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Addis Ababa University

Building Ethiopia Since 1954

The Role of Local Actors in Urban Management and the Emerging Trends of
Informal Settlements in Peri-Urban Woldia, North Wollo, Ethiopia.

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ABSTRACT

The role of local actors in urban management and the emerging trends of informal settlements in peri-urban Woldia, North Wollo, Ethiopia.

There has been a steady growth of informal settlements in peri-urban Woldia. Therefore, understanding what triggering factors, what local actors are, and how informal land and infrastructure are accessed and secured in these areas can assist decision-makers in making an informed decision. However, little is known about these issues in peri-urban Woldia. Hence, the purpose of this study is to examine the main triggering factors, prominent local actors, and the mechanisms of accessing and securing land and infrastructure in Woldia's peri-urban areas. Data were collected from 336 individuals through questionnaires (242 persons), interviews (85 persons), FGDs (9 persons), field observations, and reviewing documents. The data were analyzed quantitatively and qualitatively. Several factors contributed to informal settlements' development, including socioeconomic, demographics, administrative failings, and legal failures. Administrative failings have been cited as the main cause of informal settlements in Woldia's peri-urban areas by 21.49% of questionnaire respondents. A large amount of money through informal deals, compared to meager legal compensation, was also mentioned by 14.46% of respondents. Inefficient land provision (by 12.81% of respondents), an ever-increasing urban population, backdoor deals (by 11.16% of respondents), and an increase in the peri-urban land price (by 10.74% of respondents) were also considered driving factors for informal settlements. In addition, 10.33% of respondents cited difficulty obtaining land for housing cooperatives, whereas 9.09% cited easily accessible land on an informal basis as a key factor. Lengthy bureaucratic procedures to acquire land formally (by 5.37% of respondents) and rural-urban migration (by 4.55% of respondents) were cited as contributing factors. It also found that old-age urban land management policies contributed to informal settlement proliferation. Various local actors are involved, including land brokers, peri-urban farmers, non-governmental organizations, farmers, speculators, and retirees. The primary method by which peri-urban land is accessed and secured is through loan-borrow agreements, fake sales, and fake donations. Farmers in peri-urban areas were convinced to enter informal land deals through various strategies. People in peri-urban areas, for example, are told their lands will be taken by people unfamiliar with their culture. Peri-urban farmers are also persuaded by

local actors to sell their land before moving to the urban area with meager compensation. Informal dwellers are also hindered from establishing basic infrastructure due to spatial, economic, social, and political barriers. Without basic infrastructure, suppliers and clients (informal dwellers) frame coping strategies. Charcoal, firewood, and torchlight can be substituted for electricity by informal dwellers. Various interventions were tried, yet all failed. As a matter of witness, informal settlements are perpetuated. Hence, to make the most of urban advantages, proactive strategies are recommended: urban land and housing affordability, neighborhood renewal, infilling unused land, rural-urban linkages through planning, building Land Information Systems (LISs), and breaking up corruption chains.

Keywords: *Actors, Informal Settlement, Peri-Urban, Urban Land Management, Woldia*

Fentaw Baye Adal
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Declaration

I, the undersigned, declare that this thesis is my own and original work, and has not been presented for a degree in any other university and that all sources of materials used for the thesis have been duly acknowledged, following the scientific guidelines of the University.

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Confirmation

The thesis can be submitted for examination with my approval as an academic's supervisor.

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PUBLISHED ARTICLES AND SUBMITTED MANUSCRIPT

1. Published Articles

- 1.1 Baye, F., Wegayehu, F., & Mulugeta, S. (2020a). Drivers of informal settlements at the peri-urban areas of Woldia: Assessment on the demographic and socio-economic trigger factors*. *Land Use Policy*, 95 (February), 1–11.
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- 1.2 Baye, F., Wegayehu, F., & Mulugeta, S. (2020b). Dataset on demographic and Socio-economic triggers of informal settlements: a case study from the peri-urban areas of Woldia. *Data in Brief*, 30, 105667. <https://doi.org/10.1016/j.dib.2020.105667>
- 1.3 Baye, F., Adugna, D., & Mulugeta, S. (2023). Administrative failures contributing to the proliferation and growth of informal settlements in Ethiopia : The case of Woldia Township. *Heliyon*, 9(3), e13758.
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ABBREVIATIONS AND ACRONYMS

| | |
|--------|---|
| CSA | Central Statistical Agency |
| EMM | Ekurhuleni Metropolitan Municipality |
| FGDs | Focus Group Discussions |
| GIS | Geographic Information System |
| NDP | Neighborhood Development Plan |
| SPSS | Statistical Package for Social Science |
| UNDP | United Nations Development Programme |
| UNECE | United Nations for Economic Commission for Europe |
| UNESDA | United Nations, Department of Economic and Social Affairs |

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Throughout human history, most people have led a rural lifestyle; however, in the first decade of the 21st century, the majority of people have begun leading an urban lifestyle (Beall & Fox, 2009; Florida, 2017; Haregewoin, 2005). In the global context, all future population growth will hence occur in cities and towns. It is believed that in the coming century, there will be another 7 or 8 billion people - more than there are today - moving into cities, with the majority of them living in the poorest countries of the developing world (Cities Alliance, 2015; Florida, 2017; Lombard, 2014; Moreno, 2016). In the meantime, according to estimates, some one billion people, or one-third of the world's urban population lives in informal settlements, a population characterized as 'a billion squatters' by Neuwirth (Neuwirth, 2005). Between 2007 and 2025, the bulk of the annual population growth in developing countries is expected to be 2.27% compared to a mere 0.49% in developed nations (UN-Habitat, 2009). This remarkable increase in the rate of population growth and urbanization implies that urban areas in developing countries are being urbanized faster than urban areas in developed countries. The United Nations reported that an overwhelming 62 percent of the urban population in sub-Saharan Africa lives in informal settlements, compared to 43 percent in South Asia, mostly characterized by the insecurity of tenure, poor infrastructure, and lack of basic services.

Much of future urban growth in developing country cities are expected to take place in unplanned peri-urban areas and expanded metropolitan regions where informal development is widespread (UN-Habitat, 2009, 2014). Indeed, the number of people living in informal settlements worldwide will grow staggeringly. Thus, from the perspective of an urban or regional planner as well as from the perspectives of local or regional authorities, informal settlements might become a more and more challenging problem in the years to come (UN-Habitat, 2014).

As a developing country, Ethiopia is one of the fastest-urbanizing countries (Cities Alliance, 2015). In this regard, it is believed that due to natural population growth and the inevitable rural-to-urban migration, coupled with poor agricultural performance, the rate of urbanization in Ethiopia will increase significantly in the coming decades and those mid-

sized cities and new suburbs will double every ten years (Cohen, 2015; Davis, 2006; Pacione, 2011; Yirgalem, 2008).

Within this massive concentration of people in the urban area, the competition for space will increase to bitter levels where urban land is getting scarce and costly (UN-Habitat, 2014), and whether it gets used to construct houses, offices, roads, schools, green spaces, parking lots or other structures-or lies vacant-depends on capital and the manipulation of power in urban politics (Blair, 1974). Solving the housing and infrastructure crisis is especially hard. Renting, buying, and providing houses increase in price as landowners and private interest play a monopolistic, restrictive, and high-priced "monopoly" game on the real 'land' market (Blair, 1974; Florida, 2017).

Like elsewhere in urban areas in Ethiopia, urban growth in Woldia, among others, includes changes in the spatial (physical) aspects reflected by the conversion of the peri-urban agricultural lands. In 1994, the total area of Woldia was estimated to be 355 hectares (Baye, 2009). In the year 2018/19, according to the data obtained from the municipality of the town based on the existed land use, the total area of the town is 2097 hectares. This means that the amount of urban area increased by about 1646 hectares (463.67%). This outward expansion and consequent rural land encroachment consumed 1646 hectares of the surrounding areas including agricultural lands within 24 years. This implies that the annual rate of urban expansion between 1994 and 2018/19 is 19.32%. This rapid rate of urban expansion in Woldia has compounded with the growth of informal settlements (Baye et al., 2020). Informal settlements are getting prevalent in the peri-urban areas of Woldia.

As of this time, it is estimated that almost 80 percent of the peri-urban population are residing in informal settlements, and the number of such cases is increasing (Baye et al., 2020). Additionally, they are located at a distance from the central business districts on marginal land. This prevents the residents from being integrated into the larger urban structure and limits their access to basic infrastructure, social, and economic opportunities. The rapid expansion of informal settlement in the peri-urban areas of Woldia, thus, has recently caused concerns as cases continued and solutions on how to reduce and eradicate it are in demand (Baye et al., 2020; Moreno, 2016).

Despite this, local governments have given less attention to how these patterns of settlements come into existence. There is also no research on the role of local actors in the

emergence of informal settlements in the peri (urban) areas of Woldia. The failures to fully examine the main triggering factors, the role of local actors in the emergence of informal settlements, as well as how informal settlers can access and secure infrastructure thus, is a matter of concern. Research into these issues in peri-urban areas in Woldia has been very scarce due to the dearth of research in this area. Thus, in response to these situations and the existing knowledge gap, this research is attempted to investigate the principal triggering factors, the role of local actors for the emergence of informal settlements, and mechanisms of accessing and securing infrastructure in the peri-urban areas of Woldia.

1.2 Statement of the problem

Urbanization in Ethiopia is occurring at a more rapid rate and the competition for urban land is becoming intense. In Ethiopia, the growing demand for land for urbanization has primarily been met by expropriating peri-urban land and reallocating it through the lease system, despite the failures of urban planners and managers to meet these demands (Adam, 2014; Yirgalem, 2008). Due to this, it has left many citizens homeless and without access to safe water or sanitation, while the haphazard patterns of urban development have contributed to economic inefficiency, environmental degradation, and human suffering (Adam, 2014). In these circumstances, when administrations are incapable to satisfy the demand for affordable urban land through formal channels, other informal methods of acquiring land and infrastructure generally grew to meet the demand, particularly in the peri-urban areas “where land is more easily available, where people can escape the costs and the threats of urban land regulations, and where there is a possibility of combining urban and rural livelihoods” (UN-Habitat, 2009, p. 10).

To that effect, urban areas, for example, in Africa have been dominated by widespread informal settlements. An overwhelming 62.2 percent of the urban populations in sub-Saharan Africa live in informal settlements (UN-Habitat, 2009). Characteristically, Ethiopia as a developing country in Africa, its urban areas are no exception. Accordingly, as many developing countries, its urban areas have been experiencing a rapid rate of urbanization, which is one of the driving forces for the mushrooming of informal settlements on the fringe of urban areas. Woldia is one of the urban areas in Ethiopia where the outgrowth of informal settlements is widespread (Baye et al., 2020; Baye et al., 2023).

Despite there being no records on the actual number of people occupying informal settlements in the town administration of Woldia, the total sizes of houses demolished due to their informalities were 167 in the year 2014, costing at least 768 of the town's population within a year (in Ethiopia, the average family size is 4.6, CSA, 2016). Again, although data is still regrettably fragmented, in the years 2015 and 2016, the corresponding sizes of houses demolished due to their 'informalities' were 173 and 79, respectively. In consequence, in addition to the economic cost to the people, this causes many problems: people are dislocated because of evictions; their social networks are broken; they lose their neighbors, social structures, and their safety nets.

The other issue that deserves attention is that in this time of globalization, super-speed internet, smartphone, supersonic means of transportation, etc., 80% of the peri-urban population in Woldia are living in informal settlements (Baye et al., 2020) where the formal means of infrastructures and utility deliveries are neglected. To this effect, the areas lack the basics for a decent quality of life, such as clean drinking water, sewage systems, electricity, and health care centers and schools that constantly function. On top of that, except *Adengur* and *Wassie*, the rest are viable for flooding, rock falls, mudflow, earthquake, and landslides.

The other problem is that informal settlements have not received adequate development attention and peri-urban residents live in hard conditions. It implies that the settlers face challenges of sustainable development and this suggests that there is a lot of work to be done to avoid these problems. More importantly, when people occupy land informally, it also deteriorates the town's internal revenue, as land leasing is considered the principal source of local revenue. These and other related issues constitute the research problem for this empirical research.

There is a large body of work in Ethiopia related to urban and peri-urban issues (Adam, 2014; Baye, 2009; Kassahun, 2010; Shishigu, 2007; Tekaye, 2016) to name a few examples. However, the role of local actors in promoting informal housing and settlement development in medium-sized urban areas, such as Woldia, is not discussed. A notable exception is the work of Yirgalem (2008), which analyses the role of local actors in the emergency of informal settlements in Addis Ababa, Kolfe Keranio sub-city. Hence, studies on the role of actors within informal settlements are meager. This scarcity of systematic scholarly research on the role of local actors for the emergence of informal settlements in

medium-sized towns thus calls for further empirical investigations to support the formulation of guidelines and help build and manage peri(urban) land management systems.

So far, some studies are done in Woldia on urban issues such as Baye (2009), Fasigo (2009), and Tekaye (2016). The researcher is not aware of any previous work on this topic in Woldia. The above works are not addressing the main triggering factors and the role of local actors concerning informal settlement growth which need to be assessed by this study. In this regard, the research is unique in that there is no study conducted in Woldia using these attributes.

When viewed in this light, these gaps are, thus, offer key opportunities for the current study in Woldia. Therefore, this research seeks to fill these gaps that other studies did not address by taking case neighborhood peri-urban areas in Woldia. This study answers the reasons why people appoint for such informal settlements, how local actors access land and infrastructure informally, and what impacts brought to such settlement development by taking case neighborhood peri-urban areas in Woldia.

1.3 Objectives of the Study

1.3.1 General objective

The general objective of this study is to explore the key drivers of informal settlements and describe the role of local actors in accessing and securing land and infrastructure informally in Peri-urban Woldia town.

1.3.2 Specific objectives

The specific objectives of the study are to:

1. Explore the main triggering factors for the emergence of informal settlements in the peri-urban areas of Woldia.
2. Investigate the mechanisms in gaining access to land for housing in the peri-urban areas of Woldia.
3. Assess the role of local actors in accessing urban infrastructure in the peri-urban areas of Woldia.
4. Review the past and current land management practices in Woldia in light of housing affordability and informal settlement.
5. Suggest solutions to ameliorate the growth of the informal settlement.

1.4 Research questions

1. What are the main triggering factors for the emergence of informal settlements in the peri-urban areas of Woldia?
2. How informal land is accessed for housing in peri-urban areas of Woldia?
3. How urban infrastructure and basic services are accessed (secured) by key local actors in informal settlement areas?
4. How do the past and current land management practices in Woldia contribute to and/or regulate the outgrowth of informal settlements in the peri-urban areas of Woldia?
5. What solutions are needed to ameliorate the growth of informal settlements?

1.5 Significance of the Study

The issue of land for housing is a very serious concern in Woldia. With rapid urbanization, informal settlement continues to be a challenge in the current expansion in the town. To attain a better understanding of the concern of informal settlements, there is a need for a detailed study on how, for example, informal settlements came into existence, and how policy interventions and management approaches operate within the given socio-economic and political structure in the town. There is also a need for reconsidering the issue of informality and assessing the political, social, economic as well as institutional constraints that have contributed to the dysfunctional development of the urban area. Moreover, studies should be conducted on how the local actors are involved in the urban land and infrastructure accessing and securing mechanisms as well as management practices. The other most noteworthy problem in addressing informal urbanization issues and in assessing the performance of urban management systems in the urban area is the dearth of information.

Thus, research at the local level needs to be developed to supply the local governments with the necessary information they need to make informed decisions by creating a new understanding of what works and what does not. In every sphere of human activity, information drives every decision. It is more likely for good decisions to be made if the information underlying the decisions is better. Better information results in better decisions ([Sarokin & Schulkin, 2016](#))

So, studying the causes for the growth of informal settlements and problems on the informal land and infrastructure accessing and securing mechanisms, as well as, the role of actors and their strategies in the town is timely and decision-makers take an informed decision. Furthermore, despite its different geographic scope, the empirical findings in the peri-urban areas of Woldia can provide insight into how informal land and infrastructure accessing and securing is reflected and impacted across other peri-urban areas of Ethiopia or Africa that are experiencing similar socio-cultural and administrative irregularities.

The purposes of the research are to explore the key drivers for the growth of informal settlements and describe the role of local actors in accessing and securing urban land and urban utilities, and their outcomes at the rural-urban fringe of Woldia Town.

Table 1.1 Basic research questions and sub-research questions

| Research questions | sub-research questions |
|---|--|
| 1. What are the major reasons that drive people to choose informal settlements in the peri-urban areas of Woldia? | <ol style="list-style-type: none"> 1) What are the main socio-economic and demographic drivers for the growth of informal settlements? 2) What are institutional/administrative flaws caused the growth of informal settlements? 3) What policy and legal framework failings driver the development of informal settlements? 4) How do the local actors manipulate the legal ambiguities or reinterpret the formal rules to access land to the people? |
| 2. How informal land is accessed for housing in peri-urban areas of Woldia? | <ol style="list-style-type: none"> 1) Who are the key local actors involved in the informal land accessing processes? 2) What roles do local actors play in informal land deals within the given socio-economic and political structure? |
| 3. How urban infrastructure and basic services are accessed (secured) by key local actors in informal settlement areas? | <ol style="list-style-type: none"> 1) What are the chief causes of failure to deliver urban infrastructure at the rate required by the peri-urban settlers? 2) How are urban infrastructures and/or basic services supplied and distributed in the informally settled peri-urban areas? |
| 4. How do the past and current land management practices in Woldia contribute to and/or regulate the outgrowth of informal settlements in the peri-urban areas of Woldia? | <ol style="list-style-type: none"> 1) What are the failures of the past and contemporary land management practices associated with informal settlement development? 2) What intervention measures have been taken by the local government bodies to ameliorate the outgrowth of informal settlements in the study areas? |
| 5. What solutions are needed to ameliorate the growth of informal settlements? | <ol style="list-style-type: none"> 1) What solutions are needed to ameliorate the growth of informal settlements from for example planning perspective? |

(Source: Constructed by the author, 2019)

1.6 Delimitations of the Study

Geographically, the research is carried out in the ‘peri-urban’ areas of medium-sized Woldia town, which is found in the North Wollo Zone. One reason for favoring and scoping in a medium-sized local urban area is that the next century will be known as the “urban century where most of the world's critical issues are urban issues, and where the leadership role is taken up to address these challenges come from local [levels]” (Badcock, 2002, p. 2). Besides the geographical scope of the study, of the wide range of urban topics worthy of study, my purpose here is to look into the key drivers for the outgrowth of informal settlements and means of accessing and securing urban land for housing, basic infrastructures, and services to settlers. I also delimited the study to peri-urban settlers because they are the most targeted population in the study. Additionally, the study is delimited to people from administrative offices such as the town mayor, municipality, town *kebele* offices, and private land speculators, land brokers, and other key informants who thought to show the characteristics of this study.

1.7 Limitations of the Study

The study is about a big problem in Ethiopia (with particular emphasis on Woldia) where institutional mechanisms for land administration and management have been broken down. One of the findings of the study highlights deep deficiencies in land administration and a high incidence of land sector corruption. In this context, conducting research in an insecure and unstable political environment brought methodological challenges and limitations to the study.

As with any research, this research brings some limitations as to what the researcher can conclude from the results so that it is to ensure that the results of this study are not overstated. The first limitation is that the study excluded individuals other than the informal settlers, land brokers, land speculators, key informants, and officials that come from the mayor, *kebele* offices, and municipality. They, therefore, limited the possibility to get more information about policies and strategies that affect the nature of informal settlements from the excluded population. The second research problem that I encountered was that, given the unauthorized nature of informal settlements, some experts from Woldia *Woreda* rural land

administration and utilization department were not cooperative and were not willing to provide information. Two facets caused this problem. The first is that some experts refused to give any information despite repeated visits for 'polite refusal.' The second issue is that the office has also stopped working for over a year after the experts in the *Woreda* rural land administration and Utilization office were alleged to have land sector corruption.

1.8 Description of the study area

1.8.1 Location and Topography

Geographically, Woldia lies astronomically between 11° 48' N-11°50'N latitudes and 39°34' E-39°36'E longitudes. Administratively, Woldia town is the capital town of North Wollo Zone, *Guba Lafto Woreda* and Woldia town Administration, and is becoming a seat of all these levels of government offices. The town is located at a distance of about 521 km from, Addis Ababa; 360 km from the regional capital, Bahir Dar; and about 180 Km. from Lalibela. Woldia comprises a total of 6 urban and 4 rural *Kebeles* with an area of 2097 hectares.

Weldia and its surroundings are characterized by rugged topography due to geological processes, with alternating terrain ranging from mountains, ridges, hills, plains, and slightly inclined flat lands. Woldia is flanked by Mount *Gubarja* in the east, and Mount *Gebrael/Ariro* in the north. It is because of these topographic constraints that the town is experiencing rapid growth towards the south, northwest, and west. The general topography of the area slopes down towards the center of the built-up area and finally continues toward the southwest and west of the Town. To the west of Woldia lies the flat plain of *Mechare* which is the alternative area for further expansion extending to *Tikur Wuha and Melka Demo* rivers. At the moment, when one sees Woldia aerially, it takes a shape of a hollow, and the town is expanding almost in a compacted geometry.

1.8.2 Size and population growth rate trends

Historical documents reveal that 150 people were living in Woldia at the time of its founding. Since its foundation between 1784 and 1788, as per the data obtained from the North Wollo zone population statistic department, the town has grown to house 83,806 residents today. Both natural increase and massive rural-to-urban and urban-to-urban

migrations have contributed to the rapid growth of the population of the town. Due to its administrative, economic and location advantages over other urban centers, the town has attracted a large number of people from other areas and it comprises, according to the 2019 zone population statistic department, over 31.93% of the total urban population of the zone. The population size of Woldia disaggregated by sex is shown in Table 1.2.

Table 1.2 Population size of Woldia disaggregated by sex between 1984-2019

| year | Male population | | Female population | | Total population size |
|------|-----------------|-------|-------------------|-------|-----------------------|
| | size | % | Size | % | |
| 1984 | 6,413 | 41.85 | 8912 | 58.15 | 15,325 ^a |
| 1994 | 11,689 | 47.65 | 12,844 | 52.35 | 24,533 ^a |
| 2007 | 23,000 | 49.85 | 23,139 | 50.15 | 46,139 ^a |
| 2014 | 35,154 | 51.43 | 33,198 | 48.57 | 68,352 ^a |
| 2016 | 39,262 | 51.48 | 37,069 | 48.52 | 76,331 ^a |
| 2019 | 42,396 | 50.59 | 41,410 | 49.41 | 83,806 ^b |

(Source: ^a CSA (1984, 1994, 2013), and ^b North Wollo zone population statistic department)

Similarly, the detail of the population growth rate matrix of Woldia is shown in Figure 1.1.

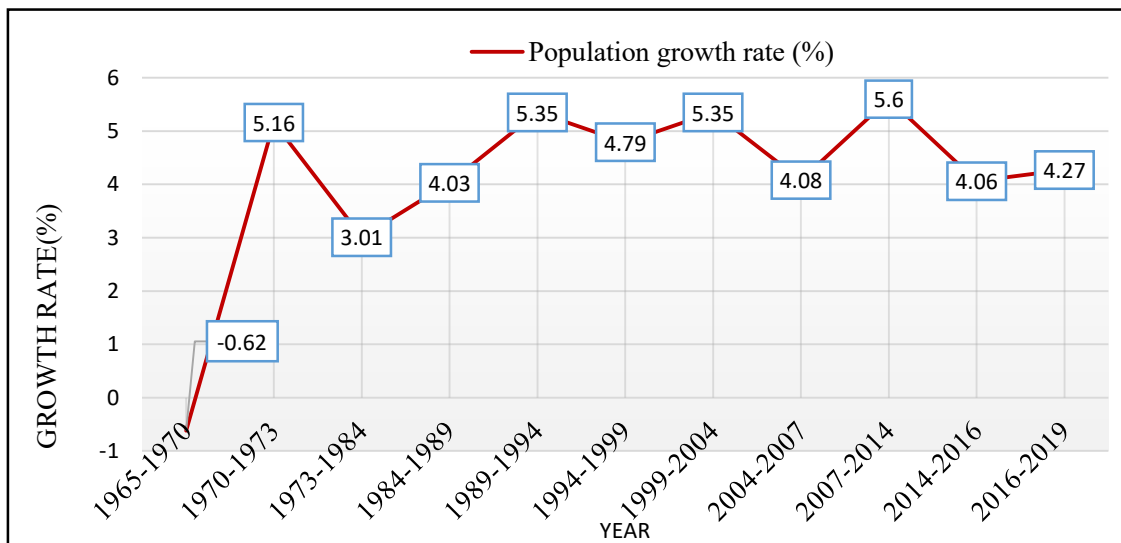


Figure 1.1 Trends of the population growth rate of Woldia from 1965-2019

(Source: Computed based on survey data, 2019)

1.8.3 Urbanization

The spatial expansion of the town has been almost stagnant since the period of growth during the 1980s. Since then, the spatial expansion/ growth of the urban area of the town of

Woldia has stagnated and only minor expansion has occurred from the spreading out of low-density individual houses.

While only two to three decades ago the peri-urban areas of Woldia consisted of dispersed rural small houses with-single story settlements where agriculture was widely practiced, these days construction overwhelmed these settlements with little or no farmland. As shown from the historical urban expansion of Woldia, the rapid growth of the urban area of the town is mainly a recent phenomenon, widely observed starting from the last quarter of the 20th century. The shape and direction of the town's expansion for the years 1965, 1986, 1992, 2009, and 2019 are presented as shown in Figure 1.2.

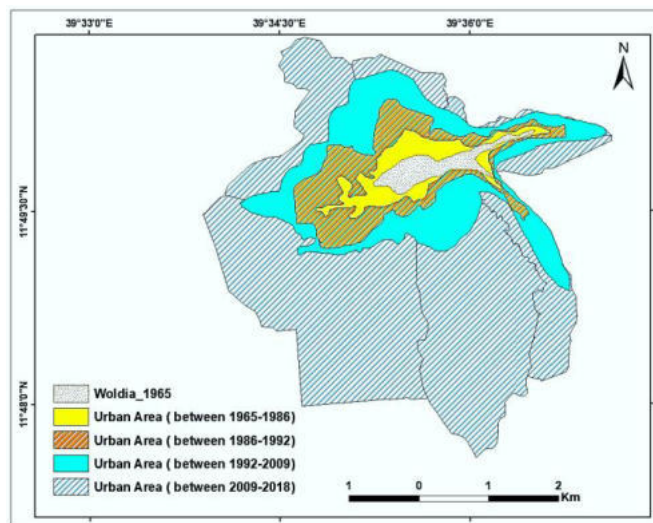


Figure 1.2 The spatial expansion of Woldia (1965-2018)

(Source: The author)

Woldia town is one of the fast-growing urban areas in Ethiopia. Although the town initially evolved in a linear shape pattern outward following the main roads (look at the shape of Woldia town until 1992), now it is growing largely towards north, south, west and southwest directions. The expansion of the contiguously built-up area follows the highways and into the surrounding rural areas connected by three radial roads with other towns of the country. *Mechare, Michael, Adengur, Teklehaymanot* and *Ariro* are some of the areas which are incorporated into the built-up area of the town between 1992 and 2019.

Despite the extensive expansion of Woldia since 1965, the rate of growth in the town is oscillating. This is due to the effect of socioeconomic and political conditions at different times in the country. For example, as one can see from Figure 1.3, the urban expansion rate

between 1992 and 1994 was minimal because it is the immediate time after the downfall of the Derg in which the government might stabilize the effects of the war.

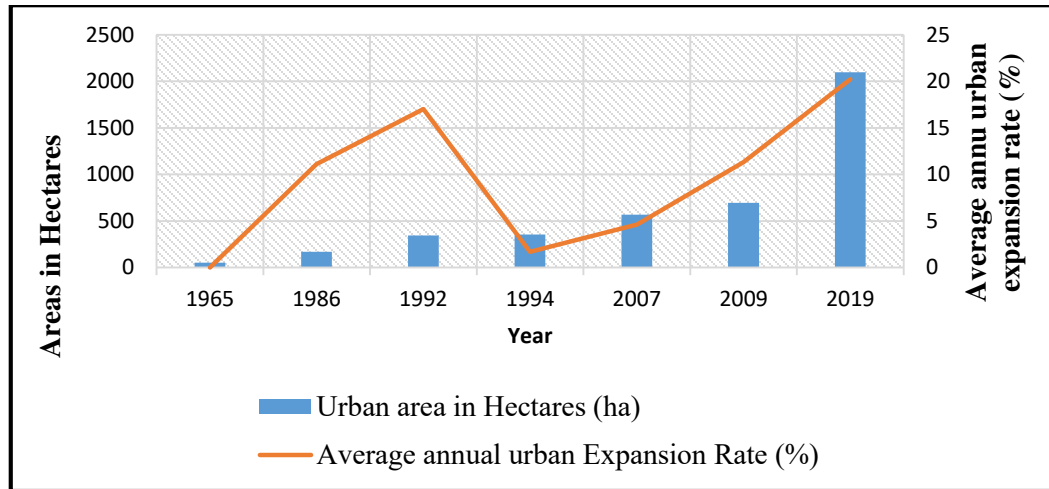


Figure 1.3 Area of Woldia (ha) and mean annual growth rate (%) between 1965-2019
(Source: The author based on field survey, 2019)

1.9 Organization of the document

This document is organized into six chapters. The first chapter is the introductory chapter. It consists of sections and sub-sections that present a description of the general background to the topic and the study area, a statement of the research problem, objectives and research questions, significance of the study, limitations of the study, delimitation of the study, and organization of the dissertation. The second chapter presents the concept of key terms, and the review of the theoretical and empirical literature. Specifically, the theoretical framework of this chapter presents the theoretical principles and the empirical findings of the study in light of informal settlements. The third chapter deals with the research methodology used in this study including a brief description of the study areas, the selection of study areas, research design, data sources, sampling procedures, data collection instruments, data collection procedures, data analysis and presentation, and validity and reliability of the study. The fourth chapter presents the main research findings and/or results, discussion and implications of the study in light of the first four basic and sub-operational research questions. Chapter Five presents the potential solutions to ameliorate the growth of informal settlements. Chapter six, presents the conclusion, areas for future research, and recommendations of the study based on the findings of the research output.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A literature review is the foundation of every study and forms the context of the study. An important outcome of the literature review is to identify the gaps and trends in my area of research. The takeaway from this literature review includes the main issues in my area of interest. With this knowledge, I can determine how to address the gaps and capitalize on the trends to shape my research and make meaningful contributions to the field. This is to ensure what is known, how much of what is relevant in my particular situation, and how it adds to what has already been studied. This in turn will help me gain a deeper understanding of the current state of my research area, enabling me to take a more informed approach to my research. This also helps me in the discussion part to reflect on how my findings complement or contradict the literature review. Hence, this chapter is written in light of this notion.

2.2 Concept of Key Terms

2.2.1 Informal Settlement

There is no single universally accepted definition of the term and concept of informal settlements. To this end, the meaning of informality is open to debate (Harris, 2017). Numerous synonymous terms have been used in different works of literature to refer to informal settlements. These terms, for example, include “spontaneous, informal, uncontrolled, makeshift, irregular, unplanned, illegal, self-help, unauthorized, semi-permanent, marginal, and peripheral settlements” (Potter & Lloyd-Evans, 2014, p. 139). Moreover, self-made cities, (UNECE, 2009); Shanties, Squatter settlements or slums (UN-Habitat, 2009); self-help housing (Abrams, 1964), unguided settlements (Wherwein, 1942), slums (Khan, 1994), ‘informal space’, the ‘unplannable city’ that lies beyond the sphere of regulations, norms, and codes (Roy, 2016). Some literature frequently used the terms slum, squatter, and informal settlements interchangeably than others.

The United Nations defines a slum as a place where people live with anyone of “five deprivations”: clean water, improved sanitation, a sufficient living area so as not to be overcrowded, durable housing, and secure tenure. The squatter settlements on the other hand

connote settlements, especially on public or unoccupied land without right or title deed/legal document. The crucial characteristic of squatter settlement is the illegality of tenure. The squatter occupies land that is legally owned by another without his consent (UN-Habitat, 2009). Though an unambiguous definition of informal settlement is still lacking, some scholars and organizations have defined informal settlements. Harrison defines informal settlements as settlements where “houses are constructed outside of the formal housing delivery mechanism” (Harrison, 1992, p. 14).

Informal settlements are also defined as human settlements, which for a variety of reasons do not meet requirements for legal recognition and have been constructed without respecting formal procedures of legal ownership, transfer of ownership, as well as construction and urban planning regulations mainly characterized by informal or insecure land tenure, inadequate access to basic services, both social and physical infrastructure, and housing finance (Huchzermeyer, 2002).

The United Nation-Habitat International defines informal settlements as:

i) residential areas where a group of housing units has been constructed on land to which the occupants have no legal claims or which they occupy illegally; ii) unplanned settlements and areas where housing is not in compliance with current planning and building regulations and the neighborhoods usually lack, or are cut off from, basic services and city infrastructure. They are considered illegal because people have occupied the land illegally, subdivided the land illegally, built [it] illegally, and consume water and energy illegally. They work illegally, too. (UNECE, 2009, p. Viii)

On Ethiopian urbanization review, an informal settlement includes three components known internationally: (i) construction on plots for which no legal land rights exist; (ii) construction on legally held plots but outside planned territories, and (iii) construction that is not in compliance with land use requirements and/or construction standards (Cities Alliance, 2015).

Similarly, ‘*Zikre-Hig*’ of the council of the Amhara National Regional State, hereafter termed as ‘the Revised Urban Land Lease Holding Regulation No. 103/2012’ (ANRS, 2012) defines informal settlements as follows.

Informal settlements are unlawful construction [or] any type of construction which is constructed on illegal/unlawful holding [or] land which is not recognized by the appropriate organ and held unlawfully or on legal holding where an appropriate organ did not allow

construction permit, or construction which lack planning permission from the urban authorities due to its inadequate services, physical layouts, ownership characteristic or its location beyond the urban perimeter. (ANRS, 2012, p. 4)

In the Ethiopian situation in general and the study area in particular, the definitions suggested by the Cities Alliance (2015) and 'Zikre-Hig' of the council of the Amhara National Regional State, Regulation No.103/2012, are the most widely applicable and fit the aspects of the informal settlement for this work. Therefore, these definitions are accepted as a working definition for this study.

2.2.2 Peri-urban

As far as the term can be traced, the 'urban fringe' in the sense of peri-urban had appeared for the first time when Smith's discussed the "urban fringe" around Louisiana in 1937 signifying "the built-up area just outside the corporate limits of the city (Pryor, 1968). Some of the terminologies used interchangeably are fringe, inner fringe, urban fringe, urban shadow, the exurban zone, rurban fringe (Martin, 1975) cited in Bryant et al. (1982).

The notion of peri-urban is also elusive, multi-faceted, and is defined in different ways by different scholars. To this end, there are several terminologies by which peri-urban is described by various authors. Peri-urban can be defined as a place, a process, or a concept. As a concept, peri-urban is when rural and urban activities meet; as a process, peri-urban is the gradual transformation of rural areas as they attain more urban characteristics; and as a place, it is the region between rural and urban zone (Narain & Nischal, 2007).

The peri-urban is, thus, leading to still poorly understood spatial, sociocultural, demographic, economic, and environmental realities but changing constantly both through time and space (Allen, 2010). The peri-urban interface as a phenomenon/process is often characterized by the gradual loss of rural values and increased urban attributes over time. Socioeconomically, peri-urban areas are heterogeneous and subject to rapid changes over time. Small farmers, step-wise migrants, informal settlers, industrial entrepreneurs, and urban middle-class commuters may coexist in the same territory (Allen, 2010) as shown in Figure 2.1.

The peri-urban is something neither completely urban nor rural. In light of this Wehrwein (1942) noted that urban fringe/peri-urban is the transition zone between the well-

known areas of urban development and those devoted to farming. Hence, the built-up city is not necessarily continuous with the political boundary in which case the economic and sociological city, the area within which people live the urban way of life has extended far beyond the city limits; in other cases, farms on which people live the rural ways of life are found within the political boundaries of cities.

The peri-urban is the transitional boundary zone where rural and urban features co-exist. The area where the urban and rural land uses intermix and is located within the urban sphere of influence, and where suburbanization takes place is the working definition of the peri-urban area used for this particular study

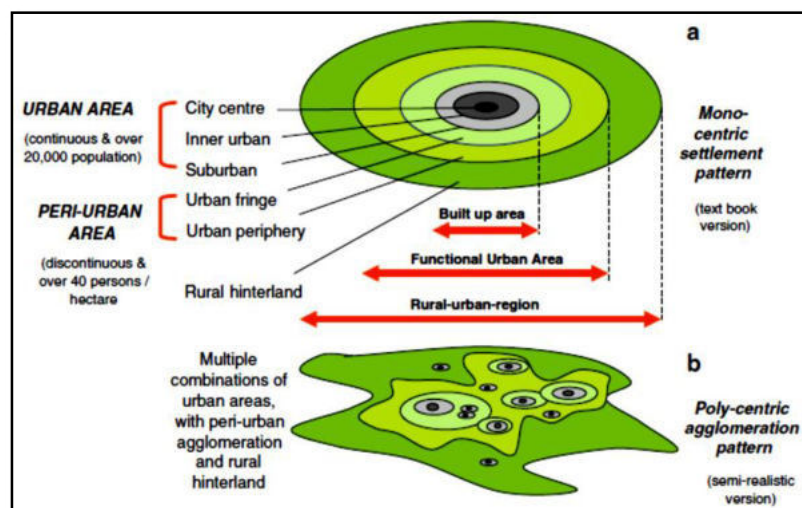


Figure 2.1 The sphere of peri-urban areas and/or rural-urban fringe
(Source: [Ravetz et al., 2013, p. 18](#))

2.2.3 Actors

Actors could be human (visible) actors and non-human (invisible) actors in dealing with informal settlement issues. In this study, human actors also called players are individuals and/or groups of people who are involved in the process of informal settlement development in which they each play an essential role because of what they can contribute. Non-human actors on the other hand refer to invisible actors such as legal systems, societal cleavages, land and building regulations, and government policies. In this study, visible actors such as humans could be influencing the development of informal settlements in the peri-urban parts of the town with invisible actors such as rules/regulations. That is, even though invisible actors are not directly involved in the outgrowth of informal settlements, they make human

actors do things that they would not normally do (Cowan & Carr, 2008) at least as a result of legal ambiguities in the best of the greater good (Zhu et al., 2019).

In the peri-urban areas of Woldia, where rapid urbanization is getting the norm, human actors such as private developers, government officials, land brokers, speculators, people in traditional institutions, landowners, informal dwellers, and other urban actors played an important role in bringing people into the area of informal settlement. Therefore, they are viewed as informal land and infrastructure accessing and securing agents that are responsible for advancing almost entirely informal land settlement and infrastructure delivery in peri-urban areas of the town.

In addition to the visible actors, the existence of legal ambiguities for example in the land policy provokes people to rush into the area of informal settlements. That is, though legal ambiguities by themselves are not directly involved in unlawful constructions, local human actors of various kinds use them to do so. With this in mind, in this thesis, the term actors are used to refer to human actors that took part and non-human actors that contribute to a large-scale informal settlement development in the case location neighborhood peri-urban areas of Woldia.

2.2.4 Land brokers

Land brokers are individuals and/or groups of people who are the agents/actors involved in informal property development where they often operate in a far less structured method of operation and the illegal nature of their work in an environment. They are the key to the accessing and securing of land and infrastructure in the (in)formal land commercialization ranging, for example, from public officials to individual entrepreneurs and single farmers, with each group having a rather different set of impacts to access land and settlement development (Thirkell, 1994). To this end, Doebele (1994, p. 49) states that “the evolution of the informal land development process into a planned and highly lucrative business operated by specialized agents and bringing together lawyers, brokers, land officials, court clerks, kin groups and local civic and political leaders should not be overlooked”. So, in this thesis, land brokers refer to those people who are involved in the sale or transaction of plots either formally or informally in informal locations with an opportunity of making quick commissions.

2.2.5 Land speculator

A precise definition of the term "speculator" is difficult to come by. Hence, it is critical to understand what land speculation is and who land speculators are in this study. To that end, land speculation, in general, is all about speculation relating to future growth, future land prices, future government policies, and facilities (like transportation, etc.). People for example may speculate the direction and magnitude of future urban growth. Such speculation can influence how urban areas are managed and developed in the future (Bhata, 2010; Bogue & Bogue, 1957). Kropinski (1970) defines land speculation as:

The holdings of land resources in their present use—and often in lower uses than those justified by the prevailing market conditions—while awaiting an expected increase in property sales value or any holdings of land property with the hope that it can later be sold at a profit. Hence, practically, all property owners qualify as speculators. (pp. 13-14)

In stark contrast, speculators are people who often anticipate a future rise in the value and price of a commodity. Hence, any person who is involved in property deals could be considered as a speculator as far as he/she anticipates the increase in the future price of his/her property (e.g. Wheat, lumber, minerals, animals, coffee, land, etc.). As the land is hoarded for many years, the gradual increase of land values will grant a profit in due time.

Generally, in this thesis, the term land speculator describes a person who purchases and/or holds large areas of unimproved land (often in its agricultural land) intending to sell it at a time when land values have risen sufficiently to make the sale profitable. Developers, investors, brokers, residents, and other individuals may be considered as land speculators so long as they take advantage of this unique situation to make their fortunes (large or small). There is a possibility that the identified categories of land speculators may overlap.

2.3 Theoretical Review

2.3.1 Actor-Network Theory (ANT)

Due to the subject matter of this thesis, Actor-Network Theory (ANT) is relevant in this work; ANT deals here with the structuring and networking of actors in the urban land and infrastructure access which is worth noting here. In it 'networks' refers to sets of interpersonal relations that connect various actors. ANT was mainly introduced into the urban management context with the work of Bender et al. (2010). Subsequently, several

studies theoretically and empirically investigated various aspects of actors' associations within the context of community, urban and regional planning (Beauregard, 2012; Beauregard & Lieto, 2016; Rydin, 2012; Rydin & Tate, 2016).

Latour (2005) pointed out that early interest in Actor-Network focused primarily on what it was that initiated the movement. Within such studies, early theorizing drew heavily on social theory which analyzed actors in terms of associations, and coalitions. The most well-known of the actor-network theories, born of social theory, is that of the Latour ANT, which views the initiation of actor-network theory to examine the actors and their associations, interactions, strategies, and tactics. In the Latour account, ANT is a socio-philosophical approach that tries to understand complex social situations by paying attention to relational ties and/or frameworks or elements referred to as associations (Latour, 2005). Given this, actors and their interests do not exist apart from associations; they are the result of association building and emerge during this process in the ANT (Wissink, 2013).

In the Actor-Network Theory, every situation is the result of ongoing associations among actors (Arnaboldi & Spiller, 2011). Within such conceptualizations, actors-*both human and non-human* such as regulations and other legal species (Cowan & Carr, 2008) fused, formed, and participated in networks-means partnered, so it is only by following these actors (Latour, 2005) and their associations that social (e.g. the urban built environment) and phenomena can be understood. In a similar vein, urban forms like urban enclaves (e.g. informal settlements) cannot be solely explained from the work of social actors: “These actors themselves also emerge as part of associations”(Wissink, 2013, p. 4).

Actors' enrolment into networks may range from high-level policy influence (policy network) to grassroots-level implementation ('practice network'). To this end, the associations or networks of actors can be manifested in the form of knowledge networks, issue networks, community networks, professional networks, and policy networks (Selman, 2000). Actors who enter the network must proceed through an 'obligatory passage point' (typically agreeing with particular rules of engagement), which ensures loyalty to the norms of the network and assures its future stability (Cowan & Carr, 2008; Selman, 2000). The strong point of this perspective is its attention to how social processes structure urban space and vice versa. “Actor networks are useful in brokering relationships with centers of power. These ‘brokers’ are often able to voice needs and demand to a wide audience” (Donelson,

2004, P. 338). To do this in practice, most peri-urban settlements are restructured as patchworks of territories. Space is not a neutral platform on which social life is played out: spaces and social practices are inherently related (Wissink, 2013).

2.3.1.1 Societal non-compliance and institutional analysis

Societal Non-compliance

Societal non-compliance is viewed as socially acceptable and functional behavior, based on the type of sociability that existed. In the informal land-accessing processes, actors (also called backstage crews) are colluding in compliance and non-compliance. Compliance here means adhering to certain standards that have been accepted. Levi (1990) cited in Tripp (1997, p. 6) conceptualizes non-compliance as “an act of resistance and the basis for institutional change through the process of developing alternative structures and institutions that eventually may come to replace many of the most problematic State rules”. The concept of societal non-compliance in its various guises is mobilized by disadvantaged actors to access livelihood opportunities that might ordinarily lie outside their reach (Leduka, 2004; Tripp, 1997). Non-compliance becomes a moral choice for vulnerable groups excluded from the formal law (Vargas & Urinboyev, 2015). Both Scott (1985), in his book *Weapons of the Weak: everyday forms of peasant resistance*, and Tripp’s (1997) work: *Changing the Rules: The Politics of Liberalization and the Urban Informal Economy in Tanzania* examined societal non-compliance in this light.

To this end, Scott in his book “*Weapons of the Weak: everyday forms of peasant resistance*” has applied the concept of societal non-compliance to explain the constant struggle between the peasantry and those who seek to extract their labors, foods, taxes, rents, and interest from them in Malaysia (Scott, 1985). According to Scott, resistance does not only manifest in public events like rebellions or collective actions but it can also be witnessed in “everyday resistance” found in individuals and groups who resist without directly challenging or confronting dominant norms. These forces were then further contextualized within the broader policies of Malaysia and the globe more generally. The powerless peasants use implicit understandings and informal networks; they typically avoid any direct, symbolic confrontation with authority. Scott (1985) describes these forms of resistance as alternatives that the people of Malaysia have devised to secure their right to

private property. This notion of analysis of the ‘weapons of the weak’ has significant implications in structuring and networking of accessing and securing land and the delivery of basic infrastructure in non-compliance with most formal rules.

Similarly, Tripp in her book "*Changing the Rule*" has applied the concept of societal non-compliance to explain the informal economy in Tanzania. Tripp argued that the emergence of the informal economy in Tanzania in the 1990s was the manifestation of societal non-compliance not only a means of resistance to early institutions but also how the government is forced to compromise on its restrictions on informal actors (Tripp, 1997). What is more, societal non-compliance is the initial form of confrontation, and resistance which reduces the bargaining power of those in control of the institution they are seeking to influence. Consequently, this bargaining power led to reform and adjustment. The state is forced to think over a policy alternative or complementary policy and legal line of several activities it had formerly considered as illegal. In such a way, the state neglects various activities it was not willing to execute openly or the state would likely legalize the previously illegal activities or at least maintain the status quo (Leduka, 2004; Tripp, 1997; Yirgalem, 2008; Zhu et al., 2019). This process of working outside the formal rules is called ‘changing the rules’ (Tripp, 1997) or ‘Weapons of the weak’ (Scott, 1985). Hence, working outside the formal rules is not only a means of resistance to institutions but also how social forces brought new resources to bear in creating alternative institutions, and that “social forces live longer than political ones” (Crummey, 2000, p. 7).

When governments are under economic and political pressure, they usually retreat from controlling resources by giving informal actors the chance to manipulate the formal rules in their interest. In the case of land provision, the inability of the government to provide urban lands highly undermined the implementation of the state’s own rules and regulations. Consequently, the government is forced to compromise on its restrictions on informal actors (Scott, 1985; Tripp, 1997, Yirgalem, 2008). These conceptual frameworks are applied to understand informal land, and basic urban infrastructure accessing and acquiring, actors’ patronage, and to explain the underpinning rules and regulations that govern actors' behavior in the provision and management of urban lands as well as infrastructures (Yirgalem, 2009).

Informal institutions

To figure out what institutions are, and which institutions are relevant for this study, it is necessary to understand what is meant by the term "institution". The definition which is most frequently utilized in the literature is the one given by North who defines institutions as the "rules of the game in a society", or more formally, the "humanly-devised constraints that shape human interaction" (North, 1990, p. 3). Also, Hodgson defines institutions as "social rule systems that structure social interactions" (Hodgson, 2006, p. 13). Institutions are relevant in the guiding of human interaction as they organize motivating forces in human interactions whether political, economic, or social. Institutions are the rules that players or actors follow (North, 1994).

Institutions can be formal and informal. The unique features between formal and informal institutions are usually vague. Different scholars use different attributes to differentiate one from the other. While some scholars use state-society dichotomies as differentiating criteria in which state agencies and state-enforced as formal institutions, the rules, and organizations driven within the society are treated as informal institutions. Still, others distinguish between formal rules, which are enforced by the state, and informal norms, which are self-enforcing (Helmke & Levitsky, 2004). But it is important to note that many institutions within the state (e.g. bureaucratic norms and corruption) can be informal while non-state organizations (such as corporations and political parties and corporations) are widely considered to be formal. Similarly, even though informal institutions could be self-enforced, it is also true that informal institutions could be externally enforced as such by clans and mafia bosses even by the state itself (e.g. organized state corruption) (Helmke & Levitsky, 2004; North, 1990).

But 'why do human actors choose to create informal rules as far as there are set of formal rules and rule-making mechanisms, and how informal institutions are created? Helmke and Levitsky (2004) identified two basic motivations for why actors choose to create informal rules. *First*, actors create informal rules because formal institutions are incomplete; hence cannot cover all contingencies. As a result, actors within particular formal institutions create norms and procedures that speed up their work or address problems not anticipated by formal rules. *Second*, actors create informal institutions when they get easier than create formal institutions to their liking or when they get easier to develop informal

formulae or solutions than overturning the ban from formal institutions. The reason actors create informal structures is not because they dislike the formal rules, but because they can't cope with existing rules and rule-making processes.

2.3.2 Theories on the Causes for the Evolution of informal settlements

In attempting to discourse as to why informal dwellers live where they are, and why the people congregate in unauthorized locations than formal areas, various theories have been suggested by different schools of thought and scholars. Since the evolution of informal settlements varies spatially and temporarily, their evolutions in developing countries also vary from developed ones. Though theories on the emergence of informal settlements for both developing and developed nations are numerous and vary in their nature due to various triggering factors, they are interconnected and multidimensional.

The plethora of explanations suggests that there is no single theory that can fully explain the causes for the emergence and growth of informal settlements (Sietchiping, 2004). However, some scholars classify informal settlement theories into theories of developing countries and developed countries. For example, Sietchiping and Al-daily classify three theories on why and how informal settlements emerge and grow in developed countries: the Chicago school, Alonso's neo-liberal theory, and the post-modern theory. Similarly, these scholars also categorize four major theories on the reason why informal settlements emerge and grow in developing countries: the land management theory, colonial legacy theory, inadequate economy theory, and the demand and supply disequilibrium theory (Al-daily, 2013; Sietchiping, 2004).

The Chicago School of Thought

This theory, which dates back to the 1930s relates the growth of informal settlements to residential differentiation resulting from differences in income levels of people with the rich able to acquire 'valuable' or desirable urban land and the poor left on unauthorized or unapproved lands to construct settlements (Kartz, 1986; UN-Habitat, 2003).

According to the Chicago school of thought, thus, the development of informal settlements is an indirect environmental result that arises from competition between the endowments and desires of different social classes, as well as between ethnic groups which

will compete for different land uses, with the strongest classes taking the most desirable places and the weaker ones occupying residual spaces (UN-Habitat, 2003).

The Alonso neo-liberal Theory

The Alonso neo-liberal theory also called the Alonso-Muth-Mills model relates the growth of informal settlements to discriminatory urban housing regulations and public spending that fail to address the housing needs of poor urban dwellers who cannot afford a formal dwelling. That is, according to this theory, an informal settlement is a realistic response to the housing needs of urban dwellers who could not afford more formal dwellings due to discriminatory urban regulations and public spending (Abrams, 1964; Fekade, 2000; Sietchiping, 2004; Stokes, 1962). To this end, people who migrate to the urban areas often end up as squatters in the informal settlements because the formal housing schemes are often unaffordable to these groups. The emergence of the informal settlement is then understood as a result of the relationship between the surplus population and the number of limited houses available in the capitalist sector.

The post-modern theory of urban landscape

The third theory which is the post-modern theory of urban landscape (also called factorial ecology) associates the growth of informal settlements to the segregation of skills or professions of urban dwellers within urban spaces. In this theory, informal settlements were perceived as the result of the differentiation of skills within urban spaces, where inhabitants settled according to their occupations, skills, and social status. Thus, some areas became more settled than others according to peoples' occupations, skill sets, and social positions (Abrams, 1964; Flood, 2000; Sietchiping, 2004; UN-Habitat, 2003).

The post-modern theory of urban land scale is also called a factorial ecology approach as it depended on multivariate factors of the different socioeconomic indicators distinguishing informal areas in the city, computing indexes that would distinguish these areas from each other. With this impact, the factorial ecology declares that the spatial detachment in urban communities of different parts of the most developed world was due, in most part, to three variables: socioeconomic status, familism, and ethnicity. While the socioeconomic alludes to factors such as income, education, and occupation; and measured

the degree to which households are blessed by the goods with these factors, familism is concerned with the effect of family type. Then again, ethnicity refers to the proportion of households who were born outside of their origin, yet could also represent the separation of specific ethnic or religious groups (UN-Habitat, 2003).

But as far as the development of informal settlements goes in developing countries, four major theories have been developed. These are the urban land management theory, the colonial legacy theory, the inadequate economy theory, and the perpetuated demand and supply disequilibrium theory.

Urban land management Theory

The theory-of-land management/governance attributes the growth of informal settlements to institutional flaws or deficiencies, the inability of urban authorities to control urban land, and inadequate urban planning schemes that have caused the informalization of urban life (Al-Daily, 2013; Devas, 2004; Fekade, 2000; Sietchiping, 2004). Such flaws generally fall on the inefficiency of urban authorities, poor urban land management practices, poor urban land information systems, and inadequate urban planning schemes. Ultimately, the urban land management theory insisted that due to the defects of the above-mentioned factors, the emergence of informal settlements in the urban areas is inevitable. To this theory, informal settlements are created because of awful urban land governance. Because of this poor urban land management, people are living in informal settlements every day, especially in developing countries where land governance is the weakest (Alemie et al., 2016).

The colonial legacy Theory

The theory implies that colonialism does not end when a nation attains political independence. Instead, it continues to influence and shape its legacy even at the time when the nation ceases to be a colony (Roy & Al Sayyad, 2004). Thus, the legacy of this theory keeps living on into today's contemporary social, economic, cultural, and spatial circumstances. The colonial legacy theory relates to the development of informal settlements, therefore, to political and historical factors especially colonialism, postcolonial practices, and civil and political instabilities (Al-Daily, 2013; Sietchiping, 2004).

The inadequate economy theory

The inadequate economic theory suggests that economic factors especially the introduction of new economic systems play an important role in the development of informal settlements. This theory argues that the introductions of urban trade, income, and class differences spatially translate into residential discrimination and social exclusion leading to the growth of informal settlements, particularly class domination, and broadly discrimination against by race (Huchzermeyer, 2002). UN-Habitat (2003) states that informal settlements have resulted from a combination of poverty or low income with inadequacies in the housing provision system where poor people are forced to seek affordable accommodation and land that become increasingly inadequate. To this end, Martin Luther King cited in Perlman (2010, p. 211) claims that the favela residents as *pseudocitizens* in a sense that they “not where they want to be, not where they ought to be, and not where they will be, but they are not where they were.”

Indeed, Lefebvre emphasized on roles of capital, labor, profit, wages, class exploitation, poverty, and the high levels of inequalities as the foundations of the unevenness of urban development. He stated that urban development was as much a product of the capitalist economic system as was any manufacturing good (Lefebvre & Nicholson-Smith, 1991). The advocates of this theory focus on the different economies of nations as the reason for the outgrowth of informal settlement, and informality is equated with poverty (Rakowski, 1994).

The perpetuate demand and supply disequilibrium theory

This theory on the other hand links the growth of informal settlements to economic factors such as the imbalance between demand and supply of urban land, services, and infrastructures (Abrams, 1964). As a result of this, most people arriving in urban areas are forced into informal settlements, where they suffer from shoddy housing, thugs, discrimination, poor infrastructure, spare health care, insecurity of property, and unspeakably poor infrastructure (Jacobsen et al., 2002). Informal settlements are emerged outside of the formal system as a result of market-driven where land use is determined by economic competition, and they are more applicable to many urban areas of developing

countries that are still undergoing in transition in economic and land tenure regimes partially dictated by traditional uses or controlled by governments (UN-Habitat, 2003).

In one way or another, scholars and international development agencies have theorized that the continued growth of informal settlements is related to the above-mentioned factors. Therefore, the above explanations of the causes for the growth of informal settlements are not mutually exclusive, rather they are hybrid. Yet, not all dimensions had an equal weight; while for some the economic indicator was privileged, institutional indicators prevailed on the other hand (Cortés, 1997; Mensah et al., 2014).

From the above theories, it should be clear that an exclusive focus on one theory for informal settlement development fails to account for how such settlement can be driven by other factors. This means that a sole focus on, for example, the inadequate economy theory is likely to both understate the role played by urban management theory and limit our understanding of the complex basis on which informal settlements growth are taken. Similarly, a mere focus on the perpetuated demand and supply disequilibrium theory limits the role played by the urban management theory in the growth of the informal settlement. In this regard, except for the colonial legacy theory, the rest are at the heart of the outgrowth of informal settlements in Woldia, and thus taken for granted for discussion that might be made sense of in terms of the theories used to explore this work.

2.4 Empirical Review

2.4.1 Informal settlement triggering factors

Many examples of the factors which led to the emergence of informal settlements have been researched, particularly in Latin America, Africa, and parts of Asia. There have been numerous studies on the major triggering factors that have contributed to the rise of informal settlements in peri(urban) areas. The informal settlement typically occurs for a combination of reasons (Harris, 2017) in response to different triggers. Much of this literature, however, did not explicitly address the triggering factors in the growth of informal settlements in an integrated way.

When informal settlements are discussed, the first thing that comes to mind for many scholars is that such settlements are unique and uniquely (Harris, 2017) derived from the poor as grassroots phenomenon. Such ideas are usually derived from such works as extra-

legal (De Soto, 2003), Subaltern (Bayat, 2000), Shadow cities (Neuwirth, 2005), Planet of the slums (Davis, 2006) to mention just a few. For such works, the primary driver for the growth of informal settlements is perceived the low level of income of the builders/occupiers. Most orthodox theories, such as the Chicago Schools (Kartz, 1986) and the inadequate economic theory (Abrams, 1964) have focused on income considerations. In these theories, the virtues of wide monetary and fiscal (i.e. economic) causes are emphasized and highlighted for the growth of informal settlements.

In this regard, work by Aiken (1981), squatters and squatter settlements in Kuala Lumpur, found that the growth of such settlements is often initiated by migration of refugees whose motivations are fear, hunger, or rural depression, by the quest for subsistence in the burgeoning urban areas, or by simple opportunism. Similarly, Aiken also noted that the desire for labor in urban centers and the potential for surplus labor in rural areas encourage migration. When there is no housing for the migrants, they often take publicly owned land, where they have less concern for being overthrown than they do on privately owned land. Other details from Aiken's (1981) account in Kuala Lumpur, as elsewhere in Peninsular Malaysia, informal settlement is essentially a result of poverty, as it is connected to variations in regional development, occupational structure of the labor force, inter-and intra-ethnic disparities, high rates of unemployment, and ultimately low incomes. Notably, Aiken (1981) found that the existence of a large squatter population in Kuala Lumpur was reflected in the economic imbalances within the city, as well as the overall economic imbalances in Peninsular Malaysia.

Additionally, citing triggering factors and informal settlement growth patterns, Numbasa and Koczberski (2012) outlined how migrants have been able to obtain and preserve access to land in the informal urban settlements of Wewak, the provincial capital of East Sepik Province, Papua New Guinea (PNG). Notably, given the deficiency of formal housing for low-income people, Numbasa and Koczberski (2012) noted that many will likely choose to live in informal urban settlements on land formally owned by their tribal ancestors. Yet the number of urban residents has grown significantly since then, and yet housing and employment opportunities for low-income families have remained very limited. This results in the fact that most urban migrants are forced into poorly serviced informal settlements. They conclude that as far as urban managers cannot adjust to urban living

conditions, and the supply of land and housing remains tight, unplanned and/or informal urban settlements on customary land will continue to grow in number and size indefinitely.

Similarly, Kassahun (2010), who analyzed how urbanization impacted the making of informal settlements in Addis Ababa, reported that population growth, poverty, and urban housing crisis have resulted in the intensification of informal settlements over the years. According to his findings, the growth of the urban housing problem and the limited effort made so far had led to the rise of informal settlements in the peripheral areas of Addis Ababa. He, therefore, suggests that socioeconomic factors such as unemployment, housing shortages, low household incomes, and poverty played a significant role in the growth of informal settlements in Addis Ababa. Another important factor that he raised was institutional failure and malpractice. A loss of coordination, administrative and information gap, absence of accountability, and loss or misuse of vital information was the result of frequent changes in city governments and the municipal service providers, officials, and employees, which in turn resulted in the emergence of informal settlements. In his study, however, the role of legal ambiguities in the growth of informal settlements was not discussed explicitly.

Meshkini et al. (2015) substantiate Aiken's (1981), Numbasa and Koczberski's (2012), and Kassahun's (2010) localized findings by arguing that in Babol city it is only those poor households that engaged in more permanent informal settlements. Thus, Meshkini et al. (2015) did a study on the theme of 'Analyzing effective factors in establishing informal settlements in Babol city using Pathway Analysis (PA) Model', and conclude that the increased population from immigration and natural growth have triggered a physical and unregulated growth in so far as the planning for urban development has been inadequate; this manifested in developing of informal settlements in peripheral areas. In this study, the development of informal settlements in Babol city relies on a combination of social factors (ownership, immigration, urban developments, urban regulations, ethnic and family relationships) and economic factors (housing prices, land prices, rental prices, income, and unemployment).

Notably, they note that several factors led to the intensification of informal settlements in Babol, including poverty, cheap land in comparison to adjacent areas, house prices, income, urban regulations, tax, and urban development (Meshkini et al., 2015). Yet,

the study failed to take into account the role of administrative juggling and legal loopholes as well as other factors that influence the development of informal settlements. Hence, their findings in this regard were flawed.

Considering the above, one notable feature is the fact that the mechanisms of socioeconomic factors to the outgrowth of informal settlements have proved insufficient. There is still considerable concern that the scale of the informal settlement could have resulted from other factors that could have contributed greatly. From this context, Mensah et al. (2014) suggested that socio-economic, cultural, institutional, physical, political, and historical factors are the main factors that greatly influence the growth of informal settlements in Kumasi, Ghana. Based on their findings they discussed in detail the specific socio-economic factors which included low levels of income, high rents, social contacts, rural-urban migration, and low levels of education. Besides, cultural factors including religious reasons, family ties, and marriage were the other factors that fueled the growth of informal settlements. Further to this, it was found that institutional factors, physical factors, political factors, and historical factors are all playing a role in fueling informal settlement growth in Kumasi, Ghana.

Compared to the above-mentioned literature, the findings of Mensah et al. (2014) on the causes of informal settlements are significantly deeper, yet they are further beyond the point of understanding the role of local actors and legal ambiguities in the growth of informal settlements as well as how the informal settlers are provided with basic infrastructure and facilities.

Like Mensah et al. (2014), Marutlulle (2017) explored the causes for the emergence of informal settlements in Ekurhuleni Metropolitan Municipality (EMM) and other parts of South Africa. As such Marutlulle's (2017) study focuses on population growth, government economic policies, economic variables, housing shortage, unavailability of land, and unaffordability of housing for the poor as the real causes of informal settlements in EMM. His findings suggest that informal settlements in EMM are predominantly caused by factors that cause housing delivery challenges and demonstrate that causes of informal settlements are intertwined with causes of housing delivery. His key findings indicate that the main triggering factors for the development of informal settlements in EMM in particular and elsewhere in South Africa are: public policy on land development, population growth,

urbanization, government economic policies, administrative issues (municipal maladministration, lack of control and corruption), economic variables (poverty, unemployment, unaffordability and poor access to housing finance), housing shortage, unavailability and unaffordability of land. However, as with other works discussed above, the findings also fail to acknowledge the role of legal ambiguity and local actors as contributing factors in the growth of informal settlements.

In a case similar to that pointed out by Marutlulle (2017), it was found that informal settlements' development is caused by i) rapid urbanization and movement of people into specific urban centers (demographic factors); ii) high poverty levels and the lack of low-cost houses or serviced land (economic factors); iii) inefficient public administration, inappropriate planning and inadequate land administration tools (institutional factors); and iv) war and natural disasters (socio-cultural factors) (Gaisie, 2015). The study of Gaisie (2015) did not, however, acknowledge the importance of legal ambiguities as to the main triggering factors for the growth of such settlements, nor did it identify the role of local actors that facilitate their growth.

On the reason why informal settlement exists in the urban areas, a study by Anyamba (2011) in Buru Buru, located some 7 km east of Nairobi's Central Business Districts (CBD), showed that a combination of economic and market forces, the inefficiency and failure of political regulations, and the national and local policies had contributed greatly to the causes for the growth of informal settlements in Buru Buru. Given this, Anyamba (2011) stated that informal settlements are developed around Buru Buru as a result of the economic and market forces which are not pro-poor, and the slow legal reforms and bureaucratic procedures in responding to the urgency of addressing urban land for housing for the low-income groups. In Anyamba's (2011) view, the causes of informal settlements and poverty have little to do with demographic changes or population expansion, but with the failure of government housing policies, laws, and delivery systems, as well as national and local policies related to housing. However, the findings of Anyamba (2011) neglected to take into consideration the role of local actors and legal ambiguities in the formation of informal settlements too.

Further, reasons for the rapid growth of informal settlements in the per(urban) area are worked by Fang and Pal (2016) point out that as the result of uncontrolled illegal

development in rural areas without an official change in land use, the causes for urban informal settlements are attributed to the state's farmland protection policy, local governments' dependence on land sale revenue, and real estate developers' speculative behavior. They employ the 'ecology of actors' framework to analyze the interactions. In this regard, they claimed that the excessive land conversion from agriculture to urban use is due to state, market, and civil society nexus. Their findings were largely supported by a literature review and anecdotes from interviews they conducted with local officials, developers, and planners (Fang & Pal, 2016). In a similar vein to the studies previously mentioned, they have made little mention of the role of land brokers or the legal ambiguity associated with the growth of informal settlements.

Similarly, a study by Parsa et al. (2011) on the 'impact of formalization of property rights in informal settlements: Evidence from Dar es Salaam city, Tanzania' showed the situations how land is transferred by local actors. Credit was perceived to fuel the growth of informal settlements in the study area due to the expectation of gaining access to it of Dar es Salaam city. Despite this, the study demonstrated that financial institutions were still hesitant to fully acknowledge and accept the residence license as security for lending due to their short duration. This makes it challenging for property owners in informal settlements to obtain loans. Neither did this study, however, examine the role of non-state actors, legal ambiguities, and how infrastructure is acquired in the informal settlements areas.

Notably, however, acting as a contradiction but supplementing to many of the findings from the above-mentioned works for the development of informal settlements, Kuyucu (2014) found that legal ambiguity was used as a weapon in property transfer thereby making informal property development, informal housing in this case. By way of a method, the role of legal ambiguity in the creation and institutionalization of property regime factors, as well as ways of (ab)using legal ambiguities to influence the market-making processes of informal settlements, are highlighted. His study concluded that the government and private actors used legal ambiguities and administrative arbitrariness strategically to create the private property and to ensure that the capitalist market functions smoothly. On the other hand, there may be clear laws, but their implementation might not be rigid enough to ensure that actors will take a chance since it might turn out that there is no punishment for the informal settlers (Zhu et al., 2019).

As such his work aims to detail the uses and abuses of legal ambiguity in the making of markets that should be taken as an important variable in analyzing the relationship between law and economy, and in examining how markets operate. A study to this effect examines how the use of arbitrary administrative rules and legal ambiguities contributed to the creation of new markets and the transfer of the ownership of the (informally owned) property to the stronger public and/or private actors with greater economic, legal, and administrative resources.

Table 2.1 Land pricing in expropriation and on the informal market in some selected urban areas in Ethiopia

| Urban areas | Typical compensation prices paid by local governments to farmers for expropriated land, Birr/m ² | Anecdotal data on a price range farmers can receive for land on the informal market, Birr/m ² |
|-------------|---|--|
| Addis Ababa | 190 | 550-800 |
| Bahir Dar | 13 | 250-300 |
| Kombolcha | 16 | 150-300 |
| Dessie | 17 | 450-600 |
| Jimma | 20 | 350-550 |
| Assosa | 30-50 | 300-600 |
| Hawassa | 31 | 550-750 |
| Shashemene | 12-18 | At least 3 times higher than the compensation |

(Source: [Cities Alliance, 2015, p. 44](#))

Furthermore, a study conducted by Cities Alliance (2015) in Ethiopia on the causes for the development of informal settlements in the peri(urban) Ethiopia showed that informal settlements are developed due to the insufficient compensation paid to peri-urban farmers. In this regard, it is found that the gains on the informal market are substantially higher than compensation for expropriated land which in turn strongly incentivizes sales and thereby provokes informal settlements. The typical formal compensation payments and corresponding informal land market prices of some selected cities in Ethiopia are shown in Table 2.1.

2.4.2 Actors involved in accessing and securing land for informal settlement

Based on the local and political systems of the respective nations with different values, goals and policies, different scholars mention numerous local actors all of whom participate in one way or another in the production of informal settlements.

Accordingly, Bentinck in his study of Unruly Urbanization on Delhi's Fringe: changing patterns of land use and Livelihood identifies farmers, residents, enterprises and speculators, property dealers, and developers as the private actors with different roles and responsibilities in the urban land management, settlements development, and infrastructure deliveries. He also identified actors within government and other public institutions such as urban administration, political representation, planning bodies, civic supplies and infrastructure, land registration, judiciary, and police (Bentinck, 2000). So also, Rakodi distinguished the public sectors including the local and higher levels of government Non-Governmental Organizations (NGOs), trade unions, enterprises and their associations, residents as the most significant actors in urban land management (Rakodi, 2004).

As indicated by Devas, urban management or urban governance includes the interplay of both the wide range of actors and institutions. The prominent actors and institutions actively involved in the urban management are credited to private segment organizations, civil society including community-based organizations, NGOs, political parties, religious groups, trade unions and trade associations, and the whole range of government agencies of national, regional and local government, including traditional authorities where they exist (Devas, 2004).

Bryant, Russwurm, and McLellan have distinguished three types of actors in the land change process: predevelopment land owner actors, intermediate actors, and the final consumer actors. At the point when applied to the informal settlement context, predevelopment landowner actors include farmers, non-farm residents, and sand and gravel pit operators. At the same time, the intermediate actors include speculators or land dealers, investment companies, and financial institutions that can be seen as fulfilling the role of intermediaries between the predevelopment owners and the final consumers. The final consumers include a variety of actors with other categories: industry, commerce, non-farm individuals, government and non-government agencies, institutions (such as churches), and social clubs (Bryant et al., 1981). Similarly,

Furthermore, Kaiser (2013) in his work, the building of cities: development and conflict, identifies four main actors. The *first* categories are the landowners, speculators, and dealers who are the central figures in the urban land development process. These may also be people who own land but do not intend to develop it themselves. They are working with

the fixed commodity, the land. The best resource of this group is not simply the land, but information about the demands for land in the very immediate future. The *second* category includes developers and other profit-motivated participants who are acting in search of a profit in the process of converting raw land into development from the passage of time. The *third* group incorporates non-elected public officials and public employees. The non-elected public officials are divided into two different groups: those who are members of appointed boards of various kinds; and those who are employees of the general and specialized local government agencies.

Table 2.2 Prominent actors in the outgrowth of informal settlements in the peri (urban) areas

| Author | Actors |
|--------------------------------|--|
| Bryant, Russwurm, and McLellan | Redevelopment land owner actors, intermediate actors, and the consumer actors (Bryant et al., 1982) |
| Devas, Rakodi | Private sector businesses, Civil society, including community-based organizations, NGOs, political parties, religious groups, trade unions and trade associations, governmental agencies, and traditional authorities (Devas, 2004; Rakodi, 2006). |
| Yirgalem | Political actors, public agencies, residents, and civil society organizations (Yirgalem, 2008) |
| Zibagw, Dafuleya, Akola | Peasants, brokers, informal settlers and officials and workers (Zibagwe et al, 2010) |
| Kaiser | Landowners, land speculators, land dealers; developers and other profit-motivated participants; nonelected public officials and elected public officials (Kaiser, 2013). |
| Nuhu | Central Government, Local government authorities, communities, private sector, development partners, and civil society (Nuhu, 2018) |

(Source: Author’s construction based on the desk review)

The *fourth* group is the elected public officials. Local government jurisdictions at the village, town, city, and county level have an elected governing board with general governing powers. A summary of prominent actors involved in the development of informal settlements is shown in Table 2.2.

An Ethiopian context is worth mentioning here. In this regard, Yirgalem (2008) referenced political actors, public agencies, residents, and civil society organizations as the major actors in the proliferation of informal settlements in the peri-urban areas of Addis Ababa, Kolfe Keranio sub-city. Similarly, a study by Adam (2014) at the peri-urban areas of Bahir Dar showed that a variety of actors are involved in the process of the informal

transaction and land development in peri-urban areas, including brokers, speculators, corrupt government officials, and peri-urban residents.

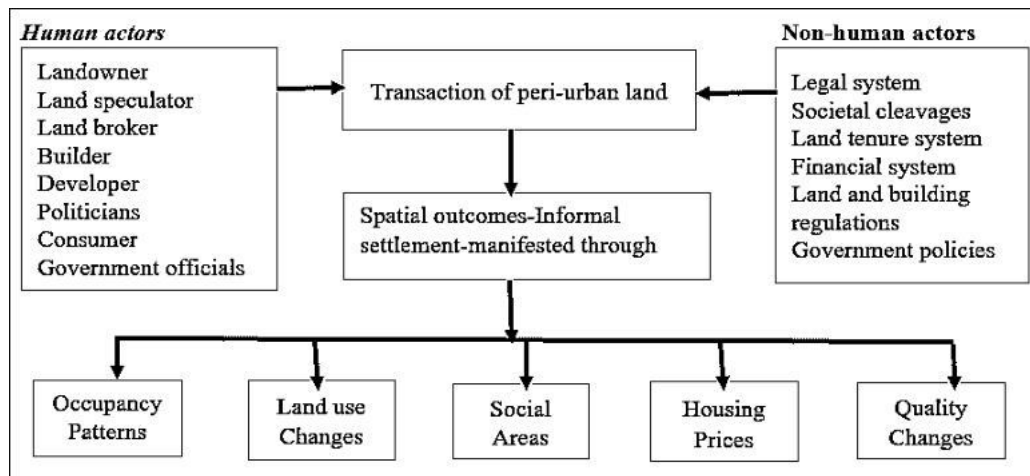


Figure 2.2 Land transaction actors

(Source: Author based on desk review and fieldwork, 2019)

In addition to human actors and the potential they hold for informal settlement development, informal settlements are developed through a process based on the strategic implementation and manipulation of legal ambiguity. Ambiguity refers to a particular type of uncertainty that often exists in decision-making and judgment situations or subjective experience of missing information relevant to a prediction (Frisch & Baron, 1988). The existence of ambiguous legal standards and inconsistent enforcement of laws creates compliance costs for the regulatees and confuses the regulatory process. Consequently, there are concerns about regulatory standards being vague and self-contradictory, as well as inconsistent and corrupt practices among local regulatory enforcement agents.

