International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Assessment of Determinants and Modes of Access to Urban Residential Land and Housing Among Different Income Households in Jimma City Administration, Oromia National Regional State, Southwest Ethiopia

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Abstract: ***The overriding objective of this study was investigating determinants and modes of accessto urban residential land and housing in Jimma City Administration (JCA), Oromia National Regional State, southwest Ethiopia. To meet the intended target, a cross-sectional research design was utilized. The unit of analysis of the study was both governmental and private organization workers. To answer research questions and attain those research objectives stated earlier, both primary and secondary data sources were employed. The primary data were gathered from respondents, while secondary data were gathered through document analysis. Simple random sampling technique was employed to select institutions from which respondents were selected and to select respondents from 20 sampled institutions. To generate pertinent empirical data for the study, the schedule method (interview questionnaire), interview guide and observation checklist were employed. The findings of the study clearly showed that the JCA has a serious problem of both quality and quantity in relation to residential housing. To the contrary, the supply of residential land doesnot commensurate the existing need for the land. Above all, land administration and management system of the city has a pervasive problem of good governance. The study also showed that, there was a significant difference between respondents on the basis of their socio-demographic status. For instance, there is a significant difference between respondents earning different monthly income. Access decreases with decreasing monthly income. Moreover, the binary logistic regression model result showed that gender, household size, educational level, length of years of service, monthly income and duration of stay in JCA are the chief determinants of accessto residential land in the city at 5% level of significance. On the whole, Jimma City Administration has a serious problem of access to residential land, and there is a significant difference between respondents in accessing residential land by virtue of their socio-demographic status. It is likely that shortage of residential land will be one of the causes of head ache to the city government. Thus, the shelter crisis will undoubtedly be the cause of a thorny political environment in the country, in general, and in the city, in particular. To stop the problem from occurring, it is important firstly, to assign competent and efficient managers and technocrats to the city government. Secondly, urban land is a scarce resource requiring careful and efficient administration and management system. Thus, the Jimma city administration should start using the modern registration and cadastral system so that it can use its scarce resource efficiently and economically. Thirdly, regional government and the JCA must redesign new land allocation system that takes into account low and moderate income households.***

Keywords: Determinants of Access, modes of access, residential land, different income households, cross tabulation table, chi-square test, and binary logistic regression

1. Background

Land is an indispensable natural resource for the very survival and prosperity of humankind. It provides not only the physical space in which humans live, work and play, but it is also one of the principal source of wealth, social status, power, shelter, food, and economic activities for human kind. In both urban and rural domains, the right to participate in municipal planning, in community decisions, and sometimes elections depend up on the status of individual as “resident” or “home owner”. For many centuries, only “land owners” could participate in elections of most western democracies (UN, 1996). Because housing plays a central role in the overall life of human kind, global attention has already been given to the improvement of access to land and security of tenure. Nevertheless, a large number of urban populaces around the globe are still either residents of low-grade residential environment(such as slums, squatter settlements, shanty towns lacking in basic urban facilities) or are entirely homeless and pass nights in streets and other public places (Mc Auslan, 1985; Tibaijuka, 2009).Indeed, even if the urban shelter crisis is a global phenomenon, the problem is very critical in towns and cities of the global south compared to cities of the global north. In sub-Saharan African countries, a vast majority of low and middle income urban households do not have formal access to urban land in suitable locations for housing construction, and as a result, they have been forced to experience the severe land and housing accessibility challenges (Okonkwo, 1986).

