

Determinant Factors of Sustainable Urban Land Management System in Tigray and Amhara Regions, Ethiopia Berihu Asgele*

Abstract:

The purpose of the study was to assess the determinant factors of sustainable urban land management in the Tigray and Amhara regions of Ethiopia. A mixed-methods approach with a concurrent nested strategy was employed. A total of 353 questionnaires were collected from implementers and users of the urban land management system; FGDs 8 with implementers and interviews with 24 experts, middle, and top managers were conducted. Quantitative data were analyzed and presented using independent sample t-test, logistic and multiple regressions; while qualitative data were analyzed using a thematic analysis approach. The result indicated that urban land management remains using outdated and traditional systems. People in the Amhara region were more cooperative in the urban land management system than those in Tigray. Nonetheless, the magnitude of the differences in the means (mean difference = -0.36, 95% CI: -0.63 to -0.09) was very small (eta squared = -.029). The main factors of urban land management are lack of commitment, lack of human resources, political influence, maladministration and instability of rules. These factors are hampering the effective management of urban land in both regions. Hence, people are not satisfied with the service of urban land management. Thus, the regional governments need to reconsider the policy, employ an automated system, and work against the identified factors.

Keywords: Urban land management, Determinant Factors, Comparing Tigray and Amhara

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Background and Introduction

The land, which is a limited supply, is critical to urban development (Garba & Al-Mubaiyedh, 1999; Madan, 2015). As nations grew in size and rural areas become urban centers, so these centers become giant metropolitan areas—thus, there is always increased competition as well as demand for land for different purposes (Aribigbola, 2008). The huge demands of urban land because of ongoing urbanization becomes more problematic if there is a problem of identifying who holds what land, which lands are private, which are government-owned, and the various land-use types (Alemie, Zevenbergen, & Bennett, 2015). Many urban problems are linked in one way or another with the operation of the mechanism for managing land (Garba & Al-Mubaiyedh, 1999). Therefore, the management of land can

play an important role in providing conditions for maximizing the potential for a beneficial process of urbanization and minimizing the negative impacts on the poor and vulnerable (Locke and Henley, 2016).

Land management encompasses all activities related to the management of land and natural resources that are needed to realize viable development (Enemark, 2005). Urban land management is a system of interrelated actors and activities as a result of which the most efficient allocation and utilization of urban space, particularly of land, is ensured (Fekade, 2000). The urban land management in Africa is a complicated task since it employs traditional administration systems. Moreover, the urban land administration system is not indigenous. Current urban land management models and

practices applied in Sub-Saharan Africa have been, by and large, borrowed from western countries and often are inheritances of colonialism, except few like Ethiopia (Fekade, 2000). Hence, it is not convenient with the African urban standards and characteristics of the people. The notable deficiencies of urban land management systems in Sub-Saharan Africa are the emergency and proliferation of informal elements like land acquisition, land delivery process, land titling among others (Gondo, 2012a).

Like other African countries, the urban land management system is a challenge and center of wrangle in Ethiopia. Land, for most Ethiopians, is central to livelihood. Land constitutes one of the factors of production, and access to land facilitates access to a key resource in value-adding economic activities (Stebek, 2015). The land management system in Ethiopia is generally weak and surrounded by a growing number of weaknesses and threats (Alemie et al., 2015). Furthermore, the Ethiopian urban land management system is troubled with a high degree of informality (Lindner, 2014). Land management systems are institutional frameworks, which need to be carried out, with the aid of national cultural, political, and judicial settings, and via technology, considering that it is very hard (Enemark, 2005). However, urban land management in Ethiopia is accompanied with the absence of independent institution at the federal and region levels, lack of underlying urban land policy, lack of coordination of the existing institutions, lack of societal participation and transparency, and weak capacity for implementation and monitoring of laws and spatial plans (Alemie et al., 2015). Tigray and Amhara Regions have shared experiences in many of their administration issues. These regions not only share a similar administration system but also have

similar cultures and traditions. Historically, they have many events and practices shared in common both in the urban and rural land management systems. Even though there are slight differences in their urban land management systems, most of their practices are common. Therefore, a study to identify the determinant factors of the sustainable urban land management systems and figuring out if there are differences between these regions is important.

