Economic Factors Influence on Funding of the Supply-Side of Housing in Kenya: Case Study Nairobi

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Abstract

Housing plays a very important role in the social economic development of any nation. One set of factors that impacts on the funding of the supply-side of housing are economic factors comprising market forces, cost of inputs, the macro economy and the cost of funding. This paper sets to establish the relationship between economic factors and funding of the supply-side of housing in Kenya and also the effect of the major stakeholders on such a relationship if it exists. Using an explanatory form of approach in research design a survey was conducted where primary data was collected by self-administered questionnaires from a random sample of 212 branches in Nairobi of financial institutions drawn from a population of 43 commercial banks, 9 deposit-taking MFIs and three major financiers of housing development. Factor analysis, correlation analysis and ordinal logit regression were used to determine the relationship between funding of housing and economic factors. Results indicated a negative relationship between economic factors and funding of housing development. It was also established that there exists a positive moderating effect of stakeholders on the relationship between economic factors and funding of housing development. The implication being the government and policy makers should ensure that interest rates and inflation rates are kept at a level that will encourage investments in housing, with the government acting then more as an enabler.

Keywords: housing, funding, financial institutions, market forces, cost of inputs, macro economy

1. Introduction

Housing contributes to the socio-economic development of nations. The role of the construction industry to an economy cannot be underplayed according to (UKCG, 2009) as it is seen as a driver of growth in other sectors due to its heavy reliance on an extended and varied supply chain. Dependence of other sectors of the economy like manufacturing, education, health, sports etc. on construction industry for performance is clearly demonstrated. Chitkara (2004) documents that the construction industry accounts for 6-9 percent of GDP in many countries, Italy 6%, Japan 8%, United Kingdom 6% and South Korea 6%. The housing market increased the economic activity in Spain and Brazil and this was attributed to a sound economic environment (Pozo, 2009; Eloy, 2010). According to the Economic Survey (2015), the construction industry in Kenya registered an accelerated growth of 13.1 per cent in 2014 compared to a revised growth of 5.8 per cent in 2013. This is reflected by the increase in both cement consumption by 21.8% and a 15.4% increase in the value of building plans approved by Nairobi City Council.

The demand for housing increases in response to several factors, notably urbanization and population growth (Doling, Vandenberg, & Tolentino, 2013). Kenya's annual housing deficit is above 200,000 and annual supply is 50,000 (UN-HABITAT, 2010; AfDB, 2013). There's a marked increase in urbanization that necessitates countries over the world to take housing problem seriously as it is estimated by (UN-HABITAT, 2014) that by 2050, 70 percent of the world's population will be living in urban areas, according to the U.N.'s Department of Economic and Social Affairs.

Worldwide, half of the adult population does not have an account at a formal financial institution, and 75% of poor people are "unbanked." Far fewer can get financing to purchase a home or an apartment. This indicates an apparent gap in funding the real estate industry (Demirguc-Kunt & Klapper, 2014). UN-HABITAT (2014) reports that that unbanked population rely on their savings to finance their housing projects and when savings are nonexistent, they are forced to turn to informal sources.

Murphy (2008) created a dynamic micro-econometric model of housing supply to study the micro-foundations of housing markets in the United States, particularly the timing of housing supply responses to demand shocks. He argued that housing markets often exhibit a high degree of volatility in prices and quantities, with significant economic consequences for both homeowners and the construction sector. Bhamra, Kuehn and Strebulaev (2010); Chen (2010) demonstrated that firms' financing policies are significantly related to variations in macroeconomic conditions by use a dynamic capital structure framework. Haslam-McKenzie and Rowley (2013) while using national data and two case studies in the Australian housing market observed that capacity constraints within the construction industry had risen due to the demand for labor within resources sector and impacted negatively on construction timeframes. Goodhart and Hofmann (2008) showed empirically that there exists a significant multidirectional link between house prices, broad money, private credit and the macro economy. Money growth has a significant effect on house prices and credit, credit influences money and house prices, and house prices influence both credit and money. They suggested the positive relationship between credit and house prices may arise via housing wealth and collateral effects on credit demand and credit supply and via repercussions of credit supply fluctuations on house prices, a relationship also observed by Muellbauer (2008) in his study of the UK, USA, South Africa and Japan using an empirical model that allows the consequences of shifts in credit supply conditions for consumer spending to be tested.

