

**CAUSE AND EFFECTS OF INFORMAL HOUSING DEVELOPMENT IN
ADAMA TOWN, THE CASE OF BOKU SHANAN SUB-CITY**

BY: SAMEYA YASSIN ABDULKADIR



A THESIS SUBMITTED TO:

THE DEPARTMENT OF ARCHITECTURE

School of Civil Engineering and Architecture Office of Graduate Studies

Presented in Partial Fulfillment of the Requirement for the Degree of Master's in
Urban Planning and Design

Office of Graduate Studies

ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY

Adama; Ethiopia

July, 2020

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Advisor: Prof. Samson Kassahun



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We, the undersigned, members of the Board of Examiners of the final open defense by Sameya Yassin Abdulkadir have read and evaluated her thesis entitled “Cause and Effects of Informal Housing Development in Adama Town, The Case of Boku Shanan Sub-City” and examined the candidate. This is, therefore, to certify that the thesis has been accepted in partial fulfillment of the requirement of the Degree of Urban Planning and Design.

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DECLARATION

I hereby declare that this MSc is my original work and has not been presented for a degree in any other university, and all sources of material used for this thesis have been duly acknowledged.

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This MSc Thesis has been submitted for examination with my approval as thesis advisor

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ADVISOR'S APPROVAL SHEET

To: Architecture Department

Subject: Thesis/ Submission

This is to certify that the thesis entitled “Cause and Effects of Informal Housing Development in Adama Town, The Case of Boku Shanan Sub-City” submitted in partial fulfillment of the requirements for the degree of Master’s in Urban Planning and Design, the Graduate program of the department of Architecture, Urban Planning and Design and has been carried out by Sameya Yassin Abdulkadir; Id. No PGE/18832/11, under my supervision.

Therefore, I recommend that the student has fulfilled the requirements and hence hereby he can submit the thesis to the department.

Dr. Samson Kassahun

Name of Advisor

Signature

Date

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LIST OF ABBREVIATION

COVID_19.....	Corona Virus Disease 2019
CMP.....	City master plan
CSA.....	Ethiopian Central Statistical Agency
E.C.....	Ethiopian Calendar
ECE	Economic Commission for Europe
FGD.....	Focused Group Discussions
MUDC.....	Ministry of Urban Development and Construction
NGOs.....	Non-Governmental Organizations
No.....	Numeric Order
UHDB.....	Oromia Urban Land Development and Management Agency
ULDMO.....	Adama City Urban land Development and Management Office
ULG.....	Urban Local Government
UN.....	United Nation
UNHSP.....	United Nation Human Settlement Pattern
UNCHS.....	United Nation Centre for Human Settlements

Abstract

Currently the process of urbanization has reached an unprecedented level. Most of the rapid urbanization phenomena happen in developing countries. As a result, a disturbing feature of this trend is explosion of informal housing development and unplanned expansion in cities of developing countries. As in other cities of developing countries, the expansion of informal settlements in Adama becomes a major urban planning problem. Due to high population growth and other related factors, the city cannot meet the ever-increasing demand for land and housing by the dwellers.

This paper focuses on understanding the formation and expansion, effects and characteristics of informal Housing housing that are found in four kebeles of Boku shanan sub city. To meet the objective of this study, data related to this study was collected from 96 household heads selected. The data were collected through questionnaires, interviews and discussion with dwellers, brokers, farmers, municipality officials and professionals and Kebele administrators. Also site observation, mapping and photographing were done to show the study in-depth. The Paper has used systematic random sampling for informal settlers and purposive sampling for experts and officials.

According to the major findings of the study, the major factors contributing to the formation and expansions of informal settlements in the study area are Failure of Plan Implementation, lack of financial capacity, rental of unaffordable housing on formal land, absence of accountability and transparency, corruption, and delay in responding to land supply systems as the causes of informal settlement in the study area. The common characteristics of informal housing in the study area are insecurity of tenure, poor housing conditions, lack of infrastructure and basic services, large plot sizes. These have greatly contributed to the unplanned and rapid horizontal expansion of the built-up area of the town, low income group, and hazardous environmental conditions such as flooding.

Some of the approaches followed to eliminate the phenomena are harmful to the population. Therefore, the government should address informal housing backlog in the city and challenges posed by informal settlements by setting appropriate regulations and Policies to regularize the existing informal housing.

Keywords: Adama; Dwellers; Informal housing; Informal settlement.

CHAPTER ONE

1. INTRODUCTION

Informal housing development has become very prevalent in most of Ethiopia's urban centers. Adama is one of the main urban centers in central Ethiopia. This research focuses on assessing the cause of informal housing for formation and expansion and the positive and negative impact of the problem in Adama, Boku Shanan sub-city. As far as I know, no study has been conducted on the title "Cause and Effects of Informal Housing Development in Adama Town" and this study shows the informal housing situations in Adama Town and the prominent factors for the formation and expansion of illegal occupation. Its consequences on the development of the town. Therefore, I am convinced that it would be important to carry out an investigation on the subject, since the development of the city has been challenged by the proliferation of informal settlements.

1.1 Background of the Study

Urban housing can be broadly classified into formal and informal settlements. Formal settlements are those that have been built and developed by government agencies or housing societies in duly approved plans. In addition to the physical, social, economic and many other considerations, the development of such colonies is taken into account so that living conditions are comfortable for the residents. On the other hand, informal settlements are those that have arisen illegally on government lands or on private lands by chance. They are unplanned and violate all government planning regulations. They have a permanent / semi-permanent and temporary structure that occupies agricultural land and green belts in and around the city. They lack drinking water and regular electricity supply, sanitation, garbage disposal, road network, park, etc. Bad houses with inadequate light, air, bathroom and toilet facilities; extreme overcrowding and high population density are some of the characteristics of these informal settlements (Ali, 2006 and Bose, 1995).

Informal settlements have become a persistent feature of urbanization and globalization. Urbanization is increasingly accepted as an inevitable phenomenon. In developed countries in Europe and North America, urbanization has been the consequence of industrialization and has been associated with economic development. By contrast, in developing countries of Latin

America, Africa and Asia, urbanization has occurred as a result of the high increase in the natural urban population and the massive migration from rural to urban areas (Brunn and Williams, 1983).

Rapid urbanization rates and unplanned expansion of cities have had several negative consequences, particularly in developing countries. Most cities in developing countries are expanding horizontally and the population is moving to unplanned outlying settlements at the expense of agricultural land and areas of natural beauty (Lowton, 1997 cited in Minwuyelet, 2004). The unplanned and uncontrolled expansion of urbanized areas of cities generally leads to problems of soil erosion, segregation of low-income groups in ecologically sensitive areas, and higher costs in terms of infrastructure provision.

Ethiopia is one of the least urbanized countries in the world. Even by African standards, the level of urbanization is low. According to the World Population Data Sheet from the Population Reference Office, while the average level of urbanization for Africa overall was 33% in 2002, Ethiopia had only 15% of its population living in urban areas. Despite the low level of urbanization and the fact that the country is predominantly rural, there is a rapid rate of urban growth, which is currently estimated at 5.1% per year. Ethiopia's urban population is concentrated in few urban centers.

Adama is one of the populous and fast growing cities of economic development in Ethiopia; However, due to high population growth and other related factors, the city cannot meet the increasing demand for land and housing. In addition, the physical expansion of the city leads people to informality on the outskirts.

In general, the information collected in case study areas of informal inhabitants characterized by low-income groups, poor housing, illegality, large plot size, and inadequate provision of infrastructure and services. The land acquisition system is an informal subdivision of land through family, donation, the informal market for agricultural land and the availability of vacant land. These problems are serious mainly in the town of Adama, especially around the sub-city of Boku Shanen.

1.2 Statement of the Problem

The stagnant nature of economic development and rapid population growth in most developing countries makes effective and efficient provision of services difficult for governments to meet

the needs of their residents. Housing is one of the basic needs for human survival; despite the fact that it remains a critical problem in most cities in developing countries for a long time, due to the fact that a large proportion of urban dwellers in less developed countries live in slums or informal settlements. According to UN Habitat (2006), an estimated 924 million people live in informal settlements and live without secure tenure in urban areas of developing countries.

In the Ethiopian context, informal settlements are known as "Chereka Bet". The term Chereka gamble in its literal translation means "moon house", which implies that the illegal construction of houses is carried out at night. Settlements are built without the permission of the municipal governments and without having a construction permit issued by the municipal governments.

Adama, is the center of commerce, the conference for the Ethiopia, its favorable commercial environment has attracted many people from the surrounding regions, as well as from other urban areas.

In Adama, the illegal construction of houses is carried out at night known as “mana addressaa” has been a challenge for urban land management in Adama. With respect to the proportion of planned city expansion out of the total extension of built-up areas, data acquired from city administrations reveals that most of them have experienced significant informal expansion the proportion of formal participation compared to informal expansion is lower. According to the 2013 report, the land developed in that year is 60 ha for formal expansion, but informal expansion is 758.89 ha with the 1:13 ratio. The city had experienced the highest level of informal expansion which is (1,595.68ha) in 2010, (1,366.01ha) in 2011 and (1, 138.34ha) in 2012 (City Report, 2015). In addition to information from the urban land management office, Adama shows that in 2016 there are 37,000 illegally built houses in the city with maximum informality in Boku Sub-city (Haile G, 2018).

Due to population growth (natural increase and rural-urban migration), insufficient land supply, poverty, limited capacity of local authorities to develop and deliver land to the poor, and administrative instability, the city cannot meet the ever-increasing demand for land and housing by the inhabitants. This led to an unlimited horizontal expansion of the city informally. As a result, most informal settlements are located in the peripheral areas of the city.

Therefore, the main problems currently observed in the area of informal settlers are insecure tenure, according to the Center for Housing Rights and Eviction (cited in Beall and Sean 2007), in Africa, 4 million more continue to live with the threat eviction. Low-quality housing and

insecure tenure remove much of the comfort of having a "home" in the city. Residents of illegal settlements live in terror of the official authorization in which they may lose their few capital assets and personal possessions. Therefore, insecurity of tenure puts informal urban settlers at constant risk of eviction, prevents them from accumulating assets and accessing credit, inhibits the use of one's home for income-generating activities, and does not allow investments in provision of services and the lack of access to basic urban services and Infrastructures.

Therefore, this study evaluated the causes and effect of informal housing development in depth and suggests possible solutions that facilitate the development of the city socially, economically and environmentally.

1.3. Objectives of the research

1.3.1. General Objective

The overall objective of the study is to assess the causes and effects of informal housing development in the town of Adama around the Boku shaman sub-city.

1.3.2. Specific Objectives

The specific objectives of this research are to:

- Identify the characteristics of informal settlers in the town of Adama.
- Examine the Land Acquisition Mechanism in the study area.
- Assess the causes of informal settlements in the town.
- Assess the effect of informal settlements in the town.
- Examine the government's response to informal settlements and
- Identify possible solutions to the identified problems.

1.4. Research Questions

This study was attempted to answer the following questions:

- What are the characteristics of informal settlements?
- What were the mechanisms for the Land Acquisition in the study area?
- What are the causes of informal settlements?

- What are the effects of informal settlements?
- What were the government's responses to reduce informal settlements?
- What are the possible solutions to the identified problems?

1.5. Significance of the research

This Paper is primarily for an academic purpose in addition; it also has its own meaning for different bodies. It can give an indication of the main problem areas that require attention for city managers. It can also be taken as a source for future research.

1.6. Scope of the research

Spatial scope, spatial coverage the study was conducted in Adama town around Boku sub-city. According to the urban land management office, Adama shows that in 2016 there are 37,000 illegally built houses in the city with maximum informality in Boku Sub-city. The area was selected because it has the original, recent and new informal settlement and would help to characterize informality. Most dwellers in site are informal dwellers.

Thematic scope, the research focuses on the causes and effect of informal settlements on housing.

Temporal scope, the time frame for this research covers the second semester of 2012 E.C academic year.

1.7. Limitation of the study

Despite the fact that this study was programmed with greater care and to collect the data as per the schedule, but due to the global pandemic disease COVID_19 encounter problems such as the unwillingness of the respondents out of fear, the same experts are not in the office, the lack of transportation facilities and focused group discussions (FGD) face the lack of data.

1.8. Organization of the research

The study contained five chapters. The first chapter contains an introduction. The second chapter deals with the theoretical framework, the third chapter deals with the study methodology, the fourth chapter deals with the Analysis and Interpretation of the data, the study, the Conclusion, and the Recommendation are discussed in the last chapter.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Conceptual definition

2.1.1 Informal settlement

Informal settlements have several definitions, but the one suggested by the UN-Habitat program is the most widely applicable. According to UN-Habitat (2003), informal settlements are identified as 1) residential areas where a group of housing units has been built on land on which the occupants have no legal claim, or which illegally occupy 2) unplanned settlements and areas where housing does not meet current planning and construction standards. Many other terms and definitions have also been devised, such as informal human settlements, slums, illegal settlements, unconventional housing, non-permanent settlements, etc.

As Samson (2004), stated, the term informal settlement is widely used by Ethiopian planners to indicate the settlements that are not in conformity with the planning laws and standards. In Ethiopia informal settlements are traditionally given the name ‘Ýecherka Betch’. The quality of dwellings in informal settlements in the Ethiopian context is characterized by limited access to water, electricity, sanitation and other basic services and infrastructure. Moreover, the settlements are faced with insecure land tenure.

