

## Socio-Demographic Factors Associated with Awareness of Mortgage Plans in Langas Suburb Uasin Gishu County: A Cross Sectional Study

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### Abstract

Mortgage is a long-term commitment that ties a prospective homeowner down to mortgage repayment for a long period usually more than 10 years and transfer of a legal or equitable interest in a specific immovable property for the payment of debt. Although mortgage helps an individual to acquire a home (house/land), it carries with it a huge responsibility, that of repaying the loan. This may be a hard task and even at times impossible due to the bottlenecks held by the economy and investors. These include; high rates of interest on mortgages, extortion by investors, poor saving culture, lack of stable employments and lack of awareness. The study aims at assessing socio-demographic factors that make individuals in middle-income economies to adopt mortgage plans. The study mainly targets the proportion of people who do not meet the requirements for the current mortgage plans. Primary methods of data collection were employed. The residents of Langas in Uasin-Gishu County subjects were interviewed as well as allowed to answer the administered close-ended questionnaires. A multivariate logistic regression model showing the relationship between awareness for mortgage plans and various socio-demographic variables was tested. The results show that there is a strong significant association between mortgage awareness with factors such as age and education level. Thus the rise in mortgage uptake is well explained by socio-demographic factors. Although the study established a positive relationship between mortgage uptake and occupation status among those in permanent employment category, the relationship was found to be insignificant.

**Keywords:** Mortgage plans; Factors; Logit; Financing, Interest rates

### Introduction

According to the World Bank report on developing Kenya's Mortgage market, the demand for housing in Kenya has grown rapidly in recent years, in both value of loans and number of loans [1]. There is lack of affordable Housing due to high cost of building materials and cost of construction. Multiple land titling and registration mechanism in Kenya are inefficient and complex, making access to land very difficult. The cost of land together with cost of building has enormously made mortgage properties very expensive. This has resulted in huge housing gap which is growing every year and is increasingly prevalent in urban areas.

In Kenya, it is estimated that 234,000 new housing units are required every year yet only 20,000-30,000 units per year are currently being produced and a mere 20% of these are affordable to low and moderate income families. Government further estimates that formal production by the public and private sectors is not more than 30,000 units per year and concludes that the annual deficit of more than 120,000 housing units is met by slum housing. In Nairobi, a city with a population of around 3 million people, nearly 60% of households live in slum areas. A recent survey of these settlements showed that 73% of households live below the poverty line [2].

As a result of unending demand for housing globally, most countries pursue policies that favor owner-occupied housing. The Government of Kenya has in the past come up with projects to build modern

affordable housing for its citizens. Notably is the slum upgrading project which was launched in 2004 with the aim of alleviating poverty. Despite of mortgage finance sector having a promising future because of its innovativeness and competitiveness in the market, the sector serves only those households at the top of the income pyramid due to qualification requirements that does not favor low income earners. As it stands, only 2.4% of the total Kenyan population can afford a mortgage. Furthermore, only 11% of the urban population can afford to take up a mortgage. This inadvertently locks out a large number of potential home owners. According to the [1], Kenya's mortgage market performance has dropped three places overall, to 109 out of 183 countries. In registering property, Kenya was found to involve many procedures and take 64 days. By the end of 2011, only about 16,000 mortgage loans had been offered in the market representing a value of Sh. 91 billion that accounted for 2.5 per cent of the Gross Domestic Product. It is also good to note that Kenya has a total of 44 financial institutions of which 10 of them are involved in the mortgage facilities; CFC Stanbic Bank, Kenya Commercial Bank, Cooperative Bank, Barclays Bank, I&M Bank, Family Bank, Krep Bank, Equity Bank, Standard Chartered Bank and Housing Finance [3].

Mortgage financing involves the full repayment of loan borrowed to acquire the property including interest agreed upon on mortgage agreement [4]. Many Kenyans who wish to own homes as well as property developers have complained of high interest rates charged on mortgage loans. The rising of interest rates affects the magnitude of real estate investment, tenants and home owners. A home buyer or builder can obtain financing (a loan) either to purchase or secure

against the property from a financial institution, such as a bank, either directly or indirectly through intermediaries. Features of mortgage loans such as the size of the loan, maturity of the loan, interest rate, method of paying off the loan, and other characteristics can vary considerably [5]. Mortgage finance institutions may lack access to long term funds to construct more properties. Mortgage market is likely to reduce or shrink in the long run due to limited funding and high interest rates. There is a need to increase Mortgage funding through mechanism such as developing secondary market [6].