Consequently, an enterprise's environmental management practices may differ based on how it perceives the extent of conflicting standards and enforcement (regulate informal settlement in this case) (Liu et al., 2015). To be able to use the law, for example, people have to be aware of the rules they follow and understand them to be able to use it (Fuller, 1969). People may just do whatever they consider to be their immediate interests when the laws are not clearly defined (ambiguous) (Zhu et al., 2019).

As a result of legal ambiguity, a fact can be interpreted in different ways, leading to confusion or misunderstanding (Zhu et al., 2019) which in turn allows actors to intervene in the development of informal settlements. In this regard, a study by Kuyucu (2014) revealed

that informal settlements are developed through the (ab)use of legal ambiguities and arbitrariness by numerous state and private actors in Istanbul. According to Fransen and Van Dijk (2008) and Yirgalem (2008), the ambiguity of the regulations and directives results in the ongoing illegal construction in peri-urban settlements in Addis Ababa, as well as the administration's inability to correctly implement the regulations. Furthermore, their studies confirm the important role that policy ambiguity plays in shaping policy implementation and compliance in the area of urban settlements. As a result of legal ambiguities, various actors are involved in the informal settlements in Addis Ababa over time, among others due to the illegal land transactions that occurred.

2.4.2.1 Modes of informal land accessing and securing mechanisms

Rakodi and Leduka (2004) conducted an empirical study to better understand contemporary informal land delivery processes in six African cities (Eldoret in Kenya, Enugu in Nigeria, Gaborone in Botswana, Kampala in Uganda, Lusaka in Zambia and Maseru in Lesotho) and their relationship to formal land administration. In their study, the authors found that the most common land delivery methods were allocations, purchases, customary through state-sanctioned channels, and self-allocations or squatting. Further to this, it was found that the informal land delivery system is partly a result of earlier land administration practices and partly a reaction to the failure of the formal systems of tenure and land administration. They attribute this to the fact that governments have failed to properly compensate landowners when they expropriate it, as well as set complicated regulation procedures. To this end, the only way of becoming the owner of a plot on which to build a house is, for example, through subdivision or fake inheritance of a parent's plot. In regards to this view, it is significant that informal land delivery systems are the primary source of land supply for housing.

Even more notably, because of their user-friendly characteristics and social legitimacy, informal land delivery processes are often effective at providing land for housing. Social institutions commonly accepted by the general populace are responsible for regulating the transactions of these informal systems. Urban communities borrow from and mimic formal rules and procedures, as well as exploit ambiguities and inconsistencies (Rakodi & Leduka, 2004).

In this regard work by Oloyede et al. (2007), an informal land delivery system in Lagos State, Nigeria, found various alternative channels through which land is made available for housing development within the zone based on the regional differences: culturally, socially, and politically. The study also found that one must pay cash for new residential construction, while the only exception would be if one belongs to an Aboriginal family which owns the land. The risk of developing land acquired through the back door deal rests solely with the person who acquires it. Other details from Oloyede et al's (2007) account also reveal that the most important way for households to access land for housing was through open market transactions in every local government council area studied. As a result, data from the study reveals that most households purchased residential land informally, through the sale of customary land, informal subdivision by land-buying companies, and its eventual sale or transfer to hired employees. Formal acquisition of land by governments may involve subdivision, sale, and subsequent delivery to the public (Oloyede et al., 2007).

Similarly, Pamuk (2000) accounts on how informal institutional arrangements (rule systems) are utilized in transactions and how community-based institutions support transactions and help informal communities solve their land, credit, and basic infrastructure dilemmas in Trinidad. In this regard, Pamuk (2000) acknowledges that sou-sou, an informal system of collection of savings, uses informal rules and sanctions in Trinidad to gain credit and use this to acquire unauthorized infrastructure and unlicensed land for settlement through the informal land market. To its effect, sou-sou financing is not exclusively used by the poor, who are unable to obtain financing through commercial banks, but is widely employed by the wealthy as well; the main beneficiaries are those who build incrementally; it is generally used by people from all ethnicities.

In addition to such accounts in accessing and securing land informally, Numbasa and Koczberski (2012) examined various ways in which migrant settlers have gained and maintained access to land in the informal urban settlements of Wewak, the provincial capital of East Sepik Province, Papua New Guinea (PNG). In this regard, traditional trading relationships, marriages, or friendships with landowning groups contributed to their unauthorized settlements. It also showed that in Wewak, migrant settlers and customary land-owners have elaborated a variety of informal tenure arrangements that have helped the

development of these settlements. On top of that, the study concluded that migrants access customary land through informal contracts with customary landowners for rental or land purchase. Because of the lack of effective housing policies, the informal market has played a vital role in providing housing for the urban poor even though it is not guaranteed that its tenants will remain in their homes for a long time.

An important one among early works was also a paper by Jenkins (2004) which is notable for providing a wider socio-economic survey of Maputo with a total of 995 households and some 6,500 members using random sampling. A concern was how urban households had accessed the plots they occupied over three periods: pre-1975, 1975 to 1987, and 1987 to 1999. The surveyed results revealed that in all periods, the majority of land access mechanisms were informal, indicating a wide range of possible land access mechanisms. Access was obtained primarily from the city administration through purchases, or informally (including a plot allocated or bought for which there was no land registry). As a result, it was noted in the findings that while access to residential land in Maputo by city administration fell from 32 percent pre-1975 to 14 percent post-1987, informal access increased from 59 percent pre-1975 to 74 percent post-1987 (Jenkins, 2004).

Wubneh (2018) mentioned that due to the fear of expropriation of peri-urban land by the governments in the sub-Saharan countries with little or no adequate compensation, farmers continue to subdivide their plots and sell them on a black market for which the transaction takes the form of inheritance, gift, and repayment of debt. Exemplary in this regard is the fact that in Ethiopia considering the extent of informal settlements flourishing, a study by Adam (2014) revealed that the main ways of informal plot acquisition from peri-urban areas include bought from the local peri-urban landholder, received as a gift from relatives, bought from the previous informal buyer, and own rightful holding.

2.4.3 Urban Infrastructures in informal areas

2.4.3.1 Situation of urban infrastructures

The integrated urban infrastructure and service planning manual of the Ministry of Works and urban development of Ethiopia (2006) defines infrastructure as the hard component that comprises all systems of an urban physical structure that are mainly laid under the ground and on the ground or above the ground (e.g. telephone and electric lines) to provide public

services. These basic urban infrastructures are also called 'urban lifeline systems' (Hamada, 2015).

Population growth determines access to and security of infrastructure in urban areas. In this regard, all population growth expected in the coming decades will be concentrated in the urban areas of the World. By 2050, 66 percent of the World's population is expected to live in urban areas, which is higher than the 30 percent in 1950 (UN-Habitat, 2014). As urban populations are growing, they are entering this process with a tremendous backlog of problems, manifest most starkly by slums, shantytowns, and informal settlements. As a result, this rapid urbanization process necessitates a heightened level of urgency in the provision of basic urban infrastructure services in the developing countries due to the problems that peri-urban areas face not only in terms of technology but also in social, economic, and political conditions (Jimenez-Redal al., 2014). Thus, the burgeoning populations overload the urban areas' infrastructures of housing, transportation, water supply, electricity, and sewerage. In line with this, the United Nations has projected that by 2030, about 60% of all people will live in cities, 80% of whom will live in developing countries with insufficient infrastructure (UN-Habitat, 2013, 2014).

The United Nations Children's Fund indicates that worldwide there were about 1.1 billion urban dwellers without access to safe water and 2.4 billion without adequate sanitation, with the largest proportion (90%) of them were in developing nations of Africa and Asia (United Nations Human Settlements Programme, 2010). Such deficiencies contribute markedly to the prominent role of infectious and parasitic diseases. To that end, a potable water supply, electricity, and the sanitary disposal of human waste are among the basic needs requiring urgent attention (Ridgley, 1993; United Nations Human Settlements Programme, 2010). This mismatch between the growing demand for infrastructure services and the inability on the part of the service providers does not only create a crisis of access to urban infrastructure but also has serious political backlash if not addressed in the medium term (Chitonge, 2014).

Despite these mismatches between demand for and supply of basic infrastructure services, informal settlement areas have seen slowdowns, and even complete halts, in their efforts to expand service delivery. Accordingly, Perlman emphasizes that "hell is here, madness is here..." (Perlman, 2010, p. Xi) when describing the way of life of people living

in informal settlements (Favelas) in Brazil. Informal settlements, thus, become wounded areas inflicted by infrastructure asymmetries (Allegra et al., 2012), or physically proximate but institutionally estranged (Macleod & Ward, 2002). This is a real reflection of the weaknesses and achievements of past and current informal settlements (slums) policies and programs since the 1950s and arguments to meet the slogan ‘*Cities without Slums*’.

2.4.3.2 Barriers to Accessing and securing infrastructure

There are variations in views on the development of informal settlements. While some claim that informal settlements are the housing options of the poor (Turner, 1977), others often nominated informal settlements as urban cancers, festering sores, urban fungi, urban problems, threats to public safety and health, and the like. For these reasons, it is widely believed that investment in such areas is a waste of scarce resources; therefore, these settlements are viewed with hostility or ignored at best (Amoako & Boamah, 2016; Hardoy & Satterthwaite, 1986; Potter & Lloyd-Evans, 2014). As a manifestation of negative outlooks, informal occupiers are considered as ‘*wild residents*’ (Winayanti & Lang, 2004). Because of these negative stereotypes, settlers are denied access to a wide range of basic infrastructure services where we are living in the most urbanized and digitized age in the history of our world. On top of this, settlers are marginalized and deprived of the notion of the right to the city; to be removed by force in either case with bulldozers and polices, or by chopping off and changing the heads of State (Turner, 1977; Zárate, 2018). As a result, informal settlements, therefore, are places of injustice in which profit and economic calculations override the well-being, dignity, needs, and rights of people and nature (Harris, 2017; Perlman, 2010; Zárate, 2018).

Consequently, houses built in the informal settlements often have little or no legal protection against eviction, no access, or only limited access to the infrastructure services that people take for granted. As a result, informal developments frequently share the following problems: inadequate water supply, sanitation, garbage disposal, roads, storm drains, electricity, and public transportation; informal settlers become people in the urban but off the grid (Tutu & Stoler, 2016). Not only no safe, sufficient, reliable piped water supply to the home but also no provision for sanitation, drainage and regular solid waste collection; they are excluded from any infrastructure extension plans, barring their

integration in any urban or municipal services (Fekade, 2000; Lombard, 2014; Pierce, 2017). Thus, this has a severe impact on residents' health, quality of life and social well-being. Furthermore, there are no emergency services if suddenly caught amid a disaster like a flood or fire. There are also no public schools or health care centers (Leitmann & Baharoglu, 1999; Satterthwaite, 2009; United Nations Human Settlements Programme, 2010; Winayanti & Lang, 2004). Therefore, providing and having access to basic urban infrastructure services to informal settlements does not match the extent of demand by the general public of developing countries.

In this regard when informal house construction has occurred, it is thought that it is not only the occupation of the site or the construction of the shelter or both which is illegal, but the consumption of physical infrastructure and services are also illegal. In these cases, many instances are illegal, such as the sources of water the dwellers use, the electricity supply they piracy, the health practitioners who consult, or the way people sell goods and services on the street. Due to the high proportion of illegal activities in many illegal settlements, there are great deals of illegal activities (Hardoy & Satterthwaite, 1986). This begs the question of why accessing and securing basic urban infrastructure services are supposed to be neglected in the informal settlement areas. Among others, some of the basic barriers for efficient infrastructure service delivery include legal barriers, spatial barriers, social barriers, political barriers, and economic barriers (Pierce, 2017; Sinharoy et al., 2019).

Pierce (2017) and Sinharoy et al. (2019) pointed out that one of the main barriers to accessing and securing basic urban infrastructure in informal settlements is the *economic barrier*. The explanation for these failings in economic factors is thought to lie in the fact that infrastructure systems require a large number of investments; however, informal settlement households often do not have enough money to pay for sufficient basic services projects. Moreover, since the areas are considered illegal, no legal taxation systems, and a lack of effective taxation systems may limit the funding available for infrastructure investments (Pierce, 2017; Sinharoy et al., 2019). Due to poor financial management, low funding priorities, lack of independence and poor engagement with civil society, local governments have not been able to invest in urban infrastructure in informal settlements (Allen, 2010; Hansen & Vaa, 2004; Jimenez-Redal et al., 2014).

The second general barrier for accessing and securing infrastructures in informal settlements is the *spatial dimension*. In this regard, Pierce (2017), Sinharoy et al. (2019), and UN-Habitat (2013) claim that informal settlements are located in undesirable or geographically inaccessible areas of the urban realms which are difficult to reach with basic infrastructure service. The problem here is that such an approach fails to access and secure basic infrastructure due to the geographic characteristics of informal settlements (e.g. due to peripheral location, located on unstable land or areas prone to flooding), high housing density and the irregular urban layout that characterizes many of such settlements.

Social barriers are the third basic barrier that interferes with the access to and security of infrastructure in informal settlements. In this regard, government agencies do not extend basic services to certain ethnic, racial, religious, or caste groups in informal settlements (Pierce, 2017). That is, many informal settlement residents do not have a thorough knowledge of urban administrative agencies owing to patterns of rural-urban migration. Oftentimes, residents of informal settlements lack the time, resources, and knowledge to advocate for them to hold officials accountable for policies, or to engage in community development (Pierce, 2017; Sinharoy et al., 2019). As a result of multiple factors, including poverty, people living in informal settlements often experience marginalization, making it hard to advocate for them. Discrimination against certain groups, such as those from caste, ethnicity, racial, or religious backgrounds, is a leading cause of the development or maintenance of informal settlements (Pierce, 2017). As a result, they are denied accessing and securing infrastructure.

A fourth basic barrier to securing and accessing infrastructure has to do with *legal/institutional issues*. In this regard, a study by Pierce (2017) from four slum settlements situated in Hyderabad, India, suggests that the extent of legal/institutional recognition influences tenure security, which in turn affects basic service access in the informal areas. Governments do sometimes refuse to extend services to informal settlements since they fear recognition would mean acknowledgment. Depending on the local law, a building may be exempted from formal service provision if it does not meet certain legal standards (Dagdeviren & Robertston, 2009). Confusing or mismatched laws, especially in the absence of a broader policy vision, can thus be a barrier to the implementation of inclusive infrastructure policies, even when such policies exist (Sinharoy et al., 2019). In some cases,

they may not be able to operate because the necessary conditions are in place (the plots may not have a formal address, residents may not have legal documents to register, or householders may lack documents showing boundaries and ownership of plots). Alternatively, public provision of infrastructure is often forbidden by law from operating in informal settlements (UN-Habitat, 2013).

The fifth barrier for the provision of infrastructure to informal settlements is the *political barrier*. Informal dwellers exchange their political voice for one-off assistance or empty promises. Or the service concerns of slum dwellers are represented to local government by ineffective or corrupt representatives. In this regard, a study by Sinharoy et al. (2019) on the review of drivers and barriers of water and sanitation policies for urban informal settlements in low-income and middle-income countries states several political barriers to the implementation of infrastructure policies for informal settlements, including corruption and patronage. Therefore, Pierce (2017) pointed out the importance of political obstacles to the delivery of informal settlements.

2.3.3.3 Supply Chains and Costs of Infrastructures

To fill the gap in basic infrastructure services in urban informal settlements, nongovernmental organizations, community-based organizations, and other small-scale service providers emerged (Narayanan et al., 2017). As a result, several small-scale private service providers in developing countries have stepped up to fill the infrastructure service gap outside the formal utility system (Nijman, 2008). Work by authors such as Pierce (2017), Narayanan et al., (2017), and Sinharoy et al. (2019), three main players are involved in the provision of basic services to the urban poor: the state, the private sector, and the voluntary sector.

In a similar vein, according to Yirgalem (2008), in his study of informal urban service provision and management in Addis Ababa, the government ignores some illegal activities relating to government urban services because the law forbids the sale or subleasing of services. The result of this has been the flourishing of informal service providers which ignore the formal rules which are meant to address local constraints. As a consequence, the government is no longer responsible for providing urban infrastructure,

which has been given over to non-state actors, such as water vendors, consumers, and local civil society actors.

Adding further detail to this conceptualization, in Turkey's spontaneous settlements, Leitmann and Baharoglu (1999) found that conventional rules do little to create any significant change in the level of infrastructure and services delivered. As a result, access to basic infrastructure and services in *gecekondu*s (informal settlements in Turkey) is generally not a problem. Inevitably, once informal actors, who both use and provide basic services, realize and understand the gaps and ambiguities in overly written rules and regulations, they will lose respect for the existing formal rules and regulations (Yirgalem, 2008). In addition to collaborating with large-scale public or private agencies on providing services, informal actors often offer services to houses and businesses that would be unable to access conventional services because of their lack of availability, inadequacy, or expense (UN-Habitat, 2009).

Even though unlawful connections cost utilities a lot to provide infrastructure to informal settlements, they consume nonetheless. Illegal connections cost significantly more on utilities than planned areas, which means infrastructure is significantly more expensive in informal settlements (Leitmann & Baharoğlu, 1999). Because of this, informal settlers who do not have legal standing are denied access to services compared to formal settlers who enjoy de jure tenure security (Chandrasekhar, 2005). As a result, most people do not have access to adequate infrastructures like water, electricity, sanitation, transportation, etc. In this regard, for example, based on the data obtained from UN-Habitat (2013) it is confirmed that informal settlers pay more money to private water vendors. The price differences between the price of a water connection for a house and that of a private water vendor were as high as 9547% for some Asian cities that UN-Habitat studied in 2013 (see Table 2.3).

That means the poor (e.g. informal settlers who buy water from private water vendors) are charged more from private vendors for water consumption. Water vendors often charge households high prices for water than people with pipe connections to their homes and public taps. On top of that, they often spend several hours every day collecting water (Sorenson et al., 2011). People who are low-income often work very long hours, so waiting in queues and then filling water containers is an additional burden. Water queues that are long and uncertain can also result in tension and fights because supplies are

uncertain. In this regard, an assessment study compiled by UN-Habitat on ‘time spent getting water of 16 sites in nine cities in Kenya, Uganda, and Tanzania, it was discovered that families without pipes spent an average of 92 minutes collecting water each day (UN-Habitat, 2013).

Table 2.3 The cost of accessing water in some Asian Cities

| Cities | Cost of water per cubic meter (\$) | | | Difference between the price of house connection and price of private Vendor (%) ^a |
|-----------|------------------------------------|------------|--------------|---|
| | House connections | Public tap | Water Vendor | |
| Bandung | 0.38 | 0.26 | 3.60 | 847 |
| Bangkok | 0.30 | - | 28.94 | 9547 |
| Chonburi | 0.38 | - | 19.33 | 4987 |
| Kathmandu | 0.18 | 0.24 | 2.61 | 1350 |
| Karachi | 0.10 | - | 1.14 | 1040 |
| Manila | 0.29 | - | 2.15 | 641 |
| Mumbai | 0.07 | 0.07 | 0.50 | 614 |
| Port Vila | 0.42 | 0.86 | 8.77 | 1988 |
| Seoul | 0.25 | 14.13 | 21.32 | 8428 |

(Source: UN-Habitat, 2013, p. 71)

^a computed based on the given cost of water per cubic meter

It is estimated that informal households that buy water from vendors spend between 5 and 10 percent of their total income on water. Similarly, based on a study conducted in Kumi (Uganda), a family consuming 24 liters per person per day would spend 15 percent of its income on water; if it relied on vendors, it would spend 45 percent (Agha, 2000).

If there are no toilets in a home, households may spend a great deal of money using public toilets. A review on the cost of sanitation by the UN-Habitat in Kumasi (Ghana), it is made known that the use of public toilets just once every day by each member of a household can need 10–15 percent of the wage of the primary income earner. On the other hand, because low-income people can't afford to use public toilets, they defecate in the open in several Indian cities (UN-Habitat, 2013). In the absence of adequate sanitation facilities in the informal areas of Kenya, dwellers rely on ‘*flying toilets*’ or ‘*scud missile*’. That means, they put the waste in a polythene bag and throw it onto the nearest roof or pathway (Beall & Fox, 2009) and there has also been continued growth of “*flying toilets*”. In informal settlements, the majority of toilets and latrines are owned and managed by community

organizations and also by individuals who charge Kenyan shillings 5 (1 Ethiopian Birr equals 0.41 Kenyan shilling) per visit per person (Mutisya & Yarime, 2011).

Despite various degrees of illegality, many illegal settlers may not have difficulties working in the provision of infrastructure. For example, they may routinely supply infrastructure for 'illegal subdivisions' where the land is not occupied illegally, but no approval to develop it has been obtained. There are many informal settlements in some cities made up of homes built on illegal subdivisions. Even if sites were never approved, the land occupied by these homes may have been legal, which means utilities like water, electricity, and sanitation can invest in them without worrying about fines, especially when many in middle-and upper-income categories live in illegal subdivisions (UN-Habitat, 2013).

In addition to the low level and high cost of water in the informal areas, informal areas are also suffered from electricity deficiency. In this regard, a study by Mutisya & Yarime (2011) in Kibera, Kenya, made clear that residents depend almost exclusively on wood and charcoal for heat. Women and girls are usually forced to carry firewood for a long distance.

According to findings of a study of illegal electricity connections in Favelas of Belo Horizonte, Brazil, informal residents are discouraged from getting electricity because they face prohibitively high connection costs, cost-prohibitive consumption fees, and sometimes disproportionate sales taxes. Due to this, low-income consumers typically spend a greater percentage of their income on energy than consumers in higher income brackets. For peri-urban poor settlers, the gap is even more severe, because they have no access to alternative natural resources as they do for rural poor settlers. The majority of empirical literature indicates that urban informal settlers (the poor) spend about 7.3% of their income on household expenses, which is considerably more than the average in industrialized nations like the United States. In other words, the study revealed that the costs of electricity are disproportionately higher for poor and disadvantaged areas like urban informal settlements (slums) (Mimmi & Ecer, 2010).

2.4.3.3 Actors involved in addressing infrastructure in informal areas

The above discussion raises a pressing need to understand how and by whom informal settlers can gain infrastructures in the absence of active involvement of the state

actors. In response to this, myriad formal and informal actors participate, including private agencies, government agencies, NGOs, and community organizations. Driven by the amount of money they can make, for example, through electricity or water sales, private individuals' involvement in infrastructure delivery and regulatory frameworks can take many forms, such as service contracts, management contracts, rental contracts, concession contracts, build-own transfer contracts, and divestitures (UN-Habitat, 2013). To improve the access to basic infrastructure services, a multilateral arrangement involving the government, alternate service providers, and informal residents provides each actor with opportunities to contribute to their area of strength. To that end, infrastructure is extended in informal areas by them by utilizing a variety of enabling strategies such as negotiation, collaboration, political deal-making, financial and organizational strategies (Narayanan et al., 2017).

2.4.4 Public Interventions to Regulate the Growth of informal settlement

The housing problem in the urban areas of the developing world emerged as early as the 1940s. To this end, informal settlements have been mushrooming since the end of World War II (Mangin, 1967). Over the period when informal settlements appeared from the 1940s and 1950s to contemporary times, many different public policies have been tried. Works of the literature of the past decades suggest that governments' attitudes to unlawful settlement developments have generally changed over the last 70 years (the 1940s to 2010s). Approaches to the question of informal settlement intervention often depend on the political philosophy of each nation; have traditionally fallen into either the Marxist or the liberal notions. This contrast may be partly rooted in the divergent informal settlement intervention that existed in various countries over time (Huchzemeyer, 2002). In general, there are three basic informal settlement intervention approaches: the optimistic, the pessimistic, and probably the hybrid approaches.

At one extreme, in the optimistic approach, informal settlements are viewed as solutions in providing shelter options to thousands of millions of poor urban populations in countries who cannot access adequate shelter through the formal channels (Mangin, 1967; Turner, 1977; Wekesa et al., 2011). In this regard, Turner (1977) and Mangin (1967) agree that informal settlement advocates the rights of the urban poor and the settlements can provide relatively cheap housing for the rural migrants and other marginalized households.

Adding further detail to this thought, they had acknowledged the potential relevance of informal settlements in facilitating vibrant micro-economies that attract and retain substantial as well as stable middle-income populations. With this in mind Mangin (1967), Turner (1977), and Wekesa et al. (2011) do concede that informal settlements are solutions to difficult physical and socio-economic circumstances rather than as problems in themselves. These writers did not suggest eradication and/or eviction as solutions to informal settlements. They suggest other policy responses such as upgrading on the rationale, among others, that the cost of upgrading the informal settlements is less than the cost of relocation of the informal settlements to new locations; eradication and/or eviction often create serious internal political disturbances (Mangin, 1967; Turner, 1977; Wekesa et al., 2011).

At the other extreme, pessimists regarded public investment in areas of informal settlement as a waste of scarce resources and hence in need of eradication. In the liberal view where the thought is pessimistic, informal settlements are usually viewed as the ‘urban cancers’, ‘festering sores’, ‘urban fungi’, ‘rudest kind of slum’, ‘dirty’, useless, ugly, and the like; thus in need of eradication because there was a widespread belief that the diversion of “scarce capital” to such ends is a waste (Hardoy & Satterthwaite, 1986; Perlman, 2010; Potter & Lloyd-Evans, 1998). Eradication was thought to be a must as it was believed that ‘poverty is the poor's fault’ (Gilbert & Gugler, 1992, p. 84; Lewis, 1966; Potter & Lloyd-Evans, 1998, p. 144).

Despite these polarized views since the 1940s, in general, there is a paradigm shift in the intervention from the oppressive through a political swing and followed by a state ambiguity concerning informal settlements giving limited space to a more gradual compromising treatment; hence, implemented a hybrid approach (Hardoy & Satterthwaite, 1986, 1993). To this end, many developing countries pursued repressive measures until researchers such as Mangin (1967) and Turner (1977) and, the international organization experience such as World Bank and UNDP started to give facts about the failures of the eradication policies, its failure, and the perverse effects it had on the informal settlers (Acioly, 2002). Thus, many of the reasons for the paradigm from the harsh and severe demolition of informal settlements to the more tolerated measures were based on the academic and international study outputs.

Thus, the following may be intended to halt the expansion and densification of informal settlements, not necessarily in a particular country. It is also important to ensure that in the sequence of government responses, governments did not move strictly from the negligence phase to the eradication phase to the upgrade stage so that the approaches did not necessarily happen one after the other. The intervention approaches are based on the period of dominance whereby the approach that existed has ruled over another.

a. Negligence

One of the conventional responses employed by the government is negligence reflected in the form of 'laissez-faire policies'. Government authorities may not offer any response to informal communities, arising from negligence, tolerance, or ignorance of informal settlements. The situation in the informal settlements may become a point of attention for the administration since the government may view such settlements as one of its political assets or is unaware that informal community members do not pose any threat to the principle of private ownership of property, and informal community members are regarded as an asset for the local economy and social system as well (Acioly, 2002; UN-Habitat, 2009).

b. Eradication and eviction

In the 1950s and 1960s, informal settlements were generally viewed with alarm and glumness in the sense that settlement represented social evils that had to be cleared or eradicated and replaced by regular housing (Harrison, 1992; Mangin, 1967; Potter & Llod-Evans, 1998).

Hardoy and Satterthwaite (1993) claim that informal settlements are seen by many developing countries as cancer that needs to be cured; the most common response was clearance projects, carried out by bulldozing. This eviction involves an involuntary removal of people from their place of residency and re-housing the evictees somewhere else, most likely to very peripheral public housing projects areas where there were much fewer opportunities for work, school, healthcare, and any other things (Abbott, 2002; Khan, 1994; Perlman, 2010; Potter & Llod-Evans, 1998). Two of the main rationales that had been raised for the bulldozing of informal settlements were the 'city beautification program' (Zhu et al.,

2019) and the second to use the cleared land more intensively or redevelopment (Cheema, 1993; Huchzermeyer, 2002). It was during the 1970s that the repressive bulldozer eviction policy predominated (Acioly, 2002).

c. Rustication and restrict rural-to-urban migration

In many urban areas, migrants form a large proportion of the urban poor with whom they share income and non-income disadvantages, including difficulties in finding adequate housing and in accessing services (Tacoli et al., 2008). Because of this notion, rural migrants are often blamed for increasing the growth of informal settlements thereby urban poverty. Rural migration to urban areas often results in the outgrowth and arising pockets of informal settlements, and there was a belief that shipments of settlers back to the rural areas would curb this. The policy instruments implemented were for example the rustication policy and the restriction of rural to urban migration (Chan, 1992; Mangin, 1967).

A more systematized response to the above policy instruments was through reducing population pressure and improving urban management (Cheema, 1993). The closed city programs (for example China's counter-urban growth policies in the 1960s and 1970s) were aimed at reducing in-migration to urban areas to restrict urban growth through such policy instruments as "tax measures, freezing urban wages, deliberate under-investment in the urban housing and service sector, various forms of rationing consumer goods and services, and demolition of squatter settlements" (Chan, 1992, p. 57; Cheema, 1993).

However, because urbanization or the growth of urban areas is inevitable (Cheema, 1993), policy instruments and programs aiming at reducing population pressures through rustication and restricting rural-to-urban migration have not been successful or far from sufficient (Alemie et al., 2016) thereby reducing the outgrowth of informal settlements in the urban areas of countries.

d. Upgrading

Informal settlement upgrading is not the latest phenomenon; countries such as Peru, Indonesia, India, and Turkey already had adopted such an approach to tackle the problems of informal urbanization since the 1950s (Acioly, 2002). Informal settlement upgrading, initiated by Turner, Mangin, and others in the 1960s and 1970s (Abbott, 2002), is a process

of intervention in the physical, social, economic and juridical structure of an existing human settlement that was “formed through spontaneous mechanisms and unplanned processes of land occupation” (Acioly, 2002, p.7). However, this approach was dominated during the 1980s. It was aimed to reduce the harmful social, economic and environmental impacts derived from eradication policies through the provision of secured land tenure, social services, and citizenship to informal dwellers; hence, it was the sites and services initiative program (Abbott, 2002; Acioly, 2002).

e. Regularization

At a time when informal settlements became the dominant form of urban development in the late 1970s in many countries, land regularization did emerge as a regulatory means (Serageldin, 1991). Thus, it appears that in the late 1970s and during the 1980s, a gradual worldwide paradigm shift started to take place and the experiences in Peru, Indonesia, Zambia and the Philippines experiences among others got wider dissemination. This shift was already advocated during the Habitat I Conference, in 1976, Montreal in Canada, and subsequently influenced by international donor and funding agencies such as the World Bank which started to promote new approaches through lending policies (Acioly, 2002). The regularization policy is incorporated into housing policies with projects and programs focusing on recognition and provision of secure tenure in informal settlements for improving liveability in such areas (Arimah et al., 2009; Huchzermeyer, 2011).

Tenure Security was believed to be one of the tools that can be used to assist in the eradication of poverty. Although the condition varies widely from one country to another, the majority of households living in informal settlements have no formal security of tenure and poor access, if any, to basic urban services. Various works of literature reveal that public and private formal land and housing delivery systems simply cannot respond to the needs of the urban poor. Thus, in such a view, there is a trust that informal settlements of any magnitude can be reduced or eradicated as far as the security of tenure is sustained by the municipality of a given nation through regularization.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Study Sites

Adengur: This area includes north of *Adengur* primary school and *Mariam* Church in which the establishment of new settlements has prevailed. It is surrounded by hill areas in the north including a narrow pass of *Karahatu*, *Mesalemia (Aysema)* in the west, a narrow road to *Zamil-Giorgis* in the east, and the urban peripheral *kebeles* of 04 and 05 of Woldia in the south.

Wassie Kebele: Located just east of the main road that leads to *Zamil-Giorgis*, *Wassie Kebele* is situated in the northern peripheral part of Woldia. It is surrounded by the *kebele* 04 of Woldia town in the south, *Adengur* in the west, *Zamil-Giorgis* in the north, and *Ariro* in the southeast.

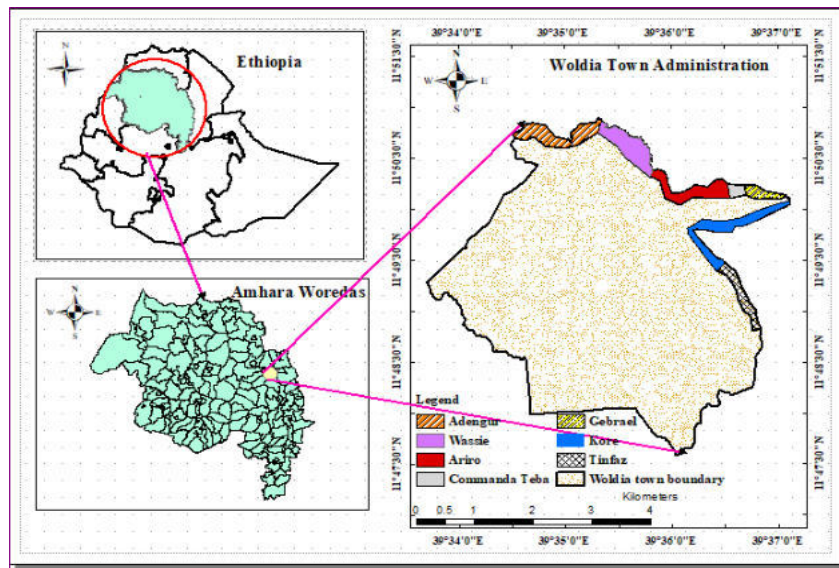


Figure 3.1 Location Map of Woldia and the study peri-urban areas

(Source: Developed by the author, 2019)

Ariro: is the third peri-urban study area in the present study. This area is found north of *Kebele* 01 adjacent to the foothills of *Gebrael* Mountain. *Wassie Kebele* surrounds it in the northwest, *Commanada Teba* in the east, peripheral parts of *Kebele 01* of Woldia town in the south, and the foothills of *Gebrael* Mountain in the north. In this area, the settlements are densest in the south and dispersed in the north direction, as the southern part is the one

settled earlier and the northern part is newly established. To the north of it, the hill areas of Gebrael Mountain restrict settlement expansion. Geologically, compared to its neighboring *Wassie Kebele* and *Commanda Teba*, the settlements are mostly developed in hard rock as well as in steeper terrain topography.

Commanda Teba and Foothill of Gebrael: They are located in the foothills of *Gebrael* Mountain. South of these informal settlements in the foothills of *Gebrael* is the historical church of *Kidane Mihret*. North of *Kidane Mihret*, there is the flourishing of informal settlements recently. The foothills of *Gebrael* surrounded the areas in the north, the peripheral areas of *Kebele 01* of Woldia town in the south, and foothills of *Gebrael* Mountain and the small corridor of Woldia all the way to the north in the east.

Kore: found between the foothills of *Gubarja* Mountain and peripheral of *Kebele 02* of Woldia town. The area is steep and could potentially cause environmental hazards such as landslides, rock fall, and floods. Further, infrastructure development in this area is more challenging and costly as the settlements are built up and being built into the geologically hard surface areas. To this end, the areas remained at the periphery of core infrastructure provision.

Tinfaz: is the other informal residential neighborhood in the peri-urban areas of Woldia. The foothills of *Gubarja* Mountain bound it to the East, peripheral settlements of *Kebele 01* of Woldia town in the west, settlements of *Kore* to the North, and *Awra Godana* to the south. Settlements in *Tinfaz* have mostly developed and are being developed on the forest reserved foothills of *Gubarja* Mountain. As with neighboring *Kore*, the areas are potentially risky, as landslides and rockfalls could threaten them at any point in time.

These peri-urban areas have been chosen as the location of research for two basic reasons. In the *first* place, they are the settlement destination areas where population pressure in the inner of the town is intense. On the way, informal settlements continue to grow at a faster rate in these peripheral areas than in other areas. *Second*, despite some attention has been given by the public to reducing the outgrowth of such settlements in the last few years, the development of physical infrastructure and basic urban services such as roads, water supply, sanitation, electricity, and refusal disposal are lagging far behind the needs. This enables us to investigate and understand how the informal settlers solve these lacks informally.

3.2 Research Design

To realize the stated research questions and purpose of the study, before the actual data collection, a preliminary field survey and personal observations have been conducted. Correspondingly, desk-review on the non-legitimate peri-urban land division, transactions, house construction, and infrastructure, as well as basic service accessing mechanism, have been reviewed to identify and define terms used in the research work. To investigate the principal triggering factors for the growth of informal settlements, I collected data using both qualitative and quantitative methods. I had given more weight to the qualitative than the quantitative method to reveal issues that were not easy to figure out in the quantitative methods.

The overall research design of this study is, thus, the blend of both qualitative and quantitative methods; hence, it is convergent parallel mixed methods. The research uses both quantitative and qualitative data to analyze the research problem systematically. I did data collection for both types of data around the same time, and I interpreted results based on the combined information.

3.3 Data types

This dissertation uses two types of data, primary data and secondary data, depending on how the data were collected. While I collected primary data from interviews, questionnaires, and observations, secondary data were gathered from census results, administrative (organizational) data, and published and/or unpublished documents such as books, articles, policy documents, and dissertations. They were also qualitative and quantitative, though I have given more weight to the qualitative as I gave more weight to the qualitative data collection tools.

3.4 Data Sources

The principal sources of data for this research include the administrative and service organs of the town, other local actors, documents, and google earth images. In this regard, the administrative and service organs of the town include individuals from the main core process owner offices within the Municipality, the mayor's office, and North Wollo zone

agricultural office. In addition to the above, I gathered data from Woldia *Woreda* water supply and sewerage authority and Ethiopian electric utility.

The other most important source of data included residents of informal settlements, local farmers, land speculators, and local land brokers. I used published and unpublished documents as the third source of data for this study. Such sources include Local Development Plans (LDPs) and annual reports of the municipality of the town.

Table 3.1 Research questions (RQ), Operational Research Questions (ORQs), Data types and sources, and Methods of Data Collection

| Research Question (RQ) | Operational Research Questions (ORQ) | Data type (Primary, Secondary Qualitative, Quantitative) | Data source | Methods of data collection |
|------------------------|--------------------------------------|--|--|--|
| RQ-1 | ORQ-1 | Primary, Secondary Qualitative, and Quantitative | Documents, government officials, peri-urban settlers, land brokers, land speculators | Document review, Interview, FGDs, Questionnaires |
| | ORQ-2 and ORQ-3 | Primary, Secondary Qualitative | Documents, government officials, land brokers, land speculators | Document review, Interview, FGDs, Questionnaires |
| | ORQ-4 | Primary, Secondary Qualitative | Government officials, peri-urban settlers, land brokers, land speculators | Interview, FGDs, Questionnaires |
| RQ-2 | ORQ-1 | Primary, Secondary Qualitative | Documents, government officials, land brokers, land speculators | Document review, Interview, FGDs |
| | ORQ-2 | Primary, Secondary Qualitative | Government officials, peri-urban settlers, land brokers, land speculators | Interview, FGDs, Questionnaires |
| RQ-3 | ORQ-1 | Primary, Secondary Qualitative | Documents, Government officials, peri-urban settlers, land brokers, land speculators | Document review, Interview, FGDs |
| | ORQ-2 | Primary, Secondary Qualitative, and Quantitative | Government officials, peri-urban settlers, land brokers, land speculators | Document review, Interview, FGDs, observation |
| RQ-4 | ORQ-1 | Secondary, Qualitative | Documents | Document review, observation |
| | ORQ-2 | Primary, Secondary Dominantly Qualitative | Documents, government officials, peri-urban settlers | Document review, Interview, field observation |

(Source: Constructed by the author, 2019)

Moreover, government documents such as the constitutions, policies, proclamations, regulations, and urban planning documents of the town of different periods were also the fundamental secondary sources of data. All in all, data types, sources, and methods of data collection across the main and operational research questions are provided in Table 3.1.

3.5 Sampling design

3.5.1 Sampling techniques

For collecting the relevant data for this research, the following sampling techniques have been employed: purposive sampling, snowball sampling, opportunistic (accidental) sampling, and systematic random sampling method. Purposive sampling was employed to select sample respondents that exhibit most of the characteristics of the interest of this study and know enough, can recall enough, and can respond precisely to questions asked in the sphere of urban land use, planning, and management at the town level. The second sampling technique used in this study was snowball sampling. This sampling technique was used to collect data from a population whose size I did not know in advance, such as land brokers, developers, and land speculators. The third sampling technique used in this study was opportunistic (accidental) sampling. I employed this technique to gather data from administrative seekers in the municipality and other key informants based on casual conversation. The fourth sampling technique that I employed to gather data from peri-urban households was systematic random sampling.

3.5.2 Sample population

The population from which I selected the samples is the main local actors, not all but very selective. As described above, sample populations only include the major players and institutions in the sphere of urban land use, planning, and management at the local or town levels such as local government officials and private individuals. The sample population includes urban managers, urban planners, urban designers, civil engineers, sanitary engineers, GIS professionals, data encoders, lawyers, environmentalists, accountants, economists, and agriculturalists obtained from the different government institutions. Besides, land brokers, land speculators, key informants, and peri-urban settlers were sample populations in this study. Table 3.3 provides details about the sample population.

3.5.3 Sample size determination

For determining the size of samples for this study, two kinds of populations existed: the known and the unknown size. First, there are respondents or sample populations whose size I know in advance (government officials, for instance) as well as those whose size is estimated (peri-urban settlers). Land brokers, land speculators, administrative seekers, and developers constitute the second sample population whose size I did not know in advance.

Even if the sizes of government officials are known in advance, I did not use a sample size determination formula. After intentionally excluding messengers, janitors, secretaries, cashiers, and some others as sources of data, I took sample respondents from the total employees of each core process owner/department of government officials. In my opinion, these employees do not exhibit the characteristics of this study. I took a sample of land brokers, land speculators, key informants (including administrative seekers) and developers for interviews and focus group discussions based on the voluntary and job characteristics of the respondents until the data being collected was saturated.

For determining the sample size of peri-urban settlers (for questionnaire administration), I applied the following sample size determination formula (Cochran, 1963, p. 75; Kothari, 2004, p. 179) (Equation 1). They recommend this sample size determination formula for use when the actual size of populations with the attributes under study is unknown in advance.

$$n_o = \frac{z^2 pq}{e^2} \dots\dots\dots \text{Equation 1}$$

Where n_o is the sample size, Z^2 is the abscissa of the normal curve that cuts off an area 'a' at the tails (1 - a equals the desired confidence level, e.g., 95%), e is the desired level of precision, p is the estimated proportion of attributes in the population, and q is 1-p. The value for Z is found in statistical tables which contain the area under the normal curve.

The municipal experts from Woldia town estimated that 80% of the settlements in the periphery areas, including the study areas, are composed mainly of informal settlers. I used this figure from municipal experts to determine the sample size for questionnaire administration. In light of that, since the value of p is 0.80 (population with the characteristics of this study), the value of q (population without the characteristics of this study) is 0.20, and with a 95% confidence level and ±5% level of precision, the sample size for informal settlers and/ farmers is computed as:

$$n_o = \frac{(1.96)^2 * 0.80 * 0.20}{(0.05)^2} = 245.86 \approx 246$$

Because the peri-urban populations are homogeneous in their informality, a sampling frame includes the majority of the target population. As described above, prior to the actual data collection, I clustered the study areas into five. To ensure that no areas overlap or are mutually exclusive, it followed tracking and delineation methods. Each house was digitized from satellite images of Woldia and an identification number was assigned. I listed and registered all households/settlements across cluster areas. Next, I assigned numbers to

houses in selected informal settlement areas as part of my fieldwork. During the actual registration, I discovered that there were some houses without occupant and others with occupants. As a result, I had to exclude houses without occupants from the sample size. This was because the survey was focused on getting information on the occupants of the houses and not the houses themselves. Therefore, it was necessary to exclude houses without occupants in order to ensure the accuracy of the survey results.

Hence, of the total digitized and updated list of 731 houses, 92 were unoccupied during the time of fieldwork. Therefore, after excluding those settlements without occupants, 246 households were selected (Table 3.2). I conducted this selection process to ensure that the fieldwork focused on inhabited houses, as in unoccupied houses, there were no people who provided useful information. In addition to *Equation 1*, described above, the following formula is used to determine the total sample households (Kothari, 2004; Equation 2).

$$n = \frac{N}{1+N(e)^2} \text{----- Equation 2}$$

Where: n= Sample; N= Population; error term (5%)

Proportional sampling methods (Equation 3) were employed to ensure a proportional representation of households in each selected area.

$$\text{Sample size} = \frac{\text{Total sample households} * \text{households of each study area}}{\text{Total households}} \text{..... Equation 3}$$

To do so, from the list of available households in each study site, by determining the sampling interval of i^{th} item, every household was selected for questionnaire administration based on the updated list and to start random numbers were picked up (Equation 4).

$$i^{\text{th}} = \frac{N}{n} \text{..... Equation 4}$$

Table 3.2 Total Number of Houses, household size, and Sample Households size

| No | Study areas | No. of houses | No. of occupied houses (Households) | Sample Households |
|----|----------------------------------|---------------|--|----------------------|
| 1 | <i>Ariro and foot of Gebrael</i> | 142 | 127 | 49 |
| 2 | <i>Adengur</i> | 167 | 131 | 50 |
| 3 | <i>Wassie</i> | 154 | 129 | 50 |
| 4 | <i>Tinfaz and Kore</i> | 141 | 132 | 50 |
| 5 | <i>Commanda Teba</i> | 127 | 120 | 46 |
| | Total | 731 | 639 | 246 |

However, I have conducted the final analysis on 244 sample respondents, as I have omitted two questionnaires due to misinformation.

Table 3.3 Categories and number of sample participants for data collection

| No | Categories | Core process owner /department | profession/Job title | No. of respondents |
|--------------|--|--|--|--------------------|
| 1 | Municipality | Urban land development and management | Urban land manager | 3 |
| | | | Lease officer | 1 |
| | | | Urban design (surveyor) | 2 |
| | | | Data encoder | 2 |
| 2 | | Local illegal construction control and peacekeeping | Law | 2 |
| | | | Management | 2 |
| | | | Data encoder | 1 |
| 3 | | Housing and infrastructure work | Designer | 1 |
| | | | Environmentalist | 1 |
| | | | Civil engineer | 2 |
| 4 | | plan implementation, sanitation, and beautification | Sanitary engineering | 1 |
| | | | Designer | 1 |
| 5 | | Cadastral office | Urban designer | 1 |
| | | | GIS expert | 1 |
| | | | Data encoder | 1 |
| | | | Civil engineer | 2 |
| 6 | | Municipality administrative office (Main) | Civil engineer | 1 |
| | | | Deputy manager | 1 |
| 7 | | Procurement and property administration (Finance) | Accountant | 1 |
| | | | Data base | 1 |
| 8 | | Urban plan and construction inspection department | Urban planner | 2 |
| | | | Urban designer | 1 |
| | | | Civil engineer | 1 |
| 9 | Zone urban works and construction department | Zone urban works and construction department | Database | 1 |
| | | | Urban planner | 2 |
| | | | Urban land manager | 2 |
| 10 | Mayor | Woldia Woreda rural land use and rehabilitation | Tenure transfer expert | 2 |
| | | | Land registration and certification expert | 1 |
| | | | Economics | 1 |
| 11 | | Woldia Woreda revenue office | Economics | 1 |
| | | | Data encoder | 1 |
| 12 | WSSA | Woldia Woreda water supply and sewerage authority (customer service experts) | Customer service expert | 1 |
| | | | Database | 1 |
| | | | Planner | 1 |
| 13 | Ethiopian Electric Utility | Ethiopian Electric utility (customer service experts) | Management | 1 |
| | | | Data encoder | 1 |
| 14 | Kebeles 01, 02 and 04 | Local illegal construction control and peacekeeping | Sanitary | 2 |
| | | | Law | 3 |
| | | | Management | 3 |
| | | | Complain resolution expert | 3 |
| 15 | Kebele 01 | Urban plan implementation, sanitation, and beautification | Sanitary | 2 |
| | | | planner | 2 |
| 16 | Zone agricultural office | Land registration and certification expert | Agriculture | 2 |
| 17 | Amhara Housing Development Corporations | Amhara Housing Development Corporations (Woldia district) | Data encoder | 1 |
| 18 | Land brokers | | | 5 |
| 19 | Land speculators | | | 4 |
| 20 | Key informants, including administrative seekers | | | 8 |
| 21 | Focus Group Discussions | | | 9 |
| 22 | People from informal/traditional institutions | | Ordinal people | 3 |
| 23 | Peri-urban settlers | | Ordinal people | 244 |
| Total | | | | 336 |

Generally, 336 participants in various categories have been involved in this research.

3.6 Methods of data collection

Before starting the actual data collection from peri-urban households, I undertook a field survey on sample study areas, the respective *Kebeles*, and departments (core process owners) in the municipality of Woldia. The development of data collection instruments followed this. Accordingly, the following data collection instruments/tools were developed: structured survey questionnaire, interview, focus groups, observations, document data collection tools, and open website searches.

Questionnaire

Since the first draft of the questionnaire was prepared in English, I translated it into *Amharic* version (the local language of the respondents) to avoid free translation and thus misconception of the questionnaires by the enumerators. Pre-testing was conducted among 14 informal settlers (subjects not included in the sample) to validate the wording of a question, the appropriateness of the message it conveys, and whether different respondents interpret it similarly. Based on the validation, hence, the instruments have been further refined.

For questionnaire administration, 5 enumerators (3 males and 2 females who were grade 12 students) were selected and oriented on how to approach, administer the questionnaire, and handle the challenges that may come across during the fieldwork. Besides, there were 5 supervisors (who were teachers from Woldia Preparatory and Higher Education secondary school) in each of the clustering areas. Moreover, given the unauthorized nature of informal settlements and the question of willingness of sample respondents, the data collectors were purposely selected from sample peri-urban areas. I did this to ensure that the data collectors could gain the trust of the respondents and thus gather reliable data without the respondents feeling threatened or intimidated by the fact that they live in an informal settlement. By selecting data collectors from the same type of environment, the respondents could relate to them and trust that they would keep their information confidential. This ensured that the data was collected in an unbiased and accurate manner. Furthermore, an official supporting letter for enumerators and supervisors was brought from Woldia town mayor's office to make sure that the data collectors and supervisors are legal. Finally, the household survey was conducted by moving from house to

house to 246 households in the sample areas from the 24th of January 2019 to the 31st of January 2019 during the school holidays/vacations and the first two consecutive weekends (Saturday and Sunday) of February 2019.

Interview

The study also used face-to-face interviews with different people who are working in urban land management, infrastructure and service delivery, and could play a role in the development of (in)formal settlements. In conducting interviews, I administered questions at Mayor, municipal, and *kebele* administrative and service organs. The interviews were used, in addition to the administrative service organs, for collecting data from key informants, including administrative seekers in the municipality. I conducted interviews for 20 to 80 minutes, with an average interview time of 40 minutes.

Focus Group Discussion

To substantiate and triangulate the data collected through other means, the study also employed FGDs. I held the FGDs with two sessions: one at the municipality and the other in the office of *Kebele* 04. I conducted focus group discussions for 50 to 80 minutes, with an average interview time of 65 minutes.

Field observation

After developing recording sheets, checklists, and observation guides, observation field notes supported by photographs were taken related to the topic under investigation. Instances of aspects crucial to the research through observation were the way informal settlement areas are settled, the layout of informal settlements, and existing physical infrastructure services.

Document Analysis (including web sources)

Furthermore, to supplement the data collected through the primary sources mentioned above, secondary sources have been used. These include local development plans and annual reports of the town's municipality, and open websites search sources. In addition, the constitutions, policies, proclamations, regulations, and urban planning documents of the town were fundamental secondary sources of data. Issues related to policies, proclamations, regulations, and directives have a town-wide effect. In this study, discussion related to such matters is also referred to in the study of peri-urban areas as well.

3.7 Methods of data analysis

As explained above, while gathering data, quantitative and qualitative data collection instruments have been used. These entailed two types of data analysis: quantitative and qualitative. Despite the utilization of both qualitative and quantitative data (mixed approach) analysis, I gave more weight to the qualitative analysis than the quantitative analysis, as I have given more weight to the qualitative data collection instruments than the quantitative.

In this regard, the quantitative and qualitative are analyzed separately and then brought together using a side-by-side approach. In this work, I used a side-by-side approach to merge the results in the data analysis in the subsequent empirical chapters (where applicable). The qualitative data analysis is based on data expressed mainly in words-descriptions, concepts, opinions, feelings, experiences, and the like, rather than numerically. The qualitative analysis part includes critical examinations of the open-ended questionnaires addressed through interviewees, focus group discussion (FGDs), key informants, field survey observations, and document (text) analysis, which takes the form of narration.

Interviews from fieldwork were recorded by taking notes. The audio (mobile records) also assisted this when the interviewees were volunteers to do so. Every evening, on the same day or the next day after fieldwork, interview write-ups and field notes, verbatim focus group transcripts, audio and visual records, memory and emotions, and personal observations were transcribed and compiled into proper notes. Transcribing, translating, coding, categorizing, and reporting are among the steps in the qualitative data analysis process. I used selective transcription to eliminate information that was not relevant to the purpose of the study because an accurate transcription should be one with the purpose.

I analyzed quantitative data using elementary descriptive statistics (frequency, percent, mean, and cross-tabulations) and simple correlation. 246 household heads were surveyed with questionnaires. However, the final analysis was based on only 244 because two questionnaires were omitted due to misinformation found during the data cleaning process. After the fieldwork, all the data that was collected using questionnaires were cleaned, categorized, coded, and inserted into SPSS (version 21) for further analysis.

3.8 Methods of data presentation

The research output can be presented in three ways: textually, tabularly, or graphically. In a textual presentation, numbers and text are used to illustrate the outputs. An example of tabular presentation is reflected in the statistical tables that describe the research output. Moreover, the results are presented graphically, with figures and photos. Diagrams, tables, and photos provided additional information for the discussion.

3.9 Validity and reliability

To address the validity of this study, this study employed data and methodological triangulation. To deal with this issue, the use of focus groups and key informants substantiated my use of official interviews to check respondents' reports made during the interview. I also supported them by the administration of a questionnaire to peri-urban settlers as a method-triangulation that combines two or more types of research strategies in the same population group. The study has also employed a member check technique. This was achieved by inviting two participant members, one member from the municipality and the other from the zone urban works and construction department, to verify whether my (researcher's) interpretations were based on and supported by the data gathered at the time of the interview. Additionally, an external auditor was also employed to review the entire project, which also contributed to the trustworthiness of the research output. This was done by inviting two Ph.D. holders with very good qualitative research experience to evaluate the research process and to determine if the findings, interpretations, and conclusions were based on and supported by the data.

Other possible factors that affect the trustworthiness (validity) of qualitative research results are the wording of questions (questionnaires), the respondent's mood, and nature (mode) of interaction between the respondent and data collector. To this effect, to assess whether there exists vagueness and ambiguity in the wording of questions or statements, a pilot test of the questionnaire was made and I made possible refinement. Since the respondent's mode was the other factor that negatively influences the response, thereby the results of the study, data were collected when the mode of the respondent was fine for gathering the data.

A questionnaire was prepared and submitted to the ex-principal advisor for his approval, and he reviewed and approved that the questions in the questionnaire are valid and appropriate for measuring the concepts that are being measured purely on a face-value basis. A Ph.D. candidate, in addition to the ex-principal advisor, reviewed the questions in the questionnaire for readability, clarity, and completeness.

I also conducted a reliability test on the instruments. In most cases, Cronbach's alpha reliability test is used to determine questionnaire reliability. Using Cronbach alpha statistics, I carried out a reliability check and its value was 81.2%, which is above the recommended level of 70% ([Christensen et al., 2014](#)).

CHAPTER FOUR: RESULTS AND DISCUSSION

There are two major sections in this chapter: Results and Discussion.

4.1 Results

4.1.1 Socio-economic Description, the response rate of Respondents and reliability test

4.1.1.1 Response Rate of Respondents and reliability test

To address the first four research objectives, I administered questionnaires to a total of 246 peri-urban household head settlers. Among these, 244 have been appropriately filled and returned (i.e., the response rate is 99.2%). In this study, government institutions (including Woldia *Woreda* Mayor Office, Woldia *Woreda* revenue office, Woldia town municipality, Cadastral office, North Wollo Zone rural agricultural office, and *Kebele* offices of 01, 02, and 04) and 2 traditional (informal) institutions were included. Accordingly, in addition to peri-urban settlers, a total of 92 individuals were interviewed in different institutions and areas using face-to-face researcher/self-administered interviews. As a result, I used a total of 336 individual responses during the analysis.

The coefficient of reliability test (Cronbach alpha) for the questionnaire items was carried out using SPSS-21. Accordingly, the value of alpha for the questionnaire that was administered to peri-urban settlers is 0.812 (81.2%). As this value is above the recommended level of 70% (Christens et al., 2014), the questionnaire items are reliable.

4.1.1.2 Demographic and socioeconomic description of Respondents

To get clear pictures of the respondents who participated in the survey of this study, it is important to know about their demographic and socio-economic profile. Hence, it is essential at the outset to present the demographic (age and sex structures, migration status, marital status and household size) and socioeconomic characteristics (level of income, level of education and occupation, tenure status, and financial sources of respondents) of sample respondents that have, not necessarily the case, most considered in deterring people to live in informal settlements. These characteristics, as details of these factors are described in the upcoming sections, were found to be crucial in determining the outgrowth of informal

settlements. Hence, before trying to describe the results and discussion of the research output, these characteristics first need to be mentioned.

Age and Sex Structure of the respondents

The age-sex distribution of the respondents as shown in Table 4.1 reveals that 63.1 % of the respondents were females who were mainly within the age group of 31-50 years. It also shows that a large proportion of male respondents were within the age group of 31-40. A gender bias of this nature was not expected and is inconsistent with Ethiopian cultural and social practices. In Ethiopia, long-lasting social and cultural practices assume male heads of household provide interactions with external parties, such as responses to survey questionnaires where their views reflect family and household interests. The low incidence of male respondents may be because the data collectors often conducted the actual data collection during the time of office working days, in which mostly male-head respondents are left for work or absent from homes.

Table 4.1 Age-sex distribution of peri-urban sample respondents

| Sex of respondents | Age of respondents | | | | | | Total |
|--------------------|--------------------|-------|-------|-------|-------|------|-------|
| | 20-30 | 31-40 | 41-50 | 51-60 | 61-70 | > 71 | |
| Male | 11 | 29 | 23 | 20 | 6 | 1 | 90 |
| Female | 25 | 44 | 45 | 18 | 20 | 2 | 154 |
| Total | 36 | 73 | 68 | 38 | 26 | 3 | 244 |

(Source: Field survey, 2019)

The age distribution of the respondents (both sexes) reveals that the age group greater than 70 was the lowest with 1.23% while age groups 31-50 have the highest percentage share of 57.79%.

Marital status and household size of the respondents

Marital status and household sizes were the other demographic characteristics of peri-urban household respondents. Based on the field survey data shown in Table 4.2, 65.98% of the respondents were married /living couples/ followed by those who are never married (12.70%) and widow/widower (10.25%). The remaining 8.2% and 2.87% of the respondents were divorced and separated, respectively.

Table 4.2 Marital status and household size of peri-urban sample respondents

| Marital status | Household size (family unit) | | | | | | | | | | | Total | % of total |
|----------------|------------------------------|----|----|----|----|----|----|---|---|----|----|-------|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 13 | | |
| Married | 1 | 10 | 38 | 33 | 46 | 18 | 9 | 3 | 2 | 0 | 1 | 161 | 65.98 |
| Never Married | 7 | 3 | 5 | 4 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 31 | 12.70 |
| Divorced | 3 | 3 | 1 | 4 | 5 | 0 | 2 | 1 | 0 | 1 | 0 | 20 | 8.20 |
| Separated | 1 | 0 | 2 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 2.87 |
| widow/widower | 1 | 4 | 6 | 3 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 25 | 10.25 |
| Total | 13 | 20 | 52 | 44 | 67 | 29 | 11 | 4 | 2 | 1 | 1 | 244 | 100.00 |

(Source: Field survey, 2019)

The other most important demographic characteristic of the respondents is the household size. From Table 4.2, it is evident that most respondents have a family size of 3-6 members. This category constitutes 78.69% of the total household respondents. 33 (13.52%) household respondents have a family size ranging from 1 to 2. 19 (7.79%) of the household respondents have family sizes of 7 and above. From the field survey result, it was found that the total household size (family unit) of the respondents was 1044. Accordingly, the mean value of the sample household is found to be 4.28 which is nearly four-family sizes per household and is equivalent to the national average family size of 4.6.

Origin of sample peri-urban settlers

On the one hand, the household survey carried out in the peri-urban areas of Woldia revealed that the majority, 130 (53.3%) of the respondents had been living within the town administration but in the other parts of the town before settling in their present locations. On the other hand, 56 (23%) of the respondents reported that they were living in the adjacent rural areas in the town administration (*Gubarja, Jeneto Ber, Mehal Mechare, Gola Mechare, and Adengur-Gebrael Kebeles*) but come into the present areas via rural to urban migration. The findings of the study also revealed that 38 (15.6%) of the respondents lived in other rural areas before they came to their present locations. The least size of the respondents, 20 (8.2%) came from other urban areas (*Kulmesk, Muja, Sanka, Merto, Sirinka, Hara, etc.*).

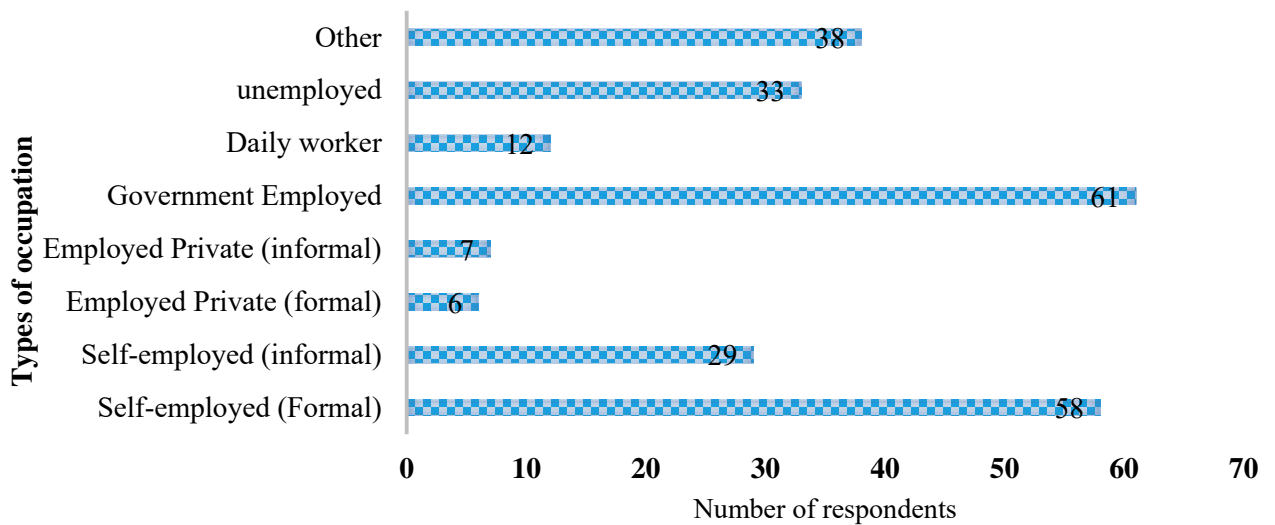


Figure 4.1 Type of occupation and number of sample respondents

(Source: Field survey, 2019)

Educational characteristics of peri-urban sample respondents

The research showed a range of educational levels of the household head in the peri-urban settlement areas. The disaggregation of the data according to the levels of education disclosed that 29.9% were with no schooling or incomplete basic primary education. While only 20.5% had never attended school, 9.4% attended adult education that helps them write and read. While 18% had attended grade 1-8 education, 27.5% attended grade 9-12 education, and 24.6% had completed college (vocational training, and college of teachers education) and above. This implies that informal settlements, far from containing poorly educated people are occupied by a cross-section of educated groups.

Occupations of respondents

A careful examination of Figure 4.1 shows that the major occupation of the respondents was government employees (25%) followed by formal self-employed (23.77%). Moreover, because of their old age or retirement or health problems, there were also significant proportions of unemployed respondent households (13.52%) who are supported by siblings/ close relatives or extended family who may or may not live with them. The informally self-employed, informally privately employed, daily laborers, unemployed, and others constitute a total of 48.77% of the total sample household respondents, which offers the lowest possible, not necessary, wage levels.

Here, unemployed refers to people who are not in the active working environment due to old age, retired, disabled, students in regular programs, etc. Employed People in a private but in the informal sector refers to those who are working in unregistered income-generating activities such as loading and unloading of charcoals, preparing of local drinks, etc. Similarly, people employed in a private formal organization refer to those individuals who work in the recognized private organizations and pay income taxes to the workers such as loading and unloading of beer, drugstores, supermarkets, etc.

On the other hand, those individuals who are self-employed but in informal economic activities include female households headed selling potatoes, fruits, and local drinks for generating income for their families.

Income level of respondents

Whether it related the people to the householder or not, household income refers to the income earned by the family unit living within the same housing unit. Hence, income information was collected and peri-urban settlement respondents were asked about the average monthly income of the households. To that end, it requested respondents to state their monthly total household incomes. Accordingly, the findings indicate that, of the total 244 sample respondents, the majority, 183 (75 %) were in the low-income threshold while 58 (23.7 %) were in the lower-middle-income category. The remaining 3 (1.6 %) were in the upper-middle-income thresholds. Using the SPSS software, the mean monthly income of all the respondents was computed and found to be 2264 Ethiopian Birr. This implies that 60% to 75% of the respondents were below the grand mean income of all respondents.

Financial sources for purchasing land/houses in the informal markets

The sample respondents across the peri-urban areas of Woldia were asked to categorize the principal sources of financing for buying a house or a piece of land in their present area. Table 4.3 reveals that 64.34% of the sample used savings in the purchase of land or a house, and only 3.3% of the samples informally borrowed money from friends or relatives without interest. A total of 5.3% of respondents borrowed money with interest from others informally. Furthermore, 5.3% of respondents obtained money through formal loans backed by guarantees, as illustrated in Table 4.3.

Table 4.3 Source of income to build/purchase the house/land by sample peri-urban respondents

| Source of income | Frequency | Percent |
|---|-----------|---------|
| Self/savings | 157 | 64.3 |
| Informal borrowing without interest | 8 | 3.3 |
| Informal money lender with an interest | 13 | 5.3 |
| Formal loan (with a collateral agreement) | 13 | 5.3 |
| Other | 53 | 21.7 |
| Total | 244 | 100.0 |

(Source: Field survey, 2019)

Tenure status and informal settlements

The other critical factor that needs to be addressed here is tenure security, which is one of the determinants of the nature of informal settlements. As per the data obtained from the sample peri-urban respondents, a total of 80% of the sample respondents were homeowners means they were tenure secured while a further 16% were renters.

Rent-free occupations are the other forms of housing occupation within these areas: rent-free constituted about 4%. Rented houses are houses that are occupied by those individuals who make regular payments to the owner as they are getting essential shelter options for certain groups of people such as poor people, daily laborers, college students, and so on. Rent-free are those dwelling units whereby households occupied the houses of relatives or friends without any rental payment. In this situation, the homeowners offer the houses rent-free to relatives or friends in return for their care. It was also found that people who own more than one informal house might offer friends or relatives in the housing unit rent-free to look after their investment while they were deciding whether to sell or keep the house.

View of respondents on the triggering factors for the growth of informal settlements

Before presenting and discussing the key driving factors for the emergence and growth of informal settlements in the study's peri-urban areas, I requested respondents to single out one principal cause of informal settlements in the peri-urban areas of Woldia. In order to ensure effectiveness, there were nine proposed triggering factors for informal settlements to

be selected by respondents. 21.49% of the respondents cited administrative deficiencies as the main trigger for the mushrooming of informal settlements in the peri-urban areas of Woldia. 14.46% of the respondents also mentioned an enormous sum of money through informal deals compared with meager legal compensation as the second key contributing factor.

Ever-increasing urban population and inefficient land provision (12.81%), an increase in the number of land brokers and backdoor deals (11.16%), and an increase in the peri-urban land price (10.74%) were also mentioned as the third, fourth, and fifth key driving factors of informal settlements in the peri-urban areas. Additionally, lack of access to land for housing cooperatives and long waiting times (10.33%), as well as easily accessible land on an informal basis (9.09%) were ranked as the sixth and seventh key factors in informal settlement development. Furthermore, the lengthy bureaucratic procedures to acquire land formally (5.37%), rural-urban migration and lack of affordable rental houses (4.55%) were mentioned as the eighth and ninth contributing factors to the growth of informal settlements as shown in Fig 4.2.

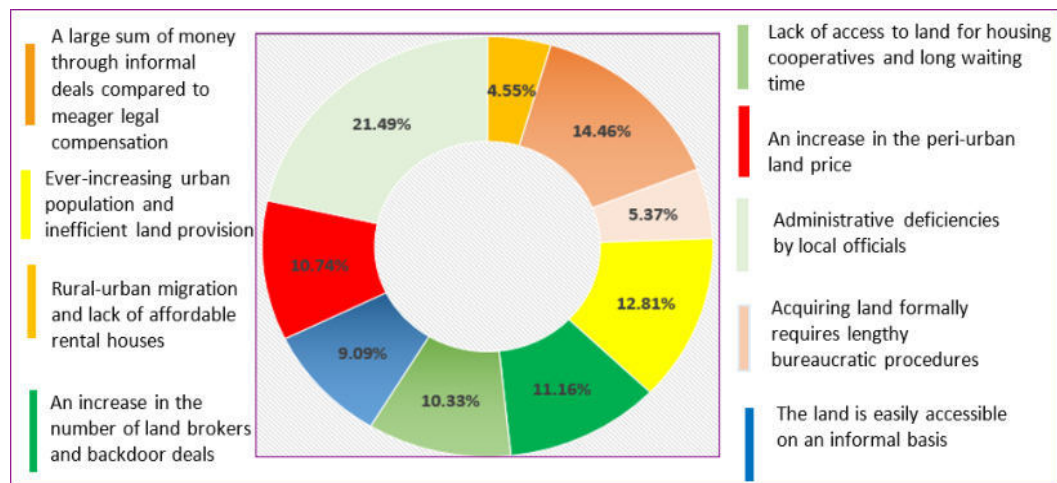


Figure 4.2 View of respondents on the causes of informal settlements in the study areas

4.1.2 Main triggering factors for the growth of informal settlements in Woldia

In this sub-section, findings and/or results of the study concerning the four Operational Research Questions (ORQs) of the first Research Question (RQ) are presented.

4.1.2.1 Economic related drivers- Income disparity and level of unemployment

An overview of a standardized World Bank's income classification is presented before exploring the income disparity of urban dwellers as a cause of informal settlements in Woldia. This is because I used it as a benchmark for my data presentation.

The World Bank assigns the World's economy into four income groups: low income, lower middle income, upper middle income, and high income—based on Gross National Income (GNI) per capita valued annually in US dollars using a three-year average exchange rate. The unit for this measure and the thresholds is the current US dollars. They fixed the cutoff points between each of the groups in real terms: they adjusted them each year in line with price inflation. The classification is published on the World Bank website (<http://data.worldbank.org>) and is revised once a year on July 1, at the start of the World Bank fiscal year. Moreover, according to the World Bank, new thresholds are determined at the start of the Bank's fiscal year in July and remain fixed for 12 months regardless of the subsequent revisions to estimates. On the rationale of this fact, as of July 1, 2018, the new thresholds for classification by income (GNI/capita-current US \$) are as follows: low income with GNI/capita less than \$995, lower middle income with GNI/capita between \$996 and \$3895, upper-middle-income with GNI/capita between \$3896 to \$12055 and finally the high-income part for GNI/capita over \$12,055 (see Table 4.4).

Table 4.4 World Bank's thresholds of income, GNI/capita (US \$), and Ethiopia's parallel

| Thresholds | GNI/Capita | |
|---------------------|-------------|-----------------------|
| | Us \$ | Ethiopian Birr |
| Low income | <995 | <28,347.55 |
| Lower-middle income | 996-3,895 | 28,376.04-110,968.55 |
| Upper-middle income | 3896-12,055 | 110,997.04-343,446.95 |
| High income | >12,095 | >343,446.95 |

(Source: Field survey, 2019)

This implies that with the current exchange rate of US \$ to Ethiopian Birr as of March 28/2019, the low-income categories of Ethiopian people are those with a total annual income of Ethiopian Birr less than 28,347.55; lower middle income with a total yearly income between 28,376.04 and 110,969.55; upper middle income with a total annual income

of value ranging from 110, 997.04 and 343,446.95; and finally high-income group with an annual total income of Ethiopian Birr greater than 343,446.95.

Table 4.5 shows the average household incomes and occupations of the respondents as a result of this survey. Accordingly, the findings indicated that of the total 244 sample household respondents, the majority or 183 (75%) were with a monthly average income level of less than 3201 (in the low-income threshold group) and just 3 (1.2%) of them were with a monthly average income of over 10,900 (upper-income thresholds). The remaining 58 (23.7%) were in the income category between Ethiopian birr 3201 and 7800 (lower-middle-income category).

Table 4.5 Types of Occupation and average monthly income of sample households

| Types of occupations | Average Monthly Income | | | | | | | Total |
|-----------------------------|------------------------|--------------|--------------|--------------|-------------|------------|------------|--------------|
| | ≤600 | 601-1650 | 1651-3200 | 3201-5250 | 5251-7800 | 7881-10900 | >10901 | |
| Self-employed (Formal) | 7 | 23 | 17 | 8 | 2 | 0 | 1 | 58 (23.77) |
| Self-employed (informal) | 11 | 11 | 6 | 1 | 0 | 0 | 0 | 29 (11.89) |
| Employed Private (formal) | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 6 (2.46) |
| Employed Private (informal) | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 7 (2.89) |
| Government Employed | 0 | 11 | 13 | 22 | 11 | 3 | 1 | 61 (25) |
| Daily worker | 3 | 5 | 4 | 0 | 0 | 0 | 0 | 12 (4.92) |
| Unemployed | 18 | 7 | 5 | 3 | 0 | 0 | 0 | 33 (13.52) |
| Other | 10 | 15 | 7 | 3 | 1 | 1 | 1 | 38 (15.57) |
| Total | 52 (21.3) | 75 (30.7) | 56 (23.0) | 39 (16.0) | 15 (6.1) | 4 (1.6) | 3 (1.2) | 244 (100) |

(Source: Field survey, 2019)

Numbers in parentheses indicate percentages of the total (n=244).

The types of occupations that the people generally take up were also instrumental in the income that they earned. Based on the survey results, 25% of the sampled populations were government employed followed by self-employed people who constitute 23.7% of total sampled households. In this study, formal self-employed people include those peri-urban settlers who work on the mandatory rules and regulations in public registers, for example, those who disclose tax information or are reported into official tax records. Self-employed

people usually either seek to escape unemployment or work on their account or are ready to accept the risks involved by engaging in the economy through self-employment. On the other hand, some informal self-employed persons settle there. They were also people or urban dwellers who work in unregulated occupations by the government bodies or they are not registered with the registrar of the business nor are they recorded in official or tax records, activities which are also sometimes called informal activities. No licenses are issued to these people by the relevant authorities. There were also other categories or sections of the informal settlers in the peri-urban areas of Woldia. In the peri-urban area of the study sites, some unemployed people might include retired people, and patients. The finding of the study also showed that 13.52% of the sample households were unemployed.

The rise in the lease price of urban land

The peri-urban settlers were asked to explain why they chose to settle in an area they didn't feel comfortable in, as if they were aware of the many challenges in their present location. One of the main reasons mentioned was that they were not able to win land for residential during the time of the lease tender due to the escalation of the bid. An informant from *Kebele 02* said that the lease policy is '*poor blind*'.