2.1.2 Squatter Settlement:

According to Srinivas H. (2015) squatter settlement can be defined as a residential area which has developed without legal claims to the land and/or permission from the concerned authorities to build; as a result of their illegal or semi-legal status, infrastructure and services are usually inadequate.

2.1.3 Slum

Defines slums as contiguous settlements where inhabitants are characterized as having (i) insecure residential status; (ii) inadequate access to safe water; (iii) inadequate access to sanitation and other basic infrastructure and services; (iv) poor structural quality of housing; (v) overcrowding (UNCHS).

2.1.4 Urban Formal and Informal Housing

As Ahsan (2019), stated, Formal housing is constructed following the building standards and regulations enforced by the national housing authorities, whereas Informal housing is built challenging minimum standards of housing regulations. Lack of tenure security is a key characteristic of informal settlements. According to the Vienna Declaration on National Regional Policy and Programs 2004 on Informal Settlements, ‘informal housing or informal settlement’ is defined as human settlements, which for a variety of reasons do not meet legal procedure (and have been built without respecting formal procedures of legal ownership, transfer of ownership, as well as urban planning regulations), prevail in their respective countries and hinder economic development.

According to Pugh (2002, cited in Ahsan (2019)), developing countries have two types of housing development systems; formal, and informal.

- ✓ **Formal housing developments** have the legal basis of the planning agency. These are developed within the structure of government rules, controls and regulations.
- ✓ **Informal housing development** is illegal and consisted of unauthorized ‘colonies and squatter settlements’. These types of developments happen mostly because of unaffordability or sometimes unavailability of housing in legal housing market. The significant characteristics of informal development are insecurity of tenure and low standard of facilities and infrastructure. Another factor of importance is the accessibility of services such as running water supply, power, and the like.

2.1.5 Land Tenure Security

According to UN-Habitat (2004), security of tenure describes an agreement between an individual and group for the rights to use land and residential property, which is governed and regulated by a legal and administrative framework. The security of tenure derives from the fact that the right of access to and use of the land and property is underwritten by a known set of rules, and that this right is justifiable. Palmer (1998, cited in Lamba 2005).

2.2. Empirical literature review

2.2.1. History of Urban land Policy in Ethiopia

Modern urbanization in Ethiopia began with the establishment of Addis Ababa, Menelik proclaimed the 1908 Addis Ababa Land Charter recognizing private ownership of urban land. During imperial regimes, the land tenure system was modern history (Imperial Haile Selassie), feudal systems that intermingled with private, governmental, ecclesiastical, and communal property (Haile G, 2018).

During the Derg Military Government, Proclamation 47/1975 provided land to urban dwellers and such a holding system was known as a permit system. All urban land was transferred to state property (art. 3.1 of the proclamation) and homeless people were allocated 500m of land to build one (art.5). Derg also nationalized all non-urban homes and provided them to low-income residents with low rental prices. But this nationalization, far from being the solution to the housing shortage, meant that all the cities of Ethiopia, including Addis Ababa, suffered severe housing shortages and constantly deteriorating housing conditions (Tolon, 2008).

According to the previous proclamation, urban land was not subject to sale, mortgage, donation, inheritance and lease, and the government became the sole owner of the land and rent collector. The effect was that housing shortages in major cities, as private construction of houses for rental services was reduced, led to today's urban housing shortages that push the poor into informal settlements and become a headache for the government.

During the FDRE of the Federal Democratic Republic of Ethiopia, the first urban land lease policy was introduced in 1993. It was amended twice thereafter, in 2002 and in 2011 to improve the implementation of the urban land policy. Public ownership of rural and urban land has been confirmed and extra-urban houses nationalized by the Derg regime continued accordingly. Today, urban land is governed by the rental and leasing system in Ethiopia. The first lease proclamation was Proclamation No. 80/1993, then revised and replaced by Proclamation No. 272/2002, which is also repealed by current proclamation no. 721/2011. With respect to land ownership, article 40 (3) of the 1995 constitution clearly states that the right to ownership of rural and urban land, as well as of all natural resources, is exclusively vested in the state and in the peoples of Ethiopia.. It is added under the article that the land is a common property of the nations, nationalities and peoples of Ethiopia and will not be subject to sale or other means of

exchange. But here, there is a gap in the implementation of this provision, since there is practically an informal land market.

2.2.2. History of Urban land Policy in Adama

During the Imperial Period, the basic approach to land distribution during this period (early 1900 - 1974) in principle the land-owning king distributes the land lord according to rank and relationship to him. In contrast, landowners are free owners and have the right to sell their land. As a result, land distribution can be considered to be market based (Addisu, 2006). In that period, the city became the administrative center of Yererena Kereyu Awraja, Adama Wereda, and the center of a number of courts, public offices, as well as security and armed forces. Emperor Haile-Sillase had given the biblical name, after 28 years, in 1944, Nazareth to the city without the participation and consent of the Oromo people (Addis, 2006 and Adama Scio-economic city, 2017).

During the socialist period (1974-1990) it was a new period in the history of urban development and the urban legal and regulatory framework. This was the period of the socialist political economy, a time when radical measures have been taken to expropriate additional urban land and houses without compensation. The urban regulatory framework was changed by Proclamation No. 47/1975 that provided for the establishment of neighborhood associations from the smallest neighborhood administrative unit (kebele) to central city associations, which in turn were responsible to the National Ministry Urban Development and Housing. As a result of the system, citizens enjoyed only using it correctly, but the government was the sole owner and developer (Haile G, 2018).

During the FDRE of the Federal Democratic Republic of Ethiopia, implement a decentralized management system. The reform focuses on designing appropriate policies and programs on issues such as defining ULG objectives, powers and functions, improving the provision of municipal services and the qualification of urban centers (Socio Economic de Adama, 2017). There is still central control over local decisions and resources that has a direct impact on local transformation processes. According to the constitution of the FDRE, the issues related to the allocation of land and its distribution is by the central control. Additionally, the revised regional state constitution has not specified the role and responsibility of city administration. The constitution shows the gap between the distribution of the responsibility of the municipalities and

the kebeles. The City Administration is responsible for the implementation of the plans. The current governance of the city is characterized by the existence of two functions, state and municipal, to provide community services in various areas. All branches of government structures include legislative, judicial, and executive bodies, and their administration is headed by the city's mayor.

2.3. Urbanization and Housing Development

According to UNCHS (2008), Urbanization is a broad term that covers a wide spectrum of processes, activities and social organization. It is the process that is carried out in two ways, through an increase in the number of cities and also as a result of the increase in the size of individual cities. The process continues along with the momentum once it begins as more and more people migrate from rural areas to cities and towns; initially the urban population tends to grow at the expense of the rural population. It seems inevitable that the world population will ultimately be urban as the world is undergoing a rapid urban transition. At the beginning of the 21st century, it is estimated that, for the first time in history, more than half of the world's population would reside in urban areas, which was only around ten percent in the early 20th century. As stated by Angel (2016) for cities to expand outward at their current rate to accommodate their growing populations or the increased demand for space resulting from higher incomes, the supply of land should not be artificially restricted. Bottlenecks in land supply lead to increases in land prices and, since land is an important input to housing, house prices rise. The tighter the restrictions, the less the property market will be able to respond to increased demand, and the more likely it is that house prices will rise. And when residential land is very difficult to find, housing becomes unaffordable, and housing is one of the most fundamental characteristics and advantages of an urban economy that is a large and diverse market. But problems in the availability and affordability of land for businesses and for housing, and limitations in transportation that reduce the effective mobility of goods and workers, can fracture the city into disconnected sub-zones that become dead ends, especially for the poor World Bank.

2.4. General Characteristics of Informal Settlement

It essentially has three defining characteristics that help us understand it; these are the physical, the social, and the legal with the reasons behind them that are interrelated (UN-Habitat (2003).

2.4.1 Physical Characteristics

As the informal settlement, due to its inherent "non-legal" status, has services and infrastructure below adequate or minimum levels, such services are network and social infrastructure such as water supply, sanitation, electricity, roads, and drainage, school, health center, market, etc. for example, the water supply to individuals households may be absent, few public or community pipes may have been provided, using city networks or a manual water pump. Informal supply networks if water can also be in place; as World Bank (2002, cited in Srinivas H. (2015)).

2.4.2 Social Characteristics

Informal settlements belong to the low-income group, either waged or salaried work or in various companies in the sector. On average, most of them earn at or near the minimum wage level. The level of household income may also be high, perhaps due to income earned and part-time jobs. Informal settlers are predominantly urban-rural migrants or urban migrants; as ibid, (2002, cited in Daniel Lerebo, 2006).

2.4.3 Legal Characteristics

The key feature that outlines the informal settlement is the lack of an owner of the parcel of land on which they have built their houses. These could be vacant government or public land when the owner does not use the land productively; it is appropriate for informal to build houses (World Bank, 2002).

2.5. Factors contributing for Informal Housing development

Critical factors affecting the formation of informal housing development are remarkably related to several important interrelated challenges. Studies and surveyors show that rapid urbanization and the influx of people to the urban area, the lack of development control mechanisms, the inadequate distribution of formal land, the lack of resources, poverty, and sociocultural factors are the main causes of informal settlements; Goz (cited in Nigusie, 2010).

Similarly, as Postsiou stated (cited in Nigusie, 2010), wherein regions of Europe, Africa, Central, and South America or Asia there is insufficient planning and unrealistic zoning regulation, inconsistent and complex legislation, unnecessary bureaucracy for the development and land permits, marginalization, Poverty, and lack of financing mechanisms for affordable housing, illegal subdivision and construction on agricultural land, political reluctance to confront the

situation and lack of important spatial information are common in settlements informal. However, informal settlements do not have the same characteristics for formation and expansion everywhere.

2.5.1. Inadequate Formal land Distribution

Throughout the history of informal settlement existence, one of the main causes has been the failure or inability of the institution responsible for providing residential plots to the growing urban population. Although official requests for residential plots in the city of Zanzibar have constantly increased, the supply of residential plots is surprisingly inadequate, an average of between 20 and 30 percent per year DoIR (quoted Ali and Sulaiman, 2006). There is a general perception among urban dwellers that there is virtually no possibility of obtaining residential parcels from the land authority. Therefore, the proliferation of informal settlements could be seen as a process of "filling the gap" as determined and driven by the basic economic principle of demand.

2.5.2. Poverty

At the heart of the phenomenon of informal settlements is the question of poverty. With an average annual per capita income of less than \$ 200, the majority of the population can be classified as extremely poor. To build a house in a planned area, you need to have enough money to buy a plot and build a "decent house" (Ali and Sulaiman, 2006). On average, a 400-square-meter parcel sells for between \$ 4,000 and 5,000, which is beyond the reach of many residents. Therefore, building a house is a project for life. People start building houses using mud and straw, and these are gradually replaced over time by cement bricks and corrugated iron sheets. This process can take years; some houses were built in the sixties and seventies and that can still be considered unfinished, even though families have been living in them for all these years. The only place that allows this common practice to take place is in an unplanned area where no drawing or construction permits are required. Therefore, a vicious circle is created in which poverty leads to informal settlements and informal settlements generate poverty.

2.5.3. Informal Land Market

Access to land with housing services is one of the main problems faced by practically all developing countries. In most cities in developing countries, the urban poor and even the middle-

income group often have to exit the formal land market to gain access to land and housing. In general, in cities in developing countries, the informal land market is much larger than the formal market (cited in Hagose, 2010).

2.6. Mode of acquisition of Informal Land and informal Housing

The informal land acquisition mechanism is analyzed as follows. First, the acquisition of land through inheritances and gifts in most cases is normal and in the same systems they are legal and it is the right of the original owner to do so. Although the nature of the subdivision of land for inheritances and gifts appears to be slow its contribution to the formation and expansion of informal settlements is high. The second organized form of urban land invasion is illegal from the start and they create their informal urban neighborhoods in the right and wrong places that they occupied. This mechanism often depends on situations such as conflicts over land ownership and is not common in all urban centers. For example, the invasion of land in informal settlements in Egypt took place as soon as land tenure was in doubt, during the transaction of land ownership between various governors, the transformation of the economy or regulation, and during the national or local elections within the country, Soliman (cited in Gossaye, 2007).

Third lands acquired through informal markets are commonly called the most complicated method of obtaining land in informal settlements. Because, 1) the land can be purchased directly from the original owner and transferred to many other owners, 2) it is the second stage and the way to transfer the land from the land acquired through inheritance, gifts and land obtained from Through the invasion of new owners, as established by Payen, (2002, quoted by Ibid) later, these processes were commercialized and entry was only possible at a cost determined by the informal market 3) is fast and unpredictable. Therefore, many sources put informal land markets first for the formation and expansion of informal settlements.

2.7. Impact of Informal Settlement

The informal agreement invokes many complex legal, institutional, financial, and planning issues, in addition to the need for its physical improvement in construction and infrastructure (Cited in Nigussie, 2010.)

