinants of affordable housing prices”, in Lau, H.H., Tang, F.E., Ng, C.K. and Singh, A. (Eds), *Integrated Solutions for Infrastructure Development*.

Olanrewaju, A., Tan, S.T., Lee, L.T., Ayob, M.F. and Ang, S. (2016a), “Investigating the compatibility of affordable housing with sustainability criteria: a conceptual structure”, *Proceeding – Putrajaya International Built Environment, Technology and Engineering Conference (PIBEC2016)*, Bangi, 24-25 September, pp. 228-240.

Ong, S.T. and Chang, S.Y. (2013), “Macroeconomic determinants of Malaysian housing market”, *Human and Social Science Research*, Vol. 1 No. 2, pp. 119-127

Oppenheim, B., (2003). *Questionnaire design, interviewing and attitude measurement: Continuum*. London (New edition), pp.7-8.

Parkin, M. (2016), *Microeconomics*, 16th ed., Pearson Education Limited, Harlow

Pillaiyan, S. (2015), "Macroeconomic drivers of house prices in Malaysia", *Canadian Social Science*, Vol. 11 No. 9, pp. 119-130

Poudyal, N.C., Hodges, D.G. and Merrett, C.D. (2009), "A hedonic analysis of the demand and benefits of urban recreation parks", *Land Use Policy*, Vol. 26 No. 4, pp. 975-83.

Queensland Affordable Housing Consortium (2012). *Definition of Affordable Housing*; Queensland Affordable Housing Consortium: South Brisbane, Australia.

Quigley, M.J. and Raphael, S. (2004), "Is housing unaffordable? Why isn't it more affordable?", *Journal of Economic Perspectives*, Vol. 18 No. 1, pp. 191-214.

Raymond, Y.C. and Love, P.E. (2000), "Measuring residential property values in Hong Kong", *Property Management*, Vol. 18 No. 5, pp. 366-374.

Redfearn, C.L. (2009), "How informative are average effects? Hedonic regression and amenity capitalization in complex urban housing market", *Regional Science and Urban Economics*, Vol. 39, pp. 297-306

Raden Aswin Rahadi, Sudarso Kaderi Wiryono, Deddy Priatmodjo Koesrindartoto, Indra Budiman Syamwil, (2015), "Factors influencing the price of housing in Indonesia", *International Journal of Housing Markets and Analysis*, Vol. 8 Iss 2 pp. 169 – 188 Permanent link to this document:
<http://dx.doi.org/10.1108/IJHMA-04-2014-0008>

Reynolds, F. (2008), "To examine programs that assist vulnerable and complex chronically homeless people", *The Winston Churchill Memorial Trust of Australia*, available at: www.mercyfoundation.com.au/uploads/pdf/Churchill-Report-Felicity-Reynolds.pdf

Richard Reed, (2016), "The relationship between house prices and demographic variables: an Australian case study", *International Journal of Housing Markets and Analysis*, Vol. 9 Iss 4

Sadi A. Sadi Abdulaziz A. Bubshaitr Fawaz Al-Muwasheer, (2010), "Factors affecting affordable housing cost in Saudi Arabia", International Journal of Housing Markets and Analysis, Vol. 3 Iss 4 pp. 290 – 307. Permanent link to this document: <http://dx.doi.org/10.1108/17538271011080628>

Samuel Asumadu-Sarkodie, Phebe Asantewaa Owusu and Patrick Rufangura, (2015), "Impact analysis of flood in Accra, Ghana", Adv. Appl. Sci. Res 6(9):53-78 DOI: 10.6084/M9.FIGSHARE.3381460

Saunders, M.L. and Lewis, P., 2009. P. & thornhill, a.(2009). Research methods for business students, 4.

Sekaran, U. and Bougie, R. (2010), Research Methods for Business: A Skill Building Approach, 5th ed., John Wiley and Sons.

Sergio Copiello (2015), Achieving affordable housing through energy efficiency strategy, University IUAV of Venice, Italy.

Shami, A. (2011), House Renting Problems in Mazandaran, Broadcasting Center of Mazandaran, available at: www.mazandaran.irib.ir/index.php?option=com_content&view=article&id=43211&Itemid=4562

Sharyn McDonald, (2014), "Social partnerships addressing affordable housing and homelessness in Australia", International Journal of Housing Markets and Analysis, Vol. 7 Iss 2 pp. 218 – 232. Permanent link to this document: <http://dx.doi.org/10.1108/IJHMA-10-2012-0046>

Tajima, K.I. (2003), "New estimates of the demand for urban green space: implications for valuing the environmental benefits of Boston's big dig project", Journal of Urban Affairs, Vol. 25, pp. 641-55.

Tan, T.H. (2010), "The effects of housing characteristics on neighborhood stability of homeownership", *International Journal of Business and Emerging Market*, Vol. 2 No. 3, pp. 286-304

Teck-Hong, T. (2011), "Neighborhood preferences of house buyers: the case of Klang valley, Malaysia", *International Journal of Housing Markets and Analysis*, Vol. 4 No. 1, pp. 58 -69.