Table 4.6 Revised benchmark lease price based on types of services (Birr/square meter)

| Rank | Residential | commercial | Social services | Industry/manuf-acturing/agro-processing | Special Tender | Urban Agriculture | Governmental development agencies | Humanitarian organization |
|------|-------------|------------|-----------------|---|----------------|-------------------|-----------------------------------|---------------------------|
| 1 | 250 | 700 | 300 | 54.45 | 250 | 40 | 90 | 70 |
| 2 | 200 | 600 | 250 | 46.67 | 200 | 35 | 80 | 60 |
| 3 | 150 | 500 | 200 | 31.11 | 150 | 20 | 70 | 50 |
| 4 | 100 | 400 | 150 | 15.55 | 100 | 10 | 60 | 40 |
| 5 | 80 | 300 | 100 | 7.77 | 80 | 7 | 50 | 30 |

(Source: Lease benchmark and Amendment of rental price based on Grade Categorization and sub Categorization of Cities in Amhara National Regional State, Proclamation No. 6/2009)

To reveal the marginality of the (peri) urban poor from the lease system, it is important to make use of data obtained from Woldia municipality. Accordingly, as per the data shown in Table 4.6 obtained from the leasing department of Woldia municipality, the benchmark lease price for residential areas ranges from 80 Ethiopia Birr per square meter to 250 Ethiopia Birr per square meter.

It means that the benchmark lease price of urban lands ranges from 14,400 Ethiopian Birr per 180 square meters to 45,000 Ethiopian Birr per 180 square meters. However, as stated above, during the lease time, the highest bidder wins and gets the land. As per the data obtained from the leasing department of Woldia municipality, from the land leased list that took place between the years 2013 to 2015, the minimum and maximum leased price for 180 square meters of a residential plot of land range between 88,749.20 Ethiopian Birr per 180 square meters to 387,900 Ethiopia Birr per 180 square meters which was beyond the reach of many of the urban dwellers. This means that there is an increase of 68,749.20 Ethiopian Birr to 342,900 Ethiopian Birr or an increase of 343.8% to 762% from the benchmark lease price.

Thus, as per the key informants (interviewees), when the lease opportunity was becoming out of the reach of people even with the middle-income level, the only means of attaining a plot of land for residency was through informal means. The urban land price that takes place under tender usually benefits those people with affluent capital or rich segments of the urban population. The conditions were getting worse when the new benchmark lease price was implemented.

An individual in the leasing department explained that there are several reasons why the urban poor criticize the urban land lease policy. First, it has no space for accommodating or treating the low-income category of urban dwellers which in turn forced these sections of the population to rush into informal means. Secondly, there was no upper limit for how many times a tender applies. Thus, to this effect, the high-income groups of people were more likely to win up to three or more than three plots of land while the low-income categories of the urban population could have to apply for only a single tender due to financial difficulties. Thirdly, after winning and starting construction, the winner of the lease tender usually hoarded the plots of land for future sale. Consequently, land price was getting very high. Land speculation by its nature can affect the urban area by creating artificial high

land values. The key informant confirmed that as a result of land speculation and the artificial shortage of land, unsatisfied people were forced to go beyond the areas of planned development to scattered and isolated locations on the urban fringe where land can be obtained at reasonable prices mainly via informal means. I confirmed it through interviews that the land price has been steadily rising in recent years, making it unaffordable for many low-and middle-income earners.

The insufficient compensation paid to farmers

The third identified main economic-related cause for the flourishing of informal settlements in the study area thereby aggravating the informal land transaction/markets is the fear of meager compensation received by peri-urban farmer households. On the rationale of this, data gathered from focus group discussions, key informant interviews, and government official documents analysis revealed that farmers sold their plots through the piecemeal subdivision process on account of the feeling of threatened meager compensation. In principle, when a previously rural territory is incorporated for urban expansion through planned urban growth, they expropriate its inhabitants by default with reasonable compensation payments only when they have legal use and holding rights to the land.

The amount of compensation to be paid is determined based on the current repayment costs of properties, which are lost due to the encroachments of the land, cost incurred for the permanent improvements the farmer brought about on the land by his/her capital/ labor and other elements such as costs of removing his/ her property, transportation costs of properties, reconstruction cost, and source of income disconnected due to the land being taken away. Theoretically, the compensation valuing and paying formulae for the displaced landholders are devised in regulation No.7/2018 (ANRS, 2018) as shown in Table 4.7.

Accordingly, conferring to [Proclamation No. 252 of 2017](#), the main criteria that must be used in computing the amount of compensation payment, for example, include the area of land (in hectares or square meters), the amount of production in quintals per hectare, or square meter, the current market price of the product, and improvements made on the property. It means that, because of the peculiar features of the property expropriated, we expect appraisers to use different formulae during the time of the expropriation of the

property. The proclamation does indicate the criteria to be used and the decision-making bodies on the final allocation of the compensation as shown in Table 4.7.

As opposed to the above-settled compensation formulae, the findings of the study revealed that the value of compensation for the property was determined by the compensation committee. That is, it often allotted compensation on an ad hoc committee or ad hoc subcommittee on the subjective judgments of the evaluating committee. This noticeably contradicts with the criterion stipulated in the Proclamation 721/2011 (FDRE, 2011). To that end, against the stated parameters mentioned in Table 4.7, the findings of the study revealed that peri-urban farmers were compensated at prices that are many times lower than farmers obtain on informal deals. As revealed by the responses from the lease office interviews, it frequently restrained the municipality from paying the estimated figures because of financial constraints. The financial constraints forced the municipality to lower the compensation package by undervaluing the farmer's land and property values. This motivates many peri-urban farmers on the fringe to block such processes (the formal process of compensation) and subdivide and sell the land, helping to satisfy their demands through other than legal channels within the town and further encouraging the expansion of deals.

Table 4.7 Formulae used to compute compensation

| | | |
|--|---|---|
| Compensation for house | = | the then cost of building materials +Expenditures for improvements+ Back payment for the remaining land lease period |
| 2. Compensation for crops | = | [Area of land (Ha) * Amount of product in quintals per hectare* the then market price of the crop] + expenditures for improvements |
| 3. Compensation for a perennial plant that had tried to give a product | = | [total amount of product per tree per year * total number of perennial plants * the then market price of the plant] + expenditures for improvements |
| 4. Compensation for a perennial plant that had not tried to give a product | = | [total number of plants * total expenditure to grow a single plant up to the present size]+ expenditures for improvements of the land |
| 5. Compensation for grass (fodder) | = | Area of the grassland in hectare * the then market price of the fodder per hectare |
| 6. Compensation for transportable Properties | = | Costs for load + transportation cost + cost for unloading and planting the properties |

(Source: extracted from Proclamation No. 252 of 2017). * implies multiply; 1ha=10,000m²

Hence, in practice, the peri-urban farmers of Woldia were complaining about the meager compensation they received for the expropriations of their land, mainly agricultural, for public purposes. As per the data obtained from Woldia Municipal compensation list of the dispossessed farmers, the amount of payment that farmers gained through informal

land/property/ deals was much higher than the amount of payment they received through compensation following the formal procedures. To compare formal compensation payments for expropriation and informal gains, I extracted the total amount of compensation from the compensation list of farmers expropriated at *Mariam sefer (Enkoy sefer)* for road opening and housing associations in the year 2015 as shown in Table 4.8. For privacy, I omitted the names of expropriated farmers. It was also found that peri-urban farmers usually criticized the compensation payment for undervaluing the real property.

Table 4.8 The amount of compensation paid to farmers at *Mariam Sefer, Adengur Kebele*

| Crop type | Area (m ²) | Production (in Quintal) / m ² | crop compensation payment (in Birr) | Displacement compensation (in Birr) | The total amount of compensation (in Birr) |
|--------------------------|------------------------|--|-------------------------------------|-------------------------------------|--|
| <i>Teff</i> ¹ | 2443.409 | 3.909 | 6932.64 | 44325.39 | 51258.03 |
| | 1492.755 | 2.388 | 4235.36 | 27079.77 | 31315.13 |
| | 2721.609 | 4.355 | 7721.97 | 49372.16 | 57094.13 |
| | 760.62 | 1.217 | 2158.09 | 13798.26 | 15957.81 |
| | 4232.166 | 6.771 | 12007.84 | 76774.88 | 88782.72 |
| | 4166.765 | 6.667 | 11822.28 | 75588.45 | 87410.73 |
| | 4917.886 | 7.869 | 13953.42 | 89214.39 | 103167.81 |
| | 3924.104 | 6.279 | 11133.78 | 71186.39 | 82320.17 |
| | 4965.603 | 7.945 | 14088.81 | 90080.01 | 104168.82 |
| | 1654.289 | 2.647 | 4693.68 | 30010.13 | 34703.81 |

(Source: Woldia Municipality procurement and property administration (Finance) department compensation lists of Farmers, 2019)

If the compensation committee had used the aforementioned criteria, the amount of compensation shown in Table 4.8, could be different. We can see in Table 4.8 that the amount of the then property compensation payment was around 2.84 Ethiopian Birr per m² times the area of the plot in consideration.

Thus, a farmer with a total Similarly, the amount of compensation for displacement [column 5] was 18.14 Ethiopian Birr per m² times the total area of the plot size.. farm size of 4965.603m² had compensated with Ethiopian Birr 104,168.82, [(4965.603m² *2.84 Ethiopian Birr per m²) +[(4965.603m² * 18.14 per m²)] of land dispossessed. This classification, in my opinion, seems a pretext/alleged reason or a matter of format, as if the

¹*Teff* is a traditional and staple food plant; a fine-grained annual grass species native to the northern Ethiopian Highlands. It is the main ingredient in the national dish *injera*.

compensation committee has implemented the rate of compensation based on the settled criteria outlined above. As one can see from Figure 4.3, as the farmland size increases, the corresponding compensation payment increases and vice versa, being other things remain constant.

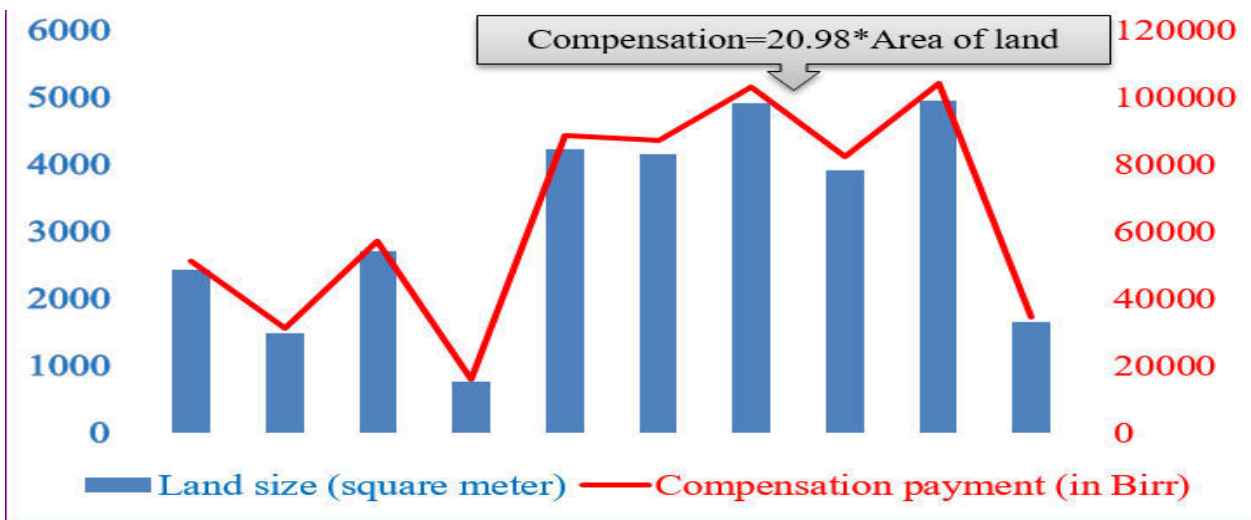


Figure 4.3 Correlation between land size and compensation payment

(Source: Based on the data of Table 4.8, second and last column)

In addition to the meager compensation, they compensated farmers only for displacement and crop compensation. Hence, not only the meager compensation but also the absence of compensation payments, for example, for the fodder (grass) discouraged the peri-urban farmers. The key informants pointed out that *fodder*² production offers so many advantages to peri-urban farmers. First, fodder is a critical means of survival for peri-urban farmers' livestock. Second, fodder is the major source of income through selling in an area where fodder productions are absent or for those people who are involved in dairy farming or animal fattening. This means that fodder can be converted into currency; modified or converted to generate cash or income for the peri-urban farmers. To this effect, there is a significant level of trading of fodder in the town administration of Woldia, particularly the *teff* straw, grass, and sometimes sorghum straws.

The key informants told me that in Woldia, in addition to as a source of animal forage, the straw of teff and sometimes the grass is used for construction. Though the

²Fodder in this context refers to the crop residues (e.g. Straws of *Teff*, sorghum, wheat, chickpea, maize...etc.) as well as foddors produced from pastures and grazing lands (e. grasses) usually located adjacent to their farm lands or located in the isolated lands that can serve as food for the farmers' livestock.

quantity of fodder production varies as to the size of the plot of land, fertility of the land, and utilization of modern agricultural inputs, to mention a few, at modest estimation, excluding transportation and other costs such as loading and unloading, a teff straw produced from one hectare of land could generate an income for the farmer between 6,000 Ethiopian Birr to 10,000 Ethiopian Birr in the local market for a single year. Let alone the effect of fodder on the livestock which is a very integral part of peri-urban farmers, if we consider this amount of income is consistent for the next 10 years (because the amount of compensation is fixed at ten years annual income if no land is to be given as a kind compensation), the amount of income lost ranges from 60,000 Ethiopian Birr to 100,000 Ethiopian Birr only from fodder. But as per the data obtained from the respondents, though there was no legal sanction that bans the disposed farmers from taking compensation from crop residues/fodders, the production of fodder was not taken into account in the computation of compensation payments. To this end, farmers prefer to engage in informal deals than formal ones.

So how farmers were involved in the informal land deals using their use and holding right as advantages? What were the fertile grounds for peri-urban farmers to change their agricultural land use to urban land use? These were central questions to be addressed here.

In principle, the Revised Rural Land Administration and Use Determination Proclamation No. 252/2017 of the Amhara National Regional State, Article 32, prohibit the Changing of the updated and Use classification. That is, this law does not accept land-use changes. Article 32 sub-articles 1 of this Proclamation underlines that unless it is based on a study, the updated use plan being functional on any rural land is not changed haphazardly. The key informants from the Zone Agricultural office indicated that in the rural Kebele of the town administration of Woldia (*Adengur-Gebrael, Mehal Mechare, Gola Mechare, and Jeneto ber*), land use classification had not yet been prepared when the research was conducted. Hence, the land-use class under work is expected to be based on the land-use class registered in the year 2013.

I found that despite the notion of the proclamation, due to the meager compensation paid to farmers, they were changing the land use from agriculture to residential use facilitated by alleged corrupt government officials backed up with the existence of legal ambiguities. Proclamation No. 252/2017 of the Amhara National Regional State, Article 32

(3) further provides a fertile ground for farmers to build a house for their own and their children aged 18 and above. The sub-Article states that ‘in areas where a land-use plan is not prepared and handed, a farmer is not prohibited from building a house for himself and to his children who have attained majority on his holding that he has got registered in the name of his family members on the landholding certificate’. I found it from the document review that these discrepancies awarded farmers to adjust the land use function from one to the other, mainly from agricultural land to residential. They mainly practiced this in the peri-urban *Kebeles* of *Adengur-Gebrael*, *Mehal Mechare*, *Gola Mechare*, and *Jeneto Ber*.

Moreover, findings of the interviews administered to key informants (land brokers, and zonal agriculture land registration and certification expert) indicated that as opposed to the urban areas where the size of the residential land is commonly limited to a certain amount, say 250m² or 200m², 180m² or something else, there is no upper limit of residential lands in the rural areas. Because of this, when the residential and agricultural lands are adjacent to one another, farmers often intentionally expand the dimensions of their lands by encroaching on agricultural land. These encroachments also motivated people to subdivide and then sell the land on the black market.

A detailed discussion with two land brokers, who documented land transaction fees in the informal and formal land deals of the municipality of Woldia, showed how the informal land transactions remunerate more revenue than the corresponding formal compensation payment, which again encouraged farmers to sell their agricultural lands. A discussion with the land brokers reveals that the most preferable plot size by many of the buyers was 180m². As per the data obtained from the land brokers, in five months, from the mid of August 2018 to the time of their interview with them, all the plot sizes indicated in Table 4.9 were 180 m² except in *Teklehaymanot* which was 250m² and 380m² costing 1,500,000 and 600,000 Ethiopian Birr, respectively. It was found that an empty plot of land with a total area of 180m² could offer a minimum of 120,000 Ethiopian Birr in an informal land deal, such as the case in *Enkoy Sefer* to a maximum of 320,000 Ethiopian Birr at *Mechare*. But the figures in the compensation list indicated that farmland with a total size of 760m², for instance, almost four times the 180m² plot of land offered a total compensation payment of 13,956.35 Ethiopian Birr which was much lower than the money gained in the informal land deals (almost eight times lower than the actual compensation payment).

Further findings and analysis showed that although the price of plots in the informal deals was lower compared to the formal deals, the monetary gains in informal deals were still enormous compared to the compensation payment made by the government. Moreover, the prices of plots in the formal deals were higher than in the informal deals. This is mainly because in the formal land deals the transaction took place with a constructed house (land plus house) as opposed to the informal deals which often involve only the purchase of an empty (raw) plot of land.

Table 4.9 Costs of plots (in Ethiopian Birr) both in the formal and informal land deals

| S.N | Site | Land broker-I ³ | | | | Land broker-II ⁴ | |
|-----|----------------------|----------------------------|---------|----------------|---------|-----------------------------|----------------------|
| | | Formal deals | | Informal deals | | Formal deals | |
| | | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| 1 | <i>Mechare</i> | 420,000 | 550,000 | 180,000 | 320,000 | 600,000 | 650,000 |
| 2 | <i>Enkoy Sefer</i> | - | 350,000 | 120,000 | 165,000 | 210,000 | 150,000 |
| 3 | <i>Ariro</i> | 250,00 | 250,000 | 150,000 | 180,000 | 350,000 | 300,000 |
| 4 | Industry area | - | - | 150,000 | 300,000 | - | - |
| 5 | <i>Teklehaymanot</i> | - | - | - | - | 1,500,000 ⁵ | 600,000 ⁶ |

(Source: Field survey, 2019)

It is also important to note that land markets were highly variable in both formal and informal markets. In fact, they reported that the prices of peri-urban land vary based on several factors. The most important determinant factors for the variations in land prices were plot size (large or medium or small), location with infrastructure and services (to transportation, water supply, sewerage, schools, health institutions, recreational places, etc.), the nature of the slope (e.g. environmental risks), legality, transferability, time, social variables such as friends selling land to each other, etc. These factors also limit the need to keep land out of the formal market. It appears from the sample respondents and data obtained from the land brokers that in informal land deals, although not a necessity, the price of plot sizes increases with plot sizes and vice versa. That is, being other things remain constant, there is a positive correlation between the price of the plot of land and the plot size.

³ This land broker discusses with the author, on the 3rd January 2019, at Melka Kole, Woldia who is a governmental employee working as a student files and results documentation officer in one of the elementary school in Woldia Woreda but he is moonlighting as land brokerage. He is unlicensed land broker as he is a governmental employee.

⁴ This land broker discusses with the author, on the 30th January 2019, at Millennium area, Woldia who is a town wide licensed land broker.

⁵ A house wall up with brick and a total plot size of 250m²

⁶ A wooden and mud wall constructed house and a total plot size of 380m²

In addition to the above which determines the price of land prices both in the formal and informal markets, the findings of the study also showed that the price of a plot of land varies over time, particularly in the formal market. I found that in 2013, a plot measuring 180 square meters with a 27 square meter house on it in *Mechare*, a millennium area, cost up to 105,000 Ethiopian Birr. During the time of data collection for this research in 2019, the same plot of land with the same square meter house on it in the same area, *Mechare*, could cost up to 750,000 Ethiopian Birr, an increase of 645,000 in just six years or over 8958 Ethiopian Birr per month. For this reason, buyers would concentrate on the informal markets as opposed to the formal ones.

Survey results from key informant interviews unfolded that one of the main reasons that sellers were benefiting from the informal land deals was that the revenues generated from the sale of the land were not subject to transaction fees in addition to the fact that the sellers were not forced to service the land in advance of sales.

The time and amount of money needed by households to purchase a residential house (land) were also mentioned by the FGD participants and key informants as one of the important factors behind their involvement in informal deals. To this end, the time and amount of money needed by households to purchase a residential house (land) in the peri-urban areas of Woldia were computed, given the prevailing level of income and the housing market price both in the formal and informal markets. In doing so, it was assumed that all other variables that affect the cost of the residential plot (house) remain constant and households save money they got without expenses. Taking the above figures of the minimum 120,000 to the maximum of 320,000 Ethiopian Birr in the informal land deals, it was calculated that the lowest-paid workers in the study areas should save their salaries/ incomes/ up to the equivalent of 37 months to 100 months or from roughly 3.1 years to over 8.3 years to afford the minimum and maximum plot values in the informal deals (Table 4.10).

The lower-middle-income sections of the population were supposed to save their income from roughly 1.3 years to 3.1 years to have enough money to buy the residential plot which costs 120,000 Ethiopian Birr and much more from 3.4 years to more than 8.3 years to afford the plot which costs 320,000 Ethiopian Birr. Similarly, the upper-middle-income categories of the population were expected to save their income from roughly 11 months to

1.3 years to buy the minimum price plot (120,000 Ethiopian Birr). At the same time, these sections of the population should save their income from 2.4 to 3.4 years to afford the maximum valued residential plot (320,000 Ethiopian Birr).

When the low-income and middle-income sections of the population were involved in the formal land deals, the amount of time needed to save their earnings was getting much longer. In this regard, with a minimum of 210,000 Ethiopian Birr and a maximum of 1,500,000 Ethiopian Birr, the households with the low-income sections should save from a minimum of 5.5 years to a maximum of 39.1 years.

Table 4.10 The time needed for saving money to afford housing in the (in)formal markets

| Thresholds | The formal market price in Ethiopian Birr | | The informal market price in Ethiopian Birr | |
|---------------------|---|--------------------|---|---------------|
| | Minimum | Maximum | Minimum | Maximum |
| | 210,000 | 1,500,000 | 120,000 | 320,000 |
| Low income | 5.5 years | 39.1 years | 3.1 years | 8.3 years |
| Lower middle income | 2.2-5.5 years | 16-39.1 years | 1.3-3.1 years | 3.4-8.3 years |
| Upper middle income | 1.6-2.2 years | 11.5 month.- 16yrs | 11 month-1.3yr | 2.4-3.4 years |

(Source: Computed based on fieldwork findings, 2019)

The lower-middle-income sections were also supposed to save their income from 2.2 years to 5.5 years to afford the residential plot with the minimum housing/plot price but from 6.1 years to 39.1 years with the maximum price. Furthermore, the upper-middle-income sections of the population were expected to save from 1.6 years to 2.2 years with the minimum price but from 2.4 years to 3.4 years with the maximum housing price.

Findings from a key informant (interviewee) from Adengur also revealed that farmers engaged in informal deals when they required an immediate resolution to their problems. This type of selling could be called a forced sale. For instance, when a farmer needed money to pay for their child's school fees and medical treatment, they are forced to sell their land at a lower price than the market price.

4.1.2.2 Social and/or Demographic related drivers of informal settlements

Ever-increasing urban population and inefficient land provision

Based on the results of key informants, focused group discussions (FGDs), and other sources of data, one of the main social and/or demographic-related triggers of informal settlements in the peri-urban areas of Woldia was the deterioration in the supply of urban land for housing for urban inhabitants due to the ever-increasing urban population. Both natural increase and massive rural-to-urban and urban-to-urban migrations have contributed to the rapid growth of the population of Woldia. Regarding the growing population of Woldia, due to its administrative, economic, and location advantages over other urban centers in the zone, the town has attracted a large number of people from other urban areas, and according to the 2019 population projection, over 29.67% of the total urban population in North Wollo was accommodated in Woldia. While it estimated the absolute size of the urban population of the zone to be 282, 494, the total population of Woldia was about 83,806.

As it is so obvious that urban ward migration is inevitable, the influx of people and rapid rate of natural increase has placed massive demands on the urban land. Findings of the interviews administered to housing cooperatives from the core process owner of Woldia *Woreda* housing cooperative indicated that although high demand existed in the urban lands in the town administration for housing and urban services, municipal authorities were unable to cope with the demand, and thus, the supply lags far behind its corresponding needs. That is, the supply of plots to respond to the backlogs of growing housing requirements in Woldia has been very slow. That was one of the reasons why some people consider that informal settlement development in the peri-urban areas of the town administration was thought to be taking the lead as the main alternative to the housing stock.

According to the data obtained from Woldia municipality, shown in Table 4.11, the number of applicants for land for housing in 2007 came to about 959, of which only 555 were granted land, while it declined the remaining 404. In addition, despite the increase in the number of urban land applicants from the year 2010 through the year 2012, no one of them has succeeded in obtaining a plot for housing.

Table 4.11 Plot applications and allocations between 2007 and 2016

| Year | Number of applicants | applicants who Received | | Applicants who did not receive | |
|-------|----------------------|-------------------------|------------|--------------------------------|------------|
| | | in number | in percent | in number | in percent |
| 2007 | 959 | 555 | 57.9 | 404 | 42.1 |
| 2008 | 1072 | 772 | 72.0 | 300 | 28 |
| 2009 | 1528 | 992 | 64.9 | 536 | 35. |
| 2010 | 862 | 0 | 0.0 | 862 | 100 |
| 2011 | 870 | 0 | 0.0 | 870 | 100 |
| 2012 | 981 | 0 | 0.0 | 981 | 100 |
| 2013 | 997 | 306 | 30.7 | 691 | 69.3 |
| 2014 | 2556 | 206 | 8.1 | 2350 | 91.9 |
| 2015 | 470 | 163 | 34.7 | 307 | 65.3 |
| 2016 | 1962 | 224 | 11.4 | 1738 | 88.6 |
| Total | 12,257 | 3218 | 6.3 | 9039 | 93.7 |

(Source: Woldia Municipality, 2019)

While in the year 2013, 30.7% of the applicants have achieved their desire for urban land for housing, the remaining 69.3% of the applicants have not received it. More importantly, the overall urban land demand and land delivery revealed a high gap. In the ten years from 2007 to 2016, 12,257 household heads registered in the town administration in search of plots of land for housing. While only about 3218 (6.30%) got an allocation and titled their plots, 9049 (93.70%) were unsuccessful in obtaining a plot (see Table 4.12).

Again, according to the data obtained from the core process owner of Woldia Woreda housing cooperative, there were 334 housing cooperatives with members ranging from 18 to 24 in a single housing cooperative established from 2013 to 2019 under different regulations. The municipality of the town, however, was unable to provide all those who applied for a plot of land for the people. Accordingly, among the 334 officially registered housing cooperatives, only half (50%) have been provided land for housing construction while the remaining half (50%) were in the backlog up to the time this data was collected. Once again this demonstrates that there was a discrepancy between the demand for and supply of residential land.

Table 4.12 Housing Cooperatives organized in Woldia under different regulations

| Year (E.C) | Number of <i>Registered</i> Housing Cooperatives under the Respective Regulation | | | | Number of <i>Achieved</i> Cooperatives for the provision of land for housing under the respective Regulation | | | | Number of <i>Postponed</i> cooperatives for provision of land for housing Under the respective Regulation | | | |
|------------|--|------------------------|-------------------------|-------|--|------------------------|-------------------------|-------|---|------------------------|-------------------------|-------|
| | Regulation No. 5/2013 | Regulation No. 10/2016 | Regulation No. 150/2017 | Total | Regulation No. 5/2013 | Regulation No. 10/2016 | Regulation No. 150/2017 | Total | Regulation No. 5/2013 | Regulation No. 10/2016 | Regulation No. 150/2017 | Total |
| | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. |
| 2006 | 174 | 0 | 0 | 174 | 149 | 0 | 0 | 149 | 25 | 0 | 0 | 25 |
| 2007 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 |
| 2008 | 21 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 21 |
| 2009 | 72 | 14 | 5 | 91 | 0 | 14 | 4 | 18 | 72 | 0 | 1 | 73 |
| 2010 | 15 | 4 | 11 | 30 | 0 | 0 | 0 | 0 | 15 | 4 | 11 | 30 |
| 2011 | 6* | 0 | 0 | 6* | 0 | 0 | 0 | 0 | 6* | 0 | 0 | 6* |
| Total | 300 | 18 | 16 | 334 | 149 | 14 | 4 | 167 | 151 | 4 | 12 | 167 |

(Source: Woldia *Woreda* Housing Cooperative core processor owner, 2019)

* indicates the data is only for six months

Lack of affordable housing and an increase in the rental price of houses

I also found that several factors determine the affordability of housing in Woldia, including housing stock and rental price. Given that, though the data is inconsistent according to the data obtained from Woldia structural plan (2009), there were 5790 housing units in Woldia in 2007. While the structural plan (2009) revealed that the housing units of Woldia were 5493, the strategic plan document of Woldia, 1998-2002, revealed that there were 5966 housing units. Contrary to these figures, CSA's 1994 result reveals that there were 5413 housing units in the town of Woldia. Thus, to be moderate, I have taken the value 5790 for comparison purposes. Of these housing units, 27% or 1550 units were owned by the government (1321 residential and 229 business) and 73% or 4240 units by the private (3926 residential and 314 business). But currently, the total governmental housing (including *kebele* and municipally constructed houses) stock reduced from 1550 to 1284. That is,

statistics on the available data, obtained from *Woldia Woreda* revenue office revealed that of the total 18,274 urban housing stocks, 4386 (24%) were rented houses (1,284 public and 3,102 private).

Based on the above figures, while the magnitudes of rental accommodation of private houses were large (70.7% of the total rental accommodation), the public rental houses accounted for about 29.3% of the total. In a sense, most urban dwellers rent from private owners. Except for the newly constructed 81 public rental houses at *Kebele* 06 near the GTZ area, the amount of subsidized public houses in the town administration was quite small. Despite their small numbers, government housings were not only allocated to the poor only but also they were allocated to higher governmental officials. According to the same source, higher government officials could apply for government/public house residency. Consequently, using their powers and authority, an equivalent proportion of government houses were occupied by these higher government officials, which in turn made the availability of public houses scarce. This leads to some sections of the urban poor being excluded from public-housing solutions and urged them to find alternative housing accommodation mainly in the informal means.

The basic question that needs to be raised here is how does the rise in the rental price of houses cause informal settlements in the peri-urban areas of *Woldia*? Informal rental houses were produced in the peri-urban areas by informal means. As per the data obtained from the peri-urban settlers, the motivational factors for the development of informally constructed houses in the fringe areas were numerous but the three major drivers in relation to affordability and rental price include: a) the rise in the rental accommodation in the inner town was unaffordable to the majority of the poor thereby pushed them to peripheral areas in search of alternative rental houses; b) the rise in the price of rental houses in the inner town encouraged landholders at the periphery to build houses for rent that can assist them as a supplementary income to the family through time, and c) people needed dual residence thereby individuals and families oscillate between town and village by living alternatively.

Besides, the research found that the rental price was one of the determining factors to stay or push at the given locality. The key informant from Amhara Housing Development Corporations, *Woldia* town branch, pointed out that the monthly rental payments of houses, among other determinants, varied based on the type of construction materials, availability of

toilet and bathroom facilities, water and electricity supply and the number of bedrooms of the houses. For that reason, payments for public rental houses vary from the lowest 150 Ethiopian Birr (US \$5.27) per month for a single bedroom to a maximum of 599 Ethiopian Birr (US \$21.02) per month for three bedrooms. Houses that were constructed from wood and mud wall, earthen floor, and corrugated iron roof were relatively cheaper than houses made from brick walls, concrete floors, and corrugated iron roofs.

As opposed to *Kebele* (public) rental houses, with the same physical attributes, the rental values of privately owned houses were at least three times higher than the public houses. Accordingly, the average rental price is 500 Ethiopian Birr (US \$17.56) for an average of 12–15 square meters of the room mainly made from wood and mud wall, earthen floor, and corrugated iron roof. This indicates that the town's poorest people were much more likely to be benefited from government rental houses than from private rental options in the town. As described before in this section, though the public houses were low in rental prices and were the most important shelter option for low-income households, their numbers were very small compared to the demand. Hence, many town residents searched for housing solutions either in the private rental sector or by buying land informally from farmers in peri-urban areas.

According to the interviewees from the peri-urban renters, the illegally constructed houses in the peri-urban areas were rented for lower prices than the inner rental houses, which encouraged the peri-urban landowners to build houses based on available options, including illegal means. This was mainly because the income generated from such investment was tax-free; impossible to be controlled by the town administration. Since these areas were beyond the control of the town administration to enforce the regulation, they paid no rental income taxes to the town administration. This condition was ensuring financial security for the owner contrary to the rental houses in the inner parts of the town administration. At the time when the costs of rental accommodation were rising and their availability in the inner parts of the town was scarce, it forced people to set up their residents and move out into the peripheral areas for affordable rental houses. That is, the section of urban communities who were unable to cope with the rental price in the inner town moved out to the peripheral areas where the rental price was relatively the cheapest. This situation, in turn, motivated landholders, land developers, and businessmen to sell and buy land

illegally in the fringe areas for rent. Thus, builders in the peri-urban areas received a good return on their speculation in the long run.

For example, on a more modest scale, a hypothetical individual who unlawfully constructed a house at the periphery, at the current average rental price, would be able to earn his initial capital expenditure within a very short time. An average of 4 living units in the peripheral area and an average rental price of a minimum of 500 Ethiopian Birr (US \$17.56) for a single living unit will generate a monthly income of 2000 Ethiopian Birr (the US \$70.20) which is the same as the salary of some persons employed in the town administration. The income generated from such investment is tax-free; being impossible to control by the town administration thereby rental income tax payments fail to afford predictable revenue for the local town government. After a year, it is worth considering that the financial gains of the illegal builder will be 24,000 Ethiopian Birr (US \$842.40) from renting out the houses. This is particularly important for some peri-urban individuals as one of the means of supplementing their family incomes.

4.1.2.3 Institutional/administrative flaws driven development of informal settlement

This section discusses how issues of administrative arbitrariness, blind-eye administration, a lack of commitment, and a failure to enforce construction laws have enlarged the informal settlements in the (peri)urban areas of Woldia in recent years. It then goes on to examine how widespread corruption, air-to-air land deals, and authority vacuum under rural and urban land administration institutions have led to the emergence of informal settlements. Besides, it will explain the way the poor land registry systems, uncoordinated urban land information systems, poor institutional memory, and the use of legal loopholes contributed to the acceleration of the outgrowth of informal settlements; it will also examine how people carried out illegal construction.

Use of administrative arbitrariness and the blind eye-administration

The findings of the study disclosed that one of the primary root causes for the burgeoning of informal settlements in the study areas was the lack of commitment by government bodies, particularly the mayor's office that was expected to serve on behalf of the state. My observation during the fieldwork also indicated that informal settlements have been

increasing, especially in the peri-urban area of the town administration. These settlements were not hidden from the administrative body. Every concerned body knew what was happening in the peri-urban areas of the town.

In the discussion with the person in charge of the urban plan and construction inspection department, I confirmed that the growth of informal construction was happening beyond the control of his office. That is because of a lack of dedication on the part of urban government bodies to take the appropriate measures on already established informal settlements at the right time or an early stage of their development. According to the discussions with the person in charge of the urban plan and construction inspection department, three cases were brought to my attention and have been confirmed in the field survey. To this effect, the remarkable cases were the construction of eight containers at the main gateway of the municipality (showed left) and several containers along the steeped road to the bus station from *Adago (showed right)* (in Figure 4.4) that have been constructed without the recognition/permission of the municipality, particularly the illegal construction control and peacekeeping core process owner, plan implementation, sanitation and beautification core process owner, and urban plan and construction inspection department.

I asked key informants as to why the town administration, the mayor's office, in particular, tolerated or even welcomed this informal occupatio. It is confirmed through an interview that these eight containers were constructed to slacken the political turmoil that took place in 2017/18 as a temporary solution that may be difficult to stop. The administrators were becoming sightless on these informal/unlawful activities.

I also found that the builders were unemployed, a potentially volatile population from the inner part of the town administration of *Mugad*. The key informant from the urban plan and construction inspection department also indicated that the builders were organized and went to the mayor's office, forcing the mayor to have a working place and that the working place was the area adjacent to the main gate of the municipality. The interviewee remarked that when the department requested planning and construction permission, builders did not volunteer to show planning and land allotment permission. What made the informality more illegal was that the builders were not working at this place, rather they have either rented or sold to a third party (second owner).



Figure 4.4 Unlawfully constructed containers
(Source: Field survey, 2019)

FGD results with officials of illegal construction control and peacekeeping core process owner at the Municipal level revealed that the laissez-faire attitude of top officials was one of the factors behind the accelerated formation of informal settlements and the ability to control getting unreachable. It was informed that following the 2018 national political instability/disorder/, higher government officials, including the zone administrator, the mayor, and the municipal manager continued their laissez-faire administrations despite the perpetuations of illegal settlements not only at the periphery but also in the inner parts of the town administration (see Figure 4.5) where the illegal constructions are not out of their observations. As per the interviewees, higher government officials frequently fear the rise of conflicts with resistant inhabitants, particularly the unemployed youths in the town. Thus, the key interviewees expressed their fears that at the moment nobody felt responsible for the ongoing informal settlements on the pretext of loosening political chaos.



Figure 4.5 Illegal houses constructed on the road (left) and at *Nitaf Dingay* (right)
(Source: Field survey, 2019)

Lack of political commitment and failure to enforce construction laws

Findings of the interviews administered to key informants from the municipality also indicated that the town administration was not only in a position to giving blindeye to the growth of informal settlements but also lacked the power to apply construction laws due to a lack of (political) commitment. Consequently, informal settlements are on their perpetuation. This particularly prevailed following the January 2018 uprising in the town. During the 2018 uprising in the town, the properties of key government officials were targeted by the majority of the people, particularly the youth. It was well-informed that houses of selected higher government officials were put into the fire. For example, the former Woldia mayor's house was burned at *Ariro*. Even the ex-zone administrator's house was saved from fire damage by the entreaty of his neighbors. These unexpected pressures caused social stress, disagreement, and disorder around crackdowns.

I also found it through interviews that because of these sudden fierce actions taken by the people, higher government officials become sluggish in controlling the flourishing of informal settlements. In addition to this, following the January uprising, new administrators and managers replaced former government authorities such as the zone administrator, the mayor, and municipality managers. These fragile government structures and political uncertainties were also conducive for undisciplined government officials and other local actors to engage in the informal development not only in the peri-urban areas but also in the inner parts of the town administration. In this regard, the town administration considerably lost its power in regulating the development of informal settlements.

Besides, key informants stated that the town administration was not also consistent in its attitude to the controlling of informal constructions in Woldia. We can detect this in the response of the illegal construction control and peacekeeping core process owner expert from Woldia municipality. As per his response from July 1/2018 to December 2018, the core process owner identified 43 newly built informal settlements within the town administration, including information such as their locations, purposes, type of constructions, and the number of constructions and submitted to the higher government bodies for further action. But, rather than higher government officials informing the office that the town administration would take measures upon them, no action or measure was taken until this time (during the time of discussion).

Consequently, because of this delay, other informal settlements were growing in number, and the experts from illegal construction control and peacekeeping core process owner were backing away instead of controlling the growth of informal settlements. More importantly, informants claimed that the time was too late to intervene and the officials in the core process owner felt that political risks might become too large if local officials took measures within an extended time horizon.

Furthermore, due to the weakness of the town administrators to enforce building or construction laws emanated from a lack of political commitment, the construction of a building without a building permit from the planning office and without providing evidence of building material by the concerned body was valid to mention here. As a result of not taking strong (political) commitment and enforcing construction laws, a substantial percentage of informally constructed houses took place in the town administration of Woldia. People built houses against the construction law. A case in point was the construction of a building beyond the limit of storeys as shown in Figure 4.6.

The building law prohibits the construction of houses without the consent of a development permit that has conditions that must be met. Additionally, building codes specify the types of materials an individual building should use. The building/construction proclamation no. 624/2009 also declares that any extensions in the number of storeys of the buildings or constructions that exceed the permitted vertical and horizontal coverage are illegal and cannot be legalized (FDRE, 2009). A key informant cited instances where a building was built against the permitted G+2 storey level. That is, regardless of the notion of the proclamation and permission of the urban plan and construction inspection department, the owner has extended a building up to G+3. The urban plan and construction inspection department realized that the construction was exceeding the limits and the number of storeys. So the office remarked the building owner to suspend the building to extend to the level of floor and storeys level. That is, since it is the responsibility of the urban plan and construction inspection department to supervise and regulate such a construction process, it inquired the builder to stop extending the building storeys or make an attempt at a reconsideration of his plan with the office.

The findings from the official document of the urban plan and construction inspection department revealed that the planning office sent out frequent warning letters to

the builder who built in violation of the agreement made with the municipality. The first letter stated that the owner of the building is erecting parts of building storeys without the planning permission so that the construction must cease and if construction goes beyond the approval of the department, the owner of the building is responsible for any risk soon to come. The second letter specified that the building under construction is illegal as it did not conform to the assessment of building materials and the third letter indicated that the construction underway is against the terms of the agreement they reached. According to the interviewee, since the frequent letters of warning did not address the issue, and since it was a very serious issue, a discussion was held at the management level in the municipality, but it achieved no solution. In fact, the discussion by the management in several meetings shows some level of commitment, but the action does not follow. Partly, this could indicate that local authorities were not fully committed to controlling further informal settlement development. For example, many informal settlements have to remain in place although they are not compliant with formal regulations. This suggests that local authorities have not been enforcing these regulations as strictly as they should. To this end, despite all these enforcement letters, management meetings, and construction laws, the owner of the building continued to construct and reached the last phase of the construction, as shown in Figure 4.6.



Figure 4.6 Unauthorized floor and rooms extension in the town at *Gonder Ber*

(Source: Field survey, 2019)

The field survey observation results revealed that in addition to the above case, ‘stealing space in the air’⁷, people also make every deception to maximize the building floor area by ‘stealing land sideways’⁸ beyond building permission. An interviewee made with the urban plan and construction inspection department from Woldia municipality described the instances of extending the building floor area without the official approval. As per the informant, while the office has permitted the builder to build up to 8.60 meters by 10 meters (86 Square meters) of land at *Admas Bashager* in *Kebele 03*, it was found that the building area had increased to 13.3 meters x 13.70 meters (182.21 square meters) construction area; an increment of 111.87% beyond the permitted limits.

I also confirmed it through discussion that extended constructions without the approval of concerned bodies are common in the town administration of Woldia. This was due to the absence of (political) commitment to controlling the informal constructions within or in the peri-urban areas of the town administration. Field observation and interview findings revealed that while the land law did not permit the development of informal construction upon the land (private or government or communal), the authorities generally tolerated it.

The widespread of alleged corruption

‘Bribery was held behind closed doors, now everything is out in the open’. Decrying the degree of corruption at the local level by a respondent from one of the study areas of Woldia.

Theoretically, the revised rural land administration and use determination proclamation no. 252/2017 guided and governed the land use of rural areas in the Amhara National Regional State. Specifically, Article 32 of this proclamation prohibits the changing (updating) of the land use classification. Sub article 1 of Article 32 underlines that unless it

⁷*‘Stealing space in the air’ is a term used to describe building a vertical storey out of the permission of authority. For example, if someone is permitted to construct G+3 storeys, but builds G+4, one storey is out of the permission and theft in the air, hence stealing in the air. Likewise when one builds a building by extending horizontally beyond a certain limit, theft has been committed and hence, stealing land property sideways.*

⁸*‘Stealing land sideways’ when one constructs building by extending horizontally beyond a permitted limit, theft has been committed and hence, stealing land property sideways.*

is based on a study, the updated use plan being functional on any rural land is not changeable haphazardly. Furthermore, the strategy document describes that there are no legal and policy mechanisms in place to convert rural landholding rights to urban uses. The only option for farmers is to wait until the government expropriates their land for official urban development. The proclamation reaffirms that land must be used according to the land use plan and failure to do so could be grounds for eviction. It is further stated that the Ethiopian rural land use and holding right forbid the sale and mortgage or its use as collateral for loans.

However, findings from the study revealed that although the public authorities have developed and distributed the necessary guidelines, implementation continues to be a problem. Key informants pointed out that peri-urban agricultural lands have been converted from agricultural to non-agricultural land, disregarding the bans of the rural land law, policies, and regulations. An interview with a land registration and certification expert in Zone agricultural office disclosed that the issue of land-use change from agricultural use to urban land use in the peri-urban areas of Woldia was a recent discussion issue. As indicated by some respondents and field observation, town expansion trespassed upon peri-urban lands and resulted in changing land uses either through their legal action or, more by and large, through a variety of illegal practices. The result was uncontrolled land development and conflicting land uses in the town. The findings based on the interview indicated that unethical government officials were facilitating the conversion of rural agricultural lands to residential use without legal grounds. Also, he added that his office was aware that land use classifications were changed via adding and/or erasing/scoring out the written land use classes on 'land registry books or ledgers' without updating the land use category. As per the understanding of the proclamation, regulation, and all the authorities concerning land-use class change and land selling of whatever nature was illegal and must not be taking place.

Furthermore, the same key informant underlined that though averting rent-seekers is the catchphrase of the regime, abuse of land use in the peri-urban areas has been widespread. According to the informant, land-use changes in the peri-urban Woldia are occurring without legal or policy frameworks. When land-use change is updated, among others, there are minutes of *Kebele* committees, recognition of the land administration committee in

Kebeles, Woreda land use representatives, and legal frameworks. But what was happening in the peri-urban areas of Woldia was changing land use without these prerequisites except the involvement of alleged corrupt government officials and land brokers. The key informant expressed his concern by saying that ‘Mark my words, nobody anticipated that, but the worst is yet to come. These illegal doings will be the source of political turmoil shortly’.

The tone of the language used in the last statements of the respondent tells us how serious the matter was, and how serious the situation was. Above all, it was not a matter of misunderstanding the political meaning of informal settlements.

I also asked the key informants to express what would landholders gain from these informal backdoor deals through bribery or whatever respondents call operational cost. It was found that the decision to change the land use class from farm to residential was rationally based on a calculation of opportunities that people will achieve when comparing the gains from either remaining agricultural land or changing to residential land. The reason for such a decision primarily relied on the frequently criticized meager compensation payment made to the same neighborhood farmer households and a large amount of financial gain if the lands were involved in the informal land markets. Besides the criticized meager compensation, landholders transformed these agricultural lands into urban lands through unlawful subdivision as a result of the high demand for urban land and an increase in land prices within the town.

Based on the data obtained from the procurement and property administration (Finance) Department of Woldia municipality, described in subsection 4.1.2.1, the amount of compensation payment for expropriation was calculated by multiplying the area of the land in a square meter by 20.98 Ethiopian Birr (Compensation payment, $CP=20.98$ multiplied by the Area of the land in a square meter). A case in point at *Adengur* showed that a peri-urban farmer with a farm plot size of 2443.409 square meters was compensated 51,258.03 Ethiopian Birr (*US \$1799.2*) in 2015. Similarly, at the same location, a person with a farmland size of 4965.603 square meters was compensated 104,168.82 Ethiopian Birr (*the US \$3656.3*).

If the above-mentioned key informants from *Ariro* and *Defergie-kibikalu* compensated at that rate, the payment ranges from a minimum of 17,833 Ethiopian Birr (*US \$625.9*) to a maximum of 31,470 Ethiopian Birr (*the US \$1104.6*). That is the amount of

compensation payment to be paid for the 850m² farmland would be the total of $(850*2.84) + (850*18.14)$ which is equal to 17,833 Ethiopian Birr (the US \$2100.5). The amount of compensation that would be paid for the landholder with a farmland size of 1500m² is 31,470.00 Ethiopian Birr (the US \$3706.7). That is, $(1500*2.84) + (1500.00*18.14)$. Findings from land broker interviews revealed that the amount of money gained via informal land deals was much higher than people gained through formal means, such as compensation in this case. Given that, the price of empty land in the informal land market in *Ariro* ranges between 150,000 Ethiopian Birr (the US \$5265) to 180,000 Ethiopian Birr (US \$6318) per 180 square meters, or simply 833 Ethiopian Birr (the US \$29.3) per square meter to 1000 Ethiopian Birr (the US \$35.1) per square meter. This means that a landholder with the above-mentioned farmland size say 850 square meters would have a probability of gaining a minimum of 708,333 Ethiopian Birr (US \$ 24,862.5) to a maximum of 850,000 Ethiopian Birr (the US \$ 29,835) compared to the 17,833 Ethiopian Birr (the US \$2100.5) compensation payment for the same plot of land, which was more than almost 40 times higher than the formal means. Similarly, the landholder with a land size of 1500 square meters would gain money ranging from 1,250,000 Ethiopian Birr (US \$43875) to a maximum of 1,500,000 Ethiopian Birr (the US \$52,650). Informal land deals, thus, increase land values and ultimately benefits the landholder. By doing so, the peri-urban dwellers nowadays are incredibly organized and have created their markets, informal rules, thereby trying to keep their advantages. Such activities benefited the de facto seller, landholders. Most importantly, within these circumstances, the decision to sell land/house is an inevitable process.

In an attempt to reveal the extent of land sector corruption throughout the town administration, a respondent from one of the study areas of Woldia mentioned that ‘formerly, people held bribery behind closed doors, now everything is out in the open. Many of the key informants indicated that monetary corruption, a common phenomenon in the study area, is a weapon to break up many bureaucratic chains of administration. A zonal expert connotes the situation of this kind of monetary corruption as an ‘act of selling the truth for money.’

Air-to-air land transactions

Another critical factor worth mentioning in the issues of informal land deals and transfer is an air-to-air land transaction in the peri-urban areas of Woldia. It was found through informants (focus group discussion and interviews) that in an air-to-air land transaction, land acquired from a local government was transferred to another party for developing a certain project (housing, commercial enterprise, or service agency) with little or no improvement to the land. The air-to-air land transaction was not only limited to the transfer of land gained from local government but also land gained through informal means. Hence, an air-to-air land transaction took place at all voids.

Accordingly, while the town administration was actively leasing out urban land to solve the chronic housing shortage in the town, it was still a common sight in the town to see leased lots in the initial stages of construction (basement construction and erection of a column). Besides, during the time of data collection, I observed that it still left many leased lands vacant and fenced without being developed despite the time limit for completion.

In the study, it was found that there was no obvious mechanism in place to ensure lease awardees developed their urban land within 18 months of awarding the lease. Additionally, the land that was leased for a specific purpose was sold and used for other purposes. It is confirmed during the field study that many lease winners have retained their fenced-off land for long periods, mainly in the hope that they would resell the land at a later date to later buyers via air-to-air land transactions. As indicated by some respondents, the leasing department failed to enforce the lease winners to build by the deadline. At the time of the survey, an interviewee from the leasing department of the municipality replied that the department was unable to enforce the lease winners in the municipality due to their failure to install infrastructure which should be installed before or in parallel with land development.

Apart from the air-to-air land transactions from the local government, it has also happened within the informal land deals. As per the information gained from the land brokers' interviews, the air-to-air land transaction was principally carried out on account of the two most important objectives. These were: to generate more returns through the transaction process and second to be free from future accountability.

Hence, in air-to-air land transactions, the buyer is mainly motivated by an unlicensed land broker, potentially a land speculator, an investor, or any interested buyer who bought a

plot of land from a seller. As soon as he has assured of his land, he tried to pass it off as someone else's (now became a middleman) and disseminated the information to a potential purchaser. During this process, a person involved in an air-to-air land deal used different types of persuasive techniques and strategies with the initial seller and his next potential purchaser(s). Of these different tactics that the mediator uses, he notified his initial seller that the land he bought was not for him, but for his closest relative who lives abroad or maybe absent and he was the agent of him to buy lands available for sale. In doing so, the initial buyer, who now acted as a mediator usually paid almost half of the payments and need not proceed to the next payments. In the meantime, for the next potential buyer, he would also inform that he bought the land on behalf of his closest relative but not for him. Despite his endeavor to own his close relative to be the owner of the plot of land, his relative was unable to pay the money not only for the remaining but also the payments he has made so far. He also mentioned that he needed money for other businesses and wants to resale the residential plot he bought. So, when the actual buyer comes soon, the new buyer will bargain with him, but not with the initial seller(s).

Moreover, when both parties come to a consensus with the name of the initial seller (because the initial seller did not finalize and collect all the money) and the name of the new buyer will be written on the agreement paper. Here the mediator makes more revenue by selling the land at higher prices and he was also free from any payment related to the latter transaction (in)formal fees to come soon such as construction permit fee, survey, and transport fee, stamp duty fee, the tea/pocket money (better to say bribery fee) and land broker commission fee. For example, if the initial seller(s) sold the plot of land at 160,000 Ethiopian Birr (US\$5616), and the second seller again sold the same plot of land for 220,000 Ethiopian Birr (US \$7722), the two parties agree as if they engaged in the sale of the property for 160,000 Ethiopian Birr (US\$5616), but not on a price of 220,000 Ethiopian Birr (the US \$7722). The initial seller agreed upon it as he/she sold at that price and the new buyer also agreed with the new hidden seller. This was because they believed the upcoming payments to be reduced as the selling price reduces. The two parties, the actual seller and the actual buyer made these payments. The monetary transactions most often took place in a non-transparent way, not only from the view of the buyer but also from the view of the seller. Moreover, since the mediator acted as a facilitator, he made himself free from any

transaction fees which in turn contributed to raising his revenue or profit. I believed this to be one of the motives behind air-to-air land transactions.

The second conceivable motive was to delete the name of the mediator in the land transaction history. This is because an air-to-air land transaction was frequently conducted by informal/unofficial means. Thus, if something wrong happened somewhere in the process, it was the responsibility of the seller (the initial seller) and the buyer (the final buyer) whose names are listed and affixed by their signatures on the agreement paper. No evidence/document that verified the involvement of the mediator in the land transaction processes, sometimes to the extent of witnesses. Therefore, there was no accountability on the part of the mediator or middlemen to the amount the dealer(s) receive(s) or maintain of dealings to prevent disputes in the future. This mechanism of informal land transaction obscures, if any, the middle actor for any future potential blame to come.

Therefore, I found that through air-to-air land transactions, urban and peri-urban lands fall predominantly under the control of a few very wealthy individuals. This has caused a land shortage for the urban poor. Consequently, the majority of people in peri-urban areas of Woldia are forced to turn to other means of obtaining land for housing including informal means to a significant extent.

Authority vacuums under rural and urban land administration institutions

As a result of the interviews with FGD participants, owners of illegal construction control and peacekeeping core processes, and administrative seekers, it was determined that there was a lack of coordination between rural and urban land administration institutions in the agency space (the zone in which agents interact). In the studied peri-urban areas, informal settlements and illegal developments developed as a result of inadequate coordination. It was also found that the institutions' duties and responsibilities in the matter of peri-urban land have not been set out yet. Based on the opinions of the respondents, they cited the inefficient institutional interaction systems between the rural and urban land administrations as reasons for informal settlement development in the peri-urban areas of Woldia.

To shed some light, in Ethiopia, there is an urban and rural land divided on policy and institutions. Results of the review of Proclamation No. 252/2017 and Regulation 103/2012 revealed that while the rural land administration office administered rural lands

under the close supervision of regions (FDRE, 2017), urban administrators governed urban lands (ANRS, 2012). Yet, in the town administration of Woldia, the lines between the rural and urban land administrations (i.e. peri-urban areas) were often unclear. There was no clear boundary between rural and urban spaces because the former was on the edge of change. Thus, the peri-urban areas of Woldia reflected both urban and rural character simultaneously. They are neither entirely urban nor rural. This regulatory void characteristic of peri-urban areas created a power vacuum zone in between.

The findings of this study also clearly showed that as a result of this authority vacuum under one's jurisdictions, there were cases in which the invasions of peri-urban land were inoffensive in some locations such as the foothills of *Kore*, *Tinfaz*, and the foothills of *Gebrael* Mountain thereby causing the outgrowth of the informal settlements. This was mainly due to a lack of coordination among land administrative government offices, mainly rural and urban land administration institutions. In this regard, this might result in a serious dispute between other institutions. In the *Nitaf Dingay* area of the foothills of *Gebrael* Mountain and *Mesalemia*-neighbourhood of *Adengur*- houses were constructed in the non-planned areas as shown in Figure 4.7.



Figure 4.7 Informal construction in peri-urban areas

(Source: Field survey, 2019)

Although the construction of these houses in unplanned peri-urban areas is illegal in the eyes of the municipality specifically by the illegal construction control and peacekeeping core process owner as the agent of the institution, their actions in regulating the development of such settlements were deemed unlawful by the rural land administration, utilization and rehabilitation office, which was deemed outside its legal bounds. I observed and affirmed

through a field survey that massive constructions of houses have taken place in the peri-urban areas of the town administration without detailed plans. I made it known from findings from interviews with some of the settlers that those people who constructed houses in the transitional peri-urban areas had an authorization letter from the rural land administration, utilization, and rehabilitation office. The rural land administrators allowed constructions of houses in the transitional peri-urban areas. The houses they constructed were in the town administration but administered under the close supervision of rural land administration, utilization, and rehabilitation office whereby the municipality had no power to govern.

Peri-urban settlers also constructed some settlements at *Nitaf Dingay* in forest-reserved areas with environmental hazards, such as flood problems. I raised questions to rural land administrators as to why they failed to control informal settlements in the peri-urban transitional areas of the town administration. The interviewees' experts from the rural land administration, utilization, and the rehabilitation core process owner believed that the spreading out of informal settlements at the peri-urban areas was none of the business of the office as far as the peri-urban landholders own green books.

Municipal organs, such as the land administration, as well as, the illegal construction control and peacekeeping core process owner were also requested for the reason why they failed to control informal constructions in the peri-urban areas of Woldia. They all replied that it was out of the authority of the municipality of Woldia and, therefore, they could not have controlled it. When illegal construction control and peacekeeping core process owner, for instance, tried to inspect the development of construction in the buffer zones or peri-urban areas, people in such areas brought a letter of permission for construction from Woldia *Woreda* rural land administration, utilization and rehabilitation office. The office provided land for construction in the peri-urban areas.

The findings of the study showed, in general, that the flourishing of informal settlement among others is associated with the loose coordination between the rural and urban land administration institutions to take care of the peri-urban areas, as well as, the weak vertical supervision of the mayor, zone urban works and construction department to correct these irregularities.

Lack of well-defined law for illegal builders and actors involved

In addition to the above causes, another root cause identified for the expansion of informal settlement was the absence of well-defined laws upon illegal builders and actors involved in these informal activities. According to the interviewees from the illegal construction control and peacekeeping core process owners of the municipality and *Kebele* 01, if they identified an illegal builder, for example, the maximum possible measure that they could take was to inform the lawbreaker to stop the construction for its illegality. The reason they cannot take more extreme measures is that they are not authorized to do so, and it is the responsibility of the local government to enforce the laws and regulations. As the local government is responsible for enforcing the laws and regulations, they have to inform the builder that the bulldozer task force will come and demolish the construction if he/she does not comply. They do nothing else. This is the only course of action they are allowed to take. Though this demolishing activity affects the economy, social and psychology of the builder, there are no corrective codes that declare how these illegal actors are punishable by imprisonment for certain years or months, or even several days.

Interviews conducted with key informants revealed that a law enforcement agency may arrest someone who violates the law for a maximum of one or two days, but there was no legal ground for the illegal builder or actor involved to be in the fine for his/her illegality, as well as, being in prison for a specified time. Others even claimed that in addition to private actors, the absence of criminal law or penal code coupled with the absence of accountability concerning unlawful occupation/settlement gave fertile ground for the corrupt government officials to be involved in accessing and securing informal lands at the peri-urban areas.

In this regard, alleged corrupt government officials were no exception. Involved experts in interviews and focus group discussions like illegal construction control and peacekeeping core process owner, as well as land brokers, confirmed that government officials were the principal actors in the development of the informal settlements. The findings of the study affirmed that 'no one is out of the game'. It found that the alleged corrupt government officials were by no means the most influential, and keen players in the formation of informal settlements. Corrupt government officials, who continually harass and demand bribes from informal developers, guided the development of informal settlements.

Furthermore, local key informants mention the experiences of *Tekelehaymanot* as a case in point. According to them, it was found that seven years ago, informal settlements in *Tekelehaymanot* took place following the master (structure) plan of the town, particularly following the 20-meter-wide road. At the time, the then manager of the municipality concluded that the experts in the municipality had played a role in the development of the settlements, which was later proved to be true. One of the interviewees said that ‘I have said that a lack of accountability has greatly aggravated these kinds of illegalities, so long as the concerned bodies did not take corrective measures for their wrong deeds’.

At the time of data collection for this study, I observed the same situation in the *Wassie Kebele* spot in *Adengur-Gebrael*. It is possible to confirm the case from Figure 4.8. As one can see in Figure 4.8, the first five fronts and the far-front constructed houses were arranged in rows. In front of them, there were plots of land covered with chickpeas during the time of taking the pictures, and builders arranged the houses in rows as they have the information that the main road passes through it; hence, the area had secretly surveyed and laid out. The houses constructed were small, usually 2 meters by 2 meters or 3 meters by 3 meters of land. This was because the primary purpose of the builders was to have a plot of land for the future where the places are incorporated into the actual urban plan.

Furthermore, the key informants expressed that the cost of regularizing small-sized houses would be much less than that of large-size houses if they found the constructed houses to be illegal and regularization was necessary. I found it through the interviews that this is because corrupt public officials often pass on information to peri-urban developers.



Figure 4.8 Informal constructions in the peri-urban areas of Woldia (*Kebele* 04)

(Source: Field survey, 2019)

4.1.2.4 Land policy and legal framework related factors

As envisioned in the constitution of Ethiopia, the Federal Government has enacted legal instruments to manage and administer land (both rural and urban). These include the constitution of Ethiopia (FDRE Constitution, 1995 (40) and respective regional constitutions. Specifically, in urban land development, and management, active legal instruments include urban planning proclamation no. 574/2008 (FDRE, 2008), building proclamation no. 624/2009 (FDRE, 2009), urban land lease holding proclamation no. 721/2011 (FDRE, 2011) and urban landholding Registration proclamation no. 818/2014 (FDRE, 2014). I discovered it in the document analysis that although these active legal instruments exist, ambiguities/loopholes/ in the legal frameworks have contributed quite significantly toward the growth of informal settlements.

Use of legal ambiguities/loopholes/ as an advantage

Results of the review of relevant government documents revealed that the legal ambiguities played a great role in the outgrowth of informal settlements in the peri-urban areas of Woldia. In this regard, one of the legal frameworks that have loopholes was the revised urban land lease-holding regulation no. 103/2012 which was issued to implement urban lands lease-holding proclamation no. 721/2011. Article 6 sub-article 4 of this proclamation states that ‘to regularize possessions held without the authorization of the appropriate body, the possessions which are acceptable under urban plans and parcel standards following the regulations to be issued by regions and town administrations shall be administered by lease holding’.

Article 9 of the Revised Land Lease Holding Regulation No. 103/2012 explains issues about illegal constructions and illegal holdings. The first sub-article of article 9 of this regulation states that where holdings/possessions are occupied without the authorization of the appropriate body, they may be converted into lease-holding tenure. Sub-article 3 (b) of Article 9 of the same regulation states that where the unlawful holding has a house, the holding shall be legalized for the owner after having paid the lease benchmark price for the land. As opposed to the above sub-articles, sub-article 2 of article 9 states that ‘unlawful holding/possession having no house construction may be unable to make it legal. Within

these contexts of laws, it is important to note that state agencies violate their regulations due to ambiguities in their laws.

An individual may inquire as to where the ambiguity lies in the law. The point is that where possessions are held without the authorization of the appropriate body, they can convert the unlawfully occupied possession into legal property by securing a lease. For the possession to be legalized, the possessor is required to have a constructed house. An owner without a construction (open space) will not be able to obtain legal possession. That is, a person's illegal possession without any construction whatsoever (open space) has no right to become legalized. Thus, in principle, it means that while illegal possession with illegally constructed houses has the opportunity of legalization through the lease system, illegal possession without a constructed house has no chance to be legalized. Therefore, to obtain the land necessary for residence, informal possessors will not leave the land vacant as they are not benefiting from it. Instead, even though they were occupying the land illegally, they can only be benefited if they construct a house rather than let it remain idle. Within these legal loopholes, I confirmed it through discussion with key informants that the proliferation of informal settlements in the peri-urban area continued.

Furthermore, when the illegally constructed houses were converted into legal holdings through the leasehold system, the size of the plot to be legalized can reach up to a maximum of 500m². But during 2019/20, those urban dwellers who were legal and applied for land for houses through the housing cooperatives, for example, would get a maximum of 180m² or 150m² plot of land. It implies that those individuals who were illegal probably get a large plot of land than those who were legal as far as their illegally built house is converted to a legal holding through the lease system. This also aggravates the development of informal settlements, too.

Additionally, article 25 sub-articles 1 through 5 of a housing cooperative regulation No.28/2017 (ANRS, 2017) delineates that when individuals apply to become members of the housing cooperative, they must meet various eligibility requirements. One of these eligibility criteria was that the applicant must verify that he/she has not applied to any type of housing program. Besides this, he/she should not own a house within the urban area he/she applied for. Moreover, the applicant should confirm that he/she did not own a house in other urban centers in the region in his name or his wife's name except owned via

inheritance. If he/she did not bring evidence for such criteria, he/she would be forced to withdraw from the members of the housing cooperatives.

However, in areas where the informal settlers were legalized based on proclamation no. 721/2011 article 6 (4), there was no room for verification whether the individual owned a house in an urban area where he is living or in other urban centers in the name of his/her spouse. The responses of the key informants (interviewees) from the housing cooperative indicated that the authorities gave emphasis only on the nature of land possession. It means that for an individual who owned an illegal settlement, particularly in the periphery areas, no attention was given to the possibility of having a house in the present urban area or elsewhere. Therefore, it showed that since the legal framework failed to identify the proof of evidence for a person who owned the plot of land while legalizing illegal occupation, controlling the illegal occupation of public spaces will never be achieved. As per the article, informal settlers are not requested to submit proof of evidence during the formalization of illegal lands and structures. However, legal applicants are required to submit all of the above-mentioned evidence. Such asymmetrical treatment caused illegal constructions and/or occupations.

Results of the review of relevant government documents such as Regulation No. 456/2005 (FDRE, 2005) revealed that illegal structures built on urban agriculture and urban greenery could be legalized under the leasehold system if they conform to urban planning and the occupier has submitted a development plan to the relevant body. Based on a review of government documents, the two criteria that are needed are conformity to the urban planning and the submission of a development project plan to the government systems. As a result, it also benefited people who have close ties to unethical government officials who provided them with clues about the urban land use category in advance. Thus, there was evidence that showed that the growth of informal settlers in peri-urban areas is also exacerbated in this way.

Finally, the use of legal loopholes as an advantage in the development of informal settlements was examined. It is found that ambiguities in the legal framework were fertile ground for the development of informal settlements. As a result, legal ambiguities/loopholes in the legal documents frequently aggravated the growth of informal settlements in the study areas. Actors utilize gaps in informal rules as advantages.

Harmonization and use of forged documents

It is also found that the use of forged documents and the introduction of harmonization practices into the town were also the additional important triggering factors in the development of informal settlements in the peri-urban area of Woldia. Currently, there are two main tax payment systems (fees) that are in place in urban areas to implement the harmonization policy. In this context, the payments are for the leasehold and old possession/permit systems. An old possession is a plot of land legally acquired before the urban center entered into the leasehold system in 1993 or a land provided as compensation in kind to persons evicted from old possession” as per article 2.18 of Proclamation 721/2011 (FDRE, 2011). Thus, they considered all land acquired and held during the Imperial era, Derg era, and after that, outside lease system as old possession. Besides, the replacement land given to owners whose land was expropriated may also be considered as old possessed since the land was given without a lease contract. Some leaseholders pay the lease price for the defined period as per the lease contract. Some urban landholders had accessed land through permit systems and paid land prices other than the lease price. Hence, the urban land system must come to a uniform lease system to bring fairness and good urban land governance.

To this end, the primary objective of harmonization was to ensure uniform application of the lease system in the urban areas of Ethiopia. Accordingly, some leaseholders paid the lease price for the defined lease period as per the lease contract on the one hand, and some landholders accessed the land via the old permit system on the other hand. A harmonized system can, therefore, eliminate complaints concerning unjust taxation and fees associated with the dual system in place. It is of important to ask here as to what are the flaws in harmonization to the occurrence and development of informal settlements within or on the peri-urban areas of the town administration of Woldia at this time.

Despite the basic principles of harmonization, I found it through an interview that it was also one of the complementary urban land policies towards accommodating informal settlements by bringing the land tax and fees into the lease system. Evidence from secondary data sources and interviews showed that fake documents were used to subsidize newly constructed houses or unplanned habitations, as if they had built them before the introduction of the lease system. It found that in many cases, land brokers and wealthy

individuals were the ones keeping the requests for harmonization. As participants shared during Kebele 04 focus group discussions, harmonizing newly occupied settlements in informal forms was a large part of the community, and witnesses recognized people who practiced it there. So, they confirmed that at the Kebele level, there was an understanding of harmonizing informal settlements not included in land law.

I found the utilization of forged documents to be the other triggering factor for the formation of informal settlements. A case in point was the use of fake documents in housing cooperatives. In the formation of housing cooperatives, there are certain eligibility criteria for allotting urban land for cooperatives. These include, among others: a) a citizen of Ethiopia who is a resident of the urban area where he/she is 18 years of age or older; b) who has no sanction from the court and is a resident of the town for two consecutive years c) one who is employed by an organization and a resident of the area for at least two years; d) who is permanent employed; e) if the individual is not living for two consecutive years in the urban area because of work, education or medical condition, the applicant is supposed to bring proof of evidence for his absence in the said urban area; f) if the applicant is not enrolled in any private home program or program that is utilized by the government or by the name of the spouse to urban land for housing, and if there is a case, he/she is volunteer to cancel or terminate the registration; g) that the applicant should not own a house in his/her name or spouse within an urban area in the country and able to show evidence for it and with permanent income for which he/she will save the expected money for compensation and construction as well. The amount of money to be saved varies based on the construction type and the place where the cooperative constructs the house.

What makes things difficult is that the majority of the criteria are elusive and subjective. For instance, it is difficult to prove whether an individual owns a house or not in any of the urban areas in the country or he/she has lived for more than two years within the given urban area or not. Due to the frequent human turnover in the municipality, institutional memory is at its lowest coverage in the study area. This makes access to information in urban areas to be difficult due to the lack of standards in records management and difficulties in locating information in different institutions. This gap creates opportunities for corruption, such as the issuance of forged documents or the illegal alteration of records.

To provide some insight into the study area, I have confirmed it through an interview that married people made a fake divorce. An informant expressed this notion at Kebele 02 who formerly lived in *Teklehaymanot*, one of the peri-urban areas of Woldia, but now, as a government employee, who lives in the town. He stated that he had inherited the land from his deceased mother several years ago. The total area of the plot was around 1500 square meters. Under the current land law, the maximum size of the plot that he could find for housing is 500 square meters. In consultation with people in the area, he was convinced to make a fake divorce and used various tactics. By doing so, his wife requested 500 square meters, and they granted it to her. Also, the remaining 500 square meters was given to his daughter, whom he had given birth to before he met his current wife. Under such conditions, he confirmed to me that he managed to obtain the 1500 square meters of land and the three family members have IDs and Green books through a fake divorce and other tactics.

The expectation of future regularization

The fact that something has started illegally in the areas of informal settlements does not mean that it would remain to be illegal. Indeed, in most cases, such areas are gradually incorporated both functionally and legally into the urban fabric through different mechanisms, one among which is regularization. To its effectiveness and to regularize the formerly informal settlements, the Amhara National Regional State has passed a specific regulation referred to as regulation No. 37/2008. The strategy document also delineates duties and responsibilities for various bodies that will be part of the management structure.

The regularization policy document outlines the requirements for the legalization of illegal possession and illegal construction under sub-articles 1 and 2 of Article 4. The analysis of the document indicated that two fundamental conditions must be fulfilled for illegal constructions and possessions to be regularized. First, when the said illegal constructions are in harmony with the master/structure plan of the town. The other is that, when settlements are in line with the land use categories, the urban design and other principles whereby the informal settlers have documented evidence that their buildings won't negatively affect plot development and basic infrastructure services. Second, if the settlements are not only built in an illegal tenure system but satisfy the definitions of

illegality/informality; builders of informal settlements pay 16 percent of the total cost of construction.

Given that, it was found that because of the flourishing of informal settlements in the town administration of Woldia, the town administration had made regularization (only once) in the year 2013. Implicitly, the original goal of informal settlement regularization was to control informal settlement growth, but it was later found that actual implementation did not achieve that goal. To this end, regularization in Woldia accelerated the formation of informal settlements. According to the interviewees from the illegal construction control and peace-keeping core process owner of the municipality, they pointed it out that illegal occupation had been regularized in 2013. Accordingly, out of a total of 966 already identified and documented illegally constructed houses up to the year 2013, about 783 had been regularized. The remaining 183 houses ought to have been bulldozed, which did not meet the above-mentioned requirements for regularization.

Nevertheless, there was still space for informal settlements to continue after the mass bulldozed action. And this was because, first for those whose homes they demolished due to illegality, there were other opportunities. That is, Regulation No. 37/2008 article 5 (4) offers a chance for evictees to obtain a residential plot or house. The sub-article insists that if there is proof that the evictees are without a home within the urban area under discussion, priority would be given to the evictees to own a house in areas where there are common housing programs, such as condominiums. Besides, in areas where there is no common housing program, priority would be given to the evictees in the provision of a residential plot facilitated by the body concerned. Based on this idea, those households whose houses had been demolished had to be given land for housing at a later time. The effort they made to manage informal settlements has been not adequate. To that end, the interviewees confirmed that from the year 2013 to 2018/19, the core process owner reported officially a total of 1527 informally constructed houses to higher government officials. They demolished 654 homes and regularized 873. It was also found that, even though the 654 houses were bulldozed, an expert from the zone urban works and construction department confirmed that the 654 plots (the lands) had been given to those whose houses have been driven out through negotiations even if houses have been demolished.

In the regularization process, I confirmed that after paying the relevant penalties and fees, unauthorized builders could register their property with the town administration and claim their property ownership certificates. Interviews with local authorities reaffirmed that the penalties and fees charged on illegally constructed houses were insignificant compared to the average housing prices in the town administration. To this end, regularization acted as a perverse incentive for the proliferation of new informalities and reinforced the very phenomenon it seeks to control. Thus, the regularization program as opposed to its intended objectives led to another wave of unlawful house building in the (peri) urban areas of Woldia. That is, this is one of the unintended consequences of the regularization program/policy.

A respondent expert from the zone urban works and construction department expressed that unofficial construction activities carried out of control in the peri-urban areas of Woldia following the year 2013 even though the figures reported to higher officials look so small. He added that the figures looked small not because of the reduction in the magnitude of the formation of informal settlements, but due to the concealing of reporting of information to higher-level governments. According to him, this was also a wake-up call regarding the dangers of regularization against the development of informal settlements and the need for immediate viable policy measures.

Poor urban land registry systems and backdoor deals

Urban land registry as one of the urban land administration is vital to get hold of urban land in any legalized manner. However, it is also evident that there is an implementation gap in this respect. The key informants from the cadastral office indicated that the land registry system at least contains the precise description of the plots that comprise the holding of the urban land user, site plan and identification number of the plot, means of plot acquisition (by lease, inheritance, gift, purchase, or any legal means), uses of the plot, date of plot acquisition, area or size, the rank of the plot, absolute location (using in readings of Degree, minute and seconds) as well as relative locations or concerning the names of adjoining holders (the names of the landholders to the north, east, south, and west).

