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**ADDIS ABABA UNIVERSITY
ETHIOPIAN INSTITUTE OF ARCHITECTURE, BUILDING CONSTRUCTION
AND CITY DEVELOPMENT (EIABC)**

**THE CAUSES AND CONSEQUENCES OF URBAN LAND MARKET FAILURE IN
OROMIA SPECIAL ZONE: THE CASE OF SULULTA TOWN**

**BY:
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**DECEMBER, 2020
ADDIS ABABA, ETHIOPIA**



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City Development (EiABC)

The Causes and Consequences of Urban Land Market Failure in Oromia Special Zone: The
Case of Sululta Town

By:

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University, Ethiopian
Institute of Architecture, Building Construction and City Development, in Partial Fulfillment of
the Requirements for the Award of Master's of Science Degree in Urban Planning

Advisor:

Birhanu Girma (PhD)

December, 2020

Addis Ababa, Ethiopia

Declaration

I, the undersigned declare that, this research is the result of my own original work and has never been presented in any university/institutions for any degree or other purposes. All materials used from other sources other than my own idea in this study are duly acknowledged & properly cited.

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Approval

As a member of the Examiners board of the final Master's thesis open defense of Birhanu Uma, we have read and evaluated the thesis prepared by Birhanu Uma entitled “**The Causes and Consequences of Urban Land Market Failure in Oromia Special Zone: The Case of Sululta Town**” and recommended to Ethiopian Institute of Architecture, Building Construction and City Development, Addis Ababa University to accept the Thesis for the Fulfillment of Requirements for the award of Degree of Master's of Science in Urban Planning.

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Abstract

To deal with the rapid urbanization the government of Ethiopia has been enacting regulations that mainly focused on restricting informal land transaction. Sululta, is one of the eight towns in Oromia Special Zone which was established in 2008 to restrict the fierce sprawl of Addis Ababa. Unlike all of these actions, the situation worsened and made the market to be dominantly informal and created bad morphological growths in the town. By observing the problem, this study has conducted to explain the major causes and the consequences of the market failure in Sululta town. Research approach of explanatory with survey methods were used in the research. Descriptive statics and analysis with detailed contextual reviews were widely undertaken throughout the research. The result of the study shows that, the major causes of the market failure includes: the inappropriate dominance of some of the actors; the unbalanced socio-economic characteristics of the actors and the illicit nature of the market actors; the poor performance of urban land management system and the ineffective land policies. Accordingly, the result of the explanation of the consequences of the failed urban land market includes: the rise of land price; rapid rate of urbanization; unsuitable settlement patterns; huge consumption of the natural environment and difficulty to implement urban plans are the major effects that are challenging the town. Finally the research recommends the reconsideration of the modalities of land provision with a very effective land management system that can insures the property holding rights of the citizens in order to solve this wide spread tragedy.

Keywords: urbanization, urban land, urban land market, urban morphology

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Acronyms/ Abbreviations

CSA:	Central Statistics Agency of Ethiopia
FID:	Feature Identification
GC:	Gregorian Calendar
GIS:	Geographic Information System
IT:	Information Technology
K:	Dynamic Degree of Urban Expansion
LDMA:	Land Development and Management Agency
LDP:	Local Development Plan
MUDH:	Ministry of Urban Development and Housing
OUPL:	Oromia Planning Institute
OSZ:	Oromia Special Zone
PPP:	Public Private Partnership
SP:	Structure Plan
UII:	Urban Intensification Index
ULDMA:	Urban Land Development and Management Agency
USGS:	United States Geological Survey

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Urban land market is a complex subject of study, explaining its failure is even more complicated (Gough & Yankson, 2000; Filatova, 2009; Gwartney & Hunt, 2019). To understand the situation in better manner, defining the market itself first is very important. Accordingly, Harford, (2006) defined it as an important place to coordinate the sellers and buyers actions. Whereas, David, (1993) stated that markets are the platforms for the transaction of good and services. The issue of the market failure has explained by the Smith, (1776) as the condition where the competition between the market actors get distorted and that encourages self-interested activities that affects the efficient allocation of resources. Cunningham, (2011) also defined urban land market failure as the condition where a market cannot supply and allocate land efficiently.

The rising concerns of urban land market failure that has created wide range of urban problems related to urban settlement patterns and difficulty of accessing land by the young and the poor (Diriba et.al, 2016). There are two major theoretical backgrounds to create efficient urban land market and land provision mechanisms namely collective theory and the evolutionary theory of property right (Negrao et.al, 2004). Where, the former forwards the government led land and service provision while, the latter is the provision of land through market led mechanisms. But Stevens & Jabara, (1988) have indicated the need of a paradigm shift towards supply of urban land that commonly known as the new economy of land tenure. The approach mainly focuses on gaining maximum economic opportunities as a result of efficiently working institutional frameworks and cooperation of all stakeholders in the market.

The failure of urban land market can be best understood by explaining the causes and consequences for its failure. According to Cantens, (2014) inappropriate relationship between the suppliers and brokers that exploits the asymmetry of information is the major challenge. The nature of the relationship between the actors is the major concern for the cause of urban land market failure. While, Haji & Salim, (2006) has indicated that, the frequent shifts of planning and urban land tenure systems are the ones to be blamed for failing the formal market. Additionally, they have poked the poorly functioning and unclear roles of institutions for the failure of the market. The efficiency of the policies and the capacity of the institutions that can enhance a safe land transaction is very important (Fatta, 2014). Bedane et.al, (2019) also have indicated land speculation as cause for the failure of the formal land market.

In explaining the consequences of the market failure Filatova, (2009) has stated, in addition to the inappropriate rise of price of land, the poor urban spatial forms are the result of failed land markets. According to Haji & Salim, (2006) the consumption of the natural environment of urban areas through encroachment is the major urban challenge which is caused by failed urban land market.

The failure of the market to sustain the ever increasing demand forces the people to fulfill their demand through the informal markets that intern creates sprawl and informal urban growth. Urban areas also faces difficulty to implement their urban plans that are expected to facilitate their growth is also the other headache for most of African cities (Napier, 2007).

In many African cities the rapid rate of the urbanization created massive demand for urban land that staggers the weak and poorly working formal land market. Dejene, (2015) stated that the present pattern of urban land ownership with the inadequacy of land supply has contributed largely to the contemporary urban land use problems in many cities of Africa.

Ethiopia is one the Sub Saharan countries with rapid economic growth that intern led to the rapid rate of urbanization. The cities and towns in the country are growing in tremendous rate that created unmatched demand for urban land. Most of the urban areas have grown even outside of the official boundaries. Ethiopia is under huge transformation for the last two decades (Shiferaw, 2017).

The economic policies and reforms are bringing about rapid economic growth despite many adversities. Ethiopia's economic performance is significantly improved (Oqubay, 2018), the perfect indicator for that is the rapid growth of cities and towns in the country. Most of the urban areas are undergoing massive social and economic changes that include; increase per capita income following the job opportunities from investments, the improvement of urban facilities including housing, streets, health, education and etc. (Kassahun & Tiwari, 2014).

It is common thing to see many construction undergoing and spontaneously emerging settlements outside of the official boundaries in cities and towns in the country (Adam, 2016). According to Tsegaye, (2010), due to the reasons like the change of economic structures that directs towards the nonagricultural activities and the increase of services provision; Ethiopian urban areas are under rapid growth.

Urban land market is a controversial aspect in today's urban Ethiopia where land is forbidden from legally to be commoditized where the reality on the ground is in opposite to it. Despite of

the rapid urbanization, the urban land administration and market in Ethiopia is criticized for being unnecessarily complicated (Lindner, 2014). Due to this complications, it is very difficult to own a piece of land formally. Kasahun & Tiwari, (2012) also has indicated the need of improving the capacity of institutions for addressing the raising urban land related challenges in the country.

There is no legally stated urban land market platform, even the current working constitution of the country prohibits land market by saying “Land is a common property of the nations, nationalities and peoples of Ethiopia and shall not be subject to sale or to other means of exchange” (FDRE, 1995). This opens a door way for failure of land market that brought a chain of informal ways for owning land.

Addis Ababa, the capital of the country is growing horizontally at alarming rate, the city is increasing by 5.04 km² per annum (Efa et.al, 2017). Due to this rapid horizontal expansion towards the neighboring cities and towns, the government established Oromia Special Zone in 2008 from parts of surrounding zones including; North Shoa, South-West Shoa, East Shoa and West Shoa to protect these areas from the fierce sprawl a but the result backfired and created further horizontal expansion of settlements (Kasa et.al, 2011).

In response to this ever growing difficulty the government of the country has forwarded different policies and strategies over the last twenty years (NUDSP, 2016). Sululta town is one of the eight urban destinations in the special zone, with tremendous urban growth and huge demand for urban land. According to CSA, (2007) the population size of the town was 15,145, and reached 52,126 in just 9 years according to (OUPI, 2016).

Informal occupation of land is common in the town in recent years, the local governing body is also in a difficult position following the failure of the formal land market to supply this tremendous demand. One can see the rapid urban growth and new settlements everywhere including the peripheral parts. Girma, (2019) explained the massive impacts of the urban expansion in Sululta town following the ruthless land market system.

The major gap identified from the literatures in respect to the failure of the market shows that a lack of a comprehensive study that binds the social aspect of market failure to concepts of urban morphology and its natural environment which should be seriously reconsidered. Even though it is rising in recent years there is huge lack of study approaches that bases on GIS and Satellite imagery in the country (Misgana et.al, 2019).

1.2. Statement of the Problem

Rapid urbanization is a common phenomenon throughout the country, where Ethiopia is one of the least urbanized countries even in African standard with score of 16% according to Schmidt, (2009) and 18% according to JMP, (2014). Urbanization is an expected phenomenon, with conversion of the conventional agricultural uses into different urban land uses. The land acquisition and annexation into the urban boundary is a common tragedy to witness in urban areas in a very short period of time in the country. The biggest challenge of this kind of development is worse where the land market is failed to sustain.

The rapid growth of the capital, Addis Ababa, has triggered rapid urbanization to the adjacent cities and towns, the consequence of spatial growth of the cities has resulted in the changing facade of the fringe areas (Barai et.al, 2011 cited by Efa et.al, 2017). Following that the government created a so called Oromia Special Zone to protect those areas from the rapid horizontal sprawl of Addis Ababa but the autonomy of this area has back fired with poor urban morphologies due to the poor land market system. The towns become the place of lawlessness where land is sold like any other commodity because the local authorities watches the situation with few actions.

Studies show that land market in Ethiopia is failed due to the speculators which are the active agents of urban sprawl and rapid urbanization (Ghadi, 2016; Bedane et.al, 2019; Girma, 2019). Urban areas are losing most of their important ecological footprints, agricultural lands, future expansion areas and etc. (Beka, 2016).

Sululta is one of the eight towns in Oromia Special Zone located in north of Addis Ababa, it is a flourishing and booming town (Girma, 2016) where, he tries to indicate the rapid speed of its growth. The town is undergoing rapid urbanization as a result of improper land market. Land is sold from a person to another where land is not legally subjected to sell, but through undercover agreement of both parties, this crack has created a greater chance for external scavengers like land brokers to manipulate the market and directly has created poor urban morphological setups.

Land brokering is becoming the big challenge for the town. The magnitude of the involvement of land brokers in the process of land trade is very much high. Now days it is almost impossible to own a piece of land without consultation and contribution of the brokers. The greatest challenge of the land market is brought from the brokers because they control both the legally established institution and anybody who want to sell or buy land in the town. The other

contributing factor for the crack in the urban land market is government policies like; expropriation for public use, investment and urban development that subjected the fringe and rural agricultural lands to become the destinations for large number of urbanities and migrant population and industries as well.

According to Girma, (2019), the town is growing badly due to the failed land market. The growth t is consuming; agricultural lands, protected areas such as; Intoto forest and the vast swampy area at the heart of the town. The town's morphological setting is becoming worse than ever now (OUPI, 2016). The issue needs immediate response from researchers, policy makers, urban planners, town land managers and any other concerned body to curb the upcoming urban tragedy.

The failure of urban land market has indicated by different researchers especially in Oromia special zone towns (Kasa et.al, 2011; Gebremeskel, 2019; Bedane et.al, 2019). The forecast of the UN Habitat, (2009) shows that the urbanization level will double in the next 30 years in Ethiopia. This is a big paradox where the country is about to rapidly urbanize in contrary, the system is not guiding it well especially in management and administration of urban land.

The special zone surrounding Addis Ababa is one of the major place of urbanization in the country (Tsegaye, 2010). In similar to the other cities and towns in the zone, Sululta is growing horizontally, and it is also consuming the precious historical and environmentally sensitive areas. Bad morphological set up is also the other major concern in the town. Considering the level of the rising concern of the issue, studying its causes and consequences of this epic phenomenon is a crucial task in developing countries like Ethiopia.

Due to the rapid urbanization taking place in the country and particularly in the special zone the government has established the urban land development and management agency that operates at the town level in 2013 so as to replace the outdated municipality lade urban land development system (OUPI, 2016). Despite of all these efforts to guide the rapid urban growth managing urban land is becoming very difficult in the town.

After observing the situation of the rapid urbanization and the land market failure in the town, this study explains the main causes of the land market failure and also evaluates the magnitude of the consequences of the land market failure in Sululta town through detailed analysis of the collected data from the study area.

1.3. Objectives of the Research

1.3.1. General Objective of the study

The general aim of this research is to explain the main causes and consequences of urban land market failure in Sululta town so as to forward ways of improvement.

1.3.2. Specific Objectives of the study

- ✓ To assess the causes of land market failure in Sululta town.
- ✓ To assess the extent of land market failure of the study area.
- ✓ To examine the consequences of land market failure on the development of the town.
- ✓ To recommend appropriate strategies for the improvement of land market of the study area.

1.4. Research Questions

- ✓ What are the causes for land market failure in Sululta town?
- ✓ What is the extent of land market failure of the study area?
- ✓ What are the consequences of land market failure on the development of the town?
- ✓ What are the appropriate strategies to improve the land market of the study area?

1.5. Significance of the Study

The research has studied the causes and consequences of land market failure in detailed manner so that it can be a good input for the local authorities to manage the main causing factors and consequences of the failure of the land market. The research also will be a good input for policy makers so as to deal with land market failure and indicates the need to revise land transfer issues. Additionally, the study can also be one good reference material for upcoming researchers since the research includes special actors such as land brokers and local farmers as a major land market actors who have been barely studied in the past researches. This research also presents how to map morphological changes using remote sensing data and soft wares that can be an example for urban planners and researchers.

1.6. Scope of the Study

The main purpose of this research is to explain the causes and consequence of the failure of the land market in Sululta, one of the town in the OSZ with intention of providing a big picture for the zone as a whole. The research has mainly focused on assessing the major causes for the failure of land market with special focus on the main actors in the land market, land policies, land management, institutional working procedures and urban morphology.

The consequences of the market failure on the town is the other main issue that the research has addressed. The research is undertaken in the geographical coverage of Sululta town. The study has conducted using the time period of twenty years considering the rapid urbanization rate in the country as well as in the town for the last twenty years that have indicated by different scholars (Tsegaye, 2010; Beka, 2016; Gebremeskel, 2019).

The research has limited scope on explaining the independent variables that has caused the land market to fail. Accordingly, these variables consists; the role, magnitude of influence and the legality of the land market actors that are operating in the process of land transaction in town. In addition to that; land policies, management and organizational structures are the other independent variables that are contextually studied. The research also has studied dependent variables under consequences of land market failure that includes; the rate of urbanization, suitability of the settlement pattern and the level of consumption of natural environment. Land market failure is the third variable that has studied in the research as constant variable.

1.7. Limitations of the Study

The main limitations faced during undertaking the research were mostly related to the outbreak of Covid 19. Specifically, because of the plague of the virus, it has limited the frequent interaction with the informants. In addition to that, frequent site visits that helps to study the town's settlement patterns and its environment has greatly reduced and forced the researcher to relay on secondary materials as an input. The other major limitation of the study is related to the allocation of the budget. Accordingly, it was very difficult to collect data using necessary tools. In addition to that, lack of willingness of some of the participants also has greatly hindered the research.

1.8. Organization of the Study

The research is undertaken and presented in the orderly manner of phases, it starts with chapter one introduction to the land market failure with contents of background, statement of the problem, research objectives and questions, significance and delimitation of the study. Following that it undertakes literature reviews on the causes and consequences of urban land market failure under chapter two. Chapter three of research methodology contains research approach, data sources, collection methods and sampling and analysis methods. Under chapter four results and discussions are presented in detailed analysis of the variables of the study. The research is completed under chapter five by providing conclusion and by forwarding important recommendations.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

This chapter provides a detailed review on the causes for the urban land market failure and its consequences as a result of the failed land market. The review as well as the entire thesis is done with a belief that understanding and explaining the causes and consequences of land market failure in Ethiopia in this era of epic urbanization is very important. It is crucial since land is the fundamental input for the growth and development of towns and cities. The way land is transferred mostly in informal way is great deal of concern because it definitely indicates why and how patterns of settlements emerge and also helps to study their sustainability.

The chapter starts with explaining the basic concepts in urban land markets specifically the urban land market failure, following that it reviews the main actors and their roles in the market. It also reviews the role of the main actors in causing land market failure in addition to that, it reviews the consequences of urban land market failure on the formal land market and morphological setups of cities and towns. The best practices towards creating efficient markets and sustainable urban areas are the other issues covered in this review. Finally the chapter concludes and summarizes on the issues of urban land market and its failure from the reviewed materials.

Urban areas are under immense pressure due to the rapid and massive need of spaces for their ever increasing uses. Land is the major ingredient of urbanization, the way it managed and supplied for urbanization process is very crucial. Poor urban morphological patterns are one of the main results of urban areas in situation where land market has failed and subjected to bottlenecks of land speculation (Bedane et.al, 2019; Girma, 2019). Inappropriate settlement patterns led by sprawl: poorly arranged streets and blocks; the absenteeism of green and open spaces; swarmed naturally sensitive areas and rapidly diminishing farming lands are the main characteristics of the rapidly growing urban areas in the country (Dijk & Fransen, 2008).

In general, the biggest gap in the literatures on the issue of urban land market failure is that; most of the research and scholars have over looked the morphological, environmental; as well as social impacts collectively even if it is a very burning issue. The reviews also have undertaken from having interest on studying the issue from urban planner's perspective. Some literatures are not included because of their focus on political and complex economic issues they reflect and explore.

2.2. Operational Definition of Terms

Urbanization: The process of conversion of agricultural areas in to urban uses and activities Woldegerima et.al, (2017).

Urban land: The total coverage of land masses in the official boundary and jurisdiction of an urban area (OUPI, 2016).

Urban land market: A tool to support urban land resource management activities and human activities that involves in buying, selling, leasing and securing urban land (Napier, 2007).

Urban land management and administration: The former indicates the process of land allocation and the latter refers to the process of determining, recording and dismantling information on ownership and use of urban land (Belachew & Aytenfisu, 2010).

Urban land market failure: The condition when competition between market actors get distorted and encourages self-interested activities outside of the formal market (Smith, 1776).

Urban environment: The natural and manmade components of urban areas and the complex their relationships between them (van Dijk & Fransen, 2008).

Urban morphology: A general spatial configuration that includes urban forms such as plots, blocks, buildings, streets, squares, open spaces and etc. Carmona, (2009).

Urban Sprawl: A morphological growth deformity led by horizontal spreading outwards of an urban area through low-density and fragmented expansions (Adam, 2016).

2.3. Urban Land Market and It's Failure

2.3.1. General Review on Urban Land Market in Ethiopia

Urbanization is defined as the growth of population living in urban areas but it also needs to be defined as the physical extension and the change in morphology (Alaci, 2010). Since land is the basic input for urbanization understanding the way it transferred is very important (Cunningham, 2011). Land use planning is the common instruments for land resource management (King & Napier, 2019). Cheshire, (2009) also has stated that land market is one of the major tool to support these resource management activities.

As elsewhere in the world, land is the vital asset of the Ethiopians but land and land tenure have been controversial issue in the history of the country. The country has experienced a fierce political debate on the appropriate land tenure policy (Crewett et.al., 2008), due that the regimes the imperial to the current government have created many land policies over the course of more than 80 years, where the policies did not change very much (Nega et.al, 2003).

Urban land market is controversial aspect in today's urban Ethiopia where land is forbidden from legally to be traded (FDRE, 1995). Tigabu, (2011) also has indicated the long ranging inconstancy between the working constitution and legislations. Whereas, there is a massive actual land market in the name of land transferring just to avoid the words; “buying ”and “selling”. Most of the policies aimed for protecting the poor from selling off their land but failed to do so (Crewett et.al, 2008).

Ethiopia has poor and old land administration system (Belachew & Aytenfisu, 2010). It is pretty much difficult to administer land where the outdated institutional setup and obsoleted administrative policies and regulations are still working. It is common to see urban sprawl and land selling in broad light in the four corners of the country where the administering and managing body cannot cope up with the rapid growth.

Bedane et.al, (2019) classified the history of land market in Ethiopia in to three major eras. The first era is the period before 1974 where land is only owned by nobility, the government and the Ethiopian Orthodox Church. Dejene, (2015), also indicated the widespread speculation by landlords and housing suppliers in the era. The second era, is the Dergue system (1974-1991) where the government abolished the private ownership and confirmed public ownership of land. The third era is the current working system which started since 1991 it tried to bring concurrent land tenure system.

Nowadays horizontal expansion of urban areas in Ethiopia is very common that the demand for being urban is high. It is a much tricky situation to define a boundary for the urban areas, because urbanization takes place in both rural and urban land (Bedane et.al, 2019). Surprisingly both sides have their own rules and regulations which makes it difficult situation. In rural parts of the country land should be provided for all farmers, pastoralists and semi-pastoralists (FDRE, 1995) but the constitution don't indicate a direction for the urban parts. The document blocks a commercialization of land where the reality on the ground shows that a broad light trade of land. The rural areas neighboring to the urban areas are the directly parts by such growth (Girma, 2016).

Starting from 1990s, lease holding is the means of owning formal land in Ethiopia, it is an approach to transfer land to individuals who develop it. The proclamation permits the transfer of land through inheritance, gift and sale. Dejene, (2015) indicated that most of formal land acquisition method in the Ethiopia is through state land auction which is very slow and inaccessible for most of the people in need of land.

In context of urban land market the inclusion of manmade alterations to land and the owner's rights associated (King and Napier, 2019) are the main elements to be included in land markets. Markets are important place for producers and customers to coordinate their actions (Cunningham, 2011). Urban land market in it part is also one of the abstract markets where there is no physical market place for it, whereas, it is guided with the formal and informal working procedures in the system.

There is a huge demand for urban land in many African cities and towns that particularly shows massive urban growths around fringe parts of the urban areas (Wanjiku et.al, 2010). In active land market system there is an owner rights to own, use and sell the land. People may trade the rights to use the land or buy and sell what is built on the land, but unless they can own it. In Ethiopian case things are bit complicated (Girma, 2016). According to the constitution of the country FDRE, (1995) land is property of the state but in informal way people trade and the government has failed to react up on the problem.

Urban land market in African cities which are rapidly growing can be defined in to formal and informal land markets (Stephen, 2009). The biggest challenge is the failure to differentiate them where they are often inter-related. Formal land markets are the ones transactions are legally recognized, but the informal one has transactions that are not recognized officially but there is difficulty in both of the markets (Napier, 2007).

According to David, (2020) land markets perform four important functions that includes; facilitating land transaction by bringing together buyers and sellers, setting price, allocating land and ensuring the price that can generate efficient use of land. All of these major functions lead to the effectiveness of the market but in Ethiopian case the market has trapped with speculations, weak municipal capability and unresponsive policies (Nega et.al, 2003 cited by Crewett et.al, 2008; Belachew & Aytenfisu, 2010; Bedane et.al, 2019).

2.3.2. Urban Land Market Failure

Urban land market needs a detailed understanding of the main economic concepts of the market. The biggest challenge raises where these systems did not function properly. Many markets in developing countries did not work properly (Cunningham, 2011; Bedane et.al, 2019). Surprisingly this could end up with the failure of government itself, even though, the urban land market is no like the other markets, it is pretty much restrictive and regulations based as a result of the sensitivity of the issue.

Markets are the most efficient way of allocating resources, they have the quality of decentralized nature because of the self-interest of the actors involved (David, 1993). Markets are concerned with resource allocation but not for fair resource distribution, so that the growing inequality of their actors can lead to their failure where there are no enough systems to curb their drawbacks in developing countries like Ethiopia (Tadesse & Gutema, 2017).

Pierre, (2014) has explained the main market entities that helps for their proper functioning includes; the availability of potential buyers and sellers; where the seller must have something to sell and the buyer must have the means to purchase it; the market price must be determined and agreement must be guaranteed by law or by tradition. McMillan, (2002) describes in order to create properly functioning markets the required elements are: information that flows smoothly; property rights that are protected; people must be able to be trusted to fulfil their promises; side-effects on third parties must be reduced and competition in the market must be controlled. Both scholars stated that missing one of the elements leads to market failure.

In addition to the major elements of market Rodrick, (2000) identified five external institutions that are also very important for smooth functioning of markets that includes: the property rights that must be protected; strong regulatory institutions helps smooth functioning the market; large macroeconomic institutions that works towards for stability; institutions for social insurance and institutions for conflict management are the major ones.

Scholars has different perspective on the basic entities for appropriate functioning of markets Mohr & Fourie, (2007) focused mainly on the ability of the parties to transact with each other, whereas McMillan, (2002) poked the ability to trust market actors to keep their promises as the main factor to determine if markets are working properly or not. Rodrik, (2000) in his article also focused on the ability of the actors to compete appropriately on the market's arena.

In economics, market is said to be failed when they cannot organize goods or services allocation efficiently. Samuelson & Nordhaus, (1992) described market failure as an imperfection in a price system that prevents an efficient allocation of resources. Market failure is directly related to price of a good or service if it really implies or not the true value of a product or a service. Cunningham, (2011) related these imperfections with monopoly, imperfect competition, asymmetry of information and externalities.

Markets can fail due to many reasons; one of them is because of their own characteristics; the spontaneity in their emergence and the unbalanced level of influence of their actors (Bedane

et.al, 2019). Where he also argues that many markets in developing countries did not work properly, he mainly blames the inappropriate or lack of intervention of the governments to adjust, which is true for the countries like Ethiopia where the government cannot cope up with the pace of economic growth in general.

In a failed market, the institutional arrangements that support the market fails, especially in markets of public goods like land. Land market failure occurs when land is provided in a way that benefits very little of society or where the public institutions fails to handle the demand and supply of the interests of society as a whole (Fatta, 2014). The other cause of market failure is highly related to the nonexistent of property rights (De Soto, 2000; Prahalad, 2005 cited by Cunningham, 2011) where people have the goods but not legally own them, such lack of property rights affect markets because property rights are essential to the functioning of markets societies as a whole.

According to Bedane et.al, (2019) it is said to be the urban land market has failed when the market does not properly address the need of citizens for either shelter or investment. Currently the land market is inefficient and highly non-transparent and it is under different distresses like lack of property right (Frank, 2009 cited by Dejene, 2015).

It is true that we live in society in which goods and services provided through markets based on the income which determines that what and how much to consume. Markets fail to work efficiently to allocate these goods and services sometimes (Cunningham, 2011). King & Napier, (2019) states market failure as “a failure of market forces to maximize social benefits for goods like land which results in market failure for less wealthy individuals and households in their attempts to find places to live, trade and manufacture in order to earn a living.”

According to Cunningham, (2011) in his book, “Understanding Market Failures in an Economic Development Context” said that, “markets can fail when they have too many suppliers or have too few customers otherwise when they get monopolized.” There are some forms of market failure that include; monopoly of firms, external effects like brokers (agents) where they decide everything including the prices, ability to overcome obstacles, asymmetric information that has inclined towards some groups.

Additionally, unfair usage of public goods like land are provided in a way that benefits very little of portion of society is also the other market failure types (Cunningham, 2011). The other form of market failure is incomplete property rights where most of the lands on fringe parts of

urban areas are not legal part of urban areas (Brunner, 2011). The access to formal property systems is a barrier to market entry for poor people, who cannot gain access to the formal capital markets without property rights (Soto, 2000).

The unhealthiness of the competition between actors in urban land market that include; government, land agents, investors, urban land owners and etc. can lead to urban land market failure (Cunningham, 2011). Where, each of them contribute for strength or weakness of the market. As discussed above the higher the demand of land and the more outdated system creates poorly functioning market that can lead to market failure.

2.2.3. The Competition and Role of Urban Land Market Actors

Like all markets, the urban land market is a complex phenomenon. Urban land market is made up of many and complex actors (Wanjiku et.al, 2010) its frequent actors include; government, private developers, urban land owners, urban dwellers, farmers, the young landless and the new comers to urban areas are few of them to mention. As any other market supply and demand are the forces that form the foundation for the allocation of resources in a market where in this case land is the hot commodity (Elgar, 2009).

The role of the main actors in the land market differ in the contextual set up the governments and working procedures but in every structure the appropriate interactions of land market actors that binds up land rights which include; rights, restrictions and responsibilities; improved technical supports that includes land registration and accurate spatial identification and the capacity of all market participants are the building blocks for a functional land market (Wallace & Williamson, 2006 cited by King & Napier, 2019). The following are the major participants in this very important market that includes:

2.3.3.1. Land Brokers

Modern brokering studies in academics started in 1960s to facilitate markets in Asian countries after the fall of colonization (Meehan & Plonski, 2017). The concept of brokering is highly related to the neoclassical economic theory, the main aim of brokering act is to develop a rational model market. They defined brokers as “network specialists” and they enable and rework deals and classified the different levels of broker’s autonomy as follows; transform, translate, distort and modify markets. According to them the biggest uncertainties surrounding brokers raises from their informal activities plugged into markets. Brokers are the important actors in shaping the overall socio economic transformations in one’s country as whole (Cantens, 2014).

Tennyson, (2005) has discussed the roles and accountability that effective brokers has to follows. According to her, a broker is a go-between in making relationships and their role is to facilitate transaction to be safe. Where in our case these brokers are the trouble makers in the market where most of them are not legally recognized.

Land brokers locally also known as delala are the main influencing actors in land market in Ethiopia especially in Oromia Special Zone towns. According to Bedane et.al, (2019), broker's speculative behavior to maximize individual profits are becoming challenge in the market. They also identified that land brokers are the main actors that leads to failure of the market because they decide on price as well as the other legal transactions procedures but to create efficiently working markets land prices should be set by the combined act of all members (David, 1993). Meehan & Sharri, (2017) also discussed the situation in which uncontrollable level of interruption of strong arm brokers may lead to market and state failure.

Gebremeskel, (2019) in his research on Mekelle city stated that brokers are the main actors that facilitate the transaction of land in the city. He added that, the brokers don't have trainings and most of them also don't have legal recognition so that there no is ethical and legal grounds that stop them from wrong deeds. He also identified their roles that include: providing information for land sellers and buyers and facilitating the completion of the legal paper works including the title transfer, clearance and ownership certificates. Land brokers get paid for the transaction in form of commission usually 2-5 % prices, these brokers usually increases the price just to increase their commissions and other related external gains (Girma, 2016).

2.3.3.2. Investors

Investors are one of the major land market actors due to the closeness of the Oromia Special Zone to Addis Ababa where the largest industrial investments takes place. They also come in all shapes and sizes. Kassa, (2011) has identified the highest interest and occupation of land by investors in the towns of Oromia special zone, he also particularly indicated the peri urban land has been massively expropriated for establishment of huge investment. Bedane et.al, (2020) also has indicated the massive land occupation of land in fringes of Shashemene by investors.

Following the rapid urbanization and industrialization, massive industrial plants with huge amount of land has transferred to investors with land about 600 hectares only in 2015 in Sululta town (OUPI, 2016). Numbers of investments has never been putted in to actions as planned originally also. Additionally, there are great indicators of land speculation taking place in the town (Beka, 2019).

2.3.3.3. Urban Dwellers

Urban land owners are also the other major actor in urban land market, even though how did they owned the land are different following the regime changes in the country (Crewett & Korf, 2008). Rulers in Ethiopia has been distributing land to private ownership for centuries (Ambaye, 2015), he also states that during the imperial time land was held in private hands and subjected to free sale and exchange but, the problem raised when monopoly reaches to its peak a research. A research undertaken in Addis Ababa by Pankhurst, (1966) shows that 58% surveyed land was owned by only 6.7% of the total population in the city.