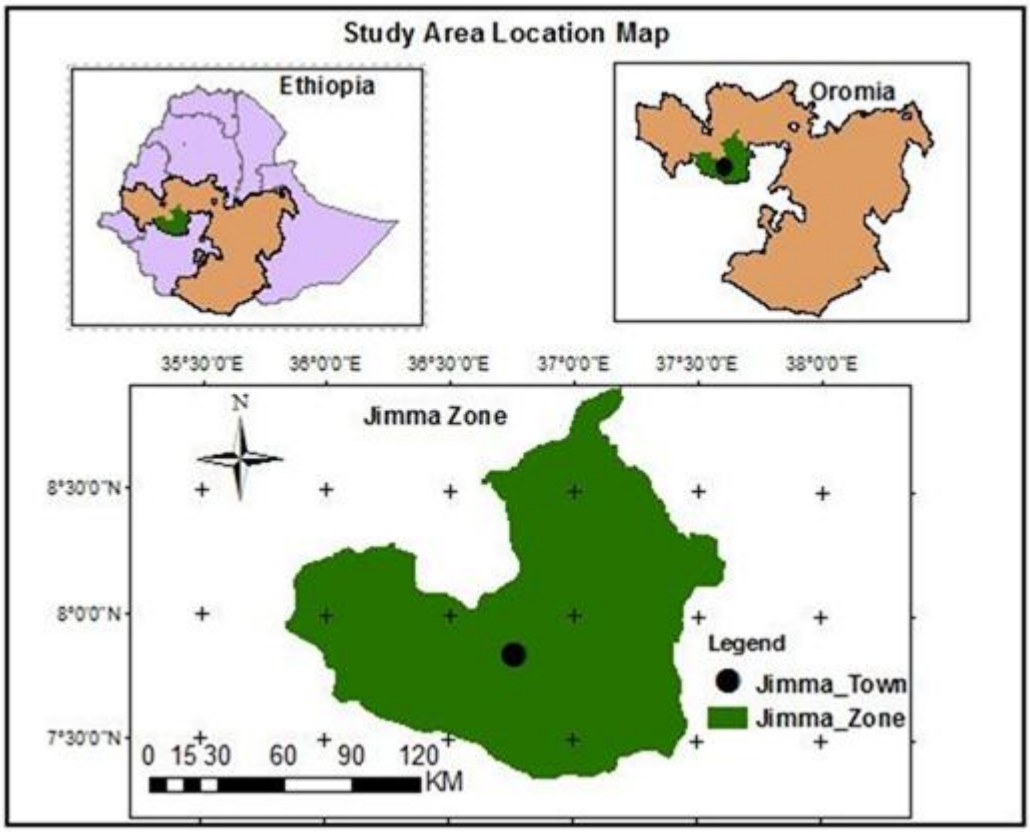
According to Solomon (1999), several endogenous (internal)and exogenous (external) factors have converged to close the gates to the formal and legal city domain, of which rapid and chaotic rate of urbanization process is the leading in exacerbating the crisis. The world urban population, which was only a billion in 1960, reached three billion in 2002. It is projected to attain 4 billion in 2017 and 5 billion by 2030 (UN, 2004; Pacione, 2005). The rapidly increasing urban population is accompanied by a rapidly increasing need for additional residential land and housing and accessibility challenge.

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Like other developing countries, the shelter crisis in urban Ethiopia is disgusting. The majority of residential housing units in the country is below qualitative standard and lack adequate space. The extent of provision for water supply, electricity, and drainage is very minimal. The lives and health of people living in housing of such poor quality and with such inadequate provision for water, sanitation, and drainage are under continuous threat (Gebeyehu, et al, 2001).To avert the situation, successive Ethiopian governments have implemented different strategies to improve citizens' access to residential land and housing. The promulgation of proclamationNo.47 in July1975 by the *Derg* Government (Pro-soviet Military government) was one of those measures. The proclamation nationalized all urban land sand extra houses which were monopolized by the monarch and feudal nobilities. Under the monarchical regime, the urban low-income households were compelled to acquire land only through the gift, tenancy, inheritance of family, and informal settlement by a group (Gondo, 2011). Nonetheless, the extent to which public landholding system has improved different income households access to urban residential land and housing is not known very well to date. Hence, the overriding objective of this research project is assessing the extent to which public landholding system has improved different income households' access to urban residential land and housing in Jimma City Administration (JCA). The findings of the study are believed to be important inputs for policy making and timely measures.