In addition to the above, they argued that the duties and responsibilities of the urban land registry or urban land bank officials are multifaceted. To this end, as the duty and

responsibility of the land registry, the experts coupled with other municipal officials should gather data on urban land information and manage it. This is because, according to the informants, gathering data is the prerequisite action of the urban land registry or land bank expert. The data to be gathered should include all the relevant attributes mentioned above. Above all, the land registry office was not only limited to gathering all this information, but it should also be able to secure, manage, and disseminate the information as needed to the extent of combating the problems inherent in land banking or urban land registry system. To that end, therefore, those urban land registry authorities whose duties and responsibilities are delegated by the law should implement the process of recording/compiling, storing, securing, updating, and publicizing information about urban lands. In this regard, the urban land registry or urban land bank is essential as a method of controlling haphazard urban growth or expansion.

Yet, key informants from the cadastral and urban plan and construction inspection departments indicated that, in the absence of these fundamental facts, urban lands were vulnerable to corruption and misuse primarily by corrupt government officials who lacked discipline. Sadly, as a result of weak record (file) management, the guidelines in offices might have been misplaced and not easily found or transferred to new leaders and staff. In the town administration, Woldia, there was a significant problem with the urban land information system (urban land banking), which was also confirmed by the field survey. For instance, after parceling of land for urban uses, some plots of land remained free or are left unallocated. Experts from the municipality intentionally excluded plots from allocation during plot distribution, therefore resulting in an artificial shortage of land. They wrongly set aside the omitted plots.

The findings of interviewees from key informants confirmed that the artificial shortage of urban land has forced people to go beyond the areas of planned development to dispersed and remote locations on the urban fringe where land can be acquired at reasonable prices or by any other means which could include squatting or acquiring land informally. From another perspective, I confirmed that they allocated these parcel plots to persons having the closest relationship (patronage) with the experts in the municipality, particularly those who work at the urban land management core process owner. This was mainly due to

the absence of well developed and managed urban land bank or an urban land registry in the municipality.

Findings in this study indicated that urban land information was in the hands of a few individuals in the urban land management core process owner. I discovered this during the time of data collection. An example of this was the cases of 'Y' and 'K' that run for private business from reaping the benefits of the town government, on the willingness and acknowledgment of concerned municipal officials due to the invisibility of municipal land bank (urban land registry system). In this regard, during my fieldwork on Tuesday, the 29th of January 2019, I came across a case wherein two individuals, namely 'Y' and 'K', were searching parcel plots that were exempted from the allotment. They sought parceled plots for their families, 'Y' for his father and 'K' for his mother. It was compensation for the return of their plots after the urban government took their previous plots for urban renewal where Y's parents lived close to *Maksegno Gebeya at Defergie* and K's in the inner town of Woldia at *Adago*.

In terms of people's desire to settle in Woldia, the Millennium area (*Kebele 06*) is the most desired location owing to its potential for expansion. The informants said that the municipal officials had permitted them to look for available plots without holders in any locality, and if they found any, their parents would receive them. On the same day, the mayor, deputy mayor, and a surveyor (designer) named "A" were in the field to check land plots and see if anyone was occupying or else had claimed the property and allotted it to displace urban dwellers. Taking the opportunity of this event, 'Y' and 'K' were searching with these government authorities.

It was because of that reason that these two people searched for plots of land to be given to their parents as a kind of compensation. The key informants confirmed that 'Y' and 'K' identified four plots (plot numbers 22, 23, 24, and 25) indicated in Figure 4.9 when I discussed them with. Though they identified these four plots as free of owners, the surveyor 'A' was well-founded with the fact that the office had given the plots to persons whose names were not to be mentioned. I found 'K' the other day and confirmed that the three plots (plot numbers 23, 24, and 25) were legally owned by people. As a result, 'K' identified for his mother, plot number 22, located near the millennium secondary high school, which

had no owner and was leased to his mother on the identification of him and the provision of the information to the municipal authority.



Figure 4.9 Plots identified for allocation through backdoor deals (plot number 22)

(Source: Field survey, 2019)

This particular case bears several important messages. Among others, the first is that the urban lands were exposed to corruption by unaccountable government officials or there was poor management of public lands. Second, there existed poor land registry systems, particularly in the urban land management department. Third, the patronage of the officials benefited certain groups of the urban population. Fourth, urban land information was at the fingertips of certain government officials so that they could manipulate it to the extent of their needs. This implies that the information is not readily available to everyone and the procedures are vague. That is why such kind of activity is dubbed as ‘*administrative sin*’ by an interviewee at *Kebele 02*.

I was also interested in the cases, so I talked with the owner of plot number 23, who is ‘M’ and works in one of the offices of North Wollo Zone. The municipality has given her the plot in-kind compensation for the plot taken at *Adengur Kebele*. ‘M’ said that the original plot was not this one (plot number 23). Before the office gave her it as a kind compensation for this plot (plot number 23), she confirmed that they gave her residential land near *Gomata*. Soon after she had received the plot of that land near *Gomata*, she began fencing the given plot. The next day, when she went to finish the fence, the fence she had

built the day before had been demolished by someone else. She appealed to the land surveyor, an expert named 'A' at the municipality. She said that expert 'A' had informed her that before her, the land was allotted to another person and it was given to her by mistake. And 'M' said that she was given this plot of land as a replacement for the previous plot with the approval of the absence of the owner by expert 'A'. Finally, she got this plot of land, plot number 23, where no one claimed as the owner of the plot.

A zone land registration and certification expert expressed his concern during the time of interview with him. He expressed that the process of land allocation is filled with corruption and disregarding planning and regulatory standards, hence resulting in unlawful settlements. The municipality itself is at a flaw for not implementing sufficient control over its land resources. As per the informant, because of the outdated land registration system and the rent-seeking behavior of municipal officials, the realities and practices of municipality actions differ from their policy and legislative obligations. That is, there is often a gap between government policy and practice, between what the town administrations ought to do and what they do.

Staff turnover and lack of institutional memory

The respondents identified the frequent staff turnover and lack of institutional memory as the other additional triggering factor for the emergence of informal settlements in the peri-urban area of Woldia. They stated that high staff turnover has been a constant problem in the municipality of Woldia which in turn aggravated the problems of institutional memory. In line with this, the findings of the study revealed that the loss of institutional memory and inconsistency in the staffing of the public and the management of municipal policy due to constant personnel turnover restrict the continuity and coherence of municipal policy. When human turnover happened in an institution, it is obvious that the skills, knowledge, and expertise of the staff will go with them, as well as the institutional memory. This implies that human turnover means losing more than employees.

Informants from the municipality disclosed that high and constant staff turnover and losses of institutional memory were the main indirect triggering factors for the outgrowth of informal settlements in the peri-urban areas of Woldia. In this regard, they cited, for instance, both the mayor and the manager of the municipality did not have a definite year of

power. From the year 2016/17 to 2018/19, four mayors have been working in the town. Analogously, in the same period, four municipal managers have been appointed. This recurrent appointment and delegation mean a high rate of administrative staff turnover. Neither of these individuals worked for more than one year, which contributed to a lack of policy continuity and institutional memory. Consequently, with the arrival of a new mayor or municipal manager, a new design is initiated; particularly when the former administration did not leave any records thereby eliminating institutional memory. I found that various policies and strategies to address the multidimensional problems of Woldia, including the growth of informal settlements, have failed due to a lack of institutional memory and frequent staff turnover.

4.1.3 Role of local actors and informal mechanisms in Accessing and securing land

4.1.3.1 Local Actors and their roles

Findings from all data sources in the study area revealed that across the peri-urban areas of Woldia where rapid urban expansion is the norm, various local actors are involved in the town who directly or indirectly influence the formation of informal settlements. That is, urban development (formal or informal) is the outcome of decisions and actions made by a wide range of public and private actors. Yet, since the interplay among actors is so complex, it is impracticable to take all the local actors into urban land management issues. Consequently, this section focuses not all but on the very selective dominant local actors at the peri-urban areas of Woldia who can be seen as representative of a wider population, and who can shed more light on these issues.

Private/individual actors

Survey results from both key informant interviews, FGDs, and semi-structured questionnaire administration unfolded those various private/individual actors are actively involved in the emergence of informal settlements in the peri-urban areas of Woldia. Findings from all data sources in the study area revealed that the foremost actors also called land transaction cadres often contributed to the commodification of land even where one has used and held the right and claims it. In effect, informal and unplanned land conversion was mainly the task of private actors, though some government and informal traditional institution actors are

confederates in the process of land conversion. The study outlined the following key private local actors who are involved in the emergence of informal settlements in the peri-urban areas of Woldia: land brokers, peri-urban farmers including other settlers, land speculators, rural land administration representatives, retired persons, individuals from local traditional institutions and local government officials mainly working in the municipality.

a) Land brokers

Findings of the interviews administered to key informants and semi-structured questions revealed that land brokers are among the key local actors who are involved in the emergence of informal settlements in the peri-urban areas of Woldia. The greatest talents of land brokers are the ability to acquire local information. A senior official in the Municipal Office of Woldia explicitly mentioned that land brokers, who have access to the most detailed local information on the legal status, ownership, prices, and names of potential sellers and buyers, filled the gap that was left by the government in areas where the formal regulation of development was fragile. It was also found that the land brokers were running for their good business because they charged a commission on transactions from both potential sellers and buyers. According to interviews conducted with land brokers, in the formal land transaction, they are paid based on the percentage of sales, typically a commission payment of 2 percent. However, in the informal land transaction, payment for them is normally made based on an agreement between buyers, sellers, and them using the formal commission payment as a benchmark for determining.

In this regard, land brokers use different strategies to convince peri-urban farmers to enter into informal deals. That is, based on the data collected from the field survey, it is witnessed that landowners did not always decide to sell land. For instance, land brokers urge peri-urban farmers to sell their land because outsiders who are not familiar with their culture, and view, and even with the meager government compensation will take their lands. They also persuade them that it is the right time to sell their plot of land. If they failed to do so, it would expropriate them with negligible compensation. Additionally, the land brokers also caused the farmers who lived in the peri-urban area to feel discouraged, believing that the government can secure higher returns from their land as long as they did not sell or use schemes that are partly propaganda and distort their perceptions. All in all, land brokers

generally engaged in blaming government agencies for being fake, illegitimate, ridiculous, irrational, artificial, or deceiving concerning their doings to benefit peri-urban farmers.

Moreover, study results from both key informant interviews and semi-structured questionnaire administration revealed that land brokers often have strong patronages among the government bureaucrats or individuals employed by the land administration institutions/departments. In light of that, the illegal construction control and peacekeeping core processor owner expert of Kebele 02 indicated that informal networks of the land broker with the municipal experts were among the prime causes for the growth of informal settlements in the peri-urban areas of Woldia. In this respect, the key informant insisted that because of land brokers' patron-client relationships and informal networks with officials in the municipality, the offices of the core process owners of the municipality were playgrounds to land brokers. To that end, local people deem land brokers as the closest coworkers of the experts in the municipality as they spent much of their time inside the municipality compound. He also confirmed that land brokers sometimes withdraw documents of other people from the municipality documentation center.

b) Peri-urban farmers

Peri-urban farmers are genuine land users. Farmers in the peri-urban areas use the land mainly for agricultural activities. However, it is not always the case. Hence, it was found that many peri-urban farmers use the land for something other than farming. In this regard, administrative seeker peri-urban informants from the municipality of Woldia referred that they have an interest in land for residence or sale because they speculated that the urban population is growing rapidly and the spatial expansion of the urban area is inevitable thereby incorporating their lands.

As a consequence, peri-urban farmers were involved in the informal land deals usually assisted by different local actors under the pretension of selling an existing house or donation or inheritance. Peri-urban farmers in peri-urban areas anticipated that the municipality would expropriate their lands at any time. To this effect, they often sub-divided their lands to sell while keeping some portions for themselves and their children. Findings from this study, therefore, showed that peri-urban farmers take the bold step of sub-dividing their plots and selling them directly to individuals or building unauthorized homes in the area for themselves and/or their children. As a result, most of the dwelling or housing units

in the peripheral urban areas of Woldia were illegally subdivided plots. It is now accepted that settlement developments in the peri-urban areas of Woldia are seen as an arena in which various actors interact and negotiate with each other to secure their benefits and meet their desires. It is because of this situation that peri-urban areas have become the largest sources of illegally subdivided plots or illegally constructed homes in peri-urban areas of Woldia.

Some respondents confirmed that in the peri-urban areas, peri-urban farmers who have lived there for a generation often made different efforts to gain additional housing in addition to splitting families and to earn additional income through rent to compensate for the scarcity of residential land. That is, it was also found that the peri-urban landholders usually required additional land for residential uses due to several driving forces. Among these driving forces, findings revealed the following. First, many families were growing in size which in turn divided into separate families or households for which additional residential house was required. When land expropriation by the government occurred for different public uses, the landholders were requesting residential plots near their settlements for their children. Second, some households intended to construct additional houses for rent to generate additional income. Third, they wanted to sell their lands through the piecemeal illegal subdivision. These actions temporarily made the scarcity of residential plots in the peri-urban areas which in turn resulted in land price escalation. On the other hand, as a result of these actions, among others, some of the settlers usually the migrants (newcomers or outsiders) fall into trouble in finding residential lands. Consequently, when they fall into land hunger for residence, they look for plots differently. While some try to find rental accommodation in the village itself, others inhabited the public lands in an unauthorized way or even others went into the informal land market (deals). Ultimately, this was one of the principal tragedies that show the way to the flourishing of informal settlements in the peri-urban areas of Woldia.

In addition to peri-urban farmers, other people settled in the study peri-urban areas. These people include original people who have lived there for a generation or a long time, and incorporated into the town administration either through regularization or harmonization or as the default urban residents. Besides the original settlers, there were also outsiders (migrants who come from other areas but settled in the informal settlement areas). In

addition, it has also proven these settlers to be vital actors in the growth of informal settlements in the peri-urban area of Woldia.

c) Land speculators

Actors, such as peri-urban farmers, investors, and business people may move into peri-urban areas to compete for land for speculative. Accordingly, when land speculators attempt to hoard the land to make a speculative profit or also termed as the unearned increment from the sale of urban land at higher prices in the future, it creates an artificial shortage of urban land for residency. These artificially withheld urban fringes affect the demand for residential land. Therefore, as in other cases, people who require residential land will suffer from residential land shortages. Consequently, they find themselves forced to acquire other means, including informal.

In this regard, the findings of the study revealed that there were various types of land speculators: ordinary farmers, land developers, investors, and rich people. The research found that nearly every one of them speculated on the land. Thus land speculators initiated the pressure for a settlement. Land speculators often initiated land-use change in peri-urban areas. Moreover, the land speculators were usually eager to take advantage of idle land so that they could boost their profits in the future. These various types of speculators used their influence in the speculation process by buying at a low price and expecting to sell at a higher price. In this regard, the research found that some farmers were optimistic about the future increase in the price of their peri-urban lands or may have sufficient capital for which they look for investment means. In this case, peri-urban farmers occupied far more land than they could use in hopes of later selling the land to later arrivals at a profit.

The findings of this study also indicated that land speculators would like to be informed of municipal projects, including those that have already been adopted and those that are still under consideration. They also wanted to know about exchanges of property and prices paid, those who are involved, what might be the demands for land in the very immediate future, and by whom and for what purposes. Such findings have meant that investors and wealthy individuals have accumulated large plots of land to speculate and hoard, particularly in the peri-urban areas, for increased profits.

Findings of key informant cases showed how some land speculators in the peri-urban areas have engaged in illegal and multiple land sales, and fraud of land revenue abounds. In this respect, some key informants have repeatedly confirmed that land value has increased in the settlements because of land speculation. Key respondents claimed that the residential land price /value/ increased by at least a rate of 102 percent per year from the year 2013 to 2019 in part due to speculative activity. For instance, a plot measuring 180 square meters that contains a 27 square meter house in the Millennium area of *Mechare* was sold for 105,000 Ethiopian Birr in 2013. At the time of data collection for this study in 2019, the same plot of land with the same house it sits on could cost 750,000 Ethiopian Birr; an increase of 645,000 Ethiopian Birr in just six years, or approximately 8,958 Ethiopian Birr per month.

Because of the above basic facts, findings revealed that land speculators (i.e. land developers and investors) generally would buy vacant land or land in its agricultural use in the peri-urban areas at lower prices and withhold the land off the market until it could be sold at a higher price, and they receive the speculative profit. That is, they hoard the residential land for certain periods, a month or even years, which in turn made the availability of land shortage. By purchasing land at one time for resale later, land speculators created one of the following impacts: a shortage of land in the present; an increase in urban land for housing demand; and a rise in the price of peri-urban land. One of the primary impacts of speculative activity on the residents of the existing built-up area was the flourishing of informal settlements. This is evident in the periphery areas of Woldia.

d) Rural land administration representatives

Dealing with the private actors in the study revealed that rural land administration representatives were the other actors that played a great role in the development of informal settlements in the peri-urban areas of Woldia. In each rural Kebele, these are people elected to serve. They have power over the allocation of agricultural land to rural households. As per the key informants (interviewees) from Woldia *Woreda* rural land administration and utilization office, the government has assigned one land administration representative in each *Kebele*. These representatives played an important role in connecting rural *Kebeles* while also serving the *Woreda* rural land administration and utilization office. Their role is

not only limited to relaying government office information but also in making decisions regarding land acquisitions or in persuading rural landholders to make amends. These people have unreserved authorization power when the land registration system has met with the farming community.

I discovered it from the study that land transfers by peri-urban farmers between their family members, whether formal or informal, entailed close consultation with these representatives. Rural land concerns would not proceed to the next step in a decision without the approval and recognition of rural land administration representatives. They were also acting as information providers to the *Woreda* rural land administration and utilization office. Because of their relationships with the peri-urban settlers and *Woreda* rural land administration and utilization office, they could act as the middlemen for informal settlements. Because they were unpaid or usually lower-paid, petty corruption was found to be prevalent, with claimants spending money to get approval. Talks with the focus group discussion revealed that rural land administration and utilization representatives played a key role in the informal land access processes. A distinctive feature of these representatives of rural land administration and utilization was their on-the-spot knowledge and their double standard of behavior: one time, they aligned with the rural people; the next time with the *Woreda* rural land administration and utilization office. Because of this, a respondent from *Kebele* 02 in Woldia termed them the rural *Kebele pendulum* or *scaffold*. Essentially, the land at the periphery must wait for the rural land representatives to request intervention before it can act.

e) Retired persons

The finding of the study also revealed that retired persons were the other actors who played an important role in the development of informal settlements. These individuals were once employed by a government entity, but are retired today. These people knew the rules and regulations more than others and are well informed about the existing gaps in rules and regulations. The findings of the study confirmed that to strengthen their activity, they usually form patronages with officials in their former offices. Retired persons are people with strong political contacts in their former offices as well. Many of the retired persons used the information they developed through their experiences in their former offices.

Individuals in local traditional institutions

The common social and cultural informal/traditional institutions that are practiced by local communities include *Iddir*, *Eqqub*, *Mahber/Senbete*, and *Debo/Jigie/Wonfel*. They are also called informal, as they are not formally registered. I found it through discussion that they played a significant role in the informal land market in the peri-urban areas. To this end, other than their primary objectives, they are also platforms for information exchange for the informal land and infrastructure market. Although they were not directly involved in the entire process of the formation of informal settlements, they have nonetheless helped maintain several public facilities, such as water supply lines, roads, community meeting halls, etc. disregarding the wrongfulness of the settlement. Leaders of informal institutions often have various opportunities and challenges in the many dimensions of a political voice for land and infrastructure.

Iddir: is one of the local informal social institutions founded by volunteers voluntarily by a group of people in the community and is initially used to settle burial issues (mutual help) and other social issues. As of now, this social institution offers a range of services, including conflict management, awareness creation, information sharing, and community mobilization for grassroots development. In this regard, when people gather during *iddir*, they could exchange information about land markets, including informal means.

Eqqub: this is an informal micro-financing system (often interest-free credit) established by a voluntary group of people to collect a fixed amount of money from its members regularly and from which interest-free loans would then be made available through a lottery method. Among the bonding forces in this association are trust and community social norms. This is one of the most significant assets when introducing a saving and credit structure as a source of income for the members to run a business, including informal means.

Mahber/Senbete: They are voluntary mutual aid religious-affiliated community associations common to the followers of Orthodox Christianity. The members gather to practice their religious duties. The following are the main roles these associations played: (i) labor mobilization during peak agricultural seasons, (ii) information exchange through discussions and gatherings, (iii) conflict resolution, and (iv) solidifying social bonds. *Mahber* and *Senbete* are very important aspects through which informal practices are disseminated, including informal land marketing mechanisms in the town administration.

Debo/Jigie/Wonfel: These are the other kinds of work parties that pool labor, widely practiced in the peri-urban and rural communities around Woldia. All of these fill the labor force gaps of a household when building a house and agricultural season activities are needed (tilling, weeding, harvesting crops, threshing, etc.). By the same token, they can adopt such models in realizing the practice of informal marketing in the peri-urban areas of Woldia.

Local government officials

When rapid urban growth and urbanization are happening, it demands careful planning and attention from several stakeholders to ensure that no one is left behind in the process. To realize this, among others, local government officials are at the closest distance with various levels of organizational structures, duties, and responsibilities. This government or administrative structure is primarily concerned with the provision of serviced urban land to satisfy people's demands. In this regard, to plan and put into practice regulating the growth of informal settlements, the town administrations should establish institutional arrangements.

In general, institutional arrangements that govern the delivery of urban land for residence and services range from the national level, such as the Ministry of Urban and Housing Works, to local levels such as the local Mayor/Municipal officials. These arrangements include the formulation of a range of organizations, structures, and networks that ultimately form the mechanisms through which actual urban plans are managed, coordinated, implemented, and monitored. If these institutions not implemented effectively, whatever urban plan is designed, an urban area will not reach the ultimate purpose of the municipal at the micro-level and the regional and federal at the macro-level it is formulated for.

In this context, it is fair for the municipality, as well as the mayor, of Woldia to be liable to regulate land conversions and ban agricultural lands from entering the market without the active involvement of the government through expropriation via the lease system. So the abuse of the (urban) lands in the town administration of Woldia is mainly the accountability of the mayor's office and the municipality than regional or federal. In addition to being illegal, the conversion of peri-urban land to informal land uses, such as settlements

without state involvement, also deteriorates the town's internal revenue, since land leasing is the primary source of local revenue.

In practice, however, across all data sources in the study sites, the findings indicated that some local government officials tend to be among the principal actors behind the emergence of informal settlements. These are people who are employed by the town administration and are in charge of governing, among others, illegal land developments. Results based on analysis of interviews, focus group discussions, and key informants' data showed that some government officials have problems in regulating the development of informal settlements. Government policy and practice often diverge from each other, since officials generally did not do what they were supposed to do. In this regard, the findings from the questionnaires and the interviews showed that government officials could be an indirect actors in the process of informal settlement development. An indirect in the sense that they enter into the informal land deals on several pretenses, often with different interests and objectives, usually, as if they were working in line with the organizations they meant them for. The findings of this study also pointed out that because of weak land administration, corruption, rent-seeking behavior, and social and political conflicts, the reality and practice of some government officials were different from those called for in policy and legislation.

Several key informants reported that alleged corrupt government officials engaging in informal land transactions on various pretexts as if they were performing duties for the organization for which they work. Hence, they are important local actors in the process of informal land subdivisions and transactions. Consequently, informal settlement developments were taking place on a massive scale, in contrast to the official objectives of government policy and legislation. In this regard, they played a crucial role before and during the construction of informal houses that were supposed to be stopped. The key informant from *Adengur* pointed out that once alleged corrupt state actors are negotiated with informal developers in a given area, they avoid patrolling the area so that they could claim the construction took place without their knowledge and consent. Additionally, they encouraged informal builders to work at weekends, at night, and during holidays.

As a result of the FGD from the municipality of Woldia, participants pointed out that government officials were the chief designers of the informal settlements. They claimed that

government officials lead the journey to such informal settlements. Since government officials in the area of urban land know the gaps in the existing rules and regulations, they give directions; even drafting the appealing format. Moreover, corrupt governmental officials usually push the peri-urban farmers to sell their lands informally. This explains why an official from the municipality emphasized that managing informal settlements in Woldia's peri-urban areas is a '*matter of managing the unmanageable*'. This also demonstrates how the implementation of public policy was subverted on the ground. This illustrates how they manipulated public policy and ultimately disregarded it in practice.

The findings of the study also revealed that some government officials were often reluctant to confront issues before the ills of informal settlements are necessary to confront them. Even further, where decisions must be made, they were referring to higher levels of government. Aside from alleged corrupt government officials, regulatory government officials such as the illegal construction control and peacekeeping core process owners, urban plan and construction inspection department, and sanitation and beautification core process owners were often said that it is in the higher municipality or mayor managers to decide and they cannot interfere with the growth of the informal settlement in peri-urban Woldia. Though it was their responsibility and duty of regulating the outgrowth of informal settlements, they would refer to the higher level of government responsible for the decision.

4.1.3.2 Urban land accessing and securing schemes

To put into practice the provision of land (both urban and rural) in Ethiopia, the public delimited the current legal regimes in the constitution of the country (Article 40 sub-article 3). The constitution clearly states that all land, whether rural or urban, belongs to the public, with the government being its steward. Therefore, since the land belongs to the government or the public, citizens can only enjoy use rights or development rights on it. Therefore, public urban lands must be sold through public auction via the lease system as per the law. In addition to the constitution of Ethiopia, leasing has been the official transfer of land rights in urban areas since the enactment of the first lease in 1993 (FDRE, 1993). As per Proclamation No. 721/2011, a lease is a system of land tenure by which the right of use of urban land is acquired under a contract for a definite period.

The lease system, proclamation 721/2011, replacing the prior Proclamation 80/1993, and Proclamation 272/2002 allows people to own land for a specified time ranging from a minimum of 15 years for urban agriculture to a maximum of 99 years for residential purposes. Urban lands are similar to rural lands in that they are owned by the government and people have only user rights. In urban areas, the management of the land rests with the municipalities or towns that act as agents of the government. The active legal document states that municipalities or cities allocate land for various groups of the population on two mechanisms: through the allotment and the lease system. The allotment and the lease systems are the two most common land allocation methods in the formal land delivery systems to the urban populations.

The foundations and objectives of the lease system, particularly the legitimatizing of the land use transfer from the government to individuals, are clearly articulated in the Proclamation of 721/2011. The proclamation states that no person may acquire urban land other than by leasing it; no person may enclose and use any plot of land adjacent to his lawful possession without the permission of the appropriate body; and no region or town administration may permit or transfer urban land in a manner contrary to the provisions of this decree.

However, as I will address it in the upcoming section, the land laws and the realities on the ground are quite different. In light of this notion, results from focus group discussions, key informant interviews, and document analysis suggest that land deals out of the ambit of the land law are happening and, therefore, the law and the practices are at odds. The situation, in turn, calls for the escalation of urban land prices in the formal sector. Consequently, the informal land transaction is getting very common, particularly in the peri-urban areas.

Informal land accessing and securing mechanisms

As per the constitution (1995), and Proclamation 721/2011, land transfer of any kind against land laws is illegal (FDRE constitution, 1995; FDRE, 2011). However, the land laws and the realities on the ground get divorced. Data generated through a household survey, focus group discussions, and interviews (including) key informants revealed that land deals out of the realms of the land law are happening and, therefore, the grounding principles, and the

practices are at odds. Consequently, displeased households, especially the urban poor, seek alternatives in the informal channels. As a result, informal land deals are happening and are widespread in the peri-urban areas via the purchasing of the peri-urban land using informal means such as informal land deals, fake donations, and fake inheritance. Informants confirm the researcher that these practices do not result from the dislike of formal rules that prompted peri-urban landholder actors to create informal structures, but rather a lack of trust in rule-making processes and existing rules.

Therefore, based on the data generated through a household survey, focus group discussions, key informant interviews, and field observation, the next sections explore the various mechanisms by which informal land transactions are happening in the context of the peri-urban areas of Woldia. More importantly, though both donation and inheritance are well-acknowledged and accepted by the Ethiopian land laws, I here refer to the fake donation and inheritance. In that view, the informal land accessing and securing processes in the urban fringe of Woldia chiefly took place in one of the following ways: purchase, fake donation, fake inheritance, or freely squatting.

A. Land accesses through the informal land market

This study has revealed that in the urban fringe of Woldia, one of the most common means of accessing land against the urban land law from peri-urban farmers to end-users is through informal land markets. The actors adopted different tactics in selling and buying plots by a localized set of informal transaction rules deeply masked in the formal systems. The interviews and personal observations revealed that informal land markets were facilitated by land brokers and buyers coming together to negotiate a deal. This was without the need for official paperwork or registration. Additionally, land brokers were found to be knowledgeable about local land laws and regulations and were often the ones who helped facilitate land transactions. Based on numerous interviews and personal observations during the time of research, informal land markets were being conducted in the manner described below.

i) Determination of plot size and consultation with family members

As per the data obtained through this study, before people held the actual informal land markets, the plot size was determined by the landowners. Thus, landholders/users often subdivided the lands to be sold based on the current minimum standard parcel size. i.e. 180 square meters. The landholder used the minimum standard parcel size of the formal areas of the town as a benchmark. This was because, if the sizes of the plots were below the minimum standards, then the legal body would not accept them in the course of the actual transfer. Once plot sizes were determined by the potential sellers, consultations within the family proceed. Consultation with the family was important to protect from future disputes, which may arise at a later date when the family members have not consulted. The consultation was important to confirm that no other family member has appealed the land. As soon as sellers have consulted the family members and come to a consensus, determining the plot size and the price of the plot followed. Once the plot size was determined, the landholders subdivided the plot into 180 square meters, marked its boundaries, and made it ready for the deal (sale).

Dissemination of information on plot availability

Once the plot size for sale was determined, the next step in the process was the dissemination of information regarding plot availability. Based on the findings of this study, the most common means of information exchange on plot availability were the following.

a) Mutual communication among actors

Information on the availability of plots, potential sellers, and buyers is a basis for accessing the land in formal or informal land deals. This is one of the first stages in the land market. In the process of accessing and securing information on these matters, mutual communication among actors is one of the most common strategies.

To this end, the findings of the study revealed that once the potential sellers determine to sell their plots, they inform people closest to them, such as relatives, friends, and neighbors. The rationale behind the fact that the sellers initially notify people closest to them was to deserve the plot of land going out of their families, relatives, friends, or neighbors. Thus, disseminating the information to outsiders or out of their social group, for

example, to the land brokers is the last option. After notifying their families, relatives, friends, or neighbors, and if they ensured that nobody showed interest in buying the land, sellers inform other people, mainly land brokers, to spread the information on the availability of plots for sale. Additionally, since land brokers are part of the community in which they operate land brokerage, and since they are familiar with potential buyers and sellers through frequent contact, people have credited them with disseminating information to potential buyers. By the time the information reached land brokers, it gets disseminated to a variety of people in the town administration who might be searching for a plot.

To triangulate the qualitative findings, sample peri-urban respondents were asked to assess their primary source of information for plot availability to their area of residence if they acquired land through purchase. Of the total 244 respondents, 135 (55%) indicated that they acquired their area of residence through purchase. Of these, the largest percentage, or 34 (25 percent) of them acquired information from potential buyers while the least, 7(5 percent) obtained it from house sellers. Similarly, 28 (21 percent) of them acquired information on plot availability from land brokers, 24 (18 percent) from neighborhoods, 19 (14 percent) from friends, and 23 (17 percent) from others. The reason why the source of information from potential buyers is relatively higher than the others is unclear. One explanation might be due to their persuasive power to create a center of attention for other people to settle in the areas where they bought and settled. Therefore, once they built a home for themselves, they opened it up to their friends and family. We know this as the “network effect”, where as more and more people move into an area, more businesses and services move in to cater to the population, and it becomes an attractive place to live. This creates a snowball effect that encourages more people to move into the area.

b) Regular visiting of potential areas

The second strategy used to obtain information on the availability of plots for sale was through the daily visiting of potential areas by land brokers. While there were part-time land brokers who used land brokerage as a secondary activity, such as government employees, there were also land brokers who used land brokerage activities as their primary activity. Because of this, those land brokers who were involved with the land brokerage as a regular business activity were often visiting the potential areas, which provided a splendid

opportunity for them to know the potential sellers and plot availability. By visiting potential areas daily, land brokers could obtain information about the availability of plots for sale. This would allow them to be among the first to know when a new plot of land became available and to be able to act on it quickly. It would also give them an advantage over other brokers by giving them access to more information about the land.

c) Information from Street-Corner Men

The third source of information on plot availability was street-corner men. The findings of this research indicated that information from street corner Men was acquired at various times. Street corners are gathering places that allow people to interact and exchange ideas sitting and standing there. On the street corners, people openly sit, stand, and discuss social, political, and economic issues. People come regularly to interact, chat, and receive information from others. Thus, the street corners served as communication points whereby information was obtained about which area contained potential sellers. This allowed people to more easily find the sellers they were looking for without having to wander around aimlessly. It also meant that sellers had a more reliable source for finding customers. Sometimes, land brokers purposely opened the issue of a land deal for discussion and information seeking.

The research found that the street-corners men were important sources of information, particularly if information about plots is unavailable due to a lack of trust, disagreement, and rivalry between land brokers. Even in times of severe conflict among land brokers and failure to get information, key informants (land brokers) confirmed that they sent other people to gather information about a place where a plot is available for sale. For such a mission, the informers got some amount of pocket money from their client land brokers for their contributions soon after the sale of the property is completed.

d) The information gained through private announcements/ notices

Although this is not the usual way to exchange information, and is not a frequent method, notifying via private notice is gaining the attention of some land brokers. In doing so, the land brokers notified the names and addresses of potential buyers and sellers through their privacy notices. So if there are people who need land for buying and selling, they announced

through notices by describing them as the accredited land broker agents. Land brokers also notified their names, addresses, and mobile phone numbers to people so that any potential buyer and seller could easily communicate with them regarding the issue. They posted notices at any available places, but they posted most of the notices more likely when people can observe easily.

e) Information from local traditional institutions

As described above, the findings of the study confirmed that traditional institutions such as *Iddir*, *Eqqub*, *mahber/senbete*, and *debo/jiege/wonfel* played a significant role in the informal land market in peri-urban Woldia. They are platforms for information exchange for the informal land market. Through their informal networks, people could spread information rapidly about what opportunities are available and informal insurance. Like the street-corner men, they are the principal sources of information, especially when people are gathered during the time of *Iddir*, *Eqqub*, *mahber*, and *wonfel* purposes. These traditional institutions provide members of the community with a platform to discuss and exchange information. They are also the primary source of information for people who don't have access to other sources.

ii) Bargaining

After the size of the plot was determined and sellers have performed consultation with family members as well as dissemination of plot availability information in the neighborhood, the next step was to bargain on the plot price and payment matters. Consequently, buyers and sellers would bargain with the facilitation of the land brokers. Both buyers and sellers discussed matters related to land ownership, land use category, plot size, plot price, and related issues. Once such matters have been settled by both the sellers and the potential buyers, the next phase was the process of bargaining with each party to secure the best possible deal. The negotiations involved between the potential sellers and buyers were mainly centered on the price of the plot and the method of payment.

However, there were minor cases, due to their absenteeism in which both the potential sellers and buyers delegated a third party, such as relatives, friends, or even land brokers who undertake their bargaining on their behalf until they reached the final

agreement. In this case, when land brokers were delegated to negotiate the price and methods of payment on behalf of either the buyer or the seller, it opened an opportunity to make their business, called *'ferk'*⁹. This in turn influenced the price of land in informal deals.

iii) Signing an agreement

If the buyers and sellers have agreed on the price of the plot and related matters, then what follows was the signing and exchange of the letter of agreement which was locally entitled as *"behig fit Yemitsena Yewul simiminet"* literally means an agreement paper that will be legitimate as if the case is brought into a law court. The letter of agreement was signed by the seller(s), the buyer(s), and three witnesses. Both the buyers and sellers put their signatures in front of witnesses. Even though it started with the consultation of the family members, if the seller has a wife/husband (married), both individuals must put their signatures on the agreement paper. Both the buyer(s) and the seller(s) collect copies of the agreement and a third copy was kept by one of the witnesses of the transaction which tends to minimize problems till the time of formal tenure transfer. The agreement paper has been fictitious, often a fake *loan-borrow* agreement. This means that the agreement paper states that the landholder has borrowed some amount of money from somebody (by mentioning the name). The sellers and buyers knew that land sales are illegal, but there was a widespread belief that agreements made under the shield of loan-borrow are legally acceptable documents. The agreement paper also states that if the borrower is unable to pay back the loan within the fixed time, he/ she agreed to convey his/her *'house'* as collateral to the lender in an exchange for the money borrowed. Here, it is important to note that, most often, the said borrower is selling the land without a constructed house. That is why the agreement is factitious and the matter is informal. The constitutional legitimacy of FDRE

⁹*Ferk* is an idiomatic expression. It is the practicing of selling property at higher prices beyond a certain limit, usually without the awareness of the buyer. For example, if the seller of the property is determined to sell his/her property at a price of 140,000 Ethiopian Birr by negotiating with the seller, the land broker or the delegated negotiator sets his/her price at which that extra sell will be the pocket money for him/her. He /she is also making persuasion up on the seller by saying, for example, that he/she is doing to the best of him, the seller. To that end, if the property is actually being sold at higher prices, say 160,000 Ethiopian Birr, the land broker will attain that extra 20,000 Ethiopian Birr (the difference) besides to the already determined commission payment of 2%. He/she will convince the seller by saying that while signing a document; he has to confirm as if he sold the property with the said amount of money. Hence, land brokers are benefited using this notion thereby tend more to the informal property deals than the formal deals.

which states that land as a common property of the Nations, Nationalities, and Peoples of Ethiopia and shall not be subject to 'sell' or 'to other means of exchange' is violated.

On top of that, during this stage, measurement of the plots and demarcations are involved with the existence of witnesses. These self-styled survey measurements are frequently done using rope or feet or using the meter on the availability of the instrument. Boundary corners of the sold plots are marked by the available materials frequently by placing stones, erecting sticks, or making holes. In addition to specifying the location of the plot (the name of the local area where it is found), the names of the neighboring landholders to the north, east, south, and west are pointed out and recorded.

iv) The commencement of payment

Following the agreement reached by both parties, the delivery of the payments began. They also fixed the repayment schedule just as if the loan-borrowing agreement had happened months earlier. On the agreement paper, the amount of money that the buyer(s) lend(s) to the seller(s) was (were) commonly expressed at least twice higher than the actual amount. This is because they believe that the price of land will rise in the future due to the intention of land price speculation. Therefore, the agreement paper reflects the expected appreciation of land value in the future. In that case, if the informal seller can refund the existing actual selling price of the so-called house sometime in a while, the buyer will lose in achieving other alternatives. Consequently, the buyer should ensure that the agreement paper reflects the expected appreciation of land value in the future, to maximize the potential gain from the transaction. To avoid this irregularity, during the time of the agreement, the amount of money paid to the seller is deliberately mentioned as at least twice the actual value.

More importantly, the payment did not commit all at once, rather, the two parties coupled with the witnesses and land brokers often agreed on an extended repayment schedule. Since it is an informal deal with the absence of a formal mortgage, financial transactions are determined by the informal buyer, informal seller, the land broker, and the witnesses. Given that, the amount of money to be paid to the seller normally has passed two phases or sometimes even three phases. The first phase of payment is where the largest portion of the payment is made before the real property transactions and the second phase is after the house is built and the actual ownership transfer is completed. In addition to these

two phases, there is a time at which an initial phase of payment is made before the above which is called ‘*kebd*’¹⁰ (a type of initial payment for assuring of the agreement).

Vi) The construction of the house

After maintaining all of the preconditions, the buyer built a tiny house (usually one room size) on bought land. One point to remember is that while landowners are entitled to use, for the most part, they are also aware that vacant land cannot be sold. Put differently, peri-urban farmers who are involved in the informal land markets are not in the absence of know-how of the land law but rather as a self-regulating reaction to the often criticized meager compensation. Therefore, before constructing a house on the informally sold plot, the seller would request an authorization letter from the *Kebele* and *Woreda* rural land administration and utilization department to build a house on his/her plot of land. Rural land representatives, corrupt officials, and land brokers often played important roles in assisting peri-urban farmers to obtain implied permits from local governments to build an informal construction. After collecting the authorization letter, the buyer built his/her house that can help in fulfilling the requirements of tenure transfer.

v) Denouncing the fabricated payback agreement and land transfer

After constructing the house, the buyer (loaner) writes an appeal to *Woreda* court attaching the agreement paper stating that he is not able to collect his money loaned to a seller using his ‘home’ as collateral. What made the informal land deals more fictitious is that when the loaner is writing an appeal to the court (judiciary), the amount of money that he/she loaned is pointed out mostly as high as the true value but typically less than that. This is because, now the matter is becoming legalized, and expenses have to be committed to the concerned government offices such as *Woreda* internal revenue, municipal service fee, stamp duty fee, etc. The payment to be made increases as the value of the collateral house increases. Accordingly, to minimize the amount of payment, the amount of money is reduced to a

¹⁰*Kebd* is a type of initial expense that is made by the purchaser when he/she agreed to buy the said property, land/house in this case. If the buyer is not in a position or withdraws from buying the property, the *kebd* is often not paid back. It is up to the decision of buyer to lose or conserve the money. On the other hand, when the buyer can buy the property based on the agreement they (buyer and seller) reached, the amount of *kebd* will be considered into the total value of the property.

certain amount. At all, two basic payment formats are prepared: one hidden (i.e. known by the players, but not by others) and the other explicit to government officials.

Based on the appeal of the lender and for its effectiveness, the court fixes the payback period to the said debtor. But if the debtor is failing to do so, actually it failed; it is the right of the lender to appeal to the status of its implementation. After the time of the repayment schedule is gone, the lender again wrote an appeal to the court stating that he/she is not able to gain his/her loan money. Then what followed was that the said borrower explained to the court once again that he/she is unable to return, and it is the decision of the court what to do next. With the appeal of the lender and with the inclusion of the names of the landholders to the north, east, south, and west, the *Woreda* court sent a letter to *Woreda* and *Kebele* land administration office by pinpointing the following key points for its decision to come.

- a. Whether the constructed house is in the name of the borrower, and the place mentioned in the sales agreement or not;
- b. Whether the seller constructs the house in the area where house construction is possible or not;
- c. Whether the seller does not construct the house on the farmland or cropland or not, and
- d. Whether the constructed house is under the permission of the concerned bodies and based on other legal grounds or not.

As a result, rural *Kebele* land administration representatives checked the stated requirements in the field, through the presence of *Woreda* rural land administration and utilization representatives. To carry out all the above requirements and proceed without any challenge, the buyer often has to pay bribes to the said key persons who are involved in the process. Moreover, because these procedures are primarily calculated and deliberately framed, the actors did not fail to do so. I confirmed it through interviews that it is far from challenging. The actors involved are experienced and highly skilled, making it easier for them to execute these procedures with accuracy and precision. Additionally, they are also well aware of the consequences of any missteps, and this further drives them to be meticulous in their approach.

By the time these activities are successful, *Woreda* office of Justice approved the agreements made by both sellers and buyers. The *Woreda* court resends a letter to *Woreda* rural land administration and utilization department stating that it has approved the

agreement the two parties reached before (i.e. to convey the house as collateral to the lender in an exchange for the money borrowed). The *Woreda* court notifies that the borrower failed to return the money back to the lender, so the stand of the court is to affirm and order the *Woreda* rural land administration and utilization department to transfer the holding titles to the appellant. In these procedures, the *Woreda* rural land administration and utilization department receive the decision of the court and transfers ownership/title to the applicant: informal buyer. Furthermore, the *Woreda* rural land administration department did that and gave a new file and evidence such as a Green book, to the new owner. The rural areas use green books to guarantee property (land) titleholders. That is, in rural areas, instead of site plans, they gave green books to the residential and agricultural parcels.

It is important to note that there are times when the landholder constructs a house on the land and has it ready for sale before the aforementioned procedures are in place. Hence, it is not always true that the procedures of informal land deals, discussed above, follow the same stages rigidly.

B) Land accesses through a fake gift/donation

Data generated through a household survey, focus group discussions, and interviews revealed that a second way to access and secure land in the peri-urban areas in Woldia was through a fake donation. While landowners in peri-urban areas were donating land as a gift, they utilized loopholes in the legal framework. That is, the issue of donation also rests upon a fictitious type of agreement for the gift/donation. A document review revealed loopholes. A case in point is that regulation No. 26/2015 article 9 sub-articles 1 and 2 of the Amhara National Regional State ([ANRS, 2015](#)) gives room for gifts/donations to *family members*¹¹. Accordingly, article 9 sub-article 1 of the regulation declares that when the land is congruent with the land use category of the structure plan of the town administration while the rural lands are to be incorporated in the urban structure plan through expropriation, the head of the household/spouse has the right to keep up to 500m² of land for housing. Moreover, it states that as far as the land is enough for the family members whose ages are 18 years and

¹¹ According to [regulation number 252/2017](#), family Member is defined as any person that has no his own permanent livelihood instead who shares the revenue of the farmer, lives permanently with the landholder. From this definition of the family member, there are three critical points that deter the involvements of any person. These are: 1) the person has no permanent means of livelihood; 2) the person shares the revenue of the farmer for his means of livelihood; and 3) finally the person lives permanently with the farmer/landholder

above, land for residential will be given to the family members provided that there is proof of pieces of evidence by the *Kebele* steering committee or on the approval of the *Kebele* social court that the children are grown within the family whether they own residential houses or in preparation to build their houses.

As per the active Regulation No.26/2015, the amount of land to be given to each child is determined by the standard plot sizes that the housing cooperatives receive from the town administration (ANRS, 2015). It means that, in principle, an urban dweller that has a residential plot of land within the town administration can own another residential land from his family as far as he/she is a child and fulfills the conditions of a family member.

Over and above, article 9 sub-article 2 of Regulation No.26/2015 further strengthens the gift/donation of land to the family member. It states that as far as the family members are the genuine donee, gift recipients by the concerned legalized body, and that they do not own their residential houses 'within the *Kebele*', they have the right to own a residential land up to 500m² as the size of the head of the family. To benefit from the regulation and sub-article, thus, it was found that peri-urban farmer households divide each member of the family into several households, i.e. the family as one household unit and each child as an independent household unit (whose age is 18 years and above) or land belongs to the vast family members of which only a few are living with the holder(s). The family members are interpreting the land law in the interest of their own to their ends. In addition, many farmers sold their suburban land as if they had transferred it to another family member under the guise of gifting or donating.

In addition to the above regulation, proclamation No. 252/2017 gives room for the disguised land transfer in the name under the pretext of gift/donation. Article 16 sub-article 1 (a and b) states that any rural landholder can transfer the landholding as well as his use right to any person residing in the region for (a) a child or grandchild or any other family member who engaged in the agricultural activity or wants to engage in this activity as far as it does not exceed the maximum ceiling of holding. The maximum ceiling of holding to donee is ≤ 7 hectares in the *Dega* and *Woina Dega*, and up to 10 hectares in the *Kola* and surrounding areas including his/her land; and (b) any other person who engaged in the agricultural activity or wants to engage in this activity that the landholder believes he has served or has been serving him as far as the landholder gives the document approving in

written form. More importantly, the donation made following the above criteria is effective only if the beneficiary is presented a written approval by the *Kebele* social court/ *Kebele* land administration committee about his care for the donor.

To its effectiveness, there are two forms of land donation/transfer that are practical in the peri-urban areas of Woldia. These are residential land donations and the donation of both agricultural and residential land in combination. Residential land donation is more susceptible to the informal land market for urban land use. Based on the results of the study, peri-urban landholders, i.e. farmers, donate/gift their agricultural lands for donee where the rural land law bans the transfer of agricultural land, for example, to government employees.

However, what actually happened in practice was different. For instance, a spouse, one who is a government employee, and the other, a lady of the house who is not a government employee, can get both the residential and the farmland on the willingness of her parents. The parents of the lady's house can apply the procedures described below (a through d). It is against the criteria of giving farmland to a family member. As described above, the donee can get agricultural land if the person has no permanent means of livelihood. But, in this particular case, since the husband is a government employee, he is the family's permanent source of income. In addition, because the lady is married and needs to contribute to her financial needs, it would not be prudent for her to share in the revenue from her family. Also, she is not living permanently with the landholder.

Sometimes, although the donee is the true family member, the donee family members commonly pay a considerable amount of money to the parents for their donation, which is often higher than compensated money if expropriated by the state. The rationale is to save as much land as possible by giving it to family members with relatively higher money rather than giving it to people who are not family members. As stated in subsection 4.1.2.1, it is found that the compensation payment for expropriated land in the peri-urban areas of Woldia, for example in *Enkoy Sefer*, whose agricultural area was 2443.409 square meters, was 51258.03 Ethiopian Birr. However, family members could pay the landholder up to 50,000 Ethiopian Birr for 180 square meters of land during the donation period. Through such a scheme, peri-urban land parcels in the town administration of Woldia could be acquired, giving fertile ground for the development of informal land deals.

Moreover, to make the transaction of the land as a legitimate donation, there are several steps involved in the delivery of land utilizing a fake donation. The most common are:

a) Application for Plot provision: here, farmers in the peri-urban areas often write letters of application to the *Kebele* land administration committee, which is usually unpaid, to inform them they are ready to give their land to a family member. After collecting the letters of application, the *Kebele* land administration committee calls for a public meeting. It was found through discussion that *Kebele* land administration committees were usually unpaid or not salaried members of the committee; *Kebele* land administration committees were frequently susceptible to fraud, corruption, and nepotism, which resulted in the misuse of peri-urban land, including informal deals for settlement development.

b) Public hearing/public saying: The public hearing or saying is required by law after a landowner applies to the *Kebele* land administration committee. Theoretically, this stage is very important since the committee has to verify whether the donee is the true family member of the donor. But, practically, the research findings showed that the public hearing or saying was still used as a matter of format and used as an input for further processing. The key informant land brokers (interviewees) pointed out that since most peri-urban landowners did the same thing in the same way, no one is in a position to dispute, even when the family member is not the true beneficiary. In this regard, the matter is getting like to a common saying '*Scratch my back and I'll scratch yours*'. This means that landowners are in a situation of interdependence and have to trust each other to maintain the system. They understand that if one of them disputes another's claim, the entire system could be disrupted, so it motivates them to cooperate.

c) Registration: Following the public hearing, the *Kebele* land administration writes a letter to the *Woreda* rural land administration and utilization department. Representatives from the *Woreda* rural land administration and utilization department, together with the existence of *Kebele* land administration representatives further investigate the donation. On the verification of the matter with the existence of *Kebele* land administration representative, the *Woreda* rural land administration and utilization bodies prepare two kinds of paper: the white paper and the Green book to ensure and certify the transfer of use and holding rights for the donee.

The white paper, also considered as Appendix-10 or donation agreement, consists of the name, age, and address (*Zone, Woreda, and Kebele*) of the beneficiary and the donor. At the same time, the serial number of the Green Book (for its green cover) of the donor is also mentioned. After specifying the names, ages, and addresses of the donor and the beneficiary, the donor(s) affirm their donations. For its effectiveness, the names of the eyewitness, their signatures, and dates are affixed. Finally, the name(s) of *Woreda* land registry expert and head of the office is added on the paper with their signatures and official seal on four copies for distribution to the concerned bodies: one copy for the donor (s); the second for the donee. They kept the third copy for Kebele land administration and the fourth for the record at *Woreda* rural land administration and utilization department. After they have completed all these processes, the Green Book will be given to the beneficiary. Then it is all about waiting for the municipalities to incorporate the area. In this regard, land transactions involved a large proportion of plots being sold to different buyers fostered by personal relations or local social relations. Therefore, the selling and buying of a parcel of land out of the ambit of land law remains in practical terms in the peri-urban areas of Woldia.

d) Paying land tax: The final stage is paying land tax. They make it to claim for its legality, which in turn confirms the landholding right via donation. The main rationale for paying land tax is to ease the long and bureaucratic legalization process of peri-urban land when it comes to municipal jurisdiction. This is important because it gives the landowners the legal right to develop the land and to receive any benefits, such as access to public services, infrastructure, and even compensation, should the land be expropriated.

C) Land accesses through fake inheritance

In the peri-urban areas of Woldia, fake inheritance was the third method of land transfer. Inheritance is the legal process by which land transfers to heirs after or before the owner passes away. In many instances, there are possibilities of inheritance to people even before death has been executed. As per proclamation no. 252/2017, article 11 sub-article 2, any person residing in the region and engaged in the agricultural activity or wanting to engage in this activity has the right to acquire rural land through inheritance. Particularly, Article 17 of this proclamation states that any person who is the rural landholder may transfer his holding as well as the use-right of any person engaged in the agricultural activity or to any other person who wants to engage in this activity through a will.

In addition to the detailed discussion with key informants and FGDs, the analysis of government official documents revealed that the availability of loopholes in the regulations and proclamations also facilitated fake inheritance, similar to fake donations. The Amhara National Regional State allows the inheritance of land regardless of blood relations. Since inheritance is possible, even before death, peri-urban farmers can transfer his/her land in the name of inheritance following the strategy used in fake gifts/donations. As far as the donors are volunteers to inherit their property, including their land, there is no legal sanction to disinherit the legal heir to it. All in all, the informal land accessing processes in the study sites are shown in Figure 4.10, with particular emphasis on informal land markets.

To substantiate the data obtained from interviews, FGDs, and document analysis, I administered a field survey questionnaire to the peri-urban (in)formal settlers. The quantitative data obtained from questionnaires within the peri-urban areas supported the qualitative findings. Accordingly, the majority, 135 (55.3 percent) of the residents secured plots for housing through purchasing from peri-urban landholders, and the smallest portion, 17 (7 percent) squat on public peri-urban land informally.

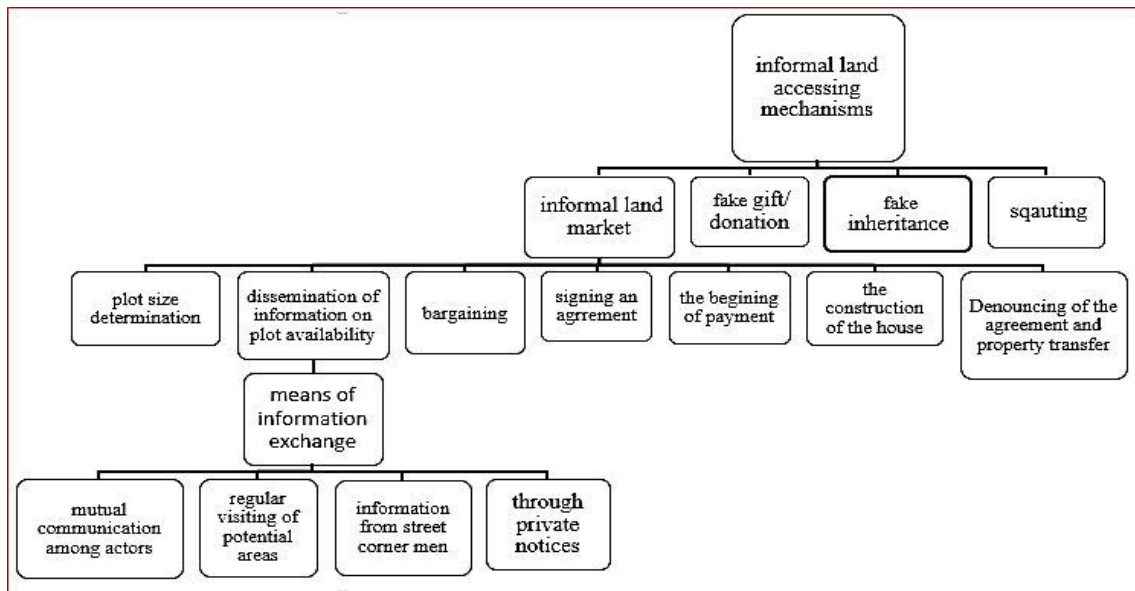


Figure 4.10 Informal land accessing processes

(Source: The author, 2019)

Furthermore, the findings showed that leasing and gift (including fake gifts or donations) represented 17.6 percent and 11.1 percent, respectively, as the second and third most important means by which peri-urban settlers gained access to land for housing. The

other means of accessing and securing land for housing in the peri-urban areas was through inheritance (including fake inheritance).

D) Land accesses through freely squatting

In some cases, urban dwellers settle on public land, especially in areas that are not accessible for governmental officials to manage, and de facto squatting is the consequence. This is also one of the strategies by which occupants could access land freely from government lands reserved for different purposes as reserved for the forest.

The findings from focus group discussions and key informant interviews revealed that vacant lands that cannot be purchased formally because of government holding or speculators' hoarding for future sell results in slowly disappearing into the formal provision. A result of all these led to the large-scale and widespread growth of informal land accessing systems, which in turn caused the acceleration of informal settlements in and around Woldia. The findings of the study also revealed that 7 percent of the sample respondents confirm that they occupied their place of residence by squatting freely. Once informal land access and the acquisition were secured, it further claimed for regularization as shown in Figure 4.11. When the request is informally accepted, peri-urban lands are incorporated into the urban vicinity, thereby local authorities would administer lands in the urban land via the lease system. However, if the local authorities do not accept their incorporation, they will be demolished.

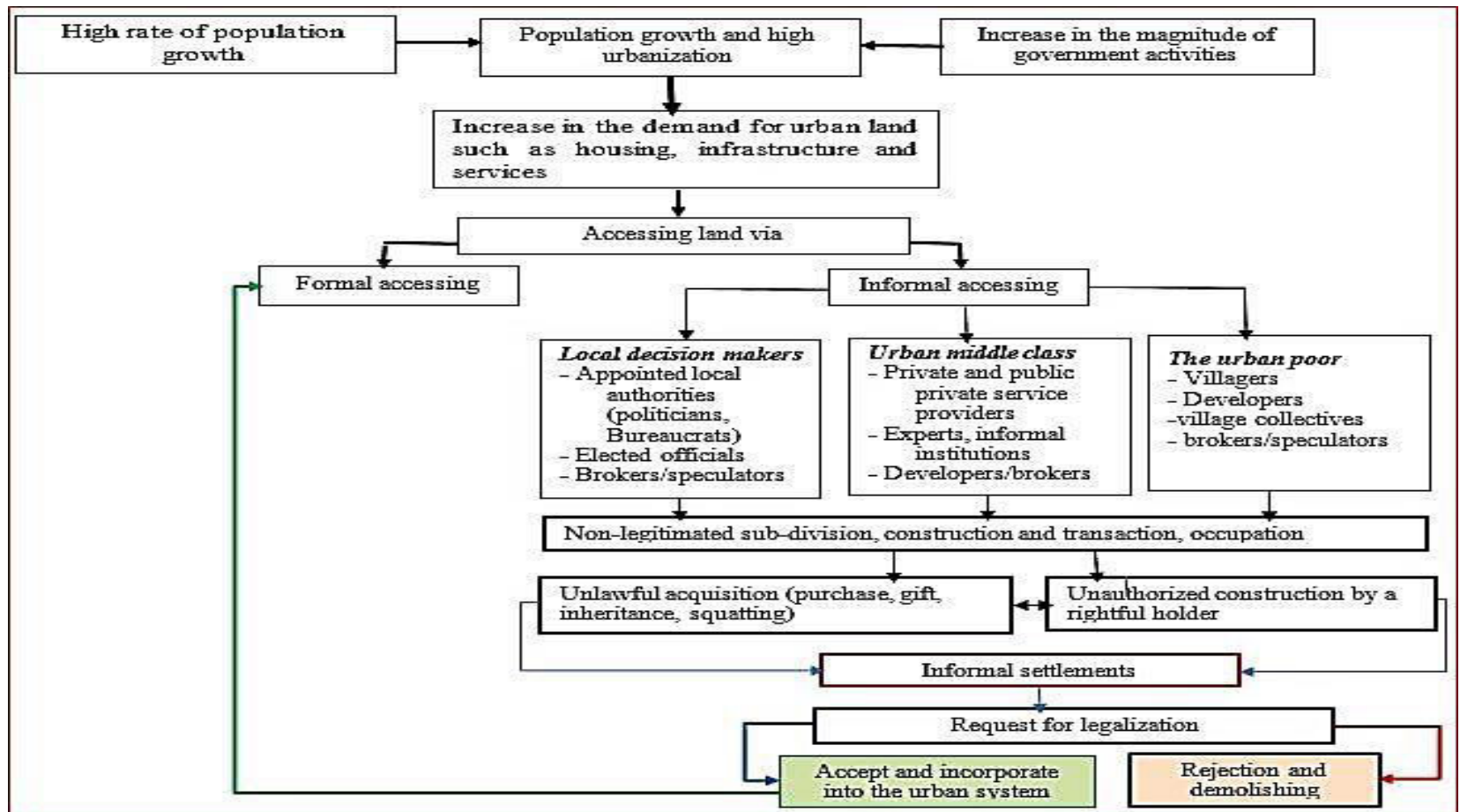


Figure 4.11 Informal settlement development via informal channel and legalization process

(Source: Author based on the various literature and empirical findings of this work)

4.1.3.3 Security Perceptions of informal settlers

The findings of the study revealed that there are many reasons why informal settlers felt insecure: fear of environmental hazards, eviction, demolition of their houses, and neglect of infrastructure delivery, among others. The main environmental hazards that can cause fear to informal settlers are earthquake vulnerability, flood-prone, and landslides with poor quality or without drainage facilities. In the fieldwork, I observed that most informal settlers living in the foothills of *Gubarja, Gabriel*, as well as *Tinfaz/Kore* and *Commanda Teba*, are more vulnerable to flooding and landslides owing to the rugged terrain surrounding Woldia.

Information gathered from the town assured that there is a sense of fear of the occurrence of earthquakes within the town and its surroundings. To that end, in general, the risky condition of earthquake events in Woldia is not serious but not a failsafe. In this regard, many of the sample respondents confirmed that they settled in these risk-prone areas with the recognition of multiple environmental risks of landslides, flooding, rock falls, and difficulties of further basic physical infrastructure extensions. The research found that because of many factors and the role of myriad local actors, the situation is not given due consideration to deter the development of informal settlements in the environment hazard peri-urban areas of Woldia as shown in Figure 4.12.



Figure 4.12 Informal settlement on a steep slope at the foot of Mt. *Gubarja (Kore)*

(Source: Field survey, 2019)

The researcher requested the peri-urban sample respondents across the informal

settlement areas to select any fear of eviction/bulldozing from their settlements based on their opinions. The findings of the study revealed that from the total sample peri-urban households, while 103 (42.21%) of them confirmed that they did not think that they would be evicted, 49 (20.08%) of them were not sure but insisted that they may not be evicted. On the contrary, 89 (36.48%) of the settlers were living in the informally occupied areas with the feeling of fear of being evicted due to lack of legal tenure, or approval of the legal authority for housing in the sites. Further, 3 (1.23%) also indicated that they were uncertain about the number of additional years they expect to stay in their current areas.

Similarly, peri-urban sample respondents were also asked if they were satisfied with the areas where they reside. I included five challenges in the final questionnaire (with the possibility of selecting more than one) so that peri-urban sample respondents could choose which challenges caused them dissatisfaction (Table 4.13). It was found that dissatisfaction was high in that 166 (68.03%) respondents reported that they were dissatisfied in the areas where they were living, while the remaining 78 (31.97%) respondents reported that they were satisfied.

Table 4.13 Causes of dissatisfaction of peri-urban respondents in the area where they are living

| Causes | Frequency | Percent |
|--|-----------|---------|
| The area is far from the workplace place | 48 | 9.96 |
| Lack of basic infrastructure services at an ideal distance | 206 | 42.74 |
| Lack of security | 83 | 17.22 |
| Poor environmental quality | 108 | 22.41 |
| Incompatible land use activities | 37 | 7.68 |
| Total | 482 | 100.00 |

(Source: Field survey, 2019); the total frequency (482) is greater than the total sample size (244) due to multiple responses

It was also found that of 482 total responses, 206 (42.74%) were attributed to a lack of basic urban infrastructure services at an ideal distance followed by the poor environmental quality which constitute 108 (22.41%). It is also found that 83 (17.22%) responses of respondents were associated with a lack of security. Additionally, 48 (9.96%) and 37 (7.68%) responses were associated with the area being far from the working place and incompatibility in the land use activities. It also compounded the lack of basic infrastructure services at an ideal distance with high demand but low use and coverage plus

irregular service accessibility such as potable water supply and electricity.

The fieldwork observation in the fringe areas also confirmed that the majority of informal settlements in the peripheral of Woldia occupied the worst land in terms of occupied land characteristics: the areas with the least serviced and the worst transportation network or without paved roads and street lights. I observed during the time of the fieldwork that some of the settled areas were not only located within the least serviced land and poor transportation networks but also located with the most liable to flooding and landslides. The foothills of *Ariro* and *Gebrael*, *Commanda Teba*, *Kore*, and *Tinfaz* settlements suffered more than settlements in *Adengur* and *Wassie Kebele*. In this regard, the key informants from the peri-urban areas and informal settlers argued that the peri-urban informal settlements are less pleasant, unhealthy, and more stressful environments.

They also manifested a sense of security of tenure in the use of houses as collateral for the loan. Peri-urban sample respondents across the selected informal settlement areas were also asked to further mention whether they could use their houses as collateral for the loan. As shown in Figure 4.13, it was found that 127 (52.05%) respondents claimed that they could use their houses as collateral for the loan if they decide to do so.



Figure 4.13 The possibility of using houses as collateral for a loan by respondents (in %)

(Source: Field survey, 2019)

The remaining 117 (47.94%) respondents claimed that they could not use their houses as collateral for a loan from banks or microfinance institutions (such as Amhara Credit and Saving Institution, ACSI). Those who could not use their houses as collateral for loans reasoned that financial institutions may be unwilling to lend to their houses as collateral because of their low and irregular income which may find it difficult to meet the financial institutions' income requirements and partial tenure insecurity.

4.1.4 Local actors' role in accessing and securing infrastructures aloof of the state law

This sub-section primarily focuses generally on the role of local actors in accessing and securing infrastructures aloof of the state law, and the enabling strategies of inhabitants employed in breaking the impasse in peri-urban Woldia. Specifically, in this sub-section of the chapter, I aim to explore residents' enabling strategies to overcome the deadlock in Woldia's informal settlement areas to bridge the gap in infrastructure and service provision, primarily in four areas: road, water supply, electricity, and sanitation/waste management. Thus, this study is inevitable at this moment, and there is a need to better understand: (1) how basic urban infrastructure services are provided and distributed in informally built-up peri-urban areas; (2) the potential costs the settlers incurred while they used these alternatives to infrastructure services; (3) the options that informal settlers used to respond to the deficiencies of basic urban infrastructure services; (4) whether these enabling strategies were viable alternatives for public infrastructure providing services; and (5) the main actors involved in such processes and procedures, the power they have and how successfully they access the peri-urban population. However, before examining the above basic themes, I will briefly present the barriers to the formal provision of basic infrastructure across the selected peri-urban informal areas in Woldia.

4.1.4.1 Barriers to the formal provision of urban infrastructure services

Political/legal barrier

According to the key interviewees from urban housing and infrastructure core process owner of Woldia municipality, infrastructures such as roads and electricity are not liberalized to privatization on the belief of the regime that these infrastructures greatly matter the economic growth and the country's transformation. Private sectors can take risks up to a certain limit as opposed to the sizable return expectations. To this end, local urban authorities are the sole suppliers of these infrastructures and the government retains a high degree of control over these lifeline systems. Because of this thought, according to interviewees, local authorities forbid the provision of formal infrastructure to informal settlements, and as a result, there is a mismatch between the two. This is the political barrier that deters the delivery of infrastructures across the selected peri-urban informal settlements.

They stated these political/legal barriers in the active regulations and proclamations. For instance, Regulation no. 94/2012 is the water supply and sewerage regulation. Article 22 sub-article 1 of this regulation states that the installation of potable water supply and sewerage transmitting pipelines in an urban center should be installed in compliance with the requirements indicated in the master/structure plan of the urban area (ANRS, 2012). Similarly, proclamation no. 86/1997 (an electricity proclamation) affirms that electricity is supplied to settlements that comply with the master (structure) plans of the town and to building with permits. To pursue this, proclamation No. 86/1997 states that the master plan of the town should demarcate and show the electric supply system layout and/or documents of the true landholder (FDRE, 1997). Still, article 46 of the Ethiopian building proclamation no. 624/2009 (FDRE, 2009), states that the supply of water for fire protection may not be taken from a supply system for use by any firefighting installation unless: (1) the use of such fire protection installation and water complies with any conditions prescribed by the urban administration or designated organ; (2) the permission of the urban administration or designated organ has been obtained upon applying the supply of such water. In consequence, the legal status of the settlement presents the most acute hindrances to addressing basic infrastructure services than others.

Concerning the delivery of infrastructures, interviewees from the urban plan and construction inspection department, sanitation and beautification, and urban housing and infrastructure core process owners of Woldia municipality agreed that they ignored informal settlements in the planning process and become ineligible for any government program; they denied the provision of infrastructure by the public. To that end, as per the edicts of the municipal authorities, infrastructure service delivery was never a top priority in these areas.

Economic barrier

Negligence of financial expenditures to install infrastructure services across the selected peri-urban informal settlements was one of the many manifestations of the economic barrier. Generally speaking, the town did not develop its infrastructure services adequately and distributed them unevenly over the vast peri-urban built-up areas due to the informal settlements being dubbed as unauthorized. The study found that an unwillingness to invest public funds in informal areas has compounded the problem. If one considers the

distribution of public-funded urban infrastructure and social services in informal settlements, then one can comprehend the extent to which town administrations neglected informal settlers.

It is also found that there were no infrastructure investments in areas that are considered as informal not only the budget allocated by the State (Central, regional and local) but also from the donor organization such as the World Bank. As far as financial support to informal settlers is concerned, no rigorous and consistent system can reasonably handle this. As a result, federal and regional funding for infrastructure and housing passed through the public to town administration has failed to informal settlements.

The urban housing and infrastructure core process owner of Woldia municipality invested a total sum of \$ US 8,043,384.05 in the area of urban infrastructure, services, and related activities (including compensation payments to install infrastructure in the areas) (Table 4.15) from the year 2016/17 to 2018/19. Specifically, as per the data obtained from the housing and infrastructure core process owner, in the year 2017/18, a total sum of \$ US 2, 643,171.28 was disbursed to 34,952 beneficiaries in the town. The average amount disbursed was equivalent to \$ US 76.05 per beneficiary.

Table 4.14 Monetary expenditure (in \$ US) to infrastructures (including for compensation) in the town administration of Woldia (2016/17-2018/19)

| Contribution by | 2016/17 | 2017/18 | 2018/19 | Total |
|-----------------------|---------------|--------------|--------------|---------------|
| World Bank | 1,069, 943.95 | 886,016.72 | 985,446.30 | 2,941, 471.97 |
| Amhara Regional State | 996,312.59 | 913,600.84 | 890,970.80 | 2,800,884.23 |
| Town administration | 576,914.74 | 858,508.96 | 865,604.14 | 2,301,027.84 |
| Total | 2,643,171.28 | 2,658,171.52 | 2,742,041.24 | 8,043,384.05 |

(Source: Woldia Municipality, urban housing, and infrastructure core process owner, 2019)

Woldia is one of the World Bank’s housing and infrastructure projects in urban areas of Ethiopia. Based on the data shown in Table 4.15, the largest share of financial expenditure of \$ US 2,941, 471.97 was credited to the World Bank followed by the Amhara National Regional State which accounted for an equivalent magnitude of \$ US 2,800, 884.23 and the remaining amount, \$ US 2,301,027.84 by the town administration within the last three years (2016/17 to 2018/19). They poured such millions of amounts of money into

installing infrastructure, and municipal capacity buildings. Yet, they denied informal settlements in the peri-urban areas from such investment schemes.

Planning related barriers

In addition to the legal/political and economic barriers, they pointed it out in FGDs at the municipality that they should deny informal settlements in the provision of basic urban infrastructure due to plan-related factors. Reaching such a position rests on several interrelated rationales, and at the heart of them were: to ensure planned, ordered, and directed urban expansion or to prevent anarchic urban growth thereby improving urban environments to rid Woldia's 'eyesores' of informal settlements; for better installation of urban infrastructure in the town via reducing the chaotic densification of settlements as shown in Figure 4.14; to ensure the equitable distribution of resources among the urban population; to reduce the negative externalities that can result in the wider public interest; because there is a wide belief that informal settlements are frequently areas of insecurity, violence, crime, drug addiction; to make the urban areas attractive and conducive for a living.



Figure 4.14 Informal settlements developed at the edge of formal settlements at *Ariro*
(Source: Google earth image, 2019)

The settlement patterns of informal settlements are irregular. This is primarily due to the fact that these settlements are often unplanned and created through spontaneous migration. People settle in whatever space is available, often leading to irregular patterns. As

a result, these settlements lack the essential infrastructure needed to sustain living, such as access to clean water, sanitation, and electricity. Compounding this further, many of these settlements are vulnerable to natural disasters due to their precarious location, often exacerbating the already dire circumstances of their residents

Spatial/topography factors

As I conducted fieldwork in February 2019, I observed that there were similarities as well as variations in the distribution of urban infrastructure, including roads, stormwater drainage, and electricity lines. Located in the foothills of the surrounding areas of Woldia, the selected peri-urban informal settlements are restricted by their topographic location from developing basic infrastructures. As a result, topography is one of the greatest barriers that prevent the construction of infrastructures such as roads, water pipelines, and electric transmission lines, as we will see in much greater detail in the following sections. Distance from the center to the periphery leads to a decrease in the coverage of these infrastructures. It reflected disparities in the distance in unequal access to basic infrastructure.

4.1.4.2 Accessing and securing urban infrastructure services: Rhetoric and Reality

Housing in the informal settlements

Housing conditions in informal settlements vary based on their location, building construction materials, and the accessibility of basic urban infrastructure. The survey found that 210 (86.1 percent) of the houses in the informal settlements were detached and the remaining 34 (19.9 percent) were multifamily houses that were connected. It has also been found that while the majority, 235 (96.3%), of houses constructed were intended for residential purposes, 9 (3.7%) were built for commercial and residential purposes as well. Based on further analysis of the housing condition, 19 (7.8%) of the informally constructed houses were one-room houses, 45 (18.4%) were two-room houses, 73 (29.9%) of them were three-room houses, and 107 (43.9%) were four-room houses. This indicates that the majority of them were four-room houses.

Building materials used for housing comprise a mix of mud and wood, stone and brick, concrete, timber, plastic, and corrugated iron, either new or recycled. To this end,

based on household surveys in informal settlements (see Table 4.16), 87.7 percent of the walls were made of mud and wood, 96.3 percent of rooftops from the corrugated iron, 59 percent of the floors were from soil/earthen, and 45.1 percent of ceilings from textile (sacks). An illustration of the main construction materials of the sample household houses is presented in Table 4.16.

Housing construction in informal settlements varies from permanent to semi-permanent. Permanent houses are houses that were constructed with mud and wood/timber, stone and brick floors; concrete, asbestos sheet, and corrugated iron roof, and tiles/marble, concrete, and wood floor. Semi-permanent houses are built from a mix of low-quality materials such as corrugated iron, flattened tin cans, and other recycled materials walls; thatch and recycled roof; soil/earthen floor, and cloth/*abujed*, sacks, and other recycled ceilings. Despite the lack of legal authority approval for construction, 220 (90.2 percent) of the houses were constructed with permanent walls, 240 (98.3 percent) with permanent roofs, and 94 (38.5 percent) with permanent floors.

