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ADDIS ABABA UNIVERSITY

**ETHIOPIAN INSTITUTE OF ARCHITECTURE, BUILDING
CONSTRUCTION AND CITY DEVELOPMENT (EiABC)**

**The Challenges of Residential Land Provisions and Sustainable Land
Developments: The Case of Furi Sub-City of Shaggar City**

By:

Girma Teferi Nigatu

June, 2024

Addis Ababa, Ethiopia



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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 of the Award of Master of Science Degree in Urban Planning

Advisor: Birhanu Girma (PhD)

June, 2024

Addis Ababa, Ethiopia

Declaration

I, the undersigned, declare that this thesis is my own and original work in fulfillment of the requirements for the degree of Master of Science in Urban Planning entitled “**The Challenges of Residential Land Provisions and Sustainable Land Developments: The Case of Furi Sub-City of Shaggar**” It has not been previously submitted to this or any other institution and is the original work of the author unless otherwise stated. All sources of material used for the thesis have been properly acknowledged, following the scientific guidelines of the Institute.

Addis Ababa

June, 2024

By: Girma Teferi Nigatu

Signature

Confirmation

I stated that Girma Teferi has carried out this research work on the topic entitled “**The Challenges of Residential Land Provision and Sustainable Land Developments: The Case of Furi Sub-City of Shaggar.**” under my supervision and it is sufficient for submission of the in partial fulfillment of the award of Master’s Degree in Urban Planning.

Addis Ababa

June, 2024

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Signature

Approval

As a member of the Examiners board of the final master's thesis open defense of Girma Teferi Nigatu, we have read and evaluated the thesis prepared by Girma Teferi Nigatu entitled **“The Challenges of Residential Land Provision and Sustainable Land Developments: The Case of Furi Sub-City of Shaggar”** 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 of Science in Urban Planning.

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Abstract

Access to land for residential housing is a main challenging urban resident in urban centers of developing nations, particularly for low- and medium-income groups. The difficulties and obstacles involved in obtaining land for residential development are the cause of inefficient living conditions, which have an impact on the community's ability to survive. By classifying and ranking the challenge of land provision and its effects on the socioeconomic condition and sustainable development, this study aims to contribute to the ways of overcoming the challenge of land provision in the study area. To fulfill the goal of this investigation, eighteen parameters of land provision challenges, thirteen socioeconomic conditions, and ten parameters of sustainable land developments were prepared, and the data were gathered from experts, employees of land-related local offices, and other interested parties who had an interaction with land provision and were aware of land provision for residential housing and other connected issues. To identify the ranks of the challenges and its effects on socioeconomic condition and sustainable land development relative importance index (RII), factors, correlations and regression analysis were applied. The results showed that availability of large investment and lack of priority and strategies; because of location, broker activities, and high land values; weak institutional performance and high residential land demand; and the unwillingness of farmers and their leaders' factors are the most influencing factors in the process of land provision for residential housing. These influencing factors have a strong effect on socioeconomic conditions as well as on sustainable land development in the study area. Finally, the research recommends the city's authority should develop a strategy on how to meet residential land demand and supply, encourage farmers on land transfer procedures, develop and change the lives of farmers, and increase the land compensation and payment process to minimize associated factors.

Key words: Residential Housing, Land Provision, Land Development, furi sub city

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Acronyms and Abbreviations

AEI	Assessment of Environmental Impacts
EiABC	Ethiopian Institute of Architecture, Building Construction and City Development
FAO	Food and Agriculture Organization of the United Nations
FGDs	Focus Group Discussions
IEA	International Energy Agency (page 22)
KII	Key Informant Interview
MOWUD	Ministry of Work and Urban Development
MSE	Micro and Small Enterprise
OUPi	Oromia Urban Planning Institute
RII	Relative Importance Index
SPSS	Statistical Package for Social Sciences
SSA	Sub-Saharan African
TI	Information Technology
UN	United Nation
UNECE	United Nation Economic Commission for Europe
UNEP	United Nation Environmental Program
UN-Habitat	United Nation Habitat
UNHCHR	United Nations High Commissioner for Refugees
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Land provisions for residential housing, particularly for urban poor is the worldwide challenge. The social equity and inclusive sustainable urban development (Liu et al., 2023) with the nature of land resource as a fundamental to development, and for any service or infrastructures delivery to a society, access to land is always challenging (Arjjumend & Seid, 2018). These challenges and associated effect of land provision for housing on sustainable land developing and on socioeconomic conditions is more complicated in global south than global northern region (UN-Habitat, 2012). Despite, the nature of complexities and chained bureaucratic network related land managements, the rapid urbanization, the nature of urban poverty, weak land managements and corruption related are even more complicated the land provision challenges in developing world (Arjjumend & Seid, 2018; Hasrat et al, 2018).

Studies have indicated numbers of challenges associated with land provision for housing. For instance, the finding by Wajiha et al. (2021) who conducted a study in New Zealand and by Bofo et al., (2023) showed that very long application processes, delay in evaluations and consent of documents; weak interaction and coordination between regulatory authorities were the challenging factors of land provision. Furthermore, the ineffective monitoring systems, the lack of transparency of information, and the absence of legal enforcement (Xiang, 2018), the desire of only profit oriented of landowners, and increased regulation over the resale of the houses (Udom & Innocent, 2019), weak land use and planning, the financial cutbacks and restriction (Zou & Chau, 2015), lack of finance and unavailability of un-developed land (World Bank, 2003; Alexander, 2021), land related policies like extensive land holdings policy and land conveyance (World Bank, 2003; Kitay, 1987; Evers, 1983, the land market forces (UN-Habitat, 2012) are among the challenges that influencing land provision for residential housing.