Informal settlements make housing more affordable and reduce transaction costs, but they cannot be mortgaged or used as collateral for any other business purpose (Desoto, 2003). At the same

time, this could be a major asset for residents in urban areas. The area boasted by sweat equity and remittances from family members. Since then, there is no security of tenure in most cases. This investment is constantly threatened by cost, particularly due to demolition in the event of road widening and other major infrastructure developments. According to Epstein (1972) quoted in Kadi Kadir (2003), informal settlements provide cheap labor that works for both formal and informal companies. In this sense, they are important supplies of labor to support the urban economy.

2.7.1. The Economic Impact

In economic terms, informal settlements mobilized significant public and private investments, which remain outside the formal economy and the investment cycle (Desoto, 2003). Furthermore, they are associated with significant public sector costs, implicit and explicit. Settlements often take over public land, transferring the cost burden to local governments and public institutions. The land often developed sporadically and costly with single-family homes that are underutilized. Informal settlements, especially on the periphery of urban areas, create long-term problems for the orderly development and growth of the city, its service requirements, and another potential real estate. Occupants generally do not pay property taxes or user fees, which reduces the municipality's income to provide essential services (Tsenkova, 2009 cited in Nigussie, 2010).

2.7.2. Environment and Social Impact

The uncontrolled expansion of cities has been reduced in several negative consequences, particularly in developing countries. According to Lowton (1997), most cities in developing countries are expanding horizontally and the population is moving on the periphery to unplanned settlements at the expense of agricultural land and areas of natural beauty. In most cities in developing countries, problems related to rapid physical expansion are not due to land shortages, but to the lack of appropriate policies and strategies to guide new development.

The other impact of informal settlement is the issue of security. A study in Nigeria by Balcon (2009) noted that since Nigerian informal settlers lack legal titles, they generally suffer from the problem of uncertainty of tenure, residents in informal settlement areas live daily in constant fear

eviction and demolition by the authority. As a result of which there are no incentives to improve the houses, therefore, they live in houses built with inferior materials.

Informal settlers are closely associated with unhappiness. Most informal settlers belong to low-income groups in the community who are unemployed or seeking the informal sector, such as peddling or providing information services and daily workers (Cho and Park, 1995, cited in Mesert, 2010). Many informal settlement houses are built without windows. One can find a single room that serves as a living room, bedroom, sick room, kitchen, dining room and the like.

2.8. Responses to informal settlement

2.8.1. Negative Responses of Government in Zimbabwe's

Amnesty International (cited in Melese, 2008) clearly stated the Zimbabwean eviction as follows. Since 2005, an estimated 700,000 people lose their homes, their livelihoods, or both, when the Zimbabwean government forcibly evicted them and demolished their homes and businesses as part of Operation Murambatsviva ("expel garbage"). The forced eviction and demolitions were carried out with prior notice, in violation of permanent court orders, and without any provision for temporary shelter, access to food and clean water. Additionally, the police used excessive force against displaced residents, including the beating captured on videotape. The vast majority of victims have not reviewed assistance with replacement housing since the demolitions, and because they are among the poorest of the poor in Zimbabwe, they have experienced hunger illnesses and psychological distress.

2.8.2. Negative Responses in Ethiopia

In Addis Ababa, many squatter settlements, including Kebele 16/17/18 and Ankorch, have been demolished. The number of squatter settlements demolished between 1999 and 2001 C.E. it was 1861 (Kagnaw, 2009).

2.8.3. Positive Response to Informal Settlement

The search for political solutions to tackle illegal settlements is multifaceted and multidimensional. Studying in the ECE region can be an important source of good practice for others facing similar challenges. Solutions range from legalization and inclusion in informal plans, regularization, and provision of essential social and technical infrastructure, as well as the resettlement program in social housing (Tsenkova, 2009).

2.8.4. Egypt Practices

Problem: The Manchiet Nissier settlement is located in the heart of the city of Cairo. The entire settlement is built on a government-owned mountainous site, half a million inhabitants of the settlement do not have legal tenure of their shelters and land. The site also lacks basic social services and infrastructure. UN Habitat (2002, cited in Daniel Lerebo, 2006).

Measure: The rehabilitation and improvement of the squatter settlement in Manchiet Nissier is a unique initiative in the living environment of more than half a million inhabitants. The project consists of relocating a percentage of inhabitants in a nearby planning settlement equipped with all services and amenities, and then in land development phases and creating renovation of the existing settlement. The priority of the project includes providing affordable housing options and access to housing credits. UN Habitat (2002, cited in Daniel Lerebo, 2006).

Process: The project was based on a participatory socio-economic survey with local inhabitants in the pale and management phases. The project strategy was an integral part of the national program for the integration and improvement of squatter settlements, which aims to achieve sustained socioeconomic development for poverty reduction and the creation of participatory rights and institutional mechanisms for urban management in these areas. The process consists of nine phases, to complete the largest project of this type in Egypt. UN Habitat (2002, cited in Daniel Lerebo, 2006).

Achievement: The project used (and still) a set of resources in the planning, implementation, and administration stages and was able to build 700,000 housing units. Thousands of houses were also improved. UN Habitat (2002, cited in Daniel Lerebo, 2006).

2.8.5. Positive Response Ethiopia

Like Daniel Lerebo (2006), the size of informal settlements has increased and is so large today that demolition measures as a means of reducing settlements are not feasible. This forced the city administration to issue a regulation known as "Regulation No.1 / 92 EC", which recognizes part of the informal/illegal settlements specifically those built up to the date of the property title survey in May 1988 EC. For the city administration, the regulation is expected to solve the

problem of homeowners who have not been recognized for a long time, homeowners who want to sell part of their property, and others.

2.9. Policies and regulations on Informal Settlement

The political and legal framework of the urban management system and informal settlement management International approaches to squatter settlements have generally shifted from negative policies (such as forced eviction, benign neglect and involuntary resettlement, etc.) to more positive policies (such as self-help and rights-based, enabling and on-site improvement policies (UN-Habitat, 2003) As authors, one approach that has received considerable attention from various government and public authorities has been the 'enabling' approach, where instead of taking a confrontationist attitude, governments have strived to create an enabling environment, where people who use and generate their resources can find unique local solutions to their housing and housing problems.

Similarly, in Ethiopia's Urban Development Policy under the title "Justified and Accelerated Development in Urban Centers," it is stated that the expansion of micro and small enterprises, the facilitation of land supply, the development of housing, the provision of infrastructure, expansion of social services, protection of the urban environment, job classification and planning (MUDC, 2012).

The document's assumption can be taken as policy responses as a preventive approach because the expansion of micro and small enterprises in urban centers creates employment opportunities (builds the financial capacity of the urban poor) and the other aspects of urban land supply and housing development in urban centers. It can help low-income urban citizens have access to a formal home. Additionally, Urban Land Lease Proclamation 721/2011 and Oromia National Regional State Regulations promulgated to implement the proclamation within the regional state allow urban land to be supplied by both tender and award.

The definition of compensation provided in article 2 (1) of proclamation 455/2005, read as "compensation", means that payment must be made in cash or in-kind or both to a person for their property located on their expropriated property;

Under this definition, compensation is paid in cash or in-kind or in cash and in-kind for property located in a person's possession to be expropriated for public purposes. But article 7 (1) of the same proclamation establishes that the owner of land whose property has been expropriated will be entitled to compensation as a compensation for his property located on the land and for the

permanent improvements he made to said land; and similarly, article 8 (1) of the proclamation shows that the owner of the expropriated land is also entitled to compensation for displacement that will be equivalent to ten times the average annual income earned during the five years before the expropriation of the land.

2.10. Lesson Drawn

In this paper, informal settlements are also conceptualized as settlements that occur both in the peripheral parts of the city whereby land for housing construction is obtained through showers, organized land invasion, or normal commercialization from the earth. The document also believes that informal housing obtained through the informal land market is predominant in the peripheral parts of a given city. To this end, the informal settlement areas that are on the outskirts of the city of Adama, the sub city of Boku Shanan, in the above discussions, it can be understood that academics, governments, NGOs, and development professionals understand that the Housing concept can determine approaches to be used to house the vast majority of people, particularly the urban poor, in most developing countries. From the reviewed literature and the practical realities of most developing countries, it can also be conceived that the issue of formal housing has been debatable and housing the urban poor [particularly in most developing countries] through The "provider paradigm", "spontaneous self-help", "assisted self-help" or the "free market economy" remained far from reality. Furthermore, the literature reviewed so far indicates that the global socio-economic perspective or policy related to housing influences national housing policies in many developing countries.

However, there is a time-lapse in the actual implementation of the already shaped national housing policies. This can best be exemplified by Ethiopia's low-cost housing policy, which was recently introduced. It has been practiced for many years in other developing countries since the early 1960s. Urban renewal, urban improvement, and slum clearance projects were carried out in the context of other developing countries in the 1990s. But, Ethiopia has started the process since the 2000s. In addition, the country also had a problem with well-articulated policies and strategies that were implemented on the ground with respect to slum renovation, slum upgrading, and cleanup of slums. Furthermore, according to the literature, it is conceived that the only option believed to be available to the urban poor, 'informal/extralegal housing' appears to be available only to middle and upper-income groups due to land commercialization and housing in

these countries. To this end, the question of housing in many developing countries, seems to be unanswered.

CHAPTER THREE

3. THE METHODOLOGY OF THE STUDY

3.1. Approach to uses in this Study

To achieve the objective of the study, a case study method was selected. Since then, it is more appropriate to describe the situation in terms of analysis of the problem. The study was mainly based on qualitative and quantitative information.

3.2. Research Method

Each research method has its techniques since then; the purpose of this study was to assess the cause and effects of informal housing development. Their appropriate research method is the field survey, such as questionnaires, interviews, focus group discussions, and observation.

3.3. Sample Design.

3.3.1. Population

The city administration has six sub-cities and 19 Gands (Kebeles) of this; the study focuses on the Boku Shanan sub-city, which has 4 informal Kebele residents. According to the city report, the total number of households living in the sub-city was 3,748 households.

3.3.2. Sampling Unit

The objective of this study is the informal residents of Boku Shanan Sub City who have four informal Kebele residences. Of these the sampling units were; officials and experts working in the land management sector, suburbs, kebeles, municipalities and lands, and 3,748 households of the Sub-city.

3.3.3. Sampling Technique

Sampling techniques to achieve the study objective are probabilistic and non-probabilistic sampling techniques, which are a systematic sampling of four kebeles to address informal residents and intentional sampling for officials, and experts.

3.3.4. Sample size

The sample size is the total number of units that will be selected for the analysis in the research study. There are guidelines that should be observed in determining the size of a sample according to Kothari (as cited in Gosaye B, 2007) when the target study population (N) is less than 10,000, the sample size is calculated by using the following formula.

$$n_f = n/1+n/N, \quad \text{and} \quad n = (Z^2 * p*q)/d^2$$

Where: -

n_f = the desired sample size (when the population is less than 10,000)

n = desired sample size (when the population is greater than 10,000)

N = Estimated population size

z = standard normal variable at the required confidence level 90% ($z=1.96$)

p = estimated characteristics of the target population that is 0.50

$q = 1-p$

d = level of statistical significance (i.e. 10%)

Depending on this, the target population for this study is 3748 households which less than 10,000. So the sample size is 96 households by simple random sampling. The identified sample size will proportionally distribute for each kebeles.

No	Sampling Frame	No of interviewee	Sampling Technique
1	Resident	96	
	Boku kebe	24	random sampling
	Migira	24	random sampling
	Café	24	random sampling
	Berecha	24	random sampling
Total		96	

Table 3.1; Distribution of sample size

3.4. Data Collection Tools

Depending on the nature of this study, it is to assess the status, use, and challenges of the city center around the sub-city of Boku Shanan, which includes the kebeles Boku, Migra, Café and

Berecha. The study employed the collection of random sampling data followed by intentional methods to select individuals who can provide the necessary information on the topic being studied.

The data for the variable of interest in the study area evaluate the characteristics of informal settlers, the mechanism of informal land delivery and its limitations, the causes and impact of informal housing, and finally examine the government's response towards informal settlements and point out possible solutions to the problems identified. The study is required to collect information from the target group that will be the stakeholders. They were residents, government officials such as the city administration, the land administration, the municipalities, the Keble administration, and the police stations. The method used to study was to consider the tools designed in three ways; first, field/terrain survey in the selected area; second, interview the questionnaire with the selected group through random sampling; and third, an interview with different government officials.

3.5. Data Types

In order to achieve the purpose and objective of the study, the type of data used to investigate the situation, both quantitatively and qualitatively, is based on questions, observations, document studies, and interviews.

3.6. Data Source

To provide strong and up to date information, generally, both primary and secondary data were utilized one after the others.

Primary Data

They were collected through information obtained from the selected areas of informal inhabitants through data collection instruments such as interviews, surveys, focused group discussions; Photographs taken during site observation, and from experts through interviews and discussions.

Field/Ground Survey on selected areas

The field survey was used as an important method to understand the problem on the ground and to collect numerical data from the thematic areas. Data collected concerning assessing the characteristics of informal settlers, the location of the informal settlement, the state of housing, and the development of infrastructure.