Problem Statement

Urban land is encountered with complex management in Ethiopia because it is a major socio-economic asset and struggle over who controls the land which is the same with the question of controlling power has played a significant role in the history of Ethiopia and could continue to do so (Belachew & Aytenfisu, 2010). Therefore, managing urban land has become a serious challenge since it is the space overall urban activities are carried out (Dube, 2013). There is a complex institutional environment for land administration in Ethiopia (Fairlie, Burns & Kebede, 2017). Moreover, Lindner (2014) argued that the Ethiopian urban land administration system is troubled with a high degree of informality. She has seconded that there is a lack of clear policies in Ethiopia. However, the ruling party argues that the public policies are well and brilliantly formulated but ineffectively implemented. Therefore, assessing the determinant factors of sustainable urban land management system would help expose the reality.

Many empirical studies on urban land management have been conducted in Ethiopia (cf. Gondo & Zibabgwe, 2010, Gondo, 2011, 2012a, 2012b, Achamyeleh, 2014, Dube, 2013, Belachew & Aytenfisu, 2010, Lindner, 2014, Bennett & Alemie, 2016, Tessema, Girma Defere, & Admas, 2016,

Alemie et al., 2015, Kebede, 2017, Sungena, Serbeh-Yiadam & Asfaw, 2014, Weldesilassie & Gebrehiwot, 2017, Belay, 2018, & Mengie, 2017). However, neither of these studies has focused on the determinant factors of urban land management systems. Of course, a handful study (e.g. Lindner and Fairlie et al.) came up with the determinant factors of urban land management systems but their focus was on the institutional factors. Moreover, some of these studies are very narrow in their scope, conducted in a single town/city (Example, Belay, 2018, Dube, 2013, Sungena, Serbeh-Yiadam & Asfaw, 2014, Tessema, Girma Defere, & Admas, 2016); while others are very vast, and conducted at a national level (Example, Mengie, 2017, Lindner, 2014, Weldesilassie & Gebrehiwot, 2017, Bennett & Alemie, 2016). In addition to the high dissatisfaction of beneficiaries on urban land management, therefore, this study is motivated to fill the geographic and content scope gap of previous studies. Furthermore, Amhara and Tigray regions were selected because of the experience and similarity they have on urban land management systems. According to the Ministry of Urban Development, Housing & Construction (2014) report indicated that the 2000-2003 City Proclamations were developed first in Amhara followed by Tigray. In the end, all regions followed, more or less, the result registered in Amhara and Tigray. These regions were centers for an experimental test of the city proclamations, including the urban land management systems. Thus, it is wise to conduct a study in these regions. Hence, the study addressed the following research questions.

How are modern urban land management systems are utilized in the Tigray and Amhara Regions of Ethiopia?

What are the determinant factors influencing urban

land management in Tigray and Amhara Regions of Ethiopia?

Is there a significant difference in beneficiaries' cooperativeness with the urban land management offices in Tigray and Amhara Regions of Ethiopia?

Objectives of the study

The general objective of the study was to assess the determinant factors of sustainable urban land management in the Tigray and Amhara Regions of Ethiopia. The specific objectives are:

1. Assess the utilization of modern urban land management systems in Tigray and Amhara Regions of Ethiopia
2. Identify the determinant factors influencing urban land management systems in Tigray and Amhara Regions of Ethiopia
3. Compare the cooperativeness of beneficiaries with the urban land management offices in Tigray and Amhara Regions of Ethiopia

Literature Review

Urban Land Management

Virtually all human activities require land but, because of the diverse needs of different human activities, there is often intense competition for land (Nuhu, 2007). The land as a source of the economy has always been the subject of debate in the research literature between scholars who favor a neo-classical economic approach to its management and those who favor a political economy approach (Garba & Al-Mubaiyedh, 1999). As the processes of rapid urbanization led to increased competition over land ownership and higher land prices in urban and suburban settings, it is useful to design appropriate Land Use Planning in order to balance conflicting interests (Dadi et al., 2016). Land management is the process of putting the resources of land into good effect, which all activities associated with the management of land and natural resources that are required to achieve sustainable development (Enemark, 2005). The central to land disputes and conflicts is the issue of security of tenure; which demands an enabling land

administration (Nuhu, 2007). Therefore, the vital role of land for development makes it imperative to ensure that it is properly managed (Garba & Al-Mubaiyedh, 1999).