Moreover, it is a reason for tenure insecurity, low physical standards of housing and community spaces, lack of access to infrastructure and poor general environment which in turns reason for the community health problems, weak social interaction, and overall socioeconomic challenges (UNECE, 2009). The delay in provision of land for housing or if the residents cannot access to lands, they are forced to rent or find low housing prices and reside in informal housing neighborhoods, where the quality of life is threatening for healthy and happy urban life (Breman, 2003). These disadvantaged communities by housing land

provision are usually live in the areas of urban peripheries characterized by high rates of unemployment, poverty, low income, and social exclusion, poor healthy and unsustainability (Ye et al., 2017). In general, only owning a house has many implications on residents' life and psychological healthy (Kearns et al. 2000; Hiscock et al. 2001; Turner and Luea 2009; Muhammad & Johar 2019). Hence, in addition to the communities' sustainability problems, lack of preplanned land provisions for housing or conversion of land use without planning for illegal housing is usually the causes for the complicated environmental, social, and economic problems (Scarpaci, 2010; Wu et al., 2013).

In similar manner, in Sub-Saharan African (SSA), access to land is highly challenging, particularly for the poor urban community who have no economic and political power (Adedeji & Olotuah, 2012). The challenges are related to land ownerships or tenure problems (Owusu-Ansah, et al., 2019), weak performance of land related institution and poor governance, improper record keeping, expensive and delaying procedures, unqualified or untrained human resources (Boafo et al., 2023), urban poverty character, rapid urbanizations, and corruption (Scheuer et al., 2016, Hasrat et al, 2018) are the common challenges. As a result, the challenges of land provision in SSA that forced the poor to live in slums and squatter settlements.

The question is how the problems of land provision for residential housing is related with the socioeconomic condition and sustainable land developments? The witness from literatures showed that the problems and challenges of access to land for residential housing are the causes for inadequate living condition or poor-quality environments of urban community and hence, on the sustainability of the community. Indicating that access to land or affordable housing can be forward the life quality of the community towards a better condition. For instance, according to the study of Zhao (2016) the lack of fairly distribution of land or affordable housing among societal activities in terms of their ethnicity, income, sex, age and the lack of public participation on land provision have resulted conversion of fertile farmland on the urban fringe of Beijing. Furthermore, weak land administrations systems and lack of supply land for housing leads to socioeconomic inequality and reasons for the development of squatters (Lombard & Huxley, 2011).

Like as any other SSA countries, in Ethiopian urban center, access to land for residential housing is challenging, particularly for urban poor communities. The land administrative related problems, legal blockages and over-bureaucratization (Arjjumend & Seid, 2018),

inadequate databank systems, shortage of financial resources, lack of participation by the poor (Abuye, 2006, Share, 2020), high exposure of land for corruption, weak integration of institutions and capacity (World Bank, (2012a), the expropriation of land holdings for public purpose and under payment of compensation (Andrew, 2007) and interference of local brokers in housing issues (Share, 2020) are among the challenging factors in land provision for residential housing in Ethiopia.

Such types of challenges of land provision for residential are even worsened and is a current issue in the region of Addis Ababa, the capital of nation and in the new formed city of Shagger, particularly in the Furi Sub-city study area. In the study area (Furi-Sub-city) the problems of housing and land provision is challenging that aggravated by the influence of high housing demands and problems in Addis Ababa, high housing demand and land expropriation problems in the region of Shagger city, and accumulation of high industry and factories that cause in migration from all the parts of the country are even worsen the challenges. Conducting investigation and understanding of the complexities of land provision challenges for residential development enables and help housing stakeholders, local governments, planners, and policy makes to provides feasible solutions in land provision and hence to achieve sustainable urban communities and urban development (Shahzad, et al., 2022).

Therefore, this study is contributed for the ways of overcoming the challenge of land provisions in the study area by characterizing and ranking the challenge of land provision and its effects on socioeconomic condition and sustainable development of the study area and other areas with similar characteristics.

1.2 Problems of the Statement

Ethiopia is the fastest urbanizing region in the world (UN, 2008; Assefa, 2010). The urbanization phenomenon in the country is being aggravated by population increments, the effects of climate change, expansion of technology and information, the depletion in arable lands and expansion of education that contributing for mass population migration to urban areas.

The provision of residential housing is the most challenging issues in contemporary urban areas of the country. The main reason of it is the land. Currently access to land for residential housing in Ethiopia is challenging issues particularly for the poor in faces of this rapid urbanization characteristics. The lack of access to land for residential has increased living costs to urban residents, the expanded areas of the slums and informal settlements, the aggravated vulnerability of urban poor and women-headed households, become the reason for environmental degradation, and other marginalized and disadvantaged groups in the urban centers of the country (UN-Habitat, 2011). Accordingly, challenge of access to land for residential purposes and lack of sufficient land provision had created acute housing shortage and overcrowding (Arjjumend, & Seid, 2018), negatively impacting the socioeconomic conditions of urban residents and sustainable land development. However, as indicated by the above report of UN-Habitat, (2011), it stated only the effects of access to land, showing that there is understanding gaps in terms of charactering, listing, and ranking the challenges of land provision for residential housing purposes and its effect on socioeconomic conditions and sustainable land development in the country.

Particularly in the Addis Ababa, Shagger city and the case study areas (i.e., Furi sub-city) land provision for residential housing is a more serious challenging than any other areas in the country. Housing problems or access to lands for housing for residents specially for poor community in case study is currently becoming political agenda. On the other hand, the processes of land transferring from farmers are another challenge for government to provide sufficient lands for residential housing in the region including the case study sub-city. Furthermore, the housing problems in Addis Ababa and land demand for other development purpose are even more complicated demand of lands. These have resulted in informal housing and squatter development in the study areas and become where large urban poor communities are being living.

However, those problems of land provision and its effects in the Furi-sub-city or in Shagger city are not based on systematic investigation and hence, there is a gap in scientific understanding and listing the challenges of land provision in the study area (Furi sub-city).