Dergue nationalized all of the urban land and extra houses through the Government Ownership of Urban Land and Extra Houses proclamation of (No, P. 47/1975) mainly to abolish shortage of urban land supply and to reduce the rising price of urban land. The proclamation also instructs that all urban lands should be property of the government that a person is allowed to own land privately which means no one can buy, sell or transfer land and urban residents given life time use of land and property on it.

After 1991 revolution in the country, despite the increase in population growth of the landless, land remained to be the property of the state according to FDRE, (1995) constitution that prohibited any sale and exchange of land but who cares you can see a person selling his/her land in broad light. Yes, many people living in urban centers Ethiopia live in kebele houses a lifelong rent from government, rest of the people lives in private houses that owned mostly before 1991, but in the past 29 years few and fragmented policies and activities has done for this ever growing hunger for urbanity in the country. Crewett & Korf, (2018) also concluded that the urban land policies in the country are becoming more and more complicated. Despite the legal controversies urban land owners are selling and buying land are transacting land in other form of such as gifts.

Paul, (2009) indicated that urban landowners who own land on which it is allowed to build get an increase in their asset values, but those who are unable to develop their assets in the most profitable way get a corresponding reduction in asset values, it creates huge gap between the formal tenure and the informality, the formal owner puts huge price on a property which highly affects the new entrants to the formal market (Giddings, 2009).

Apart from their active involvement in urban land market a sizeable portion of urban dwellers in Ethiopia live in informal houses. Dejene, (2015) pointed out that the 30 % of Addis Ababa's residents live in illegal settlements and even it reaches about 98% in some cities and towns in

the country. Whether they are active or not active in the land market Tegenu, (2010) indicted that the urban population has increased much faster than both the rural and total population during the last four decades which shows their significant. Kassahun & Tiwari, (2012) showed that the system's gaps in incorporating the urban poor in Ethiopia.

2.3.3.4. Farmers Located in the Fringe Areas

Studies show that, rapid urban expansion primarily hit farmers around the fringe parts of urban areas (Kasa et.al, 2011). According to their study local farmers are poorly protected from this inappropriate land market and it is common to see the decline of agricultural land that results by systematic displacement of farmers (Mandere et.al, 2010).

According to Bedane et.al, (2020) in Ethiopia most of the new urban growths takes place in fringe parts of urban areas where, most of the populations are farmers without little knowledge and financial capability to understand what is going on in this rapid urban growth era. The farmers are the first victims of the poorly functioning urban land market specially in fringe parts of urban areas and they are becoming the concentration of poverty and environmental degradation (Marshall et.al, 2009 cited by Kasa et.al, 2011). They also found out that farmers around fringe parts are losing both their land as well as their livelihood. This is the living proof that shows the level of the farmer's participation in the land market.

2.3.3.5. The Urban Land Policies and the Institutional Setups

Some of the main legal documents enacted to control urban land related issues in Ethiopia are; Urban Planning Proclamation No. 574/2008; Land lease proclamation No 721/2011; Urban Land Development and Management Policy of 2011; Land Resource and Inventory Model Regulation of 2013 and Urban Landholding Registration Proclamation of 2014 but according to Bedane et.al, (2019) they are criticized for their minimal role in controlling land market failure and rapid urban sprawl in the country which shows the gap between government policy and practice.

In Ethiopia land is the common property of the state and people that; land is not subjected to sell and exchange. Due to this ground breaking stand the policies and regulations only provides a use right over land (FDRE. 1995; Kassa, 2011) but the demand for land is at its stake, in this open and unmatched situation the people are forced to trade land informally. In addition to this the constitution, the land policies and the regulations have the intention to reduce the frequency of land transfer which defies the reality on the ground where urbanization is expected to double in the next 30 years (Habitat, 2010).

The government's role as facilitator of land market is crucial in bringing equity and fairness through appropriate interventions (King & Napier, 2019). They also indicated that the government has to insure the right to own and use land because property rights and rights of access are the fundamentals to build a stable land market.

According to the land lease proclamation of 2011, urban land is administrated by their respective towns or cities administrations. It is a living truth that the institutional setups are outdated and poorly managed in Ethiopia. One can possibly witness old and deteriorated full shelf of documents in most offices of land administration (Alaci, 2010).

Bedane et.al, (2019) identified in their study in Shashemene city that, 72.6% of the land transaction takes place without the involvement of the government bodies which shows the low level of their role in the market. Generally, weak institutions supporting land transactions lead to inefficiency and poor productivity are the hindering factors in the third world markets (North, 1996 cited by King & Napier, 2019). Because of the weak land administration, corruption, rent-seeking behavior, social and political conflicts the governments in the developing countries cannot perform appropriately (Wanjiku et.al, 2010).

2.4. Theories of Urban land and urban land market failure

According the Bid Rent Theory, if markets were left to compete without regulation, the land use which can yield the greatest financial benefit or return from any particular piece of land should be in a position to outbid other potential uses and users (Alonso, 1960). This intern strengthens the power of urban activities over the subordinating rural activities like that of agriculture that creates the strongest poles of the land markets.

According to Negrao et.al, (2004) there are two main theoretical backgrounds of urban land market namely, collective and evolutionary theory where, the former refers to the government led land provision while, the latter is the provision of land through market led mechanisms. But Stevens & Jabara, (1988) have indicated the need of new approach of supply of urban land known as the new economy of land tenure which focuses on gaining maximum economic opportunities by creating efficiently working market through cooperation of stakeholders.

Land is immovable property to be sold and to be bought but only the rights can be bought and sold (Tigabu, 2011; Gebremeskel, 2019) which is intended to bring efficiency of land through appropriate institutional checks and balances. Lall, (2014) also listed the main functions of urban land markets as follows including: bringing buyers and sellers together to facilitate transactions; setting prices of land; allocate land and ensures efficient use of land.

2.5. The Causes of Urban Land Market Failure

The growing demand for urban has led to formal land delivery system to become more informal (Dejene, 2015). The informal access to land is the most important means of affordable access to urban land while the demand is rapidly growing yet the supply is limited. Such situation this leads to the radical increase in land price (Cunningham, 2011). It is true that economic development induces boom in property values but is it may results failure in markets, due to the conditions like that of speculation (Bedane et.al, 2019). They also have indicated that, following the rapid urbanization rapid demand for urban land led by speculative practices have failed the formal market.

Apart from the poor performance of the land management and administration institutions, the government regulatory frameworks and administrative procedures are one of the major causes for the failure of urban land market (Napier, 2007). They also often constitute barrier to the development of more efficient and equitable land markets because costs of conforming to official norms are often higher than what many people can afford (Adesiyan et.al, 2011) that in turn leads them towards the informal market.

Tennyson, (2005) in her book entitled “The Brokering Guide Book” has discussed the roles and responsibilities that effective brokers has to follow. According to her a broker is a go-between in making relationships and their role is to facilitate transaction to be safe. Where in our case these land brokers are the trouble makers in the market that, most of them are not legally established and most of the land transaction activities are completed through these imports actors.

As urban areas grow horizontally, speculators keep their land for getting higher price (Bedane et. al, 2019). It is common to see very large fenced areas in outer parts of cities (towns) that are owned by investors where most of them sell these pieces of lands later when they think can be sold into higher prices. Speculations also can lead to serious urban problems to the developments of urban areas (Gul et.al, 2019), where we expect more and rapid urbanization in the case of Ethiopia.

Dejene, (2015) also stated that, the rapid population growth with no equivalent land supply creates shortages of land which leads to unnecessary competitions that directly creates the market failure. According to him in addition to the balancing the demand-supply dynamics of urban land, strengthening physical planning and other regulatory schemes are very important to curb the problems of urban development in developing countries like Ethiopia.

The ever increasing price of land and property led by speculation has caused land market failure in China (Du & Peiser, 2014 cited by Bedane et.al, 2019). In United States land speculation has created urban sprawl (Clawson, 1962; Triantafyllopoulos, 2017). According to George, (1935) speculation is one of the major causes of disturbances of markets as well as an economy of a country as a whole.

According to Wubineh, (2018) the main cause of the land market failure in Ethiopia is related to government legislations like that of the lease proclamation of 2011 that favors of private monopoly rather than ensuring citizen's well-being. He also added that in addition to the proclamation the other regulations and working strategies has paved the way for speculation and other problems that has caused the formal market to wobble.

Bedane et.al, (2019) have also indicated that despite of the currently working constitution the policy and regulations has tried to bring urban development, marketing land by facilitating land transaction even though they are only placed on papers. In addition to that the proclamations and other legislations are creating the condition of monopoly that few people are owning land comparing to the total population (Wubineh, 2018).

The other main cause of urban land market failure is the lack of property right that restricts the property rights, so that according to Arnott, (2008) most of the people in developing countries ignore land registration regulations because they simply see no benefit in registering title to their properties and even if they want to there are few conditions to be formality.

Gebremeskel, (2019) stated that when the state is unable to implement regulations on the areas that needs to, it results to dysfunction of markets that leads to their failure of the formal market. Gwartney & Ferrarini, (2014) also concluded that there are different causes for the distortion or failure of urban land market that include; the urban planning that allocates land around urban/rural boundaries and the second reason is the condition to obtain permission for development.

One of the main cause for urban land market failure is the distortion of land price around fringe parts. In developing countries like Ethiopia fringe parts are the hot spots of new urban settlements due to their low price of plots land which in turn creates urban sprawl and bad urban morphology but countries like England and Netherlands curbed this problem by increasing the price of land in more than 700-fold to change use from agricultural to residential (Cheshire, 2009).

2.6. The Consequences of Urban Land Market Failure

Understanding of the consequences of urban land market needs the basic understanding of the consequence of market failure at the first place. According to Cunningham, (2011) market failure leads to uncompetitive situations, generates low-level equilibrium which affects the related firms in the system and creates barriers to entry. Land market failure may result in form of monopoly when city dwellers buy multiple land that drives land price higher and makes very difficult to engage the poor in the market (Haji & Salim, 2006).

Studying the consequences of urban land market failure is a very important task since land is a determining input for the development of all sectors of a national economy (Bedane et.al, 2019) apart from a specific urban settlement it affects a country as whole. Dejene, (2015) stated that the present pattern of urban land ownership with the inadequacies of the existing land areas have contributed largely to the contemporary urban land-use problems in many cities of the Africa. He also indicated that this bad physical arrangements has negatively affected the dwellers and has made difficult living urban areas in Africa that creates overcrowding, congestion, slums and squatting in urban areas in Africa.

According to Cunningham, (2011) there are two main consequences of market failure; the first is the uncompetitive situations where new entrants are kept out of the markets because they are forced to pay high prices for products that could be available at lower cost which means especially the lower income people are the most affected actors in markets. The second devastating consequence of land market failure is, it blocks development options and creates barriers to growth especially in developing countries like Ethiopia. The National Urban Systems Study Report undertaken by MCUD, (2016) also has indicated dysfunctional housing and land market creates the continuing lack of affordable housing and the expansion of the informal settlements.

According to King & Napier, (2019) the morphological set up and their environment of urban areas and their sustainability is determined by the nature of ownership and property rights defining their land. The commodification of land and the level of the effectiveness of its market has failed urban land market and left them with devastating consequences. In contrary, a properly working urban land markets are important for society and sustainable development because they potentially allow the poor and working class access to land and housing.

Informal settlements and urban sprawl are the predominant characteristics of urban growth in most of African cities. The majority of urban residents, especially the poor, access property

rights through transactions occurring outside state regulation and formal land markets (Rakodi & Leduka, 2003). The seriousness of the situation is indicated in the research that undertaken in six African cities; Gaborone, Kampala, Enugu, Lusaka and Maseru shows that 50% to 70% of land for housing is accessed informally (Wanjiku et.al, 2010) this in turn leads to bad morphological setup that leads to the future slum areas. Dejene, (2015) in his research on Hossana town also found out that 51% of the land owners have bought land informally.

The formal market mechanism has failed to meet the housing needs of the population in Sub-Saharan cities (Durand-Lasserve, 2006; Berner, 2007). Self-help housing and squatting have long been recognized as the only means available to fulfill the immense demand for mass housing in the cities (Adesiyani et.al, 2011) that intern created uncontrollable urban spatial growths out of out the official boundaries of the urban areas.

The increasing demand for urban land with growing of informal land market is resulting in consumption of areas which are considered as historically relevant and had communal tenure (Wanjiku et.al, 2010). A research done by Woldegerima et.al, (2017) has reported that enormous amount of agriculture land and forest has converted to built-up areas in fringe parts of Addis Ababa and blamed informal land transactions as the main cause for it.

The failure of urban land market can result in to variety of social problems also. In Ghana, disputes over land ownership have arisen when some family members have sold communal land without the authority of the clan or other family members (Gbaguidi & Spellenberg, 2004). In fringe parts of Addis Ababa local farmers are dispossessed from their land or some reduced their farm size that forced them to shift their livelihood due to this failed land market (Kasa et.al, 2011) to which they are not accustomed with.

In Ethiopian cities, the local people mostly the poor, is unable to take part in the formal market and turn in to the informal one. Wanjiku et.al, (2010) indicated most of land negotiations are conducted between landholders and buyers with help of land agents (brokers) that link the two parties. Most land transfers have a letter of agreement between the seller and buyer which acts as an informal means of proving ownership without government approval which really cannot provide them legal tenure.

2.6.1. The Consequences of Land Market Failure on Urban Morphology

We are at historical era of urbanization, almost a decade since urbanization has passed rural (Habitat, 2009). Developing countries like Ethiopia are scoring the highest urbanization rate (Tegenu, 2010). According to DESA, (2018) predictions, Ethiopian urban dwellers in 2050 is

expected to be 40% of the total population which means more than 50 million people will live in urban areas. According to the prediction, comparing the current 20% our urban population the figure will double in the coming 30 years, so that, it is very important that we need to prepare for this tragedy.

Urban morphology is always depends on a scale but in general it is defined as spatial configuration of urban elements (Dempsey et.al, 2010). They also explained that these urban forms include a number of physical features and nonphysical characteristics including buildings, streets, urban blocks and open spaces that they are analyze in terms of size, shape, scale, and density, land uses, building types, layouts and distributions.

Land markets do not have one common ground in different parts of the world. According to urban economic theory, housing costs rise with parallel to the size of cities. The theory also states that the reason for the rise of housing costs is consistent with competition for space and accessibility to jobs. The free market policy led by the neoclassical theory of efficient markets focuses mainly on demand and supply that really don't fit in to the marketization and commodification of public goods like land.

In sub Saharan African countries the market led approach of land market has created fringe parts to be the center of almost all new developments that stretched urban morphologies (Adam, 2014). Fringe parts are always confronted by both urban and rural; social and legal actions. It is very important to assume these volatile areas as urban components due to the huge need for urbanity and the continuity of settlements.

Land demand is an evitable concern following the rapid urbanization, the pressure is immense where the market is failed to function properly (Dejene, 2015). Following uncontrolled land market failure urban areas are under rapid urban expansion which are producing larger morphological types that directs towards the periphery of urban areas (Lacour, 1996 cited by Stan, 2013). Which also have increased the level of urbanization in such unhealthy way.

The most common mechanism by which specific spatial forms appear sprawl phenomenon is through fragmentation (Stan, 2013). This morphological deformity to such development on mostly vacant (void) areas is mainly characterized by successive sub-division of agricultural parcels and reducing street hierarchy which creates street connectivity due to lack of collector streets consequently leading to a discontinuity throughout the peripheral settlements.

Despite of having such tremendous urbanization, rapid and unplanned urban growth threatens the sustainable development of urban areas since urban morphology is crucial issue in creating sustainable and working urban areas. Overcrowding, extended and increased informal settlements are the main characteristics of our urban areas.

Tadesse & Imana, (2017) states that the in most cases urban fringes are the directly affected parts by urban sprawl, they are mostly denominated with the term of periphery and they are places of confrontation and interference. She also stated that these areas are always subjected to leap frog development because they are not prepared for urbanization.

To study the consequences land on urban morphology, understanding urban morphology itself is very important. According to Carmona, (2009) urban morphology is defined as a general settlement pattern of an urban areas which includes urban forms such as plots, blocks, buildings, streets, squares, open spaces and etc. that aids the day to day lives of residents and visitors of an urban settlement.

A. Density: Is measured in terms of the number of people or urban forms living in a given area. Of course the level of density is relative but countries have different levels in UK new residential areas have to be serve 30 households per hectare to its minimum (DCLG, 2006). While in Hong Kong 300 dwellings per hectare is considered as low density (Breheny, 1997; Jenks, 2000). In Ethiopian case 300 dwelling units per hectare is an optimal density (MUDC, 2012). Density on one hand can be seen as an outcome of the competition between land uses. .

B. Land Use: Generally, land use is the word to represent the different types of functions a particular land is providing. A land use or zoning planning is a traditional way of urban planning but nowadays mixed use way of land use is the most desirable approach (Dempsey et.al, 2010). They also identified that understanding the land use pattern of a settlement is a crucial step in studying urban morphology because it clearly explains travel patterns and the quality of life. Land use pattern is said to be dynamic since land is subjected to market forces.

C. Accessibility and Transport Infrastructure: Transportation is associated with the ease of accessibility to urban forms such buildings and places but it is not an easy and it is actually layered concept to explain. Dempsey et al, (2010) concluded that one of the main way of analyzing accessibility is through studying the relationship between home and the city center. It is also possible to study accessibility the link between services, facilities, open space, and how accessible a place or service might be described.

D. Urban Layout: Describes the spatial organization of urban forms including streets, blocks and buildings. Layout (pattern) is mostly studied at street scale in types of, conventional grid, organic, tree (cul-de-sac), radial, loop and combination of shapes (MUDH, 2017). Street networks are studied in terms of urban block sizes, their location in the city and movement connectivity. Speaking of urban layouts connectivity and permeability are the main concerns because they can tell how lively and how well the spaces are. Urban layout has important influence on movement and the way in which different places and spaces are connected (Dempsey et al, 2010). It can also tell the historical growth and development of an area.

2.7. Addressing Urban Land Market Failure

To address market failure, it is very important to work towards getting markets to perform more efficiently so that resources are allocated and decisions are made in appropriate manner (Cunningham, 2011). The effectiveness of markets is also linked to the appropriate interaction with hierarchy and networks in addition with their embeddedness in societal structures, values, moral standards and similar factors. Appropriate level of interference of government is also one of the major issue in addressing market failure. Identifying the drawbacks and cracks in the market's institutional set ups are also one of the main aspects of addressing market failures.

It is possible to have a powerful system of land use regulation or planning without restricting the overall supply of space or buildings (Combes et.al, 2005). Land use planning is likely to have some restricting effect on supply; the question is that, in practice what extent of supply is restricted and whether this restriction causes significant price distortions or welfare effects.

As rapidly urbanizing country we are facing new urban morphology of large and rapidly growing cities and towns. When Markets cannot efficiently allocate resources, they need interventions, land markets are not different. The following are some of the best interventions and approaches used to facilitate land transaction that helps to prevent the horror of urban sprawl (King & Napier, 2019).

2.7.1. Best Practices for Urban Land Market Failure Interventions

According to Dowall, (1993) there are three generally accepted approaches for government interventions into urban land markets: elimination of market imperfections and failures to increase operating efficiencies; removing externalities so that the social costs of land market outcomes correspond more closely to private costs; and to redistribute society's scarce resources so that disadvantaged groups can share in societies resources. Without being regulated urban land market suffers from a widespread problems of market failure (Cheshire,

2009). He also explains that cities in unregulated land tends to be large in an uncontrolled manner. He poked the British Urban Planning Policy as best option which restricted the supply of land to reduce the sizes of cities.

Government legislations are one of the prime tools to curb market failure that is why it is said the core of well-functioning markets (King & Napier, 2019). Tigabu, (2014) suggested that successful policy has to ensure a positive urban expansion and also has to minimize the impact on urban settlement and its environment. Rajack & Lall, (2009) also indicated deregulating and lowering transaction costs of land may reduce the revenue of cities but it ensures sustainable revenue sources can contribute for the growth of cities as well.

Government's land administration actions that includes; the legal title registration and certificate delivery, development permissions, documentation and registration of ownership through surveying and mapping for maintaining geographic and cartographic information systems (Wanjiku et.al, 2010) are common. The combination of this all efforts result to a well-functioning land administration system which intern creates effective land markets. Researchers like Bedane et.al, (2019) agree on bringing about a properly working urban land market is essential by provide property rights.

Markandya et.al, (2002) in their part poked public interests, environmental and cultural values apart from legislations and regulatory controls to protect sensitive land resources. Wray, (2007) also stated a clearly defined and secured property right can help for guiding development. According to zoning regulations protects open spaces and provide a healthy ecological infrastructure. Economic incentives such as; pricing, preferential tax schemes, transfer and development taxes, and subsidies also can be used to encourage cities management, developers and landowners to use their land in accordance with defined social or environmental objectives and to poverty alleviation (Kassahun & Tiwari, 2012).

Using information technology for land management is very important. Technologies such as geographic information system (GIS) are becoming very important for decision making (Kasa et.al, 2011; Engida DESA, U, (2018)., 2013; MUDC, 2013). Property rights that clearly define and secure land tenure definitely help for guiding development (Markandya et.al, 2002). Supporting and advocating is also very important for empowering actors to participate in markets by supporting and enabling people to express their views and concerns, get access to information and services, defend and promote their rights and responsibilities in order to be able to make choices and having access to options (SEAP, 2015).

In reviewing different literatures countries have varies experience to deal with land market failure. Accordingly, the land use planning of Dutch, has prevented sprawl urbanization in large areas by providing large urban parks between adjacent cities which provide much public access (Combes et.al, 2005). The approach, systematically stopped sprawl without restricting the overall supply of land and it also praised for providing strong direction for development. In Singapore, the government agency is responsible for the provision of public housing where 80% of the population live in this apartments (Kok, 2017).

Finland operates a subsidized land and housing market that operates by not-for-profit oriented organizations (Andre & Garcia, 2012). Iran created a land and housing market that can be directly accessed by low-income individuals through expanding stock (Keivani, et.al, 2008). While in African countries like Tanzania and Mozambique Land remains nationalized, which means individuals cannot buy or sell it (Wanjiku et.al, 2010). All of these efforts are to support the land and housing market so as to create properly functioning markets.

Many African countries have recently changed their land legislation or institutional setup with the objective of recognizing land rights and providing security of tenure in new and innovative ways (Kassa, 2011). One key objective of doing so has been to establishing land administration that can provide at country-wide coverage at an affordable cost, and that can be upgraded in a flexible way as and when the need to do so arises.

In Ethiopia and in the Oromia Special Zone although, formal land transactions do occur they are pretty much bureaucratic and financially unreachable for whom in need of land (Mohamed & Worku, 2019) which forces the urban dwellers to go with informal systems of supply (Dadi et.al, 2016). In low level of urbanization and rapid land transaction such as Ethiopia the formal market struggles to function properly and informality becomes common phenomena, in such situation formalization is the perfect answer (Rajack & Lall, 2009).

2.8. Summary of the Literature Review and Identified Research Gaps

Synthesizing the findings of a literature review using descriptive literature analysis for ease of bulky conclusions of the literatures is crucial (Fink, 1998). In this particular review 74 materials have been reviewed; 45 are article journals, 14 of them are books, 12 are proclamations and strategies and 3 are reports. Out of the totally reviewed materials 69 of them are in softcopies and only 4 are in hardcopy.

The summary of the literatures has presented in table below.

2.8.1. Summary of the Literature Review

Table 2.1: Summary of the literature reviews

A. Summary on urban land market failure	
Author and date	Conclusions
Cheshire P., 2009	Without being regulated urban land market suffers from a widespread problems of market failure.
Cunningham S., 2011	Concluded that urban land market failure as an imperfection in a price system that prevents an efficient allocation of resources (land).
King N. & Napier M., 2019	Land market is one of the major tool to support land management in formal manner that external activities can lead to the market failure.
Lasserve D., 2006	The formal market mechanism has failed to meet the housing needs of the population in Sub-Saharan cities.
Dejene G., 2015	Currently, the urban land market is inefficient and highly non-transparent in Ethiopia and it has failed to address the need of citizens. .
Kasa L. et.al, 2011;	Markets cannot be separated from their societies; that is why we are having urban sprawls in towns and cities in Ethiopia.
B. Summary on the causes of urban land market failure	
Arnott R., 2008	The main cause of urban land market failure is the lack of property right.
Adesiyan S.et.al., 2011	Administrative procedures are one of the major causes for the failure of urban land market in Sub Saharan countries cities.
Belachew M., & Aytenfisu S., 2010	The poor and old land administration system in Ethiopia has led to the urban land market failure.
Bedane S.et.al., 2019	Bottlenecks like land speculations are the causes for land market failure.

Cunningham S., 2011	The growing inequality of the actors leads to the market failure where there are no enough systems to curb their drawbacks in developing countries.
Dejene G., 2015	The slow and inaccessible formal land acquisition system as well as the rapid population growth has created shortage of land and unnecessary competitions and has caused the market to fail in Ethiopia.
Gebremeskel D., 2019	When the states are unable to implement regulations on the areas that needs to, they results to dysfunction and failure of their markets.

C. Summary on the consequences of urban land market failure

Girma B., 2019	Poor urban morphological patterns are one of the main results of urban areas that are in situation of land market failure.
M.P. van Dijk & J. Fransen, 2008; Bedane S.et.al, 2019	Poorly arranged streets and blocks; absences of green & open spaces; swarmed sensitive areas and farm lands are the main characteristics of the rapidly growing urban areas related to failed land market.
King N. & Napier M., 2019	Land market failure is the result of monopoly and makes very difficult to engage the poor in the market
Stan A., 2013	Following informal land transaction urban peripheries are under sprawl.

D. Summary on research methodology

Akhtar. 2016; Dr. Michael J. 2018	Observation, snowballing and personal interviews are appropriate during undertaking explanatory and case study research.
Cheng J., 2011	Using spatial data and trend analysis for studying urban morphology through is becoming very important.
C.R. Kothari, 2004	Using both qualitative and quantitative data is crucial in conducting researches

(Source: Organized by the author, 2020)

2.8.2. Identified Research Gaps

Most of the literatures reviewed has concluded that urban land market has already failed in Oromia Special Zone (OSZ) towns and cities. They put the long ranging inconstancy between land policies, the heavily in-formalized market and the unhealthiness of the competition between actors in the market has led to this failure. In studying the consequences of urban land market failure little has said on the effects on urban morphology even though it is burning issue. There is also a major problem on viewing urbanization as if it is only the growth of population living in urban areas where as a detailed physical extension and the change in urban morphology should be studied in detailed and scientific manner.

Literatures over look very important units such as land brokers which are the main role players in the market, some literatures poke these actors for the failure of the market. Measuring the magnitude of their effects is one big gap that has filled in this thesis. Some strongly recommend government's market led interventions to curb problem of urban land market failure, some also recommended the strong policies that works towards securing property rights and others mention urban planning but the mixing all these approaches works more efficiently.

Most of the literatures reviewed have used mix research approaches which is the best method to deal with such complex issues. Some of the literatures also have used technologies such as GIS and satellite imagery following their growing importance in the field. Challenges raises during connecting market failure which a social problem to a technical urban planning issues which related urban morphological problems.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

The previous chapter has assessed and examined literatures on the areas of urban land market failure. It has reviewed the major causes for the market failure in general. Then, the chapter also has tried to explain the consequences of the urban land market failure especially on urban morphology. Additionally, the best practices to curb the challenges of the market failure has explored in detailed manner. Finally, the chapter summarizes the main materials reviewed. In this section research methodology and methods used in this study has discussed in detailed manner. Particularly the chapter provides a description of the research philosophy, approach and methods, sampling techniques, data sources and analysis methods in detailed and specified manner.

3.2. Description of the Study Area

The study area covers Sululta town that located around 23 kilometers in the northern direction of Addis Ababa.

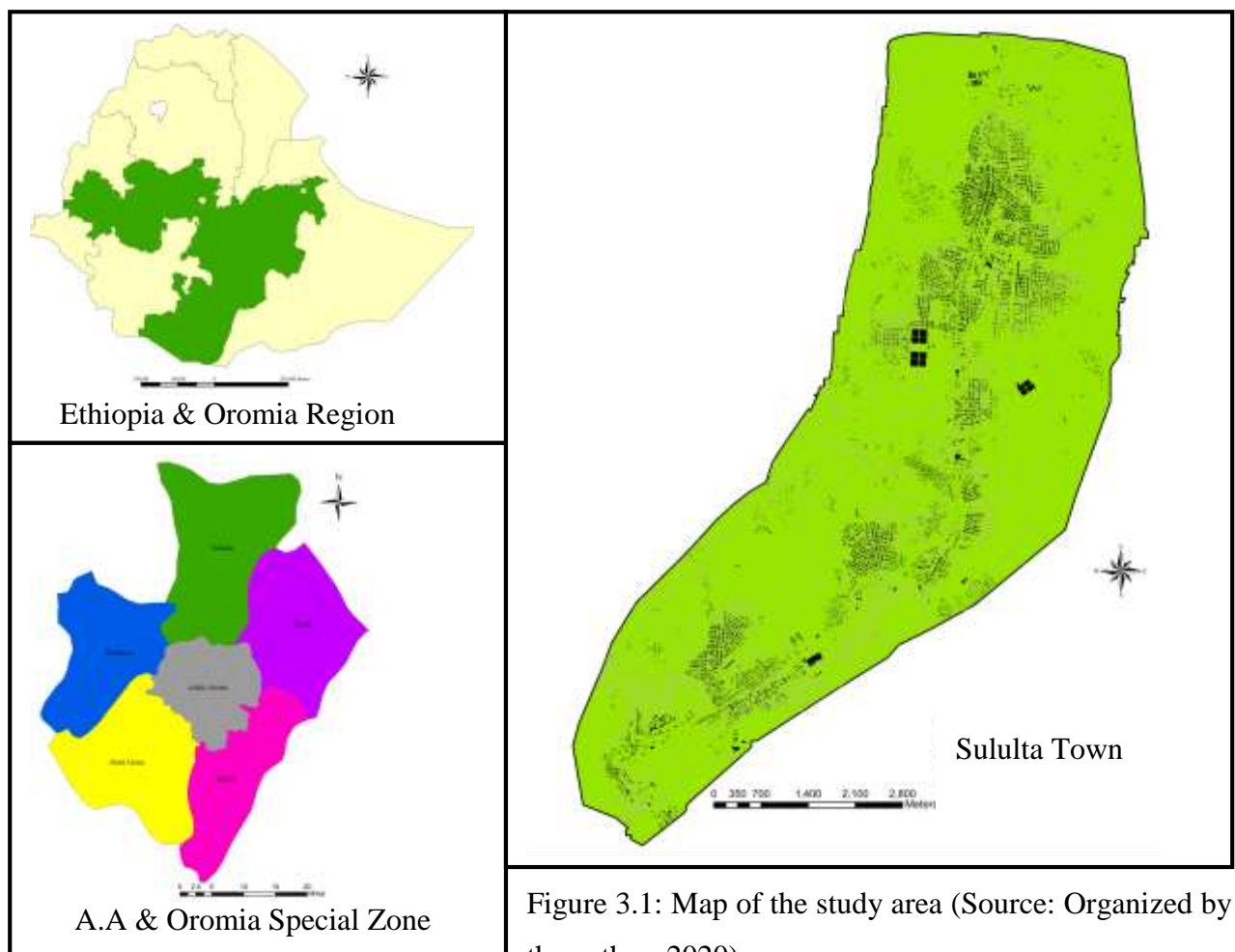


Figure 3.1: Map of the study area (Source: Organized by the author, 2020)

3.2.1. The Town's Profile

According to CSA, (2007) data, the population size of the town was 6,407 in 2007. While, OUPI, (2016) has indicated the population to be 57,537 in 2016. According to the data from the town's Land Management and Development Agency the town has 10,216 hectares of total land mass. The town was divided in to four administrative units known as kebele in 2015 for administration purpose (OUPI, 2016). According to the data from the municipality of the town, the town is best known for its agricultural products. Additionally, the town is in a very rapid and fierce horizontal growth according to the data from the town's LMDA, (2020). The research has covered all of the four kebeles for the completeness of the study.

3.2.2. A Brief History

Sululta is one of the eight towns in OSZ, which is known for its proximity to Addis Ababa. The towns in the zone are growing spatially and in terms of population in rapid manner which is the major headache between the towns and the national capital that forced the government to create the so called Oromia Special Zone in 2008 (OUPI, 2016). The zone surrounds by bordering Addis Ababa and it also shares boundary with Oromia Regional State Zones such as; East Showa, North East Showa, West Showa, North Showa, and South West Showa.