With the tremendous growth in the building and construction industry in Kenya, and the fact that banks are lending only 4.94% of their total loans and advances to this sector (CBK Report, 2013), there is a need for greater understanding of the factors influencing funding of housing in the Kenyan market.

Few studies look at the effect of economic factors exclusively on the supply-side of housing. Most studies concentrate on the demand-side specifically the mortgage market. The ones that look at the supply-side concentrate on what ails the construction industry and the effect on funding specifically from the financial institutions is not drawn out. Mwania (2010), estimates of the demand of housing in Kenya based on annual time series data for the period 1980-2009, using a log-linear demand equation, showed that income per capita was the most significant variable in explaining the demand for housing in Kenya. Wagura (2013), looked at the supply-side of housing with factors such as, price of houses, income per capita, inflation and interest rate and found that the price of housing is the most positive significant factor in determining the number of houses delivered in a period. Empirical study by Mallick (2011) on the role of monetary policy in India on the construction sector activities and house prices during normal period of the economy from a policy perspective found that it is mainly commercial bank credit from supply side of housing development and rise in income in demand side that have positive influences on the construction sector growth with the demand side factor having a stronger impact than the supply side which may have resulted in shortage of housing supply. Kimani and Musungu (2010); Sifuna (2009); Kameri-Mbote, (2002), looked at the legal and regulatory issues in the construction industry in Kenya. When it comes to funding, Waweru (2011) found that SACCOs are overall among those financial institutions that offer the lowest interest rates on loans, charging an interest rate of around 12% for a loan of a two- to four-year period.

2. Literature Review

2.1 Theoretical Framework

The two main theories underpinning this study are the New Keynesian Theory and the Stakeholders Theory. The former explaining the economic situation that may impact funding and the latter looking at the role and effect that stakeholders may have on the relationship between economic factors and funding for housing. The New Keynesian Theory explains the strong influence the monetary policy has on economic activity (Mankiw, 2008). Prices of a good or service do not adjust quickly to changing economic conditions due to "stickiness" of prices, brought about by *"menu costs" and aggregate-demand externalities*, *staggering price-setting* and *coordination failure*. This friction gives rise to monetary non-neutrality and means that the competitive equilibrium outcome of the economy will, in general, be inefficient (Sims, 2012). Because prices are sticky in the New Keynesian model, an increase in the money supply (or equivalently, a decrease in the interest rate) does increase output and lower unemployment in the short run (Mankiw, 2008; Chugh, 2014; Benchimol & Fourçans, 2012; Benchimol, 2015). The important implication of this point of view is that the government may indeed have a role to play in improving macroeconomic conditions; such as countercyclical monetary or fiscal policy (Mankiw, 2008; Sims, 2012; Chugh, 2014). The underlying philosophy of the Stakeholder theory emphasizes the "joint-ness" of the stakeholder interests and the need for all stakeholders to benefit over time through their cooperation (Freeman, 1984; Freeman, Harrison & Wicks, 2007). Value-creation both economic and non-economic should emanate from such a relationship (Argandona 2011; Bosse, Phillips, & Harrison, 2009). This study concurs with these theories 1) by advocating the major role the government through the central bank can play in boosting growth in housing development 2) highlighting the importance of the major stakeholders in the construction industry to the

relationship between economic factors and funding of housing development.

2.2 Review of Related Studies

2.2.1 Effect of Economic Factors on Funding of Housing

Although this study is confining itself to the supply-side of housing development, it has been demonstrated that the easy availability of credit for housing sector (non-food bank credit) at cheaper rates could increase the housing prices, Himmelberg, Christopher and Sinai (2005); Joshi (2006) through its impact on the demand which would augur well with developers as an incentive for constructing residential places.

The objectives of a monetary policy are to promote maximum employment, stable prices (low inflation rates) and moderate long-term interest rates; thus ensuring a stable value of a country's currency (Central Bank of Kenya website; Federal Reserve website; Bank of England website). It is a balancing act that the Central Bank exercises between targeting inflation and stabilization of national output. The management of this trade-off between inflation and output stabilization is particularly challenging in small open economies subject to large supply-side shocks, such as Kenya (Adam, Maturu, Ndung'u, & O'Connell, 2010).

