



The Real Estate Market in Ghana: The Driving Factors and Housing Price.

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Abstract

The pricing of real estate houses in Ghana is a great concern to most Ghanaians. Numerous factors contribute to this. This study aimed to discover the key variables influencing Ghanaian real estate pricing. The quantitative approach was used for this study. The data collection method used to achieve the objectives of the study was the survey method. Members of the Ghana Real Estate Developers Association (GREDA) were given a total of 196 sets of structured questionnaires. The members comprised contractors, consultants, the client's team, and others. Out of these questionnaires distributed, 130 completed questionnaires were returned. The results of the analysis showed the following as the main factors driving real estate prices: construction cost, financial market, structural features, government policies, macroeconomic determinants, and shifting population demography to be the major factors driving the pricing of real estate residential houses in Ghana. The value of R (the correlation coefficient of the regression analysis) was 0.846, indicating a very high positive correlation existing between the dependent and independent variables. This suggests that the two variables are moving in the same direction. The study concludes that population demographics, construction cost, structural features, macroeconomic variables, government policy, and financial market explain 62.9 percent of the variability in the pricing of real estate residential dwellings in Ghana.

Keywords

Real estate, Real estate Market, Housing price, Driving factors.

1.0 Introduction

Housing is regarded as an economic venture, a sign of success, public acceptance, and a component of urban development. Housing is most people's largest single investment in their lifetime (Kioko, 2014). Others, on the other hand, consider housing as merely a shelter to meet their necessities

(Ahmad, 2010). Universally, among the most fundamental needs of people is housing, which makes up the majority of real estate. According to Maslow's hierarchy of needs, housing is a basic need that is required for sustaining life (Maslow, 1954). According to Barefield (1983), owning a home improves a person's self-esteem. Maslow considers this to be the most important need that people have. The average public sector worker is known to work more productively when their housing demands are met (Vulukku, 2014). Ghana's housing industry has grown over the previous two decades. This growth is owing to a rise in the need for housing in the country's urban centers, particularly Accra, Kumasi, and Takoradi, as a result of a rising prevalence of migrants from rural areas to these urban areas in search of greener pastures (Sarfoh et al., 2016). Similarly, according to the censuses conducted in the relevant years, the population of Accra alone increased from 1.4 million in 1984 to 5.4 million in 2021. (Ghana Statistical Service, 2021). With this in mind, private corporations such as Regimanual Gray, Home Finance Company (HFC), Devtraco, and others took advantage of the opportunity and spent millions of dollars in the housing market. This drew more developers into the country, resulting in the formation of the Ghana Real Estate Developers Association (GREDA), which now boasts a large number of developers. In Ghana, the real estate sector has emerged as one of the most intriguing, developing at a substantially faster rate (Kioko, 2014). The sector is divided into three key divisions, each of which is supported by banks and mortgage markets. These are the public and private sectors of real estate development, as well as private persons. In comparison to the government, the private sector's participation in the real estate market is large and spectacular (News Ghana, 2019). One of the necessities for people in Ghana is an affordable home. People, however, have an impact on the pricing of these affordable dwellings at some time in their lives (Karl & Mayer, 1996). Given this, it is important to identify how housing prices are decided and what impact they have on individuals. Taking the pricing of houses into account, Real estate house price entails taking into account a variety of elements that affect the pricing. Mensah (2016) indicated that the high cost of raw materials affects the pricing of housing.

One of the necessities for people in Ghana is an affordable home. People, however, have an impact on the pricing of these affordable dwellings at some time in their lives (Karl & Mayer, 1996). Because of this, it is important to identify how housing prices are set and the impact they have on individuals. Considering the pricing of houses, the valuing of real estate houses involves considering the numerous causes that affect the pricing. Mensah (2016) indicated that the high cost of raw materials affects the pricing of housing. The price of construction materials like ready-mixed concrete, brick, reinforcement steel, sand, and aggregate will affect home prices, according to Tsuruel (1999). According to Kioko (2014), variable interest rates brought on by inflation and related economic problems have an impact on loans' higher total repayment amounts, which in turn have an impact on real estate house prices. In addition, the real estate market seems to be dictated by certain factors (Earl, 2006). The question is, what are these elements that influence the pricing of Ghanaian real estate houses? It is necessary to examine the driving factors that highly influence the pricing of real estate residential houses in Ghana. The purpose of this research is to identify the variables that affect the pricing of real estate houses in Ghana. The objectives of this research were to investigate the variables that affect the Real Estate pricing of residential homes in Ghana and to analyze the correlation between the factors and Real Estate pricing of residential houses in Ghana.

2.0 Literature Review

2.1 Factors Affecting Real Estate Market

Literature from various sources and countries identify certain factors which are known to be controlling the real estate market. Prices were influenced by a variety of elements, including supply and demand dynamics, costs, and the potential income of buyers. Furthermore, the capacity to pay, take loans, and the cost of financing are key impacts restricting prices (Earl, 2006). In all six items were found to be influencing the pricing of Real Estate housing, namely, Construction Costs, Structural Features/Characteristics, Government Policies, Macroeconomic Determinants, Financial Market and Shifting Population Demography. These are referred to as “Factor Groupings” in this study. As Several factors were identified as variables under each factor groupings were studied and used as the basis for measuring the extent to which these factor groupings influence the pricing of Real Estate housing. These are the points of discussion and measurement in this study.

