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ANALYZING THE RESIDENTIAL STATUS OF HOUSEHOLDS IN SUB URBAN AREA: THE CASE OF WOLAITA SODO TOWN, SOUTHERN ETHIOPIA

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Abstract

Urbanization has a significant effect on the residents' life. Thus, this article was designed to analyze the residential status of households in sub urban area of Wolaita Sodo town. In order to achieve the objective, the collected data were analyzed through descriptive statistics (mean, standard deviation, standard error and percent) and inferential statistics (t-test and chi-square). Hence, the result revealed that variables like family size, age of household head and farmland size belongs to residents were significantly associated with evicted household residents than non-evicted ones at 5 percent significant level. However, variables like dependency ratio, saving status of households and sex of household heads were insignificantly associated with residential status of households at 5 percent significant level in the study area. Hence, it was possible to conclude that family size, age of household heads and farm land size were significantly affecting residential status of sub-urban households in the study area.

***Keywords**: Descriptive statistics, Inferential statistics, Resident, Sub-urban, Urbanization*

1. Background and Problem Justification

The united nation defines urbanization as the course of shift in population from a rural to make urban civilization. Numerically expressed, urbanization denotes the increase in the share of population that resides in urban areas predominantly because of net rural to urban migration (UNFPA, 2007). Over the past few decades, our world is urbanizing at an unprecedented speed, as the population residing in urban areas has increased from 30 percent in 1950 to 54 percent in 2014 (www.http://data.world bank.org). Today, only Africa and Asia remain mostly rural, with 40 and 48 percent of their respective populations living in urban areas. However, they are urbanizing faster than the other regions and are projected to become 56 and 64 percent urban, by 2050 (United Nation, 2014).

Urbanization process has been associated with other important aspects such as economic, social, and environment. Based on UN (2014), urban living is often associated with higher levels of literacy and education, better health condition, greater access to social and economic services, and enhanced opportunities for cultural and political participation. Nevertheless, rapid and unplanned urban growth as well as urban expansion threatens sustainable development when the necessary infrastructure is not developed or when policies are not well-implemented. Unplanned or inadequately managed urban expansion leads to rapid sprawl, pollution, and environmental degradation, together with unsustainable production and consumption patterns (UN, 2014).

The rapid urban growth, high population density and high consumption rate of residents in megacities has led to a wide range of local and global socioeconomic and environmental impacts which requires attention from the world community since it will significantly affect the global sustainability and future prosperity. Continuing urbanization or migration from rural to urban areas will expand the number of megacities, and it concedes that megacities are often plagued by environmental deterioration, inadequate housing, traffic congestion, slums, crime, and homelessness and so forth (Makinder, 2012). Brian (2000) proposed urbanization issues such as urban poverty, the rising crime rate, solid waste disposal, housing for the poor, environmental protection, pollution, and so on are being emphasized by the government. Jusoh and Rashid

(2008) argued that those issues need to be tackled holistically to ensure the role of urban center as the engine of economic growth will be continuously maintained and enhanced.

Land is the basic resource for the survival and development of cities and towns (Zhang *etal,* 2010). Urbanization will affect land use change especially along the urban-rural gradients and lead to land use-related problems, such as land changed into discrete land uses, conversion from native to designed land cover or development into a non-contiguous pattern (Shrestha *et al*, 2012). These consequences could then affect the ecosystem and environment properties, including ecosystem services, biodiversity, biogeochemical cycles and climate conditions (Peng *et al*, 2016).

Urbanization, especially urban land expansion, also has a significant effect on the residence life. Sodo town is one of the highly expanding towns in Ethiopia. During the period of 1980s and 1990s, the town showed rapid population growth and urbanization increased followed by limited growth of urban facilities. The allotment of land to individuals to build up house is gradually decreased from $500m^2$ in 1970s and 1980s to $300m^2$ in 1980s and currently, $200m^2$ is allotted for individual to build up house. This was because population increased from time to time. Since the year 2000 the town became the capital of Wolaita zone and a lot of developments were recorded in the construction of government and non-governmental public and private establishments (Sodo town municpaliy,2017).Thus, understanding the process of urban expansion, which reflects urbanization in a spatial-temporal form and its impact on the pattern of land use, could help us cope with the emerging problems with respect to urban development and ensure both environmental and socio-economic sustainability for the ever-growing urban population.