Table 4.15 Main construction materials of sample respondents' home

| Main construction materials of walls | No. | % | Main construction materials of roof | No | % |
|--------------------------------------|-----|------|--|-----|------|
| Mud and wood | 214 | 87.7 | Concrete | 5 | 2 |
| Stone and brick | 6 | 2.5 | Asbestos sheet | 4 | 1.6 |
| Corrugated iron | 2 | 0.8 | Corrugated iron | 235 | 96.3 |
| Flattened tin cans | 20 | 8.2 | Thatch | 0 | 0 |
| Others | 2 | 0.8 | Other | 0 | 0 |
| Total | 244 | 100 | Total | 244 | 100 |
| Main construction materials of floor | No | % | Main construction materials of ceiling | No | % |
| Soil/earthen | 144 | 59 | Cloth/ <i>Abujed</i> | 38 | 15.5 |
| Tiles/Marble | 29 | 11.9 | <i>Chipudi</i> | 27 | 11.1 |
| Concrete | 65 | 26.6 | Textiles (sacks) | 110 | 45.1 |
| Wood | 1 | 0.4 | Other | 49 | 20.1 |
| Other | 5 | 2 | No ceiling | 20 | 8 |
| Total | 244 | 100 | Total | 244 | 100 |

(Source: Field survey, 2019)

In addition to the main construction materials of the house, the main difference between houses in informal and formal settlements was their legal ownership status. They

attained one of the legal statuses for formal settlements when the house was built with the permission of the administrative authority. The results of household surveys in the study peri-urban areas showed that while 130 (53.3 percent) of the respondents reported that they have a legal construction permission letter from the rural land administration and utilization department, 96 (39.3 percent) reported that they did not own construction permission letters. Aside from this, 18 (7.4 percent) of the respondents did not volunteer to inform whether they built the house with authority permission.

Having described the housing conditions in the informal settlements, in brief, I move now to discuss, in detail, the infrastructure accessing and securing mechanisms in the informal settlements in the context of rhetoric and reality as well as the main actors involved in addressing these infrastructures aloof of the state law which have been used to make sense in this chapter.

Access to roads and Paths

This type of urban lifeline brings all the necessary resources into the built environment of the town: housing, public buildings, markets, and workplaces, as well as public facilities including schools, health clinics, wells, standpipes, and public toilets. Under the road infrastructure category, there are subcategories which include asphalt road, cobblestone, gravel road, large block road, earthen pressed road, concrete road, culvert, and natural earthen road. Though the town administration, particularly the municipality declared that it has done far better on the road network than other infrastructures in the year 2018/19, an analysis of the infrastructure asset management plan of Woldia Municipality of 2018 revealed that the roads network accounts for only about 2.36% of the total area occupied by the road reserve in Woldia.

As per the data obtained from the 2018 Infrastructure Asset Management Plan (IAMP) document of Woldia municipality, there was a total length of about 182.25 kilometers (including community roads) of the road in the town administration. Furthermore, the asset management inventory revealed that of the total 155.47 kilometers of road length of Woldia, about 86.27 kilometers (56%) were covered with gravel followed by earth surfaced which accounted for 40.98 kilometers (26%). On the other hand, Cobblestone road and earth-pressed road covered a total length of 22 kilometers (14%) and 5.94

kilometers (3.8%) respectively as shown in Table 4.17. In addition to the above statistical shreds of evidence, there were about 20 bridges and 332 culverts in Woldia.

Table 4.16 Quality of road surface condition

| No. | Road surface | Conditions | | | | | Total length (Km) |
|-----|-------------------|------------|-------|----------|-------|-----------|-------------------|
| | | Very good | Good | moderate | Poor | Very poor | |
| 1 | Asphalt | 0.00 | 0.00 | 0.01 | 0.01 | 0.06 | 0.08 |
| 2 | Cobblestone | 4.26 | 14.58 | 3.16 | 0.00 | 0.00 | 22.00 |
| 3 | Gravel | 4.6 | 17.65 | 40.77 | 23.16 | 0.09 | 86.27 |
| 4 | Large block stone | 0.00 | 0.00 | 0.03 | 0.14 | 0.00 | 0.17 |
| 5 | Earth Pressed | 0.00 | 4.00 | 0.28 | 1.66 | 0.00 | 5.94 |
| 6 | Earthen | 6.00 | 7.73 | 14.68 | 10.64 | 1.93 | 40.98 |
| 7 | Stair Concrete | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.03 |
| | Total | 14.86 | 43.99 | 58.9 | 35.6 | 2.12 | 155.47 |

(Source: Housing and infrastructure core process owner of Woldia municipality, 2019)

Given these official figures and as far as the coverage in the formal areas is found at the lowest level (2.36%), it is not hard to imagine the situation of infrastructure in informal areas. Sample peri-urban respondents across the study areas were asked to express their perception of the level/condition of the road in their surroundings. Accordingly, it is found that the majority of the respondents (63.52%) perceived that the road conditions in their surroundings were bad and 25% of the respondents perceived that the roads in their surroundings were not paved at all. 8.61% of the respondents perceived that the condition of the road was a paved road in a good condition. There were variations in the perception of respondents like road conditions across peri-urban areas. Table 4.18 shows the variation in the perception of respondents across peri-urban informal settlements.

Table 4.17 Perception of respondents on the conditions of road across peri-urban areas

| Condition of the road/ Peri-urban areas | Paved in good condition | footpaths in bad condition | not paved at all | other, specify | Total |
|--|----------------------------|-------------------------------|------------------|-------------------|-------|
| <i>Ariro and Gebrael</i> | 1 | 23 | 7 | 1 | 32 |
| <i>Adengur</i> | 9 | 47 | 13 | 0 | 69 |
| <i>wassie</i> | 7 | 48 | 22 | 1 | 78 |
| <i>Tinfaz/Kore</i> | 0 | 22 | 17 | 3 | 42 |
| <i>Commanda Teba</i> | 4 | 15 | 4 | 0 | 23 |
| <i>Total</i> | 21 | 155 | 63 | 5 | 244 |

(Source: Field Survey, 2019)

Besides, during the fieldwork, it was observed that most of the routes in the peri-urban areas were unpaved or natural earthen roads. Most of the roads/routes/ were indeed footpath routes with poor quality. These naturally earthen roads were deterring movements, especially during the time of rains.

Sample peri-urban respondents were also asked to identify the main problem with the roads. Out of the 244 respondents, 92 (37.7%) respondents indicated the absence of roads and the existence of only footpaths as the most dominant type of problem across peri-urban informal settlements. The second prevalent problem relates to the bad road surface, of which 81 (33.2%) respondents disclosed. The third major road problem discovered during the survey was the problem of drainage during the time of rain, which accounted for 38 (15.57%) of the respondents. It is also found that 33 (13.52%) of respondents reported that narrow sidewalk was the main problem of the road in their areas.

Peri-urban sample respondents were further asked whether they participated in the development of roads or footpaths in their areas of settlements. The survey found that 238 (96.7%) respondents reported that they had participated in the development and maintenance of roads in their surroundings, and 5 (3.3%) respondents reported that they did not participate in the development and maintenance scheme.

Specifically, regarding community participation, a further investigation into the development and management of the roads in the study areas was examined. It was found that participation in the pavement and maintenance of local roads was high in that 123 (50.4%) of the respondents reported that they participated in the community by contributing building materials and technical expertise. Moreover, 57 (23.4%) of the respondents have participated in labor while 45 (18.5%) were involved in financial contribution. Similarly, 11 (4.5%) reported that they participated in the consultation and generated ideas during meetings. In this way, peri-urban settlers open roads in collaboration with their communities as shown in the far right image (c) of Figure 4.15 at their own cost.



Figure 4.15 Naturally earthen road (a), steeped footpath to the doorway (b), and community-developed road (c)

(Source: Field survey, 2019)

Besides, the peri-urban settlers developed their routes. Peri-urban settlers for example filled cement sacks with soil and made terracing/steeping type of routes in front of their doorways (as shown in Figure 10.2b). Because of this, walking is the most affordable form of transportation in the peri-urban areas for people to meet their daily requirements. In addition to walking, *Bajaj* is the second most important means of transportation in the peri-urban areas wherein the community-opened road was accessible to do so. The study found that 63.3% of the passengers' trips were by walking, while 34.8% were by motorized *Bajaj*. Just 1.9 % of the settlers used bicycles as means of transportation.

Water Supply

Providing safe potable water to the communities at affordable rates is one of the primary goals of this infrastructure. To ensure this, the office of Woldia water supply and sewerage office is the main responsible authorized organ. Moreover, water distribution by the office is guided by Regional Regulation No. 94 of 2012 (ANRS, 2012). To that end, they provided water connections on the demands of the new customers in planned settlements approved by concerned public authorities. As per the data obtained from Woldia water supply and sewerage office, at the time of the data collection for this research, the town has 18.90 kilometers transmission network and a 136.12 km main water distribution line. Furthermore, the town also has 37 public standpipes (*Bobos*), nine boreholes, and 7 reservoirs. The water

holding capacity of the reservoirs ranges from 100m³ to 500m³. The distribution of *Bonos*, boreholes, reservoirs, and water pipelines is shown in Figure 4.16.

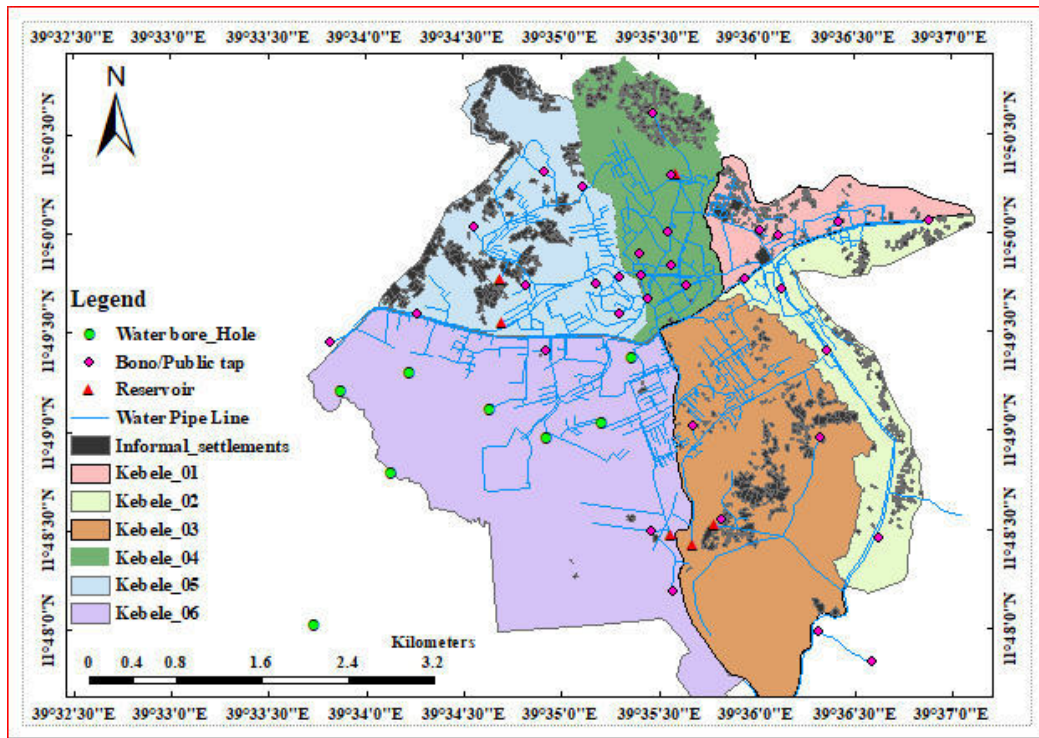


Figure 4.16 *Bonos*, boreholes, reservoirs and water pipelines distribution in Woldia

(Source: Woldia Water supply and sewerage authority, 2018/19)

Nine bore wells have been dug at different locations in the town administration to supply potable water to urban dwellers as shown in Table 4.19. The production capacity of the wells ranges from a minimum of 5 liters per second from the well of *Melka Kole* to 14.4 liters per second at *Burka*.

As per the data obtained from Woldia water supply and sewerage office, the then mean total water production capacity by Woldia water supply and authority was 3424m³ per day. But they estimated the total demand for potable water in the town at 5103m³ per day. This implies that well over 1679 m³ per day of the town’s demand for potable water continued unmet. Similarly, the town’s water production capacity has never kept up with demand. Moreover, while the per capita demand of water per day per person was 60 liters, the actual mean per capita production of water was 41 liters per day per person, almost 19 liters of water per day per person shortfalls from the actual demand. Based on these official

figures, and since the coverage level in the formal areas was found at the lowest level, it is not difficult to comprehend the situation in informal areas.

Table 4.18 Location, year of construction, functionality, depth and production rate of Boreholes

| Location/place name | Year of construction | Function/Condition | Depth (m) | Production capacity (litre/second) |
|----------------------------------|----------------------|--------------------|-----------|------------------------------------|
| <i>Gonder Ber</i> health station | 2011 | Functional | 146 | 12.9 |
| <i>Yirdaw Enchet Tera</i> | 1995 | Functional | 120 | 10 |
| <i>Burka</i> | 2011 | Functional | 150 | 14.4 |
| <i>Berberie Meda</i> | 2011 | Functional | 140 | 12.9 |
| <i>Girar Kebele</i> | 2009 | Stand by | 121 | 0 |
| <i>Weyra Kebele-1</i> | 2009 | Functional | 121 | 14 |
| <i>Weyra kebele -2</i> | 2011 | Functional | 148 | 10 |
| Millennium school | 1995 | Functional | 120 | 10 |
| <i>Melka Kole</i> | 1983 | Functional | 120 | 5 |

(Source: Woldia Town water supply and sewerage authority, 2019)

Water sources and consumption

Based on the empirical findings from the 244 sample households, 120 (49.2%) households got their water from private pipes. However, 105 (43.03%) households did not have private water pipes, and thus, changing the direction of the game for accessing water. It implies that 43.03% of the respondents most probably purchased water from private water vendors. The remaining 11 (4.5%) and three (1.22%) respondent households got water from shared pipes in their neighborhoods and public taps/Bonos, respectively. A total of five (2.05%) of the respondents collected their water from other sources, including streams nearby. In general, about 124 (50.8%) of the sample households across the case study areas lacked a water source at home, implying that the vast cross-sections have relied on external sources for their potable needs.

Consequently, the peri-urban people without private piped water sources resort to a wide range of arrangements including public provisions distorted by bribery (illegal connections), buying from informal private water vendors, getting water from gifts (from friends, relatives, neighbors), buying water from water kiosks, and at worst they used water from other sources such as streams, rainwater harvests, etc.

The magnitudes of water consumption (liters per month, liters per day per household, and liters per person per day) were carried out using SPSS-21. Accordingly, the findings of the study revealed that on average, sample households consumed 797.91 liters per month or 26.6 liters per day per household or 6.21 liters/day/person (see Table 4.20). Associated with the then mean per capita demand of 60 liters per day for urban households or 13.04 liters/day/person set by the water supply and sewerage authority of Woldia, the empirical findings indicated that informal settlements were associated with limited access to urban water services, thus putting them at higher risk of water infrastructure marginalization.

Table 4.19 Mean water consumption by income category per month per liter from all sources.

| Average Monthly income (Ethiopian Birr) | Sample size | Percentage of sample | Mean | Sum |
|---|-------------|----------------------|--------|--------|
| Up to 600 | 52 | 21.3 | 743.56 | 38665 |
| 601-1650 | 75 | 30.7 | 791.00 | 59325 |
| 1651-3200 | 56 | 23.0 | 804.46 | 45050 |
| 3201-5250 | 39 | 16.0 | 828.21 | 32300 |
| 5251-7800 | 15 | 6.2 | 860.00 | 12900 |
| 7881-10900 | 4 | 1.6 | 912.50 | 3650 |
| Over 10901 | 3 | 1.2 | 933.33 | 2800 |
| Total | 244 | 100.0 | 797.91 | 194690 |

(Source: Field survey, 2019)

I estimated water consumption for each income category. The empirical findings of the study also revealed that the average quantity of water for the low-income category was low and high for the high-income category. In this regard, sample households with an income category of less than 1651 Ethiopian Birr (\$ Us 57.95) consumed water less than the total average of 797.91 litres. Sample households with an income category of more than 1650 Ethiopian Birr (\$ US 57.91) consumed above the total average. This finding aligned with the most conventional notion that per capita water consumption increases with the increase in the income level of consumers.

(In)formal water tariff/ affordability and willingness to pay

Based on the information gained from the interview at Woldia water supply and sewerage office, the magnitude of water price (tariff) varies across different customer categories. That is, there was price differentiation among different customers. Table 4.21 illustrates this. In the context of Woldia town administration, there were four customer categories: residential, government and public organizations, commercial organizations, and public taps (*'Bonos'*).

Table 4.20 Official water tariff rates across different water supply blocks and monthly water consumption ranges

| Category | Monthly consumption range of water (in m ³) | Tariff rates (in Ethiopian Birr) across different customers | | | |
|-----------------------|---|---|-------------------------------------|--------------------------|-------------------------------|
| | | Residential/private pipe owner | Government and public organizations | Commercial organizations | Public tap (<i>'Bonos'</i>) |
| 1 st block | 0-5 | 3.50 | 5.00 | 5.50 | 3.50 |
| 2 nd block | 5.1-10 | 3.80 | 5.50 | 6.20 | 3.50 |
| 3 rd block | 10.1-25 | 5.45 | 6.50 | 7.00 | 3.50 |
| 4 th block | 25.1-40 | 6.50 | 7.50 | 8.00 | 3.50 |
| 5 th block | >40 | 7.00 | 8.00 | 9.00 | 3.50 |

(Source: Woldia Town Water supply and Sewerage Service office, 2019)

Yet, in this section, the aim is to look at the informal water tariff and willingness to pay by urban dwellers in informal residential areas within the town administration. So, the next analysis will focus on the status of residential and public taps than other categories.

As one can notice from Table 4.21, except for the public tap or *Bono* users, the tariff rate was incremental or progressive. There were also five blocks. So, when the volume of water consumption is incremental, the cost is computed after dividing the total volume of water consumption into blocks and then multiplying the resulting total volume by the respective tariff rates for each block. A hypothetical example will illustrate this point. Urban settlers with their private water meter were paying 3.50 Ethiopian Birr per 1m³ or 1000 liters of the volume of water consumption. For example, if the volume of water consumption by a residential client is 110 m³ in August and 125 m³ in September, the difference in the volume of water consumption between the two months is 15 m³. As a result, the payment to be made by the customer is divided into three blocks. The first 5m³ volume of water consumption is computed on the first block tariff rate of Ethiopian Birr 3.50, the second 5m³ volume of

water consumed by the second block tariff of Ethiopian Birr 3.80, and the third 5m³ volume of water consumed by the third block tariff of Ethiopian Birr 5.45. Hence, the total cost of consumed water excluding the water meter renting service for September would be 68.75 Ethiopian Birr. i.e. $(5 \times 3.50) + (5 \times 3.80) + (5 \times 5.45)$. Therefore, in the residential area, a household that consumed 15,000 liters (15m³ volume of water) is estimated to pay 68.75 Ethiopian Birr (the \$ US 0.41) excluding water meter renting. The total cost, including the water meter rent, is 73.75 Ethiopian Birr.

Yet, since informal area residents have not waited for the government to act, one of the mechanisms of accessing water was via buying water from informal private water vendors. During the time of data collection for this research, those households who have no private water meter connection commonly purchased water at a price ranging from one to two Ethiopian Birr per 25 liters (0.025m³) or a Jerrycan (a plastic container with a water holding capacity of 20-25 litres of water). To put these figures into perspective and take the lower limit of this range, one Ethiopian Birr per 25 liters, implies that informal urban dwellers bought water from private water vendors for 40 Ethiopian Birr for 1m³ volume of water. Similarly, taking the upper limit of this range, they were paying up to 80 Ethiopian Birr per 1m³ volume of water. As a result, the study pointed out that in the informal settlements or in areas where there were no water lines or water meter installation, dwellers were forced to buy water from informal private water vendors at a cost ranging from 600 Ethiopian Birr (at the lower limit) to 1200 Ethiopian Birr (at upper limit) for 15m³ volume of water. That is, they were paying more for water in absolute terms than those with their private pipes.

Still, informal settlers that purchased water from private water vendors paid much more money than those who obtain water from the public taps (*Bonos*). While those settlers who purchased water from private water vendors paid up to 1200 Ethiopian Birr (\$ US 42.12) per 15m³ of water, those who purchased water from public taps (*Bonos*) paid 300 Ethiopian Birr (\$ US 10.53). It implies that the informal settlers without private water pipes paid more for their volume of water consumption to private vendors than those who had private water installation or those who obtained water from public taps (*Bonos*). This implies that those people in the informal areas who purchased water from private water

vendors had to pay almost two to four times higher than those who had access to public taps (*Bonos*).

This inappropriate pricing and user charging were some of the major problems in the peri-urban areas of Woldia. The price of the volume of water from private water vendors was several times more expensive than publicly provided water. The difference between the price of the volume of water from private pipes and the price of the volume of water vendors reached up to 1645 %. That is, $\left[\frac{1200 \text{ Birr} - 68.75 \text{ Birr}}{68.75 \text{ Birr}} \right] * 100 = 1645\%$ for 15m³ volume of water consumption. One thing noteworthy here is that the costs for residential would also be higher and thus the comparison with prices of private water vendors would be different as higher tariff blocks will be involved more. Despite pricing issues, the findings of the study revealed that private water vendors were in serving the informal settlers (peri-urban settlers) at higher costs.

It is important at this juncture to pay attention to public taps tariffs on reality. In actual terms, the water tariffs of public taps were constant, unlike other categories. Nevertheless, customers often purchase their water daily in *jerry cans*. Users were not paying the price of water, for example, the first block, at once. During the time of data collection for this research, the price of a *jerry can* of water including the service charge was 0.50 Ethiopian Birr. That is a household that purchased 15m³ of water from a public tap within a month, for example, paid a total of 300 Ethiopian Birr.

$$\text{That is, } \left(\frac{15,000 \text{ liters}}{25 \text{ liters}} \times 0.5 \text{ Ethiopian Birr} \right) = 300 \text{ Ethiopian Birr.}$$

On the face of it, the tariff rate of public taps appeared so low and should not cost high compared to other tariffs; but actually, it was not. It costs the second highest next to private water vendors to users. It would have been low if the customers had bought the water at a block price at once after they consumed the amount indicated. But this was not the practical way of buying water from public taps (*Bonos*). As a result, they reached the first block tariff of public taps once the user purchased seven *Jerry cans*. Consequently, in addition to pricing issues, due to long queues on days and missing work, while fetching water from *Bonos*, they were less effective in serving the informal settlers.

Thus, the net effect is that peri-urban households consuming water from private providers were either by under-consuming water or paying a disproportionately high

percentage of household income for it and sacrificing other household necessities. Furthermore, when the State is not in the position of providing water for the peri-urban informal dwellers officially, people there adjust to using other alternatives such as water from streams, rainwater harvesting, and water from traditional dig boreholes as enabling strategies. It is for this reason that informal settlers in areas near springs were using the water from these sources for washing clothes and taking showers as shown in Figure 4.17.



Figure 4.17 Alternative sources of water utilized in informal areas
(Source: Field survey, 2019)

Electricity distribution, accessibility, and informal tariff

Though people in the peri-urban areas of Woldia are often in need of electricity for use, it is found that access to electricity was often unreliable, erratic, and expensive. That is, concerning the availability of electricity, the dwelling units in the central parts of Woldia were well connected to electricity power lines. That is, peri-urban dwellers did not have the full benefits of an electric power supply. The most remarkable feature of electricity in the town was uneven in its distribution over space. Most peri-urban areas did have a low level of electrification and the challenge was worse in informal areas. As a result, a large number of these residents come up with the decision to connect the power illegally from neighborhoods that have legal connections. This has directed to high levels of electricity use through illegal connections. The widespread sharing of a single electric meter by several of the urban dwellers was the common manifestation in the peri-urban areas of the town administration.



Figure 4.18 Informal connections of electric wire from a single electric meter to neighborhoods

(Source: Field survey, 2019)

During fieldwork, the researcher observed that electricity connections in the selected peri-urban settlements were being jury-rigged from houses that are legally connected to a power grid (Figure 4.18). The result is, thus, informal dwellers often accessed electricity illegally from the neighbors who connected legally. Such connections were rampant in peri-urban areas. One of the major reasons behind such an abundance of illegal connections might be that peri-urban settlers who want to use this utility have no legal access to it because the plot they occupy was not legally recognized, or they failed construction permits.

The uneven distribution of electricity in peri-urban areas is also observed from the electric line distribution in the town. The electric line distribution indicated that the densest electric line distribution in Woldia appeared predominantly in the northern half of the town within a 1.5 km radius from the center. An obvious difference was perceived between places in the central and peripheral. Except within the 1.5 km radius from the center, electric line distributions have expanded following the three main highways in the direction to west, northeast, and southeast (see Figure 4.19).

This is also compounded by the fact that the spatial distribution of electric poles in the town declined significantly with distance from the center and major highways. In this sense, the analysis showed that areas close to the major highways and central parts have experienced a much greater distribution than areas that are farther away. From the electric pole distribution, it was noticed that the outer areas have much lower access to electricity

compared to their counter inner parts. Hence, there existed huge disparities between the inner and outer areas within the same town administration in the use of electricity.

Even though the distribution of electric poles in the peri-urban was minimal, the findings of the household survey revealed that the majority 226 (92.6%) used electricity as a source of light and the remaining 18 (7.38%) used other sources such as candles, firewood, flashlights, and kerosene (via lamps). Of those households who used electricity light as a source of light, 119 (52.65%) did have their own electric meter reading, while 96 (42.48%) of them did not have access to a formal connection to the Ethiopian Electric Utility supply lines and the remaining 11(4.87%) used shared electric meter. Those households who were getting electricity through a connection from neighborhoods were, thus, forced to obtain their electricity possibly from a single electric meter that was connected to multiple neighborhoods.

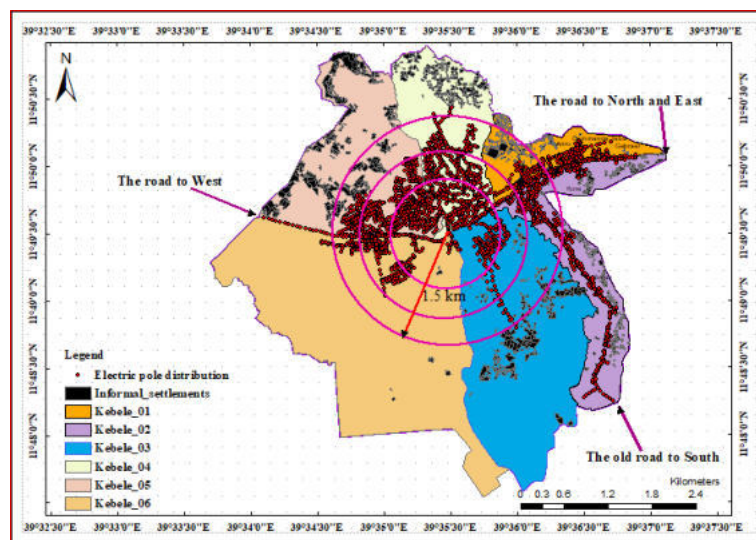


Figure 4.19 The spatial distribution of electric poles in Woldia

(Source: Woldia, cadastral office, 2018/19)

In addition, another finding indicated that informal settlers suffered during the windy and rainy times where their connections were disrupted or stopped working by the wind and rain. Because of these inconveniences, they stated that it forced informal settlers to wait without electricity until the connection is fixed. Besides this, because many neighbors were sharing a single electric meter, it can cause overloading and ultimately stop functioning. In that case, to prevent this overloading, people often changed their cooking and baking hours at other times, frequently from 9:00 to 11:00 local time (3:00 A.M to 5:00 A.M) in the

morning when people were at sleep. Households were using the candle, firewood, kerosene via light, solar energy, and battery flashlight as a source of light when the electricity was absent or when the power was blackouts. This was the way of substituting electricity with the available alternatives as enabling strategies.

The study findings also showed that the main sources of energy to peri-urban households used for cooking were generated from firewood (43.9%), electricity (30.7%), charcoal (25%), and others (0.4%). This implies that the use of energy for cooking in the peri-urban areas was dominated by firewood followed by electricity and then charcoal. When there was no electricity or when the peri-urban households were forced to reduce their electric consumption, or when the owners restrict them to use electricity only for lighting, people used alternative sources of energy such as fuelwood, charcoal, and kerosene.

As a result of all these, the findings of the study also revealed that because of the unreliable, erratic, and frequent interruption of electricity, the majority of the peri-urban respondents were not only forced to use firewood or charcoal for household cooking but also the electricity that reaches a distance to such settlements was too weak to enable the household's major electrical appliances.

Informal pricing/ affordability of electricity

In addition to the restrictions on the types of electrical appliances one can use, those who do not have access to electricity were obliged to connect electricity from their neighbors at higher costs. So, if the formal system of service delivery was unable to reach the people, then they turn to alternatives that usually involved not only lower quality but paying the full higher costs in any way out of their own pockets.

This study has also investigated how informal energy pricing affects peri-urban residents. In this regard, the findings of the study showed that the bulb price for illegal electricity was not uniform across all peri-urban informal settlements depending on the physical distance and topography. As per the key informants, people without electric meters but connecting from their neighbors were restricted to use the power only for 4 to 6 hours a day. The findings of this study confirmed that in the peri-urban areas whether they were formal or informal, residents without electric meters were paying for electricity use at a

negotiable price ranging from 30 Ethiopian Birr (\$ US 1.05) to 40 Ethiopian Birr (\$ US 1.40) for a single 60 watts fluorescent bulb per month to the legal owner.

This implies that if a 60-watt fluorescent bulb gave light for about 6 hours a day, the total power consumption was 0.36 kilowatt-hour of electricity for a day. That is, $60 \times 6 = 360 \text{ wa} = 0.36 \text{ KW}$. If the customer used for a month, 30 days in the Ethiopian calendar except for the leap year, the total power consumption within a month, thus, was 10.8 kWh ($0.36 \text{ kW} \times 30 = 10.8 \text{ KWh}$). In the town, during the time of data collection, the legal price of electricity (base tariff) for the first block (up to 50 kWh) in the residential customer category was 0.273 Ethiopian Birr per KWh. Accordingly, the total electricity cost of a 60-watt fluorescent bulb that gave light for about 6 hours a day within a month was 0.273 Ethiopian Birr (\$ US 0.01) multiplied by 10.8 kWh plus a service charge of 1.68 Ethiopian Birr (\$ US 0.06). Hence, the maximum possible cost of a single 60-watt fluorescent bulb including the service charge was 12.48 Ethiopian Birr (\$ US 0.44). This was the amount of electricity price to be paid by the one with an electric meter.

Yet, the informal settlers were forced to pay money for the same amount of energy consumption ranging from 18 to 28 Ethiopian Birr (\$ US 0.63 - \$ US 0.98) above the normal price which created a financial burden as the number of bulbs increased within the house. By inference, the informal electricity seller collected on average more than 12 to 22 Ethiopian Birr (\$ US 0.42 to 0.77) from a single 60-watt bulb. In other words, households without their own electric meter tended to spend a larger portion of their income on electricity compared to those with their own meter. Consequently, consumption levels were often less than adequate. A respondent from *Ariro* considered his place of residence as a '*place of forgotten*'. In general, in comparison with the conventional systems, informal options come at a higher cost per unit for peri-urban informal settlers because they did not have legal alternatives to obtain the service. To this end, the major barriers to accessing electricity were legal as most peri-urban settlements were located in unauthorized settlements plus the cost of connection (fees and material). It may also be that the households were located far from any suitable point of connection to the often underdeveloped electricity networks in the informal settlements, a factor further adding to the cost.

The sanitation and waste disposal situation

The waste disposal situation

Sewerage systems are primarily responsible for collecting and treating municipal and industrial sanitary wastewater, plus wastewater that originates from residential, commercial, or industrial sources, along with stormwater to protect the livable built-up environment. Despite this fact, the findings of this study revealed that there was no sewerage system in Woldia. Besides, as observed during the field observation, the town administration was suffering from high levels of sanitation and waste management problems (liquid and solid). The existed open and uncontrolled solid and liquid waste dumping was not only improper but also highly saturated and unsanitary which in turn threatened human health and urban environmental beautification. Both solid and liquid wastes generated mainly from residential and commercial areas were the principal causes of the high level of stream water pollution and contamination.



Figure 4.20 The situations of waste disposal and use of pipes to drain liquid wastes (Source: Field survey, 2018/19)

I observed the seriousness of the waste management problems during the fieldwork from condominium houses found in front of Woldia Health and the bus station. Figure 4.20 shows that it generated liquid wastes from the condominium at *Teklehamanot* collected through a plastic pipe to drain into *Shelle* stream. An informant living and working there confirmed that he lost many of his customers for visiting his shop. That was because, besides the bad smell generated both from the liquid and solid wastes dumped near his working place, many of his customers were the victim of asthmatic effects and coughing.

For that reason, the respondent claimed that ‘life was getting complicated as no one takes care of me from the effects of waste dumps’.

Data obtained from the municipal sanitation senior expert who is responsible for the implementation of sanitation and beautification of the built-up areas of the town indicated that certain factors contribute to a dysfunctional waste management system in the town administration, especially solid waste. According to the respondent, among those determining factors, the foremost were (1) negligence of solid waste management practiced at the community level; (2) lack of awareness of waste disposal and environmental sanitation at the household level; (3) the absence of waste containers; (4) lack of coordination among different sectors in handling waste disposals; (5) lack of attention by higher officials to the issue of waste generation; (6) poor attitudes by some of the communities upon the hired waste collectors; and (7) lack of skilled human resources in the office and more importantly the absence of budget allocation to the office to execute the implementation of solid waste management. As a result, the dumping of waste into drainage ditches, streams, and open/vacant areas caused obstruction and overflow of rainwater and waste into streets. As one can look at the heaps of waste in Figure 4.20, it is possible to realize that the waste management system was at the lowest level.

The sample peri-urban respondents were also asked what methods they used to dispose of waste in their areas of residence. In this regard, the result displayed in Table 4.22 revealed that solid waste collections in informal settlements were primarily self-organized by residents. The study found that 41.8% of respondents claimed that they managed waste through burning, 21.3% through collecting by the truck, and 12.7% through dumping it into open spaces. The other methods of disposing of solid wastes include dumping along the streams or gorges (11.5%), dumping along the roadsides (7.8%), burying (4.5%), and others accounting for about 0.4%. This reflects the variation of solid waste collection and disposal practices as seen in the informal settlement areas.

Respondents were also asked whether they dispose of solid wastes based on recognition of the health impacts of such practices on people and the environment. Surprisingly, 227 (93%) of the respondents replied that they disposed of waste on the recognition of the effects of waste on human health.

Table 4.21 Methods of disposing of wastes in informal areas

| No | Methods | Frequency | percent |
|----|---------------------------------------|-----------|---------|
| 1 | Burning | 102 | 41.8 |
| 2 | Dumping into rivers | 28 | 11.5 |
| 3 | Collected by the municipal truck | 52 | 21.3 |
| 4 | dumping the waste along the roadsides | 19 | 7.8 |
| 5 | Dumping into open spaces | 31 | 12.7 |
| 6 | buries | 11 | 4.5 |
| 7 | Others | 1 | 0.4 |
| | Total | 244 | 100 |

(Source: Field survey, 2019)

However, 17 (7%) of them replied that they did not know the effect of waste on human health. Similarly, results of the same household survey showed that 173 (70.9%) of them disposed of the waste based on a knowledge of the effects on the environment, and the remaining 73 (29.1%) did it without knowing the consequences. The sample households claimed to dispose of the waste with recognition of the effects of waste on humans and the environment. This was because there was no legal site in the nearby area to dispose of waste. The lack of legal waste disposal sites left the households with no other option than to dispose of the waste in an unregulated manner, potentially leading to contamination of the local environment and health risks to the residents.

Sanitation

This infrastructure is primarily designed to provide sanitary toilet facilities and safe excreta disposal in a culturally appropriate manner and to reduce health risks linked to contact with excreta. People who live in informal settlements invaded unserviced land illegally and connected to utility lines because they can afford to do it and because there were few viable alternatives. The study found that residents in informal settlements arrange their on-site toilets and sanitation arrangements. They claimed that while informal settlers can use alternative water sources, utilizing alternative sources of sanitation was not as easy particularly for women, children, and individuals with disabilities. Hence, the self-built toilets being dug close to houses in informal settlements were necessary yet it did not equip

them with septic tanks. To that end, the research findings also indicated that quite a high percentage of the toilets in these areas have been built by the household themselves.



Figure 4.21 Private pit toilet (left) and communal shared toilet (right) at *Ariro*

(Source: Field Survey, 2019)

To assess the type of toilet facilities employed by households in informal areas, I asked the respondents to give their opinion on seven items that were included in the questionnaire. In this regard, across the peri-urban informal settlements of Woldia, private pit toilets were the most common (75.4%) sanitation types of the excreta management system followed by shared water flush (8.2%) with an average toilet being shared (Figure 4.21) between 4 households to 12 households. Furthermore, while 12 (4.9%) utilized communal toilets, 19 (7.8%) were still practicing open defecation in the peri-urban areas. The proportion of residents who used private water flush toilets in the study areas was only 3.7%.

As observed during the field observation in *Tinfaz*, foothills of *Kore* and *Commanda Teba*, toilets were built on the most undesirable lands such as steep slopes, rocky grounds, and hard to build on than peri-urban areas of *Adengur* and *Wassie Kebele*. Despite the dominance of self-built toilets in the informal settlement areas, respondents showed a varying level of perception on the level of satisfaction in the use of toilet facilities when they were requested to respond to their level of satisfaction.

As far as the household's perception of the level of satisfaction in the use of toilet facilities is concerned, 130 (53.2 percent) of the respondents said that they were

disappointed (with 116 samples or 47.5 percent dissatisfied and 14 samples or 5.7 percent highly dissatisfied) and 92 (37.7 percent) satisfied. Only 22 (9.8 percent) of the respondents indicated that they were indifferent. Based on settlers' complaints, the main reasons for their dissatisfaction were unsanitary conditions in the poorly maintained pits, lack of light at night, the absence of roofs, and unexpected toilet collapses from a brief use. Key informants from *Ariro* have mentioned that because of the absence of roofs on many pit toilets, they were unable to use them during rainy seasons or on hot, clear days. The absence of light caused users not to see the toilet holes at night and thus to defecate on top of the toilet, which in turn caused intestinal worms, diarrhea, typhoid through touching, and bad smells generated from the toilets. Additionally, since many households share a single toilet, it was not always available to use mainly during the morning times. Besides, the absence of doors to the toilets deprived the user of privacy as they use the restroom. To this end, according to the study, households who were not satisfied with the toilets had to use open space for waste disposal early in the morning and defecate at night, posing a risk to human health and personal safety.

During the time of the fieldwork, I noticed that most of the toilet pits were open pits that smelled bad due to being very full due to small volumetric capacities. In addition, a few have visible breeding areas for worms. Additionally, the floor surfaces of conventional toilet pits were dirty, which prevented good drainage of water from the toilet pit and provided favorable breeding grounds for flies. Once the pit toilets were full, they could not be used; the residents covered the pit toilet with whatever materials they had on hand and have to dig another one, even if there was not enough space. Due to the lack of a simple strategy for emptying pit toilets, there was a risk that their full confines will overflow, contaminating the environment with large quantities of human excreta containing pathogens, and producing offensive odors. The findings of the study also showed that even though some informal settlements could afford to pay for emptying services, they were also constrained by the absence of roads or the existence of too-narrow roads that were difficult to access.

It was also found that some toilets were constructed with poor materials, such as sticks and timbers covered with plastic sheets, thus people were hesitant to use them due to the risk of falling into an inflated pit. Based on an incident that happened to his wife, an informant from *Ariro* mentioned a fear of slipping and falling while using the toilet.

Similarly, some key informants in the peri-urban informal settlements pointed out that they were not encouraging their children to use the pit latrines due to the fear that they might fall in.

The results of the study also indicated that the most important constraints to building sanitary facilities free of risks were lack of finance, the unwillingness of house owners for renters, lack of enough space, and other related constraints. Peri-urban sample respondents were also asked to express the fundamental challenges that restrict them to build sanitary facilities in their compound. Accordingly, the majority of them (92.6%) reasoned that due to lacking financing, 44.7% of them said that due to property owners refusing to allow renters to use/construct their toilets and 37.7% of them claimed that due to a lack of space. Additionally, 17.6% of the respondents associated with topography, tenure security, sanitation not being a top priority, and lack of knowledge on how to construct standard toilets. Aside from that funds for sanitation were often postponed when there were more urgent needs among the occupants. As the settlements were illegal, the town administration here did not take care of sanitation issues in these areas. They reported it in the survey that lack of finance was the main constraint towards sanitation improvement.

Overall, the findings of the research revealed that informal settlers at the peri-urban areas, therefore, used other enabling strategies that resort to the deficiencies of basic urban amenities including: (1) providing or substituting another infrastructure and services to tackle the least provided; (2) by developing informal mechanisms to obtain basic infrastructures and services without following the necessary preset standards or government regulations; and (3) by consuming less of the basic infrastructure or services (e.g. water and electricity consumption). These strategies allowed informal settlers to cope with their daily needs and to have access to basic urban amenities. They also enabled them to survive, as they were able to provide or substitute infrastructure and services, develop informal mechanisms to obtain basic infrastructures and services and consume less of the basic infrastructure or services.

4.1.4.3 Key actors involved in Accessing and securing infrastructure

As highlighted in the previous section, across the peri-urban informal settlement areas, accessing and securing basic urban infrastructure services were not the duties and

responsibilities of the town administration. Hence, it was not only the construction of the shelter which was illegal but the connection and consumption of infrastructure services were also illegal.

Contrary to this, several local actors were involved in accessing and securing basic urban infrastructure services across the peri-urban informal settlements of Woldia, in which government provision was limited and where needs were often greatest. Some of the foremost local actors who played a leading role in ensuring access to basic infrastructures include informal private water and electricity vendors, corrupt local State actors, consumers, lobby groups (special interest groups), and members of local traditional institutions. In the absence of appropriate official rules, these actors framed coping strategies that facilitated the informal access process. In particular, informal private vendors provided access to basic infrastructures through informal networks and through informal means of payment. Corrupt local State actors were often complicit in allowing these informal networks to exist, as the bribes they received provided additional incentives for them to do so. Consumers, lobby groups, and members of local traditional institutions all played a role in making sure that access to basic infrastructures was possible.

a) Informal private water vendors

Access to water in informal settlements was often based on partnership arrangements between private pipe owners and residents in the local settings. It was a private initiative to deliver water not only across peri-urban informal settlements but also in the planned areas of Woldia with low connection rates and low levels of service. Private water vendors were selling water to consumers coming to them to purchase water, hence were direct vendors.

In the peri-urban areas of Woldia, water vendors were generating higher earnings from the selling of water from their water meters. They sold water at one to two Ethiopian Birr per 25 liters per container without the need for billing than the authorized rate of 3.5 Ethiopian Birr (\$ US 0.12) up to 5m³. The findings of the study confirmed that private water vendors generated sizable returns from the sale of water from their main pipes.

Regulation no. 94/2012 did say nothing about the reselling or re-leasing of water acquired from the government to second parties. Woldia water supply and sewerage authority implicitly treated private water vendors like any other domestic consumer. In

doing this, there was no legal sanction on the resale of water to private users/customers. Though the selling of water by private water dealers to others was common in the town where the water supply was inadequate and unreliable; the extent was more prevalent in the informal settlement areas.

b) Informal private electricity dealers

A review of the Ethiopian electric power proclamation no. 86/1997 (FDRE, 1997) showed that no customer may distribute or sell electricity for commercial purposes. In principle, the proclamation clearly states that a utility license may be suspended or revoked if unauthorized electricity is used for the agreed-upon terms and conditions, or if the licensee fails to comply with the requirements specified in the regulation. In practice, however, it was observed that most peri-urban households shared connections informally. The empirical findings also documented that there were no fines levied for providing electricity to informal settlers. Nevertheless, many of these settlements have developed ways to service and gain access to electricity through their means. As described in detail in subsection 4.1.4.2, since the pricing of electricity was generally left to the informal private individual dealer and corresponds client at a negotiable price, the private electricity dealer can charge over the tariff. This also motivated the private dealer to further involvement in the electricity dealing/distributing against the agreement reached with the enterprise. Here, the dealers and consumers were the actual actors in facilitating the connection.

c) Members in informal/ local traditional institutions

In addition to their role in accessing and securing urban land, influential individuals in informal/traditional institutions such as *Iddir*, *Eqqub*, *Mahber/Senbete*, and *Debo/Jigie/Wonfel* were also highly active in the delivery of urban infrastructure services in the study area. To this end, local traditional institutions were platforms for information exchange for informal basic urban infrastructure services. Even though local traditional institutions were not directly involved in the whole process of the delivery of infrastructures in informal areas, influential individuals from *Iddir*, *Eqqub*, *Mahber/Senbete*, and *Debo/Jigie/Wonfel* helped peri-urban settlers to pull members of the communities together. They raised the collective voices of its members to manage several public facilities such as

water supply lines, roads, community meeting halls, etc. disregarding the unlawfulness of the settlement. The members through their *Iddir*, *Eqqub*, *Mahber/Senbete* and *Debo/Jigie/Wonfel* contained to struggle on the margins of society to have their needs prioritized by the municipality or Mayor Councils.

d) Lobby groups (special interest groups)

Lobby groups are people with common concerns shared by members of an interest group and mobilizing a great number of people around a specific need. In this group of persons, people like retired politicians with easier access to government or the wealthy person with vast amounts of money participated. These people were often working as consultative to the politicians in the local areas. In each case, the status of the influential individuals enabled them to mobilize a great number of people around them. For instance, while the local communities need installment of infrastructures, local people often delegated these retired politicians and wealthy individuals to influence the State bureaucrats. The locally respected individuals have the power to do such things as drafting informal rules and following up on the implementation of the same upon approval by the community members. They also convinced illegal construction control experts to tolerate temporarily the illegal construction and extension of services from service providers as if they were not aware of it. What is more, individuals without tenure security managed to acquire basic infrastructure services by making residents official subscribers and, if possible, collecting utility bills from illegal builders through bribing officials.

4.1.5 Past and current land management practices in Woldia

I aimed the fourth key research question of this dissertation at assessing the past and current land management practices in Woldia in light of the outgrowth of informal settlements. To this end, in this section, results of the review of relevant documents, interviews, and field observations concerning the two operational research questions of the fourth research question are presented. As everywhere else, it is only by fully understanding past achievements and failures that we can predict the future frontiers. Such practices can enable to admit mistakes and omissions of the past to be corrected and also propose an improvement in the future. With such intentions, much of the focus of this section falls on

reviewing the customary land tenure systems as land management practices since the time of the Imperial regime followed by the radical land policy shift of the *Derg* Era. This section also addresses briefly the urban land management practices of the post-*Derg* period with particular emphasis on the lease system.

The question of informal settlement growth cannot be treated in isolation from the political dynamics and the history of the land management systems of a country. Historical evidence revealed that different government regimes responded to the chronic housing shortage differently. In this regard, as long as the prevailing land demand for housing construction remains unsolved, the proliferation of informal settlements with their negative characteristics will continue to worsen.

To achieve this, this section first describes the *rist* and *gult* systems as factors of land management practices that were perpetuated from the early twentieth century until the downfall of the Haile Selassie regime in 1974. Following this, it focuses on providing accounts of the radical land policy shift of the *Derg* (the ruling military junta formerly known as the Provisional Military Administrative Council) in line with the nationalization of urban lands and extra houses in 1975. More narrowly, it also describes the current urban land management practices based on the lease system before describing rules passed to govern the outgrowth of informal settlements in the urban and peri-urban areas. Finally, it deals with cadastral system as the general land information and management system in the town administration of Woldia.

One might wonder why the past land management practices were discussed before exploring the key factors that triggered informal settlements. There was no problem with this. The current land management issues are addressed after discoursing the main triggering factors. In this respect, I believe that presenting past and current land management trends separately creates disjointed ideas. It makes sense to compare the present-day land management practices with those from the past after discussing the principal causes. This is why the fourth main objective was drafted in this manner from the beginning. By doing this, it is easier to understand the context of the changes and how the current trends have come about. It also allows for a more comprehensive view of land management and how it has evolved over time. Additionally, it provides an opportunity to analyze the effects of past land management policies and compare them to the current trends.

4.1.5.1 Urban land management pre-1975 Ethiopia

The findings of the review of pertinent documents revealed that the terrible challenges of the land governance system at this time have roots in the history of land tenures of Ethiopia as far as the acquisition, allocation, utilization, preservation, and transfer of land and related resources are concerned. It broadly circulated such a view in both scholastic circles and among the public (Ambaye, 2015; Crummey, 2000; Hoben, 1973). Hence, to make sense of the current land administration systems of the study area, it is important to begin and explore the customary land tenure systems, mainly the *rist* and *gult* systems as factors of customary land management, in Ethiopia which run from the thirteenth century to the time of the downfall of Haile Sellasie regime (Crummey, 2000). As a customary land management system, the Ethiopian rulers had distributed land to the nobility and peasants in the form of *gult* and *rist* rights, respectively. That is, for generations, the customary system administered and enforced land rights in Ethiopia (Ambaye, 2015 (Ambaye, 2015; Crummey, 2000; Hoben 1973).

The *rist* and *gult* systems, where most of the land was controlled by the state and feudal lords, had developed various ways of controlling land rights in different situations. They determine how land is managed with members of communities; how land rights can be transferred within the group; and how land rights can be transferred to other persons outside the group (Ambaye, 2015). They have also many implications in both their social interaction, ways of life, and political attitudes. The *rist* and *gult* systems were continued till 1974 at the time when Emperor Haile Selassie was overthrown by the Marxist-Leninist *Derg* and when some legal measurements had changed the customary system. The land tenure systems of Ethiopia were divided into those of the north and those of the south where the north is characterized as the heartland of the empire with communal tenures and that of the south as a conquest area that has come under the domination of the north through essentially private tenures (Cohen, 1973). The land tenure system in the northern part of feudalistic Ethiopia generally is classified into the basic forms of communal land, private holdings, church lands, and state lands (Ambaye, 2015; Cohen, 1973).

As described by Crummey (2000), *rist* rights were land-use rights appealed by a member of kin from members of his/her generations of the same ancestor. As for land, the land was belonging to the lords, the feudal, mainly in pre-1975. As to Hoben (1973, p. 14),

rist denotes the “cognatic/ambilineal descent system” in a sense that people could claim rights to plots of land based on their genealogical ties to a given place, through their fathers, mothers, or spouses which could be eventually traced to the original occupiers of the area. It emanated all land rights from the benevolent gift or transfer of the kings as royal ownership of all land. As to Ambaye (2015), the ideological background behind such a claim was that land was acquired through the conquest of local tribes by the Ethiopian kings to whom it transferred the land of the conquered in ownership as a spoil of war.

In pre-1975 Ethiopia, it is indicated that the Emperor owned all the land in the Empire, which he granted to various royal, noble, administrative, and religious elites or institutions in return for differing combinations of services and tributes (Cohen, 1973). This implies that since users were not genuine landholders, it could withdraw land at any time when the emperor was interested in doing so. The history of *rist* and *gult* tenures in Ethiopia has huge potential to explain the many difficulties it trapped the country in.

As a result, in the urban sector the members of the royal family, the nobility, the bureaucratic elites, and church notables, who had absolute political power, owned almost all urban land and improved property created a land shortage in the urban area for the needy. For example, there is a historical basis for informality in Addis Ababa, which was developed under a feudal land tenure system (Burns & Dalrymple, 2012). A survey study result in 1966 indicated that 5% of Addis Ababa's population owned 95% of the city's privately owned land. Approximately at the same time, more than 55% of all urban housing was comprised of rentals in the major cities (Kebbede & Jacob, 1985). In this regard, it is remarkable to note that an overwhelming proportion of urban land was owned by a small minority. One of the most important outcomes of these critical issues is that the majority of the urban population lived in highly crowded and congested dwellings mostly built and owned by small-scale minor landlords. Renters lack ownership rights as a result of the *rist* system, and so are limited in maintaining and improving their homes. As a result, housing conditions deteriorated (Kebbede & Jacob, 1985). This tells us that in the absence of security of tenure, urban residents are constantly under threat of eviction from land and house owners.

The other evil of the *rist* system is that it has limited the transfer of rights overland to a person outside the inheritance circle or one's lineage (Ambaye, 2015; Kebbede & Jacob, 1985). A case in point is that to sell land outside one's lineage, a *rist* holder needed a

document signed by the members of his or her lineage affirming that the relatives were unable to buy the land from the holder and that the holder had permission to sell the land outside the lineage. This fact confirms that the preferred sell was to the lineage if possible, and in the absence of one and underwritten confirmation of agreement to sell the *rist* holder might sell land to the outsider (Daniel, 2015). In pre-1975, members of the royal family, the nobility, the bureaucratic elites, and church notables who had absolute political power advocated this tradition (i.e. the limitation and ban on land transfer). To this end, the land policy in place did not fully reflect the concerns of the urban poor in light of housing affordability and availability.

As a consequence of all the above failings, after the downfall of the Haile Sellasie regime in 1974, there was a huge outcry about urban land inaccessibility by the urban people particularly by the urban poor, and this forced the Derg to adopt principally two basic approaches: self-help cooperatives housing and social housing or public rental housing approach that helped in part to tackle the problem during his reign (Ambaye, 2015). In other words, informal settlements continue to be the most accessible shelter option for the ever-increasing urban poor population, who invest their time or resources in developing their dwellings.

4.1.5.2 Urban land management during the Derg Regime

In the aftermath of the 1974 revolution, Ethiopia underwent a radical transformation in which it dismantled the feudal socioeconomic and political structure. As a result of these sweeping social, economic, and political changes, an official socialist system was established, replacing feudal production systems (Kebbede & Jacob, 1985). One of the multitudes of changes that were brought in Ethiopia as a result of the coming to power of the Derg was the nationalization of urban land and extra houses without compensation within the boundaries of those townships and municipalities. Consequently, the Derg confiscated all land previously owned by the monarchy and governed under Proclamation 31 of 1975. Also, public ownership of rural lands prohibited the private ownership of land as well as its transfer by any methods such as sale, antichrists, or mortgage (Cohen & Koehn, 1977; Holden & Yohannes, 2002).

Cohen and Koehn (1977) noted that Derg issued a policy statement confirming that urban land would be treated in the same manner as rural land (i.e. would be nationalized). The imminence of change in urban land patterns resulted in uncertainty and anxiety among urban dwellers in the area of housing investments. With this in mind, it was common to observe that many landlords assumed that the forthcoming urban proclamation would grant possession of a dwelling to its occupants. Consequently, some “landlords turned to extreme measures directed at driving tenants out of their living quarters such as roof removal” (Addis Zemen, Hamle 15, 1967 and Ethiopian Herald, July 25, 1975, cited in Cohen & Koehn, 1977, p. 26). The other consequence is that high-income groups made very little/no contribution to the supply of housing investment. By and large, the supply of new housing stock was very limited, and basic infrastructures and services were not only inadequate but virtually unavailable in most urban areas (Kebbede & Jacob, 1985). Lower-income groups are left with no opportunities for formal settlement in the state supply systems. Hence, they responded by invading the land and establishing settlements illegally, since there was nowhere else for them to go. This implies that the nationalization of urban lands and extra houses by the *Derg* had brought *effects* on the outgrowth of informal settlements in the urban areas of Ethiopia, one of which is in Woldia.

4.1.5.3 The post-1991 urban land management practices: Lease system

In 1991, when the Derg fell, and the EPRDF came to power, urban people gained access to urban land through the lease system, originally proclaimed in 1993 during the transitional government, revised in 2002, and then further revised in 2011.

Results of the review of government documents showed that urban land for residency is accessed in one of the following two ways: a lease system with terms ranging up to 99 years and a permit system for urban land, where it is outside the lease system. Under the lease system, which is the main urban land accessing mechanism in the urban areas, the land is allocated to individuals and organizations with the decree that allocated land be developed according to the planned use within 18 months. Additionally, the 721/2011 proclamation (FDRE, 2011) passed more severe measures against those who violate the lease agreement. For example, if one fails to start construction on time, the urban administration will reclaim the land and it may impose some penalty or fee on the lessee

(FDRE, 2011). Despite these vibrant requests, as identified under subsection 4.1.2.1, there are cases of lease-allocated land being fenced off and remaining idle for long periods, as discussed in detail in the section outlined above. To this end, the reality is different on the ground.

The key informants (interviewees) indicated that in the lease system, residents are allowed to get land only through auctions, and affluent people often win the tender while the middle and lower-income earners are mostly out of the competition. As a consequence, the lease system often discouraged the poor, and consequently, the supply shortage causes them to seek out other ways, including informal means. That is, it forced most residents to go secretly and unlawfully to the informal urban land market to purchase or squat the land or to seek to secure a real lease holding from the government. Therefore, informal settlements have emerged at the rural-urban fringe of urban areas. This illegality has allowed many people to find housing in the informal settlements, leading to the rapid and uncontrolled growth of urban areas.

Results from focus group discussions, key informant interviews, and official government documents showed that, in general, the current urban land lease system impedes the free transfer of lease rights and challenges the very purpose of revising the former lease proclamation in that it exacerbates the concentration of land in the hands of the rich while denying access to the poor, hence labeled as '*poor blind*'. In this regard, the current urban land policy (lease system) of Ethiopia has brought its footprints to the proliferation of informal settlements in Woldia.

Based on the findings of the relevant government documents and interviews, it is possible to infer that broadly speaking, the proliferation of informal settlements in Woldia is a result of the long problematic history of land law regimes in place and public policy failure for a significant segment of the urban poor population. The land tenure system of the imperial period, the land policy of the *Derg*, and the current urban land lease policy resulted in the state '*landlordism*' (the state ownership and management) by allowing the state the power to distribute and redistribute land. That is, today's proliferation of informal settlements in the urban area is not only the ill side of public land management practice/policy of today but also the outcome of cumulative effects of inherent old-age urban land management practices/policies pursued by successive regimes.

4.1.5.4 Rules passed to govern the outgrowth of informal settlements

To intervene in the development of informal settlements in the peri(urban) areas in the Amhara National Regional State, some regulations were endorsed and redrafted at different times, albeit with no/little success. Regulation no. 12/1999, Regulation no. 41/2006, and Regulation no. 37/2008 were important law cases to manage informal settlement growth (ANRS, 1999; ANRS, 2006).

Regulation no. 12/1999 was the first of its kind and passed in 1999. The regulation was entitled as ‘revenue-fostering and urban role-enhancement Regional Executive Committee Regulation No 12/1999 against unauthorized constructions’ (ANRS, 1999). Its aims were dual: to maximize the revenue of municipalities in the region; to enhance the role of urban centers in the region through penalties determined against constructions out of authorized plans. As per this regulation, when informal settlements appeared, the initial measure was penalizing informal construction to prohibit the outgrowth of new informal settlements in the future. From the review of Regulation No.12/1999 and findings from key informants, it appeared that it did not have the desired effect of preventing the growth of informal settlements as it focused on revenue generation rather than correcting misdeeds.

Thus, without areal execution in Woldia, Regulation No.12/1999 was amended, repealed, and replaced by regulation no. 41/2006 in 2006 titled as ‘the Amendment of Penalty Tariff against Constructions out of approved plans (ANRS, 2006).’ This new regulation enlarged and amended its predecessor by adjusting three penalty rates against illegal constructions. For that reason, when the constructions are proven to have caused major, medium, and minor alterations, the penalty rates for such acts are 8%, 5%, and 3% of the varied construction costs, respectively. The key informants from illegal construction control and peacekeeping core process owners from the municipality and *Kebele* 02 pointed out that, like its predecessor, the law went beyond reality to make it possible for informal settlements to be turned into authorized urban land.

Still, the office of the head of the regime and the council of the Regional government passed another regulation no. 37/2008. Regulation no. 37/2008 specifies that the prevention of illegal constructions is known to be the typical duty and responsibility of urban centers in the region by the 16% penalty rate. The law through the municipality was responsible either for the demolition or regularization of informal settlements. To that effect, because of the

flourishing of informal settlements in the town administration of Woldia, the town administration executed the implementation of regulation no. 37/2008 in 2013. As discussed in detail in sub-section 4.1.2.4, however, this also provoked people to build houses informally, making the number of informal settlements to be more in number than before. This was one of the unintended consequences of the regularization program/policy through regulation no.37/2008.

More importantly, the findings of the study revealed that urban land laws concerning informal settlements were often subjected to constant change, resulting in many actors being misinformed, confused, or untrusting. For instance, in the Amhara National Regional State, rules for the intervention of the outgrowth of informal settlements were modified and amended at least three times since being enacted in 1999 without effective execution except for a flawed try of regulation no. 37/2008. In this regard, in addition to the existence of legal ambiguities, in contravention of the passed rules, many stakeholders were excluded from the decision-making process, making formal rules impossible to implement thereby facilitating the sheer scale and often the unplanned and illegal conversion of peri-urban land into urban land over the past two decades. Consequently, informal housing in the peri-urban areas of Woldia has mainly been accessed and secured against the land law.

4.1.6 Responding the alarm: intervention practices in managing informal settlements

Informal settlements have emerged parallel with the formal ones. They, in their various forms, are major elements of Woldia's urban landscape that can no longer be ignored. Results from the official government documents revealed that even though the incidence of an informal settlement in Ethiopia mainly began during the *Derg* period when housing became a problem, a policy-wise response was started in the 1990s. Nevertheless, the responses to the proliferation of informal settlements varied with the political ideologies of the governments. For instance, the initial intent of implementing a series of rules for informal (illegal) occupation at the time of the *Derg* was not primarily to control or contain the growth of informal settlements, but to ensure social justice in light of egalitarian principles. Accordingly, houses deemed to be illegal (informal) were not demolished but nationalized following the proclamation of 1975.

4.1.6.1 Conventional intervention approaches

Based on the data obtained through this study, the current town administration of Woldia has executed the following basic handling measures for dealing with informal settlements: benign neglect, demolition, harmonization, and regularization based on circumstances. Laying at the heart of why such measures have taken include the following: (1) to ensure planned, ordered, and directed urban expansion or to prevent anarchic urban growth; (2) to reduce the chaotic densification of settlements thereby installing better urban infrastructure in the town; (3) to ensure the equitable distribution of resources among the urban population; (4) to reduce negative externalities which may be detrimental to the broader public good; (5) because informal settlements are frequently areas of insecurity, violence, crime, drug addiction; (6) to make the urban areas attractive and conducive to a living; (7) to reduce the provoking of informal settlement growth for further aggravated settlements; and (8) informal settlements affect the internal revenue of the town administration due to no payment of bills and taxes from there.

Negligence/ benign neglect

The finding of this study revealed that the most prevailing response taken by the town administration on the proliferation of informal settlements was negligence in a sense of a blind-eye administration. Discussion with the illegal construction control and peacekeeping core process owner of the municipality ratified that unethical government officials have a blind eye to these fraudulent activities, or even encouraged such practices. To that end, it is found that officials from the land sector conspire with land speculators, brokers, and landholders whereby strict action at one level was being frustrated at another, hence the blind eye administration is perpetuated.

For example, the town had developed a Neighborhood Development Plan (NDP) at 140 hectares of land at *Mehal Mechare* in 2015 shown in Figure 4.22 by Egis International in association with IAU-IdF and UrbaLyon under the auspices of Ministry of Urban Development and Housing (MoUDH). Nevertheless, the field survey observation and findings of the interviews administered to key informants from the illegal construction control and peace-keeping core process owner of the municipality revealed that the issuance of forged land documents created opportunities for fraud. As a result, the NDP in Woldia

has been ignored. Against the proposed plan, illegal divisions have emerged in the fast-growing edge of Woldia where NDP is developed.

Key informants and field observation pointed it out that in the NDP area, site plans and land use plans have invariably delivered to individuals in advance of the structure plan. In this regard, the land is being parceled and sold that should not be parceled and sold before the endorsement of the new structure plan. NDP land use plans that existed were not implemented accordingly, which created opportunities for alleged corrupt officials to abuse their authority and leads to unplanned construction development. This denotes that, before the development of the new structure plan and approval by the concerned bodies, part of the NDP has been parceled and sold to economically powerful individuals.

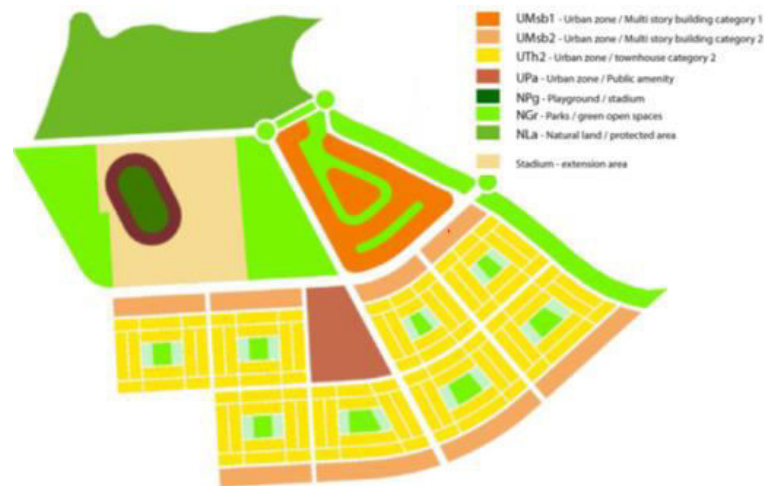


Figure 4.21 The NDP of Woldia at Mehal Mechare, 2015

(Source: Neighborhood Development Plan of *Mehal Mechare*)

In this regard, the municipality was not doing its best to lead the NDP according to the plans. Finding obtained from an interview with a key informant in the land bank and land registration expert of Woldia municipality, there was no inventory of land data, which affects the efficient management of the land and created opportunities for the illegal allocation of the land to private parties. Peri-urban landholders in the NDP areas have also site plans for these commodified parceled plots. While these are happening, it is confirmed through a discussion with the illegal construction control and peace-keeping core process owner of the municipality and my field observation that the town administration did nothing about the ongoings, hence a blind-eye administration or a state of negligence.

The inability (or unwillingness) of the town administration to effectively manage NDP land over and the sheer rate of pirate development creates the opportunity for incentives for misuse of the land, and thus, reflects significant governing failings. The big deal is what will happen the minute the municipality tries to ratify the upcoming revised structure plan for the NDP in the town. Without a doubt, a disaster is in waiting unless a policy line measure is dedicated to dealing with the matter.

Demolition

Demolition/bulldozing of informal settlements is the second most dominant intervention scheme taken by the town administration, in addition to the scheme of negligence. I confirmed it through a discussion with the illegal construction control and peace-keeping core process owners of the municipality and *kebele 02* that since 2013, they have been demolished houses deemed illegal in the town and a measure that is allowed under passed rules detailed above. To that end, 654 illegal settlements have been cleared so far. The illegal construction control and peace-keeping core process owner of the Woldia municipality officer also confirmed that at the moment, there were more than 1527 illegal settlements identified by the core process owner within the jurisdiction of the municipality. He mentioned that since corrective measures have not been taken upon informal settlement found in the shortlists so far, the figures are likely to increase in the future if concerned bodies put no immediate intervention measures in place. Despite this delay, it did not implement consistently. Informants pointed it out that the demolition of the said illegal settlements was not based on principles but on circumstances due to the existence of an acute fear of local, national, and international criticisms that could arise after demolition.

On top of the above, the findings of the study revealed that different practical conditions lead to the demolition of informal settlements minimal. Informal settlers' rights were being protected by a growing lobby against demolition. As a common practice, people built close socially unconquerable institutions (near Churches, for example, around Urael near *Kore* in the middle of *Gubarja* Mountain), knowing that the authorities are reluctant to demolish their constructions for fear of communal problems, and hoping that surrounding areas will acquire protection.

Harmonization

Relevant government documents (for example proclamation 721/2011 and proclamation No. 574/2008) indicate that upon the introduction of the lease system in 1993, two urban land tax and fee systems came into effect. These are leaseholders who pay the lease price for the period as per the lease contract, and some urban landholders pay the land fee through the permit system. It is for this reason that land tax payments in the urban land system should be uniform to provide fairness and good governance to the sector. To this end, the harmonization of the system was necessary to end complaints regarding the discriminating tax system and fees that applied to the dual in place. Of course, the primary purpose of the harmonization policy was to settle the land tax payments of the old possessions and to complete the lease system that was already in place.

In town administration, the harmonization law is being misused by alleged corrupt officials who implement it. In addition, the land registration system was ineffective, flawed, and unreliable due to inadequate data management, security, and storage. Because of these discrepancies, undisciplined state authorities easily manipulated data, leading to the harmonization of informal settlements through the lease system in secrecy. As a result, informal settlements developed after the lease system were getting legitimate through the principle of harmonization as if they have developed these settlements before the endorsement of the lease system in the town administration. In general, the harmonization law, against its prime objective, undermines and distorts the formal urban development process via fraud and relaxes the informal settlement to be accommodated in the formal settlement domain.

Regularization

Informal settlements in and around urban areas are fear-provoking challenges for many urban managers or planners. Apart from the abovementioned intervention measures, the other action which was under work to govern the outgrowth of informal settlements in the peri(urban) of Woldia was regularization. This regularization scheme as an intervention measure was a recent phenomenon of its kind. To this effect, in 2011, the government issued the Urban Land Development and Management Proclamation 721/2011 (FDRE, 2011). At the heart of the policy, one of the objectives is concerned with accessing urban land for

those whose income is low and in the poor section of the society. The policy specifically notes that one way of achieving such access is by regularizing the informal settlement holding already under informal settlers' control and making the land management more inclusive. In this regard, from 2013 through 2018/19, the findings of the study showed that a total of 876 informal settlements had been regularized within the town administration. Regularization, thus, is one way of accommodating informal settlements towards more inclusion in the sphere of formal settlements.

Additionally, it has been confirmed through interviews that the regularization policy is most often used for political patronage in the title for 'vote's schemes'. As per the data obtained from the FGDs at the municipality and *Kebele* 04, against its objectives, there are times at which the local governments permit such settlements via regularization for a political campaign when national and local elections are to come. This was also supported by the key informant's view at *Mechare* where the common political practices of using informal settlements as vote banks, but promises were not followed through. As a symptomatic of this alienation, he claimed that "politically affiliated government officials were being ready to be everything for us when election campaigns were to come. But they were shameless when the elections ended. Those regular campaign agendas that were promised before the election, such as providing a plot of land for housing, creating employment opportunities, and developing infrastructure, would cease thereafter. Government officials were often lobbyists and were also good for nothing. They usually lie to us. They were using our voices only for the election campaign to win their votes". In that sense, land issues were highly politicized.

In this context, the intervention measures that were taken to ameliorate the outgrowth of informal settlements in the peri-urban and urban areas of Woldia were in general unsuccessful.

6.1.6.2 The Journey to the cadastral system

The town administration has started a cadastral system to manage urban land and restrict illegal settlements in particular. This system enables the town to better track land use and ownership, helping to protect the town from illegal developments. The cadastral system provides a detailed map of the land, including all registered ownership titles, boundary lines,

and land use information. This information is used to regulate land ownership and use, allowing the town to take action against any illegal developments and protect their land from being overdeveloped.

4.2 DISCUSSION

4.2.1 Main triggering factors for the Outgrowth of informal settlements

4.2.1.1 Economic-related drivers

As reported in subsections 4.1.2.1 and 4.1.2.2, the research found that income disparity, the rising cost of urban land, the inadequate compensation paid to farmers, the ever-increasing urban population, high urban land demand but low supply rate, unaffordable housing, and the rising rental cost are found to be the main socio-economic drivers of informal settlements in the peri-urban areas of the study areas.

The income category of the participant households across the selected peri-urban areas was classified into four categories: low income, lower-middle-income, upper-middle-income, and high income (Table 4.4). The results showed that of the total 244 sample household respondents, the majority of 183 (75%) are in the low-income threshold group and just 3 (1.2%) of them are upper-middle income thresholds. The remaining, 58 (23.7%) are in the lower-middle-income category. This figure confirms that the largest portions of the informal settlements are in the low-income category. In general, this low-income capacity of the people in the town administration deters large numbers of urban people to participate in the urban land lease for residential purposes as well as private housing programs or housing cooperatives. It is this discrepancy between urban land demand and supply, exacerbated by very low incomes that lead to unaffordable, and as a result, urban residents prefer informal settlements.

This finding matches with the study by Gilbert and Ward (1985) and UN-Habitat (2014) which confirms a low level of income is one of the main reasons for the emergence of informal settlements. In societies with wide disparities in income and wealth, the degree of residential and land-use segregation is likely to be very great. This finding also matches with the theorization of the Chicago School of thought (Kartz, 1986; Squires et al., 1989; UN-Habitat, 2003) and in part to inadequate economic theory (Abrams, 1964; Kartz, 1986)

plus extralegal (De Soto, 2003), Subaltran (Bayat, 2000), Shadow cities (Neuwirth, 2005), and Planet of the Slums (Davis, 2006). They usually consider a low level of income at the center of informal settlement. To build a residential house in a formal and planned area, one needs to have adequate income to lease a plot of land or buy an officially constructed house. The main financial sources of peri-urban households to build a house or purchase the available land were identified as savings, informal borrowing without interest, borrowing money from friends with interest and sometimes from a formal loan with a collateral. Yet, many of the respondents claimed that it excluded them from the formal loan market due to their lack of assets that help them to take the collateral. Therefore, they were forced either to save their income or borrow from informal creditors or involve in any other means of obtaining financial capital to construct the illegal houses.

Thus far, based on the results of key informants and focused group discussions (FGDs), the development of informal settlements is not associated with familism and ethnicity. In this regard, the post-modern theory of urban landscape (Abrams, 1964; Flood, 2000; Sietchiping, 2004; UN-Habitat, 2003) which links informal settlement development to ethnicity and familism, does not align with this study.

Simultaneously, results of this study concerning the effects of income which in turn affects the housing accessibility in the urban and peri-urban areas are inconsistent with findings in Addis Ababa. A study made by Burns and Dalrymple (2012) in Addis Ababa found that 70-80 percent of an informal settlement in city administration is occupied by those who are relatively well off. While the upper-middle and higher income category of the population in Addis Ababa frequently occupy the informal areas for rent and profit by speculating future prices, the poor section of the population in peri-urban Woldia mainly occupies for residency. While informal settlements in Woldia were predominantly for residential purposes, those in Addis Ababa were to make a profit and speculate on an increase in land value in the future.

The types of occupations that the people generally take up are also instrumental in the income that they earn. The results of the study revealed that of the total 244 sample household respondents across the selected peri-urban areas, 36 (14.75%) are involved in the informally employed activities, 33 (13.52%) are unemployed, 12 (4.92%) are daily workers, and 38 (15.57%) lead their lives through remittances from their relatives. This means that 71

(29.10%) sample respondents had no occupation, and these were people who had been placed on a pension; those who could no longer work on their farms, and those who had lost their farms through expropriation.

As a result, these informal settlers have low, irregular, and high-income uncertainty as a result of their job characteristics. It is common for private informally employed individuals to lack social security and be victimized by an instance of firing upon the desire of the informal employer. This suggests that the emergence of informal settlements is connected with the unemployment situation. As a result of this, it urged these individuals to use informal means of acquiring land for housing. This result is also in line with prior studies that tend to find relatively high support for informal settlement as a result of unemployment (Aiken, 1981; Kassahun, 2010; Meshkini et al., 2015).