2.2 Construction Cost

The cost of construction is evidenced by the costs of materials, labour and equipment. Construction materials are referred to by a variety of names, including raw materials, parts and packaging products, consumables, packing and packaging, and equipment (Smith & Tesarek, 2011). Typically, the building's permanent structure will be made of materials such as concrete, brick, and steel. An engineer must consider the location of the suppliers as well as transportation costs when selecting these materials. Additional studies reveal that the cost of building a home has sharply increased as a result of increases in the price of building supplies like cement, steel, sand, and piling materials (Glindro, 2008). Additionally, high housing construction costs have been a result of the costs of materials and equipment (Glindro, 2008). The welfare of households is impacted by the affordability of housing, the relationship between developers and contractors is weakened, and the housing markets are unstable, along with the rest of the economy (Mansur, 2016). Blackley and Follian (2008) claim that the price of land and other building materials, which drives up construction costs, is the main factor influencing housing prices. Similarly, among low-income earners, construction cost and structural characteristics are major determining factors influencing the acquisition and ownership of real estate houses (Amatete, 2016). Similarly, Susilawati et al. (2005) showed that “investors shift supply to the higher-end market, which offers a better return on investment, to cover the high cost of renovation or new construction to comply with tax and other statutory requirements such as rising skilled labour and material costs, interest costs, fire safety, and other charges”.

2.3 Structural Features/Characteristics

2.3.1 Location

The location of residential property as well as its physical features affects its value. The location of residential property within an urban area provides employment opportunities as well as other

relaxation and recreational advantages. Some of the features which influence a residential property value or price of a residential property include social amenities such as community services, schools, parks, etc. (Pollakowski, 1982). The surroundings of the residential property such as external factors, levels of safety, and existing urban infrastructural facilities are the other features that also affect residential property value. The existing urban infrastructures include roads, public transport, education, and health centres, and sewage drainage systems (Pollakowski, 1982). Similarly, the market price of residential property in a city has a direct impact on where it is located. Each location is distinguished by unique values in variables such as accessibility, neighborhood, traffic, socioeconomic level, and proximity to green spaces, among others. (Fernandez-Duran et al., 2011).

2.3.2 Accessibility to Location

According to Hwang (2009), the accessibility of jobs is a determining factor of real estate prices. That is, locations near job prospects are regarded as quite preferable; thus, good work visibility tends to increase residential housing prices. Similarly, according to Quigley (1985); Thill and Van de Vyvere (1989), site accessibility is among the most crucial residential decision-making criteria in low-income areas. However, Adair et al. (2000) revealed that there is minimal impact on the pricing of houses and job accessibility when the study area is taken as a whole, but with different influences across different sub-regions. According to Ryan (1999), the correlation between the value of residential properties and ease of access assessed in terms of travel time is inversely related to housing prices. Nevertheless, research that was conducted to measure accessibility based on travel distances revealed a direct correlation between ease of access and residential real estate price (Franklin & Waddell, 2003). Again, residential property value decreases significantly with distance to major employment areas (Munroe, 2007). If accessibility and infrastructure are improved, there will be greater demand for more accessible locations. As a result, bids will be higher (Mills & Hamilton, 1994).

2.3.3 Environmental Amenities and Green Urban Nature of Location

Studies on the effects of green urban areas on residential properties revealed that the cost of housing is impacted by access to green spaces (Kong et al., 2007). In addition, the study hinted those green urban areas have important amenity values. Similarly, according to Tyrväinen & Miettinen (2000), there has been a high demand for green space for various purposes due to the establishment of environmental awareness. Accessibility, the standard of public facilities, the quality of urban planning, and the environment all affect residential property prices, according to a study on the effects of location on home values (Fernandez-Duran et al., 2011). In relating to the above general impact of location on the pricing or value of a house to Real estate developers, Cahill (2010) point out that housing prices in the Philippines vary due to many factors. Among these factors include location and accessibility. In the Philippines, the location of real estate has the greatest influence on real estate prices. The more expensive the real estate house, the closer it is to urban areas. Accessibility is the next factor that influences pricing in the Philippines after locality. Roads and other infrastructure are expensive to construct and sustain, hence land that is aided by roadways is expensive. Amatete (2016), revealed structural characteristics as among the major determining factors influencing low-income Kenyans' procurement and possession of housing properties.