2. Methods and Materials

The Study Area



Source: Jimma University, Department of Geography & Environmental Studies, 2015

The study area, Jimma City Administration (JCA), is located at about 350kms from Addis Ababa, the capital city of the country, in the southwest direction of the country. Astronomically, it has a latitude and longitude of 7°40′ N, 36°50′E respectively. The city is found in the Oromia National, Regional State, one of the nine national regional states of Ethiopia. The city is located in the southwestern part of the country where rainfall is almost year round and most coffee products of the country come from. It is the largest urban and commercial centre in the in the region.With a status of the special administrative zone, it is the capital city of Jimma Zone. Currently, the city has the "city administration" and the "municipality" wings, which execute the tasks of the state and municipal functions respectively. Currently the city is divided into 13 *kebele*administrations (or urban dwellers associations). These *kebeles*also have both administrative and municipal wings. All these bodies form together one administration under the mayor. Jimma is accountable to Oromia National, Regional State Government (ONRS, 2008).

According to the 2007 census report of Ethiopia, the city had a total population of 120,960, (60,824 males and 60,136 females). During the census, there were 32,191 households, but only 30,016 housing units in the city. Owing to the massive influx of population towards the city, the shortfall of residential land and housing in the city are horrific.

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3. Research Design and Methodology

Research Design: The main intent of this study was identifying and describing about factors determining access to urban residential land in the city under investigation and modes of access to land. Hence, a cross-sectional survey research design was employed in this research. It is a design that is rooted in positivists' philosophical outlook. Positivists believe in the objectivity of the material world (Creswell, 2009).

Sampling Procedure: The units of analysis for this study was both public and private organizations workers who used to live and work in JCA by the time this study was under taken. The sampling process was undertaken at two different stages. The first stage sampling involved the selection of government and private institutions from which respondents were chosen. Accordingly, 20different institutions were chosen by using simple random sampling. The second stage involved the selection of 216 sample respondents from the sampled institutions using simple random sampling technique. The sample determination was based on a published table.

Data Sources and Data Gathering Techniques: The study employed both primary and secondary data sources. Most primary data were collected from respondents they were gathered using interview questionnaire, interview guide and different observation check lists. Secondary data were gathered from research and from different City Administration reports and other relevant documents the city.

Outcome Variable: Access to Residential land**.**

Explanatory Variables: The supposed explanatory factors identified by the writers include gender, religion, household size, educational level, length of service year, monthly income, duration of stay in JCA, religion, birthplace, marital status, type of occupation and institution (work place) and others.

Data Analysis Techniques: With respect to data analysis, the researcher employed both qualitative and quantitative analytical techniques. In quantitative research approach, both descriptive and inferential statistics were employed. Most of the quantitative data were analysed using SPSS software. Binary logistic regression, cross-tabulation table, chi-square test, mean and percentage were the widely used statistical techniques in this research.

4. Results

The main body of the paper focused on four major areas. The first part of the study focused on assessing the general profile of the housing problem and the supply of residential land in the city. The second part focused on assessing respondents' socio-demographic characteristics and access to urban residential land nexus. The third section focused on identifying the major determinants of access to residential land, and the fourth section looked into the major modes of access to land. Accordingly, the sections are presented one after the other as follows.

General Profile of Housing Problem and Land Supply System in Jimma City Administration (JCA)

General Profile of Housing Problem

As regards to home tenure system, the proportion of owner-occupied was about 47 % in 1984 and decreased to 34.12 % in 2007. This indicates that currently about 66 % of the inhabitants of the city do not have their own housing, and so that they dwell in different forms of rental arrangements.

Table 1: Distribution of housing units by of tenure status

Tenure status	1984		1994		2007	
	No. HHs	%	No. of HHs	%	No .HH	%
Owner Occupied	5415	47.8	6,919	40.5	10242	34.12
Rented from kebele	5272	46.5	4,913	28.8	5094	16.97
Rented from House Renting Agency	167	1.5	473	2.76	455	1.52
Rented from private households	-	-	2918	17.1	12048	4012
Rent free government houses	76	0.7	1436	8.41	1912	6.37
Paying rent difference	34	0.3	63	0.37	233	0.78
Rented from other organization	-	-	186	1.1	32	10.66
Not stated houses	366	3.2	170	0.99	---	----
Total	11,329	100	17078	100	30016	

Source: CSA (1996 &1990). The 1984,1994 & 2007 of Population and Housing census of Ethiopia

Generally, the housing supply and the number of households are not proportional. The issue of housing quality is also horrific. According to NUPU (1997), only about 24% of the total housing stock of the city is in better condition. Moreover, a sizeable number of households still do not have access to one or more urban amenities.