Land administration is concerned with the management of the land tenure system, including arrangements for monitoring and enforcing many of the laws and regulations affecting tenure. In any country, land administration is a product of the political and social development of the nation (Nichols, 1993). Urban land administration is a complex issue and more difficult in developing countries. Therefore, to address the contemporary urban land management related challenges, formulating and implementing policies and laws through the prime consideration of the principles of governance are important to create a harmony between urban people and urban land (Alemie et al., 2015). Effective urban land management is not only left to the government or another body. Successful sustainable land management efforts rely on stakeholder support and integration of stakeholder knowledge (Klaus, 2005). Considering the complexity of sustainable development, sustainable land management – is supposed to support a sustainable (land) development – has as well to be defined as process orientated as action-orientated (Lange, Siebert, & Barkmann, 2015). They have argued that in urban land management it is not only a matter of what kind of development can be achieved but also of how this is done (e.g. participatory, transparent). Hence, urban land management highly requires the involvement of different stakeholders with genuine participation, transparency, equity, etc.

Urban Land Management in Ethiopia

Urban land governance in Ethiopia is neither a new phenomenon nor adopted from other western countries, unlike other African states. The urban land management system has traced back to the Imperial regimes. It has been practicing based on the indigenous systems in a long time. The urban land management system in Ethiopia is reaching this period through many ups and downs. It has

been accompanied by different informalities and challenges, as well as good practices in its path. Historically, the issue of land in Ethiopia has been a vital and sensitive topic throughout different times (Achamyeleh, 2014). Even though urban land management responsibility is given to the city administrations in Ethiopia, the system is different among the cities. Gondo (2012) argued that urban informality in the land management process is plural and characterized by multiple linkages in Ethiopia. According to him like many other developing countries, the land management process in Ethiopia has not been immune to the growing phenomenon of urban informality. Besides, one of the main problems in urban land administration is the absence of clear legislation as well as confusion about the applicability of legislation (Lindner, 2014). Of course, the legislation by itself has not any problem but implementers do not obey the rules and regulations rather, provide circular letters during implementation.

A good land administration needs clarity on land issues and the decisions of the body responsible for administrating land at any level (Belay, 2018). The government has made efforts to address rural and urban land administrations by strengthening land administration systems and the development of Land Use Planning at national and regional levels (Dadi et al., 2016). Even though efforts have been carried out to develop the policy and legislative framework for urban land administration, these initiatives need to evolve into scaled up (Fairlie et al, 2017). The current Ethiopian land administration programmes are not harmoniously coordinated between national and regional levels (Belachew, 2010). Urban land management policies in Ethiopia are not backed by detailed guidelines and working procedures; coordination problems impinge upon the efficiency of infrastructure provision; there is lack of systematic land management information system that would serve as a basis for decision making; and there is lack of capacity to effectively implement, monitor, and update urban land

management related policies (Yusuf, Tefera & Zerihun, 2009). Nevertheless, the Ethiopian government is confident enough about the quality and content of the policies, and it always advocates through media the policies are well formulated.

Materials and Methods

Study Design and Sampling Techniques

This study employed a mixed-method approach; more specifically, a concurrent nested design was applied. The study employed both primary and secondary data sources. The primary data were collected using key informant interviews, focus group discussions, and questionnaires. Secondary data sources were collected from the reports and plans of urban land management offices. The urban land management policy of Ethiopia was also reviewed.