As reported in subsection 4.1.2.1, it is found that the rate of rising the benchmark land lease price (up to 762%), which has been characterized by enormous price increases in recent years, has made it unbearable for most low and middle-income earners compared to affluent people. In the land market, alleged corrupt government officials' involvement and land brokers' and speculators' involvement has caused a very rapid increase in the price of a formal market, thereby damaging the formal residents' plots. As a result of this process, the urban poor and the middle-income group had no choice but to adapt to living in informal settlements. Similar trends were also observed in other studies (Meshkini et al., 2015).

Furthermore, land brokers confirmed that land prices have risen steadily in recent years, resulting in a very high cost for low-and middle-income earners. Thus, there is minimal space for housing in urban areas, which forces urbanites to settle in informal areas and take advantage of the informal land market to get housing. All in all, the urban poor claim the lease system for the reason of benefiting people from the high-income sections such as merchants, investors, and corrupt government officials. It has been argued that the lease system that has taken place so far has benefited people of high income, such as traders, investors, and corrupt government officials, rather than the urban poor. People of low income in urban areas believe that the lease systems have worsened the affordability of urban land than it was in the past. It is found that the claims that the rise in the lease price of urban land for causing informal settlements agree with the literature (Aiken, 1981; Kassahun, 2010; Meshkini et al., 2015, Numbasa & Koczbersk, 2012).

The findings of this study confirmed that people in peri-urban areas construct houses unlawfully since no legal plots are available to them at a price they can afford. If legal markets for accommodation are too expensive, cheaper illegal solutions are the only alternative. I also observed similar trends in other studies. For example, as the price of land has become increasingly unattainable for many urban dwellers, informal land delivery options have become a necessary component in shelter provision (Cheema, 1993; Hardoy and Satterthwaite, 1986; Leduka, 2004). It is with these inconsistencies that many informants (interviewees) agree on the notions that among other causes, the unlawful occupation and informal land transactions for settlements at the peri-urban areas, among others, are due to the misguided policy responses and the existence of weak regulation systems, particularly the lease proclamation 721/2011 (FDRE, 2011) and regulation No. 103/2012 (ANRS, 2009).

As summarized in subsection 4.1.2.1, theoretically, when peri-urban farms are expropriated for public use, the amount of compensation is determined by the current repayment costs of the properties lost to encroachments, as well as other factors such as transportation costs, construction costs, and income that is no longer generated (for example the income from fodder). In contrast to the criteria stipulated in the Proclamation No. 252 of 2017 (FDRE, 2017), the study's findings revealed that an ad hoc committee or ad hoc subcommittee decides the value of compensation for the property. It would appear that compensation has often been assigned based on subjective judgment on ad hoc committees or subcommittees. This is contrary to the criteria stipulated in the Proclamation No. 252 of 2017. Due to this, peri-urban farmers are compensated at prices that are many times lower than those obtained on informal deals (markets), compared to the parameters stated in the proclamation (refer to Table 4.7 and Table 4.8). This research finding is consistent with research findings by Wubneh (2018).

The findings of the study from key informants in Woldia's urban fringes, we infer that peri-urban farmers tend to subdivide and informally sell their farmland since the sales price is usually higher than the payout levied by the state. Therefore, peri-urban farmers prefer selling their land over receiving compensation (for expropriating the land) because there would be a greater gain in selling than receiving compensation. Despite its different geographic scope, the empirical findings in the peri-urban areas of Woldia are strong and

consistent with the literature (Ambaye, 2015; Cities Alliance, 2015; Wubneh, 2018) across other peri-urban areas of sub-Saharan Africa or Ethiopia that are experiencing similar sociocultural irregularities. In line with this, Wubneh (2018) reported that due to the fear of expropriation of peri-urban land by the governments in the sub-Saharan countries with little or no adequate compensation, farmers continue to subdivide their plots and sell them on a black market for which the transaction takes the form of inheritance, gift, repayment of debt. Similarly, a study by the cities alliance in Ethiopia also revealed that one of the main causes for the development of informal settlements in the (peri) urban areas of Ethiopia is that the gains on the informal market are substantially higher than compensation for expropriated land which in turn strongly incentivizing informal sales (Cities Alliance, 2015).

However, further analysis revealed that farmers are not getting adequate compensation and in many cases, the lives of displaced farmers are much worse off after losing land. This finding confirms Wubneh's (2018) conclusion. In line with this, a key informant from *Adengur* complained about the amount and processing of compensation by stating these things:

The government fools the farmers at *Mecahre*. We (the informant and people in his locality) have learned a lot from the pains of farmers in *Mechare*. They (Farmers in *Mechare*) received a small amount of compensation and finished within a short period. They are becoming the daily laborers in Woldia with scanty job availability. We would not be people like those farmers. Many government officials considered the land deals that we did as unlawful. Without better opportunities, we the farmers are legal even though it is illegal in the eyes of the state. We do not know where the illegality rests. We do have the Green books which certify that we are the owners of the land. Why the government officials are running for snatching the land from us for the betterment of others? Even to the benefit of us (the state and the farmers), landowners do not have the power to negotiate on the amount of compensation with the government official. Once the compensation payments are determined by the compensation committee, they forced individuals to take that amount of compensation. If someone is not interested in the amount of payment or compensation, the government officials tag the person as a development destructor and choose to enforce their power. In the name of compensation, it is the forceful taking of our property, and lands. We do not have a voice anymore.

From the above claims, it is important to notice at least four basic facts. One is that though it was unlawful, informal land deals benefited the farmers more than the compensation payments they attained through formal government procedures. Second, there was a sense of fear of farmers being idle (jobless) after their land is expropriated. Third,

there was no/little negotiation in the amount of compensation between the government and the land user, the farmer. The fourth was that the taking of their land or expropriation of their land was not based on the agreement of parts, the government, and the use and landholder rights.

Overall, we can infer that the high remuneration generated through informal deals incentivizes many peri-urban farmers on the fringe to block the formal process of compensation; urge to subdivide and sell the land helping to satisfy their demands through other than legal channels within the town and further encouraging the expansion of informal deals. Those who buy land through informal deals build houses on it which often results in the flourishing of informal settlements in the peri-urban areas of Woldia.

Last, but not least, one thing that needs to be taken into consideration for peri-urban farmers' decision to sell their land is not always the fear of meager compensation but also there are other possible critical conditions such as when people need the cash for immediate motives which also aligns with empirical findings (Nkurunziza & Surveying, 2007; Thirkell, 1996). Whenever the rural poor need immediate cash, they settle their property for sale through a process that Thirkell called "*crisis selling*", such as the illness of a family member, legal costs involved in court cases, or extreme poverty (Nkurunziza & Surveying, 2007; Thirkell, 1996).

4.2.1.2 Social and/or Demographic related drivers

The various participants in this study mentioned that social and/or demographic factors, such as the ever-increasing urban population and inefficient land provision as well as lack of housing affordability and an increase in the rental price were also contributed to an increase in the illegal occupation of land in the peri-urban areas of Woldia. An assessment of the situation of the ever-increasing urban population and inefficient land provision (described in subsection 4.1.2.2), revealed that of the total 12, 257 applicants to get urban land, 3218 (30.7%) of the applicants have achieved their desire for urban land for housing while the remaining 9039 (69.3%) of the applicants have not received it. Hence, despite the existence of high demand in the urban lands for housing due to the ever-increasing urban population, demand, and supply are currently far out of balance, and this causes the problem of low and middle-income households' access to urban land to worsening. This is certainly a negative

sign because there is no hope for the town's housing backlog. Since many people are unable to obtain residential land in the urban area and other alternatives, there are no alternatives except to live in informal settlements. It was found through this work that the rise in demand and fall in supply for formal plots forced peri-urban farmers to involve in informal deals instigated by land brokers, land speculators, and allegedly corrupt government officials, thereby converting their land for residential purposes.

In addition to that and more vital, it is obvious that a substantial housing shortage appears in the town and a wide gap exists between the demand and supply of housing, both in terms of quantity and quality. This shows the inability of the state to meet the demand for land and housing for the needy. The provision of a building plot is discouraging. It appears that many households then shifted from a formal housing program to other means including informal means. This finding is consistent with the Alonso-neoliberal theory that related the outgrowth of informal settlements as a realistic response to the housing needs of urban dwellers who would not afford a formal dwelling (Abrams, 1964; Fekade, 2000; Sietchiping, 2004; Stokes, 1962).

The research also found that the facts underlying the ever-increasing urban population and inefficient land provision as a triggering cause for the outgrowth of informal settlements are consistent with the literature. Concerning the challenges of the proliferation of informal settlements in developing countries, Doebele (1987, p. 7) states that the “problem of adequate land [housing] for the urban poor in developing countries is bleaker today than it was 25 years ago and almost surely will become bleaker in the future”. Therefore, there is evidence that indicates that the ever-increasing urban population and inefficient land provision that are some of the main triggering factors for the emergence of informal settlement in the urban areas of developing countries.

The study also found that cooperative housing organizations (described in subsection 4.1.2.2 and Table 4.12) which have been expected to house many of the urban land demands in town administration, partly failed to operate successfully. Although there are efforts by the local administration to reduce the housing shortage, the gap between demand and supply is still widening. This, in turn, calls for the urban dwellers to seek other means of attaining urban land informally through a different mechanism, such as informal land market or by squatting, which is consistent with the empirical studies (Kassahun, 2010; Meshkia et al.,

2015; Marutlulle, 2017). These results tell that the unmet urban land demand, one of the deficiencies of public land management, is the major force underpinning the proliferation of informal land markets, thereby increasing the flourishing of informal settlements. This is also consistent with the literature. Urban land is becoming the most commodity item in an urban property (Cohen & Koehn, 1977).

The study also found that the other mechanism of solving residential housing demand in the urban areas is through renting houses: either public/governmental or privately constructed houses. In this regard, the research findings indicate that the development of the informally built houses in fringe areas is driven by many factors, but the following are the three most significant: a) the increase in rental housing costs in the inner town makes it unaffordable for the majority of the poor, forcing them out into peripheral neighborhoods; b) prices for rental houses in the inner town are increasing, so landholders in the outer suburbs are building houses for rent, which, over time, can provide supplementary income for the family, and c) individuals and families often live alternately in the town and the village when they need dual residency.

The peri-urban farmers also argued that the monthly income generated from renting out a house is better to sustain their livelihood than a one-time compensation payment which can be consumed within a short period. This is particularly true when compensated farmers do not know what to do with the compensation cash they received or have no awareness and information about various income-generating activities. In this regard, informal settlements often keep lower housing costs and informal settlements contain many of the cheapest rental accommodations. This is because settlers usually settled in informal settlements areas without physical and social infrastructures. Moreover, returns from illegally constructed rental houses can be made even from the low rents that poor people can afford. Since informal constructed houses had been promising, it encouraged people to invest and extend houses by adding extra rooms/units/to original buildings, such as from one unit to two units, from two units to three units, and so on. Therefore, it is evident that the informal settlements which are developed at the periphery of the town become the new reception areas for these groups. Other studies have also observed similar trends (Meshkini et al., 2015; Numbasa & Koczberski, 2012).

The above finding is also consistent with the empirical literature and theorization of the perpetuated demand and supply disequilibrium theory that relates the growth of informal settlements to the imbalance between demand and supply of urban lands. The facts entail that when the landholders, land developers, and businesses are entertaining rental markets on the illegally/unlawfully constructed houses at the periphery, then informal settlement perpetuates over time and space (Abrams, 1964; Fekade, 2000; Gilbert, 2003; Roy & Alsayyad, 2004; Turner, 1977; Payne, 1997). Therefore, informal settlements make them ideal for landholders, land developers, and businesses aspiring to develop rental housing. Poor people usually move to the periphery given rising rents, typically in the inner town, because the peri-urban area offers more affordable housing than the inner part. Demand for peri-urban areas makes them very attractive as residential areas. We widely understood that illegal construction meets the urgent housing needs of the marginal groups (Gilbert, 2003; Roy & Alsayyad, 2004).

4.2.1.3 Institutional/administrative flaw drivers

In addition to the above socioeconomic and demographic triggering factors for the growth of informal settlements in the peri-urban areas of Woldia, administrative disguising, and legal failings also played a decisive role in the development of such settlements. The findings showed that, due to the inefficiency and alleged corrupt government officials, as well as the existence of legal loopholes and technical failings, informal settlements in the peri-urban areas of Woldia are on the perpetuation indicating a poor level of urban land administration. In this regard, there is strong evidence that suggests the urban land management system of Woldia is characterized by various challenges ranging from uncoordinated land use planning, conflicts with land-use changes, and problems of modern land management tools such as cadastral systems, land registration systems, and battles over meager compensation to a large number of corruption issues. As a consequence of these constraints, people are often left with no alternatives other than the informal means of getting land for construction. The findings of this study support the theory of urban land management (Al-Daily, 2013; Devas, 2004; Fekade, 2000; Sietchiping, 2004).

It is so obvious that government officials are generally responsible for governing the growth of informal settlements in any urban area. Yet, the findings of the study showed that

in the town administration of Woldia, some government officials failed to do so adequately, mainly because the urban managers themselves are deeply entangled in urban land sector corruption. In this regard, it is found that due to the lack of control and enforcement of construction laws and the corruptibility of many government officials, nowadays, people are less likely to apply for a formal construction permit.

Furthermore, because of the authority vacuum, the institutions' duties and responsibilities in the matter of informal settlements in the peri-urban land are not set out yet. This dichotomy of land administration institutions into rural and urban land, and above all else, lack of coordination between these two institutions on the issue of the peri-urban areas of Woldia have further aggravated the unauthorized subdivision and construction between the two jurisdictions. These findings of the study align with some literature (Adam, 2014; Ansah & Chigbu, 2020; Kassahun, 2010). This poorly regulated or uncontrolled circumstance creates fertile ground for informal land accessing and securing thereby leading to the growth of informal settlements in the peri-urban areas of Woldia. Further, because of the uncertainty of what constitutes 'rural' and 'urban' land in peri-urban areas, different management regimes and administration systems are applied to land tenure rights, leading to a clash of land tenure laws that may lead to disturbances, disputes, and violence. Significant challenges to peri-urban growth have resulted from these factors. This means that the rapid and unplanned illegal conversion of rural lands to urban lands leaves many actors out of the decision-making process. This fact is also consistent with the findings of Alemie et al. (2016) and Ansah & Chigbu (2020).

Further analysis of the study findings revealed that the town administration, the mayor's office, in particular, tolerated or even welcomed the outgrowth of informal occupation. Harris (2017) considered this situation of tolerance and welcome as the politics of calculation whereby the state agencies turn a blind eye to violations and infractions or a deliberate lack of enforcement. This is the situation whereby the informal occupiers feel that their patronage (and possible connections within the public) with the mayor offer some further security. This also reflects a situation expressed by De Soto in his famous metaphor "*the dogs know where to bark*" (2003, p. 8). It means that they sometimes attributed the fashionable right of urban decentralization of recent years to the unlawful occupation of urban land in the peri-urban areas of Woldia. The study finding also revealed that there is

also coordination between the mayor's office and the inspection department of the municipality. As a result, many private construction systems are being undertaken without appropriate construction permits even though the town's building inspection department has been issuing frequent warning letters to those builders who have violated the agreement with their municipality.

Besides this, though the legality of this allocation process by the mayor's office is at best debatable, political patronage within the public administration and the wider political system has been important in providing protection. These findings also agree with the theorization of Actor-Network Theory (Beauregard, 2012; Beauregard & Lieto, 2016; Rydin, 2012; Rydin & Tate, 2016). Particularly, the local administration mainly the mayor is paying back favors, consolidating potential clients, and rewarding friends by informally giving out free land for urban development. Inevitably, information on such matters is difficult to obtain, apart from political patronage, it is difficult to obtain, but it is rumored that bribes change hands as well (Burns & Dalrymple, 2012). Similarly, Amaboldi and Spiller (2011), Latour (2015), and Wissink (2013) stated that every situation arises from ongoing associations among actors. In line with this, Tripp (1997) argues that when rent-seeking and the illegal diversion of resources from the state occurs, the people who gain access to them tend to find that their kin or family members benefit. It is certainly illegal according to the current building requirement and requisite permit.

In addition to the above, informal settlements are highly politicized. The findings of this study are consistent with the study findings of Leitmann and Baharoglu who state that 'illegal settlers had votes' (Leitmann & Baharoglu, 1999), and Gimelli et al. (2018) who conclude that politicians are using the people as a vote bank, where at election time, they make lots of promises: informal settlers are authorized. As in all activities of an informal kind, informal expansion is indexed to official attitudes. On the eve of an election, corrupt government officials may give a covert signal, and construction regulations might not be enforced (Keyder, 2000). To gain a vote, the town administration even began legalizing the informal settlements. The gradual provision of urban infrastructures, especially access roads, water supply, and electricity to the informally settled areas accompanied by this forgiveness by concerned town administrations. Politicians use settlement issues to exert influence over the electorate; local leaders have also used low-income areas as springboards for political

careers (Gilbert & Wards, 1985). This is also the additional means for the formation of informal settlements in the peri-urban areas of Woldia. The implication is that politicians come up with promises during election campaigns. They promise to build a road, a sewerage system, and water for informal settlers. Nevertheless, it is found from key informants that no one does anything at the end of it.

The results of the study indicate that sometimes the corrupt government official bribed the peri-urban builder with a recommendation letter and forged documents, thus making sure the peri-urban builder to build houses regardless of the master/structural plan of the town. Therefore, all those involved in implementing the structural plan of the town are to blame for the rise of informal settlements in the town. It is the failure of these governmental structures that aggravates the growth of urban settlements in the town.

Findings of this study have pointed out that the development of informal settlements in the peri-urban areas of Woldia is also associated with the lack of well-defined law enforcement for illegal builders and actors involved. It implies that to reduce, if not eliminate, the development of informal settlements, important legal measures, and corrective legal fines should be taken against those official actors who are instigating the peri-urban farmers to pursue activities of such a nature. The study findings are consistent with the literature (Gilbert & Ward, 1985). According to a study in Bogota (Colombia), the development of land for informal use decreased when criminal laws against informal builders were implemented. The police take action against a group of invaders or informal settlers within 48 hours of a written complaint. If the invaders cannot demonstrate a rental contract, they are removed within 30 days of the act of invasion or within 30 days of the date when the complainant first knew of the invasion. If removal does not take place within 30 days, the invader is removed when the authorities grant a possession order from a civil judge. Much stronger criminal law can supplement civil action. Article 424 of the penal code declares invasion to be punishable by imprisonment of from 2 to 20 months. The law applies whether the land invaded belongs to a private individual or the state (Gilbert & Ward, 1985).

The implication is that those events in the presence of firm political control to enforce and maintain rules for the protection of illegal builders and actors involved have resulted in a massive decline in informal settlements elsewhere in some countries. Yet, in

the peri-urban areas of Woldia, such corrective measures were not executed during the time of collecting the data.

4.2.1.4 Land policy and legal framework related drivers

Policy weakness has led to insufficient urban land provision for housing development, especially for low-income populations (e.g. lease policy). The leasing policy in place created a massive urban land shortage by making land accessible to the highest bidders in the tendering system. The research found that insufficient compensation following the peri-urban expropriation in the peri-urban areas of Woldia also triggered informal settlements. Based on personal interviews I conducted with people in peri-urban areas, individuals do not perceive the compensation paid to them during the expropriation to be very good compared to the income they collect from informal deals. Hence, fear of inadequate compensation drives farmers to divide and sell their lands informally to informal settlements, fueling the already existing land administration malpractices. The dealing of lands for residential development is occurring both on privately owned (used) lands and public lands.

More importantly, it is found that the lack of multipurpose land banks and/or the lack of a sophisticated land management system combined with limited coverage of land registration (information) infrastructure led to the heightened number of informal settlements in the peri-urban areas of the town administration. In fact, because of the traditional and manual land registration system and rent-seeking behavior of some municipal officials, the town administration itself is at flaw for not implementing sufficient control over its land resources.

Further findings also revealed that there are often vast differences between government policy and practice, even between what the town administrations should do and what they actually do, which in turn led to the outgrowth of informal settlements. These findings are consistent with the literature ([Fransen & Van Dijk, 2008](#); [Frisch & Baron, 1988](#); [Kuyuc, 2014](#); [Zhu et al., 2019](#)). For example, according to [Kuyucu \(2014\)](#), legal ambiguity was used as a weapon in property transfer, thereby making informal property development in the urban areas.

Many people have often criticized the town administration for its tolerance and negligence of the proliferation of informal settlements. They often consider the corrupt

government officials as the actual informal settlement architects. Key informants from municipal officials insisted that rather than getting penalized for their wrongdoings, including falsifying land documents or using official stamps, or transferring land illegally without considering possible losses to potential resources available for urban development, they were assigned automatically to higher and better government positions (from Woreda to Zone to Region).

In the study area, participants in the FGD and key informants also cited land regularization as a major factor contributing to informal settlement growth. They described that land regularization also had unexpected consequences wherein new informal settlements had developed in anticipation that they would be legalized. The regularization of the informal settlements by the law led to a situation where powerful individuals and corrupt town authorities kept extra land, waiting for approval by the law later. An effect of land regularization, therefore, is that it facilitates the emergence of informal settlements in the peri-urban areas of Woldia. This result is also in line with other studies ([Magina et al., 2020](#); [Parsa et al., 2011](#)). This study also found that the fragile government structure and political instability, frequent human turnover, and lack of institutional memory in the land sector of the town influenced informal settlements.

The findings of the study revealed that one of the chief causes for the emergence of informal settlements in the peri-urban areas of Woldia is the involvement of state actors in the land sector corruption. This finding is consistent with the literature. The study of the World Bank reveals a clear picture of the extent to which corruption is pervasive in Ethiopia's land sector, which provides useful support for this work. In light of this, the findings of the World Bank's study entitled-Diagnosing Corruption in Ethiopia- show that the corruption risks in Ethiopia are rampant in the land sector due to several fundamental factors. Because of that, it is worth quoting the World Bank that it was "nearly impossible to get a plot of urban land without bribing city administration officials" ([Burns & Dalrymple, 2012, p. 286](#)). Weak institutions and high land values mean the land is the focus of corruption ([Zevenbergen et al., 2013](#)).

The findings of this study also clearly show that informal settlements have emerged in the existence of legal ambiguities/legal loopholes in legal frameworks. Informal settlements often grow as a result of the ambiguity in legal documents in the study areas.

Those who are in favor of informal settlements exploit regulation gaps. This is also consistent with empirical research. Though the primary purposes of legal frameworks are to avoid the gaps and drawbacks of urban land governance, sometimes “the legislators create laws that officials fail to enforce” (Harris, 2017, p. 4). Similarly, the findings imply that the seemingly powerless actors can reinterpret, use or challenge the formal rules specified by the state, create opportunities for changes both to the rules themselves and to the relationships between state structures and non-state actors (Rakodi, 2004). Likewise, Razzaz (1994) cited in Leduka (2004) explains that the informal settlements in the urban areas of the developing nations are manifestations of societal non-compliance that exists to take advantage of inconsistencies and indeterminacies in the regulations and means by which the state enforces its policy.

In the same fashion, one of the findings of the study on the land sector corruption in Ethiopia reveals that although most corrupt activities in the land sector occur at the implementation stage, the level of corruption is influenced strongly by the way policy and legislation are formulated and enforced (Kuyucu, 2014). An example of this is the capture of state assets by the elite through the formulation of a policy that goes in favor of the elites or the abuse of power by those elites (Burns & Dalrymple, 2012). This means that developing and having a proper urban planning and construction law is not enough; rather, its successful implementation and enforcement are more important. Ineffective implementation of urban land-use plans due to lack of (political) commitment and failure to enforce construction laws is, therefore, one of the reasons for the flourishing of informal settlements in (peri) urban areas of Woldia.

The empirical evidence provided in this research reaffirms the use of *forged documents* is a common method that aggravates the flourishing of informal settlements in the peri-urban areas of Woldia. A study finding in the diagnosis of corruption in Ethiopia also confirmed this. Issuance of forged land documents resulting from fraud, bribery, or nepotism has seriously eroded confidence in the land records system (Burns & Dalrymple, 2012). This implies that the development of informal settlements is also associated with the poor urban land registry system of the town.

In general, findings and results of the study indicate that due to the bad governance and interplay of socioeconomic, demographic, administrative disguising, and legal loophole

factors, informal settlements will be continued as a challenge in the town at a rate faster than the present unless a viable and appropriate policy measure is in place. The land administration institutions (both urban and rural) are disorganized, corrupted, procedural problematic, responsibility fragmented, and overall malpractices to manage the flourishing of informal settlements.

4.2.2 Actors and their Role in Accessing and securing land

4.2.2.1 Key local actors

Urban land development (formal or informal) is the outcome of decisions and actions made by a wide range of actors. The study findings confirm that myriad local actors who are involved in the informal land accessing and securing processes facilitated the outgrowths of informal settlements in the peri-urban areas of Woldia. The main local actors include local decision-makers, such as appointed local authorities, politicians, elected local officials, and bureaucrats plus private service providers, and the urban poor. In addition to these, land brokers, land speculators, and peri-urban residents were also acting directly or indirectly in the informal land accessing and securing process. The findings of this study are consistent with the literature (Bryant et al., 1982; Devas, 2004; Kaiser, 2013; Nuhu, 2019; Rakodi, 2006; Yirgalem, 2008; Zibagwe et al., 2010).

In the above sense, it suggests that informal settlement development in the built environment is not neutral to public officials, but public officials have interests and manipulate the boundaries of informality to meet their interests (Selman, 2000). There is a strong linkage between the formal and informal institutions, wherever, for example, public employees operating in the informal sphere (during land demarcations and transactions) sell their information services to the affluent (Nkurunziza & Surveying, 2007). The findings of the study are also aligned with the theoretical notion of Actor-Network Theory (ANT) where actors form sets of interpersonal associations that connect them (Blender et al., 2010). This implies that informal settlement is the outcome of ongoing associations among actors (Amaboldi & Spiller, 2011; Cowan & Carr, 2008; Rydin & Tate, 2016; Wissink, 2013).

Besides, from the accounts of the traditional informal institutions, it is found that informality in the peri-urban areas of Woldia is very pervasive, omnipresent, and socially accepted from the grassroots to the official sphere. One can even imply that informality has

been institutionalized (informally) in the land market system in the study of peri-urban areas. In such a way, the state often neglects various activities it was not willing to execute openly or the state would likely legalize the previously illegal activities or at least maintain the status quo. This is also congruent with the literature (Leduka, 2004; Scott, 1985; Tripp, 1997; Yirgalem, 2008; Zhu et al., 2019) that working outside the formal rules is not only a means of resistance to institutions but also how social forces brought new resources to bear in creating alternative institutions, and that “social forces live longer than political ones” (Crummey, 2000, p. 7).

4.2.2.2 Urban land accessing and securing systems

In the study of the peri-urban areas of Woldia, state and non-state actors often helped to frame and contextualize local people to engage in informal accessing and securing land rights, thereby enflaming informal settlements. Based on the results of key informants and focused group discussions (FGDs), influential local actors often push their hidden agendas forward behind the backs of other actors, mainly landowners (users), using different tactics. This implies that they manipulate the boundaries of informality in the interest of their own needs. The survey data gathered showed that land brokers employed different strategies to convince peri-urban farmers to enter into informal land deals. People in peri-urban areas, for example, are told their lands will be taken by people who don't know their culture, or beliefs, or are even paid meager compensation from the government. In addition to that, the land broker also persuades peri-urban farmers to sell their plots of land before their land is entering into the urban area and now is the ideal time to do so. Other informal settlement literature such as Ansah and Chigbu (2020), Alemie et al. (2016), and Rakodi (2006) have suggested that the outgrowth of informal settlements is caused by different land management regimes and administration systems due to different land regulations at the peri-urban areas.

The empirical evidence provided in this research reaffirms the role of land speculators in the development of informal settlements. Similar trends were also observed in other studies (Adam, 2014; Daniel, 2015; Fang & Pal, 2016). For example, Fang and Pal (2016) reported that due to the frequently criticized meager compensation paid to farmers, and their desire to focus their negotiations on the amount of compensation not only gives

room for speculators to offer relatively higher monetary gains to acquire land but also encourages peri-urban farmers to engage in land speculation themselves. Land developers and investors are profiteering actors. We distinguish them from the landowners and others in that they are hoping to make their profit from the passage of time over their holds. For such actors, the land is an eye-catching investment object due to the increasing land prices in the rural-urban fringe. In line with this fact, the study findings of this research revealed that farmers (landholders) are not ignorant about the rise of the future price of their lands.

The study also found that many of the corrupt local government officials find themselves at the peripheral of government policies than being the loyal followers of rules and policies. In this regard, informal accessing and securing of peri-urban land exists outside of the bureaucratic, legislative framework and is difficult to control. As a result, informal settlements continue to emerge because unethical state actors themselves are deeply immersed in the informal land accessing and securing processes. In line with this, Numbasa and Koczberski (2012) reported that informal selling of peri-urban land is not only the outcome of the failure of the government's control capacity but also a reflection of its implied approval of a situation.

This also makes sense, given that the peri-urban de facto landholders (users) may actively resist any undesirables to move nearby (societal non-compliance). With inflexibility and local resistance (societal non-compliance) to bureaucratic oppression, landowners are involved in subdividing and selling their plots against the land law. This resistance often extends beyond influencing building laws, and this non-compliance action of the actors keeps people from securing land for housing that may not be able to afford formally. At the same time, the informal accessing and securing of peri-urban land are done in a disguised form, chiefly in the form of a loan-borrow agreement (via informal institutions). Peri-urban farmers in Woldia who sold their land claim that they have transferred part of their land to their family members as a gift, inheritance, or through debit bondage whereby the landholder is seemingly unable to pay for a fictitious loan contract agreement for large sums of money. The research found that 135 (55.3%) respondents secure plots for housing through purchasing from peri-urban landholders. This implies that in current peri-urban Woldia, access to land is largely dependent on purchase. This finding also supports other research findings on peri-urban land (Adam, 2014; Ansah & Chigbu, 2020; Jenkins, 2004),

who noted that access to land is dependent on one's purchasing power rather than socio-cultural characteristics, such as gender and age.

Survey results from both key informant interviews and questionnaire administration unfolded that the price of land also increases in areas closer to the better serviced and accessible areas along major roadsides. This finding is consistent with the previous study (Thirkell, 1996), which stated that the decision to buy an informal area is not reckless but also makes sound economic sense. In this regard, peri-urban land prices generally increase steadily over time due to settlement consolidation, improved infrastructure, and subsequent increasing security of tenure among the residents.

Additionally, the findings of the study also revealed that the decision to buy informal land in the peri-urban areas also rests upon the sellers' urgency in the demand for the money. This also helps the buyers to lower the market price as well as increase the bargaining power of the land buyer, using financial constraints as an advantage. This finding also matches with the empirical findings of Thirkell (1996) who states that:

In informal settlements, buyers recognize the vulnerability of sellers and lower their plot prices based on this information. Many settlement agents identify poor families who are vulnerable to crisis, labeling them as potential sellers. If the family encounters some crisis or hardship, the agent will offer to resolve their situation with a cash payment. The agent is then able to complete a deal that may already be in place with a more affluent buyer. Using more sophisticated tactics of sites in the same area with different occupants of different incomes sell at widely differing prices. (p. 85)

Moreover, local actors are involved in informal land accessing and acquisition mechanisms by operating beyond government rules to suit their ends. With similar trends observed in other studies (Leduka, 2004; Rakodi, 2006; Scott, 1985; Tripp, 1997; Vargas & Urinbojev, 2015) local actors implement informal rules when formal rules are incomplete or where legal ambiguity exists to rule over informal settlements. Accordingly, local actors re-interpret the land law to suit the settings of their areas of jurisdiction. Similar trends were also observed in other studies (Alemie et al., 2016; Pamuk, 2000; Oloyede et al., 2007; Rakodi & Leduka, 2004)

One final note about the urban land accessing and securing system is that there has been an increase in the price of land in Woldia's peri-urban areas due to corruption and wealthy individuals investing in such settlements to make these areas more appetizing to wealthy individuals and restricting access to those with lower incomes. It was also understood from

the account of the participants in the studied areas that informal accessing and securing of land by means of a fake sale, fake donation, and fake inheritance are happening on an everyday basis against state law. This is due to the lack of proper land registration systems in these areas, which makes it easier for people to access and secure land illegally. Furthermore, the lack of enforcement of existing laws further encourages people to engage in these illegal activities. This illegal land acquisition often leads to land disputes and cases of land grabbing by powerful people. This has serious implications for the security of people living in those areas and the protection of their land rights. Similar trends were also observed in other studies (Adam, 2014; Baye et al., 2020; Baye et al., 2023; Kassahun, 2010; Yirgalem, 2008).

Yet, of the above-mentioned mechanisms, the informal land market is so huge, and as a consequence of this, the outgrowth of informal settlements is likely to continue to grow in the town administration with the current policy in place, and for a wider audience beyond the field-sites in and around Woldia at a rate faster than the present.

4.1.3.3 Security Perceptions of informal settlers

Informal settlers often feel that their safety is at risk due to their lack of legal rights and limited access to basic services. Security perceptions of informal settlers are often characterized by feelings of fear, insecurity, vulnerability, and powerlessness. They often feel they are at risk of eviction or other forms of displacement, and their safety is further compromised by their limited access to basic services such as healthcare, education, and reliable electricity or water.

The findings of the study revealed that there are many reasons why informal settlers felt insecure: fear of environmental hazards, eviction, demolition of their houses, and neglect of infrastructure delivery, among others. The main physical and environmental hazards that cause fear for informal settlers are earthquake vulnerability, flooding, and landslides with poor quality or without drainage facilities. These hazards lead to displacement and destruction of property, which can cause economic loss, lack of access to basic services, and health problems for the residents. Additionally, these hazards can cause psychological distress, such as fear and anxiety, as the residents are constantly at risk of their homes being damaged or destroyed. All of these effects can have a lasting impact on communities,

leading to long-term economic hardship, social disruption, and decreased quality of life. Furthermore, the effects can be disproportionately severe for lower-income communities that lack the resources to prepare for and respond to hazards.

Informal settlers in the peri-urban areas of Woldia are not free from the fear of eviction. Despite the lack of formal recognition of their rights, many informal settlements in peri-urban Woldia are facing eviction. For example, in 2018/19, the local government of Woldia bulldozed more than 654 households from an informal settlement. Due to this action, informal settlers have a fear of being evicted as others in the area. This fear is compounded by the lack of legal protection for informal settlers. As a result, residents of informal settlements are living with the constant threat of eviction and displacement. This has caused a great deal of uncertainty and anxiety among the population.

Informal settlers settled there because of the absence of formal land for housing and the lack of any alternatives to where to go. The implication is that, due to the lack of formal legal recognition, residents of these settlements face social and economic exclusion. This further perpetuates the cycle of poverty as they struggle to access basic services such as health care and education, and cannot take advantage of the economic opportunities available to them. That is, the lack of security of tenure has also made it difficult for the residents to access credit and other financial services, leaving them with limited opportunities for economic development. Informal settlements are often located near urban areas, providing access to employment opportunities that are otherwise not available to them in rural areas.

Those who could not use their houses as collateral for loans reasoned that financial institutions may be unwilling to lend to their houses as collateral because of their low and irregular income which may find it difficult to meet the financial institutions' income requirements and partial tenure insecurity.

4.2.3 Actors and their role in Accessing and securing urban infrastructure

4.2.3.1 Barriers to the formal provision of urban infrastructure

In each peri-urban informal settlement, the distribution of basic infrastructure services, such as electricity distribution, water pipes, and road access, is influenced by a variety of factors, including the spatial dimensions of distances and topography, income, and institutional and

legal factors. For example, the study findings indicate that of the 226 (92.6%) households that use electricity, 119 (52.65%) did have their own electric meter reading, while 96 (42.48%) households did not have access to a formal connection to the Ethiopian Electric Utility supply lines, and the remaining 11(4.87%) used shared electric meters. Even though income, physical distance, topography, and other factors play a role in determining how many households have an electricity meter connection, the institutional/legal barriers that limit access to electricity meters are more significant than others. These have effects on the level of infrastructure delivery in the informal areas. These findings are congruent with the empirical findings (Pierce, 2017; Sinharoy et al., 2019).

On the other hand, the findings of this study contradict the work of Pierce (2017) who, in addition to the above, found that informal settlers face barriers in access to basic infrastructure services, as well as (in)formal infrastructure services, due to their ethnic, racial, religious, caste, or other identities.

4.2.2.2 Accessing and securing urban infrastructure services

It was found that whilst some respondents claimed that they received no infrastructure, the research findings showed that governing infrastructure by informal institutions has turned out to be a massive force in the informal peri-urban areas. Many times, there is a conflict between the formal laws and the informal institutions, especially when it comes to the infrastructural provisions. The empirical findings of this study also revealed that informal accessing and securing of infrastructures are happening out of the ambit of the formal legal regime. Local authorities denied informal settlers access to a wide range of basic infrastructure services. The results of other studies showed similar trends as well (Amoako & Boamah, 2016; Hardoy & Satterthwaite, 1986; Harris, 2017; Perlman, 2010; Potter & Lloyd-Evans, 2014; Winayanti & Turner, 1977; Zárate, 2018).

In the study peri-urban areas of Woldia, though the informal settlement laws did not put particular restrictions, the sectoral laws such as building regulations, electricity, and water supply regulations strictly prohibit the delivery of infrastructure to such areas. Moreover, the spatial, economic, social, political, and legal barriers greatly determine informal dwellers from making private provisions for basic infrastructures. This was because local government officials often banned in extending infrastructure access to

informal settlements in their development schemes as such settlements are coming into being with no government official approvals. The low funding dedicated to infrastructure investment and development has aggravated this challenge in most of these informal settlements to meet the growing demand.

The research output showed that financial expenditures in the form of investment are directly invested in areas that are considered legal (planned) by the town administration and in line with the structural plan. The underlining insight here is that it legitimizes the separation of formal areas from informal areas. This means that the existence of a master or structural plan, for example, is one of the necessary preconditions for infrastructure extension in peri-urban areas. Local authorities achieved this through a spatially discriminated incentive system that favors the planned areas and disfavors the informal settlements which is similar to Piece's empirical work (Pierce, 2017). This conditionality is one of the legal barriers for informal settlers to obtain the necessary finance to extend physical infrastructure in their area of residence. That is why many of the informal settlements in peri-urban areas of Woldia were not equipped with the basic infrastructure of varying quality and quantity. The implication is that informal settlements were neglected and marginalized, leaving them out of the mainstream of the economy. Similar trends were observed in other studies (Harris, 2017; Perlman, 2010; Potter & Lloyd-Evans, 2014; Winayanti & Lang, 2004, 2004). For example, Allegra et al. (2012) described those informal settlements as wound zones as a result of asymmetric infrastructures. Similarly, Macleod and Ward (2002) said that informal settlements are settlements with physically proximate but institutionally distant.

As a manifestation of the above situations, the findings of the study also revealed that areas close to the major highways and central parts of Woldia are mainly infrastructure-served areas (refer to Figure 4.18). It can mainly relate this to the primary focus on the planned residential areas, for example, with electricity, though may also be related to major economic and facilitating business. The peri-urban areas of towns, which often lie outside the formal infrastructure network of the town, are characterized by sporadic water supply, frequent electricity outages, poor solid waste collection practices, a lack of sewerage systems, and an unmaintained stormwater drainage system in comparison to the central area of the town.

Because of these neglected and marginalized situations, some observers suggest that despite years of research and the many advances that have been made in both theory and practice relating to urban informal settlements, the “effects of stigmatization and discrimination are still felt by millions of urban dwellers today”(Lombard, 2014, p. 4). These urge informal settlers to set the accessing tactics of these infrastructure services using various enabling strategies (Narayanan et al., 2017; Nijman, 2008; Sinharoy et al., 2019). Thus, informality is at play in the matters of infrastructure delivery via negotiation, collaboration, political deal-making, and use of organizational and financial strategies depending on the set of assets (natural, physical, human, and financial) and entitlements that individuals possess and whether they can mobilize them in times of challenge (Pierce, 2017; Sinharoy et al., 2019). In this regard, it means that urban policy and program responses of governments in developing countries to deficiencies in an urban shelters, services, and infrastructure have been disjointed and ad hoc (Cheema, 1993).

This requires planning by informal settlers. As a result, based on the results of key informants and focused group discussions (FGDs), informal dwellers resort to ad hoc informal means to access infrastructures through which individuals and institutions interact, exchange information, exert impact, or are influenced and trade infrastructure services. In this regard, the study outlines the options that informal settlers use to respond to the deficiencies of basic urban infrastructure services. Those settlers who were denied access to formal infrastructure provisions have responded by seeking substitutes, though the actual (per unit) costs are high relative to the costs of services provided through formal networks. In this regard, informal settlers get urban infrastructures and services either illegally or at higher prices. Accordingly, households without access to public pipe water obtain water from a combination of sources: rivers and streams or from a range of (in)formal providers (e.g. public taps, water kiosks, streams, water vendors). In the same manner, many of the informal settlers continued to rely on non-public services of electricity. They substitute electricity for charcoal, firewood, and torchlight. Such infrastructure deliveries (substitutes) by the informal private providers in informal areas are beneficial as it does not confer the status of approval of a settlement that is often perceived with the state delivery of infrastructures. The findings of the study revealed that across the case study informal settlement areas, there are no sewer facilities. It was found that people usually limited their

water use, and consequently, occupiers are more likely to rely on open space dumping and on-site sanitation mechanisms.

Yet, the study found that peri-urban dwellers without access to formal infrastructure provisions often pay exorbitant prices for water and electricity to their sellers. For example, across the case study areas, urban households without access to piped water often pay more than 17 times the piped water price to buy water from informal private vendors. Similarly, households without access to electricity often pay more than 3 times the electricity price to buy electricity from informal vendors per a single 60 watts electric bulb. Thus, the strategies people use are partially feasible substitutes for public services. However, as the findings of the study disclose, the bulb price for illegal electricity is not the same across all peri-urban informal settlements. Given that quality fluctuates with distance from the network, the price for illegal electricity is not uniform. For these reasons, the sellers of informal connections impose an additional charge of 18 to 28 Ethiopian Birr per 60-watt fluorescent bulb per month to their legal owners. This amount is determined by the physical distance and topography of each peri-urban informal settlement.

To this effect, for example, households are using candle, firewood, kerosene via light, solar energy, and battery flashlight as a source of light when electricity is absent or when power is blackout. This is the way of substituting electricity with the available alternatives as enabling strategies. Similar trends were also observed in other studies ([Mutisya & Yarime, 2011](#)).

Some of the foremost local actors who are playing a leading role in ensuring access to basic infrastructures include informal private water and electricity vendors, corrupt local state actors, consumers (buyers), lobby groups (special interest groups), and people in local traditional institutions. In the absence of appropriate official rules, the suppliers and clients framed coping strategies that enable the informal settlers. The study findings confirmed that a variety of factors shape the actors' strategies (e.g., financial resources, social capital, access to government institutions, etc.); no actor is powerless. A similar procedure was used to deliver urban infrastructure in informal areas ([Leduka, 2004](#); [Scott, 1985](#); [Tripp, 1997](#); [Vargas & Urinboyev, 2015](#)).

This result is also in line with prior studies that tend to find relatively high support for infrastructure provision in informal settlement areas. This has the consequence of the

entry of all marginalized and/or corrupted State actors (Nijman, 2008; Slavnic, 2010; Winayanti & Lang, 2004; Yirgalem, 2008). In this regard, informal settlers who are often neglected by the public infrastructure services can be better served by NGOs, CBOs, the private sector, and so on (Narayanan et al., 2017). For instance, in the absence of publicly provided piped water, private water vendors, who in some instances charge several times higher the price per liter of public supplies, are common at the edge of informal settlements (Dillinger, 1994; Hardoy & Satterthwaite, 1993). In informal settlements, infrastructure delivery does not have to conform with formal rules (Leitmann & Baharoğlu, 1999). This ultimately creates the divergence between the legal law and informal infrastructure provision in the selected peri-urban areas of Woldia. This is why, it is important to understand how local actors in the peri-urban informal built-up areas go about accessing and securing urban infrastructure in the existing urban development policy.

4.2.3.3 Actors involved in accessing and securing infrastructure

A number of actors play a role in accessing and securing infrastructure in peri-urban areas, including private water vendors, private informal electricity dealers, people from traditional institutions, special interest groups, and corrupt government officials. Each of these actors has different motivations and interests, complicating ensuring safe and sustainable access to infrastructure. Private water vendors, for example, are motivated solely by profits and may not prioritize public health or safety. Corrupt government officials may prioritize their own interests over the public good. These factors contribute to the complexity of securing safe and sustainable infrastructure access in peri-urban areas.

4.2.5 Past and current land management practices in Woldia

4.2.5.1 Land management practices in General

Land management policies have proven to fall well short of responsible governance, particularly when it comes to informal settlements in periphery areas (Adam, 2014; Alemie et al., 2016). The history of urban land governance, discussed in this work, dates back to the Haile Selassie regime using mainly the *rist* and *gult* as analytical tools. It forced a large part of the urban population to live in crowded and congested dwellings due to the widespread

insecurity of the *rist* and *gult* system, which resulted in a shortage of residential housing. They concentrated the ownership of urban land only for a few.

Additionally, all urban land and extra houses owned by the monarchy within the boundaries of townships and municipalities were nationalized without compensation through Proclamation 31 of 1975 (also known as the Derg's radical land policy shift). This in turn led to the chronic housing shortages as well. Furthermore, an assessment of the lease system as an active urban land management policy instrument in place today, it is found that it brings lots of injustice in it as it makes the town dwellers disproportionately beneficial and exacerbates the rise in the price of the urban land market thereby enflamed informal settlements.

Broadly speaking, the review of previous research in Ethiopia suggests that the proliferation of informal settlements in most urban areas of the country was the results of the long problematic history of land law regimes in place and public policy failure for a significant segment of the urban poor population. Previous regimes have often failed to provide adequate housing for the urban population, which has led to an increase in informal settlements or slums. The land tenure system of the imperial period, the land policy of the Derg, and the current urban land lease policy resulted in the state 'landlordism' (the state ownership and management) by allowing the state the power to distribute and redistribute land. That is, today's proliferation of informal settlements in the urban area is not only the ill side of public land management practice/policy of today but also the outcome of cumulative effects of inherent old-age urban land management practices/policies pursued by successive regimes.

4.2.5.2 Intervention Practices in managing informal settlements

The exploration of urban land management through different regimes revealed that the administration of urban municipality has responded to the growth and evolution of informal settlements primarily through negligence, demolition, harmonization, and regularization. Based on interviews with individuals, I have cited several reasons for implementing governance measures. Laying at the heart of why such controlling measures, among others, principally demolition and regularization have been taken include the following:

A. Social Impacts

- To ensure the development of settlements that are conducive to living;
- To prevent the development of settlements, which are barren of social services such as health centers, educational centers, police stations, fire protection, water supply institutions... etc.;
- To ensure the better installation of urban infrastructure in the town by reducing the chaotic densification of settlements;
- Because informal settlements are frequently areas of insecurity, violence, crime, and drug addiction and to be free from such negative externalities.

B. Economic Impacts

- Informal settlements affect the internal revenue of the town administration due to no payment of bills and taxes, thereby reducing the local, regional and national income;
- Because informal settlement deteriorates the developable situation of urban areas;
- To ensure the equitable distribution of resources among the urban population;

C. Ecological Impacts

- To ensure planned, ordered, and directed urban expansion or to prevent anarchic urban growth;
- To prevent environmental degradation when settlements encroach forest-reserved areas;
- To prevent illegal settlements expansion in environmentally sensitive areas that are susceptible to landslide, rock fall, etc.;
- To reduce the negative externalities that can result in the wider public interest;
- To make the urban areas attractive and conducive for a living;

D. Political Impacts

- Informal settlements result in insecurity and political unrest, thereby political life is somewhat restrained;
- Rivalries and conflicting interests undermine the solidarity that is needed to bring about political change;
- The informal settlers can use their democratic rights to influence the political agenda despite being excluded from services by their place of residence.

- Government policies and strategies are suspicious of most informal settlers, and they are reluctant to cooperate with them. This is because informal settlers are often skeptical of the government's intentions, as they are often excluded from policy decisions and are not given enough resources to help them improve their living conditions.

The intervention measures taken to ameliorate the outgrowth of informal settlements in the peri-urban areas of Woldia were also in line with literature that is envisioned by policymakers and scholars, such as negligence (Acioly, 2002; Durand-Lasserve & Royston, 2002; UN-Habitat, 2009), eradication and bulldozing (Abbott, 2002; Harrison, 1992; Khan, 1994; Mangin, 1967; Perlman, 2010; Potter & Llod-Evans, 1998), rustication and restricting rural-to-urban migration (Chan, 1992; Cheema, 1993; Mangin, 1967), upgrading (Abbott, 2002; Acioly, 1992; Fekade, 2002), and regularization (Acioly, 2002; Arimah et al., 2009; Huchzemeyer, 2011; Serageldin, 1991). Yet, most, if not all, of these controlling measures taken by the town administration, have contributed to the proliferation and development of illegal settlements instead of controlling them. In comparing various urban land governance regimes, the research output revealed that the conventional informal settlement managements used so far are ineffective, weak, and have neglected to eradicate the ills of these settlements. That is, the intervention approaches already mentioned above apply as much as in this discussion as they do anywhere else were unsuccessful. This ineffectiveness is also consistent with the literature (Arimah et al., 2009; Ferguson, 1996; Hardoy & Satterthwaite, 1993; Khan, 1994; Martine & McGranahan, 2010; Perlman, 2010; UN-Habitat, 2009). As a matter of witness, informal settlements are in their perpetuation.

CHAPTER FIVE: POTENTIAL SOLUTIONS TO AMELIORATE THE GROWTH OF INFORMAL SETTLEMENTS

5.1 Introduction

Informal settlement development and peri-urban land management is an extremely complex system that encompasses interrelated activities and actors. No single urban planning strategy and policy will solve the deep roots of informal settlement problems. Therefore, there is no unique solution to address the multifaceted challenges of such settlements. Yet, to make the most of the urban advantage, spatial strategies, and plans need to be considered as *proactive solutions* for informal settlement development in the peri-urban areas of Woldia in particular and other peri-urban areas with similar socio-economic and cultural conditions in general. To this end, based on the local context of the study peri-urban areas, the following are potential solutions: urban planning and enforcing land use regulations, urban land and housing affordability, urban renewal, infilling unused land, planning for the development of rural-urban linkages, building and strengthening Land Information Systems (IMSs), institutional reforms, and above all breakup corruption chains.

5.2 Potential solutions

5.2.1 Urban Planning and enforcing land use regulations

Urban planning provides an opportunity to address and solve the numerous challenges found in informal settlements, paving the way for a more prosperous and equitable future. Through urban planning, public authorities and other stakeholders can work together to develop comprehensive strategies that focus on improving access to basic services such as water, sanitation, and electricity. In addition, they can provide job opportunities and create safe and affordable housing. By taking an active part in urban planning, decision-makers can create healthier and more equitable living areas, enabling people to access essential services, and resources and build more meaningful and fulfilling lives.

Urban planning and land use regulations also influence informal settlements. Woldia's peri-urban areas are burdened by urban planning and land use regulations that do not match urban reality. This means that even if regulations are in place, they may not be implemented or upheld. This means that the controlling mechanisms of informal settlements

are often not planned ahead or even tolerated. This lack of planning and tolerance has a dramatic effect on the ability of informal settlements to flourish and be continued.

This can lead to chaos, instability, and lack of security for those living in the informal settlements, impacting their health, economic circumstances, and overall quality of life. This limits their access to basic services and infrastructure and makes them more vulnerable to displacement. This can have serious negative impacts on the people living in these settlements. This also leads to an increase in informality with limited access to basic services and infrastructure. This often leads to a lack of tenure security, and residents can be subject to eviction at any time. This can be exacerbated by the lack of access to other basic services such as water, sanitation, healthcare, and education.

Urban planning should address informal settlement challenges through proactive urban planning, monitoring, evaluating plan implementation, and land use regulations. These steps can help to reduce the negative impacts of informal settlements, such as overcrowding, inadequate infrastructure, and poor sanitation. Proactive urban planning can help to identify areas at risk for informal settlements and create strategies to prevent them. Monitoring and evaluating plan implementation can help to ensure that plans are being followed, and land use regulations can help to ensure that informal settlements don't become permanent. Furthermore, informal settlements can be more vulnerable to natural disasters due to their lack of infrastructure. This further increases the vulnerability of those living there. Such conditions contribute to the precariousness of living and working in informal settlements and further entrench poverty in these areas. As a result, informal settlements are extremely challenging environments to live in.

Municipal authorities often have limited access to specialist legislative expertise, and struggle to respond to these situations. The multiplicity and rigidity of laws and regulations compel citizens to pursue unauthorized routes to conduct land and property transactions. This is to do business, earn a livelihood, and access basic services. As a result, parallel systems flourish and urban informality becomes the norm.

Urban planners should integrate spatial planning with fiscal, sectoral, and institutional planning. Besides, it is advisable to rethink public spaces such as parks, green areas, and streets. In addition, they should monitor land use, developed land supply, shelters, community facilities, and utility usage. Based on this systematic monitoring of land prices,

rents, shelter prices, property taxes, and other local taxes. In addition to improving towns' visual character, well-designed public spaces can stimulate economic activity and improve functionality.

5.2.2 Urban Land and housing affordability

Urban land and housing affordability are growing problems in Woldia. Urban land and housing affordability are the deeper root problems of informal settlements growth in Woldia's peri-urban areas. Access to land for housing is becoming increasingly limited in the town, due to rising urbanization and population growth. This limits the housing supply, which leads to higher housing prices. This can make it difficult for people to find affordable housing, and it can also lead to increased homelessness. As a result of the lack of access to land for housing, many people particularly the lower and middle-income groups tend to move to informal means. To meet the challenges of informal settlements through the development of urban plans, access to housing is a precondition and a planning priority area.

To address current housing challenges, local authorities should put housing at the forefront of their urban planning by placing people and human rights in sustainable development. That is, local authorities must explore innovative solutions that expand access to land for housing. For instance, local authorities could consider vertical expansion that accommodates the town's population and growth without sacrificing space and peri-urban agricultural land. Moreover, it is also important to develop incentives for the private sector to build affordable homes, and infill development into residential units. These solutions include increasing density and taking a more efficient approach to land use. This can help everyone has access to safe and affordable housing.

Besides, affordable housing models ought to be considered. Affordable housing models are types of housing that are designed to be affordable for low- and moderate-income households. There are a variety of affordable housing models, including public housing, low-income housing, and cooperative housing. Affordable housing models are designed to provide low-income households with access to safe, secure, and affordable housing. Affordable housing models aim to address the issue of housing insecurity by providing low-income households with access to affordable housing. These models can include subsidies, public housing, and other tools that help to make housing more accessible

to those who need it. Subsidies and other tools help to make housing more affordable by reducing the cost of rent, providing additional funds for repairs, and allowing for the construction of new units. Public housing provides a more secure and stable form of affordable housing that can help low-income households stay in their homes for longer periods. All of these models work together to address the issue of housing insecurity and provide people with access to the housing they need.

To make urban affordable housing more accessible to those who need it, local governments should prioritize increasing the availability of low-cost housing, incentivizing developers to build more affordable housing units, and providing more assistance to low-income households. By increasing the availability of low-cost housing, low-income households can have access to housing they otherwise couldn't afford. By incentivizing developers to build more affordable housing units, local governments can create more affordable housing options for those in need. Lastly, providing more assistance to low-income households can help to bridge the gap between what they can afford and housing costs, making it more accessible. As a result, low-income households can have access to safe, secure, and affordable housing, alleviating the housing crisis and bringing much-needed stability and security to the lives of families in need.

5.2.3 Urban Renewal

Urban renewal is the other option to house many people who are in need of residential areas. Urban renewal is the process of redeveloping crowded areas to improve their economic viability through infrastructure investment and blight elimination. It is often used to improve the quality of life in cities by creating new jobs, housing, and transportation options. This will attract new businesses and residents. Urban renewal as a way of handling informal settlement outgrowth must be considered. Areas such as *Mugad*, *Abadinsa*, *Islam Kebele*, parts of *Adago*, and around *Pissa* need urban renewal. Through urban renewal strategies, these areas could be transformed into vertical construction as a vertical village, increasing the town's housing stock. This in turn meets some housing needs of society. As a result, when some portion of society relocated to these areas through urban renewal strategies, the pressure on the flourishing of informal settlements declined thereby reducing informal settlements. Increasing the housing stock of the town enables people who would have

otherwise moved into informal settlements to find a place to live. This helps to spread out the population and creates a more even distribution of people. This reduces the development of informal settlements as demand meets housing demand and reduces pressure on informal settlement areas.

5.2.4 Infilling unused land

The other option for reducing informal settlements is to use unused urban land (infill unused land) in established urban areas for housing construction. Infill unused land is the redevelopment of vacant or underutilized land within an existing urban area. The goal is to create more efficient and sustainable urban areas by increasing the density of development and making better use of available space. In turn, this contributes to the town's housing stock. This is a great way to create more affordable housing, increase density, and stimulate economic development. It also helps to reduce sprawl and environmental damage from land clearing. Using unused land within existing urban areas can decrease the need for people to move to the outskirts of towns, reducing the formation of informal settlements.

Infill development also provides an opportunity to create a more efficient and compact urban form, which reduces transportation costs, increases access to employment opportunities, and minimizes the need for additional infrastructure investments. Additionally, redevelopment of existing urban neighborhoods can create more affordable housing, by unlocking access to existing infrastructure and services. Infill development can also help to reduce sprawl, by making use of existing urban land, as opposed to suburban land. This can reduce the need for long and costly commutes, and allow for more efficient use of already existing resources. This can also reduce the environmental impacts of development, such as air and water pollution, soil erosion, and habitat destruction. Additionally, it can help to create vibrant and livable communities, with access to amenities such as parks, public transportation, and other public services.

5.2.5 Integrating rural-urban through planning

The study's findings revealed that the linkage between urban and peri-urban areas of Woldia is too weak. They are disjointed in that while urban planning takes place, due emphasis is given to the urban side without considering the suburban side. This lack of attention has

resulted in a disjointed relationship between these two areas, leaving the peri-urban areas neglected and underserved. In reality, urbanization should not rob rural communities of the benefits of urbanization.

Urban planning can help to bridge the gap between rural and urban areas and create solutions that address informal settlement challenges. Urban planning should strive to create equitable urban-rural linkages, promoting the growth of both urban and rural communities while minimizing the harmful effects of informal settlement development. Urban planning should be done with the intention of not only developing cities but also improving the quality of life in rural areas by providing benefits such as access to infrastructure and services.

Yet the study revealed that even though urban and rural areas depend on each other, the peri-urban/rural areas often lag behind synergies between urban and rural communities and spaces. Urban and rural areas should not be treated as separate entities when development plans, policies, and strategies are made. Thus, in order to create a more cohesive and sustainable community, there is need for a more comprehensive approach to urban planning, and one ought to take into account both the urban and rural sides. To this end, urban planning strategies should take into account urban-rural linkage to meet informal settlement challenges through urban planning. By doing so, the gap between the urban and peri-urban areas can be bridged, leading to a more integrated and equitable development for all.

5.2.6 Building and Strengthening Land Information Systems (IMs)

Developing and enhancing Cadastral Systems is beneficial to both the public and private sectors. It can help to prevent land disputes, document property ownership, and streamline the process of buying and selling land. It can also help to improve the accuracy of land surveys and provide a reliable source of data for decision-makers.

A cadastral system combines the cadastre, with its spatial focus, and the land record, with its legal focus. Hence, cadastral systems link people to land (spatial component) and rights (legal component) as well as other (off-register) land-based interests, through accepted rules defining the relationship (land tenure). To this end, by linking people to land and their associated rights, a cadastral system provides an organized and structured method of understanding and recording the ownership of land.

Accurate and up-to-date cadastral information is essential for efficient land administration. It is also a key tool for spatial planning, land management, and the sustainable use of natural resources. Furthermore, it is a basic requirement for the successful implementation of land reform. Furthermore, it will help to ensure that land reform is implemented effectively and transparently. With the availability of reliable and comprehensive data, citizens will be able to assess the suitability of land for different activities and determine the best use of their land. This will help to ensure that land is used efficiently and sustainably, and that land reform is carried out in line with the goals of the government. Additionally, it will help to ensure that land transactions are carried out in a transparent and accountable manner thereby regulating the flourishing of informal settlements.

Cadastral information must also be made accessible to the public, in accordance with open data principles, to ensure transparency and accountability in land administration. This will enable citizens to make informed decisions regarding their land rights and responsibilities. By making cadastral information accessible, it can become an essential part of long-term planning, as well as monitoring and evaluating land use. It will also ensure that citizens are aware of their land rights and can exercise them accordingly.

Cadastral systems facilitate settlement mapping, settlement profiling, household enumeration, and household numbering. This is essential to regulate informal settlement growth. Without a cadastral system, it is difficult to keep track of land boundaries and ownership, which means that informal settlements can grow unchecked. With a cadastral system in place, it is possible to monitor and regulate the growth of informal settlements, thus helping to ensure that the land is used responsibly. By having an accurate record of land boundaries and ownership, it is easier to enforce land use regulations and ensure that the land is being used sustainably. This helps to protect the environment, prevent land disputes, and make sure that the land is being used for the benefit of the community. Additionally, it can help to ensure that informal settlements are not growing out of control and are being built in accordance with regulations.

Compared to the traditional land recordation system, this cadastral system creates realistic land information as well as a land management system. That is, by using cadastral land registration, data can be more accurately represented, more easily accessed, and used

for a wider variety of purposes than traditional analogue data. Such a cadastral system as a multipurpose cadastre system, for example, not only provides a legal record of property rights (the legal cadastre) but also enables the urban center to have information on its land and property (fiscal cadastre). Hence, the process of accessing information will be easy and timesaving, particularly when staff turnover is the manifestation of the municipality. This is also one of the strong points of the enforcement of the land use plans of the town. This controls the haphazard urban land use plan changes without publicization as well as ensures accountability on the part of public officials.

Most importantly, the cadastral system provides the context for understanding how urban land administration functions (land tenure, land use, land value, and land development) are essential in reducing the outgrowth of illegal settlement at the municipality level once the urban cadastral system is in effect and gives better systems of security and tenure. Moreover, in the cadastral system, information is easily accessible and makes it difficult for corrupt government officials to manipulate the land records easily as of the analogue documents. People who are entering into the informal occupation could be captured easily as far as access to cadastral information is available.

5.2.7 Institutional Reforms

Informal settlements are also fueled by institutional flaws. To this end, to ameliorate the growth of informal settlements, in addition to the above, institutional reforms as a strategy for action and as an opportunity to promote consultation with urban stakeholders are needed.

Institutional reforms are essential for the successful implementation of public policies as they help to create an enabling environment for the effective functioning of public institutions. Reforming institutions should address the need for transparency, efficiency, and accountability in order to create an environment where citizens can trust their government. Additionally, reforms should be tailored to the specific context of the realm, taking into account the political and cultural landscape. Local leaders should be included in the reform process and be given the tools and resources to implement the changes. This will ensure that the reforms are rooted in the community and can be sustained over time. Finally, reforms should be evaluated regularly to measure their effectiveness and to make sure they are still relevant to the local context.

In doing so, the scope of responsibilities of the stockholders ought to be designed thereby auditing existing urban land administration institutions. The stockholders should have a clear understanding of the roles and responsibilities of urban land administration institutions that are already in place, and make sure those roles are being fulfilled appropriately. An audit of these existing institutions would provide a better sense of what needs to be done to ensure that they are functioning correctly. This audit would help to identify any gaps in the current system, such as a lack of efficiency or inadequate resources, which could then be addressed in order to improve the overall effectiveness of the urban land administration system. It would also provide clarity around the roles and responsibilities of each institution involved, ensuring that they are working together in the most effective manner possible. As such, this audit is an essential step in improving the urban land administration system, providing a comprehensive assessment of all involved institutions and pinpointing necessary change

To equip and assess their impact on the functioning of urban land management, training or capacity building of local officials and private local actors such as lawyers, legal administrators, and judicial decision-makers should be implemented.

5.2.8 Break up corruption chains

Informal settlements are often caused by corrupt practices, such as bribery and land grabbing. Several factors can foster corruption in the land sector of Woldia's peri-urban areas. One of the issues that aggravates the growth of informal settlements due to high levels of corruption is the lack of responsibilities, and restrictions defining land tenure. This in particular prevails in the peri-urban areas. Corruption in the form of bribery and other forms of malfeasance allows people to purchase land illegally, allowing them to avoid the formal process of purchasing land. This leads to a lack of regulation and enforcement of the land tenure process, resulting in a lack of accountability and an increase in informal settlements.

Different strategies should be designed to address land sector corruption. One way to address this problem is to break up corruption chains. Therefore, corruption chains must be broken to prevent further growth. Transparency and accountability must be enforced to achieve this. Specifically, the breakup of corruption in the land sector could be tackled by improving land record systems; public access to land record systems; better public

awareness of policy and plans; development and implementation of service standards, and enhanced oversight of these bodies. Taking these proactive steps can help to reduce corruption in the land sector that fueled informal settlement growth.

Improved land information systems that are readily accessible by the general public will be critical to building community trust in the land sector agencies. Having access to reliable and up-to-date land information systems can enable citizens to better understand what is happening in the land sector and how their rights are being protected. It can also help to reduce instances of corruption and ensure that land transactions are conducted in a transparent and accountable manner. Furthermore, there must be a clear definition of transitional arrangements, particularly in peri-urban urban areas. This is to ensure that citizens who have lived in peri-urban urban areas for extended periods of time are not suddenly displaced. In addition, the transition process is fair and transparent. It is also imperative to provide citizens with the necessary information and resources to understand the changes and ensure a smooth transition.

Similarly, there should also be regular reporting to decision-making bodies on the status of informal settlements. This should include data on how many people live in informal settlements, the services they receive, and any other relevant information. It should also include any actions taken to address the issues and any progress made in implementing solutions. Such information will guide decision-makers in policy-making.

Finally, having an independent agency to investigate complaints can help to quickly identify and address corruption issues. By creating an agency that is separate from the government, the public has confidence that the investigation is unbiased and will be conducted fairly. This agency should also be given the power to take action against any wrongdoers, such as by suspending or even dismissing those found guilty of corruption. This will ensure that those responsible are held accountable and that the public can trust in the integrity of the government.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The study was conducted to examine the key triggering factors causing the growth of informal settlements and analyze the role of local actors in accessing and securing land and infrastructure in the peri-urban areas of Woldia. To achieve the objective of the study, five basic research questions and eleven sub-research questions were designed. A mixed-methods case study was conducted and I employed a survey technique for collecting data. The questionnaire survey, interviews, and observations were conducted for data collection, and document analysis reinforced these data (including web sources). There has been a total of 336 participants in various categories who have taken part in this study.

To compare the findings and results to the literature as well as to guide the study's line of inquiry, the study adopted the Actor-Network Theory (ANT). Further to this, the study used the societal non-compliance and institutional analysis that aid to explain in underpinning rules and principles that govern actors' behavior in accessing and securing urban land and infrastructure in the urban built environment.

The findings of this study pointed out those socioeconomic and demographic factors that have played a prominent role in shaping the peri-urban informal settlements in the study areas. Although there are variations in the extent of influences, what is clear, then, is that, low-level income and effect of unemployment, the recent escalation of lease price of urban land, and the ever-increasing urban population have been responsible for reducing the supply of formal urban land, and making formal ownership of land increasingly difficult for a growing number of urban residents. The study found that an inefficient formal land provision, lack of housing affordability, and the rise in the rental price also compounded this situation.

The study also found that, as a result of the maladministration of corrupt government officials, the existence of legal loopholes, and technical failings, the chaotic arrangements of settlements on the peri-urban areas and central parts of Woldia give a signal of poor (peri)urban land administration. The study found that the urban land management system of Woldia is characterized by uncoordinated land use planning, conflicts with land-use changes, lack of modern cadastral systems, and poor land registration systems due to

maladministration of corrupt government officials, the existence of legal loopholes, and technical failings.

Further to this, the study findings revealed that, as a result of the authority vacuum between rural and urban land administration institutions, many private constructions are being undertaken without proper construction permits even if the concerned bodies are sending out frequent warning letters to the builders. In some instances, the catalyst of this process appeared to be forged land documents, the use of official stamps, and recommendation letters from corrupt public officials given to peri-urban builders, regardless of the master plan/structure of the town. The study also found that due to the fragile government structure and political instabilities, frequent human turnover, and lack of institutional memory in the land sector of the town, the urban administrators cannot do much to regulate the expansion of informal settlements. It is also found that land regularization policies also provoked the outgrowth of informal settlements in the peri-urban areas. In this regard, the study acknowledged that land regularization has the effect of stimulating the process of informal settlement development in the peri-urban areas of Woldia.

An important outcome of this was that people who did not achieve through the formal process, thus, have resorted to land through informal means. Besides, many local actors such as land brokers, peri-urban farmers including other settlers, land speculators, rural land administration representatives, retired persons, individuals from local traditional institutions, and local government officials with a range of interests are involved in land access and securing activities. In this regard, much of the time, by using clientistically networks and common tricks, the local actors have transferred lands informally, thereby enflaming informal settlements. For instance, peri-urban farmers who sold their land claim that they have transferred part of their land to their family members as a gift, inheritance, or through debit bondage.

It was also found that with the current policy in place, informal settlers are unlawful; hence, it is thought that it is not only the occupation of the site or the construction of the shelter or both which is illegal but the installation and consumption of physical infrastructures are also illegal. As a result, compared to the central parts of the town, peri-urban areas which often lie outside the formal infrastructure network are characterized by sporadic water supply, frequent cuts and voltage fluctuations of electricity, poor solid waste

collection practices, non-existent or unmaintained stormwater drainage, and absence of sewerage systems.

Yet, it was found that informal accessing and securing of infrastructure is happening. As a result, informality is at play in the matters of infrastructure delivery via negotiation, collaboration, and use of organizational and financial strategies. In this regard, the research also found that informal settlers get urban infrastructures and services either illegally or at higher prices, or have responded by seeking substitutes. It was also found that the key local actors that facilitate access to basic infrastructures in the informal areas include informal private water and electricity vendors, corrupt state actors, consumers, lobby groups, and influential individuals in local traditional institutions.

The findings of the study also have explained the different urban land management approaches employed by Haile Selassie, the Derg, and contemporary regimes in the context of the flourishing of informal settlements chiefly in the urban areas of Ethiopia in general and Woldia in particular. Having reviewed the past and current land management measures taken by the three regimes, it is found that today's proliferation of informal settlements in Woldia is not only due to bad public land management practices/policies but also due to the cumulative effects of old-age urban land management practices advocated by successive regimes over decades of years. Currently, it is found that the town administration has been responding to the development and growth of informal settlements, mainly through negligence, demolition, harmonization, and regularization. Yet, most, if not all, of these controlling measures made by the town administration, were found to be inefficient, weak, and failed to tackle the evils of such settlements. As a matter of witness, informal settlements are in their perpetuation.

6.2 Areas for future research

It would be relevant to conduct an investigation similar to this one using land sector corruption data. This would enable us to verify the representations of informal settlement developments. This would be useful for enhancing our understanding of how land sector corruption and informal settlements are related. Therefore, further investigations into the role of land sector corruption in the growth of informal settlements would offer new insights and provide an opportunity to strengthen the findings of this work.

The second area of research I recommend, based on the findings of this study, is to examine whether there is any stratification between the informal settlements in the given locations and the income levels of individuals. So, further research should be conducted to determine if there is evidence of income-based residential segregation between informal settlements.

Finally, I undertook this study on case studies of seven-neighborhood peri-urban areas in Woldia. As in all case study research, the results are biased toward the cases studied. Peri-urban land management practices are heterogeneous in Ethiopia as well. While the seven peri-urban neighborhood areas are representative of the country's tenancy groups and institutional structures, their capacity constraints and customary practices are different across the various peri-urban neighborhoods of Ethiopia. Therefore, further investigation in other peri-urban areas in Ethiopia could be repeated using a similar theme that would give new data, and additional insights, and provide an opportunity to strengthen the findings of this study.

6.3 Recommendations

The study recommends the following:

- In Ethiopia, there is an urban and rural divide in policy and institutional terms. This creates a vacuum zone in peri-urban areas which manifests both urban and rural character at the same time. But there is no policy line to administer these areas where there exist institutional ambiguities or where there is no clear boundary line between the two jurisdictions. Therefore, it is recommended to have a clear and consistent land policy that suits peri-urban land management in addition to the rural and urban land laws.
- Informal settlement regularization in the peri-urban areas of Woldia is often used as a tool for political manipulation rather than as a tool for regulating informal settlement development. As a result, the regularization of informal settlements leads to a further increase in the number of informal settlements. Hence, the public should undertake serious reviewing, monitoring, and evaluation of the national (regional) informal settlement regularization guidelines and legislative lines that provoke further informal settlements. Further, the implementation of regularization must be done with maximum

care and to the level of monitoring the land brokers, powerful individuals, and corrupt government officials.

- It is also found that the lower and middle-income brackets of the urban people are effectively barred by the wrong sides of the lease policy in place. The leasing policy is poor blind or wealthy people biased in affording land for housing. Hence, it is recommended that the lease policy should be revised to the level it supports and ensures opportunities for the urban poor for residential settlement.
- It is also found that since the public is not questioned, the compensation payment paid by the public is extremely unfair and unacceptable to peri-urban landholders. To this end, the implementation is flawed. So, in addition to making viable expropriation procedures and rules, compensation for land should also consider the skyrocketing informal land prices and must also be accompanied by a formal land market to have any meaningful impact. Additionally, landowners must be adequately compensated for any land acquired by the government.
- Informal housing in peri-urban Woldia is a spontaneous response to the state's incapacity to satisfy the basic need for housing or affordable living space in the current process of rapid urbanization. Further, the legal ambiguities/legal loopholes that existed in the legislation of housing cooperatives played a big role in the outgrowth of informal activities. Therefore, the current policies and strategies for providing access land to urban housing such as condominiums and housing cooperatives should be reviewed.
- Policy instruments that are designed to avoid informal settlements growth in various documents do not hold objective meanings. Instead, they are ambiguous and therefore subject to multiple interpretations by numerous state and private actors. Ambiguity broadens the ability of different actors to effectively use these legal loopholes and try to maximize personal gain within a particular context. Hence, this study recommends the need to develop a comprehensive, clear policy, legislation, and legal framework, and procedures to the extent that effectively regulates the outgrowth of informal settlements.
- Findings of this research also indicate that one of the root causes for the expansion of illegal settlement in the peri-urban areas of Woldia is the absence of well-defined criminal law upon illegal builders and actors involved in these informal activities. Hence, to reverse the current alarming rate of informal settlements, particularly in

environmentally sensitive, public, and protected areas, law enforcement and corrective measures should be designed and put into practice for those individuals who open the door for rent-seeking practices and unethical conduct.

- The study, suggested, among other things, that the government enact enabling legislation to make sure that all land sold and unsold within the urban area must be registered. To ensure effective implementation of this policy, the government should provide adequate resources to facilitate the registration process. Furthermore, the government should ensure that they did all land registrations in a timely, transparent, and accessible manner, to guarantee the protection of land rights for all citizens.
- Findings and results of this study disclosed that peri-urban areas suffer from a lack of access to basic urban infrastructures. The cost of providing adequate infrastructure services, particularly in informal areas is significantly higher than in central areas because of the affordability issue. So, this study is critical to informing policy reforms for equitable, inclusive, and sustainable peri-urbanization through access to basic urban infrastructure services.
- This study found that measures to regulate the outgrowth of informal settlements in peri-urban areas of Woldia are not always proactive enough. It is not any more essential to use the conventional informal settlement management approaches, as almost all have evolved unprofitably. It is highly recommended that measures to curb informal settlement growth should be revised. For a solution to this issue, through critical assessments of the main triggering factors, local authorities should take control and a proactive strategy must be developed before informal settlements with all their ills come into being. Above all, there is a necessity for a major policy rethink in the area of informality.