2. Objective

The objective of this study was to analyze the residential status of households in sub urban area of Sodo town, Larena kebele.

3. Materials and Methods

3.1. Description of the study area

Wolaita Soddo is one of the oldest city in Ethiopia with age of about 120 years and highly booming city in trade and investment in the region. The city is located in the strategic place for the southern Ethiopia at the center and it has 7 outlets and inlets which connect the north, south east and west areas through Hossana, Addis Ababa via Woliqite, Soddo Arba Minch, Jinka, Soddo Jima via Waka, Soddo Gofa-Sawula, Soddo Hawassa via Bedessa Morocho and Soddo Addis Ababa via Boditti Shashamene and Sodo- Tebela-Hobicha- Dilla. The relief of the city is mainly characterized by mountains, gorges and plain lands and especially the city has an extensive expansion area to the south,west and east whereas the northern part of the city is mainly constrained by mount Damota. Wolaita Sodo town is situated at a distance of 395 km via Shashemene and 270 km via Hossana south west of Addis Ababa and 170 km from Hawasa. Astronomically, the city is located at $6.49^{o}N$ latitude and $37.45^{o}E$ latitude and longitude respectively. Relatively, the study city is located west of the Great Ethiopian rift valley and at the eastern margin of south western highlands. The city is established at the foot of mount Damota and currently it covers an area of 8382 ha. The highest and lowest altitude of the city ranges from 1600 - 2100 meters (5200 and 6900 feet) above sea level. Accordingly, the average altitude of the city is 1,800 meters above sea level. The mean annual temperature of the city is $20^{o}c$ and the mean annual rainfall is 1,212 mm. The climate of the city is known by woynadega. (Sodo Town Municipality Office, 2017).

Map of the Study Area
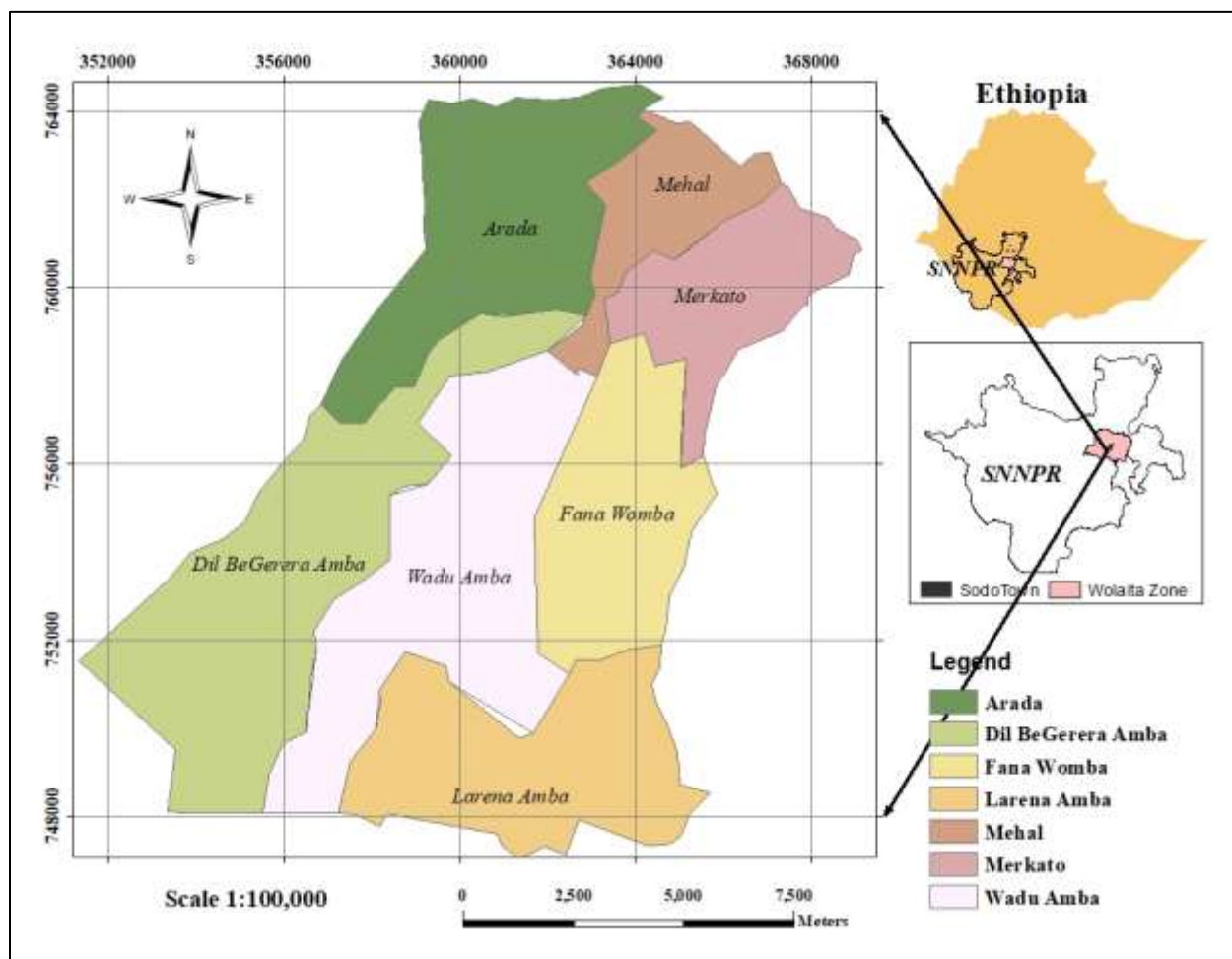
Figure 1: Location map of the study area (Source: Sodo Town Municipality, 2019)