According to the information from the town's elders, the town was established in 1930s following the establishment of military camp at the verge of Addis Ababa around the resent day Mishig area. Over time the settlement had a village form which attracts people from surrounding rural areas and established its first market eventually. As the settlement grows it named Sululta, which is Afan Oromo word literally means "gorge" following the mountainous land form surrounding the town. The town remained small rural village center for the next 50 years until it gets its first township title in 1987 and labeled as a member of OSZ towns following the reform of 2008 (Girma, 2016). The town is known for its agricultural and industrial products in recent years (Beka, 2019).

According to Girma, (2016) the zone is rapidly urbanizing, with urbanization rate of 5.3 % which is much higher than the nation's level which is said to be around 3.7 %. He also predicted that the level will rapidly increase in the coming years. Currently the town is one of the hot spots for urbanization in the country (OUPI, 2016). Due to its diverse locational and natural advantages over the other towns of its surroundings, it is becoming one of the best destination for residential, recreational as well as industrial developments in recent time.

3.3. Research Approach

Studying market failure is a quite complex and scientific task, explaining the causes and consequences of urban land market failure is even more difficult job. The study has undertaken in an explanatory approach where the causes and consequences of land market failure has explained in detailed manner. It also has undertaken with a stand of urban land market has failed which has shown by different scholars especially in the Oromia Special Zone towns (Kassa, 2011; Dejene, 2015; Bedane et.al, 2019; Beka, 2019; Gebremeskel, 2019).

In order to explain the causes and consequences of land market failure, the research has conducted in positivism approach by explaining the reality on the ground. According to Saunders, (2009) it is key to conduct researches with acknowledging reality on the ground and without interfering so that to be neutral from altering the issue (problem) under study. Based on this, the study has the characteristics of mixed approach of positivist with explanatory approach.

In most cases, physical planning lean towards physical issues and provides physical solutions for social problems. Whereas, it is very important to assume urban planning can be miss interpreted where there are complex social problems like market failure. This research undergoes a detailed explanation of what has caused a social problem (urban land market failure) and its consequence on the town's urban growth practices (urban morphological setup) and its environment as well as the effects on the market itself.

This particular research tries to study the problem of urban land failure from two main viewpoints. First what caused the difficulty of the market to function properly; if it is speculation as Bedane et.al, (2019) suggested or if it is caused by information gaps between the market actors as suggested by Cunningham, (2011); or the shortage of land supply that created incomplete market as indicated by Dejene, (2015); otherwise if is the ineffectiveness of the land policies and working procedures as of Tigabu, (2011) and also tries to explain other external factors.

The second part explains the severity of the situation's consequences on the town's morphology and aspects including; suitability of the settlement pattern, the rate of urbanization if it is healthy enough to sustain the development of the town and also explains if the growth is suitable for plan implementation. Different image processing methods that help to observe the changes and effects on the natural environment such as the forest and swampy areas are widely used in the study.

The research provides details of effects on the formal market through positivist view point. This research also uses mix of quantitative and qualitative approaches, so that it involves the generation of quantitative data and undertakes quantitative analysis of them. From all bunches of quantitative research approaches this study employed descriptive research approach to form a data base from which to conclude characteristics as well as relationships of population through survey methods by using the sample of the population.

This study has employed mixed approaches. The quantitative approach is equally important to understand the subjective part of land market failure so that to explain attitudes, opinions and behavior. The qualitative approach also has used to explain the morphological and environmental aspects of the problems consequences. This approach helps to make the study complete in assisting for gaining the desired output of explaining the conditions.

3.4. Research Design

Fink, (1998) recommended Cohort design to study one or many groups at one period of time which uses self-administrate survey questionnaires and face to face interviews. The design also includes a group of people who have something in common such as; farmers around fringe areas, land buyers, land brokers (agents), older urban dwellers, investors and government officials from land management and development agency who remained part of a study group over an extended period of time. These actors are the main role players which are in day to day struggle over land market issues in town Sululta.

The survey questionnaires and interviews prepared and conducted helps to explain the role and contribution of each actors for the failure of urban market from randomly selected households from all of the 4 kebeles in the administrative boundary of the town. Both open-ended and close-ended questionnaires are used in the research. Apart from these, archival data base of the last 12 years gained from the town's municipality also has used in the research. The morphological and environmental aspects of the research has studied using detailed site observation and satellite imagery processing.

After data collection is completed, data encoding and processing took place using IBM SPSS 20, Microsoft Excel 2013 and Arc GIS 10.2.2. Then, the data were analyzed using descriptive statistical methods that supported by graphs and maps. Generally, the research has been undertaken in orderly and sequential manner starting from problem statement to conclusion and recommendations according to the following diagram;

3.5. Research Methods

Fink, (1998) and Kothari, (2004) stated that, a carefully controlled scientific research methods are the gold standard for providing valid evidences and knowledge. So that, mix of survey and contextual review methods has adopted to study the cause and effect of the phenomenon under study. Survey is better for this thesis so as to identify the fundamental contributing entities for the failure of land market and also helps to measure the magnitude of the consequence of the problem on town's spatial setup of the town.

Accordingly, this study has conducted through the major survey tools such as; questionnaires and interviews to the study variables that includes; type of actor (land brokers, land owners, land buyers, the poor urban dwellers, investors and government body), level of influence in the market, social characteristics of the actors, economic status of the actors and legality of the actors. The questionnaires are self- administered close ended type, in addition to that limited number of open ended questions were added in order to get additional unlisted concerns.

To explain the variables of consequence of land market failure on morphological setup and its environment detailed and frequent site visits and observations were widely used. Land satellite maps from United States Geological Survey (USGS) has studied and analyzed using GIS to measure the magnitude of the spatial change using trend analysis. To study the effects qualitative description also was used. Finally, contextual reviews on the currently working legal documents were undertook.

3.6. Justification for the Research Methods

Using mix of research methodologies yields greater results (Fink, 1998; Kothari, 2004; Cheng, 2011; Akhtar, 2016; Michael, 2018) based on these justifications a handful of mixed research methods has been used in this research. Survey methods such as questionnaires and semi structured interviews that helps to gain strong set of data from case study areas with site visits and observations are crucial (Bedane et.al, 2019).

Finally, detailed descriptive statistics with the help of contextual review has employed to explain the causes and consequences of urban land market failure as An et.al, (2009) suggested. An explanatory researches focus on determining the “why” aspect of correlation ship between variables and works towards fact gathering (Kothari, 2004). It is also very important to include both qualitative and quantitative data because they create massive opportunities for researchers to explain phenomenon under study (Saunders, 2009).

3.7. Data Types and Sources

Both primary and secondary data have used in this research. The primary data are crucial part of this study. The sources of the primary data are the main actors that dwells in the town. In addition to that, the working data bases such as; base maps, land ownership and transfer records are also the other sources of primary data. Primary data such as satellite maps are also have retrieved from official web sites including Google Earth and USGS.

Secondary data are also equally important, for instance reports such as, rate of land transferability and local regulations of land like that of legal procedures for buying/selling or transferring land, proclamations, policies, strategies, regulations and manuals related to urban land markets have collected from Sululta Town Land Development and Management Agency (LDMA), Oromia Urban Planning Institute (OUPI) and other trusted websites such as www.lawethiopia.com.

3.8. Data Collection Methods

3.8.1. Primary Data Collection

Primary data is the heart of this research. Before starting data collection, questionnaires and interviews were prepared for every actors in the land market. For the primary data collection questionnaires are distributed for all of the actors in the market. And also interviews have conducted to collect primary data from land brokers and government officials even though finding these brokers and speculators was not an easy task so that, snowballing was the technique used to conduct the interviews. Primary data were also collected from Sululta Town Land Development and Management Agency through interviews to assess the legal and official procedures in the land market. The other major primary data collection were conducted by downloading satellite imageries from Google Earth and USGS websites using Universal Maps Downloader version 9.85.

3.8.2. Secondary Data Collection

Secondary data collection has employed before the collection of the primary data. The secondary data were collected using secondary data collection methods such as; collecting hard and soft copies of reports, manuals, local norms and standards and data base of land ownership. Downloading soft copy files from the appropriate web-sites for secondary data from web sites such as; Research Gates, Academia, and other trusted websites has been conducted. Hard and soft copy files such as; reports, manuals, local norms and standards and additional files has been collected.

3.9. The Study's Variables

Setting variables that studied in a research is an important task. Accordingly, the following table clarifies the variables of the study and the techniques used to measure them.

3.9.1. Types of Variables and Measuring Techniques

Table 3.1: Variables and measuring techniques

Variables	Types of variables	Measurement scale & description	Measuring relationships of the variables
Land market actors (brokers, owners, farmers, informal holders, investors, the urban poor and government.	Independent	Descriptive statistics	Relationships analysis using graph
Level of influence of the actors on the market	Independent	Descriptive statistics	Relationships analysis by tables
Social characteristics of the actors	Independent	Descriptive statistics	Relationships analysis using graphs
Economic status of the actors	Independent	Descriptive statistics	Relationships analysis using graphs
Legal status of the actors	Independent	Descriptive statistics	Evaluation by comparison
Land policies	Independent	Qualitative Review	Qualitative description
Urban land management system	Independent	Qualitative Review	Qualitative description
Institutional working procedures	Independent	Qualitative evaluation	Qualitative description
The rate of urbanization	Dependent	GIS trend analysis	Quantitative spatial analysis
Suitability of the settlement pattern (Morphology)	Dependent	Quantitative evaluation	Qualitative spatial description
The level of consumption of the natural environment	Dependent	GIS trend analysis	Quantitative spatial analysis
Suitability for plan implementation	Dependent	Qualitative evaluation	Quantitative spatial analysis
Land market failure	Constant	Qualitative evaluation	Qualitative description

(Source: Organized by the author, 2020)

The independent variables of the research are the causes for the land market failure that includes; the main actor’s level of influence, social characteristics, economic and legal status. Land policies, urban land management system and institutional working procedures are also the other independent variables in the research. The dependent variables in the study are the consequences of the land market failure that include; the rate of urbanization, appropriateness of the settlement pattern, the level of consumption of the natural environment and difficulty for plan implementation. The third variable of the research is the land market failure as constant variable which has apparently shown by different literatures.

3.10. Population of the Study and Sample Size

The population of the research are categorized in two domains, the first domain of the population are the actors in the land market and the second domain of the population are the affected parts of the town. To select the sample from the total actors, the number of the actors in the land market have collected from the Sululta town LDMA. Based on this, the total samples for each actors has decided. The distribution of each samples for each actors is based on the number of each selected actors that participate in land transaction. For the morphological impact study all parts of the areas under the official boundary of the town has used.

3.10.1. Sample Size and Techniques

The process of sample size selection undertaken is with multi stage sampling framework which involves mix of random and non-random sampling techniques. To study the causes of the market failure, especially from the main actor’s viewpoints through variables such as; the actor’s level of influence, social characteristics, their economic and legal status in the market, probability sampling has been used. The sampling frame was 35,568 of the total households in the town according to the data gained from the municipality in 2020 that involves both of the formal and informal land holders using Yamane’s, (1967) simplified formula of proportion equation with 95% confidence level, Margin of error 5% and the sample cover 30% of sample proportion.

$$n = N / (1 + N (e)^2) \dots\dots\dots \text{Equation (1): Simplified formula of proportion equation (Yamane, 1967:886)}$$

Where n is sample size, N is number of population size and e is the level of precision.

The sample size was computed as follows;

$$n = 35,568 / (1 + 35,568 (0.05)^2) = 395 \text{ households}$$

Additionally, the 109 landless people are selected randomly from the youngsters and the poor people who dwells on rental houses in the town. Apart from the above method, 10 well-known land brokers in the town are selected based on their reputation through Snowball technique. 10 LDMA staff members also included in the research by convenience sampling. The total number of selected sample size scores 415 individual participants that included all of the main actors in the land market because it can help for the successfulness of the research.

Apart from the household level sampling, the research has undertaken detailed contextual reviews on the very important documents. In order to undertake the review 12 very significant documents themed on urban land and its market were reviewed. The documents includes; policies, strategies and directives that were enacted to help the land market and selected purposively. To study the consequences of land market through variables such as; the rate of urbanization, suitability of the settlement pattern, the level of consumption of the natural environment and difficulty for plan implementation the entire town land coverage was used.

3.11. Data Analysis Methods

This research explains the causes and consequences for the failure of land market so that both qualitative and quantitative data were used. To analyze the causes for land market failure the emphasis was given to studying the main actors in the market, so quantitative descriptive analysis using graphs has been conducted. While, the effectiveness of land policies were analyzed through detailed contextual reviews and evaluation by a qualitative analysis. Qualitative analysis through description was also conducted to analyze the capacity of urban land management system and the effectiveness of the institutional procedures working in the town currently.

The research also has conducted quantitative GIS based spatial temporal urban dynamics analysis for measuring the consequences of the market failure the morphological impacts as Kasa et al, (2011) recommended. Quantitative analysis through land cover change rate analysis was also undertaken for the variables of the research that include; the rate of urbanization and the level of consumption of the natural environment by using urban intensification index, dynamic degree of urban expansion and Length/breadth ratio (L/B) Analysis. In addition to these, qualitative analysis of observations were conducted in detailed manner for the variables such as; suitability of the settlement pattern and favorability for plan implementation. To make the research complete the researcher has used the mix of the following methods.

3.11.1. Descriptive Statistics Analysis

Descriptive statistics analysis is a very important data analysis method that involves the enumeration, organization and graphical representation of data (Kothari, 2004). In this research, the collected data have listed, organized and graphically presented using the percentage coverage and the mean values. The analysis undertaken have generated findings on the causes of problems by asking participants to list all of the possible causes and effects for the land market failure. This research primarily undertakes cause and effect analysis through organizing data to indicate links between the actors and events that caused land market failure with the possible consequences of its failure that has brought the bad morphological set up and environmental defects to the town.

3.11.2. Cause and Effect Analysis

Cause effect analysis has undertaken to generalize the explanations and findings of the causes and consequences of the land market failure. The analysis conducted includes: listing all of the causes of the problem and their effects and followed by drawing the fishbone cause and effect diagram. The analysis is very important because it organizes the findings from the causes of land market failure with the possible consequences identified.

3.11.3. Measuring and Analyzing Urban Morphology

3.11.3.1. Trend Analysis

Trend analysis has undertaken to measure the rate of urbanization, the magnitude of consumption of the natural area and etc. Accordingly two mainly known analysis methods are conducted namely Urban Intensification Index Analysis (UII) and Dynamic Degree Urban Expansion Analysis (K). The UII analysis undertaken involves computing the change in the area of a settlement in accordance with total area of the town in the time period of every 5 years that ranges from 2000-2020 following the rapid urbanization in the country. Using the following formula.

$$UII = ((U_{ib} - U_{ia}) / TLA) * (1/T) * 100\% \dots \dots \dots \text{Equation (3): Urban intensification index (Fan, 2017)}$$

UII stands for urban intensification index, U_{ib} stands for urban area at end point of time, U_{ia} indicates the earlier time area, TLA denotes the total urban area and T stands for the time period. The method uses for explaining the speed and intensity of urban expansion. Where large UII indicates the faster rate of urban expansion that in turn indicates the availability of large non-urban space.

The trend analysis method used in the research is known as Dynamic Degree Urban Expansion Analysis (k). It is very important to indicate the average rate of change in urban expansion by revealing the growth in terms of the absolute volume. This analysis is also conducted by classifying the study time that ranges from 2000 to 2020 in to smaller time period of 5 years. It is computed by introducing the initial urban area in a time period as follows;

$$K = ((U_{ib} - U_{ia}) / U_{ib}) * (1/T) * 100\% \dots \dots \dots \text{Equation 4: Dynamic degree urban expansion (Fan, 2017)}$$

Where K stands for dynamic degree of urban expansion; U_{ib} indicates urban area at the end time, U_{ia} , initial urban area and T stands for the interval time period.

3.11.3.2. Measuring Density

Out of the wide range of the diverse measurements to calculate the density of a given area, coverage ratio of building footprint to site area has used due to its simplicity in applying it and interpretation. Density standards of the fringe parts of Addis Ababa which is 54-80 hh/ha (AASP, 2002) and 200 hh/ha in medium towns of Ethiopia (MUD C, 2012) was used as indicators during the study of the town.

3.11.4. Qualitative data analysis

Using the qualitative analysis, detailed contextual reviews on the very important urban land market documents have undertaken. The materials reviewed includes; land policies, regulations, strategies, norms and other related documents. Additionally, urban land management system and institutional working procedures have explained using the analysis method. The appropriateness of the settlement pattern from the site observations and satellite maps were also analyzed through qualitative analysis.

3.12. Summary of the Research Methodology

Table 3.2: Summary of the research methodology

Research Questions	Data and variables needed to be answered in the research question	Methods of analysis used to answer the question	Purpose of findings
What are the causes for land market failure in Sululta town?	Surveying land market actors with variables such as; level of influence, social characteristics, economic status, and legal status of the actors. Contextual reviews on land policies and urban land management system.	Descriptive analysis and graph and table presentation.	To identify, categorize and explain the major causes that leads to the land market failure.
What is the level of land market failure of the study area?	Market failure	Descriptive analysis and qualitative description	To quantitatively and qualitatively explaining land market failure.
What are the consequences of urban land market failure on the development of the town?	Survey data of consequences of land market failure with variables such as; rate of urbanization, suitability of the settlement pattern, level of consumption of the natural environment and favorability for plan implementation.	Descriptive analysis and graph presentation Trend analysis with maps Quantitate and qualitative	To explain the magnitude of the consequences of land market failure in the town.
What are the appropriate strategies to improve the land market of the study area?	Based on the analysis conducted and reviewed best practices.	Descriptive analysis and qualitative description.	To recommend appropriate directions to curb land market failure.

(Source: Organized by the author, 2020)

CHAPTER FOUR

4. RESULT AND DISCUSSION

4.1. Introduction

The previous chapter attempts to discuss the research methodology used in this study. The first part starts by the description of the study area, which is Sululta town. The mixed research philosophies of explanatory and positivism are explained and presented as an approach followed in this study. As research methods, the mix of different survey methods have explained in detailed manner. The data types and sources with their data collection methods also have discussed and the study variables have explained. Population and sample size are the other points raised in the chapter. In addition to that, data measurement and analysis methods used in the study have discussed. Finally, the chapter has summarized the research methodologies used in the study.

This chapter in its part also explains the cause and consequences of urban land market failure based on the collected data. It starts from the description of the respondents up to discussion of the results gained in the research. The data collection was undertaken in a very challenging situations due to the socio-political condition of Ethiopia as well as the global epidemic of Covid 19 (Corona) in during the study period. However, maximum effort has made to keep the quality of data in all these challenges.

All of the sampled 415 participants were surveyed. Where, 380 of them are from the population of the dwellers of the study area. The other surveyed actors are 10 staff members from Sululta town land development and management agency and the other 10 participants are the well-known land brokers in the town. Thankfully, 400 of the participants have fully completed both of the open ended and closed ended parts of the questionnaire so that the analysis of the data is conducted based on these collected data. While, the rest of the surveyed population has excluded from the research due to the incomplete information they provided. To normalize the quality of data, the appropriate age and social group members has included.

Apart from the survey conducted, both soft and hard copy documents related to the study variables such as; land policies, regulations, strategies, urban land management system and institutional working procedures have analyzed in this chapter. To analyze the consequences of urban land market failure on urban morphology and its environment satellite imageries also have analyzed in a detailed manner. Additionally, the consequences on the land market itself have explained.

4.2. Description of the Respondents

4.2.1. Socioeconomic Characteristics of the Respondents

In order to analyze and explain the socio economic status of the main actors in the market the study variables such as; gender, age, family size, level of education, occupation and monthly income per household (hh) were collected and explained in the survey through questionnaires and semi structured interviews. According to the survey conducted the result of the survey shows that out of the 400 participants in the research 57 % of them are males and 43 % of them are females.

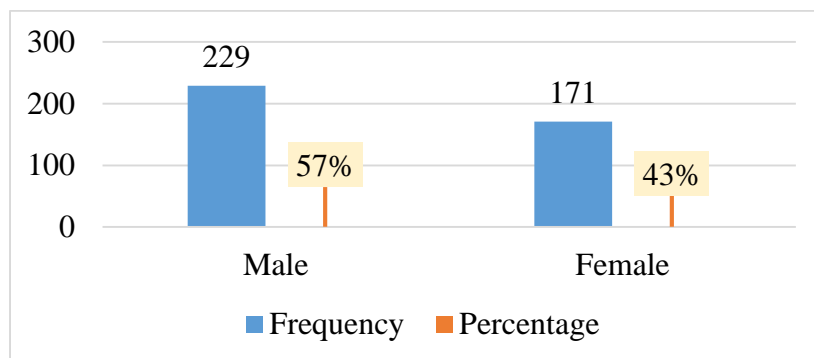


Figure 4.1: Graph of gender ratio of the participants (Sources: Organized by the author, 2020)

The age group of the participants in this research ranges from age group below 15 years to age group above 65 years. Accordingly, 5 % of them are below 15 years old; 23 % of them ranges from 15 to 25 years old; 34 % of them are in age group from 26 to 45 years; 28 % of them ranges from 46 to 65 years old and the people above 65 years old counts for 10% of the participants. The collected data are represented in the following graph.

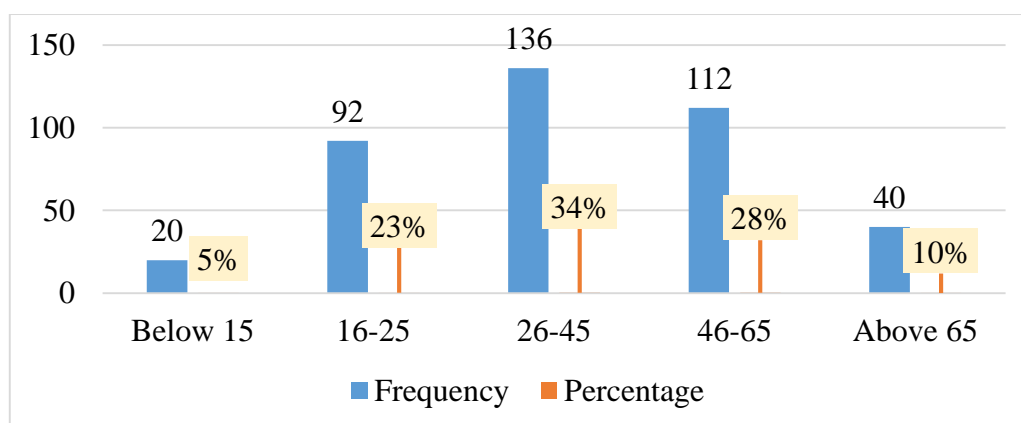


Figure 4.2: Graph of age group ratio of the participants
(Source: Organized by the author, 2020)

The family size of the participants in the research ranges from singles to households with more than 15 individuals and the average family size of the households is 6. Singles accounts for

12% of the participants; households with family size from 2 to 5 covers 34%. The family size range from 6-10 accounts for 25%; households that have members from 11-15 numbers 24% and participants with more than 15 members also covers 5%.

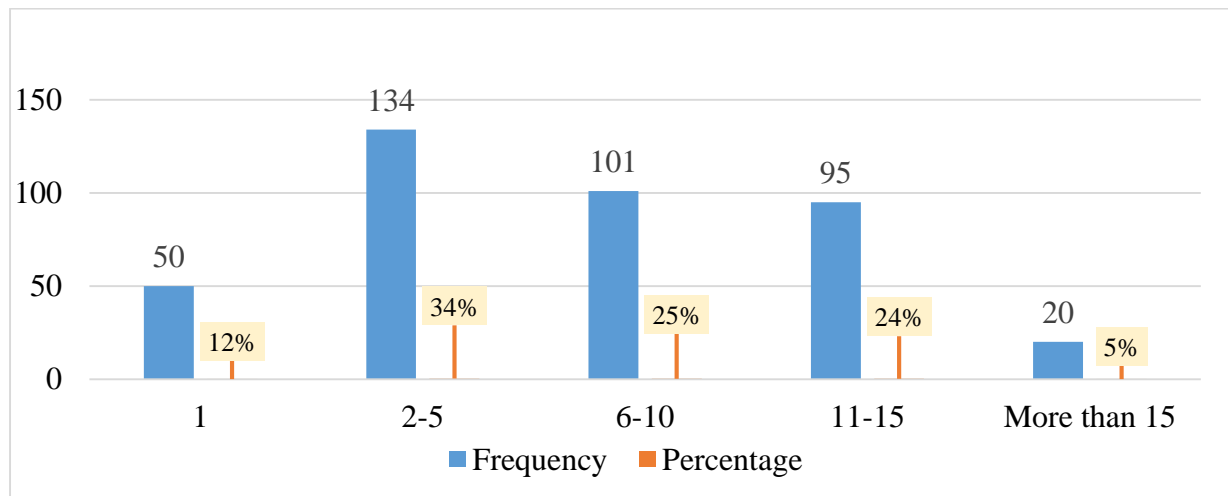


Figure 4.3: Graph of family sizes of the participants (Source: Organized by the author, 2020)

Concerning to the level of education, 18% of them have never attended schools; 32% of them have attended schools up to grade eight. Whereas, 25% of them have attended schools up to secondary school; 3% of them have completed grade 12th and 7% of them have attended TVET; 6% have went to higher educational diploma, 6% have first degree and 3% have reached masters and above educational level.

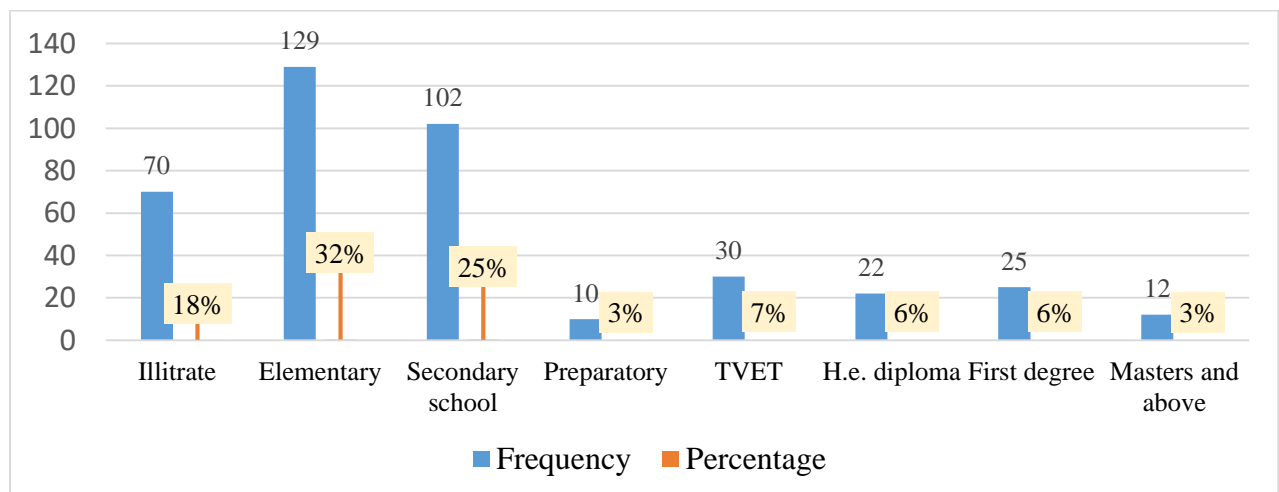


Figure 4.4: Graph of the level of education of the participants

(Source: Organized by the author, 2020)

The other socioeconomic variable of the actors in the market is job and source of income where most of them are private workers with 47%; 23% of the samples are private and government employed; farmers accounts for 11% whereas 19% of them are unemployed and students.

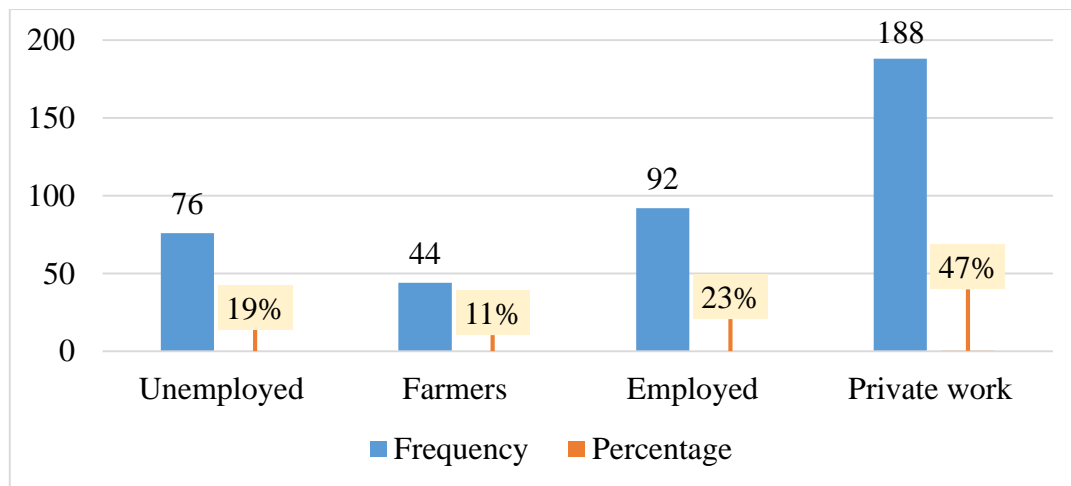


Figure 4.5: Graph of sources of income (Source: Organized by the author, 2020)

According to the collected data 42% of the participants are categorized under poor economic status by earning less than 800 (13%), 800-2,000 (29%). Whereas, 26% are labeled as low income by earning 2,000-4,000 birr/month. The middle income earners accounts for 13% and 11 % by earning 4,000-6,000 and 6,000-8,000 birr monthly. The upper middle income covers 6% by earning 8,000-10,000 birr monthly and the high incomers that earns more than 10,000 birr monthly accounts for only 2% according to the category of CSA, (2007).

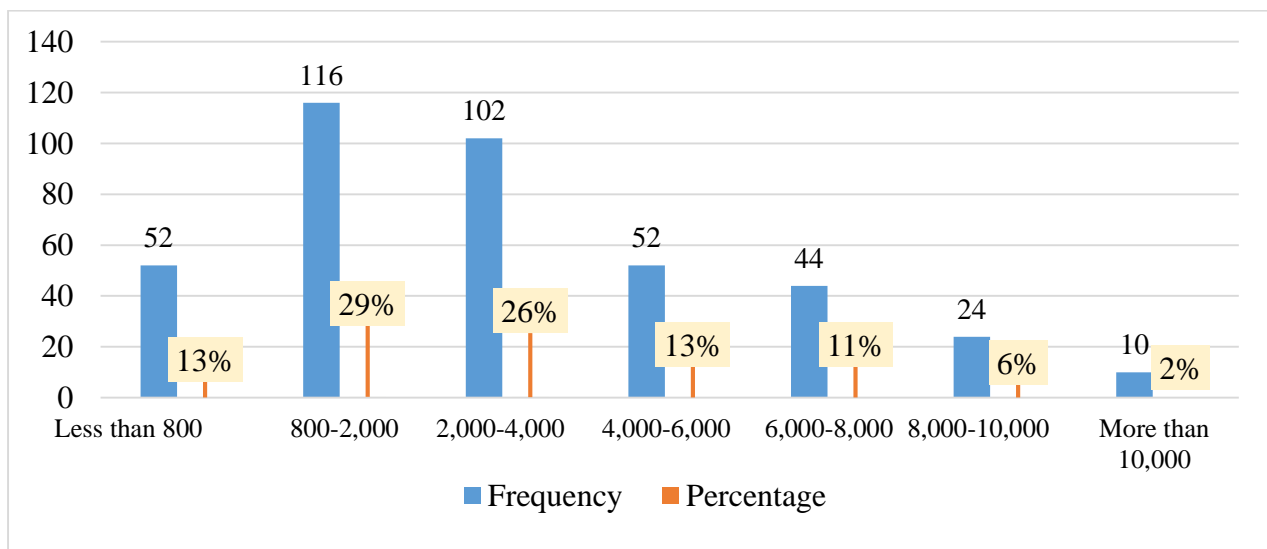


Figure 4.6: Graph of monthly income of the participants (Source: Organized by the author, 2020)

4.2.2. Activity of the Actors in Urban Land Market

According to the collected data 69% of the sampled participants have indicated their participation in the market. Specifically, all of the sampled land brokers, investors and government officials have involved in the market. 87% of the informal landholders; 81 % of the formally registered urban landholders; 67% of the local farmers; 18% of the landless

participants are specified their participation in the market. In order to measure the validity of the data the measure of skew-ness has computed and scored value 0.7 which shows the distribution of the responses are moderate. The level of the participation of the actors has presented on graph below.