Studies that so far investigated have been limited to the character of land management (Buta, 2019), socioeconomic effects of good governance (Udessa, et al., 2023), squatter settlements (Abagissa, 2019). Though, a few studies have listed the challenges of land provision and access to lands for residential such as a study by Muleta (2014), in Bekoji town, study by Bereket and Nigatu (2015) in Hawassa city, by Share (2020) in Sululta town and by Ayana (2018) in Bedelle town still there is a lack of understanding on challenges of land provision in the study area. None of these studies had ranked the challenges related to land provision, hence it is unknown which challenges should be tackled first and how, on the other hand, the character of land provision challenges in those towns and city might be different due to the facts of high land demand for different development activities in the region of Addis Ababa and Shagger cities than those urban centers.

Furthermore, there is limited literature and there is understanding gaps regarding to the effects of land provisions' challenges on socioeconomic condition and sustainable land development in the Furi-sub-city. The relationships for challenge of land provision and socioeconomic condition or sustainable are not yet scientifically investigated and it is unknown whether the relationships are positive or negative in the case study sub-city. Even though as study conducted by Udessa, et al., (2023) indicated the poor governance and corruption in the urban land management systems of Laga-Tafo, had brought negative influence on socioeconomic and on the implementation of environmental protection rules, but still not established a clear relationship regarding to the challenge of land provision in Laga-Tafo.

Therefore, characterizing, listing, and ranking the challenges of land provision in Furi sub-city and identifying the effects of the on socioeconomic condition and sustainable development helps to improve overall access to lands for residential purposes or access to housing by residents, particularly for urban poor communities. Hence, this study believed to increase insight by exploring and then rank the challenges of land provision for residential housing and effects on socioeconomic condition and sustainable land development based on the evaluations of experts in land management other related offices and other stakeholders who have direct relation with land provision in the study area.

1.3 The Objectives of the Study

1.3.1 General Objective

The general objective of the study is to explore the challenge of urban residential housing land provision and its effects on socioeconomic conditions of residents and the practices of sustainable land development in Furi sub-city of Shagger.

1.3.2 Specific Objectives of the Study

The specific objectives of the study are to:

- identify the challenges of residential land provision in the Furi-sub-city;
- examine the effects of residential land provision challenges on socioeconomic conditions of the study area;
- identify the impacts of residential land provision challenges on the practices of sustainable land developments in Furi-sub city.

1.3.3 Research Questions

In consideration to address the above specific objectives, the following research questions were raised to undertake the study.

- ✚ What are the challenges of residential land provision in the study area?
- ✚ What are the effects of residential land provision challenges on socioeconomic conditions of the study area?
- ✚ What are the impacts of residential land provision challenges on the practices of sustainable land developments in Furi-sub city?

1.4 Scope of the Study

The scope of the current study presented in terms of spatial areas where the study has been taking place and the thematic issues that the study has been focusing on. In this regard the study had focused on Furi-sub-city of Shagger, the new city that formed recently. Thematically, study was only focused on the challenges of urban land provision for residential housing purposes and its effects on the socioeconomic conditions and sustainable land developments in the boundary of indicated spatial scope. To identify and rank the challenges of land provision for residential housing and its effects, study was focused on the

views and opinion of experts, land managements, administrations, developments, land banks, infrastructure and construction workers of the sub-city and other stakeholders who directly involved in land provisions or related systems in sub-city or in the areas.

1.5 Significance of the Study

This study is important for several reasons. The first is that the author believe that this study had shaded light by filling gaps indicated, hence, has important roles in filling literature gaps for scientific community presenting the study area and other areas with similar characteristics. Secondly, as this study provided understanding on the challenges of land provisions and effects on socioeconomic and sustainability, the rank of the challenges enables urban planners, land policy, urban developers' stakeholders, decision makers and other concerned body to come up with sound decision or solution despite offering greater importance for further investigation on this topic.

Thirdly, this study is believed to help more the land authorities of the study sub-city and other sub-cities of shagger on how to curb the challenges and which challenge they must focus on to ensure effective and on time land delivery system. Despite, providing insight and understanding for all concerned bodies, the study will help to improve good governance related problems particularly related to housing issues for poor, hence, has significant positive input on well-maintained socioeconomic condition of the resident and for overall sustainability of the case study areas and other areas with similar characteristics. Furthermore, the findings of this study will serve as based for other students and by showing future research direction for interested groups in the areas.

1.6 Limitation of the Study

The study is limited in coverage and duration. The main emphasis is to identify the effect of land provision challenges on the socioeconomic conditions with depth exploration of the challenging factors that hindering active and on time land delivery for residential housing with the effort of identifying the challenging factors that hinder active and on time land delivery for residential housing in Furi sub-city of Shagger.

1.7 Organization of the Study

This report paper has sectioned into five main parts by chapters. Accordingly, chapter one provides the background evidence on the challenges of land provision for residential housing

and its effects on socioeconomic condition of urban residents and as well as the effects it pose on the sustainability. The section also contains other subsection such as statement of the problems, research objective, research question, scope and significance of the study and limitation to the study. Chapter two concerned with the reviews of academics' discourses that were relevant for this study. The review was focused on challenges of land provision, aggravating factors, the effects on socioeconomic conditions and sustainability, challenge of land provision in Sub-Saharan Africa and Ethiopia, ways of overcoming the challenging and benefits effective and on time land delivery for residential were included.

The section three or chapter three presented brief background of the case study areas and about research methods and materials used for this study. The chapter have further sub section such as description of the study area, research design and method, type of data, study variables, sample size and techniques, methods of data collection and analysis. Chapter four is about result and discussion of the study. The chapter discussed the results and discussion in respect to the research questions, the finding of the study and related to the finding of other studies. The final section is about conclusion and recommendation. The paper's finding is summarized in respective to research question and the recommendations were forwarded based on the findings of the study for policy improvement and inclusive land provision response.