2.4 The Design of the Building

The cost of a building is significantly influenced by its structure. Building size, shape, and complexity are all considered in the field of building morphology (Seeley, 1996; Ashworth, 2004). The primary design elements that affect cost are plan shape, building size, wall-to-floor ratio, degree of circulation space, storey heights, the total height of the building, and grouping of buildings (Seeley, 1996; Ashworth, 2004). Smaller, complex-shaped, curved, or angular structures will be more expensive per square meter of floor area than larger ones with straightforward, rectangular, regular floor plans and elevations (Seeley, 1996; Ashworth, 2004). Additionally, complicated layouts and details require more time to assemble and may require several trades, increasing the possibility of mistakes and flaws. The number of cellular compartments and replication will also affect how much the final building project will cost (Seeley, 1996; Ashworth, 2004).

2.5 Government Policies

The policies made by the Government can influence the demand for housing and pricing. Over the last ten (10) years, there have been significant impacts on housing policy in South Africa (Napier, 2005). However, the policy's ability to produce sustainable housing has been insufficient. The effects of taxes on household land holdings were comparable to those of shocks to preferences for residential houses, according to the effects of fiscal policy on taxation changes compared to land holding levels (Chakraborty, 2016). Additionally, if these taxes are substantial enough, they might result in more significant variations in asset prices. Similar findings were made by Chakraborty and Morita (2017), who found that fiscal stimulus increases GDP and boosts consumption. Particularly concerning anticipated expansionary fiscal policy, this was discovered to be true. Given how people respond to fiscal policy right away, fiscal foresight is seen as essential (Morita, 2017). Similarly, on how the real estate industry responds to changes in policy, Crowe conducted one of the most thorough studies (2013). The study compared the governmental practices of different countries and discovered that, in theory, monetary policy measures ought to be effective in preventing real estate booms. Furthermore, if the real estate sector boom is the only one affected by the policy, the overall economy may suffer from the tightened monetary policy. The study asserts that fiscal policy, however, has a potentially substantial effect on price development (Crowe, 2013). Macroprudential tools, according to Jung and Lee (2017), have the potential to reduce excessive credit taking by households. Accordingly, Iwata (2014) discovered that deflation in Japan reduced investment levels. As a result of a lack of consumer confidence in the market, investment levels are unlikely to rise. Additionally, a study by Tuuli (2018) noted that “government policies have very little effect on the real estate sector”. Nevertheless, according to the study's econometric analysis, neither fiscal nor monetary policy significantly affected the real estate market, particularly cost growth (Tuuli, 2018). Furthermore, GREDA (2007) indicated that “the high prices of housing in Ghana are partly attributed to government regulations such as complicated procedures of obtaining permits from different departments at different locations”. Due to the delay in construction projects caused by the difficulty in obtaining permits, homebuyers are later subjected to high-interest rates on loans (GREDA, 2007). Government procedures for identifying land titles for owners cause unnecessary delays, resulting in companies purchasing land that is owned by more than one person (GREDA, 2007).

2.6 Macroeconomic Determinants

Fundamental determinants influence housing demand and supply (Amatete, 2016). Macroeconomic determinants and financial market dynamics are among the major determining factors influencing the purchase and possession of residential housing by low-income earners (Amatete, 2016). According to studies by Deutsche Bank in 2008, the most common determinants of the real estate market are macroeconomic determinants. The study cited GDP growth rate, banks' lending percentage, rate of unemployment, and average rate of inflation as indicators for real estate market pricing, among other things. Again, the most important influence on return levels is GDP, Huczynski, and Buckhanam (2013). Similarly, Hoskina and Cardew (2013) found significant relationships between GDP growth, inflation, joblessness, and composite asset returns. Variables like the rate of employment, the average wage rate, and consumer purchasing power were identified as having an impact on the level of home values (Lee, 2009; Manganelli, 2014; Oktay et al., 2014; Post & Berkhout, 2014). Other researchers such as Ciarlone (2015); Lin, Tou, Lin, and Yeh (2014); Tsatsaronis and Zhu (2004) contend that changes in a population's income may not have a substantial impact on the dynamics of the home values rate.

2.7 Financial Market

According to (Tsatsaronis & Zhu, 2004), the purchase of real estate properties depends on the mortgage and, thus, interest rate plays an essential role. The cost of loan servicing decreases if the interest rate is lowered to its lowest possible level (Tsatsaronis & Zhu, 2004). Customers can now obtain large mortgages while maintaining their current income levels. The decision to finance a home must consider the type of mortgage loan. The two primary types of loans are adjustable-rate mortgages (ARMs) and fixed-rate mortgages (FRMs) (ARMs). Tsatsaronis and Zhu (2004) claim that the variation in home prices can be attributed to short-term interest rates to the extent of almost 10.8%. Additionally, nations with a large percentage of floating mortgage rates exhibit a greater effect of short-term rates on housing prices (Tsatsaronis & Zhu, 2004). The housing boom, according to Greenspan (2010), is primarily being driven by long-term interest rates because a sizeable portion of mortgages in the US are tied to 30-year fixed interest rates. Other researchers like Dhillon et al. (1987); Vickery (2007), Koijen et al. (2009); Krainer (2010) have discovered that mortgage pricing terms and other interest-rate-related metrics have a significant impact on mortgage financing options. The decision between fixed-rate and adjustable-rate mortgages can be influenced by the increase in home value, with a higher increase favouring adjustable-rate mortgages, according to additional research by Elliehausen and Hwang (2010); Krainer (2010).