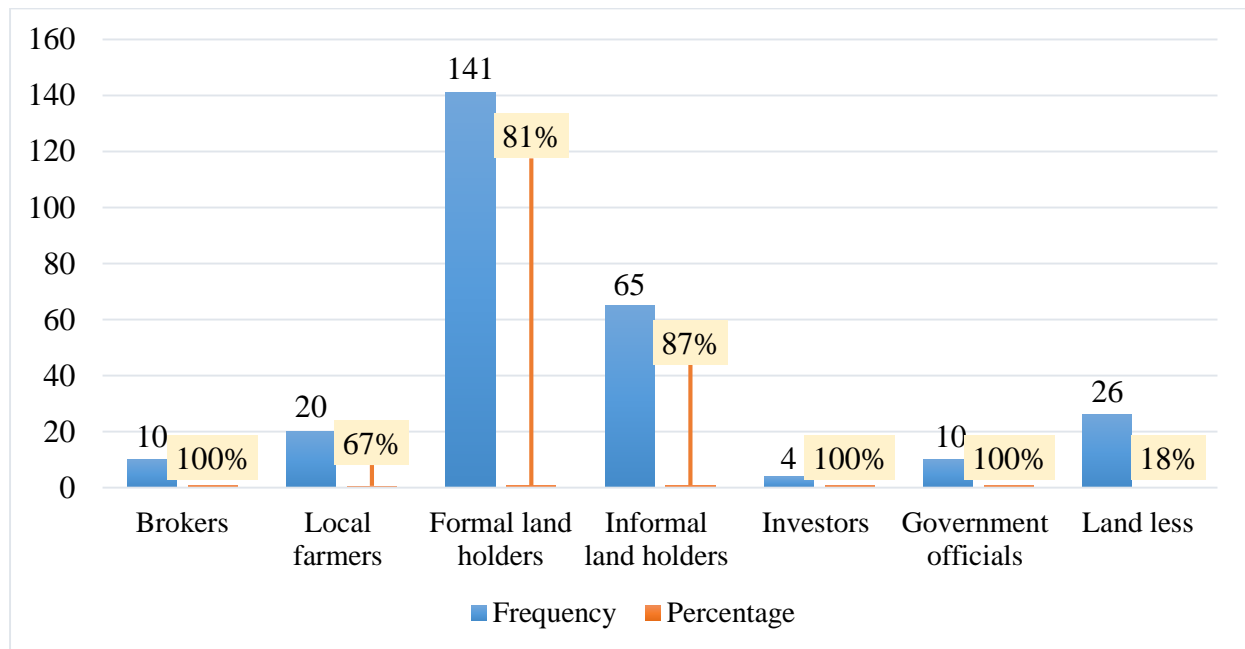


Figure 4.7: Graph of the activity of the actors in the land market
(Source: Organized by the author)

Accordingly, the participants in this study have indicated their significant role in the market. Where brokers, investors, and government officials take the lead by participating fully in the market. Followed by the informal settlers, the formal landholder's and the local farmer's participation in the market. The least participated group of actors in the market according to the collected data are the poor and the young landless who don't own parcel of land but still dwells in the town.

The collected data shows that, the brokers have active role in the market, their role is immense that it is stronger than the average brokers or agents. Brokers should be facilitators of transactions in perfectly working markets whereas, in Sululta, broker's role is much higher than facilitation, according to the observation conducted the brokers in the town almost control all of the activities related in the land market.

Due to the vast informality of the market huge portion of settlements are becoming informal. Accordingly, out of the 75 sampled informal settlers labeled by the municipality 87% of them have involved in the land market. In addition that, out of the sampled 30 farmers, 67% of them

have transacted land. While, out of the 170 sampled legally registered urban dwellers 81% of the have took part in the market. Whereas, all of the sampled investors have also have participated in the transaction of land. The above numerical data and explanations show that the significance of the activities and roles do the main actors have in the land market.

Apart from the act of brokering, 6 out of the 10 sampled brokers have bought or sold land for their own selves. All of the 54 sampled informal settlers have involved in buying land. Whereas, 11 of them also have involved in selling of land. 21 out of the 30 local farmers have sold land while, 9 of them also have bought land. Out of the 170 sampled formal land owners 21 of them have bought and sold land. While, 107 have bought land and 42 of them only have sold land.

4.2.3. Qualitative Data

The second part of the survey questioner contains open ended questions in order to find out the respondent's perceptions on the challenges of the formal land market and the defects on the settlements they are residing in. The open ended questioner part also tries to figure out the causes and consequences of the urban land market to insure the completeness of the collected data and the study.

Varies types of answers are provided by the respondents, for the ease of analysis they have classified it to two main categories and in to six sub categories; the first main category is the causes for the failure of the market that includes the sub categories such as: advantages in the market and the challenges of the market. While, the second main category is the consequences of the failed market and the responses are in to three sub categories namely; settlement pattern defects, depletion of the natural environment and effects on the market by itself.

According to the responses from the open ended questionnaire part, the sub categories of the causes of the land market failure, such as the advantages in the market has 4 themes while, the challenges in the market has 3 different themes in order to make the study easier to summarized and find out the major findings.

Coming to the consequences of the failure of urban land market on urban morphology the sub category on the suitability of the settlement patterns has recorded in to three themes and the other sub category of the morphological defects observed have eight sub categories. All of these responses are discussed in respective sections of the analysis by supporting the quantitative analysis.

4.3. The Causes of Urban Land Market Failure

4.3.1. Imperfect Competition between the Land Market Actors

According to the collected data from the 400 participants in the research, it has identified that age groups have different level of participation. Out of the age group more than 26 years, 72% of them have indicated that they have participated in the market. In contrary, youngsters with the age group of less than 26 years old have replied that only 15% of the have participated in the market which shows the difficulty the youngsters faces to participate in the market.

Out of the male respondents that participated in the study, 83% of them have responded that they have traded land. Whereas, only 17% of the female respondents have indicated that they have experience of land transaction. The data also shows that, gender wise the males almost dominates the market and the balance shifts towards them, which shows the difficulty that faces females to participate in the market.

In terms of the family size, out of the 276 participants that have replied that they have participated in the market, the households with family size from 2-5 shares the largest portion in the market with coverage of 34% followed by the households with the family size from 6-10 and 11-15 that covers 25% and 24% respectively but the biggest problem rises towards the singles the rapidly growing age group and shares one of the biggest coverage of 12% in the market that shows immense challenges that faces bachelors to own a piece of land to settle.

The survey shows that, most of the brokers' are youngsters between age group that counts for (60%) 16-26 age group, 30% (26-45) age group and 10 % between 46-65 years old. The figure is one good example of the young age group of the land brokers that are working in the town right now. The data shows that, the dominance of the young aged brokers which are in the hunger for wealth other than bringing equity and fair services.

The informal settlers surveyed are mainly people with age groups between 26-45 years that accounts for the 49%. The second age group that resides in those settlements are the age group 46-65 years old with 36% followed by the age group above 65 which covers 12% of the respondents. The lowest portion of the group the dwells in the informal settlements are the youngsters between 16-25 years old accounts about 3%. In the description of the formally registered urban land owners and family sizes, about 68% of them are households with family sizes of 2-5 and followed by the households with family sizes from 6-10, which counts about 18% of the respondents. Whereas, the dwellers with family sizes between 2-5 and 6-10 collectively accounts for about 14% of these very important market actors.

The local farmers are the most predominant dwellers in the town. Accordingly, their largest share of family size ranges from 6-10 with 59% score. Following that 2-5 family size are the second categories that the farmers have by scoring 24%. Singles and the family sizes with more than ten family members' scores 2% and 15% respectively. Most of the farmers lays in age group between 46-65 years that takes 45% of the respondents. Age group more than 65 years also takes important share of the 23%. Apart from these scores the age group from 26-45 also shares about 17% of the respondents. The age groups of 15-26 and less than 15 shares the smallest portion of the respondents by scoring 13% and 2% respectively.

The government officials and office and site staff's members are mostly the young between the age group between 26-45 with the hunger for wealth and new working habits. Having such young age officials (staff members) is both advantageous and challenging which has analyzed and discussed in the following parts of this study. Most of the investors that are participated in this research are in the age group between 46- 65 that shows their business led mentalities of these important actors.

4.3.1.1. Unbalanced Level of Influence of the Actors in the Land Market

The level of influences of each actors in a market is a very important issue that should be seriously studied (Cunningham, 2011). According to the conducted literature reviews the level of influence of the actors have to be maintained to bring about a properly working markets. The major requirements for the efficient land markets are raised from their proper competition between the actors in it. Price is one of the major market components that should be determined by the combined efforts of the main actors (Elgar, 2009). In this particular research the level of influence of each of the actors on the market is analyzed using descriptive analysis method. The level of the influence of each actors in the market have discussed in the section below.

A. Land brokers

Land brokers are the most dominant actors in the market. According to the survey conducted their influence is pretty much high and also their actions in the market are diverse. Accordingly, their great role stretches from a simple facilitation to single handedly dominant control over the market. According to them, apart from bringing land buyers and sellers together, they also do additional tasks such as; setting price; representing the seller or the buyer; working as an agent on processing legal documents such as getting on an ownership certificate and title transfer which is locally known as guday geday which is a combination of words that means task finisher.

The influence of the brokers on the land market starts from setting precise. While, setting price starts from the seller's decision on the amount of money he/she wants to sell the land on followed by price setting by the land brokers. These brokers fix price based on main two grounds depending on how much money they get after the brokering task is completed. The first type of setting price is done by expecting the 2% commission from each of the two sides, this type of setting price can be recognized as the healthier and works towards the facilitation of the transaction. The second type of setting price is known as farq a semi made up Amharic word that indicates an act of getting improper advantage over the buyer without his/her knowledge. This type of setting a price is done by adding extra price over the price seller sets which only brings an extra money for the broker.

The level of influence of the brokers in the market is high. Based on the questionnaire presented by the researcher for the sampled land brokers, 40% of them have indicated their level of influence in the market is very high. While, 20% of them indicated that their level of influence is high that indicates their pretty much impressive role in the transaction of land. 20% of them also have responded that they have medium level of influence, 10% answered low and 10% are indicated that they influence the market in a very low level manner.

B. Local farmers

Local farmers are the least advantageous actors in the market. According to the survey conducted 90% of the farmers have consulted as well as guided by the land brokers to sell their land which shows their dependency to this actors. The farmers have little to say, first of all they set price with little knowledge in general. In addition that, the farmers responded on the question who set price when you sold your land indicates that, 78% of them responded that they sold their land based on the price set by the brokers and other external bodies.

The sampled farmers that dwells around the fringe part of the town indicated that huge amount of land, averagely 0.8 ha of land have sold and transferred to new owners. According the farmers, they have sold averagely about 34% of their land which a frustrating fact, still they are under a huge horror to come. Out of the 30 local farmers participated in the research, 36% have sold 5 qarxi and 12% of them has sold their farm land which is more 15 qarxi, while 23% of them has sold a land which measures of an area from 10 to 15 qarxi, 5% has already sold a land from 5-10 qarxi and 20% of them has sold a land which is less than 5 qarxi, where qarxi is a local area measurement which is equivalent to 750 m². Where, most of the farmers has complained the brokers and buyers for treating them badly due to their lower level of influence.

They also responded that their level of influence in the market to be minimal with score value of low, which covers 40% of the respondents and very low of 10%, in addition to that 25% have indicated that their influence is medium whereas 10% of them said they have influenced the market in very good manner with score of high, surprisingly only 15% of them said they have well controlled the transaction while selling or buying land. These responses of the farmers indicates that their level of influence over the market is little that they cannot cope up with the sneaky brokers and massive demand for land that makes them the immediate target.

C. The formally registered urban land owners

In this particular study, the formally registered urban land owners are the collective category set by the researcher that contains the town dwellers with different ownership types of land that include; kebele house and registered private land owners. Accordingly, to study these important actor's level of influence in the market, survey were conducted by selecting older settlements which has enabled the researcher to get the targeted samples.

Despite the fact that, the urban residents are the relatively long term dwellers of the town their influence on the market is not this much influential. Out of these important actors surveyed of the sampled formally registered landholders; 13% of them have responded that they have influenced the market at high level and 9% have responded their influence is high. Whereas, 46% of them has responded that their influence in the market is medium and 23% of them have replied their level of influence to be minimal with score of low influence 13% and 10% of the residents have indicated that their influence is very low because of the challenging competition from the other powerful actors in the land market.

The formally registered urban landholders have responded that their influence is high with response rate of 43% they have provided an information that they kept their land to sell it in future for profit which makes these particular group of the actors much more higher influential in the urban land market despite their number is few.

D. The informal landholders

New comers especially from other cities such as; Addis Ababa, the other towns in the OSZ and from surrounding rural areas are the major important members of this category of the urban land market actors. Out of the informal settlers surveyed 78% of them have consulted brokers to buy land where brokers are dominantly and solely controlling the market as discussed above. According to them, the problem starts from the start, where they get them through informal ways which don't give them the freedom to explore and decide in the transaction freely.

Accordingly, 60% of them have responded that their influence the market is minimal. Their responses shows that; 13% have said they have very high influence and only 10% have responded they have exerted high influence. Whereas, 17% of them have indicated that their influence in the market is medium level. Surprisingly more than half of the respondents have responded that they are not in control of the market. Specifically, 42% of them have indicated that they exert low level influence and 18% of the respondents have exerted very low level of influence in the market.

In addition to the closed ended survey questionnaire part, the respondents have explained their concerns over the market in the open ended part of the questionnaire that, the dominant control of the brokers and the land sellers without the help and interruption of the government body have left them without no options to compete in the market.

According to the survey, 58% of the respondents have witnessed that they do have awareness on the existence of farq whereas only 42% of the land buyers don't know if there is farq or not. One important point in this fact is that, about 60% of the land buyers have admitted that the higher probability of to be subjected to farq which is not the actual price of a land which shows the little influence they able to exert.

Generally, the informal settlers have little influence over the market during they bought their land, that only 15% of them have replied that they set price with fair agreement with the sellers without the pressures from the brokers. Whereas, the rest of them have felt the pressure of these informal agents.

E. Investors

According to the survey conducted, investors are one of the prominent influential actors in the market. Even though they are not desperate in buying or selling land as of the other actors the current formal system favors them highly. According to the survey, 80% of the investors surveyed has started working. Whereas, only 20% of them have never started working and kept the land without a function it intended to provide. Out of the investors 20% of them have taken additional land formally. Whereas, 80% of them have never took additional land.

The biggest challenge from the investor's side is that, they keep huge amount of land which intensifies the pressure on the supply of land. According to the survey conducted about 596.46 ha of land in the town is kept by these investors where 28% it has never been in use (OUPI, 2016). According to the site survey conducted, 25% of the investors has responded that their

level of influence in the market to be medium while 75% of them has said their level of influence is high in transaction land in the town.

F. The young and the poor landless

The poor and the young in the town are one of the mainly effected actors in market. This category of the market actors includes; the people that dwells in rental houses and the young that lives with their parents and relatives because they don't have their own land. According to the conducted survey these group of land market don't own a piece of land in the town and left out by the formal urban market system.

The survey conducted indicates that, 82% of the respondents never have any role in the market while, only 18% of them had participation in the market. Out of the respondents that have indicated they had experience in the market in the past, 12% of the have indicated that they had a very high level of influence and 5% also responded that they had high level of influence in the market. While, 24% of them have responded that they had medium level of influence. Accordingly, the 59% of the respondents have expressed their inability to compete in the market with responses of 21% of low level and 38% very low level of influence in the market.

Apart from being considered one of the actors in the market rightfully, this particular group of land market actors have very low level influence. According to the collected data, the main reason for their inactive role is the system itself. Currently, let alone having influence in the market the young and the poor landless portion of the population is almost blocked from the formal land market.

In analyzing the level of the influence of the actors huge number of buyers are observed where mainly related to the huge need of spaces caused by the rapid population growth with no equivalent land supply that creates shortages that leads to unnecessary competitions and directly creates the market failure. The reality on the ground shows that the unbalance between the land sellers and buyers are fiercely increasing but the situation worsened by the higher influences from manipulative brokers and speculative formal landholders.

Actual market prices are determined by the combined activities of all individual buyers and sellers (David, 1993) in contrary, according to the collected data, the main price determiners are land brokers in the town. In perfectly working markets no one seller or buyer will able to control or influence market prices but with shared responsibilities (Cunningham, 2011). The following table summarizes the responses of the actors their level of influence over the market.

Table 4.1: Summary of the respondent's level of influence

Actor	Level of influence				
	Very high	High	Medium	Low	Very low
Land Brokers	40%	20%	20%	10%	10%
Local farmers	15%	10%	25%	40%	10%
Formal landholders	13%	9%	46%	12%	10%
Informal landholders	13%	10%	17%	42%	18%
Investors	0%	25%	75%	0%	0%
The young and poor landless	12%	5%	24%	21%	38%

(Source: Organized by the author, 2020)

According to the responses of the participants, apart from their own influences, 60% of them have responded that, the influence of the brokers to be very high followed by the four fold lower level of influence of local farmers of 15% but the response also shows that 41% of the farmers has low level of influence. The other major significant fact gained was that, informal land holders are pretty much hindered in market that only 13% have very high level of influence while 42% of them cannot decide in the market having low level influence.

4.3.1.2. Unbalanced Economic Statuses of the Actors in the Urban Land Market

In properly working markets the interaction between the actors of the urban land market is very crucial. One very important variable of the aspect is the level of income the actors have that helps to explain the condition and the level of the competition between them. Using the CSA, (2007) and PRC, (2020) income level classification for developing countries, a population can be classified in to 5 main categories namely; the poor that is the portion of the population that lives on ≤ 2 \$ dollars per day and the low income group earns 2.01-5 \$ per day; whereas, the middle income group live on 5- 7\$ per day; the upper middle income earns 7- 10\$ per day, and the high income people are the ones that earns and live on more than 10\$ daily.

Using the above classification the economic status of each actors have explained by changing the currency to Ethiopian birr as of September 2020 rate. Accordingly, the poor earns less than 1,560 birr monthly; the low income group dwells on 1,560-4,050 birr monthly; and the middle income earns 4,050-6,450 birr per month while the upper middle income group earns 6,450-

10,530 birr per month and the portion of the population that earns more than 10,530 birr per month are the high incomers. The following analysis is done using the base line as economic classifications of the two institutions.

A. Land Brokers

Out of the sampled land brokers that are actively participating in the market, 20% of them earns more than 10,530 birr per month that labels them among the high incomers. While, 60% of them have forwarded that their monthly income is in the range from 6,450-10,530 birr that puts them in the upper middle class group. Whereas, only 20% of them are the middle income category. The participants also noted that they are not in the condition of financial problems. Their economic level also has helped them to sell and buy land even by themselves. According to the collected data significant number of the brokers have also traded land for themselves with score of 30%.

According to the above analysis, the financial capacity of the brokers is pretty much higher than the rest of the actors. This dominancy intern have aided them to control the market improperly. This agents supposed to facilitate the transaction of land but their economical level enabled them to manipulate the market as of their wish. Where markets do operate efficiently in condition of lower influence from external bodies but this case shows that their higher level of influence. Their dominancy is caused by their higher level of income that has caused the market to fail to operate appropriately.

B. Local farmers

Out of the sampled local farmers, 67% of them have point out that they have participated in the land market that dominantly packed with the low level of livelihood. So that, 45% of them have forwarded that they earn <1,560 birr monthly; that proves they are really economically poor to compete with the other wealthier actors. Whereas, 33% of the farmers have monthly income in category of low income and only 19% of them are in the middle economic level. Fiercely, only 3% of the farmers are categorized in to upper middle income groups. The figures shows that the lower level of economic status of the local farmers residing in these fringe parts of the town.

In this very much lucrative land market, the local farmers are the most important actors but due to their lower level of economic status they are easily subjected to manipulation. According to the conducted site survey most of the newly growing parts of the town are located around fringe parts, that the farmers are the suppliers of land for the market. Even though, most of the farmers

sell their land for financial purposes they are not frequent gainers, one major fact gained from the collected data also shows that significant number of the farmers dwells on very much lower economic status, where, about 78% of the farmers lives on lower level of income status.

As discussed above, the market is failed to protect these farmers because they don't have the capacity to compete in the market that in turn forces them to sell their land easily. Let alone gaining from the market, about 5% of the farmers are currently dwelling in rental houses losing all of their land by selling it off in very cheap price and surprisingly the local farmers are living in worse level of economic status after selling their land.

C. The formally registered urban land owners

As discussed in the previous sections, the formally registered urban landholders is a collective category that includes the town dwellers with different ownership types of land. Accordingly, out of the sampled participants of these group urban land owners 81% of them have responded that they do have direct participation in the land market. The collected data also shows that, 13% of them dwells on poor economic level and 25% of them are under lower income group. Whereas, about 39% of them are under middle income category. Whereas, the upper middle income group and the higher income group accounts for 18% and 5% of the sampled urban dwellers respectively.

Just by figuring out this fact, it shows that the 62% of the formally registered urban land owners dwells on earnings of middle and higher income level. While, 38% portion of this important group lives on low economic status that implies the occupants have probability to sell off their lands that can worsen the market. The collected data also shows that about 15% of the respondents have bought the land only for profit that which has a significant level of for the rise of speculation.

D. Informal landholders

This very important market actors are has occupied through informal land transaction. This category contains the most economically diverse groups of population. According to the survey conducted on the surveyed 65 informal landholders; 21% of the respondents are poor in their economic status. While, 44% of them are low income portion of the population and 21% of them are middle income people. Whereas, the upper middle income scores about 12% of the sampled respondents and 2% of the respondents are in the category of the high incomers.

The above figures shows that, the huge difference of income levels in the category that, about 65% of the participants are low and poor incomers that forced them to participate in the informal market which also indicates the inability of the poor and the low income group of the population to have access for land in the formal system that causes the land market failure.

The second significant income group of the informal group are the middle and the upper middle income with score of 21% and 12% respectively of the total participants in this particular group and the higher incomers accounts only 2% of the respondents. This fact shows that the two very different levels of income groups that competes in one market, that makes the competition difficult and one sided that causes the land market failure. According to the survey conducted, the gigantic poles of the economical differences are a serious issue to consider because they definitely creates unhealthy competition between the land buyers themselves that intern leads to land market failure because in this case it is very much difficult to have a stable price which is one of the important principles of effectively working markets (Cunningham, 2011).

E. Investors

It is true that investors are not financially compared to the other actors but to explain their influence over the market that it is very important to study their economic level. Accordingly, the survey conducted shows that all of the investors in the town are considered as of high incomers. This fact shows that they are not comparable with the other actors because of their immense economic pressure addition to the government's policy that highly favors them.

F. The young and poor landless

The poor and the young in the town are massively effected by the formal land market due to their lower economic statuses. The survey conducted on this particular group indicates that 22% of them are ranked in the poor category and 61% of them also have responded that their monthly income falls in the category of low income group. While, 17% of the respondents under this group of the market actors have responded their monthly income to be in the middle income category and inevitability none of them falls in the category of upper middle and higher incomes of the economic status.

According to the above explanations the young and the poor in the town have massively affected due to their inability to compete in the market in relation to their lower economical statuses. The economic statuses of each of the land market actors are summarized in the following table in order to explain the level of competitions in the market.

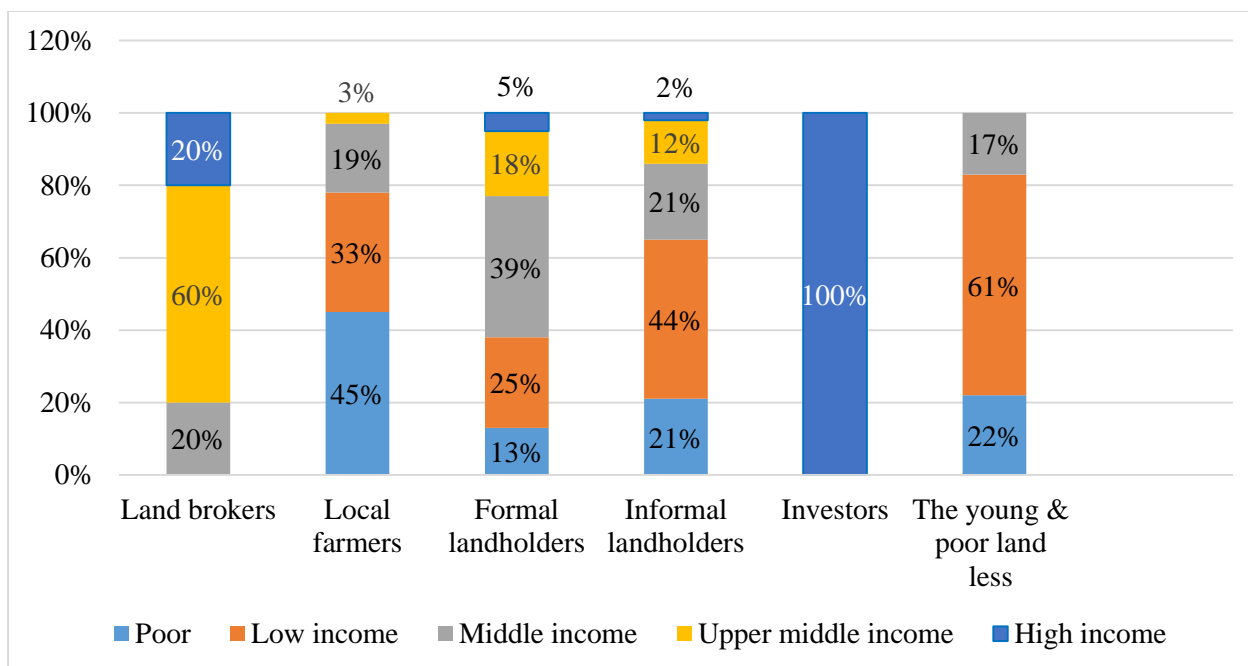


Figure 4.8: Graph of the activity of the actors in the market
(Source: Organized by the author, 2020)

According to the above analysis, there is enormous difference between the actor's income levels. Accordingly, 100% of the investors, 20% of the land brokers and 5% of the formal land owners are categorized in the high income category. Additionally, 80% of the land brokers and 57% of the formal landholders in the town has an income of middle and upper income which showcases the superiority of this actors. In contrary, 83% of the young and poor landless, 78% of the local farmers and 65% of the informal land holders of the town dwells on poor and low monthly income which proofs the difficulty these groups faces to compete in the market.

4.3.2. Illicit Nature of the Urban Land Market Actors

Legality of the actors in any markets is one of the primary concern. In property markets like land, it is very important to have strong rules and regulations that insures property rights. The absence of formal property right is one of the major cause for the failure of the formal property markets (Soto, 2000; Prahalad, 2005).

Apart from the importance of property right by itself, it allows a person to gain access to financial resources without requiring one to sell off his/her property. This fact is supported by survey conducted in this research that shows, about 67% of the local farmers are sold their land just for financial purposes and also huge number of the urban dwellers are also in process of selling their property for financial gain.

One major fact found in the conducted survey is that, the huge amount of informality has deeply rooted more than the formal market land market system. Informal transaction, illegal acts like trading land which is not legally acceptable, the wide spread of speculation, the dominance of legally unrecognized land market actors are the major concerns surrounding the land market in the town. This very important aspect is explained in the following section.

A. Land brokers

As explained in previous sections, the influence of the land brokers is pretty much high. According to the survey conducted majority of them don't have legal licenses, it is impossible to create effectively working markets where one of their important actors are working illegally and puts in appropriate influence over the other actors in the market. Markets work best were all bodies have legal obligations (Giddings, 2009).

According to the collected data legality of the brokers are very much controversial where part of them are very bossy and they also have Hippocratic characteristics. It is possible to say they are above the law, their illegal actions are so many with the help of their wide spread informal connections with the market actors such as government officials and speculators.

Out of the participated land brokers in the research, only 20% of them have the legal licenses to operate in the market. Whereas, 80% of them are not legally recognized. This informality has paved a way for absence of legal responsibility and obligations. According to the conducted observation the problem extends horizontally because of their informal connections with the officials in the towns LDMA.

One important fact that have found in the data collection is that, 60% of the brokers have direct participation on speculation by themselves or through other actors. Their act of speculation is widespread that, 67% of them have indicated that they do have one parcel of land to be sold and amazingly the rest of 33% of them also have pointed out that they have two and more two parcels of land that are waiting for perfect time of better profit.

Coming to their legality of their brokering act, 45% of their brokering act end up in success. Whereas, 55% of their brokering act end up in failure this shows the massive number of land transactions that takes place through them comparing to their act with their informality. It is very easy to understand their contribution for the failure of the market. The other very mesmerizing data gained from the survey conducted is that, the broker's actions are definitely illegal that, about 82% of the transactions carried out through them is the trade of land without any property on it.

B. Local farmers

Out of the studied land market actors in this research, local farmers are the least ones to have appropriate influence over the market. In explaining the legality of the actors the local farmers are the true owners of the land even though they are not protected. Out of the surveyed local farmers only 26% of them have urban land ownership certificate whereas the massive share of the farmers (76%) still don't have those certificates. Whereas, they only have farmers cards that really don't grant them the title of urban land ownership.

Even though, the farmers are the true owners of the land their properties are not legally registered and well documented. As a result of this situation sneaky brokers and speculators buys off their lands cheaply and illegally. According to observation conducted, apart from the farmer's landholding registration card nobody knows the size of the land do the farmers own.

According the supreme law of the country FDRE, (1995), no one have the right to sell or buy land expect only the property on it through the formal mechanisms that performed by the responsible authority and institutions. Whereas, according to the collected data, 67% of the sampled farmers have sold a portion their land. In opposite to the law of the country, all of the farmers sold their land without a property on it. In explaining the cause of land market failure in the town, the informal land transaction without any property on it performed by the farmers also have a significant role eventually failing the market.

C. The formally registered urban land owners

Out of the formally registered urban landholders that have participated in the land market, 28% of them have bought land without ownership certificates. Whereas, 19% of them have bought land that have legal ownership certificates through auction and the other 53% are the older holdings., Additionally, out of these very important actors only 12% of them has forwarded that they have an experience of selling land with ownership certificate. This group of the land market actors are the most legally protected ones.

D. Informal landholders

The informal land buyers are also the other prominent actors in the market, they come in different forms and financial capabilities. As discussed in the previous section, these very important actors are dominantly new comers with lower financial capabilities, their major concern is that they have bought land in the informal market so that to make short cut from the long bureaucratic formal urban land market.

According to the conducted survey 87% of the respondents categorized under this sub group were bought land without property on it and also that do not have legal ownership certificates (i.e. buildings). Whereas, only 13% of respondents have bought land with property on them even though they do not have the legal ownership certificates. This figure also shows that buyers are towards buying land through informal way.

Since buying parcel of land with property ownership certificates requires huge amount of money and long office processes people buy and sell tract of land illegally. To explain the issue in detailed manner, 86% of these actors bought land by consulting land brokers. Likewise, only 24% of them has consulted other actors while buying land. This figure shows that the massive illegality of actors while land transaction.

According the conducted survey, about 12% of the informal landholders have the intensions of selling it back for greater benefits, that shows huge portion of the land buyers are working it for gaining financial profits through speculation. This is a massive figure that selling back it for better profit will increases the price of parcels of land for the future buyers this worsens the situation of not properly working markets that leads to their failed market.

E. Investors

Investors are one of the most legally protected portion of the actors in the market which is related to the strong focus of the government towards them. Even though, it is at the expenses of the farmers which don't get even the appropriate compensation for giving their land. All of the surveyed investors, have legal licenses but the major concern related to them is that about 20% of them have never started working on their projects that they only kept these massive portion of the land in the town without any functions they need to provide.

F. The young and poor landless

The young and poor landless in the town are in desperate position of buying land through the informal way which is related to their capability of competing in the formal market. Where, only 6% of them has indicated that they have the capacity compete in the market. In contrary, 94% of them has indicated that they do not have capacity of competing in the formal market. According to the survey conducted 57% of them have responded that they want to buy land without a certificate. While, only 43% of them has responded that they want to buy land with certificates. In addition to that 85% of them has indicated that they want to buy bare land without a property on it. While, only 15% of them has indicated that they need of buying land with a property.

Generally, the legality of the actors in the current land market is pretty much controversial. Informal land trade has reached its peak, trading land without property on them is a very common issue in the town. Even though the law forbids selling or buying land expect the property on them. Speculation is also deeply rooted in the market, according to site observation conducted huge number of parcels have been kept for future profitable by building foundations.