CHAPTER TWO: REVIEWS OF THE LITERATURE

2. Introductions

This section of the study which focus primarily on the literature discourse of the challenges of land provisions for residential has further break downed and discussed to easily understand the issues that have been so far discovered. Accordingly, the chapter organized in focus of mainly the challenges of residential land provisions, the effect of those challenges of socioeconomic activities of the residents and the areas as well and the effects on sustainable developments on the community and the area as well. On the other hand, these organization of the reviews and the flow of ideas is based on the order of the research questions of this study.

The chapter started with briefly presenting the definitions of key terms that are redundant throughout this study report and then go through the reviews of different literatures presented on the three above key issues over the world, in African particularly in Sub-Saharan Africa (SSA) and in the Ethiopian cases. The section finalizes the reviews with summaries of main understanding from the literatures and the gaps identified on this study in the case study, in Ethiopia and as well as in the other nations with similar characteristics like SSA.

2.1 Theoretical Literature Rivew

2.1.1 Definition of Key Terms

Residential Lands: refers to living areas in the urban centers or suburban areas zoned for housing or residential purposes. This may include single-family building, multi-family homes, apartment buildings, townhouses, and other residential structures. Those land areas are always located in areas that are proposed for residential development, may contain specific zoning regulations and building codes that govern the type of housing that can be constructed on the land (Ekbia et al., 2009).

Land Provision: Land provisions take in the regulations, rules, and limitations that pertain to the utilization and development of land in a specific region by the stablished local authorities, such as municipalities and planning commissions (Ennis, 2010). These provisions aim to manage and direct land use to achieve planning objectives. Land provisions encompass a range of elements, including zoning regulations, building codes, environmental protection measures, and other restrictions that dictate how land can be utilized and developed. These

provisions are intended to ensure that land is utilized in a manner that promotes public safety, environmental sustainability, and the overall well-being of the community. Land provisions are essential in urban planning, property development, and the management of natural resources (Auckland Council, 2019).

Land Development: The process of transforming raw land into plots suitable for development involves providing essential utilities such as water supply, sewerage, gas, and electricity, along with streetlights, footpaths, curbs, and streetscape. Additionally, it entails constructing and naming local streets and sections, and assigning legal titles to each (McDonagh, 2010). For instance, In New Zealand, the development of land is a complicated undertaking that often extends beyond the established time frames. The procedure commences with a comprehensive topographical survey and a scheme plan, which are mandatory prerequisites for applying for resource consent (Auckland Council, 2019). Always land development projects must adhere to the protocols and requirements set forth by the consenting authority, such as the specification of a minimum lot size, the construction of building platforms, yard setbacks, height restrictions, and the provision of essential utilities, including water, electricity, and fiber optics, as well as the disposal of wastewater and storm water (Sutherland, 2019).

Sustainable Land Development: The practice that involved the responsible development and maintenance of land to meet current needs without jeopardizing the ability of future generations to meet their own needs. It includes thoughtful planning, design, construction, and management of land and property projects to promote environmental, social, and economic sustainability (Akadiri, et al., 2012). The objective of sustainable land development is to minimize the negative effects on natural resources, encourage energy efficiency, decrease pollution, and improve the overall well-being of communities (Williams, 2007). According to Samal and Dash (2023), this approach typically includes factors like eco-friendly construction methods, incorporation of renewable energy, water preservation, protection of biodiversity, and the establishment of pedestrian-friendly, diverse communities. The aim is to establish developments that are environmentally conscious, socially fair, and economically feasible in the long run (Williams, 2007).

Socioeconomic Conditions: Socioeconomic conditions refer to the combination of social and economic factors that influence the status and well-being of individuals, families, and communities. These conditions encompass a wide range of factors, including income levels,

employment opportunities, education, housing, access to healthcare, social mobility, poverty rates, and overall quality of life (Bangura, 2010). It plays a significant role in shaping the opportunities and challenges that people face in their daily lives. They are influenced by a variety of social and economic policies, cultural norms, historical trends, and systemic inequalities. Understanding socioeconomic conditions is crucial for addressing issues such as poverty, inequality, and social justice, as well as for designing effective policies and programs to improve the overall welfare of society (Bangura, 2010, Hujo, 2021).

Urbanizations and Housing: Urbanization and housing are closely interconnected, and their relationship has significant implications for the development and sustainability of urban areas. The key aspects of their relationship are: Urbanization leads to an increased demand for housing, Urbanization often results in a diverse range of housing needs (meeting these diverse needs is essential for creating inclusive and sustainable urban environments), Urbanization requires the development of infrastructure to support housing, Urbanization influences land use patterns and zoning regulations, affecting the location, density, and type of housing developments, Urbanization presents opportunities to promote sustainable housing practices (UN-Habitat, 2005). The relationship between urbanization and housing also impacts social equity, as access to quality housing, affordable neighborhoods, and community resources can influence the well-being of urban residents. Understanding and addressing the complex relationship between urbanization and housing is crucial for creating livable, inclusive, and sustainable urban environments. Effective urban planning, housing policies, and community engagement are essential for managing the dynamics of urban growth and ensuring access to adequate housing for all residents (UN-Habitat, 2016).

2.1.2 Land Development and Urban Housing

Beside the residential housing the urban housing contains all the types of building in the urban area i.e., including the residential housing. The all these urban housing are directly integrated with residential housing and is not functional without residential services or vice-verses. Therefore, any activities that are imposed on natural lands or farming lands in urban areas or on peripherals of urban areas in a way to stimulated development is for housing (Ennis, 2010). This indicated that the land development and urban housing are highly interlocked means the problems related to land development are the root cause for urban housing related problems particularly urban residential housings (Metternicht, 2017).

These land development for urban housing especially urban residential housing can be seen as formal land development or in formal land development (i.e., formal housing and informal housing). According to Adams and fuss, (2010) formal land development or housing in particular residential housing represents land developed or housing produced through the official or recognized institutions and planning authorities such as banks, land development companies, real stated developers, private developers on personal or in group guided by formal legal practices, land use, building standards and directive regulations.