2.8 Shifting Population Demography

A study conducted by Singh (2009) on the link between demography and real estate revealed that the age-dependent demand variable influenced the level of housing prices in the United States significantly. In addition, a decline of 47 percent in the prices of houses with a focus on demographic variables was predicted by the study. The number of adults and net migration, as opposed to just counting the number of births that took place 20 to 30 years ago, are better demographic indicators for studies on housing pricing, according to Lee et al. (2012). The same

study also claimed that factors like income, finance costs, and the unemployment rate were all significant when examining housing prices. Similarly, Mankiw and Weil (1989) concluded that demographic patterns in the real price of housing play a significant role in real estate price fluctuations. In addition, their study established that the ages between 20 and 30 were the major part of those demanding housing. However, due to the varying findings in each country, several researchers from various countries replicated the study and condemned it. Among the various researchers who replicated Mankiw and Weil (1989) study include Ohtake and Shintani (1996). They found that demographics had no impact on determining house prices by using data from Japan. Once more, they concluded that housing prices were price elastic and that demographic changes only had a short-term impact on housing prices. Nonetheless, Poterba (2011) observed that demographic factors influenced house prices. However, he claimed that forecasting the period and magnitude of the effect was difficult because a broader range of economic forces that affect housing prices includes these factors.

3.0 Methodology

The quantitative approach was used for this study. The data collection method used to achieve the objectives of the study was the survey method. The data for this study was obtained from sampled workers of the “Ghana Real Estate Developers’ Association (GREDA)” through structured questionnaires with contractors, engineers, consultants, and client teams as the main respondents. The objectives addressed were: to look into the factors that affect the Real Estate pricing of houses in Ghana and to analyze the correlation in both real estate variables and pricing houses in Ghana. The driving factors among others that influence real estate pricing considered were: Construction Cost, Structural Features/Characteristics, Government Policies/subsidies, Macroeconomic Determinants, Financial Market, and Shifting Population Demography. This study adopted the purposive sampling technique as a non-probability approach to obtain the sample. A total of 196 sets of questionnaires were administered to people within the registered members of the GREDA. This number was determined by using the appropriate sampling formula (Kothari, 2004) for the sample size (n) of a finite population. These persons include contractors, consultants, the client’s team, and others. Out of the questionnaires distributed, 130 finished questionnaires were reverted. All contractors, consultants, client’s team, and others returned 70%, 10.77%, 10%, and 9.23% respectively. About 88.4% of the respondents had a working experience between 5 and 20 years. The data obtained from the respondents within the GREDA was analyzed with Statistical Package for Social Sciences (SPSS) and the outcomes were presented in tables. To analyze the data and derive meaningful conclusions from the study, regression analysis was used.

3.1 Materials and Methods

The data for this study was obtained from sampled members of the “Ghana Real Estate Developers’ Association (GREDA)” through structured questionnaires. The GREDA was targeted because it is the most organised association of Real Estate developers. The decision to focus on Real Estate developers was decided based on the fact that the study aimed at getting key systems information from the Real Estate sector of the economy. The objectives addressed were to measure the extent to which the prices of the Real Estate market are being influenced by identified driving factors.

This is also to enable the study to analyse the correlation in both real estate variables and pricing houses in Ghana. The driving factors among others that influence real estate pricing considered were: Construction Cost, Structural Features/Characteristics, Government Policies/subsidies, Macroeconomic Determinants, Financial Market and Shifting Population Demography.

The data obtained from the respondents within the GREDA was analysed with Statistical Package for Social Sciences (SPSS) and the outcomes were presented in tables. This tool was used because it gives better output organisation in that it creates a separate output file that has data, tables, and graphs, all of which can be easily exported and used in an article or a report. It also provides a speedy process of cleaning data and screening.

4.0 Results

4.1 Driving Factors that Influence Residential Real Estate Pricing in Ghana

The study aimed at identifying the extent to which main variables affect the cost of residential housing in Ghana. The study's questions were answered using a Likert scale of 1 to 5, with 1 being "not at all," 2 being "little extent," 3 being "moderate extent," 4 being "great extent," and 5 being "extremely great extent." The scores were averaged and interpreted as "4.5 - 5.0 Very great extent; 3.4 - 4.4 Great extents; 2.5 - 3.3 Moderate extent; 1.5 - 2.4 Little extent; and 0.0 - 1.4 Not at all." By this definition, a factor is considered to be of great influence on Real Estate pricing in Ghana if it obtains an average of 3.4 or more. Using this cut-off point, the tables are hereby presented.

4.1.1 Construction Cost

The participants were asked to specify the degree to which construction costs drive the trend in which residential real estate houses were priced in Ghana. For each factor, the means and standard deviations were used as shown in Table 1.