Figure 4.9: Reserved plots of land with building foundations for speculation
(Source: photo by the author)

4.3.3. Inconsistent Land Policies, Regulations and Strategies

In property market like land, government interventions are inevitable but they are always criticized for the distortions they create that inhibits markets from working properly (Cunningham, 2015). Apart from all of the speculations of the literatures they are also pretty much important in managing markets and for giving responsibilities on the shoulders of the actors in the market. (King & Napier, 2019) also supported the need of the interventions as follows, “the government’s role as facilitator of land market is crucial in bringing equity and fairness through appropriate interventions strategies.”

The constitution of the country strictly states that, land is not subjected to sell and exchange (FDRE, 1995). Following that, land policies and regulations have the intention to reduce the frequency of land transfer which defies the reality on the ground (Zhang et.al, 2019). Being the supreme law of the land the constitution itself has blurred the sight on the issue of urban land, where it only specifies how farmers, pastoralists, investors can have access to land while stating nothing about how the urban dwellers acquire land (Tegenu, 2010). Even though it forbids the commercialization of land, the constitution also urges the development of policies and regulation that should ensures the right to development for the citizens of the country equally. By taking this reality in to account the following section has explained the inconsistency and difficulty of the major currently working legal documents as follows.

4.3.3.1. Land Lease Proclamation (No 721/2011)

According to Tigabu, (2011) the main reason for adopting the proclamation was to reduce the widespread corruption related to land management and transaction in the country. In contrary of the different types of acquisition of land through formal as well as informal modalities, it totally forbids acquisition of land other than the lease system overnight through tender supply system of land. This totally new approach worsened the situation by forbidding considerable portion of the population that don't have the capability to compete in the market.

The proclamation also provides autonomous authority of administrating urban land to the respective urban administrations. It is very important, to give local authorities the power to manage and control the rapid urbanization but the reality on the ground is very different that the institutional setups are outdated and poorly managed. The possible sign for that is the old and deteriorated full shelf of documents in most offices of land administration in the towns and cities in country (Zhang et.al, 2019).

Scholars like Wubineh, (2018), also criticizes the proclamation by saying that, it favors the private monopoly rather than ensuring the citizen's well-being. Because the proclamation don't limit the number of one bidder that can participate so that it only favors the haves. The proclamation proposes three main ways of land acquisition modality that includes; tender allotment, allotment through land transfer and donation where all of them don't focuses working towards the poor. It is possible to say the proclamation itself have played a great role for the frailer of urban land market in leading huge amount of the population in to informality.

According to the document, a lessee can transfer his/her holding rights to the extent to which he/she amount has been paid and it greatly works towards avoiding transfer (trade) of urban land without property on it which the proclamation cannot solved. Land transfer through donation is the most common weakness that again cannot solved yet.

Let alone the informal land market, the formal land market itself has surrounded with bitter illegalities, for example huge portion of urban dwellers in Sululta done transfer of ownership through donation as cover up of the trade of land. The leasehold clearly states that if a person repeatedly transfers his/her leasehold rights without completion of construction by expecting speculative market benefits, the governing body should prevent him/her from future bids but who does it in reality, nobody!

Despite of, recognizing the rapid urbanization and the huge demand of spaces, the proclamation provides two major mechanisms of transferring property right through permanent and

temporary mechanisms. The former refers to inheritance and donation while, the later refers to transfer of property right through rent and lease system. First, who donate land for someone, it is a rare event, putting such narrow aspect as a major concern in such rapid urbanization era is a very silly thing, that is why every person selling land goes to municipality and write false statement of donating land to someone.

The second mechanisms is through temporary use right which is a senseless term scaring people by putting time period of 90, 60 etc. Land is a very crucial and sensitive issue by itself. So, how do the proclamations really sets that the government one day strip their property or use right overnight? It is a life and death matter! Nowadays, informality has grown like in urban areas of the whole country especially in cities and towns of Oromia Special Zone that directly have caused the failure of land market.

4.3.3.2. Urban Landholding Registration Proclamation (2014)

The proclamation clearly states the need of registration of urban land holding by specifying its advantages; generation of reliable information for provision of infrastructure, acceleration of development of urban areas and most importantly giving security for the possession right of the citizens. The problem raises where, how can all of these goals can be achieved where most of the urban areas are under rapid urbanization and led by dominantly by the informal land acquisition mechanisms as discussed in the foregoing sections of this research?

According to the document the main objectives of the proclamation includes; minimizing disputes, establishing transparent and accountable working system, registration and publicizing the aspects of possessions and making efficient land market system. But according to the observation conducted, after working for six years nothing has improved apart from mentioned only on the paper. The proclamation clearly recommends the use of a Legal Cadaster System that holds the updated information, containing a record of the landholding rights, restrictions and obligations of a defined legal boundary of parcels of land. But it is still an ambition, currently the mechanism of delivery of the landholding certificate in the town only favors the people with money as explained in previous sections.

Apart from focusing only on the technical aspects of the Cadaster system the proclamation has brought numerous cracks. For instance, in the process of deciding holding right of a parcel of land, the proclamation under article 14(1) states that the owner should present all evidences, then the adjudication authority should check the evidences in order to permit or decline the decision of the holding right. This approach has opened a door way for corruptive authorities

to manipulate the situation. So that, the personal greediness has left thousands of the town's residents unregistered and without property rights they should have gotten. The best evidence for this issue is that out of the 35,568 households dwelling in the town 6,042 which covers 17% of the households are labeled as informal by the town's LDMA because they cannot present evidences the requires.

Even though, following the proclamation and the help of different NGOs, the town has conducted, land and infrastructure inventory in 2016 according to the information gained from the municipality of the town. But, nobody used them, all of the invested money and the wasted time just thrown on to the old shelves and to the nonfunctioning computers in the town's so called Urban Land Development and Management Agency (LDMA).

4.3.3.3. Oromia Rural Land Use and Administration Proclamation (2002)

The constitution of FDRE, (1995) has gave the regional states to formulate their own land policies accordingly, the Oromia Regional State has amended its land policy in 2002. Even though the policy was directly related the rural land aspect, it significantly shows the overall situation in the region and specifically in rapidly urbanizing areas such as the special zone.

The proclamation can be praised for its seriousness towards the ownership of land by the rural residents through forbidding redistribution of plots of land, but the question raises what about the farmers dwelling surrounding urban areas where cities and towns are growing rapidly by redefining their boundaries, for instance Sululta town has expanded its boundary for three times in the last twenty years. Those farmers have totally lost their lands through the informal land market but still nobody stood for them.

4.3.3.4. Oromia Urban Land Lease Regulation (2016)

This regulation was reenacted duo to the inability to implement the former lease regulation of 2012. The regulation also claims that, the former regulation didn't considered the reality of rapid urbanization in the region that it cannot insured the benefit of the population that is the reasons to reconsider the regulation after implementation of for four years. In addition to that the regulation was just dramatic and was highly controversial once its implementation started.

The regulation strongly ties the allocation of urban land with urban planning but it still has missed the points of unmatched need of urban land that the government can supply and the truncated level of urban planning experience the region has, especially in the towns and cities of Oromia Special Zone where rapid urbanization is at its stake.

The regulation was anticipated so that it reconsiders the widespread informality but in contrary, it didn't brought anything different. Article 9 (1) of the regulation states that any informal land held by an occupant before 2012 should be turned formal and included in to the lease system, but what about an occupants after a year, two or three years? Article 9 (10), states that all land occupation after 2012 should be labeled as informal and should be taken care of by the respective municipalities by demolition as specified on article 9 (12) but we are talking about homes of huge portion of residents. This in turn, led the informal market to grow because, it has grew the people's conception to be formal one day, that it not much bothering if it stays informal for a while.

Even on article 9 (7), the regulation paves the way for illegality, where it states the formalization of land size occupied beyond the legal permission. This article has massively leads to the illegal way of land transaction where, people has just buy land and adds it to their property which highly leads to unfair distribution of land that only favors the haves.

Article 10 (3) of the proclamation, also discusses on one of the major incidents of the current situation, the subdivision and transfer of the formal land holding. Accordingly, it orders that only subdivision of land allowed if, all parcels have finished the construction of buildings on them. The article left massive portions of cities and towns in the special zone without unregulated in this manner buy just forgetting the major cause of why it has brought for, where the urban areas are in challenge of rapid subdivision of land in to smaller parcels. In other aspect it definitely allows that, the construction of unregulated buildings just to get the formalization of the ownership.

The proclamation's best side is the strong attitude towards the protection of older landholdings whether they are regulated or unregulated. But, it seems that it is not much bothered about the upcoming horror of rapid urbanization and the need for spaces as well as the possibility of turning in to informality.

In contrary to what hoped for it still favors the richer portion of the population. For instance 80% of points are given for the bidder that presented higher amount of money, this also favors only the haves according to the statement under article 21 (1). The article also shows its clear biases also under article 15 (5) that didn't limit the number of tender one can participate. In allocation (allotment) land provision also, the price of a parcel of land is based on the municipalities set prices, but the problem is that, this type of land allocation is very slow and little compared to demand for them land.

4.3.3.5. Regulation for Formalization of Unregistered and Informal Urban Land (2016)

This regulation was enacted by Oromia Regional State. The main objective of the regulation is like words from heaven and read as, “For the past several years considerable amount of the urban land owners cannot get property rights over their properties. By considering the effects of widespread informality, this regulation has enacted so as to protect, the socio- economic benefits of the population.” According to the regulation, it was intended to register and legalize the wide spread informality for the once last time, but who says this is the last time? Even we are at the verge of urbanization tragedy. Theoretically it is very difficult to limit urban growth especially in a country of low level of urbanization such as Ethiopia.

The stands of this regulation is according to the Urban Land Lease Regulation (2016), which has discussed in the previous section and also explained to be highly problematic. According to the regulation, only owners that registered and failed to get legal ownership certificate before 2012 can be formalized, but what about the others? The regulation declines the legality for all of the informal houses constructed after 2012. Instead it orders the demolition of the construction after the year on article 31 (4 & 5).

Giving great expectation, the regulation declines the hopes that promised, on article 9 (1), states the list of requirements but most of them are unattainable. For example, it requires the ownership card during the Dergue era, which is away more than 20 years ago, this judgment is cruel because obviously the settlements were not there back then. The other requirement is the letter of allotment, which seems a joke, why do anybody be informal having the legal letter of allotment? And the third and most disturbing requirement is that the presentation of receipt for paying revenue, how do one get those receipts through forgery?

Unlike the others this document has noted, the cases of farmers surrounding urban areas that has later turned in to boundaries of the municipalities, Most of the requirements are fair here, but the regulation didn't said about the land of these farmers that has occupied informally. Lastly, the regulation has stated good hope, after heart breaking requirements discussed above. Article 31 (2), states that, the reconsideration of the demolition of buildings despite of the above requirements if it bring considerable socioeconomic problems.

4.3.3.6. Oromia Urban Land Lease Regulation Implementation Strategy (2016)

The strategy strictly forbids the land allocation without the lease system, despite of what is happening on the ground. It also favors the haves, as of the major prior legal documents. According to the document, there are three types of land allocation including; lease allotment,

lease tender and renting, but still little portion of the population uses these modalities as discussed in the previous sections.

According to the strategy's article 9, the process of preparing land for allocation seems pretty much idealistic due the uneatable requirements. For instance, an area for allocation of land should; be planned, have all necessary infrastructures and an area without conflict of ownership. It would be very important if areas are planned before development but providing all the necessary infrastructure before the settlement is very much unrealistic in poor countries like Ethiopia. That is the major reason, why do the regulation as well as the strategy won't work easily because they clearly reduces the supply of land and leads the people to informality, that in turn causes the formal market to fail easily without further due.

One strong part of the regulation is its holistic and planned approach. For example the strategy under article 10 provides the establishment of local authorities for the respective towns and cities that so called Land Development and Management Agency. The agencies main duties are preparing and planning land for development for all aspects of urban uses on yearly bases with accordance with the plan of the town or the city.

According to the strategy article 41 (2 &3), even if a person win a bid and bought land legally, the payment arrangement is very difficult for most of the population. Sadly, the strategy promotes the portion of the population that can pay all of the price at once, which is uneatable for significant portion of the population.

The set of procedures that an individual should follow during land transaction are much more complicated than the informal market. For instance; under article 52, a landholder can only transfer her/his lease right to other person if the lease holding period is not done. Accordingly, the price of the lease holding right is determined by the municipality or by the two party's negotiation. According to the article 52 (2) also the transaction should be based on a bid the seller has performed and approved by authorized person, but in reality who does that?

4.3.3.7. Oromia Urban Land and Property Inventory Implementation Strategy (2016)

According to the regulation, the main reasons for the enacting the strategy includes; to register and produce the appropriate information of the urban land and property so as to help decision making; to protect the land resources from informal settlements and land grabbing. And to create appropriate file keeping mechanisms that includes the manual and digital methods.

The document states, the legal authority for the task is the respective LDMA with the direct help of the towns or cities municipalities. According to article 5 (3), all portion of the land under the municipalities boundary should be recorded using modern soft-wares like GIS and data like satellite imageries. The strategy is too much technical that the major problem lays on the number of professionals and their capacities to perform the inventory as well as the later use of the outcome of the inventory.

According to article 7 (1) of the strategy, the agency have the authority to hire the necessary human power or licensed body to conduct the inventory. According to the data from Sululta town, land and property inventory has undertaken in 2016, but it is just for formality, it is still kept without uses for the last 4 years. The lack controlling body as well as the dedication of the agency to use this very important system has also played its role in the failing the formal urban land market.

Let alone the detailed contents of their coverage, the legal documents opposes themselves in their main principles itself, as instance the Land Lease Proclamation, (2011) and the Constitution FDRE, (1995). Where, the former works towards ensuring good governance and preventing corruption in the land market through tender because it only helps the wealthier small portion of the population the later strictly rectify the equal protection of right of every citizens to develop.

Insecurity of land tenure restricts the advantages one should get including; reducing the incentives that should have gained; the lack of property right that reduces the productively of land, it also fails the formal market to function effectively and it also highly limits transferability of land for financial purposes as well for the development of urban areas in a country (Wanjiku et.al, 2010; Adesiyani et.al, 2011; Dejene, 2015 Bedane et. al, 2019).

4.3.4. Dysfunctional Urban Land Management System

Urban land management and administration are the most interconnected concepts, the former refers to the process putting land and its resources in to good use. While, the latter refers to the process of recording and distributing information of the ownership and use of land with detailed process of determining the property rights and every important information (Tessema et.al, 2016). According to Esayas, (2013) the management of land information is one of the major duties of land management and administration agencies especially in urban areas to maximize the efficient use of land. Whereas, according to the observation conducted on the town's LDMA it is barely coping up with rapid urbanization in the town.

The informal access to land has surpassed the formal access modalities that resulted the failure of the formal urban land market. Following that, the federal and regional governments in the country has been developing the legal documents that are intended to the management of urban land. Accordingly, to the lease proclamation, regulations and its implementation strategies have been enacted in the last several years. Sadly, their impacts are very minimal and even worsened the situation that significant portion of urban dwellers has left out from gaining legal recognition.

Following the lease proclamation of 2011 as nationwide, the regional state of Oromia also has enacted its lease proclamation in 2016 and followed by the legislation for the establishment of Land Development and Management Agency in the same year, at both regional and municipal level so as to help the burdens of municipalities in management of urban land but their actions didn't brought the once expected results. In most cases the agency's requirements for formalization are pretty much unattainable that restricts the property rights.

According to the information from the town's officials, the boundary of the town has formally redefined three times; according to the 1988 Kebele level boundary redefinition, 2008 master plan boundary redefinition and 2016 structure plan boundary. Apart from the extension of the land mass in massive manner little has done in terms of land management.

Local farmers that dwells around fringe parts are the most vulnerable land actors of all. According to the survey conducted in this research, despite of being included in to the town's boundary the farmers still have the farmers ownership card which is called Green Card, that really didn't entitles them as urban land owners that makes them to be let go their land easily in cheap prices. Even after the enactment and implementation of the latest lease proclamation of 2016 for 4 years nothing has changed in terms of land management. Only 12% of the farmers surveyed in this research has the new urban land holding certificate in all of these three periods of boundary definition which shows the low level of performance the land management agency has. Out of the surveyed actors in the market 63% of them indicated that they never has got the agency's service for land registration and certification as well as during land trade. According to the data gained from the municipality of the town compared to the increasing number of urban dwellers very little number of population have ownership certificate.

The town's land development and management agency has weakness in managing the land transactions has mainly caused for land market failure. The urban land management has mainly hindered by inefficiency and poor productivity of the agency. According to the survey

conducted; corruption, rent-seeking behavior and conflicts are the major challenges that have caused the urban land market to fail to work properly.

The land management practice in town is very much unmatched with the rapidity of land transfer happening in the town. The system is pretty much restrictive that relatively few number of the people went for legal registration. According to the survey conducted about 8% of the respondents have ignored the registration for land because they didn't see the benefits of the registration. While, 32% of the participants have already legally registered and most importantly 62% of the respondents have insisted on the need for registration but they don't have access to do so. This impressive figure shows, massive portion of the urban dwellers are not legally registered or not labeled as informal and took judgment of demolition. According to the lease parcelation and bid price of land allotment, the supply of land is very low much compared to the huge demand of urban

According to the survey conducted on informal land buyers 20% of them has bought land in the price between 500-10, 0000 birr, 35% of them also have bought land with 10,001 to 50,000 birr. Whereas, 25% of them has responded that they have bought land with price between 50,001-100,000 birr and 10% of them have bought a parcel of land with 100,001-200,000 birr and 10% of them also have said that they bought their land in between of 200,001- 500,000 birr. This figures shows that 80% this respondents have bought a parcel of land in price below of 100,000 Birr while the lease allotment system has the cost beyond the people's capacity to pay that makes the legal urban land to be unaffordable for the majority of urban residents.

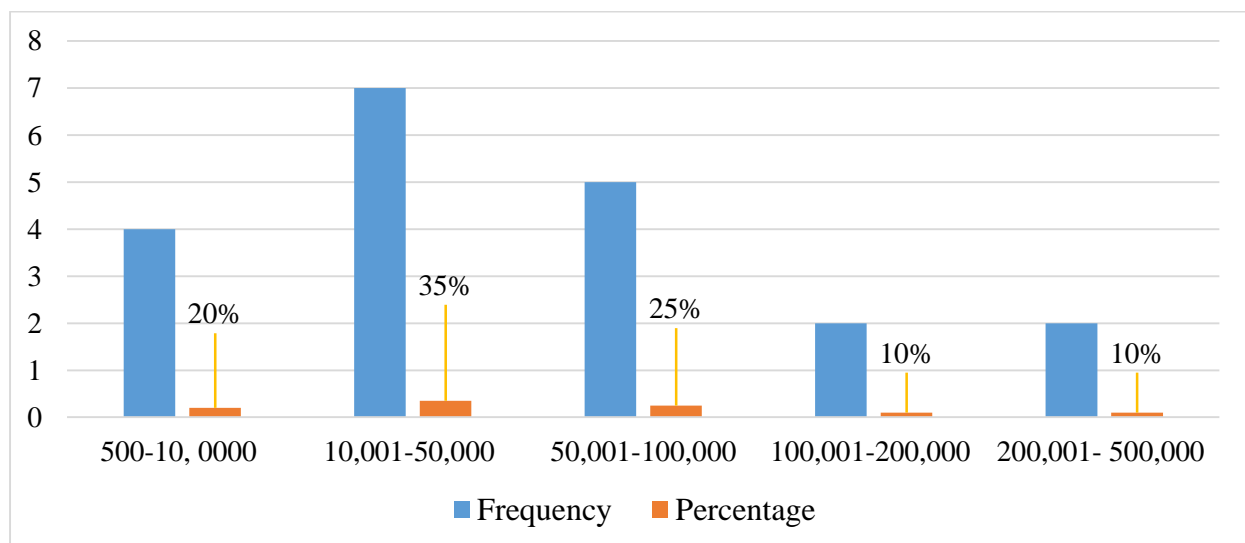


Figure 4.10: Graph of the price of land (Source: Organized by the author)

Let alone the current ones, the exact number of the old land property ownership is not formally registered and known by the authorized body. This is the significant indicator of the performance of the land management of the town. According to the interviews and observation conducted, poor data registration and documentation are mainly problems identified. According to the informants though, the weakness in the performance of the agency for land management is mainly caused by low level of financial, technical as well as human resources that discussed in the following section.

4.3.4.1. Poorly Structured Organizational Arrangement

The agency was established in 2013 that, it is relatively at a young age of only seven years to deal with the severe urban land situations surrounding it. The poor arrangement of the departments are creating difficulty in managing the older properties as well as the rapid land transaction in the town. The following diagram shows the organizational arrangement as well as the tasks of each departments of the agency.

Table 4.2: Organizational arrangement of Sululta town LDMA

Oromia Industry and Urban Development Bureau	
Sululta Town Urban Land Development and Management Agency	
Department	Task and duties
Department of Land Development and Renovation	Land Lease Zoning ✓ Preparing zone plan, setting initial lease price of parcels and undertaking bid
	Preparation and implementation of urban plans ✓ Working towards development and implementation of urban plans
	Studying and allocation of land for investment ✓ Receiving proposal plans and allocating land for investment
Department of Land Marketing Administration	Compensation and the issue of expropriation ✓ Undertaking research and Estimating compensation
	Controlling illegal land transaction and informal settlements ✓ Controlling land transaction and taking the necessary actions related illegality
Department of Cadaster	Land Inventory ✓ Forming temporary committee and Hiring certified consultants
	Land preparation for development ✓ Study and prepare urban land for development
	Land ownership Registration

	<ul style="list-style-type: none"> ✓ Study, identify ownerships and approval and provision of property ownership certificate
	<p>Prevalence hearing team</p> <ul style="list-style-type: none"> ✓ Study and identify property holding titles

(Source: organized by the author, 2020)

According to the above table, the agency has three main departments under its structure that includes: the land development and renovation department; land marketing and administration department and urban land information department. Each of the department has their own tasks under their wings. The biggest problem identified under this issue is that, the appointment of the general manager is pretty much political.

In the wake of its establishment the agency took all of the poorly managed data over a long period of time. The agency’s structural organization is poor apart from being classified in to three departments. The major problem caused by this organizational structure is that, all of the departments are autonomous which caused the lack of cooperation and interdependency between them. Additionally, apart from having tasks the departments have the lack of important tools and materials that are used some of the tasks.

According to the observation conducted, the interaction between the agency’s staffs and the people in need of services is problematic, huge illegal deeds such as corruption, false provision data and forgery of documents are becoming big challenges for the formal market. Demolition is becoming a normal way of dealing with informality, it has created huge out cry in town following the demolition took place around a locally named Ashewa Sefer in the summer of 2020. Little attempts have been done towards formalization even though informal settlements share the largest portion of the town’s total neighborhoods.

4.3.4.2. Insufficient Working Man Power

According the legislation of the establishment of ULDMA, (2013) the appropriate number of skilled man power should be hired and appointed. Accordingly, 96 permanent workers and unspecified number of non-permanent working man powers are required in the establishment of the agency. But, according to the collected data the agency has 66 workers with deficiency of 30 workers away from the non-permanent workers in contrary to the legislation.

According to the observation conducted, let alone the currently working staff numbers the original plan of the 96 staff number is very minimal compared to the duties and tasks of the agency. The agency’s general manager also has proofed the colossal lack of workers but issued

a very silly reasons such inability to hire professions and lack of budget. Apart from the lack of the required staff numbers, the other very burning issue raised is that, most of the positions are not held by the appropriate professionals. This has led the departments to function poorly.

The following table summarizes the shortfall of the agency's working power.

Table 4.3: Sululta town land development and management agency workers coverage

<i>No.</i>	<i>Profession</i>	<i>Existing No.</i>	<i>Required No.</i>	<i>Gap</i>	<i>Remark</i>
1	Urban planner	3	5	2	Huge lack and most of the positions are held by non-professionals
2	Architect	0	1	1	No architects even though they are needed
3	Civil Engineer	1	2	1	Huge lack of man power
4	U. Engineer	3	5	2	Good number and relatively good coverage
5	Surveyor	12	15	3	Good number and relatively good coverage
6	Draftsman	0	1	1	No draftsman and their services are needed
7	Geographer	0	1	1	No geographers and their services are needed
8	GIS specialist	3	5	2	Good number and relatively good coverage
9	Cartographer	0	1	1	Needs to be hired for frequent mapping
10	Urban mgmt.	5	5	0	Good coverage and positions are kept by others
11	Land mgmt.	6	8	2	Good coverage and positions are kept by others
12	Sociologist	0	2	2	No sociologist and their services are needed
13	Historian	0	1	1	No historians and their services are needed
14	Economist	6	8	2	Good coverage and needs additional
15	Lawyer	3	5	2	Needs more lawyers (complexity of issues)
16	Geologist	0	1	1	No geologist and their services are needed
17	Statistician	0	2	2	No statisticians and their services are needed
18	Finance	4	5	1	Good number and relatively good coverage
19	Secretary	12	15	3	Good coverage and but needs improvement
20	Management	5	8	3	Good number and relatively good coverage
	Total	63	96	33	

(Source: Organized by the author, 2020)

According to the table above, the darker rows indicates the unoccupied but the required skilled manpower and positions which scores about 34.37% gap of the required man power. Accordingly, the agency is currently functioning with only with 2/3 of the needed workers that hindered the proper functioning of the agency. The lack of skilled man power in the agency has led to poor efficiency in order to keep up with rapid land transaction. According to the collected data, it takes 7 to 60 days to complete simple transfer of property rights. To get ownership certificate for older landholding it takes more than two years even though it is legal landholding. This weak and slow service delivery of the agency has greatly affected the population to give up on getting the necessary services from the agency.

Apart from boundary redefinition, the agency didn't performed any needed data management that in turn helps the land management sadly there is no, data management professionals such as GIS experts apparently, the agency undertook only one inventory in the last seven (7) years where nobody knows the where about of the data collected. According to the interview conducted with the agency's officials the regulatory frameworks and administrative procedures are also the hindering factors for the failure of the urban land market. In contrary to the huge need to be formalized, the legislations and regulations creates barriers to the development.

The organizational arrangement of the agency is pretty much open to perform on every tasks and duties provided. Accordingly, absence of the immediate superior authority has helped them to function autonomously but it has also created the door way for misconducts. The major problem of the agency's institutional arrangement is the weak link between each of three departments. Additionally, the agency's workers are very limited in number that creates most of the staff to perform on different tasks at the same time, that in turn drags down the speed of the completion of the task as of in need of the people in need of the services. The capacity of the agency is very limited implementation the plan that facilitates, according the data collected and observation made. For instance huge number of plots of land has still in hold of construction for speculation even after the expiry of the grace time where, the agency should have taken care the necessary measures following its responsibilities.

Apart from setting only on the paper, the town's access for information about the land lease and its allocation is not equally accessible. According to the observation conducted, only the notification for the approval of ownership has been posted on the wall of the agency's fence. Where, nobody knows the procedures undertaken during the approval time that creates the problem of transparency the agency have.



Figure 4.11: Photo of the plots land on hold for speculation
(Source: photo by the author, 2020)

4.3.4.3. Poorly Working Procedures of the Land Development and Management Agency

According to the survey conducted, the working procedures in the agency are supposed to facilitate working flow but in contrary most of the time chaotic and not well organized, it is very unfortunate to set such weak institution to control and manage such dynamic land and land related issues in this rapid urbanization period. It is a common thing to see a crowd of chaotic customers to get service but the dissatisfaction is very high.

The decision of land allocation and land lease determination is not transparent. Accordingly, the allocation of land for the low income group of the society is not unaffordable and the land prepared is also don't serviced with the necessary infrastructures in contrary to the land lease proclamation's promises. Generally, the lease system that was expected to allocate serviced land, eliminating land speculation, insuring the transparency of land allocation, improving the capacity of implementation was not this much as expected.

Even though, the capacity of the agency is at limited level, it has departments and case teams to deal with the different issues that brought to it. According to the observation conducted, some tasks of the agency has created weak links, in implementing the leases system and also the currently working structure plan of 2016. Some tasks and departments has created a door way to misconducts such as corruption.

The main duties and tasks with their challenges in identifying the weak links in the working procedures of the agency in the following charts.

A. Institutional working procedures for land holding adjudication (Approval)

Table 4.4: Institutional working procedures for approval of landholding adjudication

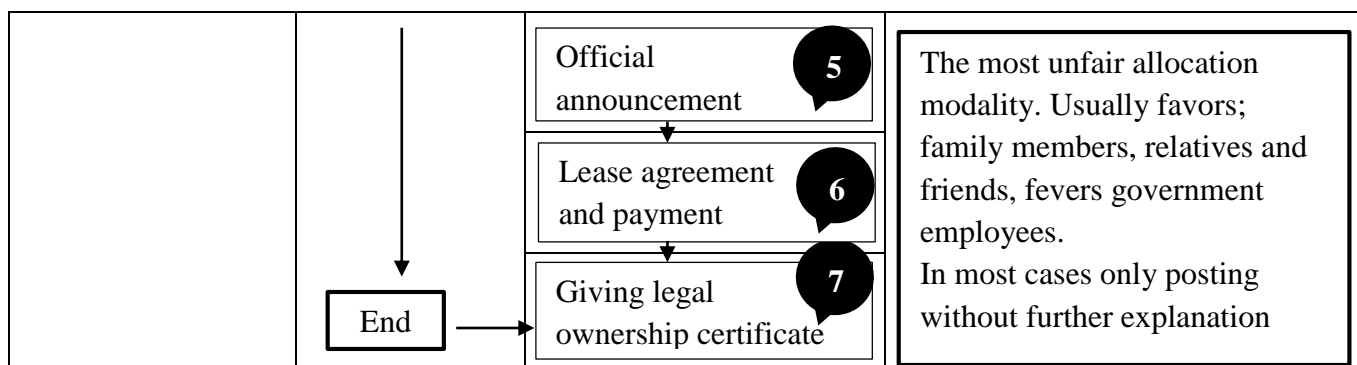
Main Task	Task steps	Procedures	Remark on weak links
1. Adjudication of old landholding right	Start	Presentation of evidence by the person claiming to be the right holder. 1	Mostly false (forgery) evidences Great chance of corruption
	Decline	Checking the evidence of the organ that permitted the right. 2	The procedure orders old registration evidences but it didn't really there this opens a door way for illegality.
	Acceptance	Notification of the acceptance for the land. 3	The notification is done by adjudication officer that responsible for job, that also creates huge window for corruption
		Approval for legal land use right 4	The officer should to check the land use type and parcel size, any ownership questions according to the plan
		Grievance if any making 5	By Grievance Handling Tribunal formed by the agency or by Municipal first instance court
		Announcement of completion of adjudication 6	Announcements are very limited and providing the final landholding right certificates delays most of the time
	Final Approval	Transfer of landholding adjudication documents 7	
End			

(Source: Organized by the author, 2020)

B. Institutional working procedures for land allocation

Table 4.5: Institutional working procedures for land allotment through tender and free allocation

Main Task	Task steps	Procedures	Remark on weak links
2. Land Allocation 2.1. Land allotment through tender (auction)		Auction document preparation & sale 1	Lack of making the bid public
		Making the details of the bid public 2	
		Forming bid undertaker /Approval committee 3	With number from 3 to 5 from the agency's members which expose it to be biased, first of all they are colleagues, easy favors someone
		Undertaking the bid 4	
	Loose 5	Selection, approval and declaration of the winner 5	Unattainable requirements: paying at least 5% of the initial price of the land; 80% is given to the highest bidder
	Win 6	Lease agreement and payment 6	Winners are posted and made public
	End 7	Handing over documents 7	
2.2. Land allocation through allotment (Free price land allocation)		Announcement of the allotment to the public 1	Mostly dominated by nonresidential uses in opposite to the demand
		Applying for the chance of allotment 2	Favors some group All appliers should bring support letter form kebele administration and the cabinet of the town which is political
		Document verification and investigation 3	
		Allocation based on requirements through withdrawing lottery 4	Favoring some group is common: family members, relatives and friends



(Source: Organized by the author, 2020)

C. Institutional working procedures for registration for formalization of landholding

Table 4.6: Institutional working procedures for formalization of informal landholdings

Main Task	Task steps	Procedures	Remark on weak links
3. Formalization of informal holdings in to lease system	● Start →	Application for landholding registration 1	Unattainable requirements But forbids all of settlements after 2005. Where, most of the areas are developed later
	↓	Receiving Applications 2	People present fake documents because they really don't have
	↓	Verification of applications for registration 3	Only applicant's that satisfies formalities but most of them cannot and exposes the situation corruption
	↓	Case team site visit and document analysis 4	Usually involves corruption during site visits
	↓	Paper and digital registration 5	Usually only paper registration that creates difficulty
	↓	Approval and issuing certificate of landholding right 6	The agency shall make the information public but nothing is known Approval by the agency approval committee, corruption
← Decline	Acceptance	End →	

(Source: Organized by the author, 2020)

D. Institutional working procedures for undertaking land inventory for development

Table 4.7: Working procedures for undertaking land property inventory for development

Main Task	Task steps	Procedures	Remark on weak links
4. Undertaking land inventory and preparation of land for development (Cadaster)		Formation of land inventory committee or out sourcing the task to qualified consultants 1	Inventory is undertaken only once in the last 7 years due to lack of budget but the regulation strictly it need
		Creating public awareness 2	The people have very little awareness over inventory
		Preparation of all the necessary resources and man power 3	Budget and the willingness of the officials are the main hindering reasons
		Undertaking the inventory 4	
		Encoding the collected data 5	
		Study and registration of formality and informality of land resources 6	Demolition by the committee formed at town/city level
		Updating the previous document 7	There is no GIS and other software experts to follow up the situation
		Approval and legalization of the document 8	Approval only by the agency's staff that makes the decision weaker
		Site selection 9	Approval by the town council and allocation. But, the supply of land is very little compared to demand
	End → End → End →	Preparing lease zone, neighborhood and parcel plan	

(Organized by the author, 2020)

E. Other major tasks of institution and their working procedures

Table 4.8: Working procedures for landholding right transfer and disapproval ownership

Main Task	Task steps	Procedures	Remark on weak links
5. Land holding right transfer (The trade through negotiation)		Owner announces his/her will to transfer the landholding right 1	Few people officially announces
		The agency create case team, that follow ups the process 2	Improper interruption of the agency that decides the price
		The land owner undertakes bid with legal authority in close follow up 3	Undertaking bid to transfer property right seems only idyllic, in most cases price is based on negotiation
		Transfer of the property right and official documents 4	Few number of people addresses their issues through the agency
6. Disproval land ownership due to failing to undertake construction according the contract		Identification of the individuals and giving the letter of notification 1	Number of the landholders don't make any development on the land but still kept their land for speculation
		Owners present reasons for the delay in 30 days 2	In most cases owners don't respond due to lack of actions taken by the agency
		Taking the land back to agency's resources 3	Despite of the responsibilities of the agency neither of these measures are not being taken that became the main reasons for speculation
		Notification letter for finish construction 4	
7. Implementation of the latest urban plans		Working with concerned bodies for implementation of urban plans. 1	According to site survey and interviews, plan implementation is at low level

(Organized by the author, 2020)

4.4. Urban Land Market Failure in Sululta Town

Depending on the literature reviews conducted urban land market is a condition where, markets fail to function properly due to the different reasons. One of the main indicator of that is a situation of imperfect pricing system as a condition described by Samuelson & Nordhaus, (1992). According to Gwartney & Ferrarini, (2019) market failure is the situation where dominance of the effects of externalities is massive and according to Margetts, (2019) market failures are defined as failure to allocate resources in efficient way due to the inability of the market mechanism. According to the data collected, the main reason for the irregularity of price is due to decentralization of the process. Pricing land is only decided by the unofficial agreement between land brokers and sellers which aims profit making.