However, the failures in formal land development or housing because of several reason leads for the emergence of informal land development or housing in some cases in developed countries while usually in developing countries. In many cases these informal activities can results in various consequences hence, always tried to bring to formal (formalizing) or demolishing (Pugh, 2006). Both have their own social economical, sociopolitical and sustainability issues which pose environmental consequences. Formalizing may lead to unsustainable land development since it's not according to scientific based land use and may open door for the corruptions and hence leads to sociopolitical problems (Ekbia et al., 2009). Demolitions also always resulted in multiple socio, political and environmental problems. Where the effect is from individuals to collectively the community and the government (Kamau, 2002). If only demolishing is taken alone, it has many economic consequences on the owner one hand and on the other hand on the government or environmentally, the resources used for constructions is going to waste which leads to un-efficient use of natural resources and has many other negative impacts on nature. It leads the poor communities to live in below standard housing, not access to public facilities and my pose communities' healthy problems (both physical and physiological healthy) (Akadiri, et al., 2012).

However, the questions are what are causes and challenging factors for the failures of formal land development or housing provisions? What are the effects of those challenges on the socioeconomic conditions of a communities? And how about the effect on the sustainable land development of an urban centers? The literatures have tried to provide the relationships of challenges of land provisions for housing and the effects on socioeconomic condition and sustainable development as presented in detail in the following sections of this chapter.

2.2 Empirical Literature Rivew

2.2.1 The Challenges of Land provision for Residential Housing

Studies had indicated the main challenges of land provision for housing over the world. There are differences and similarities among the challenges within developed regions and developing nations. However, the challenges and causes of land provisions for residential housing in Sub-Saharan countries are similar.

Accordingly, Wajiha et al. (2021) conducted a study in New Zealand on the challenges of lands provisions for residential housing by employing relative importance index (RII) method. They identified nine challenges such as: exceptionally long application processes, delay in evaluations and consent of documents; scope modification; weak interaction between regulatory authorities, late response to requests by regulatory authorities; weak coordination within regulatory authorities; weak planning and scheduling; design errors and slow progress while design development were the challenges significantly influencing the provision. In very similar way Boafo et al., (2023) discussed in their findings that the expensive nature of the procedure, improper record keeping, overlap of bureaucracy, disorganization of the procedure, and the presence of unqualified or untrained middlemen, and lack of accountability and transparency on the part of the traditional authorities and the delay in approval were the main obstacles challenging land provision in Namibia, As also discussion by Xiang (2018) on weak efficiency and unfairness in housing provision indicated; the function of agencies, ineffective monitoring systems, the lack of transparency of information, and the absence of legal enforcement were found to influencing the system. Accordingly, Xiang emphasized that regulations enforcement along with transparency is the most key institutional establishment because it is the base for functions and to stipulates organizations to collaborate and monitoring the housing provisions system. Furthermore, most of the literatures that have done on this study issue have redundantly revealed that the rigidity and excessively strict bureaucratic structures and the desire of only profit oriented of landowners, and increased regulation over the resale of the houses are the familiar challenges of over the world (Udom & Innocent, 2019).

While other study rises the issues of housing delivery challenges in terms of sustainable developments and affordable housing. For instance, Black and Hoben (1985) pointed that the land development and provision is the main challenges for sustainability and affordable housing development. Accordingly, land use and planning in most of the nation or cities

along with in the rapid urbanization is the challenge to balance the supply of large land parcels for the development of affordable housing and sustainable development. In addition to the financial cutbacks and restriction, and rigorous requirements of governmental regulations are also the major challenge to the provision lands to affordable housing (Zou & Chau, 2015). A recent finding by Alexander (2021) also verified that challenges such as finance, unavailability of un-developed land, rigid municipal procedures, high demand than supply and understaffing of personnel in the division of property management of Windhoek city were the obstacles that affecting the land delivery systems for residential housing provisions. The report by World Bank (2003) argued that under finance or lack of finance is always the main key challenges to access to housing or lands through the markets particularly for poor peoples. Along with financial problems, the inflexibility, and vagueness of policies on land delivering and related process usually exclude the poor from owning land. In general, funding, or financial challenges related to land process is the main obstacles for any projects but even worse challenging to provide sustainable land development or residential housing.

Following the financial challenges several literatures and studies have discussed that land and land related policies are the most impacting the smooth land provision for housing particularly in developing nations. For instances, World Bank (2003) reported that land policies are the cause for complicated land provision and even in some cases it is the root causes for social conflicts (examples in countries such as Cambodia and Colombia, Zimbabwe, and Cote d'Ivoire). Those policies related to lands are differ from countries to countries examples in Hong Kong topography and land-use regulations severely restrict the land supply (Bertaud, 1997), in some other nations because of land policy related long process in clarifying and registering titles are constraints for private sector developers (Kitay, 1987), extensive land holdings policy and land conveyance that cause for delaying title to land and housing developments are the most common problems of land provision in many Asian countries (Evers, 1983).

The other common problems for land provisions for residential housing is the market force. Market forces always taken as a challenging factor for land delivering for residence both among individual and government, as a results of pushing up the cost of urban land that potentially resulted in making inaccessibility of land for majority of city residents, particularly for poor (UN-Habitat, 2012).

Whereas Jabareen (2006) discussed the public and private sectors conflicts, lack of building experience, cost control and capacity, and regulation specifications are factors affecting land provisions of sustainable housing. Furthermore Arjjumend, and Seid (2018) also indicated in their study; legal blockages and administrative chains like authority procedures, over-bureaucratization, and handover difficulties were the major constraints to get land for housing development in urban centers of developing nations. The discussions of these authors emphasized that due to gaps created by policies along with the lack of understanding of politicians and authorities, the urban poor are unable to access to land by legal means or cannot afford the prices on market provision.