Rapid inflation does cause large increases in the cost of materials and land (Noppen 2012). Hossain and Latif (2009) studied the determinants of housing price volatility in Canada. They used the Generalized Autoregressive Conditional Heteroskedastic (GARCH) and Vector Autoregressive (VAR) models to analyze the time variations in housing price volatility and how they interact with some fundamental macroeconomic variables. The study concluded that housing price volatility is significantly affected by the Gross Domestic Product (GPD) growth rate, housing price appreciation and the volatility itself.

Supply of property is inelastic in the short-term because of time lags in construction and land release, changes in housing demand have a significant effect on housing costs as supply is not able to quickly respond to increases in demand (Gans & King, 2003).

Saunders and Cornett (2011) observed that high interest rates indicate restrictive monetary policy action by the central bank and this makes financial institutions' lending decisions scarcer and more expensive, they concluded that high interest rates are correlated with higher credit risk, and may encourage borrowers to take excessive risks and or encourage only the most risky customers to borrow.

Berger-Thomson and Ellis (2004) noted that housing investment is one of the most cyclical components of GDP with much of this cyclicality arising from the sector's sensitivity to interest rates, though intrinsic cyclicality could also be attributed to construction lags. Murphy (2008) observed that cyclical patterns are a consistent feature of housing markets, with alternating periods of price increases and downturns often being evident and this cyclicality of housing markets naturally arises through the interaction of demand and supply forces he observed that when a demand shock, such as a shock to wages, pushes up prices, supply is then slow to respond, prices continue rising and overshoot; prices mean-revert when supply eventually responds fully.

Economic downturns characterized by high inflation, excessive interest rates, high taxes and volatile exchange rates lead to high costs and consequently reduced investment; and an effective strategic measure in development of affordable housing is lowering the cost of construction of affordable housing (Assaf, 2010). But with deliberate government intervention as reported by Chanond (2009) several Thai governments were able to use real estate industry stimulus measures to revive the economy during various cyclical economic downturns.

The above studies clearly demonstrate there exists a relationship between various economic factors and funding of housing development and warrants a study in the Kenyan market to establish whether it is the same and what kind of relationship.

The study then sought to test the effect of Economic factors on Funding of housing. Thus the following hypothesis was specified.

H_o: *Economic factors do not influence the funding of housing.*

H_1: *Economic factors do influence the funding of housing.*

2.2.2 Effect of Stakeholder Factors on Relationship of Economic Factors and Funding of Housing

The moderating role of stakeholders in making decisions in investment which in effect touch on financing, was empirically shown by Roberts and Henneberry (2007), that in France, Germany and the UK the decision-making process, as perceived by institutional investors, tend to "collapse down" the decision-making process, taking shortcuts that potentially leave the decision-making process open to the influence of bias, judgment and sentiment.

Abdul-Rahman, Wang, and Yap (2010) came to the conclusion that the issue of professional ethics plays an

important role in quality-related problems in a construction project for in their questionnaire survey that they conducted in the construction industry in Malaysia, a fast developing economy where they used descriptive and correlation analysis, they found that various forms of unethical conducts have significant impact on construction quality. This is not unique to that market only for even in Kenya we have the same with many reported cases of collapsing buildings (MFCP, 2011; Mathenge, 2012) and in Nigeria the construction industry is plagued with corruption and fraudulent practices (Olufemi, Fniob, & Omolayo, 2013). Jordan (2005) stated that unethical behavior is taking a growing toll on the reputation of the construction industry.

As more and more developers enter the Kenyan market, issues of how these firms are run come to the fore regarding external financing, Chowdhury and Maung (2013) demonstrated empirically that increase in managerial efficiency increases firm's ability to acquire debt. Their argument was debt can also serve as a disciplining device and an increase in debt financing should also improve internal governance practices and indirectly compel the management to become more efficient. The simultaneous models they used confirmed that causality between debt and managerial efficiency is bidirectional.

The main stakeholders in the construction industry are the developers, contractors, consultants, suppliers, financiers, the government, buyers and sellers in real estate and they do influence financing differently due to their unique interests. Chalevas and Tzovas (2010) empirically demonstrated that the mandatory corporate governance mechanisms introduced in the Greek market decreased firms' weighted average cost of capital, and increased firm's financial leverage, this can be construed to mean that corporate governance issues will have an effect on the accessibility of finances to the developers in the Kenyan market.