3.2. Sampling technique and Sample size

Based on the 2018 Population Projection by the CSA, the total population of Sodo town was 254,294, of which 125,855 were males and 128,439 were females. It had also 46,956 households. For this study, Larena Amba, kebele 07 was randomly selected among the whole 7 kebeles by using simple random sampling technique. This method was used because; it gives equal chance for all kebeles to be included in the study. The kebele had 5799 households. Among them 120 sample respondents were taken by using systematic random sampling technique. This method was chosen for the reason that individuals were selected at regular intervals from the sampling

frame. The intervals were chosen to ensure an adequate sample size. The sample size for this study was determined by using the formula, as indicated in Bartlett and Higgins (2001). The sample size was calculated by using the formula as follows:

n = _____N_____   where, n: designates the sample size.

$\qquad$ 1+ N (e) ^{2}

N: designates total number of households' residents in the sub-urban area of Larena Amba.

e: designates maximum variability or margin of Error = 0.09.

1: designates the probability of the event occurring.

$$n = \frac{5799}{1+5799(0.09)^2} = \frac{5799}{47.97} = 120$$

3.3. Methods of Data Collection

Questionnaire was the principal source of the data gathering tools in this research. Both close and open-ended questions were prepared by the English language and translated to Amharic for the sample respondents aiming for clarity. Then it was accessed to the sampled household by enumerators to gather relevant data.

3.4. Method of Data Analysis

To analyze the residential status of households' in Sodo town, descriptive statistics like, percentages, ratios, mean values, standard deviation, standard error and inferential statistics like t-test and chi-squares were used to analyses the residential status of households through different indicators in the study area.

4. Result and discussion

4.1. Average family size by status of the households' residents

Average family size for the evicted and non-evicted households was indicated in Table1. Accordingly, figure computed indicated that, the average family size of the evicted households was found was 6.873467 person and 6.078286 persons per family member were non-evicted in sub-urban of Sodo town (Table1). This means, the average family size of evicted households were more than the average family size of non-evicted in sub-urban of Sodo. Statistical result

also show that there is significant mean difference (t=2.1899, P=0.0307) between evicted and non-evicted households at 5 percent significance level in in the study area.

Table 1. Average family size by status of the households' residence

Status of residence	Mean	Std. Err.	Std. Dev.	t -value	P-value
Evicted	6.873467	0. 2318829	2.008165	2.1899	0.0307
Non-evicted	6.078286	0. 1865419	1.103597		

Source: Survey result, 2019

4.2. Average age of households head by status of the household's residence

The average age of evicted household heads were 49.4 year while average ages of non-evicted household heads were 44.3 years in the study area (Table 2). This mean, relative higher average age of household heads was related with evicted household heads in the study area. Statistical result also shows that there was significant mean difference (t=2.6582, P=0.009) between evicted and non-evicted at 1 percent significance level.