The housing deficit problems is not only limited to the developing countries but also to the developed countries [3,7] investigated the relationship between rates and real estate investment in Kenya. His findings show that the interest rates affect house prices, mostly real estate retail borrowers and investors alike are forced to increase the house prices to cater for the cost of borrowing and also break-even. He recommended that the Government should play a role in the control of interest rates through the Central Bank of Kenya and frequent supervision of house pricing to protect rights of both owners and investors.

Housing finance plays a major role in the housing system and services of any given country. William [8] indicated that access to shelter produced by public agencies continue to elude the urban poor who simply cannot muster the financial resources required to procure these housing units. Olusola [9] identified lack of commercial bank short term mortgage as one of the major obstacles against rural and urban housing production in emerging economies like Kenya. The increased demand for housing in both the rural and urban areas has created a hyper competition amongst the financial and banking institutions. The problem has been created in that there has been confusion among the customers on choosing the best mortgage institution to deal with and also the mortgage institutions have had to lower their lending rates to be able to cope with the competition. Commercial banks have continued financing mortgages with a potential size of the mortgage market which is currently around KSH 800 billion.

A well-structured mortgage facility can deliver accessibility to housing facilities to a wider population segment as home ownership remains the largest single asset that a majority of the individual owners will have in their lifetime. In an attempt to bring to an understanding the issues that hinders mortgage absorption in Kenya, the research study focused on socio-demographic factors associated with awareness of mortgage plans in Kenya with special emphasis on the middle income earners. It is an area that has been of low interest to most researchers.

## Objectives

The objectives that guided the study were as follows;

- To determine the proportion of people preferring alternative plans to mortgage
- To establish modes in which people acquired land
- To determine socio-demographic factors associated with mortgage awareness plans

## Research Methodology

### Study area

The study was done in Langas Estate, Eldoret. Langas settlement is an informal high-density residential area located on the southern outskirts of Eldoret town, about 7 km from the central business district along the Eldoret-Kisumu road. In 1999 Langas had an estimated population of 26,000 Musyoka [10] and according to Simiyu [11], there are about 1051 households in Langas Estate. Although official statistics are not available yet, it is currently estimated by various sources at between 35,000 and 40,000 people. Langas was selected as the study site because it is the largest settlement within the County of Uasin Gishu, and because its population is a mix in terms of ethnicity and income levels and this forms a fair representation of Eldoret urban population. Many residents are low-income earners making a living mostly from the informal sector as wage employees or from self-employment and/or providing casual labor to factories in the urban area. However, middle income and high-income earners and formal sector employees are also represented in this settlement.

### Research methods

A descriptive research design was used. The target population of the study was residents of Langas and the intent was to get percentage of population that own land, their willingness to take a bank loan, awareness of the mortgage plans and if they had alternative plans to acquire land. Primary data was obtained through self-administered questionnaires with use of closed-ended questions. Data presentation was done by the use of bar charts, percentages and frequency tables. Factors investigated in this study were mainly age, gender, marital status, and education level and occupation status. To test for association between awareness of mortgage plans and socio-demographic variables, chi-square test was used. Logit model was employed to determine factors that were significantly associated with knowledge on the awareness of mortgage plans. For data analysis statistical, packages such as SPSS and STATA version 13 were used. 5% level of significance was used.

### Sample size determination

Sample size determination was obtained using the following formula developed by Daniel [12]

$$n = \frac{z^2 p(1-p)}{d^2}$$

Where,

n- Minimum sample size

Z<sup>2</sup>- Abscissa of the normal curve

p- Percent of study subjects who are aware of mortgage investment

d- Desired level of precision

Taking a 95% confidence interval, p=0.5, Z=1.96 and d=0.05

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384$$

Therefore the required sample size is n=384

### Finite Population Correction for Proportions

If the population is small then the sample size can be reduced slightly. This is because a given sample size provides proportionately more information for a small population than for a large population. The sample size ( $n_0$ ) can be adjusted using Equation shown below:

$$n_0 = \frac{n}{1 + \frac{(n-1)}{N}} = \frac{384}{1 + \frac{(384-1)}{40,000}} = 380, \text{ respondents}$$

This is the required study sample after adjustment. However, due to non-response, the study utilized a sample size of 347 respondents.