Interview with dweller's in the studied areas

In line with the objectives of the study, the purpose of the interview was to obtain information on the main challenges and the mechanism of the land delivery system in the area, the causes and impacts of informal housing on residents and the city, the Settlers opinion and future government response to problems. The ideas used in the interview were mainly drawn from the current condition of the study area to address the problems and objectives of the research. The interview/questionnaire has three parts. These are:

- a) Part I: it is simply personal information.
- b) Part II: its purpose is to seek information on the main problems of informal settlements in the studied areas with respect to the current situation of housing conditions, circulation activities, and the environmental condition of the area.
- c) Part III: consists of open-ended questions that tried to obtain general information from the inhabitants of the area about current problems and their opinion needs for the particular study area.

Interview with officials

An interview was conducted with senior government officials from the city administration, Adama metrology agency, Adama land administration, municipalities, Keble administration, police stations, experts, and people with knowledge related to the profession. It dealt with the problems colonists are currently facing, the root cause and impact of informality, the response they will propose to address the problem, policy regulations, guidelines, and the plan to ban/improve the problem of the study area and the city Like everything.

Secondary data: Were obtained from different types of written documents. It can include personal documents both in written form (such as diaries and letters) and visually (such as photographs); official documents derived from state and private sources; majority media outlets; and virtual outputs, such as internet sources. For this investigation, the documents reviewed were: urban development policy documents; official reports on informality; Previous research works on the same topic; and land transaction agreement forms in the study area. These documents have helped to obtain data on informal settlement policy issues and on how informality is carried out in the areas under consideration. This has finally helped to make a valid conclusion from the results obtained from other sources.

3.7. Data Analysis and Interpretation

The systematic classification of all the data collected, whether qualitative or quantitative data, the analysis of quantitative data included the calculation of descriptive statistics such as the ratio and percentage analysis, while the qualitative data will be analyzed using content analysis techniques and is a difficult technique to identify and analyze particular words, messages, images, text, and counting or classifying the idea to produce a quantitative description of the text.

3.7.1. Data Analysis Tool

The main statistical tools that were applied for the classified data are tables, charts, graphs, maps, and images that use the SPSS, Excel, CAD, and GIS software to facilitate the interpretation of the results of the analyzed data.

3.7.2. Data Interpretation

After the data has been classified and analyzed using soft tools and statistical tools, the interpretation of the data result will be interpreted using descriptive and inferential statistics such as ratio, percentage, text, maps, and graphs.

3.8. Data presentation

Finally, the analyzed data was presented through text, tables, figures, photographs, maps, and charts using different soft products from MS PowerPoint.

3.9. Ethical Consideration

The effectiveness and credibility of a research work depend mainly, among other factors, on the consideration of ethical issues and standards. It is an indispensable part of an investigation process. Ethics in an investigative process refers to the responsibilities and conduct of an investigator to protect target groups involved in the research process and in the Dowling area of research (as quoted by Mulu G, 2016). So; By doing my study, I complied with all ethical and legal requirements regarding research participants. In other words, the individuals or groups observed must give their informed consent to their participation in the study and are normally provided with anonymity and confidentiality.

CHAPTER FOUR

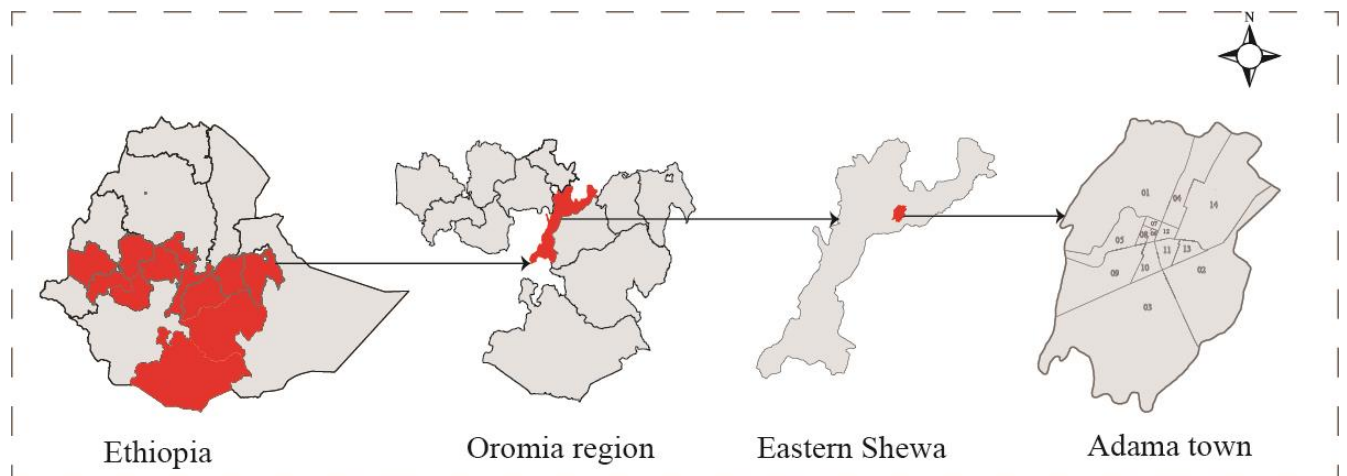
4. DESCRIPTION OF STUDY AREA, FINDINGS AND DISCUSSIONS

4.1. DESCRIPTION OF STUDY AREA

This chapter gives an idea of the study area. An overview of the location, physical and socioeconomic characteristics, and urbanization processes that have given rise to the slum areas in Adama will be presented.

4.1.1. Location of Adama town

The city of Adama is located in the central region of Ethiopia and Oromia state and is surrounded by the eastern part of Shewa. It is located at 8.54° N 39.27° E at a height of 1712 meters and 99 km southeast of the Ethiopian capital Addis Ababa. The city lies between the base of a cliff to the west and the Great Rift Valley to the east (City Administration)



Map_4.1 Geographic location of Adama town

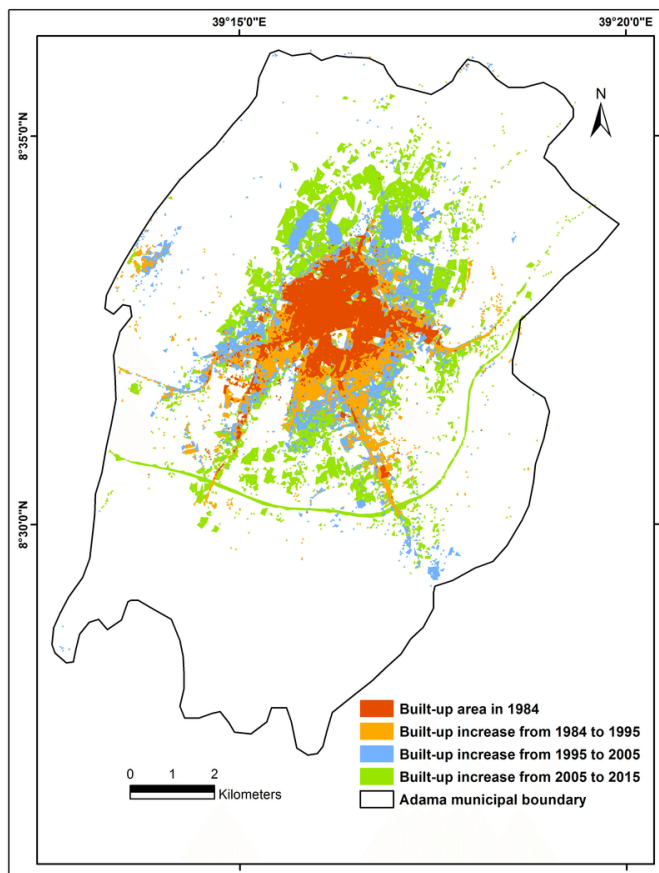
Source: Researcher, 2020.

4.1.2. Establishment/Formation

It was in 1915 that the town of Adama was established with the introduction of the Addis Ababa-Djibouti railway line. The pattern of physical layouts of the city had gradually grown to the east direction following the railway line that was stretched from Djibouti to Finfinne [Addis Ababa]. After the end of railway construction, Adama Sprawled in different directions and the city was able to hold the present shape in due course of time.

Physical expansion and demography transformation of the city as a result of rapid rate of population growth, which is population through birth, migration from rural areas to urban centers as the result of economic and social necessities those have great influence on population dynamism in the urban areas. The population of the city had grown-up from 37,583, 45,583, 66,341, 75,000, 108,232 and 127,842 in 1950, 1960, 1970, 1975, 1982 and 1994 respectively. (Adama Socio Economic, 2017: 20).

As (B.K.T., N.C., X.Z., D.L., and D.N.; *Sustainability* 2019), stated, The urban expansion trends in three major cities of Ethiopia for three consecutive study periods (1987–1995, 1995–2005, and 2005–2017), that all cities under extensive physical expansion over the past 30 years. The magnitude of urban expansion is ranked in the order of Addis Ababa, Adama, and Hawassa with annual growth rates of 4.5%, 8.3%, and 8.9%, respectively.



Map_4.2 Urban Expansion Map of Adama town

Source: (B.K.T., N.C., X.Z., D.L., and D.N.; *Sustainability* 2019)

The city currently center of trade, industry, culture and meeting center as well, the city have its own six sub cities and fourteen kebele/ Ganda governmental structure which include: Bole, Aba Geda, Danbala, Lugo, Boku Shanan and Dabe Sub Cities with an area of 22,517.40 hector land cover. According to structure plans of city (2018) the land has is suitable for habitable for all urban activities. Land use categories as residential cover 20.4%, commerce 6.2%, service cover 4.5%, administration cover 1.2%, transport cover 13, manufacturing cover 15%, and environment 39% coverage. This implies 61% of the land is suitable for different urban amenities i.e. the city has high potential land capacity for settlement.

4.1.3. Population

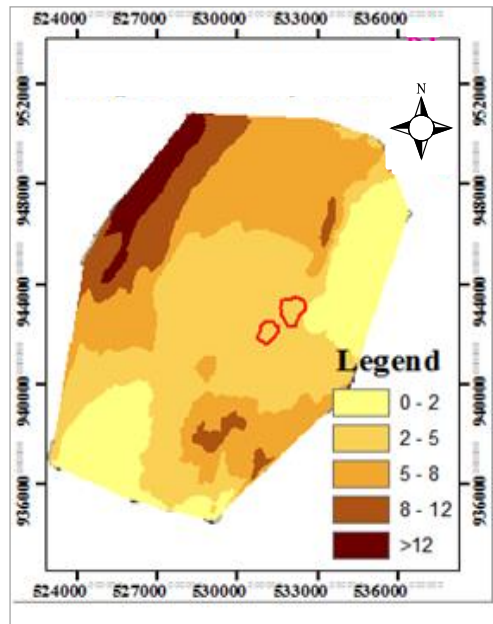
According to the 2007 census report, the total population of Adama town was 222, 012 from which, 108,872 are males and 111,340 females. Besides, the population growth rate of the city (5.4% per annum) was estimated to be higher than the national average (2.5% per annum) growth rate of urban population (CSA, 2007).

4.1.4. Topography

In urban settlements, the topography of an area is very crucial, as it is used entirely to classify the habitable and habitable area depending on elevation, appearance, slope, and climate.

Elevation; affects drainage patterns, site visibility, and the surrounding landscape, which in turn determines the size and spatial configuration of sheds in the local view. Therefore, an elevation of the city of Adama goes from 1604 m to 1740 m a.s.l. This elevation gap with a different orientation indicates that it does not have such a significant impact on both land use and infrastructure construction.

Aspect; it is simply the direction of the faces of the slope and is typically identified by the direction of the compass. Although variation in appearance is common at our site, it generally faces north to south and east. So the aspect and slope of Adama are analyzed as indicated in the following slope based map.



Map_4.3; Slope of Adama town

Source: Researcher, 2020.

As indicated on the map above, the 0-2% grade class is flat and therefore subject to rippling flooding and requires a large investment for the drainage system to minimize or avoid negative effects related to it during development, 2-5% is favorable for different urban environments and does not require much cost of the drainage system, also 5-8% is suitable for urban settlements and does not have difficulty to carry out different infrastructures such as roads, drainage systems. 8-12% of such a grade is subject to gulling, but can be easily treated without much expense of resources. And a grade class greater than 12% exposed to ravine erosion because it needs high treatment and is not suitable for urban settlement purposes. However, the percentage in this category is very small.

4.1.5. Natural hazard

Environmental natural hazards are dangers arising from geological or weather-related occurrences, such as earthquakes, flooding, and landslide. Among these problems, flood were occurred during high-intensity rainfall seasons around an area of 0_2% slope that area were predominately around the Migra area.