Wajiha et al. (2021) more specifically discussed about the influence of private sector on land provisions for housing by categorizing into key stakeholders such as consultants, contractors, and regulatory authorities. The impacts of stakeholders that directly or indirectly involved in housing provisions are also highly depends on the characteristics of land provision policies. The more complexity of land related guidelines is the more rigid review, application process and time-consuming, hence highly affects the housing provision. In some cases, for instance in New Zealand the land approval process is heavily dependent on the skill sets, knowledge and decision-making ability of private housing providers and other stakeholders (Berke et al., 2006). The application process in many urban centers might related to the verification of Assessment of Environmental Impacts (AEI), discussion and participations with affected parties, pre-application meetings and getting professional help before, on or while and post application for lands, and other many intra and inter departmental discussion and other more that have a potential to contribute to the delay of land delivery (Berke et al., 2006). Thus, questions can arise due to inadequate consideration, delays in getting consent, construction costs related problems, lack of recognition of sustainability, overpricing, assignments of inefficient sales methodology, related to knowledge of the market and in some cases related to housing design and urban plans (Berry et al., 2019). On the other hand, the complexity and time-consuming characteristics of land provisions and process is not always aligned according to the available resource (Berry et al. 2018), resulting in another gaps and challenges on housing provision.

The discussion by Albatsh (2015) evaluated the challenging factors of land provision for residential housing in terms of allied services, infrastructure, and facilities. Accordingly, like complexity of land provisions guideline, the availability, distributions and provision of housing allied services and facilities highly affect the land allocation systems. Therefore, the

delay or the process of the provision of those housing basic facility are the causes for the delay of housing provisions (Chan et al., 2004). Indicating the land provisions system and other associated services should be integrated and balance the budget, deadlines, and service quality for the successful and on time housing provision (Haughey, 2011).

Finally, institutional arrangements and capacity for housing and land related have also high influence on determining land provision characteristics for housing. According to Hasrat et al. (2018), in efficiency of land administration systems in many countries are because of weak institutional capacity and organization. Accordingly, the lack of transparency, problems related to resource capacity (e.g., lack of human resource, technology, and funding) and problems related to administrative and management capacity (e.g., abuse of power, corruption, bureaucratic, expensive procedure, and lack of coordination among intra or inter institutions) are the challenging factors related to institutional problems affecting land provision (Burns, 2007). In general, if the systems have not well defined and disciplined procedures, transparency, legal framework, inclusiveness, honesty, and responsibility, it highly disturbs the efficient use of urban land (Transparency International, 2011). This will let the urban land provision system to speculations, illegal procedures, market failure, squatter settlement, poor services and infrastructure, inadequate collection of revenue and more many other challenges. In some case, land brokers, corrupt bureaucrats, and administrators will challenge the system.

In general, Hasrat et al, (2018) summarized the challenge and major causes for residential housing land provisions into three key issues namely: rapid urbanization, urban poverty, and corruptions related land provision challenges.

Regarding to urban poverty; urban poor residents will be challenged more in poor and weak economic activities of urban areas where informality is dominant (UNEP, 2002). Therefore, for poor it is impossible to access to land for housing because of high land prices as a results of markets failures and restrictive regulations in many urban centers of developing nations. Corruptions is the most challenging factor far known in developing world. It may range from administrative corruption) to misuse of government power and political positions (Transparency International, 2011). It may include public officials, outside investors, local leaders, and brokers with strong chain at all levels that can even use persons that command political and economic power (UN-Habitat, 2012). When urbanization concerned, its obvious rapid urbanization has challenged the normal relationships between land demand and supply

for urban residential housing, particularly in Sub-Saharan African countries and Asian where there is rapid urbanization is taking place (Hasrat et al, 2018). Therefore, rapid urbanization, poverty and corruptions along together challenges the overall systems of land provisions systems for residential housing development that lead to socioeconomical and sustainable land developments.

In summary, the literatures showed that land delivery delays are the matter in most of the countries. The challenges of delays because of many reasons have resulted high demand for lands and lead to land markets failures (Ramanathan 2012, Emam, 2015). A study by Lessing (2017) in New Zealand on land provisions challenges indicated the delay from land provision to housing construction to transfer to owners has brought a complicated problems in the systems. Whereas Honrao (2015) argued that the time-consuming nature of land provision alone is the responsible challenges and basic problems that calling for sophisticated methods.

In conclusion, land related activities have problems particularly urban lands. Land provision for residential housing is everything and is the main reason for housing related problems all over the world. Without looking at the issue of land there is no meaningful discussion of residential housing problems especially for poor residents (Arjjumend & Seid, 2018). The issues of lands are generally affecting the socioeconomic conditions of urban community and local government and over sustainable developments (UN-Habitat, 2012).

2.2.2 Contributing Factors for the Challenges of Land Provision for Residential Housing

It is important to understand the causing factors that leads to the challenge of land provision to residential housing because it enables to overcome the challenges effectively. In line to this, several studies have also presented the challenges of land provisions along the with their causing factors. For instance, Wang et al. (2009) and Zhao (2013a) discussed that dual land tenure systems in China had been the cause to for the challenge land provisions for affordable housing. Transferring the land from owner sometimes take long time that causing delay to provide land and cause for problems like illegal housing or squatter development and in accessibility to land for housing (Ho, 2005). Whereas Zhao (2016) argued that socioeconomic inequality is challenging to provide land for affordable housing that need new land use systems considered social inclusion in the peripherals areas of Beijing, China. Hence, urban poverty is the causing factor that hinder efficient land provision for sustainable and affordable housing (Arjjumend & Seid, 2018).