### Results and Discussion

#### Socio-demographic characteristics

Summary of demographic data is shown in Table 1 below. A higher proportion 135 (38.9%) of the study subjects were in the age-group 26-35 years. There was a higher percent of male subjects when compared to their female counterparts (52.7% vs. 47%) respectively. Marital status showed those who were married had the highest proportion (56.8%), while those who were separated/divorced had the least proportion indicated by (8.9%). Most of the study subjects had secondary and tertiary level of education (51% vs. 36.9%) respectively. It is evident that the percent of respondents who prefer an alternative mode of acquiring land apart from mortgages accounted for 87.6% [13-16].

Variables	N (%)
Age categories(years)	
18-25	82 (23.6)
26-35	135 (38.9)
36-45	78 (22.5)
Above 45	52 (15.0)
Gender	
Male	183 (52.7)
Female	163 (47.0)
Missing category	1 (0.3)
Marital status	
Single	119 (34.3)
Married	197 (56.8)
Separated/divorced	31 (8.9)
Education level	
Primary	42 (12.1)
Secondary	128 (36.9)
Tertiary	177 (51.0)
Occupation	
Employed	150 (43.2)

Self-employed	124 (35.7)
Casual	72 (20.8)
Other	1 (0.3)
Prefer an alternative mode of acquiring land apart from mortgages	
Yes	304 (87.6)
No	43 (12.4)

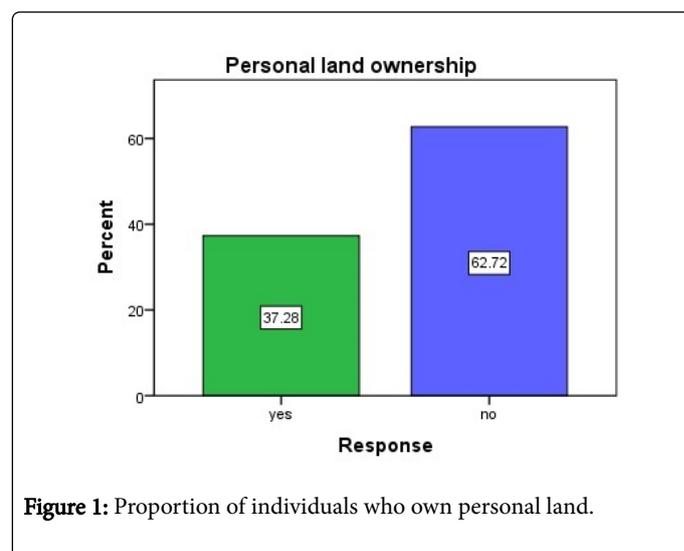
**Table 1:** Socio-demographic characteristics of the study participants, N=347.

#### Ever taken a financial loan, aware of mortgage and willing to take up a mortgage

Table 2 below shows that the proportion of respondents who had ever taken up a mortgage formed 59.4%, while those who are aware and willing to take up a mortgage are represented by (68.3% vs. 34.3%) respectively.

Variable	N (%)
Ever taken loan from a financial institution	
Yes	206 (59.4)
No	141 (40.6)
Aware of mortgage	
Yes	237 (68.3)
No	110 (31.7)
Would you like to take up a mortgage?	
Yes	119 (34.3)
No	228 (65.7)

**Table 2:** Percent distribution of socio-economic factors of the study subjects.



**Figure 1:** Proportion of individuals who own personal land.

### Personal land ownership

There was a huge percent difference between the proportion of the individuals who own personal land and those who do not own as shown in the figure below.

Majority of the respondents (62.7%) do not own personal land while nearly a third of the respondents own a personal land as indicated by (37.3%) respectively (Figure 1).

### Mode of land acquisition

It was important to clearly establish the mode of land acquisition used by most respondents among those who owned land.

From the figure below, savings is the most preferred mode of acquiring land forming 66.93%, mortgages and any other modes of land acquisition had the least proportions of 5.512% and 1.575% respectively. Respondents who prefer acquiring land through loan is indicated by 25.9% (Figure 2).