According to the 2007 Housing and Population Census Report of Ethiopia, a total of 120,960 inhabitants and 32,191 households live in Jimma City Administration. The same report revealed that there are only 30,016 housing units for the whole households. Thus, about 2,175 households are either co-habitants or dwellers of service quarters or homeless.

Table 2: Number of households per housing units in JCA in 1994

No. of housing Units	No. of HHs per Housing units		Total No. of HHs	% of HH
	No	%		
15438	1	90.4	15, 438	80.7
1351	2	7.91	2702	14.1
289	3	1.71	867	5.2
Total		100	19135	100

Source: CSA (1996 &1990). The 1994 Population and Housing Census of Ethiopia result for Oromia Region

Supply of Residential land in JCA Per Annum

According to NUPI's appraisal, to accommodate the new family formation, avoid overcrowding and replace dilapidated housing units, about 2, 070 additional new housing units are needed per annum in JCA. Conversely, the city administration allocated only about 5, 030 building plots for housing between 1992 and 2000, while the total land

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requested was over 10,000. This means that the annual allocation was only about 766 (37%) of the plots needed per annum. On the other hand, from the total plots allocated by the city administration, the share of the inhabitants (ordinary people) was only about 31.8%. This means that the city administration allocated most of the plots to those who were powerful economically and politically.

Table 3: Number of plots allocated by the type of applicants (1992-2000 EC)

Type of Applicant	*No. of plots allocated*	*%*
Residents of various Kebeles	1600	31.80
Schools, college & university teachers	1400	27.83
Other government employees	500	9.94
Diaspora	450	8.94
For housing cooperatives	1080	21.47
Total	5030	100

Source: Jimma City Administration, 2008

In the foregoing section, an endeavor was made to examine the general profile of the residential housing problem and the corresponding residential land supply in the city under investigation. In the next section, an attempt is made to examine the relationship between respondents' characteristics and their access to urban residential land and housing.

General Characteristics of the Respondent

For this study, data were gathered from 216 respondents using the scheduled method. Hence, this section devotes its self to the examination of the general socio-demographic and economic characteristics of the respondents.

As table 4 revealed, the survey covered a total of 216 respondents. Of the total respondents involved in the study, the vast majority (74.1%) were males, while 25.9% of them were females. Most of the respondents were aged 18 and above. Accordingly, a sizeable number (32.4%) of the respondents fall in age group of 39 to 45, followed by those who are between 25 and 31 years. The proportion of respondents above 60 constitutes only 1.4 percent. Regarding religion, all types of religion are practiced in the city, but the followers of Orthodox Christianity constitute the overwhelming majority (49.1%) followed by the followers of Islam religion (25.9%). The share of the remaining faiths such as *Waqefeta* and other Protestant Christianity, including Catholic belief followers was insignificant of the total respondents , 71.8 % of them were married who need to have their own residential land and housing, 21.3% were single, and 14.6% of them were divorced, while 2.3% of them were widowed (Table 4).

Table 4: Socio-demographic and economic Characteristics of respondents

Gender of Respondents	*Frequency*	*Percent*
Female	56	25.90
Male	160	74.10
Total	216	100.00
Age Category of Respondents	**Frequency**	**Percent**
18-24	14	6.5
25-31	49	22.7
32-38	36	16.7
39-45	74	34.3
46-52	24	11.1
53-59	16	7.4
60 and above	3	1.4
Total	216	100.0
Religion of Respondents	Frequency	Percent
Muslim	56	25.9
Orthodox	106	49.1
Protestant	49	22.7
Catholic	4	1.9
Others	1	.5
Total	216	100.0
Marital Status of Respondents	**Frequency**	**Percent**
Married	155	71.8
Single	46	21.3
Divorced	10	4.6
Widowed	5	2.3
Total	216	100.0
Educational Level of Respondents	**Frequency**	**Percent**
Cannot read &write	8	3.7
1 - 6	4	1.9
7 and 8	9	4.2
9 -12	39	18.1
12 +2	45	20.8
BA/ BSc	77	35.6
MA/ MSc	29	13.4
PhD	5	2.3
Total	216	100.0
Monthly Income of Respondents	**Frequency**	**Percent**
Less than 1,500	58	26.9
1,500-3000 birr	30	13.9
3001-4500 birr	54	25.0
4501-6000	34	15.7
Above 6000 birr	40	18.5
Total	216	100.0
Household Size of Respondents	**Frequency**	**Percent**
1 - 3	76	35.2
4 - 6	105	48.6
7 - 9	28	13.0
Above 9	7	3.2
Total	216	100.0
Home Tenure System	**Frequency**	**Percent**
Own occupier	104	48.15
Rental	112	51.85
Total	216	100.0