Table 1: Construction Cost Effects on Pricing of Residential Real Estate House

Construction Cost	Mean (M)	Std. Deviation
High Cost of Land	4.53	0.501
High Cost of Raw Materials	4.68	0.466
High Cost of Labour	4.34	0.536
Costs incurred indirectly, such as statutory fees and infrastructure costs	3.50	0.532
Average	4.26	0.509

Source: Field Data (2020)

The study's findings under construction costs in Table 1 indicated that the factors under construction costs that drive the pricing of Real estate residential houses in Ghana include the high cost of raw materials and land, with mean scores of 4.68 and 4.53, respectively, to a large extent. "With a mean score of 4.34 and 3.50, respectively, the high cost of labour and indirect costs like statutory and infrastructure charges heavily influence the pricing of real estate houses. However,

the respondents' opinions on statutory and infrastructure charges, which received a mean score of 3.50, differed". It is also important to state that all the factors are relevant to the Ghanaian and have a great influence on the price of Real Estate housing situation since they all scored a mean of more than 3.44. The most influential factor is the "high cost of raw materials", the relatively less influential factor is the "high cost of labour",

The study's findings under construction cost are in line with research from Blackley and Follan (2008), who claimed that rising land and building input costs are a major factor in house prices and are a driver of rising construction costs. Again, the cost of building a home has drastically grown due to price rises in building supplies like cement, steel, sand, and piling materials, according to Glindro (2008). As a result, high housing construction prices are a result of the high costs of materials and equipment. According to this, Amatete (2016) identified construction costs as one of the key determinants impacting the purchase and ownership of homes. (Amatete, 2016). Also, the results of the study on construction costs, corroborate those of Susilawati, Armitage, and Skimore (2005), who claimed that investors push supply toward the high-end market because it offers a better return on their investment while covering the high cost of renovation or new construction to satisfy tax and other statutory requirements.

4.1.2 Structural Features

The participants were asked to indicate how much structural characteristics influenced Ghanaian residential real estate prices. Table 2 displays the mean score and standard deviation for each factor under structural features.

Table 2: Structural Features Effects on Pricing of Residential Real Estate House

Structural Feature	Mean (M)	Std. Deviation
Design of Buildings	3.92	0.571
Constructing Method	3.81	0.484
Location/Accessibility	4.68	0.469
Building Type	4.18	0.653
Constructing Quality	4.32	0.584
Real Estate Developer	3.14	0.462
Average	4.00	0.537

Source: Field Data (2020)

Findings from the study under structural features revealed that location/accessibility with a mean score of 4.68 had a very great effect on the pricing of real estate houses in Ghana. Again, construction quality, type of building, design of the building, and construction methods with a mean score of 4.32; 4.18; 3.92, and 3.81 respectively had a great effect on pricing, while Real estate developers had a moderate effect on pricing as indicated in Table 2. According to the findings, there was general agreement among respondents on the extent of the effect of location/accessibility, construction quality, type of building, and building design on pricing, whereas there were differing views among respondents on the effect of Real estate developer type on pricing. By the cut-off point, it can be said that among the factors in this group, the only factor

that is not relevant in Ghana because it does not have a great effect on the pricing of Real Estate is the “Real Estate Developer”. The most influential factor is the “location and accessibility”.

The study's findings on structural features are supported by literature, where Fernandez-Duran et al., (2011) reported that the location of residential property is directly influenced by the market price of such property in a city. Every place has distinctive values for elements like the neighbourhood, traffic, socioeconomic status, and closeness to green spaces, among others. Jobs' accessibility is cited by Hwang (2009) as a determining factor in real estate costs. In other words, people tend to favour regions with plenty of job opportunities. This is consistent with the study's results that excellent employment visibility tends to drive up residential housing prices.

Similarly, to this, a city's residential property market price directly affects where it is located. Every place has distinctive values for elements like the neighborhood, traffic, socioeconomic status, and closeness to green spaces, among others. (Fernandez-Duran and et al., 2011) These results lend support to the study. Again, the study's findings are consistent with Munroe's (2007) assertion that a residential property's value declines dramatically with proximity to important job centres. The cost of housing is impacted by access to green spaces, according to research was done by Kong et al. in 2007 on the effects of green metropolitan areas on residential properties. These results are consistent with the research. The results of this study corroborate Cahill's (2010) assertion that a variety of factors affect how much a home costs in the Philippines. Location and accessibility are two of these elements. The Philippines is one of the countries where real estate values are most influenced by location. The closer to urban areas a property is, the more expensive the property is. Following locality, accessibility is a determining factor for pricing in the Philippines. Land that benefits from roads are expensive since it costs a lot to build and maintain roads and other infrastructure. Accessibility, the caliber of public amenities, the effectiveness of urban planning, and the environment all have an impact on residential property prices, according to Fernandez-Duran et al., (2011). The results of this study concur with those of Fernandez-Duran et al., (2011). Additionally, Amatete (2016) found structural elements to be one of the key determinants affecting the acquisition and possession of housing properties by low-income Kenya.