Even though the formal pricing system is working, the market is dominated by the informal mechanism due to the volatility of price determination that creates lower cost of buying land compared to the much expensive lease based pricing system. The other major reason for the informality of them market is related to the complex and bureaucratic system of the formal market. According to the conducted survey 17% of the current landholders have occupied land through the informal market, without no licenses and property right.

One of the major incident identified during the survey, is that land is being allocated inefficiently in the formal market, apart from the huge demand for space, the supply is pretty much low, According to data from the town's agency, more than 6,042 households have been identified as newly informal holdings whereas in 2020 whereas, only 240 parcels of land has provided for users formally in 2020, that shows the unbalance between the supply and demand.

The other major indicator of the market failure is the imperfect competition between the market actors. According to the collected data, 65% of the people that formally accessed property right, are high incomers that accounts very little portion of the community. Whereas, the majority of the surveyed participants have accessed land through informal mechanisms. Few people have the appropriate information over the legal procedures and the lease based pricing system. Following the bureaucratic and restrictive system that blocks the entry to the formal market very few portion of the respondents have awareness over the system. According to the survey conducted, 12% of the participants have responded that they have very low information about the system. Whereas, 43% of them have little level of information whereas 28% of them has relatively middle level of information and only 17% of the participants have full information and knowledge over the market and system operating in the town currently.

Additionally, inappropriate interruption of actors such as land brokers and government officials are very challenging. Based on the observation conducted for more than three months in and out of the town’s LDMA, there is huge illegal attachment between the land brokers and the officials has greatly hindered the formal market and favors the informal market.

4.4.1. Government’s Monopoly in Urban Land Market Failure

Monopoly is one of the major characteristics of a failed market. Accordingly, monopoly is a condition where businesses do not provide consumers with relative to price that creates the change of spending their money elsewhere. According to Margetts, (2019) it is a situation where the government solely supply land and creates barriers of entry to the private sectors and cooperatives. It is called the market is monopolized where an actor controls 25% and above share of a market. Currently, LDMA of the town is sole provider of land in the formal land market. With a simple comparison between the demand for land and the capacity of the supply of the agency, it is an important indicator for the failure of the market.

Table 4.9: Supply and demand of land for housing

Year	Supply			Demand			Gap	
	Gov’t allocation	Kebele housing supply	Total	Informal holdings	Kebele housing requests	Cooperative housing land requests		Total
2018	350	48	398	8,325	0	0	8,325	-7,927
2019	2,658	12	2,670	12,398	85	12,483	12,568	-9,898
2020	350	0	350	14,285	180	14,285	14,465	-14,115

(Source: Sululta town LDMA, 2020)

Apart from the inability to supply land according to the demand, the government led supply of land is confronting and limiting the participation of the private sector that can create a competitive market. According to the collected data, 68% of the customers in the land market are not happy with the service of the formal market, especially in the issues of price and the biased market that favors the few group of the community.

The formal (government led) market is controlling land supply in monopoly, following that the land buyers as well as land sellers are turning to the informal market. The major problem related to the market monopoly is that it greatly reduces the effective competition between the market actors that in turn reduces the allocation of land in efficient way.

Apart from the government monopoly of urban residential land supply, the planning approach of structure plan led by the local development plans also greatly restricts the supply of land, which in turn creates inappropriate high price of the formal land. Which also means is that, those formal land owners' gets massive increase in their asset values that mainly favors the speculators and also the huge portion of the town, the farmers that sell land are in trouble of losing asset values because they are not allowed to sell their land in the formal mechanism that force them to sell in very cheap price through the informal mechanisms.

4.4.2. Land as Public Good in Urban Land Market Failure

Land is one of the main public goods in urban setting, which is in principle it has to be provided and accessed by all which insures the joint ness of consumption. A provision of land to one makes the availability to others but it is difficult to do so in reality, in contrary to the assumption of land is belonged to the people of the country (FDRE, 1995). The market of a public good can be said failed in two main cases, the first case is when large number of population is free riders that creates difficulty in allocation of a scarce resource like land. The second case is the situation where supply is very much little in contrast to the demand, the second case is the main sign of the situation of land market failure in Sululta town.

In Economics the true value and market value should not be wide apart (Cheshire & Vermeulen, 2011). According to the survey conducted, the price of the lease holding and informal market for similar area of land is different accordingly, a piece of land with an area of land around the fringe part ranges from 250,000-400,000 birr through the formal lease system where as in the informal market it is possible to own the same area of land in the same neighborhood with 60,000-200,000 birr, which shows the wide range of the price difference that failed the formal market.

According to the currently working documents of the lease system and its implementation regulations and strategies the supply of land should pass through different steps. One of these major steps is the provision of physical infrastructures before the owners' starts to settle that is the major cause of the spike of the price of the formal land provision mechanism, in reality the costs are in the unreachable for the most of the people who demands for the land that in turn led the people towards the informal market. The major problem for such government led urban land market is that nonpaying consumers easily left out from the market (Gwartney & Ferrarini, 2019) that in turn shows the failure of the market to supply the desired land.

4.4.3. Externalities in Urban Land Market Failure

The effect of externalities are the major concern for a failure of a working market. To explain the externalities in simple terms, they are the spill overs of the effects of markets actors. These spill overs could be positive or negative, but the major concern of this study is the negative spillovers that land market actors exerted on the urban land market (Margetts, 2019). He also indicates that a failure to consider negative externalities is one of the main indicator of market failure, because in most cases pricing systems don't include all of the social benefits and full costs of preparation of parcel of land for development.

According to the survey conducted, the overall improper actions of land brokers are creating speculative behavior in land market is Sululta town. Accordingly, the respondents have forwarded that; 36% of the land buyers in the market have the intention of speculation. According to the survey conducted 62% of the urban dwellers and land buyers have confirmed that the influence of the brokers are pretty much improper at very high level. 25% of the respondents also have stated the effect of the brokers are high level that indicates the massive level of improper interruption of on the land market is linked to brokers, that aided for the growth of speculative behavior.

In economics, it very difficult to explain the level wide spread damage by externalities and they create difficulty for efficient allocation of resources (Gwartney & Ferrarini, 2019). Where, externalities such as improper interruption of market actors and governments supply of land that focused on investments are the main challenging concerns of the market that creates greater spill over on the land market in the town. The spill overs are creating the price of the land to raise to its maximum in the formal market where as it is creating the lowest prices in the informal market that pulls the dynamics of the market to be two faced where in both cases the price of a parcel of land don't show the true cost.

The other negative externality of the urban land market in the fringe parts of the town is caused by the spillover caused of lack of formalization of land holding rights. Where, land owners don't have secured legal landholding rights. According to the survey conducted 17% of the participants don't have legal landholding certificate where they are not feeling really the owners of the land and 36% of them have an idea of selling the property and going away before it gets demolished by the government. Negative externalities create, the lesser marginal social benefits while increasing the marginal private benefits that leads the huge consumption of urban land by individuals with very less price.

4.4.4. Barriers in the Current Urban Land Market

Urban land markets are one of restrictive and regulation based market but apart from them the formal land market in Sululta town has indicted some forms of barriers. According to the conducted survey, 66% of the participants that have labeled in the informal landholders have indicated that they don't have the capacity to buy land according to the price zone set by the lease system. This cost barrier is creating difficulty to enter in to the formal market for this massive portion of the population.

The second major type of market barrier observed in the town is related to the absence of government licenses, where such massive of the settlers in the town don't have the legal property holding rights that forbids to participate in the formal market to sell or transfer their property holding rights.

4.4.5. Government Led Public Land Provision and the Welfare Economics Theorem

One of the main theorem of improving social welfare, is the welfare economics (Elgar, 2009). The theorem strictly indicates that, an outcome of an allocation of public resources are socially desirable when no one lost their benefit than they were previously (James, 2015). The theorem depends on principles to function but missing one of them is referred as market failure. The first principle is people are the judges of their own welfare but according to the collected data, 17% of the respondents and as well as 6,042 landholders in the town are not the deciders of their properties because they don't have legal landholding rights.

The second principle is that, no one actor in the market should be dominant that it eventually creates monopoly. In contrary, according to the conducted survey the government is the sole provider of land in the formal market and land brokers are also the dominate actors in the informal urban land market as well. The other principle according to the theorem is that, goods and services have to have a defined prices. Where, nobody knows the transaction cost of land in the informal market and whereas, it is unfordable in the formal urban land market according to the collected data.

In contrary to the theory's aims, the current urban land market in the town is not delivering a socially optimal urban land allocation. The theorem delivers clear guide for regulating market especially through government led mechanisms so as to eliminate market failures. Efficient allocation is the root requirement of working markets but in a complex situations like urban land, it is very difficult to put it on the ground prepositions and approaches that work towards social welfare (Elgar E., 2009). Accordingly, the rational way of insuring market efficiency is

a very difficult scenario in urban setting but still insuring effective allocation of resources is a priority issue .

Urban planning should have to work towards efficiency. One of the major tool to allocate urban resources is through markets. The current government led land supply is not satisfactory, according to the collected data, based on Likert scale level of questionnaire, 33% of respondents have stated they are very dissatisfied and 46% also have informed that they are dissatisfied in the service of the formal market in which the figure shows that significant portion of the urban dwellers are not happy with the allocation modalities of the formal market.

According to the conducted survey, urban land market has failed, especially in relegation to the wide spread of informality, where the working agency cannot manage the rapid transaction. Accordingly, 17% of the transaction are found to be informal according to the collected data and analysis undertaken. In a failed market like this one, there is no reward or penalty in the transaction which makes the situation to be worse.

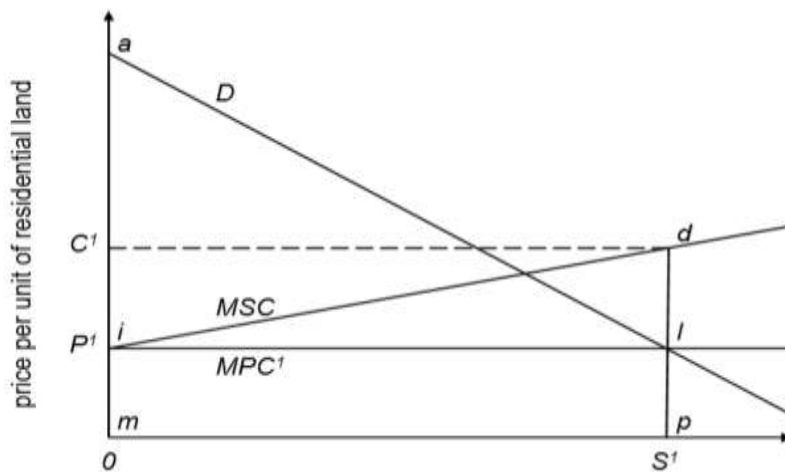


Figure 4.12: Graph of supply- demand of land (Source: Elgar, 2009)

D indicates the downward slope of aggregate demand for residential urban land whereas s, implies the increase in supply of urban land and P shows the price of the supplied land.

4.5. The Consequences of Urban Land Market Failure

In all of urban economics, the consequences of the failure of the formal market system has been indicated to be brutal by different scholars (Wanjiku et.al, 2010; Adesiyen et.al, 2011; Cunningham, 2011; Dejene, 2015; Bedane et.al, 2019; King & Napier, 2019). Specially, in this rapid era of urbanization, where, land is very important issue in developing countries like Ethiopia. The previous sections of this research has indicated that the causes and the failure of the formal market to allocate land in efficient way, based on this the following section explains the consequences of the formal urban land market on itself and the urban environment.

4.5.1. The Consequences of Urban Land Market Failure on the Formal Land Market

4.5.1.1. The rise of price of land

According to the conducted survey, the price of land has been significantly rising. Following the failure of the formal market to serve the rapidly increasing demand huge portion of the population have turned towards informality. The price of land for residential use is becoming more and more expensive over the time. The following graph is organized based on the conducted survey based on the price that the people bought and sold land in the town. The graph also shows that, due to the failure of the formal land market the price of land is rising rapidly over the course of the past twenty years.

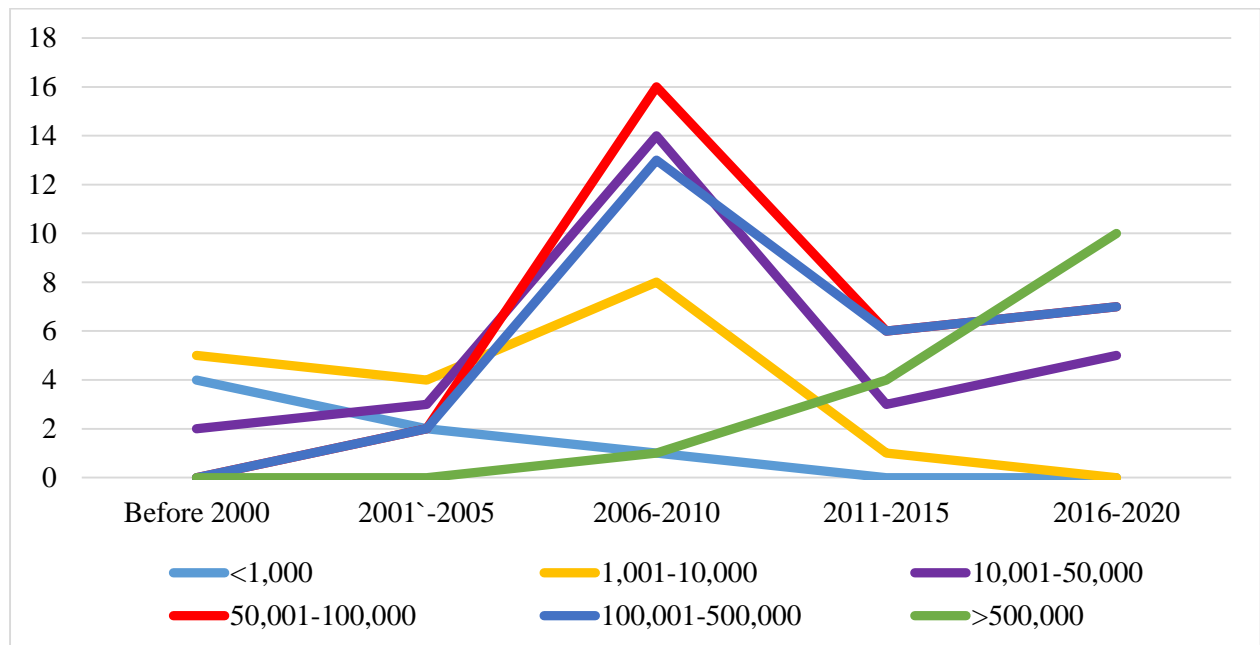


Figure 4.13: Graph of the rise of land price (Source: Organized by the author, 2020)

According to the above graph, the frequency of land transaction with >1000 birr is declined to zero after the year of 2011 and the transaction with 10,000 birr also came in to zero in 2020.

Following that, the frequency of transaction with price of land with 10,000-50,000 scores its highest in the year from 2006 to 2010. The main figures that indicates the rise of land price is the time period between 2011 and 2015, the frequency starts to rise starting with the price from 50,000 to 100,000 and more than 500,001 birr is becoming the common price starting from the year 2016.

The commodification of land through the formal market also has created, the rise of price even in the informal land market. In addition that, the other very critical issue indicated in the above graph is, the rapidity of land transaction specially starting from 2006 which is important indicator of the future trend of land transaction.

The rise of price in both the formal and informal land market has created uncompetitive situations that has kept new entrants like the young and the poor in the town out of the market because they are forced to pay high prices even in the informal market. According to the conducted survey on the market actors, urban dwellers 29% of them has responded that they can't access land in both the formal and informal market.

4.5.1.2. Inappropriate Dominance of Land Market Actors

According to the survey conducted, land brokers are the most dominant actors in the market where only 20% of them are legally registered and took full responsibilities. Whereas, 80% of them don't have any legal grounds to be responsible for their actions. The problem is also deep that they also work as the central actors between the land buyers and the agency's workers that leads to corruption and other illegal actions. Additionally, the failure of the formal market has created cracks for wrong deeds like, an illegal of bare land without any landholding rights, which is forbidden by the rule and regulations of the country. Generally, the dominance of land brokers and legal landholders with speculative behaviors are the main results of the failed formal market.

4.5.1.3. The Rise of Land Speculation

The failure of the market has created new brides of speculators that buy gigantic parcels of land and sells it back by dividing it in to smaller parcels. According to the site observation and survey conducted, out of the informal landholders in the town 12% of them have the intension of selling their land in the future. Where, 5% of them have sold more than 10 parcels from a large parcel they have bought and 10% of them also have sold 3-10 parcels and 85% of them have sold 1 or 2 parcels.

The other major challenge that found out according to the survey conducted is that, out of the 22% of the regular urban landholders that have responded to have high influence in the market, 43% of them have responded that they have the intention of selling the land for better price in the future. Additionally, the failed formal market has caused some group of the residents to hold multiple parcels of land. Accordingly, about 32% of the urban land owners that have possessed land through formal and informal ways have responded to have 2 and more parcels of land in the town that creates monopoly that in turn leads to the rise in land price and difficulty of market entrance.

The rise of the price of land in both the formal and informal market has created an imperfect price system that prevents an efficient allocation of resources in contrary to the biggest objective of the formal urban land market. In most cases, there is no known price of land in the town that, the transaction of land is undertaken by the deal between the sellers and buyers mostly through the consultation of land brokers that favors only the rich and left out the poor from the market and favors the speculators to gain better profits.

4.5.1.4. The Loss of Government Revenue

According to the conducted survey, 17% of the respondents have indicated that they don't have land ownership certificate and system don't grant them the formal landholding rights. According to the data gained from the town's LDMA, that figure can reach up 35% which can averagely reaches more than 25% of the total town's landholdings. The lack of formality don't let them to pay the expected taxes and there is no way that the people pay revenue even if they want to pay.

According to the survey conducted, these informal settlers labeled by the town's LDMA have stayed there for long time. Accordingly, 15% of them have settled for 16-20 years. Whereas, 20% of them have stayed for 11-15 years and 30% of them have stayed for 6-10. The rest 36% of this settlers have stayed there for 1-5% years. Averagely the settlers has stayed there 8 years without paying revenues and taxes which helps the government to build infrastructure and other development activities is a great loss for the town.

The loss of revenue, the failed market has brought devastating consequence by limiting the development options and creates barriers to development mainly around the fringe part of the town. The most potential future growth areas have occupied by informal settlements that needs huge amount of resources even to demolish them according to the current decision where about 6,042 buildings are labeled as informality and they are waiting to be demolished.

4.5.2. The Consequences of Urban Land Market Failure on the Urban Morphology and its Environment

Settlement patterns (urban morphology) are the indicators of the socio-economic activities of a particular urban area (Stan, 2019). Those patterns created as a result of the land use which determines landscapes and cityscapes. Accordingly, one of the main point of focus of this research is the explanation of the urban morphology and its environment as a result of the failed urban land market in the town.

The acute supply of land through the formal modalities have spread the growth of squatting and informality specially in the fringe parts of the town, that opened the door way for the rise of the informal market. The people are forced to access land through any possible means due to huge demand for urban life, the wide spread of land speculation and the weakness of the administration and management of urban land by the authorized agency. The major identified characteristics of this areas during the site observations include; poor housing conditions, unsuitable settlements patterns, lacks of physical infrastructures and inadequate social services, lack of green and open spaces and the consumption of environmentally sensitive areas.

According to the frequent site visit conducted over the course of the research time period, successive sub-division of agricultural parcels is the major manner of settling in the town. The approach also have reduced the quality of settlements because it didn't considered the area needed for streets, open spaces and other amenities and infrastructures. Additionally, streets are not arranged hierarchically and lacks connectivity throughout the peripheral settlements. The morphological defects identified where, the parcels are not organized and arranged in appropriate manner due to the absence of any formal way to plan the settlement.

The settlements are dominantly growing with sprawl characteristics. Such growth is also making these parts of the town a center of confrontation. The sprawl growth is massively underway through distant leap frog developments following the inability to buy land in central areas due to the unnecessarily complication of the formal land provision mechanism. Huge portion of the town specifically the fringe areas are not prepared for urbanization and left without services like, electricity, water and etc. Such squatter, sprawl, and leap frog urban growth threatens the sustainable development of urban areas since urban morphology is crucial issue in creating sustainable and working urban areas.

4.5.2.1. Rapid Rate of Urbanization

Using USGS data set and GIS trend analysis method, the analysis undertaken shows that, high intensity of urban expansion and rapid dynamic degree of urban expansion is taking place in the town. The following trend map shows the rapid urbanization rate as a result of the failed urban land market in the town.

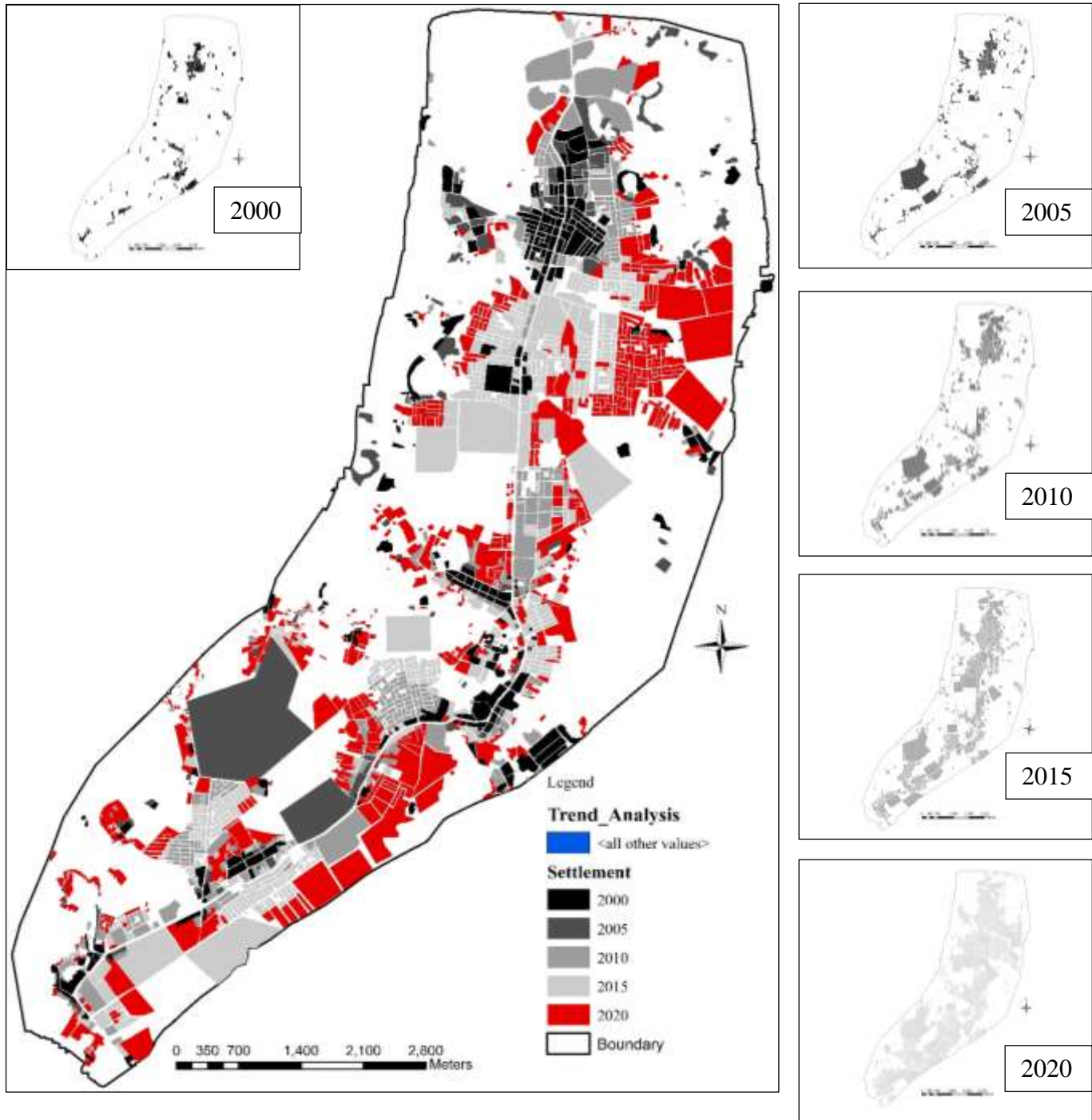


Figure 4.14: Map of settlement trend analysis (Source: Organized by the author)

The analysis is undertaken using multi temporal change of the time period of 20 years in classification in to 5 classes of 5 years in terms of intensity of urban expansion and dynamic degree of urban expansion. The method has two step analysis preceded by encoding the trend data of the last twenty years horizontal growth. Accordingly, the change in growth of the settlements was assumed based on block level analysis to reduce the complexity and the time of encoding and analysis the trend data.

After encoding takes place, GIS area analysis based on the time period of five years is carried out. The change in land mass area of the settlement shows that, impressive growth of landmass area caused by the failure of the formal urban land market that cannot control and manage this immense horizontal growth. Both UII and K were calculated have indicated huge urban horizontal growth. The summary of the UII and K values have indicated in the following table.

Table 4.20: Multi temporal change and urbanization rate

<i>No</i>	<i>Year</i>	<i>Area (ha)</i>	<i>Change of Area (ha)/5 years</i>	<i>UII (ha/years)%</i>	<i>K(ha/years)%</i>
1	Before 2000	229.24	229.24	-	-
2	2000-2005	497.61	268.37	2.57	6.82
3	2005-2010	783.12	285.51	1.62	2.54
4	2010-2015	1,283.29	500.17	6.46	30.06
5	2015-2020	1,936.02	652.73	3.64	22.20

(Source: Organized by the author, 2020)

The urban expansion intensity method is very crucial because it helps to understand and explain the speed and intensity of an urban growth. Where, large UII values indicates the faster rate of urban expansion that in turn indicates the availability of large non-urban space that opens a door way to explain the level of management of urban land. In contrary the lower UII value indicates low speed of urbanization as well as the availability of low quantity of land for urbanization.

The intensity of urban expansion (UII) is calculated using equation (3). Accordingly, using the average UII value of the classification specified by Habitat, (2020) on Africa’s urbanization dynamics on African cities and Fan et.al, (2017) on Asian cities, the values have classified in to 5 categories as follows; Maximum – 5.1% and more, High 2.51% – 5.0%, Medium 1.6%-2.5%, Low 0.5%- 1.5%, Very Low 0.5% and less.

Accordingly, the computed UII values over the last 20 years shows a great change of urban spatial growth, starting from the time lap of 2000-2005, the value is 2.57% is immense that indicates the rapidity of the growth at high level. Whereas, the time period between 2005 and 2010 shows little decline in the intensity of the growth with score value of 1.62% that falls in the category of medium intensity growth. The 2010- 2015 period of time shows that fierce horizontal growth that should be considered seriously with score value of 6.46% and lays in the category of maximum intensity of growth and the following time period between 2015-2020 also has significant growth value of 3.64% that lays in the category of high intensity of urban horizontal growth.

The urban expansion intensity values have indicated in the following graph.

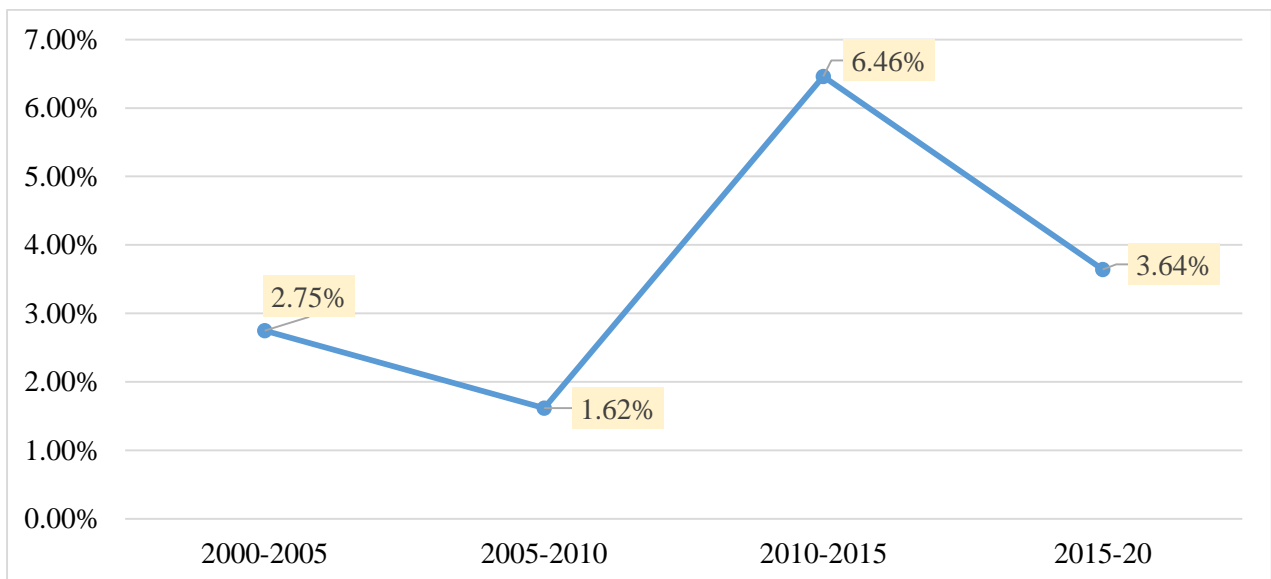


Figure 4.15: Graph of urban expansion intensity
(Source: Computed by the author, 2020)

According to the computed UII values, the only time period of 2005-2010 has scored 1.62% UII value which is a medium intensity growth that can be labeled as a conducive growth. While, the time period from 2000-2005 and 2015-2020 have UII values which lays in the category of high intensity of urban growth that shows the difficulty that face in managing the urban land and its development. The 2010-2015 time period has score value of 6.46% that lays at maximum score of tense growth which is an indicator for immense intensity of urban spatial growth by towering above all the time laps.