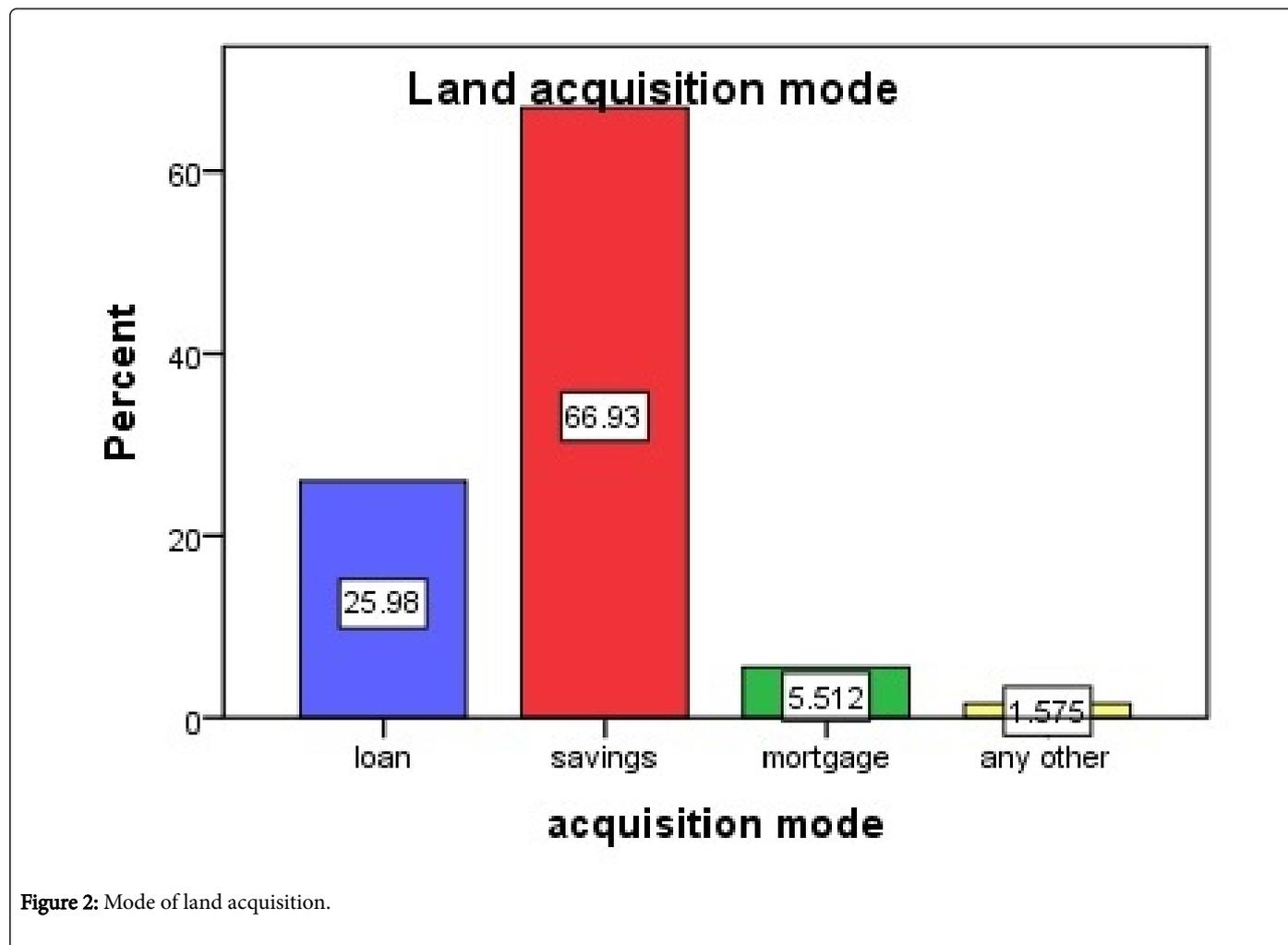


Figure 2: Mode of land acquisition.

### Bivariate associations with awareness of mortgage plans

In Table 3 below, it is evident that age was a strong significant associated with awareness of mortgage plans ( $p=0.0431$ ) with those in the age category (26-35 years) having a higher level of awareness than their counterparts in the other age categories.

Gender and marital status were not significantly associated with awareness of existence of mortgage plans. As expected, being highly educated was significantly associated with awareness for existence of mortgage plans when compared to their counterparts in other education categories ( $p=0.0005$ ) [17-21].