4.1.3 Macroeconomic Determinants

The study demanded the respondents indicate the extent to which macroeconomic determinant factors drive the pricing of residential real estate houses in Ghana. Table 3 presents the findings of the study under macroeconomic factors.

Table 3: Microeconomic Determinants Effects on Pricing of Residential Real Estate House

Microeconomic Determinants	Mean (M)	Std. Deviation
GDP Growth	3.86	0.553
Bank Lending Rate	4.28	0.662
Unemployment Rate	3.49	0.650
Inflation	4.18	0.616
Average	3.95	0.620

Source: Field Data (2020)

From Table 3, the macroeconomic factors that drive the pricing of residential real estate houses to a large extent are the bank lending rate, inflation, GDP growth trend, and unemployment rate, with mean scores of 4.28, 4.18, 3.86, and 3.49, in that order. All the factors in this group were identified by respondents to be very relevant to the Ghanaian situation in that they greatly affect the prices of Real Estate. The most prominent factor is the “Bank Lending Rate”

The study's findings are corroborated by published research by Amatete (2016), who claimed that macroeconomic drivers are among the key elements influencing low-income households in Kenya's decisions to purchase and own residential properties. Analogously, research done by Deutsche Bank in 2008 showed that macroeconomic factors dominate other factors in determining the real estate market. The study pointed to GDP growth rate, bank lending percentage, unemployment rate, and average inflation rate as indicators for real estate market pricing. These results confirm the conclusions of this study. The most significant factor influencing return levels, according to Huczynski and Buckhanam (2013), is GDP. This is consistent with the study's findings.

4.1.4 Government Policies

The purpose of the study was to determine how government regulations affected residential real estate house prices. The extent to which government policies impact the pricing of residential real estate homes in Ghana was a question that the respondents were required to answer.

Table 4: Government Policies Effects on Pricing of Residential Real Estate

Government Policies	Mean (M)	Std. Deviation (SD)
Tax Credit and Deduction	3.84	0.554
Government subsidy	4.45	0.598
Land use Planning System	3.83	0.599
Building Regulation	3.77	0.521
Zoning Rule	3.69	0.595
Administrative Procedure	3.80	0.489
Financial Policy	4.35	0.567
Average	3.96	0.560

Source: Field Data (2020)

The study's findings showed that government policies have a significant impact on residential real estate house prices. This is shown in Table 4, where the average score for government subsidies is 4.45, the average score for financial policies is 4.35, the average score for tax credits and deductions is 3.84, the average score for the land use planning system is 3.83, the average score for administrative procedures is 3.80, the average score for building codes is 3.77, and the average score for zoning rules is 3.69. By definition, all the governmental factors were identified to be relevant in Ghana, signifying the overall impact of politics on Real Estate Development in Ghana. The two prominent ones are “government subsidy” and “Financial Policy”.

The study's findings on government policies support previous research by Chakraborty (2016) who found that taxes on household land holdings had a comparable impact to shocks on preferences for residential homes. Morita (2017) also noted that fiscal stimulus has a favourable effect on GDP and consumption levels. Additionally, given that the tax structure already favours debt-financed home ownership. Crowe et al., (2013) pointed out that fiscal policy might have a significant impact on price development. They provide evidence in support of the study's findings.

Macroprudential tools, according to Jung and Lee (2017), may be able to stop households from taking on too much debt. Iwata (2014) found that Japan's deflation decreased investment levels in accordance. Investment levels are not anticipated to increase because of a lack of consumer trust in the market. Additionally, GREDA (2007) stated that "the high prices of housing in Ghana are partly linked to government rules such as cumbersome procedures of acquiring permissions from different ministries at different locations."

4.1.5 The Financial Market

Participants were required to specify the degree to which the financial market drives the pricing of real estate houses in Ghana. The mean score and standard deviation of the various indicators under the financial market were computerized and presented in Table 5.

Table 5: Financial Market Effects on Pricing of Residential Real Estate

Financial Market	Mean (M)	Std. Deviation (SD)
Buyer Power	4.58	0.511
Credit Availability	4.08	0.598
Interest Rates (Long term)	4.42	0.582
Debt Appetite	3.02	0.549
Average	4.03	0.560

Source: Field Data (2020)

The study revealed that the financial market drives the trend of pricing residential houses up to some level. Buyer power, with M= 4.58, interest rate (long term), with M= 4.42, and credit accessibility, with M= 4.08 are the indicators from the study under the financial market that significantly influence pricing. While Table 5 shows that debt appetite, with a mean score of 3.02, had a moderate impact on pricing. The results show that "Debt Appetite" happens to be the Financial Market effect that has not have much effect on the pricing of residential Real Estate. "Buyer power" has the most influence on pricing.

Given that a sizeable share of mortgages in the United States is tied to 30-year fixed interest rates, the study's findings concur with Greenspan's (2010) assertion that long-term interest rates are the primary cause of the housing boom. Once more, an additional study discovered that mortgage pricing terms and other interest-rate-related indicators were crucial factors in determining the choice of mortgage financing (Dhillon et al. 1987; Vickery, 2007; Kojien et al. 2009, and Krainer, 2010).