Let alone the higher scores, the average UII value for the last twenty years is 3.57% which is high intensity of urban spatial growth all along for the two decades which needs to be seriously

considered by scholars and policy makers which should needs focus on the non-settled parts of urban areas, obviously the farmers and their farms.

The other method used to analyze and explain the rapidity of spatial growth is the dynamic degree of urban expansion method. The method involves computation of the change in terms of increase in absolute volume of land mass in a given period of time. It is computed by introducing the initial urban area in a time period using equation (4). By taking the average K value of the classification specified by Habitat, (2020) on African cities and Fan et.al, (2017) on Asian cities, the values have classified in to five (5) as follows; Slow speed expansion $K \leq 5\%$, Low speed expansion 5.1% -10%, Medium speed expansion 10.1% - 20%, Rapid speed expansion 20.1%- 25% and High speed expansion $K > 25$.

This method is very important because it helps to explain urban expansion through retrieving average rate score values and these indicators of change in urban expansion reveals the change in urban expansion area only in terms of the absolute volume increase in set time period. The twenty years' time period was selected based on the scholars suggestion on the viability of the time period which lays between 15 to 25 years, in any classification of time. The following graph has produced based on the computation conducted;

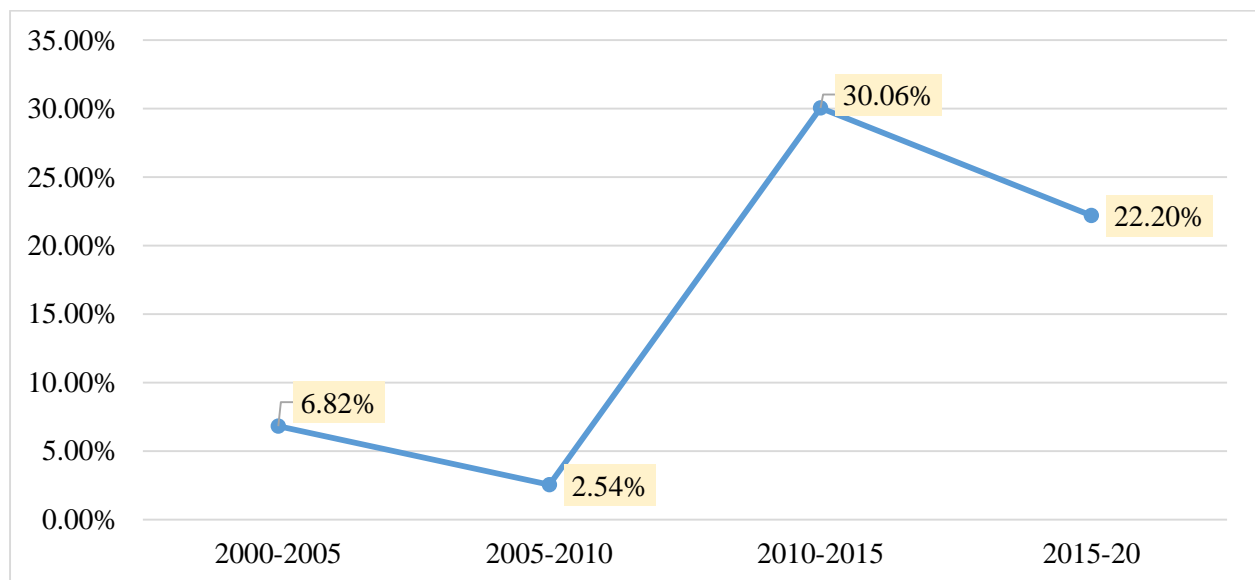


Figure 4.46: Graph of dynamic degree of urban expansion
(Source: computed by the author, 2020)

According to the computation of K conducted of the last 20 years of four time period classification. The time period 2000-2005, has score value of 6.82% which is low speed of urban expansion according to the stated classes of score values and even the growth declines

to 2.54% in the time period of 2005-2010 following the establishment of the special zone in 2008. But, the speed strikes back scoring an immense value of 30.06% of additional land area in the time 2010-2015 in contrast of the previous time period which has indicated to be very high rapid expansion according to the set category. Lastly, the time period 2015-2020 also has taken massive expansion scoring 22.20% of growth which lays in the category of high speed expansion of urban growth.

According to the analysis conducted, the rapid growth has started in the time period of 2000-2005 and the following time lap has shown decline. But the next two laps of growth periods have indicated that massive urban expansion. The average growth rate of the town (Sululta), for the last twenty years shows enormous urban expansion, with average value of 15.40% of dynamic degree urban expansion which lays in the category of medium speed expansion with consideration of the slower urban growth in the first decade of the study period and a very rapid growth in the second decade of the study time.

To check the validity of the two methods both of the score values of urban expansion intensity and dynamic degree of urban expansion has considered using the average values of African and Asian towns. Both of the computed set of values of urban expansion has indicated that the town is under very intensive and rapid urban expansion with average scores of 3.57% UII value and 15.40% K value for the last twenty years.

Such rapid expansion that consumes huge part of the non-urban parts is fierce and needs to be carefully considered. The rapid horizontal growth in contrary to the inward growth has many physical as well as social challenges. The former indicates, the encounters such as leap frog development, difficulty in provision of infrastructure and etc. while, the later implies the effects related to the loss and reduction of farm lands that in turn creates loss of livelihood and social crisis especially for the fringe dwellers of towns and cities.

The formal market that should have controlled urban land for wise and efficient use cannot cope up with the ever increasing demand for residential and other urban uses. This in turn has created fierce horizontal urban growth that led by the informal land market, where individuals transacts land in uncontrolled and unmanaged way. The horizontal urban growth that consumes massive amount of land is becoming the biggest challenge for the town.

4.5.2.2. Unsuitable Urban Settlement Patterns

The failure of the formal urban land market to allocate land according to the ever-growing demand has forced the residents and new comers to forge the other options like that of the informal market. Because, the dysfunctional market has created the continuing lack of affordable housing and the expansion of the informal settlements mainly characterized by sprawl and horizontal expansion.

The informal market led by sneaky brokers, illiterate farmers as well as the speculative land buyers and sellers don't care about the suitability of the settlements. Where, the suitability of settlement patterns are very essential in enhancing the livability of the urban forms so as in creating conducive urban environment that can last for the next generation as well.

Currently, the horizontal sprawl like growth is creating bad physical arrangements that negatively affect the dwellers and has made difficult living urban areas. The settlement pattern has created overcrowding and congestion and the future slums areas in the central parts of the town whereas it also created sprawl and squatting in the fringe part of the town.

According to the conducted survey, the other devastating consequence of land market failure is that it blocks development options and creates barriers. The current trend of development, has led poorly development situation through, diminishing the probability of urban conducive development and also produces different challenging barriers to bring about an intended urban development.

It is true that, urban development is characterized by the nature of ownership and property rights defining urban resources. According to King and Napier, (2019) the morphological set up of urban areas and their sustainability is determined by the nature of ownership and property rights defining their land which is a true indicator of the current sprawl and squatter typed urban patterns happening in the town currently.

The current informal land supply mechanism is taking place by continuously dividing large agricultural lands in to smaller urban land use parcels. The growth is happening through unplanned manner that, it is reducing street hierarchy and missing in the street connectivity, leading to a discontinuity and difficulty in accessing the sprawl growth throughout the peripheral parts of the town. In most parts, streets run in to dead end, very small or very large blocks, and there is no left green and open spaces and etc.

The pattern of the urban growth is creating a leap frog development which is uncontrolled in its characteristics. The situation is worsened where both the large farming fields and their illiterate farmers are totally unprepared for urbanization land in this manner that in turn is creating unfavorable context.



Figure 4.17: Map of plot area ratio analysis (Source: organized by the author, 2020)

Density analysis has undertaken to measure the suitability of the development by tracing all of the building footprints up to the latest 2020 USGS data to explain the current settlement density

of the entire town of Sululta town. There is no parcel level ownership map despite of different urban land uses. Accordingly, the analysis shows that, 182.61/ha of building density out of 9,950 ha of the total land mass of the town, which is 0.018 ha of plot area per a single hectare of urban land and covers 1.83% of the total area.

Comparing with settlement standards like that of LDP Manual, (2006) Standards for Structure Plan Preparation (2008, 2012), Structure Plan Preparation and Implementation Manual, (2016) which have averagely forwarded that 0.01-0.03 ha/ha as low density settlement, 0.04-0.06 ha/ha as medium density and settlements with more than 0.06 ha of plot area per hectare high density growth with coverage of 5-20% of built up area out of total land mass of an urban area.

Comparing with these standards with the town's density score that stated earlier shows that, the density lays in the category of low density settlement, this is also an important indicator of the consequences of the failure of the formal urban market failure where dominantly the farmers are selling off this very important urban resource into very cheap price that in turn extends the town horizontally in an poor manner.

The following graph shows the ever decreasing of settlement density level over the last twenty years compared to the total area of the town's settlement using the trend of urban blocks developed over the course of study period.

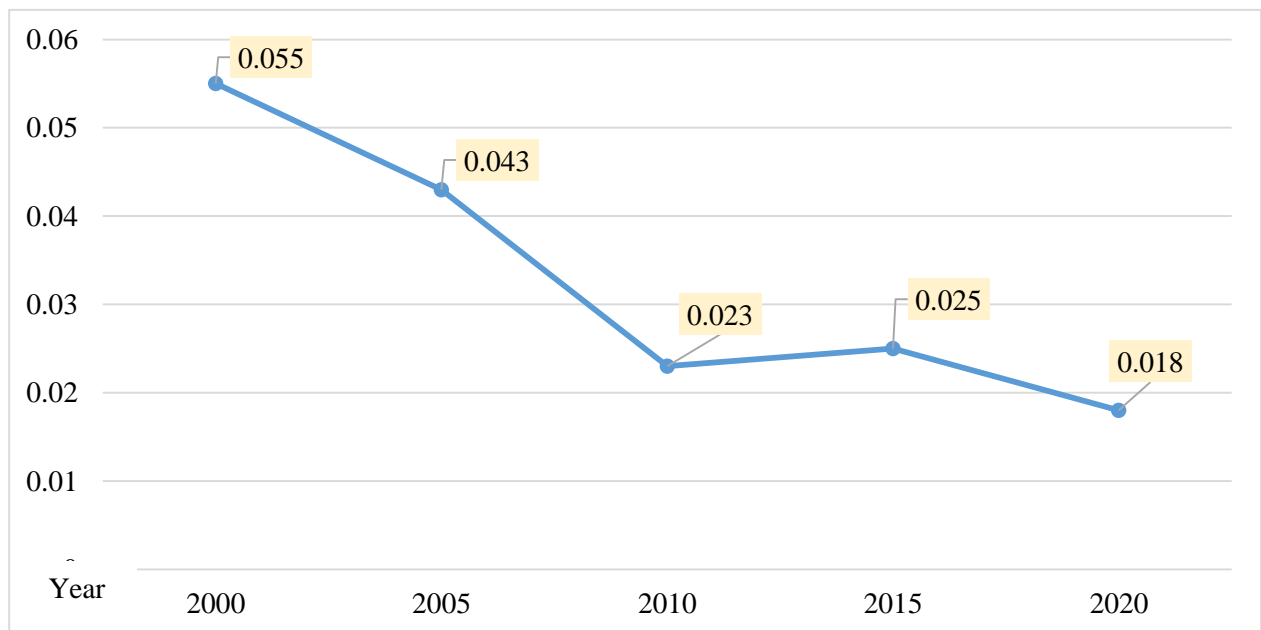


Figure 4.18: Graph of density of the settlement
(Source: computed by the author, 2020)

4.5.2.3. Consumption of the Natural Environment

According to trend analysis conducted, using USGS data of the past twenty years in the interval of five years, the ranges from 2000-2020. The data shows that huge amount of natural environment has been took by urban functions without any control and guidance of the town's land management and development agency (LDMA).

This uncontrolled land consumption also has took historically relevant and had communal tenure. The consumption of the natural land has took mainly, the wet lands in Nono Mana Abichu and 01 kebeles. Additionally the forest located in Kaso Woserbi Kebele has greatly diminished over the course of twenty years.

The major cause of the consumption of these natural environment is related of the informality of land transactions that has made these areas to be the center of new developments.



Figure 4.19: Photo of the sprawl over the swampy areas (Source: photo by the author, 2020)



Figure 4.20: Photo of the sprawl in to Intoto forest (Source: photo by the author, 2020)

The following maps shows the huge amount of consumption naturally sensitive areas such as swampy lands and the forest areas.

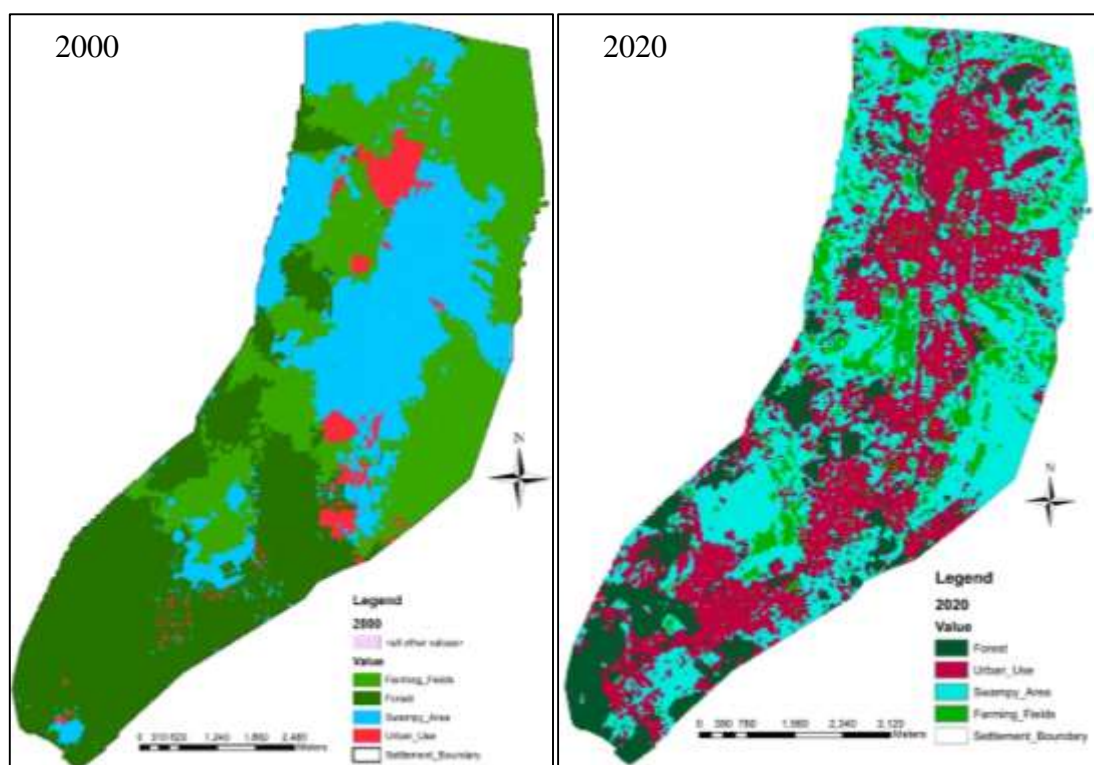


Figure 4.21: Map of trend of the natural environment (Source: organized by the author, 2020)

The following table shows the massive consumption of the natural environment that includes; the swampy areas, farming fields and the forest parts of the town.

Table 4.31: Multi temporal change and urbanization rate

Year	Land use type			
2000	Swampy Area	Farming Fields	Forest	Urban Use
Area (ha)	1,575.01	1,835.15	1049.35	225.25
Area (%)	34	39	22	5
2020				
Area (ha)	492.25	1,883.34	600.56	1,708.39
Area (%)	12	40	13	36
Change of area (ha)	-1,082.76	48.19	-448.79	1,483.14
Change of area (%)	-22	1	-9	31

(Source: Organized by the author, 2020)

According to the above table, the swampy area has reduced by 22% and 1,082 ha and the forest coverage also has reduced by 9% and 448.79 ha in the twenty years.

4.5.2.4. Difficulty for Plan Implementation

According to the collected data from the town's LDMA plan implementation professionals (planners and surveyors) have indicated that, the rapid transaction of land the followed by rapid construction of settlements (buildings) it has become very difficult to implement the 2016 Structure Plan (SP) of the town. The following map shows the affected buildings if the current SP plan is implemented.

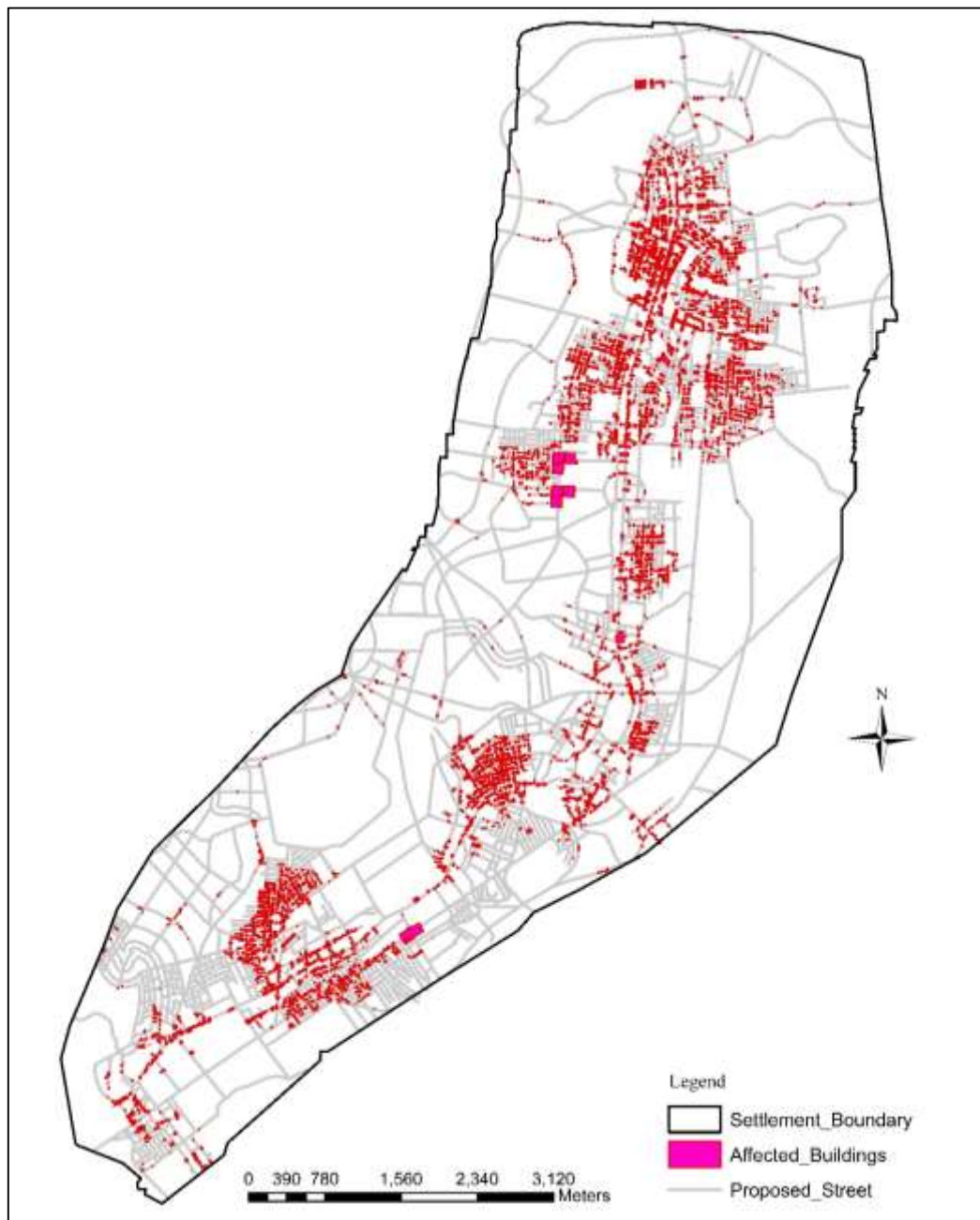


Figure 4.22: Map of suitability for plan implementation analysis

(Source: organized by the author, 2020)

According to the, interview conducted with the town's officials, the implementation of the current SP is becoming very challenging. Accordingly, 1, 412 buildings in 2018, 2,655 buildings in 2019 and 166 in 2020 have demolished in the last three consecutive years due to their non-conformity for implementation of the plan.

According to the suitability analysis conducted to implement the currently working SP simple overlapping method has been done. To quantify the severity of the consequences of the failure of the land market the traced USGS 2020 satellite map and the proposed street network of 2016 have overlapped, to find out the number buildings affected if the plan is fully implemented. Accordingly, the analysis has indicated that 7,784 buildings needs to be demolished to implement the plan. The condition shows the worsening effect of the failure of the formal urban land market because it is restricting the expected development and suitability of the settlement patterns of the town.

4.6. Discussion of the Results

4.6.1. Consistence of the Sample Characteristics

Out of 400 individual participants, to explain the main issues socio economic status of the main actors in the market 57% of them were males and 43% of them were females. Concerning to the age of the participants, 5 % of them were below 15 years old; 23 % of them ranges from 15 to 25 years old; 34 % of them were in age group from 26 to 45 years; 28 % of them ranges from 46 to 65 years old and the people above 65 years old counts for 10%. Coming to the family size of the participants, singles accounts for 12.5%; participant's households with family size from 2 to 5 covers 33.5%. 6-10 family size accounts for 25.3%; 11-15 accounts 23.7% and participants with more than 15 members also covers 5%.

Concerning to the level of education, 17.6% of them are illiterate and 32.2% of them have only attended schools up to grade eight whereas, 50.2% of them are literates with education level above grade 8. The other socioeconomic variable of the actors in the market is source of income where, 81% of them are private workers and government employees and also 19% of them are unemployed. The economic status of the participants is that, the poor accounts for 40.6%, the middle incomers are 24%, the upper middle income covers 6% and the high incomers' accounts for 2.5%. Where, all of the socioeconomic classifications are according to the CSA.

To explain the major problems related to the level of activities of the market actors, the sampled participants in the market were identified. Accordingly, 69% of them have participated in the land market directly or indirectly which has indicated the participants are the true source of

information needed. Specially viewing all of the actors; 100% of the investors, 100% of the government officials, 100% of the brokers, 87% of the informal urban landholders, 81% of formally registered urban landholders, 67% of the local farmers, 26% of the poor and young landless urban dwellers that have involved in market. According to the collected data and the analysis, all of actors in the market has played significant roles in the market.

According to the analysis conducted based the data collected from these very important market actors. Investors, brokers, government officials and informal land buyers take the lead by their immense involvement in the market. Specifically, the role of the land brokers is much higher than facilitation of transaction. That, they almost control all of the activities related to land market. The above numerical data and explanations shows that the significant activities of the main actors in the market. In order to explain the consequences of the land market failure on the urban morphology 20 years of USGS map has used with careful GIS analysis, by classifying the time period in to four, five years urban growth periods.

4.6.2. The Causes of Urban Land Market Failure

One of the main cause of the failure of the market according to the conducted analysis is that the formal market blocks the entry of the huge portion of the population. Accordingly, the findings indicate that the difficulty that the young and the land less portion of the population faces in the market and the difficulty that is facing single mothers and young females so as to compete in the market. According to the findings of the analysis, 26-45 years group which is one of the raising age group and which are also need of establishing their family and homes.

The other, main cause of the failure of the formal land market is the unequal level of influence of the actors have in the market that has explained in the analysis as; land brokers are the most dominant actors in the market. The influence of the brokers on the market extends from setting préces up to controlling solely transaction of land. Local farmers are the least advantages actors in the market. The higher illiteracy level and low economic status of the farmers have led to low level of influence of them land market. Despite the fact that, the urban residents are the relatively long term dwellers of the town their influence on the market is found out that to be medium. The sampled informal landholders have also responded that they have minimal level of influence in the market. Additionally, investors have high level of influence over the market through taking huge tracts of land in the town, where even some of them doing nothing on them for several years.

One of the important variable for the analysis of the causes of the land market failure is the economic difference of the main actors that are involved in the market. According to the analysis undertaken there is enormous difference between the actor's income levels. Accordingly, 64.5% of the brokers have income more than the formal landholders as well as the informal landholders. Whereas, about 13% of the informal landholders have income more than the local farmers and the poor and young landless in the town. The analysis indicates that the economical unbalance between this very important actors has brought the failure of the formal urban land market. The analysis also indicates that the land brokers are dominantly disrupting the chain of land transaction. According to the above analysis, the financial capacity of the brokers is pretty much higher than the rest of the market actors that aided them to control the market.

Coming to the legality of market actors that have significant participation in the market, According the findings of the analysis conducted majority of actors in the market don't have legal licenses, it is impossible to create effectively working markets where one or more of their important actors are working illegally and puts in appropriate influence over the other actors in the market. Markets work best were all bodies have legal obligations. 80% of the land brokers are not legally recognized whereas, 76% of local farmers don't have urban land ownership certificates; 78% of urban dwellers have bought land without ownership certificates and 17% of the participant's houses are labeled as informal settlement by the LMDA of the town. Out of the surveyed land buyers 62% of them have indicated that they prefers buying land without ownership certificate.

Generally the legality of the actors and their activities combined in the current land market is pretty much controversial. Informal land trade has reached its peak, trading land without property on them is a very common issue in contrary to the supreme law of the country that forbids selling or buying land expect for the property on them. Speculation is also deeply rooted in the market, according to the site observation conducted huge number of parcels have been kept for future profitable trade, the system is failed that, speculators build foundations of the buildings and fences that in order to get the ownership certificates so that to sell the land legally for better profit just to cover up the wrong did even though it is forbidden to fail to not finish the construction of houses according to the lease regulation.

The distortions created by the land policies, regulations and strategies are also the major causes for the failure of the formal land market. According to the findings of the contextual review

conducted, the Land Lease Proclamation of 2011 has totally forbids acquisition of land other than the lease system overnight that has created massive distortions in the market where, it worsened the situation by forbidding considerable portion of the population that don't have the capability to compete in the market and even it favors the private monopoly rather than ensuring the citizen's well-being. The Urban Landholding Registration Proclamation of 2014, also has clearly states the need of registration of urban land holding by specifying its wide spread advantage and forwards the legal requirements of land owners where it is known that most of the urban dwellers don't have legal property ownership certificates. The 2016, Regulation for Formalization of Unregistered and Informal Urban Land also has created immense difficulties in contradictory to its objectives of formalization of the ever increasing informal settlements. Giving great expectation, the regulation declines the hopes that promised to formalization. Due to these inconstant and conflicting land policies and implementation strategies the system is facing wide spread difficulties.

The other variable of the research that has contextually reviewed and explained is the part of the causes for the failure of the market was the current urban land management system its performance is poor that, the informal access to land has surpassed the formal access mechanism. Due to the high demand of land for the town has formally redefined its boundary three times with little land management works. Let alone the current ones, the exact number of the old land property ownership is not formally registered and are unknown by the authorized body. This is the significant indicator of the poor performance of the current urban land management system of the town.

According to the interviews and observation conducted on the agency, poor data registration and documentation are mainly problems identified. According to the findings, the weakness in the performance of the agency for land management is mainly caused by the low level of financial and technical resources. The dysfunctional urban land management system is also have played great role in failing the formal land market. The findings shows that huge portion of the working positions are not occupied or are at the hands of the nonprofessionals. The working flow in the office is chaotic where, it is very unfortunate to set such weak institution to control and manage the dynamic land issues. The major challenge that has hindered that, working procedures is that the necessity of the unattainable requirements that has created a door way for corruption.

4.6.3. The Consequences of the Urban Land Market Failure

According to the collected data and analysis made in the previous parts, neither the town's municipality nor the authorized LDMA are not providing land for urban dwellers especially for the poor and the young than the informal market. The condition further stretches and disrupts the town's morphological and environmental set ups by forcing the people to buy land far away from the central parts of the town that in turn makes very difficult in the provision of the both social services and physical infrastructures.

The other major consequences of the failure of the market found out is that, huge portion of the settlements are informal. Accordingly, out of the 35,008 households that are believed to be in the town, 17% of them are labeled as informal by the Sululta town LDMA that greatly affects the wellbeing of the majority of the population in provision of physical infrastructure and social services as well as social unrest over the tenure security.

The consequences of the failure of the formal urban land market system have identified to be brutal, in very wide social and morphological aspects specially, in this rapid era of urbanization. According to the conducted survey, the price of land has been significantly rising over the last twenty years. The rise of price in both the formal and informal land market has created uncompetitive situations that has kept new entrants like the young and the poor in the town out of the market because they are forced to pay high prices for even in the informal market. The main figures that indicates the rise of land price is the time period between 2011 and 2015, the frequency also starts to rise starting with the price from 50,000 to 100,000 and more than 500,001 birr is becoming the common price starting from 2016.

The other devastating consequences of the failure of the market is that, it has created uncompetitive situation between the market actors. Findings shows that, inappropriate dominance of land brokers over the market through their long hands, the informal landholders and the agency's workers also made very unpleasant interaction in the market that leads to corruption and other illegal actions. The other identified and explained consequence of the failure of the market is that, the failure of the market has created new brides of speculators that buy gigantic parcel of land and sells it back by dividing it in to smaller pieces without any control where, about 26% of the responds from the regular urban dwellers have the intention of selling the land for better price in the future. The loss of massive government revenue is the other very challenging consequences of the failure of the formal market. According to the conducted survey, 17% of the respondents have indicated that they don't have the land

ownership certificate that don't grant them the formal landholding rights. Where, the lack of formality don't let them to pay the government revenue.

The morphological consequences of the market failure on the town's settlement patterns are identified to be immense. The acute supply of land through the formal modalities have spread the growth of squatting and informality especially in the fringe parts of the town. The sprawl growth is massively underway through distant leap frog developments following the inability to buy land due to the unnecessarily complication of the formal land provision mechanism. The fringe parts, are not prepared for urbanization and left without infrastructure. Such squatter, sprawl, and leap frog urban growth threatens the sustainable development of urban areas since urban morphology which is crucial issue in creating sustainable and working urban areas.

To explain the level of the consequences of the failure of the formal land market on the urban morphology and its environment USGS data set and GIS trend analysis method is used, the result of the analysis has showed that the town is under high intensity of urban expansion and rapid dynamic degree of urban expansion. The findings of the analysis shows that, the average UII value for the last twenty years is 3.57% which is high intensity of urban spatial growth all along for two decades which needs to be seriously considered. The other method of analyzing the rapidity of spatial growth used was dynamic degree of urban expansion method that also has indicated the average growth rate of the town to be 15.40% of dynamic degree value that lays in the category very rapid urban spatial over the last twenty years.

The other, consequences of the fromal land marekt on urban morphology is that, suitability on the settlement patterns in terms of density of plot area versus to the total area of the town. Density analysis has undertaken to measure the suitability of the development by tracing all of the building footprints up to the latest 2020 USGS data to explain the current settlement density of the entire town which shows the coverage of 1.83% of the total area which is labeled as low density settlement compared to standards such as MUDC, (2006); MUDC (2008); MUDC, (2012) and MUDC, (2016).

The findigs of the anayisis also shows that, according to trend analysis conducted, using USGS data of the past twenty years in the interval of five years, that ranges from 2000-2020 shows that huge amount of natural environment has been took by urban functions without any control and guidance of the town's LDMA. The horizontal growth has consumed the natural areas such as; the wet lands in Nono Mana Abichu and 01 kebeles and the forest located in Kaso Woserbi Kebele has greatly diminished over the course of twenty years. The major challenge of related

to the consumption of these natural environment is because of the informality of land transactions because the informality of the market has made these areas to be the center of new developments. The increasing demand for urban land with growing of informal land market also has resulted in consumption of areas which are considered as historically relevant and had communal tenure.

From all of the consequences of the failure of the formal urban land market, the impact on the suitability to implement the current SP of 2016 is very challenging. The findings of the GIS analysis, by overlapping the traced 2020 USGS data and the 2016 SP shows that, it needs the demolition of 7,784 buildings to implement the plan which shows the worsened effect of the failure of the formal urban land market on urban morphology, where it is restricting the expected development and suitability of the morphology. The findings of the analysis has shown on the following Fishbone diagram.