The above studies clearly demonstrate that the conduct of major stakeholders in their areas of operation does have an effect on funding of housing and this prompts the interest to study the same in the Kenyan housing development market so as to establish whether such a moderating effect applies here and to what extent.

The study also sought to examine the moderating effect of stakeholders on the relationship between Funding of housing and Economic factors. The following hypothesis was tested:

H_o: *Stakeholders do not have a moderating influence on funding of housing.*

H_1: *Stakeholders have a moderating influence on funding of housing.*

3. Research Methodology

A random sample of 212 financial institutions comprising commercial banks and micro finance institutions (MFIs) was drawn from a population of 451 branches in Nairobi got from 43 commercial banks, 9 deposit-taking MFIs and three other financiers (Shelter Afrique, East African Development Bank and International Finance Corporation) of housing development in Kenya. Majority of the questions were Likert-type scales, where the respondents were asked to respond to each of the statements in terms of five degrees of agreement or disagreement. These ranged from (i) Strongly Agree, (ii) Agree, (iii) Neutral, (iv) Disagree, (v) Strongly Disagree. Other questions still using the Likert scale sought to measure the degree of influence on funding of housing development ranging from (i) Very Large Extent, (ii) Large Extent, (iii) None, (iv) Small Extent, (v) Very Small Extent. The other type of questions were single/multiple category scales i.e. dichotomous scales. There were two or more mutually exclusive responses for example "Yes" and "No" while others were specific where the respondents had to pick their choice from a set provided. Care was taken to ensure that the provided choices exhausted all possible responses to the question presented. Lastly, open-ended questions sought to collect any other factors left out. These open-ended questions used during pilot testing helped enhance the questionnaire by pointing out data that needed to be collected but had been omitted. The dependent variable funding was ordinal in that different categories of funding were provided ranging from less than KES 100 million to greater than KES 400 million with intervals of KES 100 million.

One hundred and fifty eight (158) useable questionnaires were collected, which translated to a response rate of 74.5 per cent. Factor analysis was used to see whether any data reduction was appropriate; descriptive analysis was used to draw out the characteristics numerically of both the respondents and the financial institutions, and correlation analysis to establish if there exists any relationship between the independent variable (economic factors) and the dependent variable (funding of housing). Several diagnostic tests were carried out to establish the suitability of the multiple regression analysis to be used, these are; multicollinearity to test the correlation of the independent variables, test of parallel lines to examine the equality of the different categories and whether the assumptions of the correlation between independent variable and dependent variable does not change for dependent variable's categories, also parameter estimations do not change for cut-off points held, the last diagnostic test was test of goodness of fit to test how well the model fits the data. The results of these diagnostic

tests indicated that it was appropriate to use the ordinal logit regression analysis which was used to test the relationship between the dependent and independent variables.

4. Findings

4.1 Descriptive Analysis-General Information

4.1.1 Education of the Respondent

The study found that 98.7% of the respondents had a first degree and higher therefore highly educated.

4.1.2 Total Amount Lent out for Housing Development

The study found (Table 1) that majority at 43% of the financial institutions' Nairobi branches advance loans worth less than KES. 100 million per branch, while 21% advance loans between KES. 100 – 200 million and 14% between KES. 201 – 300 million. Only 22% advance loans for housing development of more than KES. 300 million.

Table 1. Total amount lent out for housing development

TOTAL AMT. LENT OUT (KES.)	Frequency	Valid Percent	Cumulative Percent
<100m	66	42.9	42.9
100-200m	33	21.4	64.3
201-300m	21	13.6	77.9
301-400m	6	3.9	81.8
>400	28	18.2	100.0
Total	154	100.0	

4.1.3 Percentage of Total Loans Advanced, Average Default Rate and Average Lending Rate

The study found out that (Table 2) the average of the total loans advanced for housing development by the Nairobi branches is 32.9% with a median and mode of 30% of the total loans for housing development as shown below. The average default rate on housing development loans was 6.3%. The average lending rate for housing development was found to be 16.33%.