According to Sivam (2002) the government budget and finance, land policies, regulation, laws are also causing problems to land provision challenges while in some cases they are also the challenge itself. Similarly, Transparency International (2011) indicated that weak land administration is a major contributor to land provisions system by creating room for corruption. Once corruption is introduced into the systems, it become main reason for the tenure insecurity, change of land use or zoning and delays of land provision for residential housing purposes (Pacione, 2020). Furthermore, TI and FAO (2011) pointed that poor land governance is characterized by low level of accountability, transparency and the rule of law and leads to inequality, tenure insecurity, and poor managements of natural resources, social stability, lack of investment and to unsustainable development. Administrative corruption can impose illegal payments to acquire official documents like title deed, register land, and approve building permits across the globe, this in turn challenges poor urban residents to access to land through those illegal payments and hence makes them inaccessible to land administration services (UNODC, 2017).

In addition to lack of organized urban planning or land use and rapid urbanization rates (Bah et al., 2018), rapid population growth, weak economic development, and community formation (Rittenberg, 2012) have resulted in very large housing problems. A recent study conducted by Adam (2020) summarized the causing factors for the challenges of land provisions as rapid population increase or urbanization, corruption and politicized land administration and controversial land policy or land use acts are the reason for inequality of land demand and supply.

2.2.3 The Impacts of Residential Land Provision Challenges on Socioeconomic Condition

The effect on socioeconomic condition can be discussed in terms of the three basic concept of socioeconomic equity or the idea of fairness in social fields. Thus, distributive equity (i.e., fairly distribution of benefits among societal activities in terms of their ethnicity, income, sex, age or other characteristics), procedural equity (i.e., how people treated such as in public participation on policymaking, the land use planning process, institutional and political context), and contextual equity (i.e., in terms of the effects from long-term institutional and the political situation) can be used to discuss the effects on socioeconomic (Hurst et al., 2013). Using this concept, evaluation of the impacts of poor land provision for residential based on these concepts helps to provides direct solutions. For instance, Zhao (2016)

discussed the causes of urban informal housing using illegal gated communities in suburban Beijing and argued that informal development of farmland on the urban fringe is the results of distributive, procedural and contextual socioeconomic inequities of land use planning and housing provision in the context of a market economy. The paper underlined that unless these socioeconomic inequalities at the local level are tackled; informal land development would even worsen that new land use planning system should encourage social inclusive strategies based on the social equity concept.

Weak land administrations systems and lack of supply land for housing leads to socioeconomic inequality and reasons for the development of squatters (Lombard & Huxley, 2011). This creates the tenure insecurity, low physical standards of housing and community spaces, lack of access to infrastructure and poor general environment which in turns reason for the community health problems, weak social interaction and overall socioeconomic challenges (UNECE, 2009). Furthermore, delay in provision of land for housing or if the residents cannot access to lands, they are forced to rent or find low housing prices and reside in informal housing neighborhoods, where the quality of life is treating for healthy and happy urban life (Breman, 2003).

According to Ye et al., (2014) these disadvantaged communities by housing land provision are usually live in the areas of urban peripheries characterized by high rates of unemployment, poverty, low income, and social exclusion, poor healthy and unsustainability. The characteristics are at individual demographic and community level, with high Vulnerability of the peripheral physical and social location that need argent response from Chinese local governments' land-provision and the central government's affordable housing policies consideration of social and economic crisis mitigation combined for the suburban indemnificatory housing communities.

In contrary to those results of land provision challenges on socioeconomic activities of residents. Gan et al. (2019) discussed the issues in terms of what make the communities more happies and sustainable residents. Accordingly, they found that the overall character of housing policies, public facilities, and neighborhood environment are the key determinants that impacts the residents in terms of their age, family income, level of educations, residence length and types of housing. Esperidião et al. (2023) also showed in their study that the location of neighborhood, the characters of services, and other resources such as environmental resources are the factors impacting the socioeconomic condition of the

residents. Alone only owning housing has many implications on residents' life and psychological health. For instance, it is an essential component of a secure and successful life, providing ontological security (Hiscock et al. 2001), wealth accumulation (Turner and Luea 2009), provide residential stability and stable life plan (Muhammad & Johar 2019) and psychosocial wellbeing (Kearns et al. 2000).

In some cases, neighborhoods character or urban context have also significant influences on the housing satisfaction of the community (Boschman, 2018). The urban context where living take place, with the characters of social interactions, the accessibility to services and infrastructure a basic unit that affects the quality of life of community or individuals (Byun and Ha, 2016; Li et al., 2019). Furthermore, urban context, such as social problems, appearance, social interactions, security, local government services and access to recreational activities other important factors affect the socioeconomic conditions of the community (Hur & Morrow-Jones, 2008). Li et al. (2019) also showed in their study issues such as privacy, garbage, security, cleanliness, education services, physical factors of housing; accessibility to markets, commerce, health services, public transport, cultural activities, and parks; and comfort features of housing environments affect the living condition and overall health of the community.

Despite the only land provision and housing, studies have shown that the other factors associated with land provisions have found to have significant on socioeconomic and political trusts among the communities. According to Helliwell et al., (2018) and Huynh and Peiser (2016) the government's trustworthiness, performance, and responsiveness in land provision for residential housing have brought different perception among the communities in respect to their income characteristics, demographics and education and employment and political perceptions. Ott (2011) also conducted a subjective measure in 130 nations on the issues and the finding shown that good governance, quality, and effectiveness of regulatory, the rule of law, and control of corruption are significantly affecting the communities trust on the government. In general, the land provision process and the approach itself also affect the communities or individual residents' by negatively affecting their socioeconomic condition if the service is poor or lack (Ono & Lee, 2016).

On the other hand, as the United Nations has repeatedly explained, the access to land for housing is a basic right hence, community have a right to have and access to adequate living space including the supporting surrounding facilities and services (UNHCHR, 2009).