With respect to education, about 72.1% of the total respondents were qualified to diploma and above while those who were unable to read and write constituted only about 3.7% of the total.

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Some Characteristics of Respondents and Access to Residential Land Nexus

To examine the nexus of access to residential land and some of the socio-demographic characteristics of respondents, the researcher used a cross-tabulation table and chi-square test. According to the cross-tabulation table result, the actual count of males who had access to land was less than the expected count , while the actual count for females exceeded the expected value by nine. In a nut shell, contrary to the common sense, female respondents appeared to be at better position in accessing residential land. An attempt was also made to test whether the observed difference between males and females is statistically significant. To do so, the researcher used the chi-square test.

Research Questions: Is the observed difference between males and females in accessing residential land statistically significant?

a) Null Hypothesis (H_0): $X_1 = X_2 = ….. X_n$

b) Alternative Hypothesis (H_1): $X_1 \neq X_2 \neq ….. X_n$

Table 5: Summary of Chi - Square Tests

Kind of test	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson Chi-Square	7.886[a]	1	.005
Continuity Correction[b]	7.037	1	.008
Likelihood Ratio	7.953	1	.005
Fisher's Exact Test			
Linear-by-Linear Association	7.849	1	.005
N of Valid Cases	216		

As the P value (Pearson's Chai Square value= 0.005) is less than the alpha value (α = 0.05), the null hypothesis must be rejected. Meaning, there is statistically significant difference between males and females in accessing residential land in the area under consideration. The Phi and the Cramer's values were also calculated to see the strength of the association. The calculated values were 0.218, which indicate that there is an association between the two, but the association is weak (0.218 is closer to zero).

Similarly, respondents' access to residential land was also examined in relation to their monthly income using the cross – tabulation table and the chi-square test. Accordingly, the ability to access residential land increases with increasing monthly income, so that, the two are directly related. To confirm whether the observed association between income and access to residential land is statistically significant or not, the Pearson chi square test was used.

1) **Research Questions:** Is access to residential land influenced by income level in JCA?

a) Null Hypothesis (H_0): $X_1 = X_2 = ….. X_n$

b) Alternative Hypothesis (H_1): $X_1 \neq X_2 \neq ….. X_n$

Chi-Square Tests			
Kind of test	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson Chi-Square	30.499a	4	.000
Likelihood Ratio	31.573	4	.000
Linear-by-Linear Association	30.094	1	.000
N of Valid Cases	216		

a. 0 cells (0.0%) have expected count less than 5.
b. The minimum expected count is 14.17.

Since the P- value (Pearson's chi-square test, for instance, is 000) is less than α -value (α=0.05). Therefore, the H_0 must be rejected. This indicates that there is a statistically significant association between respondents' income levels and access to residential land at 0. 05 level of significance. The calculated Phi and Cramer's Values (0.039 each) indicate that there is a moderate relationship between respondents' income and access to residential land.

The cross-tabulation table also indicated that there are insignificant discrepancies between observed and expected values of different religions in accessing residential land. Similarly, the Pearson's chi- square value of access to residential land by different religion groups was 0.760. Hence, the P-value is greater than the alpha value (α= 0.05). This indicates that there is no religion based difference in accessing residential land in the study area. Hence, the null hypothesis must be accepted. An attempt was also made to see the nexus between marital status and access to residential land. Accordingly, H_0 is accepted with p-value 0.000 and α = 0.05.