Table 2. Percentage total loans advanced, average default rate and lending rate

	Percentage of total loans advanced from your branch for housing development	Average default rate observed in housing development in your branch	Average Lending Rate for Housing Development
Mean	32.9	6.3	16.33
Median	30.00	3.00	16.00
Mode	30.00	0.00	15.00
Std. Deviation	23.1	16.1	

4.2 Factor Analysis

4.2.1 KMO and Bartlett's Test

As shown in Table 3, KMO value is 0.462 and the chi square for Bartlett's Test is 143.884 with a p value of 0.000. These two tests suggest that factor analysis is appropriate for economic factors.

Table 3. KMO and Bartlett's test for economic factor construct

KMO- Measure of Sampling Adequacy.		0.462
Bartlett's Test of Sphericity	Approx. Chi-Square	143.884
	df	28.000
	Sig.	0.000

The value of KMO for stakeholders (Table 4) constructs was 0.743 (greater than 0.5) implying that stakeholders construct can be factor analyzed. The chi square for Bartlett's test was 242.532 with a p value of 0.000 that was

significant at 1 percent level indicating that factor analysis is appropriate.

Table 4. KMO and Bartlett's test for stakeholders construct

KMO Measure of Sampling Adequacy		0.743
Bartlett's Test of Sphericity	Approx. Chi-Square	242.532
	df	6
	Sig.	0.000

4.2.2 Factor Analysis Results

The results in Table 5 presents factor analysis results for the economic factors construct. All the items had factor loadings greater than 0.5 indicating that all the items are strongly correlated with all the four components – Market forces, Cost of Inputs, Macro economy and Cost of Funding. Under Market Force, there was *Demand of housing* and *Supply of housing* which had factor loadings of 0.873 and 0.857 respectively. *Labor costs* and *Raw Materials costs* had factor loadings of 0.797 and 0.867 respectively, both under Cost of Inputs. Under Macro economy, there was *Exchange rates* and *Inflation rates* with factor loadings of 0.833 and 0.768 respectively. *Prevailing interest rates* and *Competitors lending rates* had factor loadings of 0.870 and 0.585 respectively both under Cost of funds. This indicates that economic factors can be measured using the four components.

Table 5. Rotated component matrix for economic factors

Economic Factors	Market Forces	Cost of Inputs	Macro Economy	Cost of Funding
Prevailing Interest Rates	0.094	-0.096	0.133	0.870
Exchange Rates	-0.090	-0.101	0.833	0.085
Inflation Rates	0.069	0.220	0.768	-0.052
Labor	0.105	0.797	0.205	0.101
Raw Materials	-0.152	0.867	-0.067	0.016
Competitors Lending Rates	-0.151	0.317	-0.120	0.585
Demand of housing	0.873	0.018	0.026	-0.038
Supply of housing	0.857	-0.074	-0.047	0.011

As shown in Table 6, all items under stakeholder construct had factor loadings greater than 0.5 indicating that the items are strongly correlated with component one which sought to find their suitability in their respective field of expertise. Factors, Contractors are *Knowledgeable and Competent, Consultants are Competent*, *Developers are Competent & Trustworthy* and *Existence of Skilled Labor & Good working conditions* had loadings of 0.790, 0.852, 0.854 and 0.741 and all are heavily loaded to component one. This finding suggests that these items can be used as a good indicator of stakeholders.

Table 6. Component matrix for stakeholders construct

Stakeholder	**Suitability in Their Field**
Contractors are Knowledgeable & Competent	0.790
Consultants are Competent	0.852
Developers are Competent & Trustworthy	0.854
Existence of Skilled Labor & Good working conditions	0.741

4.3 Descriptive Analysis

4.3.1 Respondents on Extent Effect of Economic Factors on Funding of Housing

The responses in Table 7 were given as Very large and Large extent combined to give a percentage when it came to measuring effect of economic factors on funding of housing.

Table 7. Extent economic factors have on funding of housing

	Very Large & Large (%)
Market Forces	
Demand of housing	87.3
Supply of housing	74.5
Cost of Inputs	
Labor	47.7
Raw Materials	70.3
Macro economy	
Exchange Rates	74.4
Inflation Rates	41.7
Cost of Funds	
Interest Rates	93.6
Competitors Lending Rates	67.7

4.3.2 Respondents on Effect of Moderating Stakeholders Factors on Funding of Housing

The responses in Table 8 below were given as Strongly agree and Agree combined to give a percentage when it came to measuring moderating factors effect on the Relationship between Funding of housing and Economic factors.