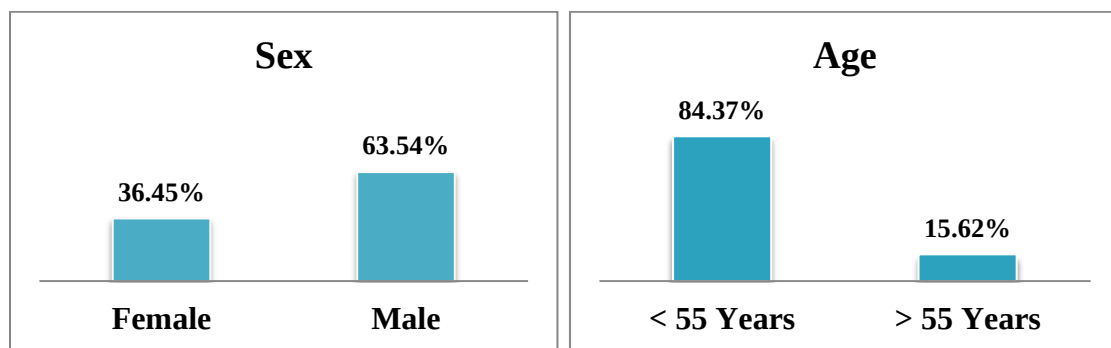
4.2. DATA ANALYSIS AND PRESENTATION

4.2.1. Background of the Respondents

This section briefly presents the socio-economic and demographic background of the respondents. It stands out specifically in sex, age, marital status, occupation, immigration status, and income dimensions. This helps to understand which segment of the population with what type of socio-economic and demographic status can predominantly occupy informal housing areas.

4.2.2. Demography Characteristics

Age and sex composition



Chart_4.1; Sex and Age composition

Source: Own survey, 2020.

As shown in the Chart, 63.54% of the household heads are males and the remaining 36.45% are females. This indicates that majority of the household heads participating in Informal settlements are male. According to age category 85% of respondents are younger than 55 years. This implies age group compositions are active productive work forces that may be exploited in the future. This reveals the gender participation and the active population of the age group in the area has taken as the potential for the study area.

4.2.3. Marital Status

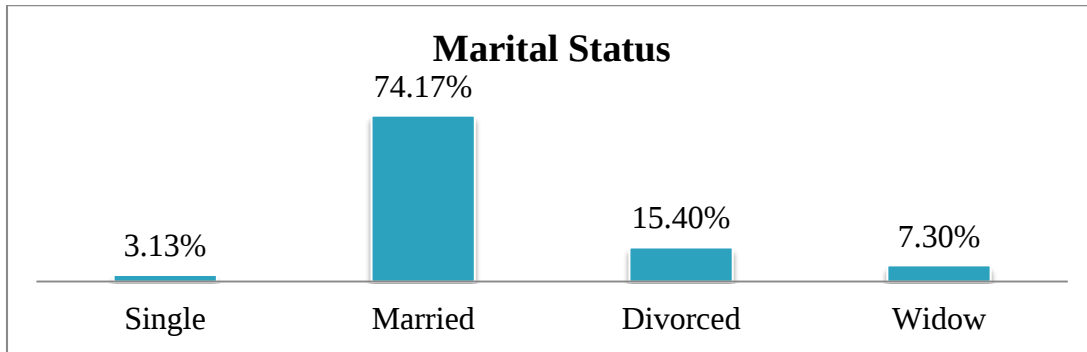


Chart 4.2: - Marital status of respondents

Source: Own survey, 2020.

As shown in the Chart, from the sample size of 96 households is 74.17% married and 3.13% single and widowed, while 15.4% are divorced. This indicates, there may be an increase in family size since 74.17% are married, so it can be emphasized in the predicted future population that the need for housing in the informal area will increase.

4.2.4. Family Size

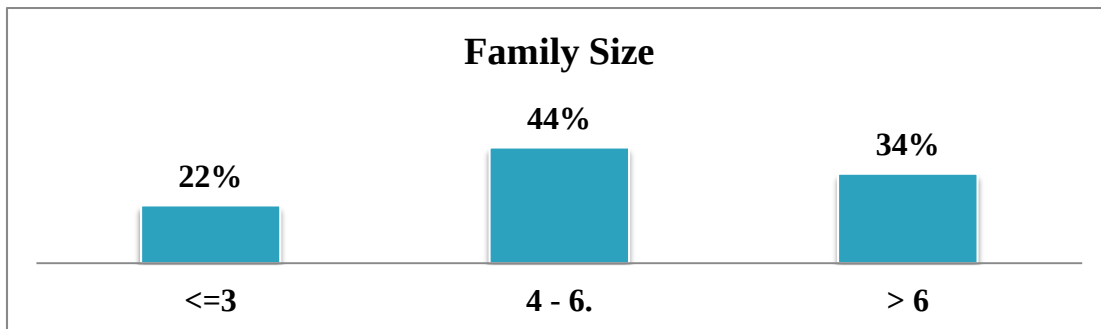


Chart 4.3__ Family size

Source: Own survey, 2020.

As shown in the Chart, 22% had a family size of less than three persons, 44% with a family size ranging from 4-6 persons and the remaining 34% with a family size of more than 6 persons. Therefore, the government response towards the existing informal settlements should take the family size of the dwellers in to consideration.

4.2.5. Educational Status

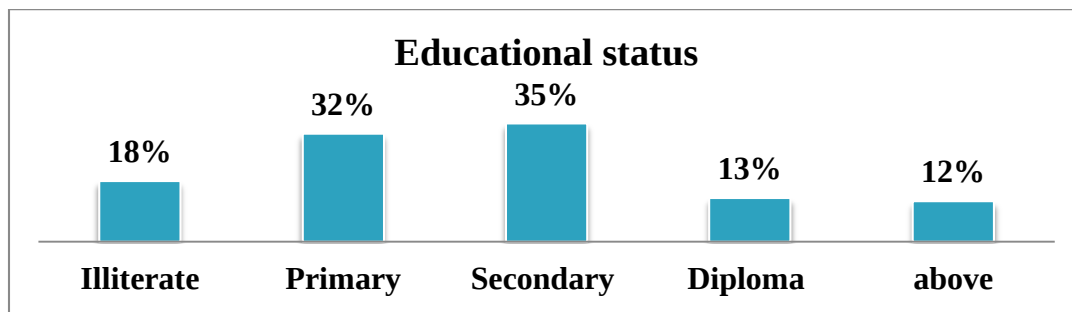


Chart 4.4__ Educational Status

Source: Own survey, 2020.

In the survey, the majority of the respondent's educational level was at a lower educational level, which is secondary and primary, with a percentage of 35% and 32% sequentially. While the percentage of illiterates was 18%, this implies that as the educational level increases, the number of samples educated in the study area decreases, so that educated people have fewer opportunities to participate in informal settlements.

4.2.6. Income Level

According to the World Bank 2005,

- ✓ $\geq \$ 1.25$ per day is classified as extremely poor
- ✓ $\leq \$ 1.25 - \geq \$ 2$ per day is classified in moderate poverty
- ✓ $< \$ 2$ per day is classified in high income levels.

Daily income*Current US dollar Price*Days in month

- ✓ $\$ 1.25 * 34 * 30 = 1,275$ Birr
- ✓ $\$ 2 * 34 * 30 = 2,040$ Birr

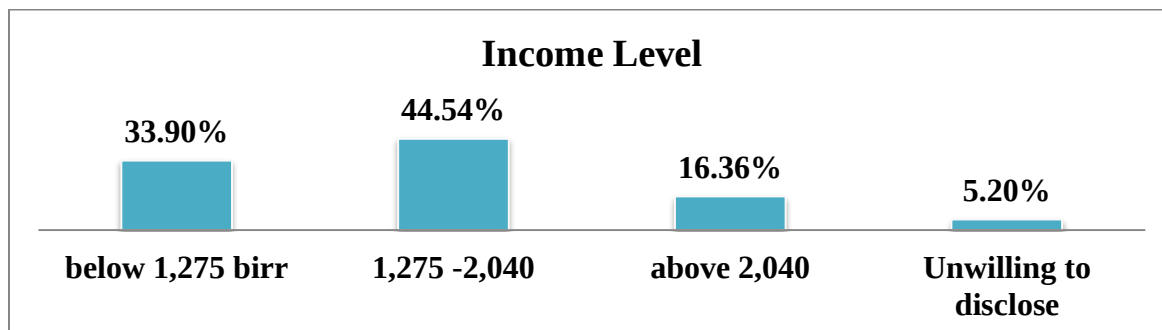


Chart 4.5:-Monthly income of house-holds

Source: Own survey, 2020.

From the above Chart, Majority of households (**78.44 %**) are in the low-income group. This implies the majority of the residents have no financial capacity to build their dwelling and they cannot afford government and private development programs.

4.2.7. Occupation of Respondent

The occupation condition of the study area indicates the level of investment, economic activities, and lifestyle of the residents.

Occupations	No Respondent	Percent
Self-Business	63	65.6
Employed	19	19.8
Others	14	14.6
Total	96	100

Table 4.1 HH occupation and engagement in the study area

Source: Own survey, 2020.

Our survey showed that there is 65.6% self-employment, 19.8% employed in households (government and private), and others, such as the daily worker and the informal business or calling it unemployed account for 14.6%. Therefore, 14.6% of the area needs a special emphasis that there must be created in the job opportunity.

4.2.8. Social Ties

In the study area, residents have different forms of social interaction. These social relationships are: - as shown below the table.

Social participation	No Respondent
Idir	37

Table 4.2 Social Ties “Idir” member

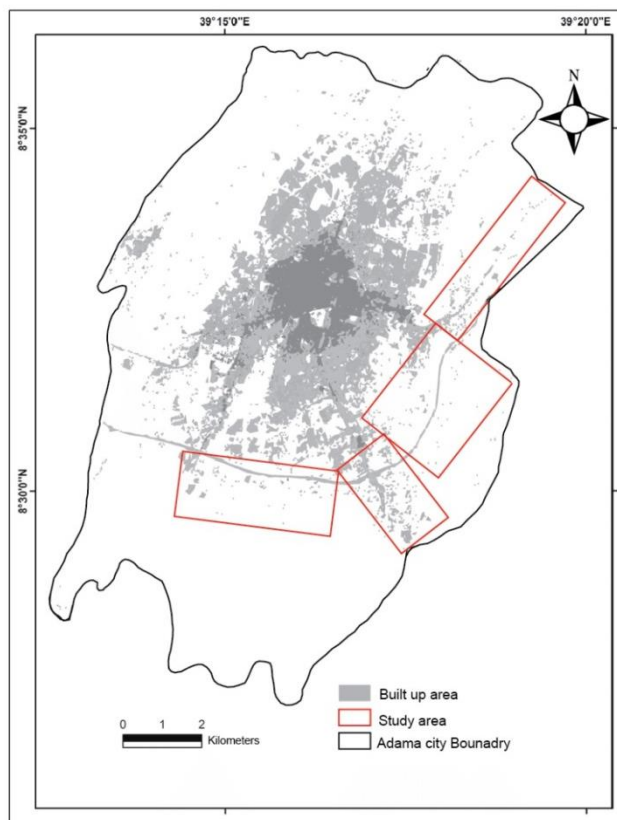
Source: Own survey, 2020.

It is obvious that heterogeneity is high in the urban area, but social ties such as idir and equip minimize and improve interaction. While, as in the study area, more than 61.4% of the area was not included in the local idir, this shows that the settlers have little social bondage among them.

4.3. Housing and Physical Infrastructure Characteristics of Informal Settlement

4.3.1. Location

The geographical locations of the informal settlements indicate that they are located on the outskirts, the vacant city center, the public space and the green area. The case study focuses only on informal settlements located on the peripheries as shown in the following map



Map_4.4 Study area location

Source: Researcher, 2020.

As seen from the location of the map in the area on the outskirts of the city where there is no developed infrastructure. As informants from the case study area prevail, most of them are attracted to the sites because of the low price of land in the area. And its slope in the 2-5% range is adequate for the constraint and can be affected by flooding in the heavy rainy season.

4.3.2. Social Services

Educational Service

The city's educational institutions were only available in informal settlements. Most citizens residing in peripheral areas did not have access to educational services; especially lower level educational institutions (kindergarten and first cycle primary school) are required at the establishment level since preschool and primary age children cannot access educational services traveling on long trips.

Health Service

The other problem observed in squatter settlements is the inadequacy of health institutions. Health institutions are provided by both the government and the private sector. The city is expanding irregularly due to various factors. Information obtained from city officials revealed that the government was unable to provide all of the infrastructure and services required by residents due to a shortage of necessary resources and pre-legal requirements. Like other infrastructures and services, health institutions were not accessible to some informal settlements in the periphery areas, although the situation was also true for formal settlements in the peripheral areas.

Open Spaces in informal settlements

The other dominant problem in the settlement is the lack of open spaces. The land in the settlement was entirely occupied by houses and, as a result, there were no open spaces, including children's playgrounds, such as the settlements.

Market Places

Markets are places visited by all households for any required consumption. Informal settlements around the outskirts of the city were a long way from markets, including mini-stores. Information obtained from some squatters (approximately 15 to 20 percent) revealed that they have to travel a long way to get Amade or Arada to be in the city center. The situation was also true for residents of some formal settlements in the peripheral.

4.3.3. Housing Condition

Houses in informal settlements are of different types, sizes, and standards. This is seen from the durability and quality of the building materials used for walls, ceilings, and floors. As discussed below

Housing Construction Material

Assessing the physical condition or condition of the housing units helps to identify those units that need maintenance and those that need to be rebuilt due to high deterioration. I tried to classify the condition of the housing units in the study judging their condition based on the construction materials that are considered basic. These, such as materials for floors, walls, ceilings, and ceilings, are discussed below.