Identification of significant explanatory variables influencing access to Residential land in JCA

In the analysis of discrete binary responses, both logistic model and the probitmodels are more pertinent. They are used when dependent variables are binary (also called dummy) and take 0 or 1 values. However, for this study, the researcher preferred binary logistic regression, due to the fact that it is easier to interpret and provides odds ratios which is lacking in probit model and others. Moreover, logistic model, as compared to its competitor, the probit model, is less sensitive to outliers and easy to correct a bias (Copas, 1988; Agresti,1996). Access to residential land is taken as a binary decision to have or not to have access to residential land. A respondent is labeled as accessible to residential land if he/she owns residential land; and non-accessible if it doesn't own residential land. To single out the principal explanatory variables influencing the respondents' access to residential land in the area under discussion, the Waldtest was applied. Accordingly, out of 12 independent variables considered in this study, six of them such as gender, household size, and educational level, length of service years, monthly income and duration of stay in JCA found to be the best predictors of access to residential land in the study area, due to the fact that their p-values are greater than the level of significance (α=0.005). Thus, H_0 must be rejected.

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Table 6: Binary logistic regression model results for the factors influencing Accessing residential land in Jimma City Administration

Variables		B	Stand. E.	Wald	df	P-value	Exp (β)	95% C.I .for EXP (B)	
								Lower	Upper
	Gender (1)	1.174	.477	6.061	1	.014	3.236	1.270	8.241
	Household size			14.269	3	.003			
	Household size(1)	5.306	1.711	9.617	1	.002	.005	.000	.142
	Household size(2)	3.995	1.674	5.697	1	.017	.018	.001	.489
	Household size(3)	4.763	1.782	7.141	1	.008	.009	.000	.281
	Education level			18.868	7	.009			
	Education level(1)	.718	1.958	.134	1	.714	2.051	.044	95.281
	Education level(2)	4.436	1.874	5.605	1	.018	84.438	2.146	3322.789
	Education level(3)	4.921	1.618	9.247	1	.002	137.127	5.750	3270.459
	Education level(4)	4.758	1.411	11.368	1	.001	116.542	7.332	1852.368
	Education level(5)	2.127	1.172	3.293	1	.070	8.389	.843	83.444
	Education level(6)	.769	1.116	.475	1	.491	2.158	.242	19.231
	Education level(7)	1.787	1.156	2.391	1	.122	5.971	.620	57.515
	Years of service			13.076	5	.023			
	Years of service(1)	1.961	.751	6.811	1	.009	.141	.032	.614
	Years of service(2)	.571	.670	.727	1	.394	1.770	.476	6.581
	Years of service(3)	-.574	.614	.875	1	.350	.563	.169	1.876
	Years of service(4)	.925	.844	1.200	1	.273	2.521	.482	13.185
	Years of service(5)	.474	.826	.329	1	.566	1.606	.318	8.112
	Monthly Income			23.228	4	.000			
	Monthly Income(1)	4.951	1.078	21.107	1	.000	.007	.001	.058
	Monthly Income(2)	2.622	.815	10.336	1	.001	.073	.015	.359
	Monthly Income(3)	-1.557	.603	6.679	1	.010	.211	.065	.686
	Monthly Income(4)	-.732	.683	1.149	1	.284	.481	.126	1.834
	Stay in jimma			6.751	4	.150			
	Stay in Jimma(1)	-1.521	.719	4.483	1	.034	.218	.053	.893
	Stay in Jimma(2)	-.591	.616	.919	1	.338	.554	.166	1.853
	Stay in Jimma(3)	-.876	.669	1.715	1	.190	.416	.112	1.545
	Stay in Jimma(4)	0.355	.651	.297	1	.586	1.426	.398	5.113
	Constant	4.629	1.706	7.358	1	.007	102.382		

The table of the wald test above additionally showed the relative advantage of different levels of each explanatory variable to access residential land at the study area with respect to their corresponding reference level. For instance, if we take gender, males had 3.236 times special advantage to access residential land compared to females. Similarly, if we look into the Exp (β) of educational levels, with reference to respondents who cannot read and write, those who completed grades 9-12, had 137.127 times chance to access residential land legally or illegally while those who qualified in a diploma (12+2) had a 116.542 times advantage to access residential land. Those who qualified with a BA / BSc, MA/MSC and PHD respectively, had 8.389, 2.1582.158 and 5.971 times better chance to access residential land compared to those who cannot write and read. Regarding monthly income, if we use those earning less than 1500 birr per month as a reference, , those who earn 1500-3000, 3001-4500, and 4501-6000 and above 6000 Birr per month had 0.007, 0,073, 0.211, 0.481 and 0.218 times chance of accessing residential land. Those who earn 1500-3000, 3001-4500, and 4501-6000 and above 6000 Birr per month had 0.007, 0,073, 0.211, 0.481 and 0.218 times chance of accessing residential land. The chance of accessing residential land increases more or less with increasing levels of income.