Table 8. Extent moderating factors have on funding of housing

Suitability in their Fields	Strongly Agree & Agree (%)
Contractors are Knowledgeable & Competent	83
Consultants are Competent	83
Developers are Competent & Trustworthy	69
Existence of Skilled Labor & Good working conditions	67

4.4 Correlation Analysis

4.4.1 Correlation between Economic Factors and Funding of Housing

The results shown in Table 9 indicate that the Pearson correlation coefficient between Fund of housing and Economic factors was -0.022 with a p value of 0.785. This indicates that Funding for housing is negatively related with Economics factors but the relationship is not statistically different from zero.

Table 9. Correlation between economic factors and funding of housing

		Economic Factors
Funding for housing development	Pearson Correlation	-0.022
	Sig. (2-tailed)	0.785
	N	154

4.4.2 Correlation between Funding of Housing and Stakeholders

Table 10 presents the correlation results between stakeholders and funding of housing development. Pearson correlation coefficient for the relationship between stakeholders and funding of housing was -0.107 with a p value of 0.187. This indicates that Funding for housing is negatively related with Stakeholders factors but the relationship is not statistically insignificant.

Table 10. Correlation between funding of housing and stakeholders

		Stakeholders
Funding of housing development	Pearson Correlation	-0.107
	Sig. (2-tailed)	0.187
	N	154

4.5 Regression Analysis

4.5.1 Regression Analysis - Economic Factors and Funding of Housing

The results for effect of economic factors on funding of housing show that the coefficient for economic factors was -2.681 with a p value of 0.017 (Table 11). The significant p value implies that economic factors do significantly influence funding of housing. The negative sign of the coefficient indicates that the relationship between Economic factors and Funding of housing is negative.

According to the findings, the study rejects the null hypothesis that economic factors do not influence funding of housing.

Table 11. Effect of economic factors on funding of housing development

Parameter	Estimate	Standard Error	Significance
Economic Factor	-2.681	1.121	0.017

4.4.2 Moderating influence Stakeholders have on Relationship between Funding of Housing and Economic Factors

To test for the moderating effect the study used the regression method where the independent variable (Economic Factors) was interacted with the moderator. The results (Table 12) show that the coefficient between stakeholders construct and economic factors was 1.257 with a significant p value of 0.016. Thus, significant at 5%. This finding suggests that stakeholders moderate the relationship between economic factors and funding of housing.

Table 12. Moderating influence stakeholders have on funding of housing and economic factors

Parameter	Estimate	Standard Error	P value
Stakeholders	0.153	1.709	0.929
Economic Factors and Stakeholders	1.257	0.520	0.016

5. Discussion of Results

The regression analysis results show that there exists a negative relationship between economic factors and funding of housing development and the coefficient was significant at 5 percent. This means that an upward shift in the items under economic factors construct will reduce the probability of an individual borrowing more (moving from a lower financing tier to higher financing tier). This study classified the economics factors into four main groups, namely; market forces, cost of inputs, macro economy and cost of funds.

The results showed that demand for housing has a greater influence on funding of housing than supply. Market forces and government intervention (Warnock & Warnock, 2008) determine the specific size of each of the housing tenures.

Cost of inputs, these being cost of labor and raw materials do not have a high effect on the availing credit for housing finance probably because these are not costs directly affecting the financial institutions. But it was found that cost of raw materials had a higher influence than cost of labor. This is in line with the cost structure of a single unit of housing (AfDB, 2013), 60% is the cost of construction that comprises 70% as the cost of materials with 30% of this being cost of labor. But this is in contrast with the findings of Wheaton and Simonton (2007) that there's no relationship found between construction costs and building activity.