Tyrvaenen, L. and Mitettinen, A. (2000), "Property prices and urban forest amenities", *Journal of Environmental Economics Management*, Vol. 39, pp. 205-23

UN-Habitat, 2009. *Urban Indicators Guidelines: Monitoring the Habitat Agenda and the Millennium Development Goals- Slums Target*, Nairobi: Un-Habitat

Vakili, S. (2008), "Hidden element of high housing prices", *Hamshahri*, available at: www.hamshahrionline.ir/news-42601.aspx

Wa'el Alaghbari Azizah, Salim Kamariah Dola, Abang Abdullah, Abang Ali, (2011),"Developing affordable housing design for low income in Sana'a, Yemen", *International Journal of Housing Markets and Analysis*, Vol. 4 Iss 1 pp. 84 – 98. Permanent link to this document: <http://dx.doi.org/10.1108/17538271111111857>

Webster J. (1985), "Introduction to research in England and Wales", Salisbury, Qld: 4107

Wittink, Dick R. and Philippe Cattin (1989), "Commercial Use of Conjoint Analysis: An Update," *Journal of Marketing*, pp. 91-96.

Wu, W., Zhang, W. and Dong, G. (2013), "Determinant of residential location choice in a transitional housing market: evidence based on micro survey from Beijing", *Habitat International*, Vol. 39, p. 16e24

Yi Niu, (2008),"The performance and problems of affordable housing policy in China", *International Journal of Housing Markets and Analysis*, Vol. 1 Iss 2 pp. 125 – 146. Permanent link to this document: <http://dx.doi.org/10.1108/17538270810877763>

APENDIX: QUESTIONNAIRES

QUESTIONNAIRE FOR THE MIDDLE AND HIGH INCOME CLASS

DETERMINANTS OF HOUSING CHOICES AND AFFORDABILITY IN THE GHANAIAAN REAL ESTATE INDUSTRY

A. Respondent Profile

1. Gender

(a) Male [] (b) Female []

2. Marital Status

(a) Married [] (b) Single []

3. Number of family

(a) 1-2 members [] (b) 3-6 members [] (c) more than 6 members []

4. Monthly Income

(a) Gh¢ 1,000.00 - 2,000.00 [] (b) Gh¢ 2,100.00 – 3,000.00 []

(c) Gh¢ 3,100.00 – 5,000.00 [] (d) Above Gh¢ 5100.00 []

5. Educational Qualification

(a) Diploma [] (b) Bsc [] (c) Msc [] (d) Phd []

(e) Other, please Specify.....

6. Current Apartment

(a) Rented [] (b) Owned []

B. Determinants of Demand for Real Estate Units in Ghana.

On a scale of 1 – 5, kindly tick the most appropriate rank that satisfies the corresponding determinant which will influence your choice for purchasing a building.

1 - 2 = not important

3 – 4 = important

5 = very important

Determinant	Rank				
	1	2	3	4	5
Type of building					
Size of the building					

Number of bedrooms					
Number of bathrooms					
Parking area					
Location of the building					
Access to health care					
Access to School					
Location of market and shopping malls					
Accessibility to working place					
Availability of public transport					
Household Income					
Family size					
Availability of mortgages					
Crime rate					
Aesthetic view					
Infrastructure services (eg. Drains, power and water)					

QUESTIONNAIRE FOR REAL ESTATE FIRMS

DETERMINANTS OF HOUSING CHOICES AND AFFORDABILITY IN THE GHANAIAN REAL ESTATE INDUSTRY

A. Respondent Profile

1. Point of Contact in the Real Estate Company

- (a) Architect [] (b) Quantity Surveyor [] (c) Project Manager []
[]
- (d) Sales Executive [] (e) Other, please specify.....

2. Number of years operating in the Real Estate industry

- (a) 5-7 years [] (b) 8- 10 years[] (c) more than 10
years []

B. Property Characteristics

3. Type of buildings constructed

- (a) Terrace or Row housing units [] (b) Semi-detached units [] (c) Detached
units []
- (d) Multi – storey apartment [] (e) Mixed []
- (e) Others, please specify.....

4. No. of bedrooms for units

(a) 1 bedroom [] (b) 2 bedrooms [] (c) 3 bedrooms [] (d) 3 or more []

(c) Others, please specify.....

5. Starting price

(a) \$20,000.00 - \$ 50,000.00 [] (b) \$51,000.00- \$80,000.00 []

(c) \$ 81,00.00 - \$100,000.00 [] (d) above \$101,000.00 []

(e) Other, please Specify.....

C. Determinants of housing prices in Ghana

Below is a list of factors that influence the pricing of houses in Ghana. On a scale of 1 – 5, kindly select the appropriate rank / level of importance against each determinant.

1 - 2 = non important

3 – 4 = important

5 = very important

Determinant	Rank				
	1	2	3	4	5
Type of building					
Size of the building					
Number of bedrooms					

Location of building					
Interest rates					
On site social amenities (e.g. Parks, play areas, swimming pools etc.)					
Infrastructure works					
On site Security					
Size of building compound					
Parking area					
Fully fitted/Furnished					
Common area maintenance (e.g. refuse collection, lawn maintenance etc)					