The general formula for the binary logistic regression is presented as follows

$$Li = \ln_e(P_i/1 - P_i) = Zi = \alpha+\beta_1X_1 + \beta_2X_2 + \ldots \beta_KX_K + \epsilon_i$$

Where Li is the log of the odds ratio; e is the base of natural logarithms; α is a constant; X_1, X_2, …,X_k are explanatory variables; β_1, β_2, …, β_k are estimated parameters corresponding to each explanatory variable; k is number of explanatory variables; and ε_i is the random error.

To test the overall good fitness of a binary logistic regression model, Hosmer-Leme show test of goodness-of-fit was utilized. Accordingly, the P-value found to be 0. 477, which is greater than thealpha value (α = 0.05). Hence, the null hypothesis would be accepted. The model is a good fit.

Mode of Access to Residential Land and Major Problems Associated with Land Supply and Management System in Jimma City Administration (JCA)

In JCA, residents try to access residential land in a quite different ways. Some try to access land formally by requesting the city administration or by buying from legal residents, while others try to accessillegally. As this study showed, the majority (85%) of the respondents secured land formally by requesting the city administration (by allocation or lease base). The remaining obtained by buying from speculators or from the surrounding farmers.

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Land Management Related problems affecting access in JCA

Problem of land management and supply system in JCA is multidimensional. Unclear procedure and steps, lengthy bureaucratic procedure in the formal domain, lack of good governance and rent seeking behavior among JCA workers, poor land management, administration & control system, lack of regulations and enforcement mechanisms were the top five leading problems in JCA, as ranked by respondents. Problems like lack of skilled man power, biasness and nepotism, weak informal settlement controlling mechanisms, amassment of land by the names of family members and rural relatives are among the major problems related to residential land in JCA. Some of these problems affect access to landdirectly, while others affect indirectly by creating land shortage.

Table 7: Land management related problems (As reported by Respondents)

Problems reported	Frequency	Rank
The need for bank deposit in closed account	195	6
Lengthy bureaucratic procedure in the formal land allocation system	210	2
lack of regulations and enforcement mechanisms	198	5
Poor land control system	199	4
Weak informal settlement controlling mechanisms	194	7
Unclear procedure and steps in land allocation	216	1
Amassment of land by family names and rural relatives	97	13
Lack of continuity in land allocation	100	12
Allocation of land from undeveloped city fringe area	125	10
Undeveloped land registration system	70	14
Lack of good governance and rent seeking behavior among JCA workers	200	3
Small size plot for allocation	120	11
Failure to separate genuine and fake housing cooperatives	150	9
Lack of alternative neighborhoods to choose plots from	50	16
Lack of information about date and Place plot allocation	66	15
Extreme Leniency toward land speculation	40	17
Lack of skilled man power who can distribute land	192	8

NB: The number of respondents surpassed 216 because there are multiple responses

5. Discussion

General Characteristics of Respondents

The survey covered a total of 216 respondents (56 females and 160males) whose ages were 18 and above, and engaged in different governmental and private activities. Males accounted for 74% of the total. About 71.8% of the respondents were married. The majority (65.8%) of the respondents earn less than 4501 birr income earners in the city. As regards to education attainment, 72.1% of the respondents were holders of diploma (12+2) and above.

Characteristics of Respondents and Access to Residential Land Nexus

To examine the respondents' major socio-demographic characteristics (such as sex, income, family size, religion, etc.) and access to residential land nexus at the study area, the researcher used a cross-tabulation table and the chi-square test. The result of the test revealed that respondents' socio-demographic characteristics such as income, marital status,gender, educational levels play a statistically significant role in accessing residential land in the study area. A small survey research conducted on Meta Abo Beer Factory workers in Addis Ababa by Solomon (1995) also discovered that access to land is influenced by different socio-demographic characteristics. Mesay and Shushay (2014)who conducted research on factors influenced food insecurity suggested that income, educational level, age, sex of informants is among the important factors to determine food insecurity.