Unstable macroeconomic factors negatively influence borrowing thus there would be a decline in borrowing for

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housing development. This is because any unfavorable changes of these economic factors reduce the disposable income that an individual is willing to commit towards funding of housing developments. Exchange rates had a higher influence on funding of housing than inflation rates. Most of the materials used for finishes in housing are imported so the exchange rate is significant to the financier. When it comes to inflation rates, Kenya has adopted what is called inflation targeting (IMF, 2015) which has really worked very well in creating stability in the economy. Mallick (2011) observed inflation exerting a positive impact on the rise in housing prices that could be explained in terms of the fact that when there is a general rise in prices, the real wages goes down, as a result workers demand for higher wages. The higher wages in return are reflected in the rise in housing prices in the economy. Housing supply has been described as being inelastic.

Prevailing interest rates do have a very big effect on funding of housing development as the study showed. The lending rate that a financial institution's competitor is offering was found to influence their offering of credit for housing, which shows that banks do take notice of competitors' lending rates. The average lending rate was found to be 16.3% but banks may levy other fees and charges, on top of this, including administration, processing, valuation, and legal and commitment fees, among others.

A positive moderating effect of the stakeholders on the relationship between economic factors and funding of housing development was established by the study. UN-HABITAT, (2014) posit that Public-private partnerships have great potential for increasing accessibility of decent housing for the excluded people, where there's a high demand of housing in Kenya. The results indicate that the suitability of the various stakeholders in their field of expertise supports the relationship between economic factors and funding of housing development.

6. Conclusions

The study has made significant contribution firstly by establishing a negative relationship between economic factors and housing development, thus confirming what theory states, that intervention of the government through the central bank is necessary in the creation of an enabling environment for investment in housing development, secondly it was established that major stakeholders in the construction namely; developers, contractors, consultants and labor force do play a significant role in upholding the relationship between economic factors and funding of housing development. Their suitability in their respective fields of expertise is important to that relationship.

7. Recommendations

Interest rates and exchange rates were found to have a big impact on credit provision in the housing sector, therefore to boost funding of housing development in Kenya, the government and policy makers should ensure that interest rates, inflation rates are kept at a level that will encourage investments in housing, together with reduction of the volatility of the foreign exchange rate to create stability for most building materials are imported. All this would help keep the cost of labor and cost of raw materials in the industry as low as possible and increase the supply of housing in the country. This can be done by use of the monetary policy and fiscal policy but it goes beyond that as shown by studies in other countries with well-developed housing markets like the US and the OECD countries. Studies by Glaeser, Gottlieb and Gyourko (2010) in the US housing market while examining the cause of the housing boom between 1996-2006 found that it was as a result of easy credit in the form of low real interest rates, high loan-to-value levels and permissive mortgage approvals but the effect of interest rates on prices was much lower once the model they used was generalized to include mean-reverting interest rates, mobility, prepayment, elastic housing supply, and credit-constrained home buyers, concluding that lower real rates can explain only one-fifth of the rise in prices; the other study by Sa, Towbin and Wieladek (2011) also found that increased housing activity in the OECD was attributable to expansionary monetary policy, capital inflows due to global savings glut and excessive financial innovation combined with inappropriately lax financial regulation. This goes to show that there are many combined factors in the housing sector that do have an effect on funding and this calls for further in-depth study on the economic and non-economic factors that do have an impact on this sector and that can be used to stimulate growth.

The government could introduce more attractive tax incentives in the housing sector to spur growth as has been pointed out by UN-HABITAT (2013) that property tax incentives are intended to influence investment decisions and reward (or subsidize) certain economic activities, and this can encourage developers and hopefully the benefit would trickle down to potential home owners.

The government needs to create an enabling environment by getting involved in community planning and development to ensure sufficient access to adequate housing finance products and a successful housing sector with land formalization measures because this would curb the growing demand of affordable housing unit by boosting its supply.

8. Limitations of the Study and Suggestions for Further Research

One major limitation of this study was its confinement to only economic factors; other factors need to be studied together with this. The other limitation is the use of cross-sectional data. The effects of factors that do have an effect on funding in the housing development sector needs to be studied over longer time periods thus need of use of longitudinal data.

In-depth research should be carried out on economic factors effect on funding of housing development in Kenya looking at the demand side since it has been established that macroeconomic situation has a major impact on the supply side, both from the findings of this study and also from literature review. A study incorporating or comparing the supply-side and the demand-side can be carried out too. Other factors apart from economic factors only, can be roped in and their combined effect on funding investigated using longitudinal data.

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