### Logit model of factors associated with awareness of mortgage plans

In the adjusted regression model, factors such as age and occupation were significantly associated with awareness of mortgage plans. Subjects having tertiary level of education were three times more likely to accept mortgage plans when compared to their counterparts with lower primary education level (AOR=3.14, 95%CI=1.348-7.330). It was strange that those in younger age groups were less likely to be aware of mortgage plans when compared to those in older age groups (AOR=0.28, 95%CI=0.107-0.718). Those in permanent employment were one and half times more likely to be aware of mortgage plans when compared their counterparts in the casual category although the association was not statistically significant (AOR=1.35, 95%CI=0.633-2.886) (Table 4).

Variables	Awareness of any mortgage plan		P-value
	Yes	No	
Age category (years)	n (%)	n (%)	0.0431**
18-25	48 (20.5)	34 (30.9)	
26-35	96 (40.5)	39 (35.5)	
36-45	51 (21.5)	27 (24.6)	
Above 45	42 (17.7)	10 (9.1)	
Gender			0.8802
Male	126 (53.2)	57 (52.3)	
Female	111 (46.8)	52 (47.7)	
Marital status			0.2355
Single	78 (32.9)	41 (37.3)	
Married	141 (59.5)	56 (50.9)	
Separated/divorced	18 (7.6)	13 (11.8)	
Education level			0.0005**
Primary	19 (8.0)	23 (20.9)	
Secondary	84 (35.4)	44 (40.0)	
Tertiary	134 (56.5)	43 (39.1)	
Occupation			0.0012**
Permanent employment	114 (48.3)	36 (32.7)	
Self-employed	81 (34.3)	43 (39.1)	
Casual	41 (17.4)	31 (28.2)	

\*\*Significant at p<0.05.

**Table 3:** Bivariate association between awareness of mortgage plans and socio-demographic factors.

Covariates	Unadjusted Odds Ratios			Adjusted Odds Ratios		
	P-value	UOR	95%CI	P-value	AOR	95%CI
Age category						
18-25	0.009	0.34	0.148-0.761*	0.008	0.28	0.107-0.718*
26-35	0.1815	0.59	0.268-1.283	0.200	0.58	0.254-1.332
36-45	0.060	0.45	0.196-1.034	0.041	0.41	0.171-0.964*
>45		Ref			Ref	
Gender						
Male	0.880	1.04	0.657-1.631	0.883	1.04	0.638-1.685
Female		Ref			Ref	
Marital status						

Single	0.440	1.37	0.613-3.081	0.319	1.62	0.629-4.160
Married	0.132	1.82	0.836-3.958	0.439	1.39	0.602-3.214
Separated/divorced		Ref			Ref	
Education level						
Tertiary	0.021	3.77	1.877-7.581*	0.008	3.14	1.348-7.330*
Secondary	0.0002	2.31	1.138-4.694*	0.042	2.18	1.030-4.600*
Primary		Ref			Ref	
Occupation status						
Permanent employment	0.004	2.39	1.316-4.355*	0.436	1.35	0.633-2.886
Self-employed	0.244	1.42	0.785-2.583	0.999	1.00	0.513-1.948
Casual		Ref			Ref	
Ref=reference category, *Significance level (p<0.05).						

**Table 4:** Logistic model of factors associated with awareness of mortgage plans.

## Conclusion

From the study findings, it is clear that uptake of mortgage financing among middle income-earners is relatively high. The study has revealed that education level is a strong significant factor that affects knowledge on the awareness of mortgage plans. This implies that the current existing financial institutions should advocate for major advertisements to make public sector aware of the existing mortgage financing so as to reach the disadvantaged population who fail to have adequate education because of insufficient funds.

The study has also established that employment status of clients is important since it has a strong positive effect on mortgage financing among commercial banks in Eldoret town. The study also notes that those study respondents with personal savings are more likely to acquire land when compared to their counterparts who rely solely on loans. Results also showed that a greater percent of individuals are aware of mortgage plans but the uptake is very low and the reasons being, many people cannot attain the minimum requirements for mortgage and individual incomes are inadequate. It is researchers' view that financial institutions should design more products that taps to middle income earners. The banks should be innovative and come up with various mortgage products that can be accessed by both low income and high income individuals. The central bank of Kenya should conduct frequent surveys in the mortgage market to try reducing lending interest rates on mortgages so as to accommodate middle-income earners in Kenya.

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