This study was conducted both in Tigray and Amhara regional states of northern Ethiopia. The focus of the study was on the regional and zonal capital cities due to its center to business and investment. The regional capital cities i.e. Mekelle and Bahir-Dar were taken purposefully because the demand for urban land in these cities is very high. Besides, they have a large population size and a high flow of people. Next to the regional capital cities, the Zonal capital cities have a high demand for land and investment. Amhara and Tigray have ten and six Zonal capital cities respectively. Among these three randomly selected cities were targeted. Thus, the Adi-Grat, the Axum, and the Shire from Tigray and Debre-Berhan, Dessie and Gondar from Amhara were taken. Next, the urban land management office of each selected city was taken purposively because the mandate for urban land administration was given for them. At last, the individual respondents were recruited using two different ways. On the one hand, beneficiaries were recruited using a convenient sampling method. Volunteer beneficiaries who visited the urban land management offices during the data collection process were taken for this study. On the other hand, employees or implementers of urban land

management were recruited using a systematic random sampling method. The list of all employees in each selected urban land management office was collected from the human resource. Finally, implementers were drawn based on a certain number of intervals. 48 from each selected city and a total of 384 participants were recruited in this study. Finally, 353 completed surveys were returned, representing a response rate of 91.9 percent.

The total population for this study was not known. Hence, it was calculated based on the following Kothari (2004) formula employed in the unknown population.

$$(Z^2 \cdot p \cdot q) / e^2 \dots\dots\dots 1$$

$$((1.96)^2 \cdot (.5)(1-0.5)) / ((0.05))^2 = 384$$

Where: Population is Unknown;

e = .05 (since the estimate should be within 5% of the true value);

z = 1.96 (as per the table of the area under the normal curve for the given confidence level of 95%).

As we want the most conservative sample size, we took the value of p = .5 and q = 1-p.

In the interview part, the managers of the urban land management offices and regional directors were recruited purposefully based on the reason that they have a thorough knowledge and information concerning urban land management systems. Thus, one interviewee from each city urban land administration office and both the regional urban land directors totally, ten key informants were recruited. Moreover, case team coordinators were recruited purposefully to participate in the focus group discussion due to their responsibility and detail knowledge on the issue. One in each regional capital city totally two focus group discussions were conducted in this study.

Data Collection Tools

A questionnaire, key informant interview, and focus

group discussions were employed in this study.

Questionnaire:

A semi-structured questionnaire was developed to collect data on the factors of urban land management. The questionnaire has consisted of five Likert scale questions. The questionnaire had open-ended and close-ended questions.

Key Informant Interview:

This instrument was administered to key informants who were selected purposefully. Semi-structured interviews were conducted with all the managers of the urban land management offices in the selected cities and two directors of the regional urban land management. Interviews were conducted to investigate thoroughly the determinant factors based on the experience of the top managers and triangulate it with the quantitative data.

Focus Group Discussion:

Focus Group Discussions were conducted in the regional capital cities with team coordinators in the implementing institutions. The participants in each FGD were ranged from 8 to 10 experts. It was employed to elicit a wide variety of different views about the factors of urban land management systems. It was employed to offers the opportunity of allowing people to probe each other's reasons for holding a certain view. Moreover, it enabled participants to argue on the determinant factors and the reason behind it, and finally reach censuses on it. Therefore, it substantiated the quantitative result through triangulations.

Document review:

Documents in the urban land management offices like annual reports and plans were reviewed to substantiate the first-hand information.