Flooring material

Flooring material	No House	Percent
Earth mud and Other local material	44	45.85
Cement Screed	46	47.93
Tiles(Ceramic, terrazzo and other material	6	6.25
Total	96	100.00

Table 4.3 Flooring material

Source: Own survey, 2020.

About 45.85% of the study area has an earth clay floor finish that is not durable. On the other hand, 42.72% of the houses have a Cement Screed floor finish, which is very important for the durability of such houses. The remaining 6.25% of the houses have different local floor finishing materials such as ceramic, terrazzo, and plastic tiles that are in very good condition and durable.

Walling material

Walling material	No House	Percent
Wood/Bamboo and Chika	83	86.49
HCB, Brick, cement material, Concrete	12	12.5
CIS/Lamera	1	1.04
Total	96	100

Table 4.4 Walling Material

Source: Own survey, 2020.

About 86.49% of the housing units are made of wood, bamboo, and Chika, which are the cheapest and widely available wall materials and have no durability than other wall materials; Wall has a bad and fair condition that needs an intervention that is a renovation or some maintenance

Ceiling material

Ceiling material	No Houses	Percent
None	36	27.09
Fabrics/cloth/Medabria/other local	48	60.44
Chipwood/timber/Concrete/soft board	12	12.49
Total	96	100

Table 4.5 ceiling material

Source: Own survey, 2020.

As indicated in the previous table, there are housing units that do not have ceiling material, that is, 27.09 and 60.44% have ceiling material such as Madaberia, clothing, and fibers that have less durability and poor quality. While 12.49% of housing units have wood chips, wood, and concrete ceiling materials that are of good quality. Consequently, 42.7%, 27.1%, and 16.67 of the house roofs have bad, fair, and good conditions sequentially.

Roofing materials

Roofing material	No Houses	Percent		Roofing condition	No Houses	Percent
CIS	91	94.79		Bad	22	22.92
Concrete	2	2.08		Fair	51	53.14
Thatch/Bamboo/other local material	3	3.12		Good	23	23.97
Total	96	100		Total	96	100.00

Table 4.6 Roofing material

Source: Own survey, 2020.

From the previous table, it is indicated that 94.79% of the roof material in the study area is a CIS / EGA sheet, however, 22.9% of the house joins the roofs covered with deteriorated sheets and in poor condition and others are in good condition.

From the top of the house, the construction material for the floors, walls, ceilings and roofs and the state of the study area generalized that a considerable number of informal houses are in poor condition, as they were built with cheap materials available locally that are not They are durable and below standard. The main reasons for residents not to build better houses in good condition include financial constraints and fear of demolition by the municipality. On the other hand, there are some houses in good condition.



Figure 4.1. Housing construction material and their durability status

Source: Researcher, 2020.

4.3.4. Housing Facilities

Kitchen	No Respondent	Percent
Available	26	26.7
Not Available	70	73.3
Total	96	100

Table 4.7 Availability of kitchen

Source: Own survey, 2020.

As indicated in the table, it is clearly shown that around 73.3% of residents in informal settlements do not have kitchens. Most of them use open spaces outside their houses as a kitchen to cook their food. As a result, they are exposed to adverse weather conditions like other

scorching sun and rain. Besides, they use firewood and charcoal as fuel sources for cooking, exacerbating deforestation of forest areas in surrounding rural areas.

Toilet	Percent		Shower	Percent
Available	46.7		Available	20
Not Available	53.3		Not Available	80
Total	100		Total	100

Table 4.8.Availability of Toilet and Shower

Source: Own survey, 2020.

As seen in the table above, more than half of the residents in informal settlement areas do not have a private Toilet, and 80% of the residents do not have private shower facilities. This indicates that the prevalence of hygiene-related diseases and the transmission of communicable diseases are high, since people use the external surroundings, especially open fields for their excretion.

4.3.5. Physical infrastructure

Streets

As a total of 96 household respondents, 53.3% of informal settlers do not have access to the street that serves the vehicle, the rest 46.7% have access to the streets that accommodate vehicles. The data collected from the respondents indicated in the table below.

Types of circulation	Percent
Pedestrian footpath	53.3
Vehicle access	46.7
Total	100

Table 4.9 show types of circulation

Source: Own survey, 2020.

In addition to the problems mentioned above, residents of Migra's informal sites face flooding during the summer season and the unavailability of Foot Bridge affects the mobility of settlers.



Figure 4.2 Type Street in the study area

Source: Researcher, 2020

Utility (Water and Electric) Facility

Data on housing services, such as the type of water and electricity source, are then collected to analyze the accessibility of these housing units to those services.

Electric: In response to settler and observation, they have no access to electricity. But some of the settlers have received electricity from their neighbor, and the remaining homes were using other means such as wood.

Water provision of water at the site, even in the rainy season, is insufficient and most people use the public account and suffer long journeys to obtain water.



Figure 4.3 provisions of water and electric in the study area

Source: Researcher, 2020

According to public service agencies, they do not have policies and directives to provide services to informal settlements without the consent of the concerned authorities, including the kebeles,

land management, and development and administration offices of the respective cities. This shows that the housing units in the informal settlement do not have access to obtain public services. However, those informal/illegal settlements they occupy in the center have been brought into service because the kebele administrators and the agency concerned gave letters of support. Contrary to these facts, observations and evidence show that some settlers closer to the formal settlement can easily obtain electricity and water from their neighbors.

4.3.6. Environment Condition

Solid and liquid waste management: One of the main problems observed in informal settlements during data collection was the lack of waste disposal sites. The responses from the heads of the illegal households revealed that there is a serious problem with the waste disposal system in the settlements. But in the study area, there is no drainage system, as well as no collection and disposal system for liquids to the west. Meanwhile, a solid waste collection and disposal system in the study area as indicated in the following table.

Solid waste collection	Percent
Burning	26.7
Dust Bin	13.3
Dump on an open field	60
Total	100

Table 4.10 Show Solid waste collection

Source: Own survey, 2020.

As seen in the table, 60% of the respondents throw solid waste in the open field and 26.7% collect and burn this majority, the settlers have not considered their environmental condition, this makes the area unhealthy for the settler.



Figure 4.4 solid waste dumped on open space

Source: Researcher, 2020

As seen in the figure in the study area, there is no solid waste management system. Residents throw their solid waste in open spaces, this affects the aesthetic value and the health condition of the settlers.

4.4. Land Acquisition Mechanism

The land in both informal settlements was occupied through purchase from farmers and informal sub-conciliators, inherited and through peasant heads/Kebele heads.

Land acquisition	No of respondent	Percent
Buying from Farmer	51	53.2
Buying from Sub settler	27	28.1
Owner and Inheritance	12	12.5
Through peasants head/kebele head	6	6.2
Total	96	100.0

Table 4.11 Show Land Acquisition Mechanism

Source: Own survey, 2020.

As seen in the table, 53.1% and 28.1% of the responses of household respondents who bought the plot from farmers and settlers respectively, that is, 81.2% cover a large percentage. But the responses of few respondents of having occupied their land and inheriting it from their relatives

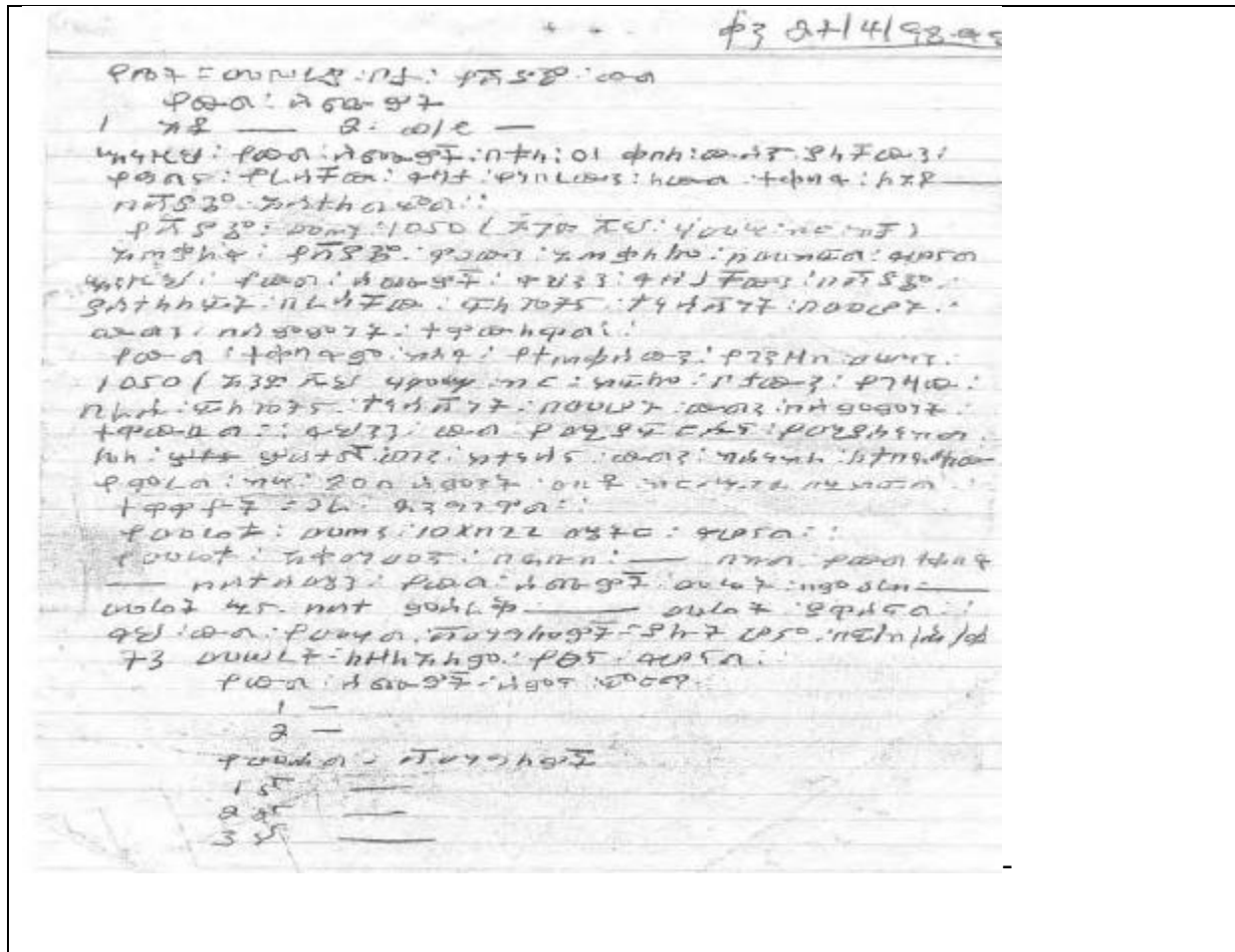
and through the peasant head / Kebele head. These settlers are considered to be some of the legal antecedents when they relate to each other.

4.5. Legal Characteristics

The key characteristic that defines the informal settlements is the lack of Tenure of the land on which they have built their houses; this feels the feeling of insecurity of the settlers. While in the study area according to the information of an elderly inhabitant during the interview as indicated Transaction system in the study area; an elderly man interviewed

In the study area, how the buyers and sellers reached an agreement on the transaction of land and/or houses has gone through two ways: In the early years of the land/home transaction process; the seller of the land and his relatives and the buyer of the land make a bilateral agreement in such a way that the seller gives the buyer a certain parcel as a gift considering him as one of his relatives, but the seller receives a certain amount of money. In this way, there is a tendency to sell and buy land among relatives. Later, the transaction has invited buyers outside the family and the same situation has continued but has a conflict of results, although very rarely. The transaction then increased in intensity, which in turn increased the number of buyers from time to time. As the intensity of the transaction increased, conflicts and denial between sellers and buyers have introduced the second way by which buyers and sellers of land collect local elders, witnesses and, if possible, one or two relatives from both sides and reach an agreement on the transaction on a white handwritten paper as seen in figure _____ the seller and the buyer for obligations in the agreement; but the one who violates the obligation to penalize and the agreement

Finally, this written document is taken as a title deed owner for the plot.



As respondents were asked if they had the above document type, 53% had tried but those who inherited from their family and owner had not. However, according to the city's land administration and administration office, the document did not allow them to enjoy full legal and unacceptable rights because the legally authorized institution did not issue it. It could be concluded that the majority of the households in the sample do not have legal documents such as property titles and property books issued by legally authorized institutions. As seen in the table, farmers are the main providers of informal settlers. Therefore, this creates the colonists' sense of fear and insecurity for the property.

4.6. The Size of Plots in Informal Settlement

The plots in informal settlements are characterized by their large sizes. As indicated in the table below, small portions of households in informal settlements occupied parcels of less than 160 square meters. Therefore, the majority of parcels generally occupied by informal settlers are large and well organized. It is of utmost importance to note that most households have occupied

parcel sizes much more than the maximum standard of dwelling parcel in the formal subdivision of land. The information obtained from the Adama Town Urban land Development and Management Office shows that the minimum, average and maximum standards of plots for residential purposes in the formal system are 105, 140 - 180, and 200 square meters respectively. Households from both settlements were asked if an unlimited number of plots had attracted them to the area. In contrast, most of the households sampled in Migra were occupied plots of more than 750m². Therefore, the land they occupy is also used as an informal means of income, because they are subdividing their spacious plots and selling for illegal settlers.