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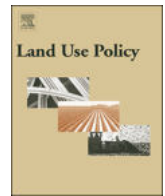
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Drivers of informal settlements at the peri-urban areas of Woldia: Assessment on the demographic and socio-economic trigger factors^{*}



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ABSTRACT

Though Ethiopia is one of the least urbanized countries of the world, its urban areas are expanding rapidly. Woldia, which is a Zonal town is no exception to this trend and situation. As a result of its rapid horizontal expansion and growth, Woldia is currently confronted with different types of urban problems. The emergence and growth of informal settlements is one of these challenges. To that end, this paper investigates the foremost demographic and socio-economic triggering factors that played key roles for the growth of informal settlements at the peri-urban areas of Woldia. In order to achieve the objective of the study, a questionnaire survey covering a total of 244 sample households was carried out in addition to in-depth interviews, FGDs and key informants. Accordingly, the income disparity; the rise in the lease price of urban land, and the meager compensation paid to peri-urban farmers during their lands expropriation are among the key economic drivers for the growth of informal settlements. Similarly, ever-increasing urban population and inefficient land provision, and lack of housing affordability compounded by the rise in the rental accommodation are the other triggers factors. All these factors, among others, point to the fact that socio-economic and demographic factors are all tied to the immediate growth of such settlements. Thus, lands at the periphery are misused and the situation has greatly contributed to the unlawful and rapid expansion of built-up areas in the city administration.

1. Introduction

Urbanization is a global phenomenon (Griffith, 2009; UN-Habitat, 2009). Thus, the twenty-first century is to be dominated by urban living in a way that we have not experienced before (Thorns, 2002). Recently, more than half of the world's total population lives in urban areas, and it is expected to continue during the 21st century with the largest rate of growth experiencing in developing world (Cities Alliance, 2015). Between 2007 and 2025, the bulk of annual population growth in developing countries is expected to be 2.27 % compared to a mere 0.49 % in developed nations (UN-Habitat, 2009). This remarkable increase in the rate of annual population growth and urbanization implies that cities in developing countries are being urbanized faster than cities in developed countries.

If well managed, cities are places of economic and social opportunities. They can serve as centers of production, employment, innovations, and social developments. Thus, urban problems are not only due to urban growth itself but also the misguided policy responses by

countries and unguided expansion of cities (Cheema, 1993; Cohen, 2006). In reality; however, managing growing cities becomes increasingly complex (Cohen, 2006).

Thus, despite their economic and social benefits, a rapid rate of urbanization and unregulated growth of urban areas, particularly in developing countries of Africa, Asia, and Latin America, have led to numerous negative consequences. One of the consequences of the rapid rate of urbanization has been providing residential areas for housing. In line with this, Beall and Fox state that, urban areas across Africa, Asia, and Latin America are increasingly characterized by burgeoning squatter settlements, shanty towns and favelas, fuelling fears about the negative social, economic, and political impact of urban growth (Beall and Fox, 2009).

As one of the urban areas in developing countries, Woldia, a town located in the northern part of Ethiopia has experienced rapid rate of urban growth. Particularly after the 1990s, the peri-urban areas of Woldia are characterized by the informal settlements. As a result of rapid horizontal expansion and spontaneous growth, Woldia confronted

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various types of urban problems. One among which is the emergence and mushrooming of informal settlements at the periphery of the town. The horizontal expansion of Woldia is not properly guided by appropriate planning. Informal settlements are not only found at the peripheral area but they are abundant in the inner part of Woldia. However, the focus of this study is the informal settlements at the peri-urban areas. This is because, among many reasons, informal settlements are mushrooming rapidly in the peripheral area influencing the future development of the town administration and urban form at large.

Research on the causes for informal settlements reveal that these settlements occur mainly due to the political, economic and institutional flaws in developing countries (Huchzermeyer, 2004; Rakodi and Leduka, 2004). Specific foci of empirical studies carried out in developing countries disclose that the urban poor are inadequately housed with formal housing in their urban areas. The low level of income and impoverishment of the majority of the urban population, which in recent years was aggravated by the growth in urban unemployment, hinders access to housing and the formal property market in the developing countries. Thus, most of the formal houses are beyond the reach of the poor, the majority of whom live in informal settlements (Durand-Lasserve and Royston, 2002; Hansen and Vaa, 2004; Huchzermeyer and Karam, 2006).

Literature reviews from sub-Saharan Africa affirm that because of the compensation prices were so low than informal deals, land owners were often refused to be compensated by the state. One instance could be, in Algeria private landowners refused to be compensated their land by the state as prices were too low. Prices offered by the government ranged from US\$ 0.73 to \$5.4 per square meter whereas in the informal deals, depending on the level of services, prices ranged from US\$200.00 per square meter in secondary city centers to \$4000.00 in the center of Algiers. An immediate consequence of such a situation has been the emergence and continue growth of illegal transaction and inflated land prices in the informal market (Farvacque and Mc Austain, 1992: 71).

In addition to reviewing the urban land lease laws such as Proclamation 721/2011 (Federal Democratic Republic of Ethiopia FDRE, 2011), proclamation 272/2002 (Federal Democratic Republic of Ethiopia FDRE, 2002) and Regulation 252/2017 (Amhara National Regional State ANRS, 2017), a few specific studies including land rights and expropriation in Ethiopia (Ambaye, 2015), and transfer of land rights in Ethiopia: towards sustainable policy framework (Daniel, 2015) were also reviewed for sources of information relating to compensation-driven cause of informal settlements on the peri-urban land in Ethiopia. Concerning the results from the literature review of Ethiopia on the magnitude and the fairness of compensation, findings indicate that the amount of compensation are disappointing for the expropriated farmers due to the absence of standardized methods and procedures, (Ambaye, 2015; Daniel, 2015). These shortfalls purports to call up peri-urban farmers to engage in the informal land deals.

Besides the above triggering factors for the growth of such settlements in the context of this study and the competitive situation mentioned under article 11(5) of proclamation 721/2011 of the lease system, the highest bidder is declared as a winner and a leaser (Federal Democratic Republic of Ethiopia FDRE, 2011). This process, in turn, is able to rise the land prices making urban land inaccessible for the low and middle income groups. In this sense, the soared land lease price creates distortions in the land market thereby restricting a large number of low income people from getting the formal land lease. Consequently, continued growth of unlawful settlements becomes unavoidable (Farvacque and Mc Austain, 1992; Fekade, 2000; Ambaye, 2015; Daniel, 2015).

More importantly, urbanization increases the demand for land; more land uses and land interests are involved than rural areas (Alemie et al., 2016:56). In light of this, the most visible and pressing problems which developing countries face are the inability to provide lands for housing in their urban areas. From the literature review of developing countries, previous few works by the authors on urban growth and the

housing problem in Ethiopia (Kebbede and Jacob, 1985), housing the poor in developing World: Methods of analysis, Case studies and Policy (Tippie and Willis, 1991), Planning and housing in the rapidly urbanising world (Jenkins et al., 2007), and Housing Challenges and Opportunities in Sub-Saharan Africa (Giddings, 2007) offer basic information regarding the way by which the ever increasing urban population and unmet demand for urban land and housing affordability cause for the growth of informal settlements.

The main aim of this paper is; therefore, to assess the socio-economic and demographic reasons for the emergence of informal settlements at the peri-urban areas of Woldia. Though these factors are valid in the formation of informal settlements, the extent of the demographic/socio-economic factors causing the formation of these settlements has not yet been well researched in Ethiopia in general. Continuing from the above information, thus, this paper is aimed at discussing on trigger factors such as the existence of income disparity, high urban land and inadequate formal land provision, the inability to win high lease price by low-income people, insufficient compensation paid to expropriated farmers and the rise in the rental housing as the causes for the growth of informal settlement growth. In general, this paper focuses on the above-mentioned triggering factors for the emergence of informal settlement.

2. Methodology

2.1. The study area

Woldia is located between 11° 48'56" N-11°50'39"N latitudes and 39°34'30"E-39°36'56"E longitudes at an average altitude of 2000 m (Fig. 1). As per the data obtained from the urban plan and cadaster office of Woldia municipality, the town is occupying an estimated area of 2001 ha. It is situated on the major north-south highway that links the national capital, Addis Ababa with Mekele in Tigray region. The town is also located at a distance of about 521 km from the national capital, Addis Ababa; 360 km from the regional capital, Bahir Dar; and about 180 km from the tourist attraction site of Lalibela (Fentaw, 2009).

Currently the town is divided into six kebeles, which are the lowest administrative unit in Ethiopia. The study was carried out in selected peri-urban areas in the town: *Adengur and Wassie, Gebrael, Airo, Commanda Teba, Kore and Tinfaz*. Though informal settlements are mushrooming both at the central and peripheral areas of the town administration, for this particular paper, the peri-urban mentioned above are selected. This is because the footprints of informal settlements are observed in these areas more than other places.

Adengur and Wassie peri-urban areas are found in *Adengur Gebrael*

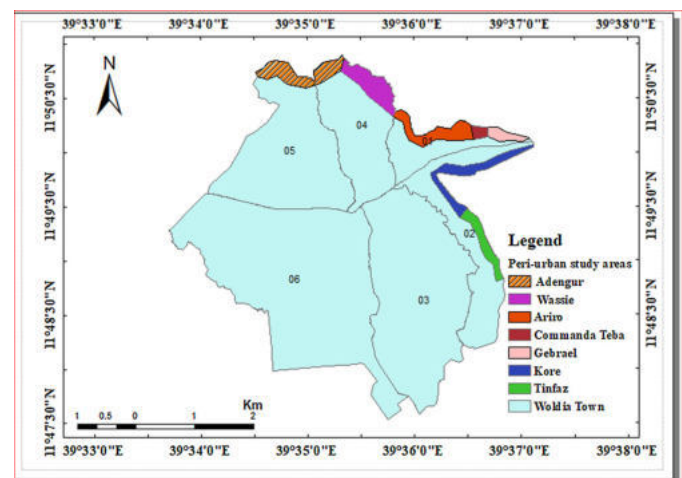


Fig. 1. Administrative divisions and study areas of Woldia.

Kebele(kebele 04 and 05). They are located in the northern part of the town. Ariro is the second peri-urban area, which is located in the northern part of the town, and has a high percentage of informal settlement. Gebrael is located at the foot of Gebrael Mountain in the north eastern part of Woldia. Commanda Teba is the third peri-urban area selected for this particular study. It is located in the north eastern part of the town in between Ariro and Gebrael. Kore and Tinfaz are located in the eastern part of the town at the foot of Gubarja Mountain.

Besides, though places such as *Enkoy Sefer*, *Mechare*, *industrial area* and *Teklehaymanot* are not specific study areas, compensation payment data of *Enkoy sefer* obtained from municipality of Woldia town, and urban land price (both formal and informal) data collected from town wide land brokers and key informants from those areas have been utilized in the main unit of analysis for this study. It was from these associations that the development process of informal settlements along the peri(urban) areas was able to be understood. While *Mechare* and *Teklehaymanot* are found at the south west of *Tinfaz*, *industrial area* and *Enkoy Sefer* are located in the west and south of the case study areas in *Adengur Kebele* respectively.

2.2. Methods of data collection and analysis

In order to achieve the stated objective of the paper, the research used both qualitative and quantitative data but more weight was given to the qualitative method so as to reveal issues that were not easy to figure out in the quantitative methods. Accordingly, in-depth interview, focus group discussion and key informants were employed as a source of data. Respondents were selected on the basis of their degree of involvement in informal settlements, hence, employed purposive sampling technique. To this end, face to face interviews with governmental officials, peri-urban farmers/property owners, land brokers, speculators, and key informants, using structured, semi-structured and unstructured interviews were held. These methods were also supported by document analysis such as the legal frameworks and data obtained from questionnaire (both open and close ended) administered to peri-urban settlers. Consequently, triangulation methods have been used to avoid bias and subjectivity.

In order to decide on sample population for questionnaire administration, there are no official data about the actual number of informal settlers. Thus, a sample size determination formula developed by Cochran (1963:75) has been used.

$$n_o = \frac{z^2 pq}{e^2}$$

Where n_o is the sample size, Z^2 is the value of the normal curve that cuts off an area at the tails ($1 - \alpha$ equals the desired confidence level, e.g., 95 %), e is the desired level of precision, p is the estimated proportion of attributes in the population, and q is $1-p$. The **Z value** is found in statistical tables of normal curve.

Municipal experts from Woldia town estimated that almost 80 % of the settlements at the periphery areas including the study areas are dominated by informal settlers. These peri-urban settlements are homogeneous in their characteristics of informality. I used this figure from municipal experts to determine sample size for questionnaire administration. In doing so, since the value of p is 0.80 (population with the characteristics of informality), the value of q (population without the characteristics of informality) is 0.20, and with a 95 % confidence level and $\pm 5\%$ level of precision, the sample size is found to be 246.

$$n_o = \frac{(1.96)^2 * 0.80 * 0.20}{(0.05)^2} = 245.86 \approx 246$$

But the final analysis has been conducted on 244 sample respondents as two questionnaires have been omitted due to misinformation. In addition 87 people from government officials, land brokers and speculators and key informants were interviewed. All in all,

Table 1

Categories and number of sample participants for data collection.

| Categories | Number |
|----------------------|------------|
| Government officials | 63 |
| Land brokers | 5 |
| Land speculators | 2 |
| Key informants | 8 |
| FGDs | 9 |
| Peri-urban settlers | 244 |
| Total | 331 |

Field survey.

a total of 331 participants in various categories have been involved in this research as shown in Table 1.

The author has employed 244 household survey data in addition to the data gathered from interviewees from government officials, land brokers, land speculators, key informants and Focus Group Discussions (FGDs) so as to show how income disparity is one of the causes for the growth of informal settlements. Thus, except for discussion on income disparity, most of the analyses in this study were drawn from 87 individuals.

3. Theoretical perspectives on causes for informal settlements

Urbanization requires enormous amount of land (Davis, 2006; Alemie et al., 2015). As a result, the consumption of the rural land by urban areas will likely to double in the next 25–30 years (Davis, 2006). The rapid urban growth generates a dramatic increase in the demand for land for housing, infrastructure and service needs. But in the rapidly urbanizing countries of developing world, large numbers of residents are left without adequate shelter, while the haphazard patterns of urban growth have caused economic inefficiency, environmental degradation and human misery (Devas and Rakodi, 1993).

There are several definitions of informal settlements. But in this paper, informal settlements are defined as those settlements which include (i) construction on plots for which no legal land rights exist; (ii) construction on legally held plots, but outside of planned territories, and (iii) construction that is not in compliance with land use requirements and/or construction standards (Gatabaki-Kamau and Karirah-Gitau, 2004; Cities Alliance, 2015). Accordingly, nowadays, a rough estimate of 80 % of the peri-urban population of Woldia lives in the informal settlements. These informal settlements have been emerged due to several factors. Among which, the demographic and/socio-economic related factors are the focus of this study.

In describing the causes for the evolution of informal settlements, a number of theories have been developed. Since the evolution of informal settlements vary spatially and temporary, the theoretical perspectives on the causes for the evolution of informal settlements are also varying both in developed and developing countries. Concerning the evolution of informal settlement in developed nations, different scholars list some basic theories such as the Chicago school of thought, Alonso neo-liberal theory and the post-modern theory of urban landscape. The Chicago School of thought uses differences in income levels of people as contributing factor for the growth of informal settlements (Katz, 1986). The Alonso neo-liberal theory tries to discriminatory urban housing regulations and public spending that fail to address the housing needs of poor urban dwellers who cannot afford a formal dwelling as the cause for the emergence of informal settlements (Abrams, 1964; Stokes, 1962). The post-modern theory of urban landscape uses skills segregation within urban spaces as the triggers of informal settlements (Abrams, 1964).

With respect to the causes in developing countries, there are four main theories of informal settlements. These are the land management theory, the colonial legacy theory, the inadequate economy theory, and

the perpetuate demand and supply disequilibrium theory.

While the land management theory relates to the institutional flaws or defects to manage the urban land (Devas, 2004) as the causes, the colonial legacy theory relates the development of informal settlements to political and historical factors especially colonialism, postcolonial practices, and civil and political instabilities (Roy and Al Sayyad, 2004). The inadequate economy theory highlights that socio-economic factors play important role in the development of informal settlements (Steyn, 2003). The other theory, the perpetuate demand and supply disequilibrium theory suggests that the imbalance between demand and supply of urban commodities such as land, services, and infrastructures forms the basis for informal settlement growth (Abrams, 1964). The implication is that theories for the emergence of informal settlements both in developing and developed nation are numerous but they interconnected and multidimensional in nature.

Though there are differences in emphasis, most theories seem to accept the importance of social and economic factors for the growth of informal settlements. Especially, the inadequate economy theory and the perpetuate demand and supply disequilibrium theory focus on the socio-economic indicators. The inadequate economic theory stipulates that one of the major housing problem is the shortage of affordable housing for the urban poor- the low income majority. Ability to obtain land cheaply has been identified as important for house ownership. Consequently, formal housing is both expensive and unachievable relative to the wage levels. As a result, the low income majority households have found themselves in the informal areas. Similarly, because housing programmes and regulations fail to address the housing demands of the poor urban dwellers, urban dwellings in developing countries of Africa have been built in squatter settlements on peripheral or unused land, or found rented rooms in the squatter settlements (Tippie and Willis, 1991). Therefore, they are the theoretical framework for this study.

Some of the major social and economic indicators that have emerged from this perspectives are low income, insufficient compensation, population growth, housing affordability and rental price. The combinations of these socio-economic indicators adversely affect people's ability to own houses of their own and reinforce for the flourishing of informal settlements at the peripheral areas of Woldia.

4. Results and discussion

4.1. Income disparity

Low level of income is one of the main reasons for the emergence of informal settlements in the urban areas of developing world (UN-Habitat, 2014). In societies with wide disparities in income and wealth, the degree of residential and land-use segregation is likely to be very large (Gilbert and Ward, 1985). Woldia, a town in a developing country, is no exception to this reality. Low level of income is usually considered at the center of informal settlement. To build a residential house in a formal and planned area, one needs to have adequate income to lease a plot of land or buy an officially constructed house. In Ethiopia, currently, urban lands are allotted either through allocation/allotment, or via tender through the lease system. Therefore, where lands are in need by the urban dwellers for residential uses, they are given through these two principal mechanisms.

To look into the effect of income disparity for the development of informal settlements at the peri-urban areas of Woldia, a standardized World Bank's income classification is used. The World Bank assigns the World's economy in to four income groups: low income, lower middle income, upper middle income, and high income based on Gross National Income (GNI) per capita valued annually in US dollars based on a three-year average exchange rate¹. The classification is published

on World Bank's web site² and is revised once a year. On the basis of World Bank, as of July 1, 2018, the new thresholds for classification by the income (GNI/capita-current US \$) are shown in Table 2.

To that end, respondents were requested to state their monthly sum total household incomes. Accordingly, the findings indicate that, of the total 244 sample respondents, the majority, 183 (75 %) are in the low income threshold while 58 (23.7 %) are in lower middle income category. The remaining 3 (1.6 %) are in the upper middle income thresholds. These figures confirm that with this World Bank standard, the largest portions of the informal settlers in the study sites are low income earners. Such economic situation deters large numbers of urban residents, particularly low income earners, to participate in the formal urban land lease for residential purpose as well as private housing programmes such as housing cooperatives. It is this gap between high urban land demand and low income level that leads to informal settlements.

On the basis of the data obtained from field survey, no informal settlers with high income thresholds were found in the study areas. But, it does not necessarily mean that informal settlers in the town are all poor. There are people with middle income category who occupy informally constructed houses in the study area.

4.2. The rise in the lease price of urban land

Prior to the discussion on the role of the rise in the lease price of urban land as one of the economic trigger factors for the growth of informal settlements at the peri-urban areas of Woldia, it is essential to briefly explain the lease proclamations and regulations in order to make clear points in discussion.

To begin with, lease is a contract between the owner of the land and the tenant or leaseholder as the constitution of Ethiopia (Article 40 of FDRE Constitution, 1995). As a mode of urban land holding, the lease system was first introduced in Ethiopia in 1993³ two years earlier the constitution. However, this proclamation was re-enacted and proclaimed again in 2002⁴, which is also amended in 2011⁵. It means that in Ethiopia urban land leasehold proclamation was modified three times since the time of inception in 1993. This constant change in the urban land laws also caused many actors deceived, confused, or untrusting thereby led unplanned illegal conversions of rural lands to urban lands (Alemie et al., 2016).

4.2.1. Proclamation 721/2011

The new urban land lease law which was enacted in 2011 is often referred to as proclamation No. 721/2011. As it is indicated in part two of fundamental principles of lease proclamation 721/2011, one of the objectives of the proclamation was to transfer urban land by lease for a fair price consistent with the principle of free market thereby preventing corrupt practices and abuses to ensure impartiality in the process. The justification emanates from the constitution that the government is the owner of the land, and no one is able to generate profit from the (lease) land just by speculating. In practice, however, as we shall see below, urban land speculators have been generating profit by selling (bare) land without adding value to it. As a result, wealthy people, investors, and urban speculators were able to earn the benefit of boosted urban land value. Consequently, the proclamation brings lots of injustices in it not only because demand for land in the town has been much greater than the supply of land made by the land authorities but also it is the high price of urban land that drives land speculation which

(footnote continued)

1\$ = 28.49 Ethiopian Birr

² World Bank web site is <http://data.worldbank.org>

³ Urban Lands Lease Holding Proclamation, Proclamation No. 80/1993.

⁴ Re-enactment of urban lands lease Holding proclamations No. 272/2002

⁵ Proclamation to Provide for the Lease Holding of Urban Land No. 271/2011

¹ The current exchange rate of dollar to Ethiopian Birr as of March 28/2019 is,

Table 2
Current World Bank's thresholds of income, GNI/capita (US \$) and Ethiopia's parallel.

| Thresholds | GNI/Capita | |
|---------------------|----------------------------|-----------------------------|
| | Current US \$ ^a | Ethiopian Birr ^b |
| Low income | < 995 | < 28,347.55 |
| Lower-middle income | 996 - 3,895 | 28,376.04 - 110,968.55 |
| Upper-middle income | 3896 - 12,055 | 110,997.04 - 343,446.95 |
| High income | > 12,095 | > 343,446.95 |

^a Obtained from World Bank web site (<http://data.worldbank.org>).

^b Computed on current US\$ to Ethiopian Birr exchange rate.

then inflates price further up.

4.2.2. Regulation No. 103/2012

Proclamation No. 721/2011 is formulated at Federal level under the auspices of the House of representative of the Federal Democratic Republic of Ethiopia. The proclamation served as a roadmap for the regional council to enact proclamations/regulations of their own law of land administration. The Amhara National Regional State as it has been given a *power to issue regulation*⁶ for the proper implementation of proclamation No. 721/2011, it has issued the council of the regional government regulation No.103/2012. Accordingly, Regulation No. 103/2012 is issued by the Amhara Regional State Council in line with Proclamation 721/2011 which is referred to as the Revised Urban Land Lease Holding Regulation No. 103/2012. Hence, objectives and contents wise, proclamation No.721/2011 and Regulation No. 103/2012 are almost alike (Amhara National Regional State ANRS, 2012).

In line with these legislations, hence, the specific purpose of this section is to discuss how the rise in the lease price of urban land causes for the growth of informal settlement at the peri-urban area of Woldia. Thus, when urban land is accessed to lease through tender, the appropriate body before putting the land on tender should confirm that the land is free from legal claims of any party. Furthermore it has to be prepared in conformity with the urban plan; parceled, delineated, assigned with unique parcel identification number and has site plan and fulfill other necessary preconditions. After fulfilling these preconditions, the appropriate body should advertise the lease tender to the public and put bid documents for sale. When bid documents are putting for sale, it is carried out through the competitive market environment. It means anyone who is interested can participate in the tendering process by buying bid bonds, the value which may not be less than 5 % of the land lease benchmark price. As it is based on competitive, the highest bidder will be declared as a winner and a leaser on the basis of his/her price and the amount of advance payment he/she offers (Article 7–11 of proclamation 721/ 2011). This process, in turn, has soared the land prices making it inaccessible for the low and middle income groups. In other words, so that it is the rich people with the highest income level who are able to win the urban land through the lease system. Implicitly, it is the rich and affluent people who can afford for such situation which in turn means excluding the poor from the lease system.

To reveal the marginality of the urban poor from the lease system, it is important to use data obtained from Woldia municipality. Accordingly, as per the data obtained from the lease office of Woldia municipality, the benchmark lease price for residential areas that took place between the year 2013–2015 was ranging from 80 Birr to 250 Birr per square meter. It means that the benchmark lease price of urban lands ranges from 14,400 Birr (US \\$ 505.4) to 45,000 Birr (US \\$

⁶ The Council of the Amhara National Regional Government has given a power to issues legislations under Article 58 Sub-Art. 7 of the Revised National Regional Constitution and Art. 33 (2) of the Urban Land Lease Holding Proclamation No.721/2011

1,579) per 180 square meters. However, as stated above, during the lease system, the highest bidder wins and gets the land. From the land leased list that took place between 2013–2015 at the Woldia municipality, it is found that the winning leased price for 180 square meters of a residential plot of land ranges between 88,749.20 Birr (US \\$ 3,115) to 387,900 Birr (US \\$ 13,615) per 180 square meters. This means that, there is an increase of 68,749.20 Birr (US \\$ 2,413) to 342,900 Birr (US \\$ 12,035) or an increase of 343.8%–762% from the benchmark lease price. And this was beyond the reach of many of the urban dwellers.

Thus, when the lease opportunity is becoming out of the reach of low and middle income earners, what Moos and Dear (1986) called 'red-lining' means the only way of attaining of plot of land for residency is through the informal means. The urban land price that takes place under tender usually benefits affluent people. As per the response of the person in the lease office, the urban land lease policy has been blamed by the urban poor.

First, the system is not accommodating or treating the low income category of urban dwellers which in turn force them to rush into informal means. Secondly, there is no upper limit for how many plots of land are allowed in a tender application. Thus, to this effect, the high income people are able to win up to three or more plots of land while the low income category of the urban population can apply only for a single tender through a difficult financial condition. Thirdly, after winning and starting construction, the winner of the lease tender usually hoards the plots of land for future sale. Consequently, land price is getting very high. Land speculation by its nature can affect the urban area by creating artificial high land values.

Land speculators are not only high income individuals but also people with business interests. Here by speculators the author meant that people who usually anticipate the rise in the future price or value of a commodity. Hence, any person who is involved in the property deals could be considered as speculator as far as he/she anticipates the increase in the future price of his/her property (e.g. wheat, lumber, minerals, animals, coffee, land, ... etc.). Sheep trader, for instance, anticipates that the prices of the sheep increase near or at the time of holidays. Similarly, lumber trader anticipates that the market value of logs increases when building is widespread. In light of that, he/she is considered as speculator. Likewise, therefore, land speculators are people who are involved in land as a commodity dealers.

Wealthy people and investors, as individuals, used their wealth influence to acquire large plots of land, speculating and hoarding more land for higher profits particularly at the peri-urban areas (Billington, 1945). These individuals are usually profit driven. Therefore, they are distinguished from the landowners and others in that they are hoping to make their profit from the passage of time over their holds by buying at low and expecting selling at higher prices. For such actors, land is an eye-catching investment object due to the increasing land prices in the rural-urban fringe. Land developers and investors are usually profit-driven actors because they are highly involved in purchasing land in one moment for resale in a future period and created problems such as deficiency in present supply, increase in the demand for urban land uses, and increase the amount of hoarding. So, they attempt to make a 'speculative profit' or also termed as the 'unearned increment' from the sale of urban land at higher prices in the future (Kropinski, 1970).

Besides, the compensation paid to farmers was frequently criticized; as a result, the unsatisfied situation of farmers on the amount of compensation not only gives room for speculators to offer relatively higher monetary gains to acquire land but also encourages peri-urban farmers [ordinary farmers] to engage in land speculation themselves (Fang and Pal, 2016). In this instance, farmers who are not necessarily high income individuals act as land speculators where they are not ignorant about in the rise of future price of their lands. When rapid growth of urban population is increasing and the spatial expansion of the urban area is inevitable, peri-urban farmers are becoming optimistic about the future increase in the price of their peri-urban lands. Consequently, they withhold the land off the market until it can be sold at higher

price. These artificial withholdings of urban fringe land adversely affect people who are in demand of land for residence (Fishman & Gross, 1970; Ambaye, 2015; Daniel, 2015).

As a result of land speculation and the *artificially created shortage*⁷ (Fishman and Gross, 1972) of land, the unsatisfied people are forced to go beyond the areas of planned development to urban fringe where land can be obtained at relatively low prices mainly via informal means. This has been strengthened by the indecision of the lease office or concerned governmental bodies to take action on fraudulent land transactions whereby a piece of land is sold to multiple buyers by lease winners. Because of this, the price of land has risen exponentially, making it inaccessible not only to many low and middle-income earners but also to high income earners.

With these inconsistencies, many people agree that the unlawful occupation and informal land transactions for settlements at the peri-urban areas are due to the misguided policy responses and the existence of weak regulation systems, particularly the lease policy such as proclamation 721 of 2011, and regulation No. 103/2012.

Hardoy and Satterthwaite (1986) state that even though informal settlers are the true builders and designers of large sections in most Third World urban areas, they construct houses illegally since no legal plots are available to them at a price they can afford. If legal markets for accommodation are too expensive, cheaper illegal solutions are the only alternative. As the price of land has become increasingly unattainable for many urban dwellers, informal land delivery options have become a necessary component in shelter provision in many developing countries (Cheema, 1993).

In addition to the lease system, urban dwellers try to attain urban land via other formal as well as informal means. On the basis of the data obtained from the field survey, land markets vary both in the formal and informal transactions. An empty plot of land with a total area of 180 m² could offer a minimum of 120,000 Birr (US \$4,212) in the informal land deals in areas, such as the case at *Enkoy Sefer* to a maximum of 320,000 Birr (US \$ 11,232) at *Mechare*. On the other hand, the price of urban land in the formal markets ranges from a minimum of 150,000 Birr (US \$ 5,265) at *Enkoy Sefer* to a maximum of 1,500,000 Birr (US \$ 52,650) at *Teklehaymanot* as shown in Table 6 section 4.3.

If one assumes the prevailing land prices both on the formal and informal deals remains consistent in the upcoming decades with the current exchange rate, the chance of urban land demanders owning a private residential land/house is a critical question. Taking the above figures of the minimum 120,000 Birr (US \$4,212) to the maximum of 320,000 Birr (US \$ 11,232) in the informal land deals, it is calculated that the lowest paid workers in the study areas should save their earnings up to equivalent of 48 months to 132 months or from roughly 4 years to over 11 years to afford the minimum and maximum plot values.

On the one hand, the lower-middle income sections of the population are supposed to save their earnings from roughly 1 year to 4 years to have enough money to buy the residential plot which costs 120,000 Birr (US \$ 4,212) and more than 11 years to afford the plot which costs 320,000 Birr (US \$ 11,232) in the informal market. On the other hand, the upper-middle income categories of the population are expected to save their income from roughly 4 months to 1 year to buy the minimum price plot. Likewise, the upper-middle income sections of the population should save their income from 11 months to 3 years to afford the maximum valued residential plot in the informal deals.

As opposed to the above discussion, when low income and middle income sections of the population are involved in the formal land deals, the amount of time needed to save their earnings is getting much longer. For instance, with the minimum of 150,000 Birr (US \$ 5,265)

⁷ This shortage is "artificial" in the sense that it is created by the speculator's withholding of land from the market, rather than by an absolute physical absence of land (Fishman and Gross, 1972).

and maximum of 1,500,000 Birr (US \$ 52,650), the households with the low income sections should save from a minimum of 5 years to a maximum of 53 years which is nearly equivalent to *one's life expectancy in Ethiopian*⁸. The lower middle income sections are supposed to save their income from 1 year to 5 years to afford the residential plot with the minimum housing/plot price but from 13 years to 53 years with the maximum price. Furthermore, the upper middle income sections of the populations are expected to save 4 months to 1 year of their income to buy a plot with the minimum price whereas 6 months to 4 years in order to buy the maximum housing price.

From the above discussion, it is worth mentioning that the cost in the formal deals are much higher than the corresponding informal deals. The other point to note is that the amount of time needed to save for residential plot in the formal deals is much longer than the informal ones and this urges people to prefer the informal against the formal deals. The third point is that due to the escalation of both formal and informal land prices, unless some corrective measures are taken, some segments of the urban population will remain without owning a house which is one of the basic needs of human being.

4.3. The insufficient compensation paid to farmers during their land expropriation

The other identified cause for the flourishing of informal settlements in the study area is the insufficient compensation received by peri-urban farmer households. Because of this, farmers are forced to sell their plots through piecemeal subdivision process.

The Revised Rural Land Administration and Use Determination Proclamation No. 252/2017 of the Amhara National Regional State defines compensation as a commensurate payment made in advance either in cash or in kind or in both forms to any legal landholding or user, when the land is taken by an authorized body for the sake of *public purpose*⁹, for a replacement of property he/she is displaced or any improvement that is made on the land (Proclamation No. 252/2017).

Proclamation No. 252/2017 is issued to determine the payment of compensation for property found in the Amhara Regional States' rural landholding when the land is expropriated for public purposes. The same proclamation specifies the basis of determination of the value of different compensable items and formulae for calculating the amount of compensation and valuation methods. Thus, when rural land holder is evicted by the regional government, the amount of compensation is determined based on this proclamation of the region.

In principle, when previously rural territory is incorporated for urban expansion through planned urban growth, its inhabitants become the subject of default expropriation with reasonable compensation payments only in cases when they have legal use and holding rights to the land.

Therefore, in theory, the amount of compensation to be paid is determined on the basis of the current repayment costs of properties, cost incurred by the farmer for the permanent improvements on the land, costs of removable property, transportation costs of properties, reconstruction cost, and sources of income that disappear due to land taken away.

Thus, according to proclamation No. 252 of 2017, the main criteria and computational formulae that must be used in calculating the amounts of compensation are indicated in Table 3. Furthermore, the proclamation does indicate the criteria to be used and the decision making bodies on the final allocation of the compensation.

⁸ The life expectancy of the Ethiopian population is estimated to be 62.8 years; 60.1 years for male and 65.5 for female (CIA World fact book, 2018)

⁹ Public purposes means a service given to the public either directly or indirectly such as government office, school, health institution, market place, road infrastructure, military camp, and so forth functions decided by the Regional and the Federal Governments deemed to be useful to the public (proclamation 721 of 2011).

Table 3
Formulae used to compute compensation.

| | | |
|--|---|--|
| Compensation for house | = | the then cost of building materials + Expenditures for improvements + Back payment for the remaining land lease period |
| Compensation for crops | = | [Area of land (Ha) * Amount of product in quintals per hectare * the then market price of the crop] + expenditures for improvements |
| Compensation for perennial plant that is ready for use | = | [total amount of product per tree per year * total number of perennial plant * the then market price of the plant] + expenditures for improvements |
| Compensation for perennial plant that is not ready for use | = | [total number of plants * total expenditure to grow a single plant up to the present size] + expenditures for improvements of the land |
| Compensation for grass (fodder) | = | Area of the grass land in hectare * the then market price of the fodder per hectare |
| Compensation for transportable properties | = | Costs for load + transportation cost + cost for unload and plant the properties |

* implies multiply; 1ha = 10,000m².

However, in many instances, municipalities don't pay the estimated figures because of financial constraints (cities Alliance, 2015). Likewise, the municipality Woldia of is forced to lower the compensation payment by under-valuing the land and property of the farmer. As opposed to the above settled compensation formulae, the value of compensation for the property is determined by *compensation committee*¹⁰. That is, compensation is often allotted on an ad hoc committee or ad hoc sub-committee based on the subjective judgments of the evaluating group. To that end, against the stated parameters mentioned in Table 3, peri-urban farmers are compensated at prices that are many times lower than farmers who sell their land on the informal deals. This motivates many peri-urban farmers to avoid the formal process of compensation and they subdivide and sell their land. This encourages the expansion of informal settlements (cities Alliance, 2015). Hence, in practice, the farmers' complaint about the meager compensation they received for the expropriations of their land, mainly agricultural is valid.

According to Wubneh (2018), due to the fearing of expropriation of peri-urban land by the governments in the sub-Saharan African countries with little or no adequate compensation, farmers continue to subdivide their plots and sell them on a black market for which the transaction takes the form of inheritance, gift, and repayment of debt. A study by the Cities Alliance in Ethiopia entitled as "the Ethiopian urbanization review" reveals that one of the main causes for the development of informal settlements in the (peri) urban areas of Ethiopia is the payments on the informal market are substantially higher than the compensation for expropriated land. This in its turn strongly incentivizes informal sells (Cities Alliance, 2015) as indicated in Table 4.

Compared to the compensation payments, the amount of money that farmers gain through informal land/property/ deals is much higher than the amount of payment they receive through the formal procedures. To confirm this, the amount of payments are extracted from the compensation list of farmers expropriated at *Mariam sefer (Enkoy sefer)* in Woldia where the lands were expropriated for road opening and housing association use in the year 2015. For the purpose of privacy, the names of expropriated farmers are omitted.

Table 5 shows that farmers have been compensated merely according to the size of their plots, even without taking the quality of their farmlands in to consideration. In that case, the compensation payment is usually criticized for undervaluing the real property.

Had it been taken the aforementioned criteria displayed in Table 3, the amount of compensation depicted in Table 5 could have been different. As can be seen in Table 5, the amount of the then crop compensation payment [column 4] is round 2.84 Ethiopian Birr per m² times the area of the plot in consideration. On the other hand, the amount of compensation for displacement [column 5] is 18.14 Ethiopian Birr per m² times the total area of the plot. Thus, a farmer with a

¹⁰ Compensation committee are committee of people who are supposed to determine the amount of compensation for the expropriation of the property. Though the number and composition are not consistent over time, they usually consist experts/people/ from the agricultural office (usually consists of two persons), one from municipality, one from Woreda finance office and one from Trade and commerce office.

total farm size of 4965.603 m² had been compensated with 104,168.82 Ethiopian Birr which is computed as [(4965.603 m² * 2.84 Ethiopian Birr per m²) + [(4965.603 m² * 18.14 per m²)]. It means that the amount of compensation Payment (CP) is equated as 20.98 Birr times the area of the land ($CP = 20.98 * Area\ of\ land$). The disaggregation of the payments, in my opinion, seems a matter of format as if the compensation committee have used the computational formula indicated in Table 3.

The findings of the study show that informal land transactions generate more revenue than the corresponding compensation payment. As shown in Table 6, an empty plot of land with a total area of 180 m² could offer a minimum of 120,000 Ethiopian Birr in the informal land deals at *Enkoy Sefer* and to a maximum of 320,000 Birr (US \$ 11,232) at *Mechare*. But the figures in the compensation list (Table 5) indicates that a farm land with a total size of 760 m², for instance, almost four times the 180 m² plot of land, offers a total compensation payment of 15,957.85 Birr (US \$ 560.12) which is much lower than the actual compensation payment. Although the prices of plots in the informal deals are lower compared to the formal deals, the monetary gains in informal deals are still enormous compared to the compensation payment made by the government.

Peri-urban farmers are not satisfied with the amount, process and treatment by governmental officials. A response from peri-urban farmer shows this situation.

The government fools the farmers at Mechare. We (the informant and people in his locality) have learnt a lot from the pains of farmers in Mechare. They (farmers in Mechare) received a small amount of compensation and the money they received is finished within a short period of time. They are becoming daily laborers in Woldia with scanty job availability. We would not be people like those farmers. Many of the government officials considered the property deals that we did as unlawful. Without better opportunities, we the farmers are legal even though it is illegal in the eyes of the state. We do not know where the illegality rests. We do have the Green books which certify that we are the owners of the land. Why the government officials are running for snatching the land from us for the betterment of others. Landowners do not have the power to negotiate on the amount of compensations with the government official. Once the compensation payments are determined by the compensation committee, we are forced to take that amount of compensation. If someone is not interested on the amount of payment, the government officials tagged the person as 'development destructor' and intended to enforce their power. In the name of compensation, it is the forceful¹¹ taking of our property, lands.

From the above response of the informant, it is important to notice at least four basic facts. First, though it is unlawful; informal land deals

¹¹ Proclamation 252/2017 article 26 (5) states that any party, who disagrees with the decision on the compensation grievance inquiry committee, has the right to appeal to the nearby "high court" after surrendering the land within 30 days since the decision is given. If there is also any party who thinks fundamental error of law is committed on the decision passed by this court, he shall have the right to submit his petition to the Cassation Division of the Regional Supreme Court.

Table 4

Land pricing in expropriation and on informal market.

Source: Cities Alliance (2015:44).

| Urban areas | Typical compensation prices paid by local governments to farmers for expropriated land, Birr/m ² | Anecdotal data on a price range farmers can receive for land on the informal market, Birr/m ² |
|-------------|---|--|
| Addis Ababa | 190 | 550–800 |
| Bahirdar | 13 | 250–300 |
| Kombolcha | 16 | 150–300 |
| Dessie | 17 | 450–600 |
| Jimma | 20 | 350–550 |
| Assosa | 30–50 | 300 - 600 |
| Hawassa | 31 | 550–750 |
| Sheshemene | 12–18 | At least 3 times higher than the compensation |

Table 5

The amount of compensation (in Ethiopian Birr) to farmer households at Mariam Sefer, Adengur Kebele (2015).

Source: Woldia Municipality finance office, compensation lists of farmers.

| Crop type | Area (m ²) | Production (in Quintal) / m ² | crop compensation payment | Displacement Compensation | Total amount of compensation |
|--------------------------|------------------------|--|---------------------------|---------------------------|------------------------------|
| <i>Teff</i> ^a | 2443.409 | 3.909 | 6932.64 | 44325.39 | 51258.03 |
| | 1492.755 | 2.388 | 4235.36 | 27079.77 | 31315.13 |
| | 2721.609 | 4.355 | 7721.97 | 49372.16 | 57094.13 |
| | 760.62 | 1.217 | 2158.09 | 13798.26 | 15957.81 |
| | 4232.166 | 6.771 | 12007.84 | 76774.88 | 88782.72 |
| | 4166.765 | 6.667 | 11822.28 | 75588.45 | 87410.73 |
| | 4917.886 | 7.869 | 13953.42 | 89214.39 | 103167.81 |
| | 3924.104 | 6.279 | 11133.78 | 71186.39 | 82320.17 |
| | 4965.603 | 7.945 | 14088.81 | 90080.01 | 104168.82 |
| | 1654.289 | 2.647 | 4693.68 | 30010.13 | 34703.81 |

^a *Teff* is a traditional and staple food plant; a fine-grained annual grass species native to the northern Ethiopian Highlands. It is the main ingredient in the national dish injera.

Table 6

A comparison of costs of plots (in Birr and US \$) both in the formal and informal land deals.

Source: Field survey, Woldia, 2019.

| S.N | Site | Land broker-I ^a | | | | Land broker-II ^b | |
|-----|----------------------|-------------------------------|--------------------------------|----------------------------|-------------------------------|--|--|
| | | Formal deals | | Informal deals | | Formal deals | |
| | | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| 1 | <i>Mechare</i> | 420,000Birr (US \$ 14,742) | 550,000Birr (US \$19,305) | 180,000Birr (US \$ 6,318) | 320,000Birr (US \$ 11,232) | 600,000 Birr (US \$21,060) | 650,000Birr (US \$ 22, 815) |
| 2 | <i>Enkoy Sefer</i> | – | 350,000 Birr (US \$ 12,285) | 120,000 Birr (US \$ 4,212) | 165,000 Birr (US \$ 5,791) | 150,000 Birr (US \$5265) | 210,000 Birr (US \$ 7,371) |
| 3 | <i>Ariro</i> | 250,00 Birr (US \$ 8,775) | 300,000 Birr (US \$ 10,530) | 150,000 Birr (US \$ 5,265) | 180,000 Birr (US \$ 6,318) | 300,000 Birr (US \$ 10,530) | 350,000 Birr (US \$ 12,285) |
| 4 | Industry area | – | – | 150,000 Birr (US \$5,265) | 300,000 Birr (US \$10,530) | – | – |
| 5 | <i>Teklehaymanot</i> | – | – | – | – | 1,500,000 Birr ^c (US \$ 52,650) | 600,000 Birr ^d (US \$ 21,060) |

^a This land broker discusses with the author, on the 3rd January 2019, at Melka Kole, Woldia who is a governmental employee working as a student files and results documentation officer in one of the elementary school in Woldia Woreda but he is moonlighting as land brokerage. He is unlicensed land broker as he is a governmental employee.

^b This land broker discusses with the author, on the 30th January 2019, ay Millennium area, Woldia who is a town wide licensed land broker.

^c A house wall up with brick and a total plot size of 250m².

^d A wooden and mud wall constructed house and a total plot size of 380m².

benefit the farmers more than the compensation payments. *Second*, there is a sense of fear by farmers to be unemployed after their lands are expropriated. *Third*, there is no/little negotiation in the amount of compensation between the government bodies and the land user, the farmer. The *fourth* is that the taking of their lands is not on the basis of the agreement of parties, the government and the landholder.

5. Social and/or demographic related factors

5.1. Ever-increasing urban population and inefficient land provision

With respect to the challenges of the proliferation of informal settlements in developing countries, Doebele (1987) states that the 'problem of adequate land for the urban poor in developing countries is bleaker today than it was 25 years ago and almost surely it will become bleaker in the future'. One of the main reasons for the emergence of deteriorating in the supply of the urban land for the urban inhabitants is the ever-increasing urban population. Both natural increase and

Table 7
Plot applications and allocations between 2007 and 2016.
Source: Woldia Municipality (2019).

| Year | Number of applicants | Applicants who received land | | Applicants who did not receive land | |
|-------|----------------------|------------------------------|------|-------------------------------------|------|
| | | in number | in % | in number | in % |
| 2007 | 959 | 555 | 57.9 | 404 | 42.1 |
| 2008 | 1072 | 772 | 72.0 | 300 | 28 |
| 2009 | 1528 | 992 | 64.9 | 536 | 35.1 |
| 2010 | 862 | 0 | 0.0 | 862 | 100 |
| 2011 | 870 | 0 | 0.0 | 870 | 100 |
| 2012 | 981 | 0 | 0.0 | 981 | 100 |
| 2013 | 997 | 306 | 30.7 | 691 | 69.3 |
| 2014 | 2556 | 206 | 8.1 | 2350 | 91.9 |
| 2015 | 470 | 163 | 34.7 | 307 | 65.3 |
| 2016 | 1962 | 224 | 11.4 | 1738 | 88.6 |
| Total | 12,257 | 3218 | 6.3 | 9039 | 93.7 |

massive rural to urban and intra urban migrations have contributed for the rapid growth of the population of Woldia. Returning to the growing population of Woldia, the town comprises, according to the CSA (2013) population projection result, over 29.67 % of the total urban population of North Wollo Zone. While the absolute number of urban population of the zone is estimated to be 282,494, the total population of Woldia is about 83,806.

As it is so obvious that the urban ward migration is inevitable (Devas and Rakodi, 1993), the influx of people and rapid rate of natural increase have placed massive demands in the urban land. Despite the existence of high demand in the urban lands in the town administration, the supply lags far behind its corresponding demands. The supply of plots to respond to the backlogs of growing land demand for housing development in Woldia has been very slow. That is the reason why some people consider that acquiring lands by informal means in the peri-urban areas of the town administration is thought to be taking the lead.

As can be seen from Table 7, for example, the sizes of applicants for land for housing in 2007 were about 959, out of which only 555 received lands while the remaining 404 applicants were not successful. Similarly, despite the increase in the applicants of urban land post 2009 to the year 2012, all of the applicants have failed to achieve plots for housing.

While in the year 2013, 30.7 % of the applicants have achieved their desire of urban land, the remaining 69.3 % of the applicants have not received. More importantly, the overall urban land demand and land delivery reveals high gap. In the 10 years period between from 2007 to 2016, about 12,257 household heads applied for housing plots in the town administration. Of these, while only about 3218 (6.3 %) got an allocation and titles whereas 9049 (93.7 %) were not able to get plots for housing. This implies that very few people (6.3 %) who apply for urban land in the formal process are able to get such plots while the majorities (93.7 %) were not successful in getting building plots. In addition to that and more vital, substantial housing shortage appears in the town and there exists a wide gap between demand and supply of housing. This shows that the inability of the town administration to meet the demand for land and housing for the people who needs it. The situation of acquiring a building plot is discouraging. Residential plot allocation for the backlogs have been terminated and has no hope for applicant to get a plot of land. Hence, the applicants in the backlogs are forced to other means of acquiring residential land including informal means.

In the absence of an active private developers, government housing, and low cost housing by the respective municipal authority, it is the cooperative housing that fills the gap. Like in many developing countries, housing cooperatives in Ethiopia are the primary mode of housing construction formed by groups of people who come together as an

entity to perform the function of a developer. (Mathema, 2004). In doing so, the government has a heavy hand in establishing and regulating the housing cooperatives. Accordingly, housing cooperatives are enforced to deposit about 20 % of the total building cost in block account to acquire land for residential house (National Urban Planning Institute, 2004). However, it is one of a serious impediments especially for the low income groups to establish housing cooperatives because such large sums of money are not available in advance to be locked away in a closed account (Mathema, 2004). Citing an experience from Addis Ababa city that might be applicable in Woldia town, nearly all 1,032 cooperative houses associations with some 20,759 members/households were established between 1998 and 2001 with members who are from the middle - and upper-income groups. Hence, in practice, these options remain inaccessible to the urban poor; low income groups. They are excluded from the channels for formal housing Mathema, 2004; Ganapati, 2014). The point is what happens in the context of Woldia. Thus, cooperative housing partly failed to operate successfully. Currently, the gap between the demand and the supply is widening though there are efforts by the town administrative to tackle the housing deficit. This in turn calls for the urban dwellers to search other means of attaining urban land through different mechanism such as informal land market or via squatting.

The municipality of Woldia, however, could not provide plots of land to all the applicants and keep pace with the increasing demand for housing. Among the 334 officially registered housing cooperatives only half (50 %) have been provided land for housing construction while the remaining half (50 %) are on the backlogs up to the time of this data was collected. This also demonstrates that there is a discrepancy in demand and supply of land for a residential purpose.

5.2. Lack of housing affordability and the increase in the rental price

Rental housing covers a substantial proportion of urban housing in developing countries of Africa, Asia and South America; it plays a key role in housing supply in a dynamic conditions of ever increasing demand on account of urbanization (Gilbert, 2003; Roy and Al Sayyad, 2004; UN-Habitat, 2003).

Woldia town is an important case in point. The actual extents of the overall rental houses in the town of Woldia are scarce. But statistics on the available data, obtained from Woldia Woreda revenue office¹² reveals that of the total 18,274 urban housing stocks, 4386 (24%) are rented houses (1,284 public and 3,102 private). These percentages of houses are rented by tenants in the town because many have no choice but to rent as they do not have the money to own theirs.

The basic question that needs to be raised here is that how does the rise in the rental price of houses cause informal settlements in the peri-urban areas of Woldia? Informal rental houses are produced in the peri-urban areas by informal means. As per the data obtained from the peri-urban settlers, the motivational factors for the development of informally constructed houses in the fringe areas are numerous but the two major drivers in relation to affordability and rental price are: a) the rise in the rental accommodation in the inner town are unaffordable to the majority of the poor thereby pushes them to peripheral areas in search of alternative rental houses b) the rise in the price of rental houses in the inner town through time encourages landholders at the periphery to build houses for rent.

As per the data obtained from Amhara Housing Development Corporations, Woldia town branch, the monthly rental payments of

¹² According to the person in charge of the revenue office, these private rental units are houses which have been registered legally by Woldia Woreda revenue office for the purpose of generating rental income tax. But he believes that an equivalent size of private rental houses are supposed to be not registered or house owners are reporting only part of the houses as if other units are not rented or their family members are using

public houses, among other determinants, vary on the basis of the type of construction materials, availability of toilet and bathroom facilities, water and electricity supply and number of bed rooms of the houses. Accordingly, payments for public rental houses vary from the lowest 150 Birr (US \$ 5.27) per month for a single bed room to a maximum of 599 Birr (US \$ 21.02) per month for three bed rooms. Houses which are constructed from wood and mud wall, earthen floor and corrugated iron roof are relatively cheaper than houses made from brick wall, concrete floor and corrugated iron roofs.

As opposed to kebele (public) rental houses, with the same physical attributes, the rental values of privately-owned houses are at least three times higher than the public houses. Accordingly, the average rental price is Birr 500 (US \$ 17.56) for an average of 12–15 square meters room mainly made from wood and mud wall, earthen floor and corrugated iron roof. This indicates that the town's poorest people are much more likely to benefit from government rental houses than from private rental options in the town. Though the public houses are low in rental prices and are the most important shelter option for the low income households, their numbers are very small compared to the demand. Hence, a large number of Woldia's residents search for housing solutions either in the private rental sector or by buying land informally from farmers in peri-urban areas.

Illegally constructed peri-urban houses are relatively lower in rental prices compared to the inner rental houses that incentives the peri-urban land holders to construct houses on the basis of available options, including illegal means (Gilbert, 2003). This is mainly because the income generated from such investment is tax free; impossible to be controlled by the town administration. Since these areas are beyond the control of town administration to enforce regulation, no rental income taxes are paid to the town administration. This condition is ensuring financial security to the owner contrary to the rental houses in the inner parts of the town administration. At the time when the costs of rental accommodation are rising and their availability in the inner parts of the town are scarce, people are forced to set their residents and move out in to the peripheral areas for affordable rental houses. That is, the poorest urban communities who are unable to cope the rental price in the inner town move out to the peripheral areas where the rental price is relatively the cheapest. This situation in turn incentivizes landholders, land developers and businessmen to buy and sell land illegally in the fringe areas for renting. Thus, builders in the peri-urban areas receive a good return on their speculation in the long run.

For example, on a more modest scale, a hypothetical individual who unlawfully constructed a house at the periphery, at the current average rental price, will be able to earn his initial capital expenditure with in a very short period of time. An average 4 living units at the peripheral area and an average rental price of minimum of 500 Birr (US \$ 17.56) will generate a monthly income of 2000 Birr (US \$ 70.20) which is the same to the salary of a person employed in the town administration. After a year, from renting out houses, the financial gains of the illegal builder will be 24,000 Birr (US \$842.40). This is particularly important for some peri-urban individuals as one of the means of supplementing their family incomes. Since informal constructed houses had been 'promising'¹³, people are encouraged to invest and extend houses by adding extra rooms/units/to original buildings, such as from one unit to two units, from two units to three units and so on. Then the informal settlements which are developed at the periphery of the town become the new reception areas of these groups. It is widely understood that illegal construction meets urgent housing needs of the marginal groups (Roy & Alsayyad, 2004; Gilbert, 2003).

The peri-urban farmers also argue that such monthly income generated from renting out a house is better to sustain their livelihood than

a onetime compensation payment which can be consumed within a short period of time. This is particularly true when compensated farmers do not know what to do with the compensation cash they received or have no awareness and information about various income generating activities (Fentaw, 2009).

6. Conclusions

At the beginning, this paper has sought to address how socio-economic and demographic factors cause for the formation of informal settlements at the peri-urban areas of Woldia to draw the findings together to broad conclusions. As such income disparity, the rise in the lease price of urban land, the insufficient compensation paid to farmers, ever-increasing urban population and inefficient land provision, lack of housing affordability and increase in the rental price are found to be the major drivers of informal settlements. Accordingly, it is safe to conclude that as far as these triggers remain high and the demand for residential land for housing in the town always be there, informal settlements would be the sole option available to the poor urban dwellers.

In the peripheral areas of Woldia, it has been confirmed that the many very low-waged workers who cannot afford formal homes have been found informal settlers. As a result, houses built outside the formal means represent a large share (24 %) of the overall housing stock of Woldia. In 2018, experts from the municipality confirmed that just about 80 % of the peri-urban areas of Woldia contained informal settlements.

A further examination of the economic indicator reveals that because of rapid urbanization, access to land for residential housing development has become an almost impossible challenge. Formal land prices, such as in the lease system, have been soaring extraordinarily in the town. In the latest years, the price of land has risen exponentially, making it unaffordable to many low and middle income earners. Because of this, the urban poor are pushed to informal settlements.

The other more important contributors for the development of unlawful occupation in the peri-urban areas of Woldia are an increase in the urban population and the inefficient urban land provision for housing to the demanders. The current wide gap that exists between demand and supply situation aggravates the problem of access to urban land for the low and middle income households. It looks like that no hope for the town's housing backlog. In such circumstances, it is found that since many people do not get residential land in the urban area and other options, there is no alternatives but to live in the informal settlements. The formal urban land provision for housing has not been able to meet the demand, especially for the lowest-income populations.

The case of insufficient compensation during the time of land expropriation in the peri-urban areas of Woldia is also the other critical trigger cause for informal settlements. Hence, because of the fear of insufficient compensation, farmers sell their lands informally for informal settlements, thereby fueling the existing land administration malpractice. Furthermore, due to the high cost of rental accommodation in the inner part of the town, informally constructed houses at the peripheral areas made renting for low income earners.

In order to appropriately respond to the burgeoning of informal settlements, the paper recommends that (1) the town administrators and urban policy makers should have better knowledge on the socio-economic characteristics of the informal settlers; (2) municipal planners should prepare a diagnosis of the existing challenges of informal settlements so as to ensure future plans to be based upon a sound baseline assessment; and (3) to this end, policy makers and developers may find it valuable to determine how they see the future of the town.

Author agreement

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

¹³ An informant in the peri-urban area of Gubarja is saying that rental income at his locality is unexpectedly increasing and that is why he constructs three units of rooms.

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us.

Declaration of Competing Interest

None.

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We would like to express our greetings for those individuals who proofread the manuscript.

Appendix A. Supplementary data

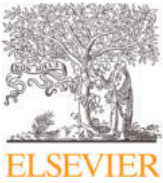
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Data Article

Dataset on demographic and Socio-economic triggers of informal settlements: a case study from the peri-urban areas of Woldia



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ABSTRACT

The data collection strategy involved the use of multiple methods. While Primary source of data were collected through the use of structured and semi-structured interviews, focus group discussions and a questionnaire household survey; secondary data were gathered from published and unpublished materials and land related legal and policy documents. Primary data were gathered through house to house survey directly administered to a random sample of 244 household heads. Besides to the household survey, primary data were collected via in-depth interviews, and focus group discussion.

Interviews were conducted with land brokers, land speculators, key informants and governmental officials. Focus group discussion was executed in two different sessions: one from kebele 04 and the other from the municipality. A total of 87 people from government officials, land brokers and speculators and key informants were interviewed. Secondary data were collected from available documents and land-related legal and policy documents.

The data collection process is followed by a detailed qualitative and quantitative data analysis. The qualitative analysis part includes analysis of data obtained from interviews and

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focus group discussions. However, statistical analysis includes descriptive statistics such as cross tabulation, percentage and correlation were employed using IBM SPSS 20.

Informal settlement continues to be a challenge in the contemporary urbanization in Ethiopia. Thus, these dataset have important implications for urban land policy both at local, national and wider audience beyond Ethiopia to reconsider urban informality. The data of this manuscript is associated with the publication [10.1016/j.landusepol.2020.104573].

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Specifications Table

| | |
|--------------------------------|---|
| Subject | Urban and regional planning |
| Specific subject area | Urban informal settlement |
| Type of data | Data tables and figures in Word files |
| How data were acquired | To do the present research, 244 peri-urban households were selected for questionnaire administration besides to interviews, and focus group discussion as a source of data. After completing the questionnaires, the results were analysed using the statistical SPSS software version 21. Data obtained from focus group discussion and interview were transcribed to the suitability of the study. Survey questionnaires are indicated in the supplementary material of this article. |
| Data format | Raw and refined data |
| Parameters for data collection | The primary parameters for data collection include socio-economic and demographic related criteria based on their relevance and degree of distinguishability of informal settlements to the topic being discussed. |
| Description of data collection | Household survey was conducted in the peri-urban areas of Woldia: <i>Adengur, Wassie, Ariro, Foot of Gebrael, Commanda Teba, Kore and Tinfaz</i> . The survey was executed by means of a questionnaire administered to 244 sample peri-urban households, and structured and semi-structured interviews as well as focus group discussions with 87 individuals from governmental officials, land brokers, land speculators, key informants. A total of 331 participants in six categories were participated. Besides, available manuals and land related legal and policy documents were reviewed [2]. Questionnaires for collecting the data are included in the supplementary material in this article |
| Data source location | Woldia town, Amhara National Regional State Ethiopia |
| Data accessibility | With the article |
| Related research article | Baye, F., Wegayehu, F., & Mulugeta, S. (2020). Drivers of informal settlements at the peri-urban areas of Woldia : Assessment on the demographic and socio-economic trigger factors *. <i>Land Use Policy</i> , 95, 1–11. https://doi.org/10.1016/j.landusepol.2020.104573 |

Value of the data

- Data can be used to supply the local governments with the necessary information they need to make informed decisions
- The data can provide new insights to stakeholders to manage, update and explore alternative housing delivery methods in order to speed up the overall accessing process at a point in time.
- The data can provide useful information to bring anyone who is interested to realize the challenges of urban areas in Ethiopia and the issue of informal settlement on the ground in particular [2].

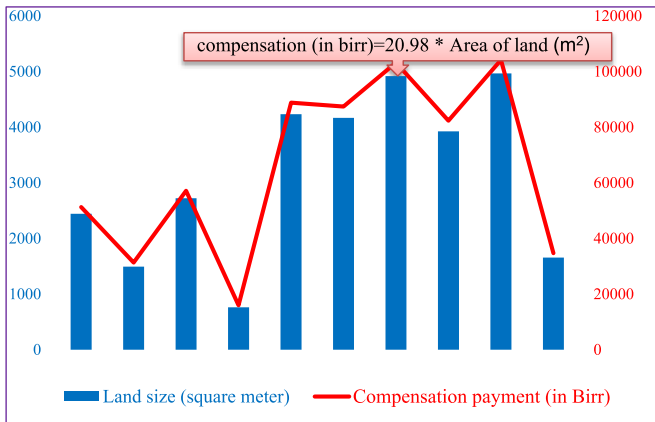


Fig. 1. Correlation between land size and compensation payment

1. Data

The present dataset is presented in tables and figures. These datasets are description of socio-economic and demographic triggers of informal settlers at the peri-urban areas of Woldia. The data were collected using questionnaires (Table 1) and in-depth interviews for the formal and informal land markets (Table 2 and Fig. 1). Sample respondents at the informally occupied areas, in addition to other questions, were requested to answer regarding their socio-economic and demographic as well as housing characteristics [1]. The overall responses are presented in Table 1 and Fig. 1.

Table 1 describes the various socio-economic, demographic and housing conditions of the respondents. Among the demographic/social variables, age, marital status and highest educational attainment have been examined. It also describes the housing conditions of the sample respondents. Accordingly, housing type, number of rooms, main use of the houses and types of construction materials for roof, floor, wall and ceiling have been investigated. Regarding the economic issues, it also describes the average monthly income, the main sources of income to build houses and means of getting land for housing.

Table 2 describes the amount of time/year/needed to save money by household respondents given the prevailing income level of respondents and the housing market price in the peri-urban areas of Woldia both in the formal and informal marketing. To own a residential house on the current market price and prevailing average monthly income of the respondents, the amount of time needed ranges from a minimum of 4 months to 53 years in the formal market and from 4 months to 11 years in the informal market (Table 2).

Fig. 1 describes the correlation between land size and compensation payment made to peri-urban farmers. As the size of the farm land increases, the corresponding compensation payment to peri-urban farmers also increases and vice versa. Being other things constant, there is a positive correlation between farm land size and compensation payments.

2. Experimental Design, Materials, and Methods

Prior to starting the actual data collection, field assessment was undertaken on a selected study areas, the respective *kebeles* and departments in the municipality of Woldia. Moreover, since the first draft of the questionnaire was prepared in English, it was translated in to Amharic version, local language of the respondents, to avoid free translation and thus misconception of the questionnaires by the enumerators. In translating the questionnaire, two post graduate

Table 1
Demographic and socio-economic of sample respondents

| Characteristics | Number | % |
|---|--------|------|
| Sex | | |
| Male | 90 | 36.9 |
| Female | 154 | 63.1 |
| Marital status | | |
| Married | 161 | 66 |
| Never married | 31 | 12.7 |
| Divorced | 20 | 8.2 |
| Separated | 7 | 2.9 |
| Widow/widower | 25 | 10.2 |
| Educational characteristics | | |
| Illiterate | 50 | 20.5 |
| Read and write only | 23 | 9.4 |
| Primary (Grade 1-8) | 44 | 18.0 |
| Secondary (grade 9-12) | 67 | 27.5 |
| Certificate | 4 | 1.6 |
| Diploma and above | 56 | 23.0 |
| Average monthly income | | |
| ≤ 600 | 52 | 21.3 |
| 601-1650 | 75 | 30.7 |
| 1651-3200 | 56 | 23.0 |
| 3201-5250 | 39 | 16.0 |
| 5251-7800 | 15 | 6.1 |
| 7801-10900 | 4 | 1.6 |
| ≥ 10901 | 3 | 1.2 |
| Housing types | | |
| Detached | 210 | 86.1 |
| Connected multifamily | 34 | 13.9 |
| Number of rooms | | |
| One | 19 | 7.8 |
| Two | 45 | 18.4 |
| Three | 73 | 29.9 |
| Four | 107 | 43.9 |
| Source of income to build the house | | |
| Self/savings | 155 | 63.5 |
| Informal borrowing without interest | 8 | 3.3 |
| Informal money lender with interest | 13 | 5.3 |
| Formal loan with collateral | 14 | 5.4 |
| Other | 54 | 22.4 |
| Main uses of the house | | |
| Residential | 235 | 96.3 |
| Both residential and commercial | 8 | 3.3 |
| Other | 1 | 0.4 |
| Main construction materials of walls | | |
| Mud and wood | 214 | 87.7 |
| Stone and brick | 6 | 2.5 |
| Corrugated iron | 2 | 0.8 |
| Flattened tin cans | 20 | 8.2 |
| Others | 2 | 0.8 |
| Main construction materials of roof | | |
| Concrete | 5 | 2.0 |
| Asbestos sheet | 4 | 1.6 |
| Corrugated iron | 235 | 96.3 |
| Thatch | 0 | 0 |
| Other | 0 | 0 |
| Main construction materials of floor | | |
| Soil/earthen | 144 | 59.0 |
| Tiles/marble | 29 | 11.9 |
| Concrete | 65 | 26.6 |
| Wood | 1 | 0.4 |
| Other | 5 | 2.0 |

(continued on next page)

Table 1 (continued)

| Characteristics | Number | % |
|---|--------|------|
| Main construction materials of ceiling | | |
| Cloth/Abujed | 38 | 15.5 |
| Chipudi | 27 | 11.1 |
| Textiles | 110 | 45.1 |
| Other | 49 | 20.1 |
| No ceiling | 20 | 8.2 |
| Means of getting the land | | |
| Gift | 27 | 11.1 |
| Lease | 43 | 17.6 |
| Inheritance | 22 | 9.0 |
| Freely squatting | 17 | 7.0 |
| Others such as buying | 135 | 55.3 |

Table 2

Time needed for saving in order to afford housing plots in the formal and informal markets

| Thresholds | Formal market | | Informal market | |
|------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|
| | Minimum | Maximum | Minimum | Maximum |
| | 150,000birr (US \$ 5,265) | 1,500,000birr (US \$ 52,650) | 120,000birr (US \$ 4212) | 320,000birr (US \$ 11,232) |
| Low income | 5 years | 53 years | 4 years | 11 years |
| Lower middle income | 1 year-5 years | 13 years-53 years | 1 year- 4 years | 3years-11 years |
| Upper middle income | 4 months-1 year | 6 months-4 years | 4 months-1 year | 11 months-3 years |

students from the department of English language and literature were consulted. To validate whether there exists vagueness, misunderstanding and other weaknesses on the first draft of the questionnaire or not, a pilot test of the first draft was administered upon 4 informal settlers prior to the actual field work. On the basis of the validation, hence, the instruments have further refined.

Thus, primary data were collected via household survey, in-depth interviews, and focus group discussions. Household survey was conducted in *Adendur and Wassie, Ariro and Foot of Gebrael Mountain, Commanda Teba, Kore and Tinfaz* [2]. Thus, sample respondents were selected from these areas because footprints of informal settlements were more visible than other places. The household survey was conducted by moving from house to house to 246 households, but two questionnaires have been rejected due to misinformation. For questionnaire administration, 5 enumerators (3 males and 2 females who are grade 12 students) were selected and trained how to approach, ask interviewees, and handle the challenges that may come across during the field work. Besides, there were 5 supervisors (who are teachers from Woldia Preparatory and Higher Education secondary school) in each of the data collection areas.

Moreover, given the unauthorized nature of informal settlements and the question of willingness of sample respondents, the data collectors were purposely selected from peri-urban households where they come from. This is because research participants knew and trusted them, the data collectors, than a strange face during questionnaire administration. Furthermore, official supporting letters for enumerators and supervisors were brought from Woldia town mayor office to make sure that the data collectors and supervisors are legal. Finally, household survey was conducted from the 24th of January 2019 to the 31th of January 2019 during the school holidays/vacations and the first two consecutive weekends (Saturday and Sunday) of February 2019.

In addition to the peri-urban households, data were collected from governmental officials, land brokers, land speculators, key informants, and focus group discussion using structured and semi-structured interviews. Interviews were executed with land brokers (5 in number), land

speculators (2 in number), key informants (8 in number) and governmental officials (63 in number) with the researcher. The governmental officials were from municipality, mayor, zone land administration, *kebeles* offices. Focus group discussion was conducted in two different sessions, one from kebele 04 (6 in number) and the other from experts of the municipality (4 in number).

The data obtained from interviews and focus group discussion responses were transcribed and analysed. Moreover, to substantiate the data collected through the instruments mentioned above, available documents and land-related legal and policy were reviewed [2].

Data obtained using interview, and focus group discussion were qualitative in nature. This was because, qualitative research method brings face to face with the real world to be investigated; involves close contact between the researcher and the research participants which are interactive and developmental; allow for emergent issues to be explored; and data which are very detailed, information rich, and expensive [3].

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We would like to express our greetings for those individuals who proofread the paper work.

Conflict of Interest

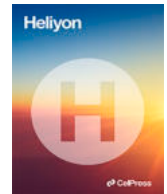
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.dib.2020.105667](https://doi.org/10.1016/j.dib.2020.105667).

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Research article

Administrative failures contributing to the proliferation and growth of informal settlements in Ethiopia: The case of Woldia Township

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ABSTRACT

Informal settlements continue to grow steadily in the urban and peri-urban areas of Ethiopia. So, studying the main triggering factors for the emergence of such settlements is timely and could support decision-makers in making an informed decision. Indeed, this study aims to identify the main administrative deficiencies that contribute to the growth of informal settlements. This informal settlement is reflected in the illegal land use, small-scale constructions, and individual housing in the rural interface areas of Woldia (in Ethiopia) where there is an authority vacuum and planning policies are unclear. The paper is based mainly on the original research, including findings from interviews, FGDS, and observations. Diagrams, tables, and photos added extra information to the discussion. The findings of the study revealed that there is laxity from the local administration in controlling the emergence and expansion of informal settlements. To this end, the findings of the work suggest that despite the public authorities being responsible for enforcing laws in controlling the development of informal settlements, for the most part, they do it incompetently due to inadequate management capacity, lack of urban land information systems, and authority vacuum among land administration institutions. Other reasons include widespread corruption, backdoor deals, and a lack of accountability. The paper concludes that the growth of such settlements is unlikely to be reversed in the future unless a viable and appropriate policy measure is in place.

1. Introduction

The contemporary world is an urban realm whereby urbanization is a global phenomenon [1–3]. UN-Habitat predicts that 66% of the global population will be urbanised by 2050. By 2050, 2.5 billion people will be living in urban areas in the world due to urbanization. In effect, nearly 90% of the increase will be concentrated in the cities of developing countries [3]. Massive urbanization, affecting close to half of the urban dwellers, has occurred not in megacities but in relatively small urban areas which are often characterized by weak institutions [3–5]. Thus, urbanization, as much as it brings a wide range of opportunities in terms of higher social and economic returns to people at the same time can pose significant challenges [6–8].

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Around one billion people live in informal settlements, which Neuwirth [9] described as a population of ‘billion squatters’. United Nations data shows that 62% of sub-Saharan Africans live in informal settlements. Similarly, 43% of South Asia live in informal settlements. The implication is that unplanned peri-urban areas and expanded metropolitan regions with informal development are expected to account for most of the growth in urban areas for developing country cities [3,5]. The number of people living in informal settlements worldwide will grow staggeringly. Therefore, urban planners and local authorities should be concerned about informal settlements since their challenges might grow [3].

In Ethiopia, literature differs on the number of people living in informal settlements. According to available literature, urban dwellers in informal settlements represent 70 to 100% of the urban population in Ethiopia due to a limited supply of urban housing. From the Habitat Global Observatory Database, the UN estimates that about 99.4% of urban Ethiopia’s population lives in informal settlements [4,5].

As an urban area in Ethiopia, Woldia has encountered similar phenomena in the growth of informal settlements. There are estimates that about 80% of the housing plots in peri-urban Woldia are unplanned [10]. This implies that such occupations fall into the informal (illegal) settlement categories as described by Refs. [11,12] of the Amhara National Regional State. The revised Amhara National Regional State urban land lease holding regulation [12] defines informal settlements as buildings on legal property that are located outside the town boundary, or buildings on legal property where the urban authorities rejected the building permit due to inadequate services, physical layouts, ownership characteristics, or a location beyond the town perimeter.

In Woldia, the actual size of informal residences is often statistically unclear as such settlements do not appear in official accounts. However, the preliminary examination of some statistics from the municipality of Woldia indicates that between 2013 and 2017, there were 1527 informal (illegal) settlement cases. Among these informal settlements, 654 houses were demolished. As a result, an estimated number of at least 3008¹ [13] of the town’s population lost their means of livelihood. To this effect, an estimated financial capital ranging from over 15 million Ethiopian Birr (over US \$ 708,000) to over 56.9 million Ethiopian Birr (over US \$ 2,686,000) was committed as a ‘dead capital’² [14] in Woldia.

Moreover, the rapid expansion of informal settlements in the town has not always been effectively managed. The developments of informal settlements across the periphery areas of Woldia gave rise to problems for the municipality not guiding planned urban growth effectively [10]. For this reason, the ills of informal settlement continue as challenges in the contemporary urbanization in the study area. The issue of informal settlements in Woldia, therefore, reaches the stage that one cannot overlook but appeals to be addressed. To this end, the outgrowth of informal settlements is one of the challenges facing the urban and peri-urban environments of Woldia. Thus, at this point, understanding the profound triggering factors for the growth of informal settlements in this paper is vitally important.

However, much informal settlement literature has highlighted the role of economic forces and the role they play in the growth of informal settlements. To this end, many people believe that informal settlements are uniquely linked to the urban poor in that they are grassroots phenomena. Such ideas are usually derived from such works as Extra-legal [15], Subaltern [16], Shadow cities [9], Planet of the slums [4], Favela: four decades of living on the edge in Rio de Janeiro [17] to mention just a few. These works consider informal settlements as the global prototype of the urban poor.

Notably, however, the extreme emphasis on economic forces such as low income to explain the proliferation of informal settlements exclusively is defective and overlooks the broader administrative failures which are currently important drivers of urban informal settlements. It is misleading always to associate the development of such settlements as urban poor and grassroots phenomenon alone. As a way to overcome this misleading view, it is essential to examine how administrative failures have led to the outgrowth of informal settlements, which gives a platform for not only understanding the challenges facing urban areas today but also finding solutions.