Model Specification and Data analysis

Multiple and logistic regression models were employed in this study. Multiple regression analysis was employed to distinguish existing relationships between effective urban land management systems and its determinant factors such as governance, motivation, skill, teamwork, leadership, politics,

commitment, and human resources among others. Therefore, the eight explanatory variables were used to predict the dependent variable (effective urban land management system). The choice of explanatory variables has been obtained from existing literature in the area. The adopted model assumed the following statistical formula;

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + \epsilon_i \quad (i = 1, 2, \dots, N)$$

Where Y = Effective urban land management system

β_0 to β_7 = Are parameters to be estimated

X1= Governance

X2= Motivation

X3= Skill

X4= Teamwork

X5= Leadership

X6= Politics

X7= Commitment

X8= Human resource

The logistic regression model was applied to identify technology-related determinant factors on urban land management system's effectiveness. Moreover, it determined the difference of the explanatory variables as well as the effectiveness of urban land management systems between the two regions i.e. Tigray and Amhara. The logistic regression model answers the question 'how do you see the status of urban land management systems' that the answer is effective, or ineffective. The numerical values of 0 and 1 were assigned to the two outcomes of a binary variable. Hence, the 0 represented a negative response i.e. ineffective and the 1 represented a positive response i.e. effective. The choice of explanatory variables was made on the basis of a review of literature on urban land management systems and the urban land policy of Ethiopia. The logistic regression model can be

expressed mathematically as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + u_i$$

Model variables were therefore defined as follows;

Y = is the dependent variable (i.e. status of effective urban land management systems, 0=ineffective and 1=effective)

β_0 = is the intercept (constant) term

β_1 to β_7 = coefficients of explanatory variables

X1= Regions (1=Amhara 2= Tigray)

X2= Standardized cadaster

X3= Digital service delivery

X4= Automation system

X5= Digital identity number

X6= Land grabbing

X7= Green area development

An independent sample t-test was also employed to see the significant difference between the two regions in citizens' cooperation on the urban land management process. The qualitative data were first transcribed and summarized according to the objectives of the study. Therefore, the qualitative data obtained through the interview, FGD and document review were described qualitatively in the description.

Model Evaluation

In the regression process, all the assumptions were conducted and checked in order to proceed into the main analysis part. Therefore, in the multiple regressions, the results which were presented in the table labeled Coefficients; the two values Tolerance and VIF (Variance inflation factor) calculated the collinearity diagnostics. According to Pallant (2016), Tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model and is calculated using the formula

$1-R$ squared for each variable. If this value is very small (less than .10) it indicates that the multiple correlations with other variables are high, suggesting the possibility of multicollinearity. The other value given is the VIF (Variance inflation factor), which is just the inverse of the Tolerance value (1 divided by Tolerance). VIF values above 10 would be a concern here, indicating multicollinearity. Therefore, all the values of Tolerance are above 0.10 and all the values of VIF are below 10. Hence, the study has not violated the multicollinearity assumption.

Moreover, the preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. One of the ways that these assumptions can be checked is by inspecting the Normal Probability Plot (P-P) of the Regression Standardized Residual and the Scatter-plot that were requested as part of the analysis. In the Normal P-P Plot, the points are lying in a reasonably straight diagonal line from bottom left to top right. This indicates that there is no major deviation from normality. In the Scatterplot of the standardized residuals, the residuals are roughly rectangularly distributed, with most of the scores concentrated in the center (along with the 0 points). Deviations from a centralized rectangle suggest some violations of the assumptions (Pallant, 2016).

In the model summary, R square explained how much of the variance in the dependent variable is explained by the model (which includes the independent variables). In this study, the value is .569. Expressed as a percentage (multiply by 100, by shifting the decimal point two places to the right), this means that the model (which includes governance, motivation, skill, teamwork, leadership, politics, commitment, and human resources) explains 56.9 percent of the variance in effective urban land management systems. This is quite a respectable and a big result. To assess the statistical significance of the result, it is necessary to look at the ANOVA result. This tests the null hypothesis that multiple R in the population equals 0. The model in this study reached statistical

significance (Sig. = .000; this really means $p < .0005$). In the logistic regression model, the goodness-of-fit test in this study was analyzed using:

The Omnibus of Model Coefficients gives us an overall indication of how well the model performs, over and above the results obtained, with none of the predictors entered into the model (Pallant, 2016). For this set of results, we want a highly significant value. In this study, the value is .005 (which really means $p < .005$). Thus, the chi-square value for this study is 20.23 with 7 degrees of freedom.