Table 2. Average age of households head by status of the household's residence

Status of residence	Mean	Std. Err.	Std. Dev.	t –value	P-value
Evicted	49.4	1.141202	9.883101	2.6582	0.009
Non-evicted	44.31429	1.361395	8.054124		

Source: Survey result, 2019

4.3. Average dependence ratio by status of the households' residence

Average dependence ratio for the evicted and non-evicted households was indicated in Table 3. Accordingly, figure computed indicated that, the average dependence ratio of the evicted household were 0. 5425666 while non-evicted household were 0. 5767154 (Table3). This means, the average dependence ratio of non-evicted households were more than the average dependence

ratio of evicted. However, there is insignificant mean difference (t=-0.3744, P=0.7088) between evicted and non-evicted households at 5 percent significance level in in the study area.

Table 3. Average dependence ratio by status of the households' residence

Status of residence	Mean	Std. Err.	Std. Dev.	t -value	P-value
Evicted	0. 5425666	0. 0556632	0.4820576	-0.3744	0.7088
Non-evicted	0. 5767154	0. 0596897	0.353129		

Source: Survey result, 2019

4.4. Saving status of the household residents

Table 4 shows, the relative saving status of evicted and non-evicted households. Highest percent of evicted households (80.43%) was recorded as non-saver than non-evicted households (19.57%) in the study area. On the other hand, the saving status of non-evicted household was greater than evicted household. This showed that there was average dependence ratio difference between evicted and non-evicted. However, there was insignificant statistical difference ($\chi2=5.4715$, P=0.7019) between evicted and non-evicted household in the study area.

Table 4. Saving status of the household residents

Saving status	Evicted	Non-evicted	$\chi2$	P-value
No	80.43	19.57	5.4715	0.7019
Yes	59.38	40.63		

Source: Survey result, 2019

4.5. Farm land size by status of the households' residents

Average farm land size for the evicted and non-evicted households was indicated in Table 5. Accordingly, the average farm land sizes of the evicted household were 0.731161 while non-evicted household were 0.425143. This means, the average farm land sizes of evicted households were more than the average farm land sizes of non-evicted. Likely the statistical test also shows

that there is significant mean difference (t=0.3680, P=0.0197) between evicted and non-evicted households at 5 percent significance level in in the study area.

Table 5. Farm land size by status of the households' residents

Status of residence	Mean	Std. Err.	Std. Dev.	t -value	P-value
Evicted	0.731161	0. 2362248	1.911793	0.3680	0.0197
Non-evicted	0.425143	0. 1379635	0.407811		

Source: Survey result, 2019

4.6. Sex of the household head by status of the households' residents

Table 6 shows the relative sex status of evicted and non-evicted household heads. Highest percent of evicted household heads (68.63%) was recorded as male household heads in the study area. On the other hand, the household headed by male were evicted than female headed household. This showed that there was some difference between evicted and non-evicted between female headed and male headed households. However, there was insignificant statistical difference ($\chi2$=0.1284, P=0.0.720) between evicted and non-evicted household in the study area.

Table 6. Sex of the household head by status of the households' residents

Sex of household heads	Evicted	Non-evicted	χ^2	P-value
Male	68.63	31.37	0.1284	0.720
Female	62.50	37.50		

Source: Survey result, 2019

5. Conclusion and Recommendation

Based on the analysis of data, the following conclusions were forwarded against identified variables that associated with the status of residents' in the sub urban area of Sodo town. The result revealed that variables like family size, age of household head and farmland size belongs to residents were significantly associated with evicted household residents than non-evicted ones

at 5 percent significant level. However, variables like dependency ratio, saving status of households and sex of household heads were insignificantly associated with residential status of households at 5 percent significant level in the study area. Hence, it was possible to recommend that, the government and non-governmental organization have to give due attention to the households who displaced from their original land due to urban expansion in the study area. In the second place, the municipality should compensate the house holders' financially in a way that they can secure their livelihood permanently. Finally, since majority of the household heads evicted from their residential area and hence, major development projects like industries and hotels should create permanent job opportunities to the householders.

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