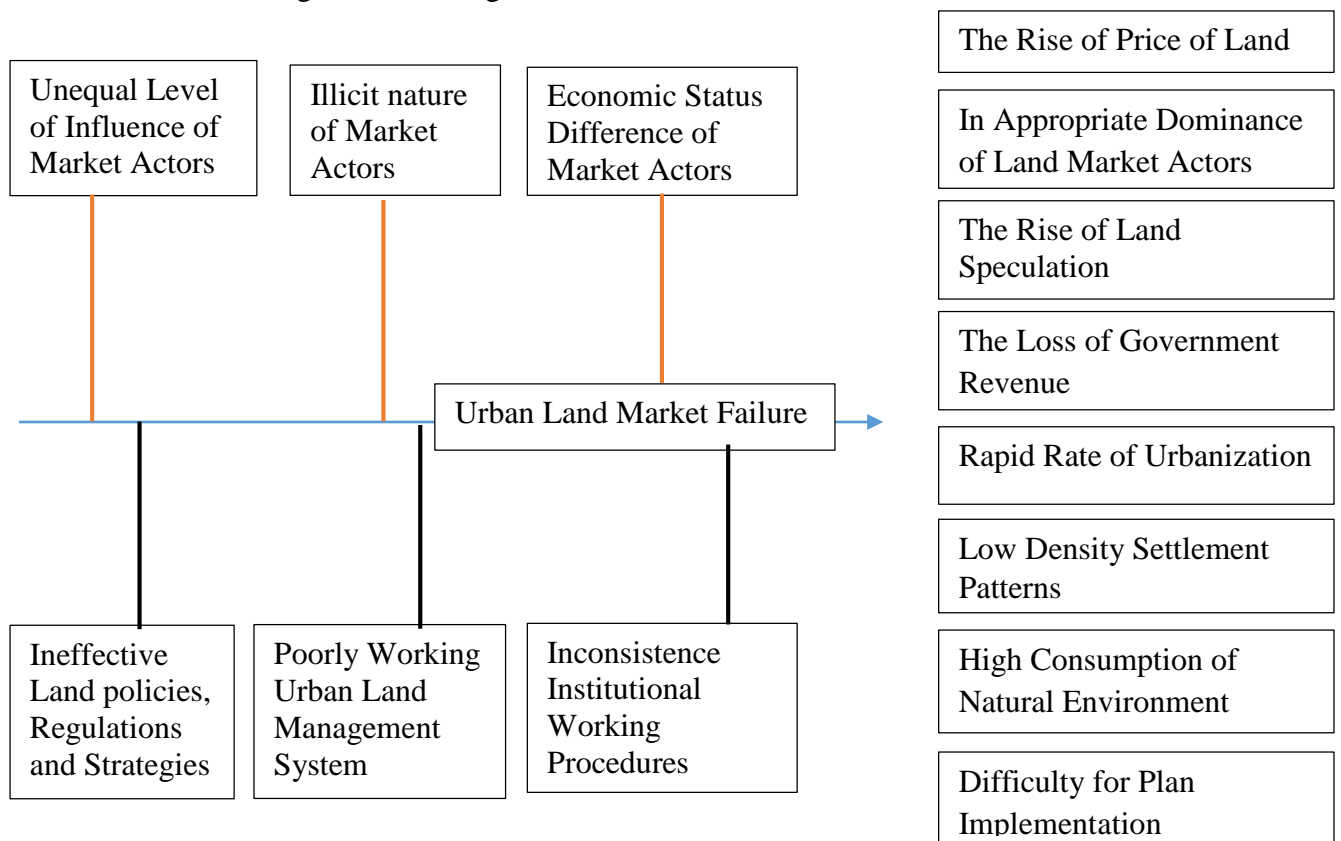


Figure 4.23: Diagram of the cause effect analysis of the urban land market failure
(Source: drawn by the author, 2020)

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The research is conducted to explain the causes and consequences of the failure of urban land market failure in Oromia Special Zone, specifically in Sululta town. This conclusion is presented as of the objectives of the research. As elsewhere, land is the vital asset of the town's population. Urban land market is controversial aspect where land is forbidden from legally to sell or bought but only the rights can be bought or sold which is pretty much confusing. The situation is worsened where boundary redefinition that consumes both rural and urban lands is becoming habit.

Markets are the most efficient way of allocating resources but not for fair resource distribution. So that, the growing inequality of their actors can lead to their failure where there are no enough systems to curb their drawbacks. In the context of urban land market, the inclusion of manmade alterations and additions to the land, as well as the owner's rights to associated natural resources are the main elements in property, but the trade of bare land without any improvements is a serious challenge that has observed in the town.

Different causes of urban land market failure has identified and explained in the study. Accordingly, the unhealthiness of the competition between market actors; inappropriate influences of market actors such as brokers; the outdated and poorly functioning land administration and management system; the distant economic status difference between the actors; legality of the actors and their activities combined in the current land market is also pretty much controversial; inconsistency of between the policies and regulations starting from the constitution's restriction of land trade and the lease system the outcry for commercialization of land through bid and the unmatched rapidity of land transfer related to hardly working LDMA, unnecessarily compacted working procedures that subjected to the widespread corruption, rent-seeking behavior and conflicts are the causes explained.

In addition of the above mentioned causes, the absence of the land provision through public housing is also a big challenge that self-help housing and squatting is recognized as the only means available to fulfill the immense demand for housing. The lack of strong urban planning and implementation also has played its role by creating informal land markets and sprawl typed urban growth. Above all, the insecurity of land tenure that have been poorly administered and managed also has played its role in leading the formal land market to failure.

According to the conducted survey, urban land market has failed, especially in relegation to the wide spread of informality, where the working agency cannot manage the rapid transaction, accordingly 87% of the transaction are informal. In a failed market like this one, there is no reward or penalty in the transaction which makes the situation to be worse.

Currently, the formal urban land market has failed to guide the rapid urbanization and to meet the housing needs of the population of the town. The way markets distribute resources are the true indicators of their societies, if resources are allocated distributed it is good sign of the proper functionality of the market, where the wide spread of urban sprawl and poor morphological growth is the best sign of land market failure.

Market failure is directly related to price of a good or service if it really implies or not the true value of a product or a service. The other indicator of the market failure is that the institutional arrangements that support them fails, especially in markets of public goods like land where the town's LDMA is working barely. Monopoly is one of the major characteristics of a failed market where, the government is the sole supplier of land but it is very difficult comparing to the ever increasing land demand.

Land is one of the main public goods in urban setting, it has to be provided and accessed by all through insuring the efficient consumption. The market of urban land can be labeled as failed when the supply is very much little in contrast to the demand which is the case in *Sululta* town. Externalities such as improper interruption of market actors and government's supply of land that focused on investments are the main challenging concerns of the market. It is true that urban land markets should be restrictive and regulation based market but it shouldn't be like one in the town creates barriers to development.

The consequences of the urban land market failure are diverse that the ones that has identified and explained in this research are categorized in to two. That first category includes the market consequences: difficulty that faces the young and the poor to participate in the market; the significantly rising price of land; huge government revenues loss; the spread of land speculation; uncompetitive situation between the market actors; the formal market has left 17% of the residents unregistered that has brought difficulty of provision of physical infrastructure and social services as well as social unrest over the tenure security.

That second category includes the morphological effect consequences are identified to be immense: the ever increasing squatting and informality; rapid low density horizontal spatial expansion; unconducive settlement patterns led by squatter, sprawl and leap frog urban growth

because the settlements took place without the guidance of the formal system; difficulty in the provision of both social and physical infrastructures. The increasing demand for urban land with growing of informal land market also has resulted in consumption of areas which are considered as environmentally sensitive, historically relevant and had communal tenure.

5.2. Recommendations

As a developing country with low level of urbanization, Ethiopia is facing difficulty in coping up with rapid urbanization due to the malfunctioning urbanization policies. This rapid urbanization era is the perfect time to fix all blurred sights of urban land polices, regulations, norms and standards by starting from the constitution itself. According to James, (2015) the time of crisis is precisely the time when a concept might best be given a deeper and redefined life.” Taking this strong attitude in to account the following recommendations has forwarded.

Working towards fair and equitable land provision systems for the people at lower prices are very crucial. In addition to the land provision, ensuring tenure security is the other main issue that should be seriously considered. In a country with a different land acquisition mechanisms over the course of long time period, considering the necessity as well as fairness for the future generation and different socioeconomic groups of the citizens is very important.

Integrated land management and administration with appropriate technological gadgets and skilled man are the necessary requirements to foster sustainable development. Geographical information led land administration system is a very crucial approach that should have to be custom in this rapid era of urbanization in the country to create an efficiently working markets. Specially creating a hybrid system of the traditional surveying and the modern geographic information system has to be the approach to follow.

Successful implementation of land development and management is mainly the result of strong institutions that has the authority to implement legislations and plans. The currently working LDMA of the town should have to have limited and should function in full capacity. Additionally, the agency should be committed to its full capacity, accountability and working towards enabling rather than controlling land transaction because strong institutions are the basic requirements for implementation of the land development plans.

The urban land market should be strong and flexible so as to handle the need of the different groups of the society and also to maximize the economic productivity of urban land with the appropriate implementation of regulations and strategies to bring positive impact on development of the town specially by eliminating land speculation.

Focusing on the private developers so as to contribute on the provision of housing within limited role and flexible lease holding system is also the other best approach. Private Public Partnership in provision of land, social and physical infrastructure can really share the wide responsibilities and accelerates the development. In addition to working towards the provision of responsibilities of land owners, the lease system should have to work towards equity and the right to the city for all citizens in contrary to what is happening in Oromia Special Zone specifically in Sululta town.

According to the conducted survey and collected data, one of the major contributing factor for the wide spread of informal land market is related to the low level of implementation capacity of the town's land development and management agency which shows working towards capacity building of the agency is very important. Urban land market should be strictly regulated and should have to work towards strict implementation.

Dealing with market externalities

One of the method of reducing the spike of price in the formal urban land market is through imposing taxation on the external activities that causes for the rise in price. The activities in the land market includes; taxation as well as control the informal land transaction and formalization of informal landholdings with strict rights is very important. One of the major advantage of providing property right is that, the owner can have a better knowledge of a true value of his/her property.

Taxation and restriction is not always the solutions to treat and guide a failed market but granting property right is also a considerable option. In addition to the current government led land supply method tying up with the private sector would be a very important tactic. For instance, provision of important infrastructures, can create a great option for turning the land market formal, because clearly wants to buy land where there is infrastructure provided.

During market failure, it is very important task of a government to reconsider the situation so as to bring efficiency but it is also very important to note that only political alternatives may not bring the desired out comes especially in urban development.

To reduce the effects of a failed market it is very important to use the positive spill overs, which literally means maximizing the marginal social benefits of usage of urban land by reducing the private marginal benefits that limits the low cost transaction of urban land through appropriate market policy.

Formalization urban landholding right, the best way to treat a failed market

According to Coase, (1991), the Coasem theory, stated that “if property rights are fully assigned and if people can negotiate at lowest cost with one another they will arrive at efficient solutions to problems caused by externalities without the need for explicit government interventions.”

Breaking monopoly in the land market

The government or private monopolistic characteristics and activities in the urban land market should be abolished. Government as well as private led land and housing provision should be reconsidered.

Towards economics supported urban planning

It is very important to reconsider, the perspectives of urban planning with market efficiency in urban land policies in the country, specifically in OSZ and Sululta town. For instance, the major concerns of urban planning are related to spaces whereas urban economics mainly focuses on insuring social welfare and willingness to pay. Where, in the town we are losing both of these major key points. Likewise, there should be an approach that really ties up these very important concepts. Market led urban sustainability practices are very important. In this approach urban dwellers should get urban land in a considerable price through legally supported modalities where both government and the private sector freely involves in urban land market and the government should collect huge amount of revenue to for provision of the infrastructures needed.

One major reality of the future is that, we have huge portion of our country’s population are in need of urban life, whether we like or not. We can’t label this need to informality forever. Because cities are becoming the dominant form of human settlements so that pre development urban planning is a very important work of the government also, additionally, consultation and enabling local farmers around fringe parts of cities and towns is also very important.

The urban land market should be free, with strict regulatory procedures, every transaction should be registered, and all market actors also should be legal. By increasing the supply of residential urban land by government and the private sectors, it is possible to create the equilibrium of the demand and supply.

It would be very difficult if 80% if our population stays rural without basic amenities and deep rooted economic deprivation, we should have to take this massive hunger for urban life in to positive advantage. Coming to urban areas people needs shelter, place for their kids, sharing

this burden through facilitating safe transaction of land and frequent urban planning, we can create the greatest dynamics of urbanization in the history of the world.

One major point that shouldn't not be forgotten in privatization of residential urban land market is that, it is also important enforce strict government regulations that works towards insuring the welfare of the society, such issues include government led provision of services and infrastructures. Additionally, strong land management system, undertaking, inventory in frequently, immediate action taking for informal and illegal deeds is crucial.

Informality is the indicator of necessity, if massive portion of the population is informal (17% according to the survey conducted) that means there is huge demand, developing strategic land provision policies with core aim of supply is very important. With properly working urban land markets which are important for society and to bring about sustainable transformation because they potentially allow the poor and working class access to land and housing. Working towards housing, through different modalities including is also very important.

According to the data collected and the analysis conducted, using GIS trend analysis, the change in land mass area of the settlement shows that impressive growth of area caused by the failure of the formal urban land market is uncontrollable horizontal growth. Which should be handled through densification strategies to reduce the effect of leap frog effect by infill, redevelopment and renewal methods that led by public housing programs.

In order to control and manage the rapid sprawl happening in the town, guiding urban development through New Urbanism movement which is ideal to build bring about compact city and to bring about sustainable development of cities. Also, with general principles such as quality of life and urban sustainability, focusing on urban intensification, creating limits to urban growth, encouraging mixed-use development and placing a greater focus on the role of public transportation and quality urban design.

The town is growing badly, the major cause for it is the informality or failure of the formal land market. Nowadays people want to live in urban areas and it has resulted rapid urbanization. Proper land market system and growth management that can sustain and leads to a desired urban development is very crucial. In order to maximize the benefits of urbanization and minimize its negative externalities it needs to create morphologically viable urban settlements; wise utilization of urban land that fits the demand; securing property right and facilitating smooth transactions to create strong markets are crucial.

Best practices for achieving strong land urban markets

Iran achieved land market success by expanding stock of land by directly providing land for the poor for housing (Adesiyan.et.al, 2011) and Singapore also controlled urban sprawl through state led housing programs. Dutch housing supply had become totally price-inelastic due to government interventions in land markets (Cheshire, 2011). In South Africa the government provides state level housing productions and provision (King & Napier, 2019). Britain restricted the supply of land to reduce the sizes of cities (Cheshire, 2009).

To bring about a sustainable urban growth, its urban planning approach should be changed in to strategic neighborhood and community levels plan than town level SP approach because the LDPs are almost nominal and function less that are intended to implement the SP. To build a city which works for the future generations; the poor have to have a place in city, children have to have a field to run in it. Strong system of land use regulation without restricting the overall supply of space is also very important. Using IT for land management is also very important with technologies such as are GIS are becoming very important for decision making and actions for sustainable cities.

Eliminating of market failures to increase operating efficiencies and removing externalities are accepted approaches for government's interventions into urban land markets (Dowall, 1993) to redistribute scarce resources to the disadvantaged groups. Regulatory controls such as zoning, sub-division regulations, property rights, transfer of development rights, and control mechanisms designed to protect sensitive land resources, public interests, environmental and cultural values are also very important. Property rights that clearly define and secure land tenure definitely aids guiding development.

Finally, the researcher recommends for the upcoming researchers to work on the issue of urban land market failure. In this particular study different limitations are found in the theoretical and analytical aspects that ties up urban economics and urban planning. Based on this, researchers and policy makers should have to work how to combine these distinct concepts. Additionally, further studies should have to be conducted on the very important actors such as brokers that have great contribution in growth and development of urban areas.

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Annexes

Annex I. Checklist for data collection

No	Checklist/Variables	Data source	Collection method	Collection tools	
1	Actors in land market (land brokers, urban land owners, local farmers, land buyers, investors, the urban poor and the government)				
	• <i>Number of each actors</i>	Primary and • Own survey	• Interview • Questionnaire	• Note books • The prepared questionnaire	
		Secondary data • Municipality	• Interview • Collecting soft/hard copy documents	• Note books • Flash/hard disk	
	• <i>Level of influence of the actors on the market</i>	Primary data • Local people	• Questionnaire	• The prepared questionnaire	
		Secondary data • Municipality	• Interview • Collecting soft/hard copy documents	• Note books • Flash/hard disk	
	• <i>Social characteristics of the actors</i>	Primary data • Own survey	• Questionnaire	• The prepared questionnaire	
		Secondary data • Municipality	• Interview • Collecting soft/hard copy documents	• Note books • Flash/hard disk	
	• <i>Economic status of the actors</i>	Primary data • Own survey	• Questionnaire	• The prepared questionnaire	
		Secondary data • Municipality	• Interview • Collecting soft/hard copy documents	• Note books • Flash/hard disk	
	• <i>Legal status of the actors</i>	Primary and • Municipality	• Interview • Collecting soft/hard copy documents	• Note books • Flash/hard disk	
		Secondary data • Local working procedural manual	• Collecting soft/hard copy documents • Review • Note taking	• Flash/hard disk • Note books	
	Other causes of land market failure				
	• <i>Land proclamations, policies and regulations</i>	Secondary data • Municipality • Trusted (official)websites	• Collecting soft/hard copy documents • Review • Note taking	• Note books • Official websites	

2	<ul style="list-style-type: none"> <i>Urban land management system</i> 	Secondary data <ul style="list-style-type: none"> Municipality 	<ul style="list-style-type: none"> Collecting soft/hard copy documents Interview Note taking 	<ul style="list-style-type: none"> The prepared interview questions
	<ul style="list-style-type: none"> <i>Institutional working procedures</i> 	Secondary data <ul style="list-style-type: none"> Municipality Local working procedural manual 	<ul style="list-style-type: none"> Collecting soft/hard copy documents Interview Office observation Note taking 	<ul style="list-style-type: none"> Prepared interview questions Flash/hard disk Note books
	Consequences of urban market failure variables			
	<ul style="list-style-type: none"> <i>The rate of urbanization</i> 	Primary data <ul style="list-style-type: none"> USGS satellite maps AutoCAD files Old spatial maps 	<ul style="list-style-type: none"> Downloading Site observation Collecting soft/hard copy documents 	<ul style="list-style-type: none"> Flash/hard disk A2 and A3 size paper maps
	<ul style="list-style-type: none"> <i>The level of consumption of the natural environment</i> 	Primary data <ul style="list-style-type: none"> Own survey USGS satellite maps 	<ul style="list-style-type: none"> Questionnaire Downloading Site Observation 	<ul style="list-style-type: none"> Prepared questionnaire questions Flash/hard disk Camera A2 and A3 paper size maps
		Secondary data <ul style="list-style-type: none"> AutoCAD files Old Spatial maps 	<ul style="list-style-type: none"> Collecting soft/hard copy documents 	<ul style="list-style-type: none"> Flash/hard disk
<ul style="list-style-type: none"> <i>Suitability for plan implementation</i> 	Primary data <ul style="list-style-type: none"> Own survey 	<ul style="list-style-type: none"> Interview Site observation and visit 	<ul style="list-style-type: none"> Prepared interview questions Camera A2 and A3 paper size maps 	
	Secondary data <ul style="list-style-type: none"> Oromia planning institute central branch Municipality ✓ Structure plan (2005, 2016) ✓ Older plans ✓ Plan implementation report since 2002 	<ul style="list-style-type: none"> Interview Collecting soft/hard copy documents 	<ul style="list-style-type: none"> Prepared interview questions Note books Flash/hard disk 	
3	Constant variable			

<ul style="list-style-type: none"> • <i>Land market failure</i> 	Primary data <ul style="list-style-type: none"> • Own survey 	<ul style="list-style-type: none"> • Interview • Questionnaire 	<ul style="list-style-type: none"> • Prepared interview questions • Prepared questionnaire questions • Note books • Camera • A2 and A3 paper size maps
	Secondary Data <ul style="list-style-type: none"> • Library • Internet 	<ul style="list-style-type: none"> • Downloading • Review 	<ul style="list-style-type: none"> • Hard disk • Note taking

Annex II. Questionnaire

This questionnaire is a part of thesis by *Birhanu Uma* masters student at *Addis Ababa University* on the title *The Causes and Consequences of Land Market Failure in Oromia Special Zone, the case of Sululta Town*. Your responses are only for educational purposes and will kept confidentially. Thank you!

Questionnaire- For land market actors---Land brokers

Data collector's name: _____ Data collection Date: _____

Part I: Background of the respondent

1. Address (Kebele): _____ Local area name _____
2. Gender: Male Female
3. Age: <15 16-25 26-45 46-65 > 65
4. Level of education: Illiterate Elementary(1-8) Secondary School(9-10)
Preparatory (11-12) TVET Diploma First Degree Masters /PhD
5. Monthly income: < 800 800-2000 2000-4000 4000- 6000 6000-8000 8000-10,000 >10,000
6. Do you do land brokering for full time? Yes No

Part II: Land market

7. What do you think is your level of influence in the market? Very low Low Medium High Very high
8. Do you have license? Yes No
9. How many pieces of land did you sell in the last one month? _____.
10. How do you get your customers? _____.
11. What is your percentage of cut for one brokering act? _____.
12. How many of your brokering end up in success (out 10)? _____.
13. How many of your brokering end up in failure (out 10)? _____.
14. Which area of the town has high demand? Please, rank the areas; _____
,
_____, _____.
15. Who buys land most of the time? Investors Diasporas Town residents New comers Brokers other _____.
16. If you have answered question number 15, please rank them in their frequency (using 1, 2,):
Investors ___ Diasporas ___ Town residents ___ New comers ___ Brokers ___ Other ____.
17. Who sells land most of the time? Investors Local farmers Diasporas Town residents New comers Brokers other _____.

18. If you answer question number 17 Please rank the frequent sellers (using 1, 2):
Investors__Local farmers__Diasporas__Town residents__New comers__Brokers__other__

19. Do you think the market is working properly? Yes No If no how?

20. If you answer question number 19 No, who do you think caused it? Brokers Land sellers
 Land buyers Government bodies other _____.

21. What is the biggest advantage in the market?

22. What is the biggest challenge in the market?

23. How do you set price?

Part III: Urban Morphology

24. Do you think the settlement pattern is suitable? Yes No

25. In which time period did the areas are grown rapidly the most?

0-5 years 5-10 years 10- 15 years 20 years <

26. What kind of urban morphological defects are being created in the areas?

Narrow streets Blocked streets Large blocks Small blocks Small parcels
 Large parcels No open spaces other _____.

Questionnaire- For land market actors--- Urban land owners

Data collector's name: _____ Date of data collection: _____

Part I: Background of the respondent

1. Address (Kebele): _____ Local name _____
2. Gender: Male Female
3. Age: <15 16-25 26-45 46-65 > 65
4. Family size _____ Male _____ Female _____
5. Level of education: Illiterate Elementary(1-8) Secondary School(9-10)
Preparatory (11-12) TVET Higher Educational Diploma First Degree
Masters /PhD
6. What do you do for living? _____.
7. Monthly income: < 800 800-2000 2000-4000 4000- 6000 6000-8000
 8000-10,000 >10,000

Part II: Activity in the land market

8. Have you ever sold land ? Yes No , if yes how many times _____ and when _____, _____, _____, _____.
9. If you have answered question number 8 yes, in which area? Kebele _____ local area name _____.
10. If you have answered question number 8 Yes, Who did you consulted? Broker Family and friends' Official from municipality other _____.
11. If you have answered question number 8 Yes, Who sets the price for you? My self The buyer The broker Official from municipality other _____.
12. If you have answered question number 8 Yes, please specify the amount of money you sold it on? _____.
13. If you have answered question number 8 Yes, do the land has ownership certificate? Yes No
14. Have you ever bought land? Yes No , if yes how many times _____ and when _____, _____, _____, _____.
15. If you have answered question number 14 yes, in which area? Kebele _____ local area name _____.
16. If you have answered question number 14 Yes, Who did you consulted? Broker Family and friends' Official from municipality other _____.
17. If you have answered question number 14 Yes, Who set the price for you? My self The seller The broker Official from municipality other _____.

18. If you have answered question number 14 Yes, please specify the amount of money you bought in the land? _____.
19. If you have answered question number 14 Yes, do the land had ownership certificate?
Yes No
20. What do you think is your level of influence in the market? Very low Low
Medium High Very high

Part III: Open ended questions on the land market and urban morphology

21. What is the biggest challenge in the market?

_____.

22. What is the biggest advantage in the market?

_____.

23. Is the settlement pattern in the area you live suitable? Yes No If no why?

_____.

24. Do the street placed well? Yes No If no why?

_____.

25. Do the area has open spaces?

_____.

Questionnaire- For land market actors--- Local farmers

Data collector's name: _____ Data collection date: _____

Part I: Background of the respondent

1. Address (Kebele): _____ Local name _____
2. Gender: Male Female
3. Age: <15 16-25 26-45 46-65 > 65
4. Family size _____ Male _____ Female _____
5. Level of education: Illiterate Elementary(1-8) Secondary School(9-10)
Preparatory (11-12) TVET Higher Educational Diploma First Degree
Masters /PhD
6. Monthly income: < 800 800-2000 2000-4000 4000- 6000 6000-8000
 8000-10,000 >10,000 Yearly _____.

Part II: Activity in the land market

7. Have you ever sold land ? Yes No , if yes how many times _____ and when _____, _____, _____, _____.
8. If you have answered question number 7 Yes, in which area? Kebele _____ local area name _____.
9. If you have answered question number 7 Yes, Who did you consulted? Broker Family and friends' Official from municipality other _____.
10. If you have answered question number 7 Yes, Who sets the price for you? My self The buyer The broker Official from municipality other _____.
11. If you have answered question number 7 Yes, please specify the amount of money you sold it on? _____.
12. If you have answered question number 7 yes, do the land (building) has ownership certificate? Yes No
13. Have you ever bought land? Yes No , if yes how many times _____ and when _____, _____, _____, _____.
14. If you have answered question number 13 yes, in which area? Kebele _____ local area name _____.
15. If you have answered question number 13 Yes, Who did you consulted? Broker Family and friends' Official from municipality other _____.
16. If you have answered question number 13 Yes, Who set the price for you? My self The seller The broker Official from municipality other _____.

17. If you have answered question number 13 Yes, please specify the amount of money you bought it on? _____.
18. If you have answered question number 13 Yes, do the land (building) has ownership certificate? Yes No
19. What do you think is your level of influence in the market? Very low Low Medium High Very high

Part III: Open ended questions on the land market and urban morphology

20. What is the biggest challenge in the market?

_____.

21. What is the biggest advantage in the market?

_____.

22. Is the settlement pattern in the area you live suitable? Yes No If no why?

_____.

23. Do the streets placed well? Yes No If no why?

_____.

24. What kind of urban morphological defects are being created in the areas?

- Narrow streets Blocked streets Large blocks Small blocks Small parcels Large parcels No open spaces other _____.

Questionnaire- For land market actors--- Land buyers

Data collector's name: _____ Data collection date _____

Part I: Background of the respondent

1. Address (Kebele): _____ Local name _____
2. Gender: Male Female
3. Age: <15 16-25 26-45 46-65 > 65
4. Family size _____ Male _____ Female _____
5. Level of education: Illiterate Elementary(1-8) Secondary School(9-10)
Preparatory (11-12) TVET Higher Educational Diploma First Degree
Masters /PhD
6. Monthly income: < 800 800-2000 2000-4000 4000- 6000 6000-8000
 8000-10,000 >10,000 Yearly _____.
7. What do you do for living? _____.

Part II: Activity in the land market

8. What do you want to buy? (land) (building)
9. In which part of the town do you want to buy? Core area Intermediate area
Periphery part Anywhere in the town Kebele _____ local name of the area _____.
10. Who did you consulted? Broker Family and friends' Official from municipality
 other _____.
11. Do you want land (house) which has ownership certificate? Yes No if No why?
_____.
12. Have you ever bought (land) (building) ? Yes No , if yes how many times
_____ and when _____, _____, _____, _____.
13. If you have answered question number 12 Yes, in which area? Kebele
_____ local area name _____.
14. If you have answered question number 12 Yes, Who did you consulted? Broker
Family and friends' Official from municipality other _____.
15. If you have answered question number 12 Yes, Who set the price for you? My self
The seller The broker Official from municipality other _____.
16. If you have answered question number 12 Yes, please specify the amount of money you
bought it on? _____.

17. If you have answered question number 12 Yes, do the land (building) has ownership certificate? Yes No
18. Have you ever sold (land) (building) ? Yes No , if yes how many times _____ and when _____, _____, _____, _____.
19. If you have answered question number 18 Yes, in which area? Kebele _____ local area name _____.
20. If you have answered question number 18 Yes, Who did you consulted? Broker Family and friends' Official from municipality other _____.
21. If you have answered question number 18 Yes, Who sets the price for you? My self The buyer The broker Official from municipality other _____.
22. If you have answered question number 18 Yes, please specify the amount of money you sold it on? _____.
23. If you have answered question number 18 Yes, do the land (building) has ownership certificate? Yes No
24. What do you think is your level of influence in the market? Very low Low Medium High Very high

Part III: Open ended questions on the land market and urban morphology

25. What is the biggest challenge in the market?

_____.

26. What is the biggest advantage in the market?

_____.

27. What kind of urban morphological defects are being created in the areas?

- Narrow streets Blocked streets Large blocks Small blocks Small parcels Large parcels No open spaces other _____.

Questionnaire- For land market actors--- Investors

Data collector's name: _____ Data collection date _____

Part I: Background of the respondent

1. Address (Kebele): _____ Local name _____
2. Gender: Male Female
3. Age: <15 16-25 26-45 46-65 > 65
4. Family size _____ Male _____ Female _____
5. Level of education: Illiterate Elementary(1-8) Secondary School(9-10)
Preparatory (11-12) TVET Higher Educational Diploma First Degree
Masters /PhD
6. Monthly income: < 800 800-2000 2000-4000 4000- 6000 6000-8000
8000-10,000 >10,000 Yearly _____.
7. What do you do for living? _____.

Part II: Activity in the land market

8. Do you own (have) land in the town? Yes No
9. Do you want to buy land in the town? Yes No
10. If you answered question number 9 yes, in which part of the town? Core area
Intermediate area Periphery part Anywhere in the town Kebele _____ local
name of the area _____.
11. Who did you consulted? Broker Family and friends' Official from municipality
 other _____.
12. Do you want the land with ownership certificate? Yes No if No why?
_____.
13. If you have answered question number 9 Yes, Who sets the price for you? My self
The seller The broker Official from municipality other _____.
14. If you have answered question number 9 Yes, please specify the amount of money you
bought it on? _____.
15. Have you ever sold land in the town so far? Yes No
16. If you answered question number 15 yes, how many times? _____
when _____, _____, _____, _____, _____.
17. Who did you consulted? Broker Family and friends' Official from municipality
 other _____.

18. Do the land/building had ownership certificate? Yes No if No why?
_____.
19. If you have answered question number 15 Yes, Who set the price for you? My self
The seller The broker Official from municipality other _____.
20. If you have answered question number 15 Yes, please specify the amount of money
you bought it on? _____.
21. If you have answered question number 15 Yes, in which area? Kebele
_____ local area name _____.
22. What do you think is your level of influence in the market? Very low Low
Medium High Very high

Part III: Open ended questions on the land market and urban morphology

23. What is the biggest challenge in the market?

_____.
24. What is the biggest advantage in the market?

_____.
25. Do you think the settlement pattern suitable

_____.
26. What kind of urban morphological defects are being created in the areas?
Narrow streets Blocked streets Large blocks Small blocks Small parcels
 Large parcels No open spaces other _____.

Annex III. Interview

This interview is a part of thesis by *Birhanu Uma* masters student at *Addis Ababa University* on the title *The Causes and Consequences of Land Market Failure in Oromia Special Zone, the case of Sululta Town*. Your responses are only for educational purposes and will kept confidentially. *Thank you!*

Interview –with Sululta town land and housing development agency

What are the main challenges in land market and land in Sululta town?

Do you think land market is failed to allocate land in appropriate manner in the town?

What are the main causes for land market failure in the town and in the Special Zone as general?

What are the main morphological characteristics of Sululta town?

What are the main morphological impact of the rapid urbanization related to the failure of land market failure?

What are the regulatory and procedural difficulties to control the rapid land occupation and sprawl?