Yet, research on informal settlement growth due to the administrative deficiencies in Ethiopian urban areas such as Woldia is comparatively sparse. In the peri-urban areas, the role of administrative deficiency in the growth of informal settlement development hasn’t been studied, presented, or documented [10]. It is these gaps that should be studied and filled by this research. As a result, to gain a full understanding of administrative flaws as triggering factors for the growth of informal settlements, we need a case study such as this one, where land and informality are becoming more politically sensitive. Besides, research at the local level needs to be developed to supply the local governments with the necessary information they need to make informed decisions by creating a new understanding of what works and what does not.

Thus, the objective of this study is to scrutinize the core administrative deficiencies for the proliferation and growth of informal settlements in the peri-urban areas of Woldia that haven’t been studied, presented, or documented as shown previously [10,18]. As such the key guiding questions defining the scope of the study are:

- What drivers fuel the persistence and proliferation of informal settlement development in the peri-urban areas of Woldia?
- In the study areas, what interventions have been implemented by the local government bodies to mitigate the growth of informal settlements?

2. Materials and methods

To realise the stated objective and research questions, the study adopts a case study methodology where informal settlement at the rural-urban fringe of Woldia is the case of the study. The study uses a mix of data sources (primary and secondary) from the case

¹ In Ethiopia, the average family size is 4.6 [13].

² The lost or forgone forms of property value not legally recognised and cannot be exchanged for financial capital.

locations. The primary sources of data were obtained from the administrative and service organ of the Zonal agricultural office, the municipality, *Kebeles*, and the mayor of the town. Other primary sources of data include land speculators, land brokers, and key informants. To complement these primary sources, secondary sources have been used including annual reports of the municipality of the town. Moreover, the proclamations and regulations documents were the fundamental secondary sources of data.

Primary data for this study were collected via methods such as interviews (structured and semi-structured), focus group discussions, and personal observation. Those interviewed were carefully selected from both the public and private sectors according to their involvement in land sector issues, their position in their workplace, their knowledge of the area under study, and their willingness to respond to the questions. Accordingly, from the total employees of each core process owner of the municipality and *Kebeles*, messengers, janitors, secretaries, cashiers, and some others are intentionally excluded as sources of data. This was because it is believed that these employees do not show the characteristics of this study. They are not involved in urban planning and urban land management due to their job characteristics. Hence, the study took sample respondents that exhibit most of the characteristics of the interest of this study. Consequently, people from the mayor's office, the municipality's office, and the Kebele office were interviewed. The informants from the municipality constitute 47 individuals (urban planners, urban land managers, lawyers, data encoders, urban designers, civil engineers, and GIS experts) drawn from eight core process owners and the municipality administrative organ. Officials and experts from the zone agricultural office and Woldia Woreda rural land administration and utilization office (agriculturalist, manager, and data encoder) were the additional informants. To its success, the following data collection mechanisms were employed: interviews, Focus Group Discussions (FGDs), field observations, document data collection, and open website searches.

Interview

The study used face-to-face interviews with different people. In conducting interviews, questions were administered to Mayor, municipal, and *kebele* administrative and service organs. To further recognise the larger view of the profound administrative failures causing the development of the informal settlement, data were also collected from key informants, land speculators, land brokers, and administrative seekers. While land speculators and land brokers were interviewed by utilizing the snowball sampling techniques, administrative seekers and key informants were interviewed based on a casual conversation based on opportunistic (accidental) sampling techniques. Furthermore, since an informal occupation of either government or privately owned land for settlement is illegal and can lead to frustration, few of the land speculators, land brokers, and key informants were to some extent hesitant and doubtful to talk. To this end, they were interviewed with great caution by addressing the aim of the research and confirming that their responses are kept confidential. Interviews were held for 20–80 min, with an average interview time of 40 min. The categories, the total number of interviewees, and the Members of FGDs are shown in [Table 1](#).

Focus group discussion

To substantiate and triangulate the data collected through other means, the study also employed FGDs. Individuals from the illegal construction control and peacekeeping core process owners of the municipality and *Kebele* 04 were purposely selected. Members of the participants were purposefully selected because the majority had worked for a significant period (up to 11 years), and had more experience in governmental policies, urban land management practices, urban planning, and the concerns of informal settlements than other experts. The FGDs were held with two sessions: one at the municipality and the other in the office of *kebele* 04. Focus group discussions were held for 50–80 min, with an average interview time of 65 min.

Field observation

After developing recording sheets, checklists, and observation guides, observation field notes supported by photographs were taken

Table 1
Methods, categories, and the number of sample participants for data collection.

| Methods | Categories: institutes/personages from which respondents are carefully chosen | Sample |
|----------------|---|--|
| Interview | Municipality | 47 |
| | Mayor | 1 |
| | Woldia Woreda revenue office | 2 |
| | Woldia Woreda rural land administration and utilization office | 3 |
| | Zone agricultural office | 2 |
| | <i>Kebele</i> illegal construction control and peacekeeping core process owners | 9 |
| | Land speculators | 2 |
| | Land brokers | 5 |
| | Administrative seekers | 3 |
| | Key informants (informal settlers, peri-urban farmers) | 5 |
| | FGDs | Illegal construction control and peacekeeping core process owner of: |
| • Municipality | | 4 |
| Total | • <i>Kebele</i> (04) | 5 |
| | | 88 |

Field survey, 2019

related to the topic under investigation. Instances of aspects crucial to the research through observation were the way informal settlement areas are settled, and the layout of informal settlements. Finally, the field survey data were mainly collected from the 24th of January 2019 to the 31st of May 2019.

Documents (secondary source)

Furthermore, to supplement the data collected through primary sources, mentioned above, secondary sources have been used including the constitutions, policies, proclamations, regulations, urban planning documents of the town, and open websites search sources. Issues related to policies, proclamations, regulations, and directives have a town-wide effect, and in this study discussion related to such matters is also referred to in the study of peri-urban areas as well.

Data analysis

Since the data collection instruments were mainly qualitative in nature, the work employed qualitative analysis. Results from FGDs and key informants were used to discuss the analyzed result and triangulated with secondary data. Triangulation was made among the analyzed result, FGDs, key informant interviews, and secondary data with the literature obtained. Diagrams, tables, and photos added extra information to the discussion. In this work, data from different sources such as FGDs, and interviews were synthesized using a side-by-side approach to merge the results in the data analysis. Further, with 88 data points collected from 11 groups of respondents, there were variations in views from groups of respondents on key drivers of informal settlements that one would expect. While some associate the development of informal settlements mainly with blind-eye administration, others attach it to the lack of poor urban land registry systems. To this end, the findings obtained from different respondents have been synthesized into each set of the following six key drivers of informal settlement, including highlighting minority views, at least in key statements.

2.1. The case study areas

The case research areas are informal settlements in peri-urban neighborhoods in Woldia, a town located in North Wollo zone of the Amhara National Regional State, Ethiopia at an average altitude of 2000 m (see Fig. 1). During the time of data collection, the town was divided into six urban *Kebeles* which are the lowest administrative divisions in Ethiopia, namely: *Debre Gelila (Kebele 01)*, *Addis Alem (Kebele 02)*, *Admas Bashager (Kebele 03)*, *Yeju Genet (Kebele 04)*, *Adengur (Kebele 05)* and *Addis Ketema (Kebele 06)*.

To explore the role of administrative deficiencies in deriving the development of informal settlements, therefore, the study was carried out in selected peri-urban areas of Woldia. These peri-urban areas are *Kore* and *Tinfaz* (from *Kebele 02*), *Ariro*, *Gebrael*, and *Commanda Teba* (from *Kebele 01*), and *Adengur and Wassie* (from *Kebele 04* and *05*) as shown in Fig. 1. In reality, informal settlements are happening both in the central and peripheral areas of the town administration; however, those that occurred in the peripheral areas mentioned above are the focus of this study. Accordingly, besides the consultation of the person in charge of illegal construction control and the peacekeeping core process owner of the municipality, seven case study neighborhoods have been selected for this research for some reasons.

First, the spatial imprint of the informal settlements is observed in these areas more than in other places.

Second, in this time of globalization, super-speed internet, smartphone, supersonic means of transportation, etc., 80% of the peri-

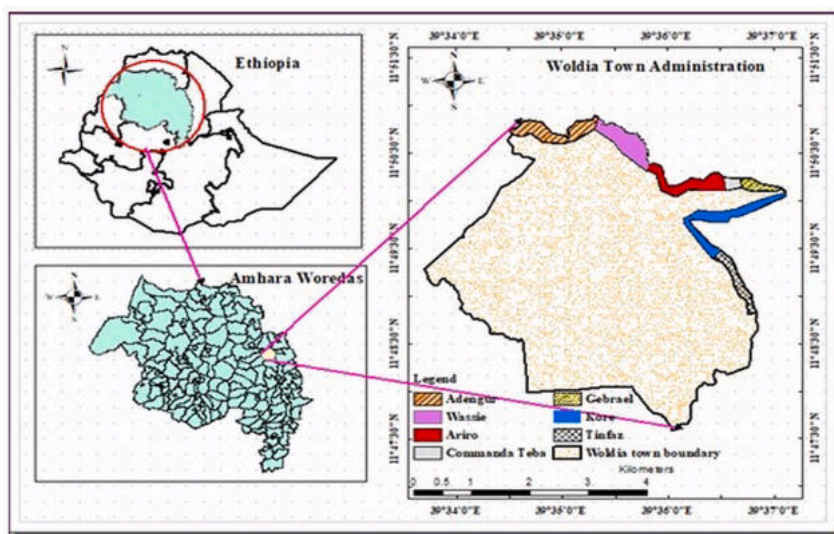


Fig. 1. Location map of Woldia and the study of peri-urban areas.

urban population are living in informal areas [10] where the formal means of infrastructure and utility deliveries are neglected. On top of that, except *Adengur and Wassie*, the rest are viable to flooding, rock falls, mudflow, earthquakes, landslides, and expensive infrastructure development.

According to the Seismic Risk Zoning Map of Ethiopia, shown in Fig. 2. Woldia falls inside the zone described by earthquakes of intensity 8 and above Modified Mercalli (M.M) scale, with a likelihood incident of 0.99 in 100 years [19], p. 292]. As a result, the settlers might face environmental challenges.

2.2. Population and spatial growth trends of Woldia

The population of Woldia has grown steadily since its foundation with a total population of 150. As of 2019, the town has 83,806 residents, after 231 years after its founding in the last quarter of the 18th century, between 1784 and 1788 [10]. In 1965, Sarnessa [20] estimated that the population of Woldia was about 9708. In fact, the exact population size of the town was unknown until 1984, when the first national census of population and housing was conducted. A brief overview of Woldia's population growth is shown in Table 2.

In the last few decades, the town has experienced only minimal spatial expansion since the 1980s, when it grew rapidly. Since then, the spatial expansion of Woldia has stagnated and only minor expansion has occurred from the spreading out of low-density individual houses. While only two to three decades ago the peri-urban areas of Woldia consisted of dispersed rural tiny houses with single-story settlements where agriculture was widely practiced, these days these settlements are overwhelmed by construction with little or no farmland. From the historical urban expansion of Woldia, we can see that the rapid growth of the urban area of the town is a relatively recent phenomenon. This is observed beginning in the last quarter of the 20th century. The magnitude and direction of the town's expansion for the years 1965, 1986, 1992, 2009, and 2019 are shown in Fig. 3.

2.3. Ethical concerns and considerations

No research should bring any risks to any research subjects or participants in any way, and needs personal data protection requirements (e.g. anonymity and Confidentiality). Participants must be completely informed about the purpose of their participation and the possible outcomes. To conform to ethical issues, after validating data collection instruments, a permission letter for data collection was obtained from the Ethiopian Institute of Architecture, Building Construction and City Development (EiABC) graduate programs office as an approving ethical committee. Similarly, a second data collection permission letter was acquired from Woldia town Mayor's office which was written to the respective *kebeles* and sample institutions to ensure that the addressees are to be fully informed about the aims and objectives of the research and to support the interviewer by providing with the necessary information and data.

The other ethical concern is the onset of informed consent, which refers to informing the research participants of all aspects of the study that might influence their willingness to agree to participate. As a result, interview participants were given a form of informed consent before participating. But, given the unauthorized nature of illegal use and trade of land and unauthorized small-scale and individual housing constructions in the peri-urban areas of the town, most of them agreed to participate in the study, but they decline to sign the written consent form, and written consent was not sought from the interviewees. Instead, verbal consent was sought with intensively briefed on the importance of explaining to respondents what the research was about, and why the information is being sought. Furthermore, it was made clear that once the interview had begun, participants were to realise that they could leave it at any time, either the entire interview or to answer any individual questions without any reason if they wished to, and there was no implied or stated threat of penalty for withdrawing. However, unlike written consent, some officials and land brokers were surprisingly willing to be recorded using an audio recording device.

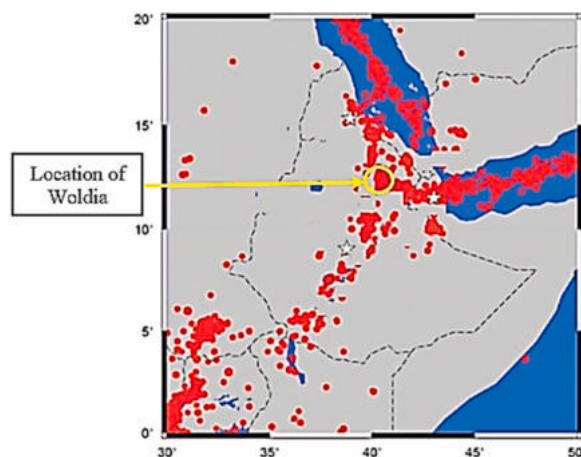


Fig. 2. The location of epicenters of earthquakes with a magnitude of 4.0 and above in Ethiopia.

Table 2
Population size and annual average growth rates, 1984–2019 (Woldia).

| year | Male population | | Female population | | Total population size | Absolute increase | Growth rates (%) |
|------|-----------------|-------|-------------------|-------|-----------------------|-------------------|------------------|
| | size | % | Size | % | | | |
| 1984 | 6413 | 41.85 | 8912 | 58.15 | 15,325 | – | – |
| 1994 | 11,689 | 47.65 | 12,844 | 52.35 | 24,533 | 9208 | 4.69 |
| 2007 | 23,000 | 49.85 | 23,139 | 50.15 | 46,139 | 21,606 | 4.84 |
| 2014 | 35,154 | 51.43 | 33,198 | 48.57 | 68,352 | 22,226 | 5.60 |
| 2016 | 39,262 | 51.48 | 37,069 | 48.52 | 76,331 | 7979 | 5.50 |
| 2019 | 42,396 | 50.59 | 41,410 | 49.41 | 83,806 | 7475 | 4.27 |

Source: Computed from the Census-based population of Woldia (1984, 1994, and 2007).

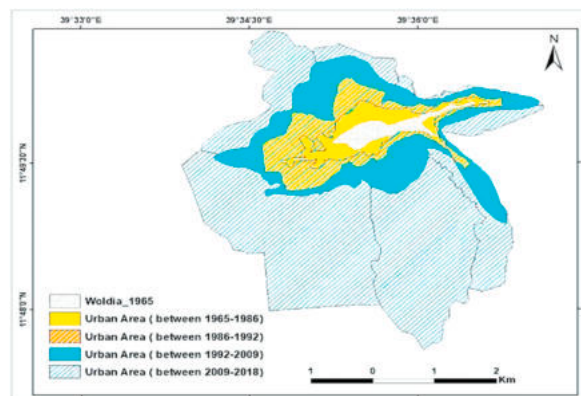


Fig. 3. The spatial expansion trends of Woldia from 1965 to 2018/19.

3. Theoretical perspectives on the causes of informal settlement growth

In attempting to discourse as to why informal dwellers live where they are, and why the people congregate in unauthorized locations than formal areas, various theories have been suggested by different schools of thought and scholars. Here are a few of the most important:

3.1. The Chicago school of thought

This theory, which dates back to the 1930s relates the growth of informal settlements to residential differentiation resulting from differences in income levels of people with the rich able to acquire ‘valuable’ or desirable urban land and the poor left on unauthorized or unapproved lands to construct settlements [21,22]. According to this school of thought, thus, the development of informal settlements is an indirect environmental result that arises from competition between the endowments and desires of different social classes, as well as between ethnic groups which will compete for different land uses, with the strong classes taking the most desirable places and the weaker ones occupying unwanted spaces [22].

3.2. The Alonso neo-liberal theory

The Alonso neo-liberal theory also called the Alonso-Muth-Mills model relates the growth of informal settlements to discriminatory urban housing regulations and public spending that fail to address the housing needs of poor urban dwellers who cannot afford a formal dwelling. That is, an informal settlement is a realistic response to the housing needs of urban dwellers who could not afford more formal dwellings due to discriminatory urban regulations and public spending [23–26]. To this end, people who migrate to the urban areas often end up as squatters in the informal settlements because the formal housing schemes are often unaffordable to these groups. The emergence of the informal settlement is then understood as a result of the relationship between the surplus population and the number of limited houses available in the capitalist sector.

3.3. The post-modern theory of urban landscape

The third theory which is the post-modern theory of urban landscape associates the growth of informal settlements with the segregation of skills or professions of urban dwellers within urban spaces. In this theory, informal settlements were perceived as the result of the differentiation of skills within urban spaces, where inhabitants settled according to their occupations, skills, and social

status. Thus, some areas became more settled than others according to peoples' occupations, skill sets, and social positions [22,23,25,27].

3.4. *The colonial legacy theory*

The theory implies that colonialism does not end when a nation attains political independence. Instead, it continues to influence and shape its legacy even at the time when the nation ceases to be a colony [28]. Thus, the legacy of this theory keeps living on into today's contemporary social, economic, cultural, and spatial circumstances. The colonial legacy theory relates to the development of informal settlements, therefore, to political and historical factors especially colonialism, postcolonial practices, and civil and political instabilities [25,29].

3.5. *The inadequate economy theory*

The inadequate economic theory suggests that economic factors especially the introduction of new economic systems play an important role in the development of informal settlements. This theory argues that the introductions of urban trade, income, and class differences spatially translate into residential discrimination and social exclusion leading to the growth of informal settlements, particularly class domination, and broad discrimination against by race [30]. UN-habitat [22] states that informal settlements have resulted from a combination of poverty or low income with inadequacies in the housing provision system where poor people are forced to seek affordable accommodation and land that become increasingly inadequate. In line with this [31], emphasized on roles of capital, labor, profit, wages, class exploitation, poverty, and the high levels of inequalities as the foundations of the unevenness of urban development. He stated that urban development was as much a product of the capitalist economic system as was any manufacturing good [31]. The advocates of this theory focus on the different economies of nations as the reason for the outgrowth of informal settlement, and informality is equated with poverty [32].

3.6. *The perpetuated demand and supply disequilibrium theory*

This theory on the other hand links the growth of informal settlements to economic factors such as the imbalance between the demand and supply of urban land, services, and infrastructures [23]. Because of this, most people arriving in urban areas are forced into informal settlements, where they suffer from shoddy housing, thugs, discrimination, poor infrastructure, spare health care, insecurity of property, and unspeakably poor infrastructure [33]. Informal settlements emerged outside of the formal system because of market-driven where land use is determined by economic competition, and they are more applicable to many urban areas of developing countries that are still undergoing a transition in economic and land tenure regimes partially dictated by traditional uses or controlled by governments [22].

3.7. *Urban land management theory*

This theory attributes the growth of informal settlements to institutional flaws or deficiencies, the inability of urban authorities to control urban land, and inadequate urban planning schemes that have caused the informalization of urban life [24,25,29,34]. Such flaws generally fall on institutional flaws or defects due to blind eye administration, lack of political commitment, the existence of corruption in the land sector, authority vacuum, lack of law enforcement, poor urban land registry system, and inadequate urban planning schemes [34–38]. Ultimately, the urban land management theory insisted that due to the defects of the above-mentioned factors, the emergence of informal settlements in urban areas is inevitable. Because of this poor urban land management, people are living in informal settlements every day, especially in developing countries where land governance is the weakest [39].

From the above theories, it should be clear that an exclusive focus on one theory for informal settlement development fails to account for how such settlement can be driven by other factors. This means that a sole focus on, for example, the inadequate economy theory is likely to both understate the role played by urban management theory and limit our understanding of the complex basis on which informal settlements' growth is taken. Similarly, a mere focus on the perpetuated demand and supply disequilibrium theory limits the role played by the urban management theory in the growth of the informal settlement. In this regard, except for the colonial legacy theory, the rest would be at the heart of the outgrowth of informal settlements in Woldia. But this study used land management theory because the main objective of the study is to investigate the influence of management problems as a critical factor in understanding the phenomenon of informality in the peri-urban areas of Woldia.

4. Results and discussion

4.1. *Situation of administrative structures and distribution of informal settlement*

A town administration's responsibilities include resolving problems in the area, monitoring the delivery of (serviced) urban land within its area of authority, assisting in the maintenance of law and order, and carrying out any functions/assignments from an upper local government council. To its effect, local government officials are at the closest distance from various levels of organizational structures, duties, and responsibilities. These administrative structures are primarily concerned with the provision of (serviced) urban land to satisfy people's demands so that no one is left of his/her needs in the urban administrations. In this regard, to plan and put into

practice regulating the growth of informal settlements, the town administrations should establish institutional arrangements.

These arrangements include the formulation of a range of organizations, structures, and networks that ultimately form the mechanisms through which actual urban plans are managed, coordinated, implemented, and monitored. Without the effective implementation of these organizational structures, whatever urban plans are designed, urban areas will not attain their ultimate purposes at the micro-level (municipality) and the macro-level (region and federal) [40]. Fig. 4 depicts the organizational structure of Woldia Municipality.

The Amhara National Regional State issued power to urban administrators by proclamation No. 6 of 2009 to regulate and manage urban areas. To that degree, Woldia as the town administration owns the following powers, duties, and responsibilities: issue policies, and formulate and execute a plan of actions that help direct, execute, and support the urban development. It has also powers, duties, and responsibilities to revise the master/structure plan and approve and supervise the implementation thereof. As one can see from Fig. 4, Woldia municipality has seven *core process owners*³ to execute its duties and responsibilities. Each of these entities is responsible for regulating the growth of informal settlements inside the town or on the outskirts.

With these powers and missions, the local government at the town administration level should regulate land use conversions and not allow agricultural lands to enter the land market without the state. If it is not, among others, the illegal conversion of peri-urban farmland deteriorates the town's internal revenue, as land leasing is considered the main source of town revenue [41]. Despite this, informal settlements are proliferating, mainly in the towns' peri-urban areas (look at Fig. 5). So, the effects of the existing administrative flaws in Woldia on unplanned settlements can no longer be ignored.

4.2. Administrative deficiencies causing informal settlements

Informal settlement continues as a challenge in contemporary urbanization in Ethiopia [11]. Studying the triggering factors for the growth of informal settlements in Ethiopian cities and towns is timely and could support decision-makers to make informed decisions. Thus, the subject tried to deal with in this article is worthy of investigation. We would only like here to bring to the attention of our reader(s) that various administrative failures account for driving the development of informal settlements at the case location areas. However, the authors do not plan to detail all those various factors by adding other accounts. Therefore, the authors do not want to make the list longer by adding triggers other than the following key drivers of informal settlements: use of administrative arbitrariness and the blind eye administration, lack of political commitment and failure to enforce construction laws, the widespread alleged corruption and backdoor deals, authority vacuum under rural and urban land administration institutions, lack of well-defined law for illegal builders and actors involved, and poor urban land registry systems.

4.2.1. Use of administrative arbitrariness and the blind eye-administration

In the urban areas of Ethiopia, urban land management rests on the municipality and/or urban area that serves as agents of the state. Nonetheless, the study revealed that government bodies, particularly the mayor's office, which was the figurehead of the local government, did not demonstrate sufficient commitment to retaining informal settlements in the study areas. My observation during the fieldwork also indicated that informal settlements have been increasing, especially in the peri-urban area of the town administration. These settlements were not hidden from the administrative body. Every concerned body knew what was happening in the peri-urban areas of the town.

In the discussion with the person in charge of the urban plan and construction inspection department, it was confirmed that the growth of informal construction was happening beyond the control of his office. That is because of a lack of dedication on the part of urban government bodies. In other words, they do not take preventative measures against informal settlements that have already been established at the right time or an early stage of their development. According to the discussions with the person in charge of the urban plan and construction inspection department, three cases were brought to my attention and have been confirmed in the field study. To this effect, the remarkable cases were the construction of eight *containers*⁴ at the main gateway of the municipality and several containers along the steeped road to the bus station from *Adago* (see Fig. 6) that have been constructed without the recognition/permission of the municipality, particularly the illegal construction control and peacekeeping core process owner; plan implementation, sanitation and beautification core process owner, and urban plan and construction inspection department.

Key informants were asked as to why the town administration tolerated or even welcomed this informal occupation [41]. In an interview, it was confirmed that these containers were constructed to soothe the political turmoil of 2017/18, as a temporary solution that might be hard to stop; the administrators seemed unaware of these illegal/informal activities. That is, the mayor's office partly turns a blind eye to the proliferation of informal settlements as a trade-off for peace and calmness in the town.

Further, the builders were unemployed, a potentially volatile population from the inner part of town administration. This has been confirmed by a key informant from the department of urban planning and construction inspections. This informant said that the builders organized themselves and went to the mayor's office to force the mayor to agree to a working place. This working place was adjacent to the municipal main gate. The interviewee remarked that when the department requested planning and construction permission, builders did not volunteer to show planning and land allotment permission. But, lately, the urban plan and construction inspection department confirmed that it was the mayor who unilaterally authorized the physical construction and development of

³ Core process owner refers to specific office or departments in the town administration sectoral offices.

⁴ Container here refers to a small size of metal (corrugated iron) boxlike construct that often looks like a shipping container mainly used for shopping purposes in small scale businesses at the case location areas.

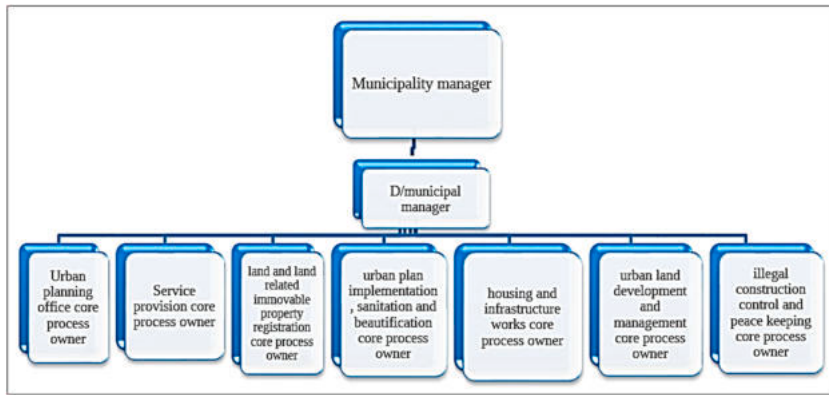


Fig. 4. The organizational structure (chart) of Woldia Municipality (2018/19).

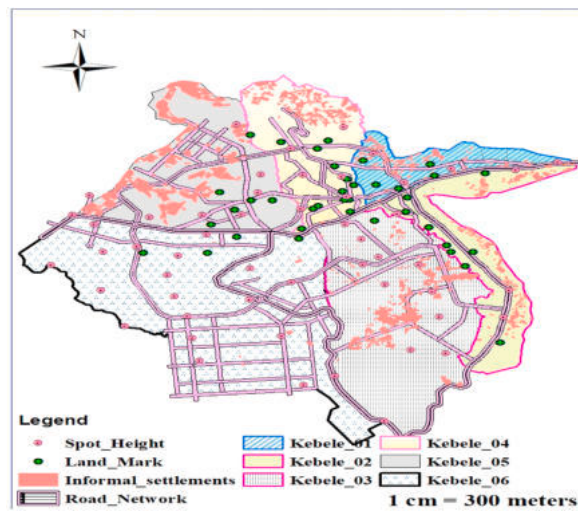


Fig. 5. Land marks, spot heights, main road networks, and informal settlements in Woldia (2019).



Fig. 6. Containers constructed illegally at the municipality's main gate (shown left) and along the steep road to the bus station (shown right). Photo by Author (2019).

containers without building requirements for these demanders. What made the informality further illegal was that the builders were not working at this place; rather they have either rented or sold to a third party.

Results of FGDs with officials of illegal construction control and peacekeeping core process owners at the municipal level revealed that high officials' laissez-faire attitude was revealed to be a major contributor to informal settlement formation. As a result, the ability to control the proliferation of informal is getting unreachable. It was informed that following the 2018 national political instability/disorder/, higher government officials, including the zone administrator, the mayor, and the municipal manager continued their noninterventionist administrations despite the perpetuation of illegal settlements not only at the periphery but also in the inner parts of the town administration (see Fig. 7) where the illegal constructions are not out of their observations. As per the interviewees, higher government officials frequently fear the rise of conflicts with resistant inhabitants, particularly the unemployed youths in the town. Thus, the key interviewees expressed their fears that at the moment nobody felt responsible for the ongoing informal settlements on the pretext of loosening political chaos.

By not regulating urban land use, the town administrators, especially the mayor and the municipality offices, conceal the fact that land-use regulations are not enforced. As long as informal construction development in the inner parts of a town is not regulated (as shown in Figure above left), there is no way for them to regulate its growth at the rural-urban interface where there is an authority vacuum (Fig. 7).

4.2.2. Lack of political commitment and failure to enforce construction laws

Findings of the interviews administered to key informants from the municipality also indicated that the town administration was not only in a position to give a blind eye to the growth of informal settlements but also lacked the power to apply construction laws due to a lack of political commitment. In fact, there are immediate detailed accounts of how the town's authority lost its power to control illegal settlement development. It is as a result of the events following the January 2018 political unrest that the government authorities are not confident to deploy development control/enforcement teams. During the January 2018 uprising in the town, the properties of key government officials were targeted by the majority of the people, particularly by the youth. It was well-informed that houses of selected higher government officials were put on fire. For example, the former Woldia mayor's house was burnt at *Aririo*. Even the ex-zone administrator's house was saved from fire damage by the entreaty of his neighbors. These unexpected pressures caused social stress, disagreement, and disorder around crackdowns.

It is also found through interviews that because of these sudden fierce actions taken by the people, higher government officials become sluggish in controlling the flourishing of informal settlements. In addition to this, following the January uprising, former government authorities such as the zone administrator, the mayor, and municipality managers were replaced by new administrators and managers. These fragile government structures and political uncertainties were also conducive for undisciplined government officials and other local actors to engage in informal development not only in the peri-urban areas but also in the inner parts of the town administration.

The problem with informal settlement growth is that when things become normal, they perpetuate themselves. In this regard, town administrations have lost a significant amount of control over informal settlement development. It was also reported that the town administration was not also consistent in its attitude to the control of unauthorized constructions in Woldia. This can be detected in the response of the illegal construction control and peacekeeping core process owner expert from Woldia municipality. As per his response from July 1/2018 to December 2018, 43 newly constructed informal settlements were identified within the town administration. This information included information like their location, purpose, type of construction, and the number of constructions. The information was submitted to higher government bodies for further action. In spite of this, rather than telling the office that the town administration would take action against them, no action was taken until this time (during the period of discussion). The town administrators were not confident enough to take any corrective measures on these informal settlements. Consequently, because of this delay, other informal settlements were growing in number. In addition, the experts from illegal construction control and peacekeeping core process owner were backing away instead of controlling the growth of informal settlements. Further, it was too late to intervene; the officials in the core process owner felt that political risks would become overwhelming if measures were taken within a longer timeframe.

Also, due to a lack of political commitment on the part of the town administrators to enforce building/construction laws, it was valid to mention the construction of a building without receiving a building permit from the planning office and without supplying evidence of construction materials by the concerned body. As a result of not enforcing construction laws in Woldia, a substantial percentage of houses were built informally. Thus, houses were built against the construction law. A case in point was the construction of a building beyond the limit of storeys as shown in Fig. 8. The building law prohibits the construction of houses without the consent of a development permit that has conditions that must be met.

The building proclamation no. 624/2009 specifies the types of materials an individual builder should use. It also declares that any extensions in the number of storeys of the buildings or constructions that exceed the permitted vertical and horizontal coverage are illegal and cannot be legalized [42]. A key informant cited instances where a building was built against the permitted (G+2 storey) level. That is, regardless of the notion of the proclamation and permission of the urban plan and construction inspection department, the owner has extended a building up to G+3. The urban plan and construction inspection department realized that the construction was exceeding the limits and the number of storeys. So it was asked the building owner to suspend the extension of the building's storeys level. That is because it is the responsibility of the urban planning and construction inspection department to supervise and regulate such a construction process. In light of this, the department asked the builder to stop extending the storeys of the building or to reconsider his plan with the office.

The findings from the official document of the urban planning and construction inspection department revealed that the planning office sent out frequent warning letters to the builder who built in violation of the agreement made with the municipality. According to



Fig. 7. Illegally built houses on the road (shown left) and in the non-planned areas at *Nitaf Dingay* (shown right). Photo by Author (2019).



Fig. 8. Unauthorized rooms under construction on the roof of the building in the town at *Gonder Ber*. Photo by Author (2019).

the interviewee, since the issue was not addressed by the frequent letters of warning, and since it was a very serious issue, a discussion was held at the management level in the municipality, but no solution was achieved. In fact, the discussion by the management in several meetings shows some level of commitment, but the action does not follow. Partly, this could indicate that local authorities are not fully committed to controlling further informal settlement development. Despite all of these enforcement letters, management meetings, and construction laws, the building owner continued to construct and reached the final phase (Fig. 8).

In addition to the above case of ‘stealing space in the air’,⁵ people also make every deception to maximise the building floor area by ‘stealing land sideways’⁶ beyond building permission. An interviewee made with the urban planning and construction inspection department from Woldia municipality described the instances of extending the building floor area without official approval. As per the informant, while the office has permitted the builder to build up to 8.60 m by 10 m (86 square meters) of land at *Admas Bashager* in *Kebele 03*, it was found that the building area had increased to 13.3 m × 13.70 m (182.21 square meters) construction area; an increment of 111.87% beyond the permitted limits. It was also confirmed through discussion that extended constructions without the approval of concerned bodies were common in the town administration of Woldia. This was due to the absence of political commitment to controlling the informal constructions within or in the peri-urban areas of the town administration. Field observation and interview findings revealed that while the land law did not permit the development of informal construction upon the land (private or government or communal), the authorities generally tolerated it.

This generally implies that public regulations fail to control new constructions against the construction law, and thereby in many instances, builders do not worry about building laws. Consequently, informal settlements are in their perpetuation. Hence, to reverse the current alarming rate of informal settlements, especially in environmentally sensitive, public, and protected areas, law enforcement, and corrective measures should be designed and put into practice for those individuals who open the door to rent-seeking practices and unethical conduct.

⁵ ‘Stealing space in the air’ is a term used to describe building a vertical storey out of the permission of authority. For example, if someone is permitted to construct G+3 storeys, but builds G+4, one storey is out of the permission and theft in the air, hence stealing in the air.

⁶ ‘Stealing land sideways’ when one constructs building by extending horizontally beyond a permitted limit, theft has been committed and hence, stealing land property sideways.

4.2.3. The widespread (alleged) corruption and backdoor deals

Although corruption has a subtle nature as well as no universal definition, for this particular purpose, it generally means the misuse of power by government officials or their network contacts or the practice of obtaining illicit gain through improper or unlawful means (such as bribery) through corrupt government officials [43]. It is also defined as the use of public resources for private gain. Corruption by this definition includes not only conventional monetary corruption but also political and administrative corruption.

The revised rural land administration and use determination proclamation no. 252/2017 guides and governs land use in rural areas in Amhara National Regional State. According to Article 32 of the proclamation, land use classifications may not be changed (updated). Article 32, sub-article 1, states that the updated use plan for rural land is not changed haphazardly unless it is based on a study. A violation of the land use plan will lead to eviction if not done correctly, as affirmed by the proclamation. Ethiopian law prohibits the sale, mortgage, or use of rural land as collateral. Leasing is the only option for converting urban development rights from rural landowners [11,40,44].

However, findings from the study revealed that although the public authorities (federal and regional) have developed and distributed the necessary guidelines, implementation continues to be a problem. Key informants pointed out that peri-urban agricultural lands have been converted from agricultural to non-agricultural land, disregarding the bans of the rural land law, policies, and regulations. As revealed in an interview with the land registration and certification expert at the zone agricultural office in Woldia, the issue of land-use change from agricultural to urban land use has been a source of concern. As indicated by some respondents and field observation, town expansion trespassed upon peri-urban lands and resulted in changing land uses either through their legal action or, more by and large, through a variety of illegal practices. The result was an uncontrolled land development and conflicting land uses in the town.

The findings based on the interview with the Zone agricultural officer indicated that unethical government officials were facilitating the conversion of rural agricultural lands to residential use without legal grounds. Also, he added that his office was aware that land use classifications were changed via adding and/or erasing/scoring out the written land use classes on 'land registry books or ledgers' without updating the land use category. As per the understanding of the proclamation, regulation, and all the authorities concerning land-use class change and land selling of whatever nature was illegal and must not be taking place. Furthermore, the same key informant underlined that though averting rent-seekers is the catchphrase of the regime, abuse of land use in the peri-urban areas has been widespread.

When land-use change is updated, among others, there are minutes of *Kebele* committees, recognition of the land administration committee in *Kebeles*, *Woreda* land use representatives, and legal frameworks. But what was happening in the peri-urban areas of Woldia was changing land use without these requirements except for the involvement of alleged corrupt government officials and land brokers. The key informant expressed his concern by saying '*mark my words, nobody anticipated that, but the worst is yet to come. These illegal doings will be the source of political turmoil shortly*'. The tone of the language used in the last statements of the respondent tells us how serious the matter was, and how serious the situation was.

Strengthening the above findings, interviews with three key informants, one from *Adengur Kebele* (at *Ariro*) and the others from *Defergie-kibikalu* disclosed that corruption is openly practiced in the town administration. The man from *Adengur (Ariro)* who discussed the issue of land sector corruption and backdoor deals was a lecturer at Woldia University, where his wife gained agricultural land from her mother through a gift. As per the informant, the land was agricultural land in which he speculated that the land would be incorporated into the urban structural plan shortly. He was also aware that the compensation for the land is not adequate. According to the informant, therefore, he volunteered to meet the neighborhood coalition to negotiate or, at the very worst, litigate to switch from agricultural to residential land use. To that end, with a total amount of 98,000 Ethiopian Birr, operational costs, he was well-informed that they deserved a document stating that their land (roughly ranging from 850 m² to 1500 m² land) was a residential plot of land but not a farm/agricultural land.

Practically, the corresponding author of this research had observed when a person named 'D' bribed 85,000 Ethiopian Birr for land-use change and size adjustment through the bank account of the middleman. That is, he paid 30,000 Ethiopian Birr for size adjustment and 55,000 Ethiopian Birr for land-use change. The size adjustment was held to keep the size enough to be portioned by families. If the size was below the standard for division, it was not possible to divide among the family members; so it necessitated size adjustment.

The key informants (land brokers and speculators) were also asked to express what would landholders gain from these informal backdoor deals through bribery or whatever respondents call operational cost. It was found that the decision to change the land use class from farm to residential was rationally based on a calculation of opportunities that people will achieve when comparing the gains from either remaining agricultural land or changing to residential land. The reason for such a decision primarily relied on the frequently 'criticized meager compensation payment' [10] made to the same neighborhood farmer households and a large amount of financial gain if the lands were involved in the informal land markets. Besides the criticized meager compensation, these agricultural lands were transformed into urban lands through unlawful subdivision by landholders as a result of the high demand for urban land and an increase in land prices within the town.

In an attempt to reveal the extent of land sector corruption throughout the town administration, participants from the study areas of Woldia claimed that '*formerly, bribery was held behind closed doors, now everything is out in the open*'. Many of the key informants indicated that monetary corruption, a common phenomenon in the study area, is a weapon to break up many bureaucratic chains of administration. As a result, such kind of monetary corruption was usually regarded as speed money or lubricant money. Often, informants describe monetary corruption as the '*act of selling the truth for money*'.

This particular empirical finding of the study suggests the land sector is vulnerable to corruption and rent-seeking via informal systems as well as internal corruption networks. It is often the case that corruption occurs in the land sector when there is no inventory of public land and related systems, poor management of public lands, and inadequate transparency in the allocation of public lands.

There are also opportunities for fraud in the land sector due to the uncertainty of documents and the issuance of forged documents.

4.2.4. Authority vacuum under rural and urban land administration institutions

The development of informal settlements in the study areas is also attributed to the lack of coordination between the urban and rural land administration institutions in the *agency space*⁷ [45]. The findings of the study showed that the institutions' duties and responsibilities in the matter of peri-urban land have not been set out yet. In Ethiopia, rural lands are administered by the rural land administration, utilization, and rehabilitation offices under the close supervision of regions [46]. On the other hand, urban lands are governed by urban administrators [40]. Yet, the lines between the two are often unclear. Due to this dichotomy of land administration institutions into rural and urban lands, and most importantly the lack of coordination between these two institutions in Ethiopia's peri-urban areas, the practice of unauthorized subdivision and construction has worsened. Having two different authorities responsible for land governance, as well as a lack of clarity as to their responsibilities in peri-urban land matters, has led to the growth of informal settlements [47].

As a consequence of this authority vacuum under one's jurisdiction, there are some cases where peri-urban invasions of land are inoffensive in some locations, such as those at the foot of *Kore* Mountain, *Tinfaz* Mountain, and the foot of *Gebrael* Mountain, which cause recurrent boundary conflicts in informal settlements. This is mainly due to a lack of coordination among land administrative government institutions: rural and urban land administration institutions. As can be seen in the *Nitaf Dingay* area at the foot of *Gebrael* Mountain and *Mesalemia*-neighborhood of *Adengur*-houses are constructed in the non-planned areas (Fig. 9).

Some of the interviewed settlers indicated that they had received authorization letters from Woldia Woreda rural land administration to build houses in transitional peri-urban areas. Constructions of houses in the non-planned areas are on the consent of the rural land administrators whereby the municipality had no authority to govern. Some settlements such as the *Nitaf Dingay* were constructed in the forest reserve areas where environmental hazards such as flood problems, landslides, and rockfalls are prevalent.

Rural land administrators were asked why they fail to control informal settlements in the peri-urban areas of the town administration. In response to the concern regarding the spreading out of informal settlements in peri-urban areas, individuals from the rural land administration, utilization, and rehabilitation core process owner replied as follows.

Since our duties and responsibilities are concerned with the rural lands, the core process owner in general, and the experts, in particular, are not worried about the emergence of settlements in the peri-urban areas of the town administration. So, whether the periphery areas of the town are characterized by unplanned construction of houses or not is not the concern of the core process owner. Thus, if the rural land certificate or the 'Green book' affirms that there is residential land nearby, the core process owner permits and gives a letter of permission to construct a house on their plot of land. In doing so, the experts did not see whether it will be compatible or not with future urban planning and land uses.

This means that the rapid and unplanned illegal conversion of rural lands to urban lands leaves many actors out of the decision-making process [48].

For instance, when illegal construction control and peacekeeping core process owners tried to regulate the construction of settlements in the peri-urban areas, those who constructed houses illegally in these areas brought a letter of approval from the rural land administration office. Besides, because of the frequent warnings by builders in peri-urban areas, people from the construction control and peacekeeping core process owners department are hesitant to send experts to monitor construction in the area. Consequently, informal constructions in peri-urban areas remain uncontrolled.

Indeed, although the municipality had no direct power to take measures against these constructions, the mayor and the zone urban works and construction offices had the power to correct these inconsistencies. Furthermore, the weak vertical supervision of the mayor and the zone urban works and construction office, together with the ad hoc coordination between rural and urban land administration institutions responsible for peri-urban landscape planning, have left land protection policies unenforced. This situation also provides plenty of room for builders to continue building informally in the peri-urban areas of the town.

Generally, the study showed that informal settlements flourish due to weak coordination and a vacuum in authority between the rural and urban land administration institutions to effectively manage the peri-urban areas, as well as weak vertical supervision by the mayor, the zone urban works, and the construction department to address these irregularities. Therefore, it is recommended to have a clear and consistent land policy that addresses peri-urban land management, as well as rural and urban land laws.

4.2.5. Lack of well-defined law for illegal builders and actors involved

In addition to the lack of political commitment and failure to enforce construction laws, and the authority vacuum under rural and urban land administration institutions, the lack of well-defined law enforcement against illegal builders and actors involved in the growth of informal settlements is also a key factor. The involved interviewee from illegal construction control and peacekeeping core process owners of the municipality and kebele 01 revealed that police may detain someone who violates the land use law for a maximum of one or two days, but there is no legal ground for the illegal builder or actor involved to be in jail for his/her illegality as well as being in prison for a specified period. Aside from private actors, peri-urban areas are prone to unauthorized occupations, given that there is no public law or disciplinary code, as well as the lack of accountability for the illegal occupations that are occurring in the area. The interviewees mentioned that corrupt officials are typically responsible for settling informal settlements. Officials often harass and demand bribes from informal developers. Several people have criticised them as the real architects and planners behind informal

⁷ Agency space is the arena where interaction between agents occurs [45].



Fig. 9. Informal construction in the non-planned forest-reserved peri-urban areas of *Nitaf Dingay* at *Kebele 01* (left) and *Mesalemia* at *Kebele 05* (right). Photo by Author (2019).

settlements. In this regard, alleged corrupt government officials were no exception.

Involved experts in interviews and focus group discussions like illegal construction control and peacekeeping core process owner as well as land brokers confirmed that government officials were the main actors in the development of the informal settlements. The findings of the study affirmed that ‘no one is out of the game’. It was found that the alleged corrupt government officials were by no means the most dominant, influential, and keen players in the formation of informal settlements. The developments of informal settlements were believed to be guided by corrupt government officials, who continually harass and demanded bribes from informal developers. They have been complained about by many people as the true actors making the road to such settlements. As per key informants, an actor may act as several actors. For example, a land broker might act as a seller, buyer, or broker. Likewise, it is in the spirit of these facts that the FGDs of Woldia Municipality said that the undisciplined government officials might act as buyers, sellers, facilitators, and regulators in informal settlement developments.

Currently, one notable example of this process is evident in *Wassie* vicinity in *Adengur-Gebrael*. As shown in [Fig. 10](#), the first five small houses and the construction at the far front are in rows. In front of them, there is a plot of land covered with chickpeas (during the time of taking the picture) and the houses are arranged in rows as builders have the information that the main road passes through it.

The implication is that local government officials are not missing from some of these developments. Corrupt government officials are the ones who plan such informal settlements. Unquestionably, these misbehaved individuals would continue to act that way, so long as they had not been held accountable for their wrong deeds.

One must ask what the implications are of enforcing or not enforcing regulations on informal settlements. This lies in the pros and cons of these settlements. There is no doubt that informal settlements not only accommodate a wide variety of social groups, but it is also evident that informal settlements often contain housing options that are very low-cost and available to the poorest citizens. That is, informal settlements often accommodate a significant share of the urban population in cities.

However, as described above, overcrowding, pollution, poor waste management, and a lack of basic services characterize informal settlements. Because of these characteristics, informal settlements pose a risk and are more susceptible to health problems. Besides, informal settlements are characterized by anarchic urban growth, the chaotic densification of settlements, inequitable distribution of



Fig. 10. Informal constructions in the non-planned areas at the peri-urban areas of *Kebele 04* (Woldia). Photo by Author (2019).

resources among the urban population, insecurity, violence, crime, and people with drug addiction. Consequently, enforcing regulations on informal settlement development is one of the ways to avoid these negative externalities. Yet, genuine local authorities should take control and a proactive strategy must be developed before informal settlements with all their ills come into being. This is because, among other things, the enforcement of regulations can lead to the demolition and displacement of people, the discontinuance of societies, and moral damage. In addition, there is catastrophic damage to the social and economic development of Woldia.

4.2.6. Poor urban land registry systems

To acquire urban land in any legal way, urban land registration is an essential tool of urban land administration. In addition, the key informants from the cadastral office indicated that the land registry system at least contains the precise description of the plots within an urban land user's holding, the site plan and plot number, the means of plot acquisition (by lease, inheritance, gift, purchase, or any legal means), the use of the plot, the date of plot acquisition, area, and rank, as well as absolute locations as well as relative locations (the names of adjoining landholders to the north, east, south, and west).

Key informants from the cadastral and urban planning and construction inspection departments indicated that, in the absence of these fundamental facts, urban lands were vulnerable to corruption and misuse. This was primarily the work of corrupt government officials who lacked discipline. Sadly, as a result of weak record (file) management, the guidelines in offices might have been misplaced and not easily found or transferred to new leaders and staff. In Woldia, there was a significant problem with the urban land information system (urban land banking) in the town administration, which was also confirmed by the field survey. For instance, after parceling out the land for urban uses, some plots of land remained free or were left unallocated. Plots were intentionally excluded from allocation during plot distribution, which resulted in an artificial shortage of land. The omitted plots were wrongly set aside.

The findings of interviewees and key informants confirmed that the artificial shortage of urban land has forced people to look beyond the areas of planned development. They have to relocate to dispersed and remote locations on the urban fringe. This is where land can be acquired at reasonable prices or by any other means which could include squatting or acquiring land informally. From another perspective, it was confirmed that these parcel plots were allocated to persons having the closest relationship (patronage) with the experts in the municipality, particularly those who work at the urban land management core process owner.

This was mainly due to the absence of well developed and managed urban land bank or an urban land registry in the municipality. Findings in this study also indicated that urban land information was in the hands of a few individuals in the urban land management core process owner. This was discovered during the time of data collection. An example of this was the cases of 'Y' and 'K' that run for private business from reaping the benefits of the town government, on the willingness and acknowledgment of concerned municipal officials due to the invisibility of the municipal land bank (urban land registry system). In this regard, during my fieldwork on Tuesday, the 29th of January 2019, I (the corresponding author) came across a case wherein two individuals, namely 'Y' and 'K', were searching for parcel plots that were exempt from the allotment process. They sought parcels of land for their families, 'Y' for his father, and 'K' for his mother. It was compensation for the return of their plots after their previous plots were taken for urban renewal where Y's parents lived close to *Maksegno Gebeya at Defergie* and K's in the inner town of Woldia at *Adago*.

In terms of people's desire to settle in Woldia, the Millennium area (*Kebele 06*) is the most desired location owing to its potential for expansion. The informants said that they had been permitted by municipal officials to look for available plots without holders in any locality. If they found any, their parents would receive them. On the same day, the mayor, deputy mayor, and a surveyor (designer) named "A" were in the field to check land plots and see if anyone was occupying or else had claimed the property and allotted it to displace urban dwellers. Taking advantage of this opportunity, 'Y' and 'K' searched with these government officials.

It was because of that reason that these two people searched for plots of land to be given to their parents as a kind of compensation. The key informants confirmed that 'Y' and 'K' identified four plots (plots number 22, 23, 24, and 25) indicated in Fig. 11 when the discussion was made with them. Despite identifying these plots as free of owners, surveyor 'A' was well-aware that the plots had been given to individuals whose names were not to be mentioned. I found 'K' the other day and confirmed that the three plots (plots number 23, 24, and 25) were legally owned by people. Thus, plot number 22 was identified for his mother, located near Millennium secondary

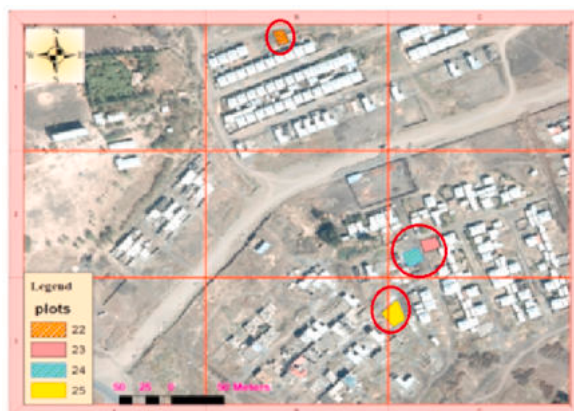


Fig. 11. Plots identified for allocation via leasehold and fixed (plot number 22).

school. This plot had no owner and was leased to his mother based on his identification and submission of information to the municipal authority.

This particular case addresses several inferences. As an example, urban lands are exposed to corruption by unaccountable government officials, and public lands are poorly managed. *Second*, there are poor land registry systems, particularly the urban land management department. *Third*, certain segments of the town's population benefit from the patronage of officials. *Fourth*, urban land information is in the hands of certain government officials so that they can manipulate it to the extent of their needs. Land information is not readily accessible to all and the procedures are vague. That is why such kind of activity, the abuse of land information by corrupt public officials, is dubbed as an '*administrative sin*' by an interviewee from Kebele 02.

More importantly, this particular case again illustrates that the municipality as a regulating institute lacks who owns what land and opens fertile ground for backdoor deals. The process of land allocation is filled with corruption and takes no notice of regulations and planning standards which in turn leads to unlawful settlements.

To that end, therefore, to reverse the outgrowth of informal settlements, it is suggested that those urban land registry authorities whose duties and responsibilities are delegated by the law should implement the process of recording/compiling, storing, securing, updating, and publicizing information about urban lands.

4.3. Responding to the alarm: intervention practices in managing informal settlements

A conventional system and a cadastral system are the two interventions undertaken by local governments to control the growth of informal settlements.

4.3.1. Conventional intervention approaches

Based on the data obtained through this study, the town administration of Woldia has executed the following conventional handling measures for dealing with informal settlements: benign neglect, demolition, and regularization based on circumstances.

4.3.1.1. Negligence/benign neglect. This study revealed that the town Administration's most prevalent response to the proliferation of informal settlements was neglect in the sense of turning a blind eye to the situation. This approach has occurred for manifold reasons. The government considers these settlements to be an asset in its campaign for political support. Second, the government may consider informal settlements as solutions to housing problems when the formal housing market cannot fulfill its needs. Third, informal settlement generates the local economy and social system. Discussion with the illegal construction control and peacekeeping core process owner of the municipality, however, pointed out that, partly except for the first reason, the other two were not the typical reasons for negligence. This was due to the land sector corruption practices in the town administration. It was confirmed by officials of the above-mentioned core process owner that unethical government officials turned a blind eye to these fraudulent activities, or even invited them. In this regard, it is believed that officials from the land sector conspire with land speculators, land brokers, and landholders such that strict action on one level is frustrated on another, hence the blind-eye administration.

4.3.1.2. Demolition. Demolition/bulldozing of informal settlements is the second most dominant intervention scheme taken by the town administration. It is confirmed through a discussion with the illegal construction control and peace-keeping core process owners of the municipality and kebele 02 that since 2013, they have demolished 654 houses deemed illegal in the town. The reasons behind at the heart of why such measures have been taken include the following: (1) to ensure planned, ordered, and directed urban expansion or to prevent anarchic urban growth; (2) to reduce the chaotic densification of settlements to better install urban infrastructure in the town; (3) to ensure the equitable distribution of resources among the urban population; (4) to reduce negative externalities which may be detrimental to the broader public good; (5) because informal settlements are usually subject to violence, crime, and drug addiction; (6) to make urban areas attractive and conducive for a living; (7) since informal settlements aggravate further informal settlements; and (8) informal settlements affect the internal revenue of the town administration due to no payment of bills and taxes from there.

Yet, the findings of the study revealed that different practical conditions lead to the demolition of informal settlements minimal. There was a growing lobby against demolition that defended the rights of informal settlers. Socially unconquerable institutions are built in prominent places (such as the *Urael Church* near *Kore* in the middle of *Gubarja Mountain*), knowing that the authorities are reluctant to demolish them for fear of communal unrest, or hoping that nearby areas will be protected. Where applicable, any evidence of recognition by the authorities and proof of residence was considered important to establish a claim. Examples are kebele identity cards, electricity bills, water bills, etc.

4.3.1.3. Regularization. Informal settlements in and around urban areas are fear-provoking challenges for many urban managers or planners. Apart from the above-mentioned intervention measures, the other action being taken to govern the outgrowth of informal settlements in the peri(urban) of Woldia is regularization. The key informant (administrative seeker) from the municipality of Woldia pointed out that the main success of this process has been the willingness of informal settlers to pay regularization fees. Besides, informal settlement regularization is often carried out by providing formal property titles to individual homeowners that occupy the settlements. Regularization, then, is one way of accommodating informal settlements toward more inclusion in the sphere of formal settlements.

Additionally, it has been confirmed through interviews that the regularization policy is most often used for political patronage in the context of voting schemes. In accordance with data obtained from the FGDs at the municipality and Kebele 04, the local

governments permit such settlements via regularization during political campaigns when national and local elections are upcoming. Yet, most, if not all, of the above three control measures implemented by the town administration were found to be inefficient, weak, and failed to tackle the outgrowth of such settlements. As a matter of fact, informal settlements are in their perpetuation. Therefore, the message is that there needs to be a paradigm shift from classical orthodox interventions to the most recent modern approaches that are best suited to the current conditions.

4.3.2. *The paradigm: the road to cadastral system in managing informal settlements*

Although conventional informal settlement intervention measures are absurd, they persist into the current era with few solutions in sight. Many of the above-mentioned public intervention measures remain remarkably ill-informed, inefficient, uncertain, superficial, and often biased against the urban poor; they instead favor affluent urban dwellers.

In Woldia, which is one of the rapidly expanding urban areas in Amhara National Regional State, key informants (interviewees) from the cadastral office reported that the office is implementing a modern cadastral scheme with support from the World Bank. It is pointed out that the town is one of the 14 selected urban areas to implement the cadastral system in the region. While it is still in the embryonic stage, the development of a cadastral system remains one of the most pertinent strategic priorities for the current land administration in Woldia. This includes informal settlements as well. Recently, the urban land cadastral office has been established to oversee the registration of all urban land in the cadastral system. That is, to execute the cadastral system for urban land management, an independent office has been established in the town administration of Woldia.

It was also made clear from the cadastral office that the town's urban cadastral system is being rolled out to, among others, address the existing 'overlooked land grabbing,' manage the expansion of informal settlements, avoid loss of information stored in paper format, and increase the town's internal revenue via land taxation procedures and legal land transfers.

4.4. *Methodological challenges and limitations of the study*

The study is about a big problem in Ethiopia (with particular emphasis on Woldia) where institutional mechanisms for land administration and management have been broken down. One of the findings of the study highlights deep deficiencies in land administration and a high incidence of land sector corruption. In this context, conducting research in an insecure and unstable political environment brought methodological challenges and limitations to the study.

As with any research, this research brings some limitations as to what can be concluded from the results. Therefore, it is imperative to ensure that the results of this study are not overstated. In conducting this research, one of the challenges was how to approach corruption topics and make participants comfortable taking part in interview sessions. The second limitation is that the study excluded individuals other than informal settlers, land brokers, land speculators, key informants, and officials that come from the mayor, kebele offices, and municipality. They, therefore, limited the possibility to get more information about policies and strategies that affect the nature of informal settlements from the excluded population. The third methodological challenge that the author(s) encountered was that, given the unauthorized nature of informal settlements, some experts from the Woldia Woreda rural land administration and utilization department were not cooperative and willing to provide information. This problem has two facets. The first is that some experts refused to give any information despite repeated visits for 'polite refusal.' The second issue is that the office has also stopped working for over a year. This is because the experts, in the Woreda rural land administration and utilization office, were alleged to have committed land sector corruption.

5. Conclusions

In this paper, we investigate how the growth of informal settlements in Woldia's peri-urban areas is influenced by the town's key administrative deficiencies. The study selected peri-urban areas in Woldia, as well as collected data from a variety of local governments, private individuals, and legal documents. It was undertaken both to address the basic objective of the study, as well as to illuminate the path forward based on lessons learned from this case study.

The findings on widespread corruption, administrative gaps between rural and urban authorities, lack of clear laws on handling violators of development regulations, and lack of land information systems have fueled the growth of informal settlements. An analysis of the cases presented in this paper reveals that administrative deficiencies interact in complex ways to drive the growth of informal settlements in the areas analyzed. If one looks at the real situation, one would realise that administrative dysfunctions drive the development of informal settlements. Furthermore, it was also concluded that public officials, even though they are responsible for regulating informal settlements within their jurisdictions, failed to do so to the full extent. This is because they have deep ties to land sector corruption. Generally, the assumption that they are responsible for regulating urban land use is ridiculous.

On the one hand, it is noteworthy that the political economy interpretation of informal settlements in Woldia has highlighted how peri-urban land has been utilized by the ruling political elite during election periods as a political asset where illegally settled urban residents are coerced to vote for the party as a means to protect their land claims. Hence, land brokers, peri-urban families, and corrupt state actors are the main actors who profit from informal settlements. On the other hand, there are costs associated with the development of informal settlements. At the heart of these costs are the following: (1) anarchic urban growth; (2) the chaotic densification of settlements that prevents better installing urban infrastructure; (3) disturbing the equitable distribution of resources among the urban population; (4) increasing negative externalities to the broader public; (5) increasing the frequency of insecurity, violence, and drug addiction; (6) and above all, the government lost millions of dollars due to no payment of bills and taxes from there.

What is clear, then, is that officials admit that a large percentage (about 80%) of the peri-urban population of Woldia lives in

informal settlements. As a result of deficient urban land governance, chaotic arrangements of informal settlements are evident in the peri-urban parts of Woldia. Moreover, due to the fragile government structure and political instabilities, urban administrators cannot control and govern the expansion of informal settlements properly. In this context, day after day, informal settlements continue to grow in the town at a rate faster than at present unless a viable and appropriate policy measure is taken. In general, there is laxity from the local administration in controlling the emergence and expansion of informal settlements. In order to reverse the ills of informal settlements, it must be based on a comprehensive understanding of the wide range of factors that trigger them. Special emphasis should be given to administrative failures since they are often overlooked triggering factors by numerous researchers.

Author contribution statement

Fentaw Baye: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Dagnachew Adugna: Conceived and designed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

Solomon Mulugeta: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

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Declaration of interest's statement

The authors declare no conflict of interest.

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ANNEX 3: QUESTIONNAIRES

Part I Household information

1. Sex of the respondent----- 1) Male 2) Female
2. Relationship of the respondent with the head of the household 1) Self 2) Husband/wife
3) Son/daughter 4) Relative 5) Other, specify
3. Age of the household head----- (Write age in full years)
4. Marital status 1) Married 2) Never married 3) Divorced 4) Separated 5)
Widow/widower
5. Religion 1) Orthodox 2) Muslim 3) Catholic 4) Protestant 5) Other/Specify
6. What is the highest educational level you have achieved?
1) Illiterate 2) Read and write (with no formal education)
3) Primary (1-8) 4) High school (9-12) 5) Certificate 6) Diploma and above
7. Family size 1) Male-----3) Female-----3) Total-----
8. What is the current employment status of the head of the family?
1) Self-employed/formal/ 4) employed, private (informal) 7) unemployed
2) Self-employed /informal 5) employ, public sector 8) other, specify
3) Employed private (formal) 6) daily worker
11. What is the average monthly income (in Birr) of the household?
1) ≤600 2) 601-1650 3) 1651-3200 4) 3201-5250
5) 5251-7800 6) 7801-10900 7) ≥10901

Part II house and housing condition related issues

1. Type of house /dwelling is 1) Detached house 2) connected multifamily house
3) other, specify
2. Do you think that the future growth of the town is in this direction? 1) Yes 2) No
3. If yes, for question No. “2” from where did you get the important sources of information
on plot availability? (You can choose more than once)
1) Land Brokers 3) sellers 5) neighbors
2) Friends/relatives 4) buyers 6) others/specify....
4. Where did this household live before coming to this settlement?
1) Rural area/village 3) another urban center
2) Another settlement within the own 4) other, specify
5. Why did you choose this location as opposed to your last residence or what factors were
important in affecting your decision to come here?
6. Do you think that this area is free from any environmental hazards such as landslides,
floods, waste dumps, etc.? 1. Yes 2. No
7. If you answer to question No. “6” is no, why did you choose as if you are aware of it?
8. Who is the Owner of the housing structure?
1) Own 2) Rented 3) Rent free 4) other, specify
9. If Self-Built/Contract built with help / mutual help building group/ did you have
permission from government officials when you built or improve houses? 1) yes 2) no
10. How many rooms do the members of your household occupy, including bedrooms,
living rooms, and rooms used for household enterprises? 1) One 2) Two 3) Three
4) More than three
11. Function of the constructed house
1) Own residential 3) Residence and production work

- 4) Commercial and residence 2) Rent 5) other specify-----
12. What are the main construction materials of the external wall of the house?
 1) Mud and wood/logs 3) Stone and brick 5) Corrugated iron
 2) flattened tin cans 4) Concrete block 6) Any other/specify-----
13. What are the main construction materials of the roof of the house?
 1) Concrete 3) Asbestos sheets 4) Corrugated iron 5) tile
 2) thatch 6) Any other/specify
14. What are the main construction materials of the floor of the house?
 1) Soil/earthen floor 3) tile 4) concrete
 2) painted(wood) 5) Any other/specify
15. What are the main construction materials of the ceiling?
 1). Cloth/Abujed 2) Textiles (sacks) 3) Others 4) No ceiling
16. Could you use your house as collateral for a loan? If yes how? If not why not?
17. Under what conditions do you occupy the land on which your dwelling is located?
 1) Family gift 2) leased 3) inheritance 4) unlawful/squatted 5) other/ specify
18. Do you have the documents for the house or land ownership you have to show?
 1) Yes 2) No
19. Are you satisfied with the area you are living in? 1) Yes 2) No
20. If you are not satisfied, what is/are the sources of dissatisfaction related to residential Environment (You can choose more than one).
 1) The area is far from working place 4) Lack of basic services at the ideal distance
 2) Incompatible land use activities 5) Poor environmental quality
 3) Lack of security
21. Does the household fear any fear of eviction/bulldozing from this informal settlement?
 1) No, not absolutely evict. 3) No, perhaps may not evict
 2) Yes, we might be evicted 4) Yes, we will be evicting 5) do not know

Part III. Infrastructure utilities and services

Water supply situation

1. What is the main source of water for drinking and cooking used by your household?
 1) Private pipe water 4) shared from the neighbor
 2) Private vendor 5) Public tap/ standpipe (Bono)
 3) Nearby streams 6) other specify
2. What is the price of a Jerry can (20 liters) of water?cent orbirr
3. If the source of water is from private vendors or 'Bono' or nearby stream, how long (in an hour or minutes) does it take to get water from this source?
4. If the source of water is a private vendor, how satisfied are you with the frequency of supply (days Per week); duration of supply (hours per day), and water charges/fees?

Sanitation situation

1. What are the methods the households use to dispose of waste?
 1) Burning 4) dumping the waste along the roadsides
 2) Dumping into rivers 5) Dumping into open spaces
 3) Collected by the municipal truck 6) buries it 7) Others, Specify

2. Who provides the collection service?
 - 1) Public collection services
 - 2) private collection services
 - 3) other specify
3. How far is it from your house?meters/mins (Ignore if house-to-house)
4. What type of toilet facilities do you use?
 - 1) Private pit
 - 2) Shared pit
 - 3) private closet
 - 4) Shared closet
 - 5) community toilet
 - 6) no toilet
 - 7) other specify
5. If there is a toilet facility, where is it located? 1) Inside the house 2) outside the house
6. Where do the contents of this toilet empty?
 - 1) Directly to drain/ditch
 - 2) Directly to open ground
 - 3) Other, specify
7. How do you rate the level of satisfaction in the use of the toilet facility?
 - 1) Highly Dissatisfied
 - 2) Dissatisfied
 - 3) Indifferent
 - 4) Satisfied
 - 5) Highly Satisfied
8. If you are dissatisfied with the toilet facility, what are the principal challenges to improving your sanitation arrangements?
 - 1) Not enough space
 - 2) Renters are not interested to invest (if the house is rented)
 - 3) Lack of finance
 - 4) Lack of knowledge on how to do this
 - 5) other, specify

Road infrastructure

1. What is the main transport mode used by your household to the workplace, school or market...etc.?
 - 1) Walks
 - 2) bicycle
 - 3) motorized trityres or (Bajaj)
 - 4) other, specify
2. What is the condition of the road outside your dwelling?
 - 1) Paved in good condition
 - 2) Paved in bad condition
 - 3) not paved at all except walk sides
 - 4) other, specify
3. What is the main problem with this road?
 - 1) Drainage in rain
 - 2) Bad road surface
 3. No roads, only footpath
 4. Narrow sidewalk
 5. Other, specify
4. Has the community contributed to maintaining drains before? 1. Yes 2. No
5. If your answer to question No. 4 is “yes”, in what ways?
 - 1) Financial contribution
 - 2) Committee membership
 - 3) Resource contribution
 - 4) Consultation
 - 5) other, specify
6. What problems do you face in the drains of the area?-----

Source of energy/ Electricity

1. What is the main source of light for the household?
 - 1) Electricity
 - 2) Candles
 - 3) firewood
 - 4) battery flashlight
 - 5) kerosene
 - 6) Solar
 - 7) other, specify
2. What is the main source of energy in your dwelling for cooking food?
 - 1) Electricity
 - 2) firewood
 - 3) charcoal
 - 4) kerosene
 - 5) other, specify
3. If the source of light/energy is electricity, how is the electricity connection made?
 - 1) Metered connection to the house
 - 2) Connection from neighbor's house
 - 3) Other, specify
4. Are you paying for the use of electricity? 1) Yes 2) No
5. If your answer to question No. 4 is “yes”, for whom and how much per month on average?....Birr

ANNEX 3: INTERVIEW GUIDE

Interview with Land brokers and/or speculators

1. For how many years have you been living in this locality/area?
2. What are the most common plot sizes requested by buyers? Is there a variation in the cost of the plot of land across different sites such as *Ariro*, *Adengur*, and *Michael*?
3. How do you characterize the economic status of people who wants to acquire a plot through informal means?
4. Who are the main sellers of plots of lands in the peri-urban areas?
5. If you have been involved in this activity for the last 10 years (since 2000 E.C) how do you see the demand and supply of land through the informal market and the price?
6. How do you exchange information concerning the land market, availability of land, and potential buyers and sellers?
7. What are the commonest sales techniques and how price setting is determined? What are the main determinants or factors of land prices and buyers' choices in the town?
8. What are your roles, motives, and aspirations in the land transactions/markets?
9. What processes or stages are involved in the formation of settlements before the actual land transaction or formalizing?
10. Can you tell me anything concerning the issue of informal settlement that we did not see in this discussion?

Thank you for your cooperation and time

Interview Questions to Land administration officials (municipality). Woldia Woreda land use and utilization office, and Zone agricultural official

1. Can you please introduce yourself, your position, and years of working at your current office, in particular your present position?
2. What are the main duties and responsibilities of the land management core processor owner?
3. Regardless of many efforts to stop informal/unlawful land occupations in the peri-urban areas, the constructions of these settlements are flourishing alarmingly even today. Who should be blamed for the increase of unlawful settlements in the town? Why did the government fail to do so?
4. Regularization exacerbates the proliferation of informal settlements in the town. Do you agree with this idea? How?
5. Who is responsible to avert this from happening and what are the basic instruments used by the government to solve such settlements?
6. What are the common channels of urban land delivery for urban development in the town?
7. To what extent do the existing land delivery channels accommodate the urban people, particularly the urban poor?
8. What will be the fate of unlawful settlers if their dwells will be bulldozed?
9. Is there anything else you want to add concerning any of the topics we have discussed or related issues of which you think I should be aware?

Thank you for your cooperation and time

Interview questions to illegal construction control and peacekeeping officials (kebele and municipality)

1. Can you please introduce yourself- position and years of working at your current office, in particular your present position?
2. What are the major duties and responsibilities of the core processor owner?

3. In your opinion and experience, what common possible reasons (economic, institutional, social and political) have motivated the continuation of illegal land occupation and construction in the town?
4. Who are the pertinent *actors in the process* of the development of unlawful occupations?
5. Despite many efforts to control and manage the formation of informal settlements, they are perpetuated? Why does the office fail to do so?
6. What resources and institutional capacity are in place for the office to carry out its duties and responsibilities?
7. Have you encountered an eviction/bulldozing of peri-urban settlement for the last eight years? If, yes what were the causes for eviction/bulldozing?
8. How did you evaluate the vertical and horizontal coordination between government agencies in the light of informal/unlawful settlement management?
9. Is there anything else you want to add concerning any of the topics we have discussed or related issues of which you think I should be aware?

Thank you for your cooperation and time

Interview questions to housing and infrastructure works core process owner of the municipality officials

1. Can you please introduce yourself— position and years of working at your current office, in particular your present position?
2. What mechanism is in place to facilitate community participation in local infrastructure development?
3. Although informal settlement consolidation and density increase, the office is sightless in the delivery of infrastructure and services. Why? At what conditions the settlers will entertain these infrastructures and utilities?
4. To what extent the World Bank works concerning the issue of unlawful/informal settlements in the provision of the infrastructure facilities?
5. Unlawful occupations and constructions are the main challenges to the effective installation of road infrastructure in the town. What actions would you recommend in addressing the problem?
6. What are the main constraints of the institution to perform efficiently?
7. Is there anything else you want to add concerning any of the topics we have discussed or related issues of which you think I should be aware?

Thank you for your cooperation and time

Interview with urban plan implementation, sanitation, and beautification core process owner experts

1. Can you please introduce yourself— position and years of working at your current office, in particular your present position?
2. What major constraints did your office encounter to address the challenge of plan implementation, sanitation, and beautification in general and in informal settlements in particular in the town?
3. Large numbers of informal/unlawful occupations are visible in the environmentally sensitive as well as forest reserved areas of the town such as the foot of *Gebrael, Kore, and the hill areas of Tinfaz*. Who is responsible to avert the flourishing of such illegal/unlawful settlements?
4. How did you evaluate the performance of your activities in controlling the widespread

- informal settlements in the environmentally sensitive and forest reserved areas in the town?
5. Did you believe that the unlawful occupation and construction in the peri-urban areas of the town negatively affect the sanitation and beautification program of your office? What are your comments?
 6. Is there anything else you want to add concerning any of the topics we have discussed or related issues of which you think I should be aware?

Thank you for your cooperation and time

Interview questions to urban planning officials (plan and Policy studies)

1. What are the duties and responsibilities of your offices?
2. Would you explain the major drivers of unlawful occupation and construction in the peri-urban area of Woldia?
3. Land allotment inefficiencies in the formal land allocation procedures aggravated the proliferation of informal settlements in the periphery areas of the town. What is your comment on this issue?
4. Many people criticize that there are no consultations and mobilization of residents to incorporate their views, information, ideas and defuse potential oppositions to plan drafts, which might or might not be taken into account in final preparation. What is your comment on this?
5. Recently, the periphery areas of the town (*such as the forest reserved areas at the foot of Kore and Piazza*) are characterized by the unlawful occupation and construction of houses which is contrary to the urban planning of the town? What is your comment?
6. What are the major practical and institutional flaws to carry out the office's duties and responsibilities?
7. Is there anything else you want to add concerning any of the topics we have discussed or related issues of which you think I should be aware?

Thank you for your cooperation and time

ANNEX 4: Check list for FOCUS GROUP discussion

1. Who are the main actors involved in the informal land accessing and securing mechanisms?
2. Who is responsible to avert this from happening and what are the basic instruments used by the government to solve such settlements?
3. What activities have been done to control unlawful construction in peri-urban areas?
4. To what extent the existing urban land use policy and its implementing institutions are effective to promote sustainable land use in the town?
5. What were the most persuasive factors for governmental officials to turn their attitude to the legalization/ regularization of informal settlements? Are there new ways of approaching informal settlement interventions in the town?
6. Many people criticized that, the areas occupied by informal settlements are rarely mapped with any detail and the edges left undefined, undocumented often purposefully. What is your comment on this?
7. Is there anything else you want to add concerning any of the topics we have discussed or related issues of which you think I should be aware?

Thank you for your cooperation and time