The Hosmer & Lemeshaw Test also supported the model as being worthwhile. For the Hosmer-Lemeshaw Goodness of Fit Test poor fit is indicated by a significance value less than .05, so to support our model we actually want a value greater than .05 (Pallant, 2016). Therefore, in this study, the chi-square value for the Hosmer-Lemeshaw Test is 3.228 with a significance level of .863. This value is larger than .05, therefore indicating support for the model. The Cox & Snell R Square and the Nagelkerke R Square values provide an indication of the amount of variation in the dependent variable explained by the model (Pallant, 2016). In this study, the two values are .103 and .159, suggesting that between 10.3 percent and 15.9 percent of the variability is explained by this set of variables.

Results and Discussions

This section presents the result of the study. The urban land management systems were evaluated based on the performance indicators included in the urban land management and development policy of Ethiopia formulated in 2011. The result indicated that the urban land management systems in both regions are not effective

As it is indicated in Table 1, binary logistic regression was performed to assess the urban land management systems on the likelihood of its effectiveness. The model contained seven independent variables (region, standardized cadaster, digital service, automation system, digital identity number, land grabbing, and green area development). The full model containing all

predictors was statistically significant, $\chi^2 (7, N = 186) = 20.23, p < .005$, indicating that the model was able to distinguish the effectiveness and ineffectiveness of the urban land administration. The model as a whole explained between 10.3% (Cox and Snell R square) and 15.9% (Nagelkerke R squared) of the variance in urban land management effectiveness. Amhara region is 2.86 times more likely to exhibit effective urban land management than the Tigray region. As shown in Table 1, only three of the independent variables made a statistically significant contribution to the model. The strongest predictor of effectiveness was green area development, recording an odds ratio of 1.80. This indicated that Amhara is over two times more likely effective in green area development than Tigray, controlling for all other factors in the model. The odds ratio of .45 for the automation system was less than 1, indicating that Amhara is .45 times less likely to report having an automation system, controlling for other factors in the model.

The qualitative result (specific from which method, interview of FGD) indicates that the land banking system is introduced in both regions in the near past, but it is not auditable and has no effective system of implementation. Moreover, land banking is not started appropriately, especially in small towns. Thus, there is no modern handling and management mechanism of land banking. There is land inventory, but a land information system is not effective because of material shortage, lack of human resources, and lack of educated employees. Even though the counting of small free plots, giving identity number of plots and registration is started, the ownership right for the small free plots and other lands under ownership controversy are still not finished. So, without accomplishing all these issues, it is difficult to bring it into land banking.

Despite starting the cadaster system, trained professionals and established an office, it is not decentralized into all the Woreda towns. On one hand, the cadaster system is only found at the regional level and on the other hand, even at that level, it is not implemented effectively. Hence, it is

Table 1: Binary Logistic Regression Predicting Likelihood of Reporting Effectiveness in Urban Land Management

	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio		
							Lower	Upper	
Step 1 ^a	Region (1)	1.052	.404	6.776	1	.009	2.86	1.297	6.325
	Standardized cadaster	.130	.218	.359	1	.549	1.14	.744	1.745
	Digital service delivery	.115	.325	.126	1	.722	1.12	.594	2.120
	Automation system	-.800	.387	4.267	1	.039	.45	.210	.960
	Digital identity number	.363	.332	1.192	1	.275	1.44	.749	2.758
	Land grabbing	.262	.264	.991	1	.320	1.30	.776	2.179
	Green area development	.589	.288	4.196	1	.041	1.80	1.026	3.167
	Constant	-3.822	.854	20.039	1	.000	.02		

a. Variable(s) entered on step 1: region, standardized cadaster, digital service, automation system, digital identity number, land grabbing, and green area development.