Additionally, the study's findings concur with those of a related study by Elliehausen, Hwang, and Krainer (2010), who found that home price appreciation can influence borrowers' decisions

between various fixed- and adjustable-rate mortgages, with higher appreciation favouring adjustable-rate mortgages. According to Tsatsaronis and Zhu (2004), short-term interest rates are responsible for a variance in housing prices of about 10.8%. The impact of short-term rates on house prices is even more pronounced in countries where a high proportion of mortgage rates are floating. These results support those of the current study.

4.1.6 Shifting Population Demography

The goal of the study was to ascertain the extent to which Ghana's changing population demography influences the pricing trend for residential real estate properties. Table 6 presents the findings on shifting population demography.

Table 6: Shifting Population Demography Effects on Pricing of Residential

Population Demography	Mean (M)	Std. Deviation
Household Size	3.72	0.486
Income Level	4.04	0.562
Migration Pattern	3.78	0.543
Population Growth	4.69	0.480
Customer Taste and preference	4.08	0.508
Average	4.06	0.516

Source: Field Data (2020)

According to Table 6's findings, population growth, customer preferences, and income level all have mean scores of 4.69, 4.08, and 4.04 respectively, indicating that changing population demography has a significant impact on pricing for residential real estate homes. All the factors were found to have a great impact on the pricing of Real Estate housing. The one with the most influence is "population Growth".

These results support Singh's (2009) findings, which showed that the level of housing prices in the US was significantly influenced by the age-dependent demand variable. Again, the study's findings concur with those of Lee et al (2012). They stated that looking at birth rates from 20 to 30 years ago is not as useful as looking at the number of adults and net migration as a whole as a demographic indicator for home pricing studies. The study also discovered that the mean scores for Household size and Migration pattern were 3.72 and 3.78 respectively. They are in line with Poterba's (2011) claim that demographic considerations, specifically the number of households, have an impact on home values. He asserted, however, that because these elements are a component of a larger collection of economic variables that affect property values, it is difficult to forecast the timing and size of the effect.

However, a study on demographic and non-demographic factors that affected Canadian real estate housing prices conducted by Fortin and Leclerc (2002) found that these changes would not have a significant impact on real estate prices because changes in real per capita income would be sufficient to counteract any negative market effects.

4.1.7 General Summary of all Factor Groupings and the Factors

It was necessary to undertake the general summary of all factor groupings and the factors.

Table 7: General Summary of all Factor Groupings and the Factors

Factor Groupings	Mean	Rank	Factors	Mean	Ranks
Construction Cost	4.26	1st	High Cost of Land	4.53	4
			High Cost of Raw Materials	4.68	2
			High Cost of Labour	4.34	8
			Costs incurred indirectly, such as statutory fees and infrastructure costs	3.50	24
Structural Features	4.00	4th	Design of Buildings	3.92	14
			Constructing Method	3.81	18
			Location/Accessibility	4.68	2
			Building Type	4.18	11
			Constructing Quality	4.32	9
			Real Estate Developer	3.14	26
Macroeconomic Determinants	3.95	6th	GDP Growth	3.86	15
			Bank Lending Rate	4.28	10
			Unemployment Rate	3.49	25
			Inflation	4.18	11
Government Policies	3.96	5th	Tax Credit and Deduction	3.84	16
			Government subsidy	4.45	5
			Land use Planning System	3.83	17
			Building Regulation	3.77	21
			Zoning Rule	3.69	23
			Administrative Procedure	3.80	19
			Financial Policy	4.35	7
Financial Market	4.03	3rd	Buyer Power	4.58	3
			Credit Availability	4.08	12
			Interest Rates (Long term)	4.42	6

			Debt Appetite	3.02	27
Shifting Population Demography	4.06	2 nd	Household Size	3.72	22
			Income Level	4.04	13
			Migration Pattern	3.78	20
			Population Growth	4.69	1
			Customer Taste and preference	4.08	12
Average	4.06			4.06	

Table 7 summarises all the results so far. Overall, the construction cost as a factor group was considered to have the highest influence of on all Estate pricing in Ghana with an average of 4.26, which is above the average of averages. Macroeconomic determinants appear to be having the lowest impact on real estate pricing among the groupings with an average of 3.95 but with a higher average than the cut-off average of 3.40.

With the individual factors as the key variables, it was found that “population growth” with an average of 4.69 has the highest influence on the pricing of Real Estate housing. This is followed keenly by the “cost of raw materials”, and “location and accessibility, all with an average of 4.68, and “buyer power” with an average of 4.58. The factors with the least influence on pricing include: “Real Estate Developers” with an average of 3.14, and “Debt Appetite” with an average of 3.02; both of which fall below the cut-off average.