Plot Size	No of respondent	Percent
Less/ equal 160m ²	8	8.3
160_200m ²	10	10.4
200-250m ²	27	28.1
250-500m ²	27	28.1
500m –750m ²	11	11.5
Above 750m ²	13	13.5
Total	96	100

Table 4.12 Plot size in the study area

Source: Own survey, 2020.

As seen in the table above, it was revealed that households in informal settlements had an area of land that may be above the standard according to the minimum standard (105m²) mentioned in the current urban land rental law in the region. and that is also the maximum area to be regularized for property owners located on unauthorized land according to other criteria provided by law.



Figure 4.5 large plot occupied above Standard

Source: Researcher, 2020.

As seen from figure land that equipped by households above standard this makes the area dispersed settlement affects the land value and development of the city.

4.7. Causes of Informal Housing Development

The result of physical expansion is that many developments have occurred outside the proposed growth area during the planning period. The area of land built within the growth limit increases from 24,035Km² in 2004 to 30,136 Km² in 2014, which consists of 35.8% of the total expansion built. At the same time, the area of land built outside the boundary increases from 3.2 km² in 2004 to 10,927 km² in 2014, which consists of 45.3% of the total expansion built, Tesema (2017). There is a large part of the new developments that occur outside the Planning boundary. Illegal developments are primarily residential and service. As Tesema (2017) stated, the failure to implement the master plan is mainly attributed to the following three factors.

1. Proximity to public infrastructure (near major roads and highways) and major transportation corridors significantly affects the degree of compliance with the plan.
2. Due to lax management by the Adama City administration. Technically, through regular monitoring and evaluation, land use changes using geospatial technologies, i.e. the geographic information system and remote sensing analysis, it would be possible to identify unplanned developments and take steps to stop construction in a timely manner. Illegal developments were not considered during plan preparation and would be phased out in the planning period.

3. Unsupported political leadership is perhaps the most essential reason that led to the deviation between the plan and outcome. Because city master plan CMP is primarily a "government-led" plan, the extent of regional government support will largely decide the extent of the plan's successful implementation. In most cases, the City administration chose to ensure political acceptance and support development rather than control.

As information from informal settlers, the main causes of informality include lack of financial capacity, rental of unaffordable housing on formal land, and delay in responding to land supply systems and regulations (rental price, size of the plot and other restrictions), while some households are related to housing standards and their enforcement mechanism in the city.

History of one respondent was presented as fellow

Everyone knows their economic situation here in the informal settlement areas ... as you see, the gap between rich and poor has widened. Right now we only have two groups of people: the poor and the rich. For example, I lived in a rental house for seven years with my family. At that time, my relative had three people and then became four. They all depend on my salary. Think about the increase in the cost of living from year to year with the increase in the rent of a house I live in ... our food ... clothes, etc., not to mention the type of housing. It was challenged with this challenge that I came here and paid for this land and then built my appropriate home with income. After coming here, you can imagine the psychological freedom that my children have enjoyed despite other problems like running water and electricity. In my opinion, therefore, the poorest segment of the population has benefited greatly in this regard.

From this discussion, it can be understood that the main cause of informality was the lack of financial capacity, the inaccessible cost of housing rent, and some restrictions that classify land and housing standards as the cause of informality.

The causes of the informality of the study area were discussed as the following table

Cause's	No of respondent	Percent
Lack of finance	39	40.56
Regulations and restriction on the size of land and house construction	11	11.50
Lack of land delivery system	27	28.08
Lack of affordable house provision	19	19.76
Total	96	100.00

Table 4.13 show cause of informality in the study area

Source: Own survey, 2020.

As can be seen in the table, the lack of financing and the land delivery system represent 40.56% and 28.08% as the main causes of informality, while regulations and restrictions (on the size of the land and the construction of housing) and the lack of affordable housing represent 11.5% and 19.76% also have an increasing informality following the major factors as information from the respondent.

4.8. Land Acquisition Period

Like Oromia National Regional State, urban land lease regulations do not. 155/2013 and the revised regulation no. 182/2016 underline that informal houses built after January 2013 will not be regularized in any way. The regulations also emphasize that for those squatters whose homes were not accepted by the provisions of the regulations, they will not receive compensation or replacement land. The government response should consider gaps on the government side, such as the insufficient supply of land and affordable housing for all income level residents, and in general, the government response should focus more on preventive measures than in healing and regularization as a second option. So, in the study area, the number of informal settlers before and after 2013 is indicated in the following table.

Year	No of respondent	percent
Before 2013	23	24.08
After 2013	73	75.92
Total	96	100

Table 4.14 Show Period of the informal settler's the area

Source: Own survey, 2020.

As seen in the table above, the number of households settled before 2013 was 24.08%, while 75.92% arrived/settled in the area after 2013. So, as regulation did not. 182/2016 to the provisions of these regulations, 75.92% of the respondents' houses will be demolished.

Land Use/Service before Acquisition

Land use	No of respondent	Percent
Vacant	0	0
Developed land	37	38.55
Farmland	59	61.45
Total	96	100

Table 4.15 land use before Acquisition

Source: Own survey, 2020.

4.9. Impacts of Informal Settlements

According to Adama Town Urban land Development and Management Office (ULDMO) information, informal settlements affect the development of the city in multiple dimensions, such as physical, social, economic, and environmental.

Physically informal settlements create spontaneous growth and expansion (unplanned growth) and built substandard houses, expansion of the unplanned area, and poor infrastructure and basic services, resulting in difficulties in integrating them with the city structure existing.

Social impact: The social impacts observed in the area are land disputes (between family members between original inhabitants and between sellers and buyers of land), the weak integration of residents with settlers and formal institutions, overcrowding and Lack of legality of this prone crime that affects the social behavior of residents.

Economic impact: Most parcel sizes are large, causing the municipality or government to lose a large amount of revenue and violate the city's structural plan that guides the development of the city. This prone development hampered the city since the integration of formal settlements with unplanned settlements built on unauthorized public land is difficult. This affects the development of the city.

Environmental impact: Landsat images from 1984 to 2015 and reported that the built-up area of the city increased by 293% (B.K.T., N.C., X.Z., D.L., and D.N.; *Sustainability* 2019). Informal settlements affected the environment in violation of the city's plan. There were informal settlements that occupied urban land proposed for urban green zones and buffer zones. This directly degrades the urban environment. There were also inadequate waste disposal systems in the settlements, which negatively affect the environment. Beyond that, most of the settlements were exposed to flooding since the slope of the area is flat and in a 0-2% grade class. However, as the information obtained from informal settlers during the interview and professionals during the discussion of informal settlements as their negative impacts, it also has positive impacts, as one of the basic needs of humans is housing, so the informal availability of affordable housing for the urban poor and provides opportunities for some people to improve their daily lifestyle. As seen above in the story box, an informal settler said, "He lived in a rental house for seven years with his family. Initially, his relative was three in number and then became four. All of them depended on his salary. Think about the increase in the cost of living from year to year with the increase in the rent of a house you live in ... our food ... clothes, etc., not to mention the type of housing. challenged with this challenge that he goes to an informal settlement and plays land to build his built houses that are affordable with his income, after that his son enjoys psychological freedom and saves some money for his other wealth from his little income. "In this way, it can be understood that the purpose of the house not only depends on the level of income but also develops psychological freedom

4.10. Opinions of the Informal settler

Respondents were asked to freely share their views on viable options for housing the urban poor. To this end, a variety of divergent views were established. Therefore, this section summarizes the views of respondents and academic comments. Some informants argued that the agency in question has to stop rampaging in time. Nonetheless, the municipality and administrators took

action on informal homes after things have gone wrong for years. If they had been constantly monitoring, things would have been resolved with little or no social cost. Still, there must be urgent monitoring and oversight in the coming years to reduce the social, political, economic, and psychological costs that have been observed in informal settlement areas so far.

Everyone in these areas must be legal ... the main settlers in the study expressed their feeling that they aspire to be incorporated into the formal system and some feel that it involves compensation for households whose houses and other properties are affected/contradict the structural plan. and the streets of your parcel size and the properties to be erased accordingly (also means compensation for money and land). To make everyone aware of your rights and obligations, this will ultimately make every home legally insured.

There are contradicting feelings between them as information discussed above (most households explained that they are not able to reconstruct their house if they are left with little or no compensation) and other households waiting for legal tenure security for further investment for better-off life.

4.11. Government Response

4.11.1 Responses of Oromia Land Development and Management Bureau

As the Oromia Urban Land Development and Management Agency responses:

Prominent factors that contributed to the proliferation of informal settlements in the city were unfair compensation for people expropriated from their properties for public purposes; inaccessibility of land and affordable housing for all income levels of the city; problems related to urban land lease laws, weak law enforcement, weak commitment at all levels of government, governance problems such as personal involvement of government employees and the inability of the city government to provide title deeds. ownership of untitled properties following the law and the high rate of population migration to the city. Regarding the effects of the proliferation of informal settlements, we distribute the regulations for all cities and towns to the city administration positively and negatively to resolve the current bottleneck of our urban centers.

4.11.2. Response City Administration

Informal settlements in the city of Adama are increasing from time to time. Data obtained from the Adama Town Urban Land Development and Management Agency indicate that even though the number of residential houses in the city is increasing rapidly from time to time.

In accordance with the provisions of current urban land lease laws, government responses to the illegal occupation are preventive and curative measures. Preventive measures include expanding micro and small institutions, facilitating land supply through tenders and awards, undertaking housing developments, and avoiding not building on unauthorized land. The second government response established as an option in the laws is curative measures. These include regularization, upgrading, demolition, and other similar actions on unauthorized evolved apartment buildings on government land. AS Regulation 182/2016, under Article 9 establishes that such holdings were regularized following the provisions of the proclamation. The regulations emphasize that only those constructions made before February 2013 (the effective date of Regulation 155/2013) are subject to regularization with other criteria mentioned in the Regulation.

The Adama Town administration has paid less attention to the preventive measures set out in the urban development policy document. For example, the city administration assigns what they call Denb-askebari (regulatory) below village-level kebele administrations on a small salary. As information obtained from some key informants revealed that the 'Denb-Askebaris' assigned by the city administration to protect illegal construction on unauthorized government land involved in corruption and did not prevent construction on unauthorized land, rather They make it easier for bribes when and how to build In 2019, only in Malka Adama, houses and fences built on unauthorized urban land were razed by the decision of the City administration. But to see the demolition trend and action, there was no organized data for consecutive years, except for general information that construction on unauthorized government land and excavation were standard daily practices in the city.

The proliferation of informal settlement is anti-development as shown in its effects. Bulldozing is nothing more than damaging resources and social life. On an individual level, it affects the life of the owner of the demolished property. But more than that, razing has negative consequences for the national economy and social concerns. The city of Adama is dominated by informal settlements. Important factors contributing to the proliferation of informal settlements in the city are the lack of access to formal land and the supply of housing, on the one hand, and unfair

compensation for people expropriated from their properties, on the other hand, which they extend their roots to the problems of legal frameworks. Despite the fact that urban land lease laws allow the delivery of land through auction and adjudication, the city government focused only on the auction approach. The effects of the proliferation of informal settlements are huge capital requirements for the provision of infrastructure and services; government revenue reduction; violation of urban plans; uneconomic use of urban land and critical floods that hinder the development of the city. The responses of the city government mainly focus on demolition. This approach may seem like a solution for the proliferated informal solution, but it never stops informality in the city. Since the causes of squats are variable as factors on the government and occupant side, demolition may not be the best option.

4.12. Summary of Findings

- A large number of informal settlements located in the area on the peripheries of the city where there is no developed infrastructure. As dwellers from the case study area prevail, most of them are attracted to the sites because of the low price of land in the area. And its slope in the 2-5% range is adequate for the constraint and can be affected by flooding in the heavy rainy season.
- Prominent factors contributing to the proliferation of informal settlements in the study area are Failures of master plan implementation mainly attributed to geographic variables, loose management to control and implementation, and political-institutional influence, lack of financial capacity, the rental of unaffordable housing on formal land, and the delay in responding to land supply systems and regulations (rental price, parcel size, and other restrictions), Although some households are related to housing standards and their enforcement mechanism, high rural-urban migration and lack of good governance are the main factors that aggravate the expansion of informal settlements in the area.
- Houses predominantly dominate in poor conditions when analyzing their homes. Building materials for floors, walls, ceilings, and roofs and do not have access to housing facilities like kitchen, toilet state; they were built with cheap locally available materials that are not durable and below standard. The main reasons for residents not to build better houses in good condition include financial constraints and fear of demolition by the municipality. On the other hand, there are some houses in good condition.