Table 2: Multiple Linear Regressions on the factors of Urban Land Management

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	.396	.186		2.132	.034
	Governance	.175	.078	.167	2.258	.025
	Motivation	-.072	.046	-.106	-1.563	.120
	Skill and ability	-.156	.089	-.156	-1.757	.081
	Teamwork	.177	.077	.195	2.302	.022
	Leadership	.367	.084	.365	4.353	.000
	Politics	.311	.068	.338	4.554	.000
	Commitment	.121	.048	.160	2.537	.012
	Human resources		-.123	.055	-1.151	.253

a. Dependent Variable: Effective urban land management

not functional till now because of material shortage.

Even though automation and digital service are mentioned in the policy, they are not functional. In the Tigray region, the plot numbers are entered into soft copy, but still, there is a problem of possessing appropriate software. Except for AutoCAD, there is no modern system utilized in urban land management. For example, in the Tigray region, land parcel identification number was started, but it was stopped because of an unclear standard. Of course, the files and the land are now in the process of harmonization, but the modern systems are not fully functional. Even though there is interruption in the implementation process, relatively urban land information management is good. But still, there is poor utilization of technology in the urban land management system on the available resources. Furthermore, the illegal urban land grabbing, illegal constructions, and illegal practices on the land are common. A little bit of the urban land grabbing is decreased, but it is not stopped.

As it is indicated in Table 2, a multiple regression was

run to predict the effectiveness of urban land management based on the factors (governance, motivation, skill, teamwork, leadership, politics, commitment and human resources). These variables statistically significantly predicted the effectiveness of urban land management, $F (9, 175) = 25.637, p < .0005, R^2 = .569$. Among the eight, six variables added statistically significantly to the prediction, $p < .05$. Therefore, the major factors for the effective urban land management are governance, teamwork, leadership, politics, commitment and human resources.

The qualitative result indicated that implementers do not know the contents of the urban land policy appropriately. So, they are implementing the policy without understanding its objectives and intended outcomes. Besides, commitment is a major problem in the implementation process. Urban land

administration is the riskiest and sensitive area. A slight risk does not have any excuse. The minor error does not consider a mistake, instead, it is considered as a misuse of power or corruption. Therefore, implementers are hesitant to implement urban land management appropriately; instead, they are escaping from giving a decision because a minor error in the land issues lets them cost a lot.

Table 3: Citizens' cooperativeness comparison on the urban land management between the two regions

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	Mean	Std. Deviation	F	Sig.	t	df	Sig. (2-tailed)			
Cooperativeness of citizens										
Amhara	2.82	.91								
			Tigray	2.46	.95	.175	.676	-2.71	189	.007

The focus group discussants addressed that the proclamations on urban land such as proclamation no. 818 Urban Landholding Registration, Urban Lands Lease Holding Proclamation no. 721/2011, Urban Planning Proclamation No. 574/2008, Expropriation of Landholdings for Public Purposes and Payment of Compensation proclamation no. 455/2005, and Re-Enactment of Urban Lands Lease Holding Proclamation 272/2002 have gaps. For instance, Urban Lands Lease Holding Proclamation 721/2011 states "If essee, with the exception of inheritance, wishes to transfer his leasehold right prior to commencement or half-completion of construction, he shall be required to follow transparent procedures of sale to be supervised by the appropriate body." What does half-completion mean? It is not clearly stated in the proclamation. Thus, the ambiguity in the proclamations is hindering the urban land management systems. Furthermore, the annual report of the urban land management offices in both regions indicated that the available numbers of human resources are not carrying out the workload of the office because of the number of employees and customers are not matching. The urban land

management offices did not fulfill the required demand for human resources.

The annual plan of Mekelle and Bahir Dar cities' urban land management office indicated that they would fulfill all the necessary materials for the budget year. However, the annual report for both cities indicated that they had material shortage like a laptop, computer, stationery materials, tables, and other office equipment and logistics supplies (vehicles for fieldwork). There is no network to check Google Earth. Besides, a lot of factors in urban land management, inter alia, complexity of illegal work on urban land, integrity problem, delay in service delivery, lack of responsibility, frequent change of regulations, shortage of budget, lack of controlling illegal construction, inappropriate compensation, contradiction of proclamations and addressing it through circular letter are included in the annual reports. The cabinet of the town gives decisions out of regulation and the implementation is carried out accordingly. Thus, the professionals and political appointees do not agree on the urban land issue. As a result, ineffective communication between these

two bodies affects urban land management.