For the individuals, the results also show that almost all but two out of the 30 factors. This shows that a similar factor influences the pricing of Real Estate housing in Ghana as in the case of other countries. Further, those which scored a mean value of 4 or more are of particular significance for this study. The particular cases of the factor groupings with higher averages show their significance in the Real Estate market. The highest influence of “Construction Cost” on pricing is impacted by the three most crucial items: cost of land, cost of raw materials and cost of labour. These three items happen to be among the first eight items that have the most influence over Real Estate pricing. The second position of “Shifting Population Demography” is curious. This means that Real Estate developers are considering the changing in the structure of the population in the development of their housing. The demography will also indicate the level of luxury to meet the taste and desire of the targeted group in the population. The major influencing factors in this factor group are “population growth” which happens to have the highest mean score among all the 30 factors, and “customer tastes and preferences”, and “income levels” which ranked 12th and 13th respectively among the 30 factors. The third in rank among the factor groupings was “Financial Market”, also scoring an average of 4.03. The critical factors under this factor grouping are “Buyer power” scoring 3rd among all the 30 factors and “Interest Rates (LongTerm)” which ranked 6th among the 30 factors.

Closely following the Shifting Population Demography are the “Structural Features”. Critical among the factors are “location/accessibility”, “construction quality”, and “building type” which ranked 2nd, 9th, and 11th among the 30 factors respectively. The influence of “Government Policy” which ranked 5th among the factor groupings in the pricing of Real Estate is mainly determined by

two factors: “government subsidy” which ranked 5th among the 30 factors, and “financial policy” which ranked 7th among the 30 factors. Two factors under the “Macroeconomic Determinants” (the lowest rank among the factor groupings prominently influenced its impact on Real Estate pricing. These are “bank lending Rate” and “Inflation” which ranked 10th and 11 respectively among the 30 factors.

Altogether, these fifteen factors are to be considered very important in the management of the pricing of Real Estate pricing due to their direct impact on cost: *population growth, high cost of raw materials, location/accessibility, buyer power, high cost of land, government subsidy, interest rate (long-term), financial policy, high cost of labour, construction quality, bank lending rate, inflation, building type, customer tastes and preferences and income levels.*

4.1.8 Regression Analysis of all the Factors

It was necessary to undertake a regression analysis between the independent variables and the dependent variables. Table 8 shows the summary regression analysis.

Table 8: Summary Regression Analysis

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.846 ^a	.715	.629	.241

a. “Predictors: (Constant), Population Demography, Construction Cost, Structural Feature, Macroeconomic Determinants, Government Policy, Financial Market”.

Table 8 shows the summary of regression analysis in determining the association existing between the independent variables thus (Population Demography, Construction Cost, Structural Feature, Macroeconomic Determinants, Government Policy, and Financial Market) and the dependent variables thus prices of real estate houses. Table 8 demonstrates that the value of R, which should be between 0 and 1, is 0.846, indicating a very strong positive correlation between the dependent and independent variables. This implies that the direction of movement of the two variables is the same. The adjusted R² value was found to be 0.629, meaning that the population demographics, construction costs, structural features, macroeconomic determinants, government policy, and financial market account for 62.9% of the variations in the pricing of residential real estate in Ghana leaving 37.1% unaccounted for.

5.0 Conclusion

The study concludes that all of the individual Factor Groupings affect the pricing of real estate residential houses in Ghana to varying degrees. The distribution of the results indicates clearly that issues that affect the pricing of Real Estate in Ghana are both social and economic factors. A

developing country that can well be classified as one of the emerging marketing and developing economies (EMDE), characterized by fairly increasing population growth, these results provide a basis for serious consideration of housing situations. The government's role in supporting Real Estate development is rather low against all expectations to the contrary. Particularly, issues about Construction Costs, the Financial Market, and Macroeconomic Determinants must be issued as primary concerns for the government. Thus, government policy towards the housing industry must also factor in the role of Real Estate Developers and how to help mitigate the factors that continue to push the prices of residential Real Estate up. Further, the government also has a role to play to regulate all the factors that affect the macroeconomic determinants, vis, GDP growth, bank lending rate, unemployment rate and inflation. These are all indirect factors that affect the Real Estate market undoubtedly. Thus, in pursuing a good macroeconomic policy, the government will be indirectly supporting the housing sector, particularly the private sector involvement in providing Real Estate housing.

In the areas of Structural Features, the issue is about the technocrats in the industry. This falls squarely within the domain of Building Designers: Architects, Structural Engineers and other consulting services engineers. The aspect a briefing with potential clients or Real Estate Developers must be done to ensure that the end product will be affordable. There must be a cultural orientation and direction regarding which types of buildings could be suitable to a particular demography and yet provide affordability.

Increasing populace should be seen as a good thing for the Real Estate industry. The fact that two factors ranked among the first 10 factors, and which also scored high numbers. Once more, the study's R value of 0.846 demonstrated the strong positive link among all variables as well as the cost of residential real estate in Ghana.

Based on this conclusion, it is recommended that the government's efforts to provide affordable housing for the populace include the creation of policies that support the modelling of real estate products that incorporate all these factors in a way that would be responsive to their relative impacts and that would allow them to adapt to changing environmental conditions.

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