- Settlers in study area are poor accessible to infrastructure and basic services such as education, health facilities, power, potable water, sanitation, transport, drainage, and markets;
- The plots in informal settlements are characterized by their large sizes. Therefore, most parcels generally occupied by informal settlers are large. It is of utmost importance to note that most households have occupied parcel sizes much more than the maximum standard of the residential parcel in the formal subdivision of land, it may have an area of land that may be above the standard of according to the minimum standard (105m²) cited in the current urban land lease law in the Oromia region in and that is also the maximum area that will be regularized for property owners located on unauthorized land according to other criteria established in the laws.
- The majority of households are categorized under the low-income group in the community. In other words the majority of the residents have no financial capacity to build their dwelling to fulfill the standard of the regulation.
- 75.92% of houses constructed after January 2013 and houses will be demolished according to city administration, this feels the feeling of insecurity of the housing tenure.
- The studies / informal settlements of the land acquisition system represent 53.1% and 28.1% of the responses of the dwellers that bought the plot from the farmers and settlers respectively, that is, 81.2% covers a large percentage. But the responses of few respondents of having occupied their lands and inheriting from their relatives and through the peasant head/Kebele head. These settlers are considered to be some of the antecedents of legality when they are related to the others.
- The impact of informal settlement affects the development of the city in multiple dimensions, such as physical, social, economic, and environmental.

Physically informal settlements create spontaneous growth and expansion (unplanned growth) and built substandard houses, expansion of the unplanned area, and poor infrastructure and basic services, resulting in difficulties in integrating them with the city structure existing.

Social impact: The social impacts observed in the area are land disputes (between family members between the original inhabitants and between sellers and buyers of land), the weak integration of residents with settlers and formal institutions, overcrowding and Lack of legality of this prone crime that affects the social behavior of residents.

Economic impact: Most parcel sizes are large, causing the municipality or government to lose a large amount of revenue. This affects the development of the city.

Environmental impact: Landsat images from 1984 to 2015 and reported that the built-up area of the city increased by 293%. This implies informal settlements exposed these cities to serious environmental deterioration, deforestation of forests in the surrounding peripheries and rural forest areas that are used as building materials and for firewood - prone deforestation in the area, loss of agricultural land, and flood problems.

The impact of informal settlements in the city of Adama had economic, social, environmental, and legal impacts that cumulatively hindered the development of the city.

- Informal living does not come by choice for the poor population; but it has a positive impact for low-income groups that do not have access to the home.
- In general, I feel that the government is regularizing and granting security tenure for other lands to invest in. If not, the government takes another major cannot rebuild your home. Whereas, as the city government's responses to the squats they focus mainly on demolition. This approach may seem like a solution for the proliferated informal solution, but he never stops squatting in the city. Since the causes of informality are variable as factors on the side of the government and squatters, demolition can never be the best option to manage informality in the city.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Based on the findings of the study the following conclusions are made

The existing housing shortage, which is the main problem of the city, is created as a result of rapid population growth rate and insufficient housing supply to satisfy the dwellers.

Major factors contributing to formation and expansions of informal settlement in the study areas are lack of financial capacity, the rental of unaffordable housing on formal land, and the delay in responding to land supply systems and regulations (rental price, parcel size, and other restrictions).

The common characteristics of informal settlements in the study area such as poor housing conditions, poor or inadequate infrastructure and basic service provision, insecurity of tenure, large plot sizes and have greatly contributed to the unplanned and rapid horizontal expansion of the built-up area of the town, low income group, and hazardous environmental conditions (flood problems) and the majority of dwellers was holding land through purchase from farmers and informal sub settler's, and inherited it create sense of insecurity and instability for the settler.

Despite having a number of negative impacts such as social, economic, Environmental and political impacts, informal settlements also have some social benefits especially for low income groups as they are the best alternatives to get land and houses at lower prices. As a result, the rate of informal settlement expansion has been increasing from time to time and the municipality is missing large amounts of revenue. Since most of the households in the informal settlement sites have low income group they an opinion the government be regularize rather than demolition or forced eviction cannot be the best solution to alleviate the problem as it further exposes the families to awful problems.

There are many approaches and methods to eliminate this phenomenon. Some of these methods are harmful to the population. Therefore, the government should address informal settlement housing backlog in the city and addressing challenges posed by informal settlements by setting appropriate regulations and Policies to regularize the existing informal and for sustainable applications to ensure effective solutions.

5.2. Recommendation

Based on findings of the study, the following recommendations forwarded

- The city government should eliminating informality in two types of interventions.
 1. Prevent the formation of new informal settlements from happening through preventive policies, and by improve land monitoring system and setting possible strategies to housing supply for low income households of the city.
 2. Address the challenges of existing settlements through programs, regulations and Policies to provide formal legal recognition of ownership.
- Enhance the participation of the community to ensure satisfaction with the results and meet the needs of dwellers and stakeholders in the process of formulating rules and regulations, planning, construction work and property administration.
- The city government should take preferable intervention approaches like rehabilitation program with proper planning of housing standards, job facilities and social interactions rather than demolishing the structures of squatter housing units.
- The city government should formulate sustainable approaches have a positive impact on many aspects; such as social, economic and environmental aspects, and contribute to make the informal areas integrated into the city as one entity.
- The city government creates relationship with private sector and non-governmental organizations (NGOs) for housing supply, provision of infrastructure and service, and transportation.
- Economic development, Maximizing economic growth and reducing unemployment by creating job opportunities with small capital-intensive, encouraging traditional financial institution (“Equb” and”Iddir”), and modern saving organization and credit service, which contributes to the eradication of poverty.
- Encouraging the project of “Eradication of Illiteracy” from voluntarily institutions. This enables them to compete in the labor market.
- Then government ensure environmental sustainability by providing access to basic water and proper sanitation, availability of infrastructure and toilets

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Appendix: I

ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY
SCHOOL OF CIVIL ENGINEERING AND ARCHITECTURE OFFICE OF GRADUATE
STUDIES

DEPARTMENT OF ARCHITECTURE, URBAN PLANNING, AND DESIGN
URBAN PLANNING AND DESIGN MASTERS PROGRAMME

This questionnaire is prepared for an academic purpose i.e. for the Partial Fulfilment of the Requirement for Degree of Master of Science Degree in Urban Planning and Design from Adama Science and Technology University.

The objective of the study is to assess the causes and impacts of informal housing in the city of Adama around the Boku shaman sub-city. It is believed that the study will help to reach at some recommendations which will be helpful for making some policy interventions. Therefore, your cooperation with honest response to the questionnaire is important for the overall success of the study. Thank you in advance for your cooperation.

PART 1 QUESTIONNAIRE FOR INFORMAL SETTLERS

KEBELE _____

I. Information on the head of the household

1. Sex _____ Age _____
2. Family size M _____ F _____ Total _____
3. Marital status a, Married b, Single c, Divorced, Separate e, Widowed
4. Educational status
 - a) Illiterate b) Reading/writing c) Primary d) Secondary (9-12) f) Above 12
5. Home to work distance _____
6. What is the main source of your income and support for your family? Occupational status
 - a) Self-employed b) Public –employed c) Retired d) Other
7. What is your monthly income?
 - a) Below 1275 Birr b) Between 1275 and 2040 Birr d) Above 2040 Birr
 - e) Unwilling to disclose
8. Is there any traditional saving mechanisms

- a) Equib b) Eddir c) Bank d) Other

II Housing Condition

9. Age of the housing unit _____
10. Number of rooms identified in this housing unit _____
11. What forms of housing construction have you adopted for the completion of your Informal building?
 - a) Phasing/ Incremental b) No phasing c) Other
12. Who was involved in the construction of the house?
 - a) Own household, b) Own household and relatives
 - c) Own household and community assistance d) Own household and hired labour
 - e) Hired skilled labor
13. Existing house characteristics and construction materials used
 - a) Mud and wood Housing condition (good_____ fair_____ bad_____)
 - b) Hollow block
 - c) Brick and stone d) Roof-corrugated iron sheet e) Roof materials others
14. Housing floor types:
 - a) Earth b) Cement screed c) Plastic tiles d) Others
15. Roofing material a) Corrugated iron sheet b) Concrete c) Thatch d) Other
16. Ceiling material a) Cloth b) Chip wood c) Plastic d) Madaberia e) No
17. Housing condition a) Fair b) Bad c) Good d) Others
18. If answer qustn.17 is Bad. What are the reasons not to improve?
 - a) Fear of eviction e) does not want to remain in the area
 - b) Received eviction notice f) Plot size small
 - c) Rumor of eviction g) Lack of funds
 - d) No need to improve
19. What is the source of water for the household?
 - a) Tap inside the house b) Private tap outside the house
 - c) Borehole d) Wells/river
 - e) Communal water kiosks f) Private water kiosks
20. What form of lighting does the household use? In addition to this, have a telephone line?
 - a) Electricity, private connection b) Electricity, shared connection
 - c) Wooden d) Other

21. What type of toilet does the household use?
- a) Private Pit latrine b) Flush toilet with a septic tank connected to a sewer system
 - c) Communal toilet d) others
22. How would you categorize the availability, in this settlement, of the public spaces listed here below: Fair / Poor
- a) Public schools b) Public health facilities, c) Cemetery
 - d) Roads e) Markets f) Religious places
 - g) Playgrounds not attached to schools h) Public water points

III Concerning About Land and other

23. What is your relationship with this property?
- a) Owner b) Tenant
24. Please, can you tell me the period of land acquisition?
25. Where did you live before you came to this settlement?
- (a) Why did you leave the rural area or above place (Whichever is applicable)?
26. What most important factors attracted you to this informal settlement?
- a) Lack of finance b) Absence of restriction on the size of land
 - c) Affordable land valued d) Fast delivery of available plots e) Affordable house rent
27. In what form was the property at the acquisition period?
- a) Vacant land b) Developed land c) Farmland
28. The area of the plot occupied in the sub-division in m²
- a) Below 175m² b) Equal to 175m² c) 175-250m² d) 250-500m²
 - e) 500m² –750m² f) Above 750m²
29. Who supported to plan for the sub-division of your plot?
30. How did you get to acquire this property?
- a) Through the Chief b) Through peasants head/kebele head
 - c) By buying d) Inheritance e) others
31. Did you think of land tenure security when you were acquiring the property?
- a) Yes (Explain your answer) b) No (Explain your answer)
32. Have you got the security of tenure for your informal plot? Yes / No, if yes When and How?

33. What is your opinion on the formal or informal land provision system?
34. What are the reasons for quitting the formal processes to have a legal plot?
- a) Delayed responses by concerned agencies b) Inappropriate rules and regulation
c) Bureaucratic bottlenecks d) No opinion
35. What are the major problems that you face in the area?
36. Do you have plans to move out of this settlement?
- a) Certainly not b) Uncertain c) Certain
- Please _____ explain _____ your
answer_____.
37. In what community organization activities have you participated in as a resident of this settlement? _____
38. As a matter of urgency, what would you wish the government/Municipality to do for this settlement? _____
39. What type of improvement method do you recommend for this informal settlement?

PART 2 QUESTIONS TO KEBELE OFFICERS, SUB CITY MUNICIPAL

- What are the major causes of the emergency of the informal settlements in this area?
 - Which income groups are participating in the formal settlement?
 - Why people preferred to informal settlement?
 - What are the major problems faced by informal dwellers?
 - What is the major impact of the informal settlement on the development of the town and the selected area in particular?
- Positive impact_____
- Negative impact on environment, social, physical and economic _____
- What possible actions are you going to propose as to address the problem in sustainable manner?
 - General comments about causes of formal settlement and its
impacts_____

PART 3 QUESTIONNAIRES FOR FOCUSED GROUP

- Would you please give us a brief history on how the settlement started?

2. Is there any period when you have had more people coming in the settlement than would normally be usual?
3. What stops people from having good houses with the necessary connections to infrastructures?
4. Are there community groups that concern themselves with the settlement welfare?
5. Who are the real occupiers of the informal plots in this settlement?
6. Who are the prime actors for informal sub-division in this settlement?
7. What is the role of the settler to formalize settlement?
8. Is the City Administration performing to formalize settlement?

PART 4 TO CITY PLANNER/EXPERTS/ KNOWLEDGEABLE PERSONS

1. What are the major causes of informal sub-division and the proliferation of informal settlements?
2. What are the practices of informal sub-division that lead to informal settlements in Adama?
3. Who are the actual occupiers of informal settlements (poor, middle, high-income groups)?
4. What obstacles are encountered while trying to avail of formal land to developers?
5. What relationship is there between your department and the informal settler elder?
6. Do you think the Municipality is doing much; it should do for these settlements?
7. What are the main problems in these settlements according to you?
8. How do you think the living conditions in these settlements should be improved?
9. Utility companies, accuse the City Administration of having policies that try to prohibit services in these settlements. What's your comment on this?
10. Administration in land management? Does it control and mitigate the proliferation of informal settlements?
11. Is it a valuable tool to mitigate and control the proliferation of informal settlements?
12. What future plans does your office have on informal settlements?
13. As an expert, what would you wish to see done in the Informal Settlements?

PART 5 TO SERVICE PROVIDERS

1. What policy and regulations does your organization have on taking services to informal settlements?

2. Are you aware of the city planning requirements that no services should be taken to areas?
3. In which ways do you think your services to informal residential areas would be made easier?
4. Whom would you blame for the expansion of services for Informal Settlements?
5. What working relationship is there between your organization and other service giving bodies involved in Informal Settlements?
6. In your opinion, what do you think is the best method of formalizing the settlements?
7. What's your organization's future plan for these informal settlements?

Appendix: II

Photos

Sample informal houses in study area



Source: Photo taken by Researcher, 2020.

Appendix: III

Photos

Slum Rehabilitation project in Caracas Venezuela