There is a difference between the two regions in the structure and implementation process of urban land management. For example, the Tigray region gave 70 square meter residence land for unions while this program is not applicable in the Amhara region. They have also valuation difference of urban land.

Another major problem is that the structure plan of cities and the actual at the ground is different. The residential areas, business areas, investment areas, and green areas provided in the structural plan are not exactly found at the ground. For instance, the satellite image of Mekelle city is not designed based on the facts at the ground. In this city the residential area in the structural plan found to be a forest, the business area became the residence and contrariwise at the ground. Thus, it hinders to implement urban land management effectively.

As it is indicated in Table 3, an independent-samples t-test was conducted to compare the cooperation of beneficiaries in the urban land management process between the regions of Tigray and Amhara. There was significant difference in scores for Tigray (M = 2.46, SD = 0.95) and Amhara (M = 2.82, SD = .91; t (189) = -2.71, p = .007, two-tailed). The magnitude of the differences in the means (mean difference = -0.36, 95% CI: -0.63 to -0.09) was very small (eta squared = .029). Even though the effect size was small, there is a significant difference between Tigray and Amhara on the cooperation of beneficiaries in the urban land management process.

Both the interview and focus group discussion result indicated that people were not satisfied with the urban land issue and its management. The beneficiaries react in a negative way when they dissatisfied or disappointed by the service renders. They quarreled and insult with the implementers. Moreover, citizens reflected complaints through illegal control of urban land, illegal buildings, conflict with the implementers and hiding information. Therefore, citizens' cooperativeness with the implementers is low.

Conclusion and Recommendations

The purpose of this study was to assess the determinant factors of sustainable urban land management in the Tigray and Amhara regions of Ethiopia. The urban land management and development policy of Ethiopia has clearly stated standardized cadaster, digital service, automation system, digital identity numbers for plots, etc. as performance indicators of urban land administration. However, these performance indicators are not effectively implemented in both regions. Of course, cadaster and digital identity numbers for plots are commenced but it is not yet efficiently implemented. This implies that the existence of a well-designed policy is good but not sufficient condition for sustainable urban land management. Comparatively, Amhara showed

effective urban land management in green area development than Tigray while it was less likely to report having an automation system. To address these problems, on one hand, both regions should have to share experience based on their effectiveness. For example, Tigray should take the experience of green area development from Amhara and vice versa in the automation system. On the other hand, the regional governments shall do with all stakeholders that render effective service delivery to make the urban land service online. Finally, strong land information administration and management systems are required because having all these in places helps for efficient and transparent land management in the regions.

Sustainable urban land management has not yet achieved despite the endeavor of the two regional governments to address the problem. The major factors of urban land management systems in the two regions are the absence of good governance, ineffective teamwork, leadership failure, political interventions in the decision process and appointment of leaders, lack of commitment and shortage of human resources. Moreover, shortage of budget, shortage of material, illegal land invasion, unfair compensation for farmers, contradicting laws, circular letters, and inappropriate structural plans are factors of urban land management systems.

It is, therefore, recommended that appropriate intervention through effective training for the implementers and education for the general public. Moreover, proper monitoring and evaluation strategies in place to manage the emerging and evolving factors of urban land management systems. Strengthen the institutional capacity of land administration is also required to address the factors and stay independent. It is also stressed that urban good governance which is explained by elements including equity, efficiency, transparency, responsiveness, accountability, sustainability, subsidiary, participation, and security must be well ensured in the regions. Finally, advanced planning and re-considering urban land policy are important.

Beneficiaries are not working in cooperation with the implementers because of the major factors aforementioned. Besides, there is a significant difference between the two regions. Citizens are more cooperative with implementers in Amhara than Tigray though the effect size was small. Therefore, the regional governments should work collaborating with the beneficiaries by creating a consultation and participatory podium.

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