Explanatory variables influencing access to Residential land in JCA

Among the 12 explanatory variables proposed by the writer as important predictors, six of the variables such as income, level of education, family size, duration of stay in Jimma City Administration, gender, and years of service found to be significant variables in accessing urban residential land at 95% confidence level. The rest six explanatory variables were not statistically significant at 95% level of confidence. A study undertaken in Addis Ababa by Solomon (1990) indicated that age of workers; income and other socio-demographic characteristics play a significant role to access building lots. Similarly, the study undertaken by Babatunde & Ighalo (2012) revealed that there is a significant relationship between the level of income of respondents and land ownership in FCC and Minna towns of Nigeria. A study undertaken by Mulu (2016) showed that respondents' characteristics such as level of education, sex, income, age of household and others play a vital role in the decision to use biogas technology at.

Mode of Access to Residential Land and Major Problems Associated with Land Supply and Management System in JCA

The study revealed that the majority (85%) of the respondents at the study area secured residential land formally by requesting the city administration (by allocation or lease base). It is a belief of the writer of this paper that this trend will not persist as the mode of acquisition of residential land in the country is entirely changed from allocation system to the lease system. The lease system is a new land delivery system in Ethiopia, where land is distributed by auction, and hence low and moderate income groups cannot get land by this modality. The management and administration of land in the city was characterized by numerous problems. The problems, indeed, affect the accessibility of respondents directly or indirectly.

6. Conclusion and Recommendations

Land delivery system under different governance systems of Ethiopia has gone through different land tenure systems. During the imperial regime (prior to the 1974) the ownership systems of both rural and urban lands were highly skewed.

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In the urban centers the members of the royal family, the nobility, the bureaucratic elite and the church dignities, owned almost all urban land in Addis Ababa and other major urban centers of the country. The Military junta who smashed Haile Selassie from power in1974 nationalized all urban lands, and land in urban Ethiopia has been distributed to the would be home owners free of charge for more than 36 years (up to the proclamation of lease). Nevertheless, the deficit of urban housing is increasing at an unprecedented rate with each passing day in the country. The Jimma City Administration is one of the urban centers in Ethiopia where the issue of residential housing is still at a critical point from both quantitative and qualitative perspectives, while the supply of residential land is sluggish as opposed to the existing housing need of the inhabitants. For instance, between 1990 and 2000 over 10,000 land seekers filed their application to the city administration to secure land. But the city administration was able to entertain onlyabout40% of the total land seekers. As a result, a significant number of city inhabitants have been obliged to dwell in a overcrowded filthy residential environment lacking in basic urban facilities. The shortfall of residential housing in the city is ascribed to various exogenous and endogenous factors. Of the different exogenous factors; the rate at which new households are formed is among the factors. The city's land administration and management system is also among the exacerbating factors in the city under discussion. On top of this, the promulgation of Proclamation No. 721/2011 (Urban Lands Lease Holding Proclamation),which excludes the urban majority from the formal land market, cannot be put aside.

JCA is the largest coffee market and urban center in the southwestern part of the country. Moreover, it is also the home of JimmaUniversity, one of the public universities in the country.Hence, a massive influx of migrants towards the city has been going on since long ago, and it is hoped that it will continuein the same fashion in the future. This phenomena will aggravate the shortfall of residential land and thereby the shortage of housing and other facilities. Thus, the shelter crisis will undoubtedly be the cause of a thorny political environment inthe country, in general, and in the city, in particular.To stop the problem from occurring, it is important firstly, to assign competent and efficient managers and technocrats to the city government. Secondly, urban land is a scarce resource requiring careful and efficient administration and management system. Thus, the Jimma city administration should start using the modern registration and cadastral system so that it can use its scarce resource efficiently and economically. Thirdly, regional government and the JCA must redesign new land allocation system that takes into account low and moderate income households.

7. Acknowledgements

The author would like to express his sincerest thanks to Jimma University (JU)Research and Publication Office (RPO) for, financially, backing up this research project, and all respondents who showed keen interest to get involved in the study.

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