Accordingly, several report of UN agents argued that housing is the greatest fundamental social-physical conditions that can highly affects an individual's quality of life and subjective well-being. However, in the face of rapidly urbanizing nations its generally challenging for low-income groups and to new urban residents to access to housing both in developing and developed economies (Ben-Shahar et al., 2020), as a result, social unrest because of affordability crisis and challenge to access to land for housing among the countries worldwide (Chiu & Ha, 2018). Such types of challenges cause a crowding effect of housing in China and forced young elites to leave major cities (Chen, Hu, & Lin, 2019), expanded housing inequality and wealth inequality among the social classes (Fang et al., 2020), which in turn being demanding for stronger government intervention (Wu, 2018). Bah et al., (2018) discussed in 17 African countries that there is over one million units housing gaps that if strategic action is not taken to curb the situation along with the poor urban planning phenomenon and inadequate housing supply, the shortage will lead the community to slums and shantytowns, which associated with social problems of poor sanitation, overcrowding and high crime rates.

In general, legal provision and access to land for residence is a precondition for healthy community and sustainable development. However, the poor land provision is the cause for the increment in living cost to the residents, the expansion of informal settlements or squatters and slums, increased vulnerability of urban poor, environmental degradation, and the increased vulnerability for disadvantaged groups, other marginalized and women-headed households (UN-Habitat, 2011). Indicating that the land is the basis to attain the social prestige, economic security, and political power (Bello, 2007 hence, having unrestricted access to land is a way to curb the challenge of poverty and homelessness (Chukwujekwu, 2006). In similar way Assaf, et al. (2010) explained that access to lands for housing or affordable housing means to achieve increased the quality of life and living, reduces the cost burden to the household, a way to meet environmentally friendly developments and urban identity, enables to meet family's satisfaction and future growth. Therefore, housing and land affordability lead the community, or individual residents to adequate improved human health and housing, work efficiency, and overall socioeconomic development, fosters social stability by reducing crimes, and creating jobs (Olayiwola et al., 2005). Furthermore, it reflects a person's cultural values and identity, aspirations for future growth and expectations which in turn positively impact the community and initiate national development (Olufemi, 2018). Generally, access to land for residential housing helps for the growth and development of

individuals or a community and the country, as it leads to improvement of the living conditions of urban residents, and to improve the overall growth of towns and cities (Arjjumend & Seid, 2018).

2.2.4 The Effects of Land Provisions Challenge for Residential on Sustainable Land Developments

As multiple studies had shown lack of urban planning-based land provisions for housing has associated with complicated environmental, social, and economic problems. Some of the results of these problems manifested at individual or community level. the impacts of sustainability can bed directly because of lack land provision or indirectly from the affected communities or individuals. According to Zhao (2016) lack of affordable housing and available legal land for housing lead the fertile farmland to squatter development. The lack of urban land use planning and dual tenure systems along with delay land supply for housing in peripheral areas of Beijing had brought unsustainable socioeconomic inequities. Squatter development because of housing problems challenges efficient and selective land use strategies (Scarpaci, 2010; Wu et al., 2013). Despite the land provision challenges, also the characteristic of insecure land tenure encourages rapid agricultural production land to housing and unsustainable natural resource management (Sarmiento et al., 2020) which in turn challenges sustainable land development for local governments.

Lack of formal housing, coupled with other factors such as rapid urbanization and population increase in developing nation has increased unsustainable the number of residents in slums and informal settlements characterized with no basic infrastructure like sanitary services, no formal planning and building regulations, environmental deterioration like life-threatening problems related to sanitation and pollution, pollution of air and water from garbage and sewers, prone to environmental hazards (such as flooding and poor drainage), health risks, overcrowding, and crime (WHO, 2011). For instance, many communities are affected by such problems over the world such as in Rio-de-Janeiro State in Brazil in 2010 community in hilly and mountainous areas were exposed to landslides, and hundreds were dead (Golubchikov & Badyina, 2012)), in India and African cities (i.e., Nairobi, Accra, Maputo, Kampala and Lagos) slums were frequently affected by flooding (Satterthwaite, 2007). Moreover, such residents are many in number and they are dependent on unsustainable energy hence, using polluting solid fuels for cooking that resulted in indoor air pollution and causing other chronic illnesses (IEA, 2011).

Therefore, working on continues legal provision of urban land for housing is tackling the expansion of urban slums and squatter or informal settlements which means curbing the problems related to social, economic, and environmental of the prone or disadvantaged communities (UN-Habitat, 2011). The overall land and housing policies must shift towards sustainable land management and development while conducted land budget for urban development. Given that the only possible way is to apply sustainable solutions to and through the nations' economic development, equality and social welfare, housing provision and good quality residential services, urban growth, access to clean energy, resource, and environmental protections (Golubchikov & Badyina, 2012). Ye et al. (2017) also indicated in their study that disadvantaged housing communities can be sustainable only if a balanced and more comprehensive social and economic system is considered and applied to the development of pro-relocated residents and in housing policies.

Furthermore, Bailey, (2010) and Jabareen (2006) argued that as the there is a link between poverty and environmental degradation, and economic growth also affordable housing is key roles urban sustainable development. It promotes resident health through reducing environmental hazards in the living areas and the resources over payments for health expenses and food (Cohen & Wardrip, 2011). Furthermore, affordable housing or access to land for housing helps for social and economic inclusivity and can integrate lower-income residents with their neighborhood and the broader community (Basolo & Scally, 2008). Integrated communities are a tool for the development and improvements of neighborhoods quality for healthy life and numerous opportunities by increasing sustainability in the communities that based on green infrastructure development, participations, pave ways for inclusive and equitable planning and development, encouraging collaboration among community members (Jabareen, 2006; UN-Habitat, 2015; Ramos & Noia, 2016).

Whereas other literatures discussed the effects of poor housing services in terms of lack of land use planning and poor implementations. For instances Server, (1996) discussed that if land use plans are not effective, there would be no control on the development of urban lands, hence lead the local authorities to the complicated land development without planning taking place outside these schemes, demolishing the number of green spaces and trees, negatively impacting the sensitive environmental resources. Land use is a vital to addressing sustainability problems and govern land systems with the principles of sustainability (Meyfroidt et al., 2022. According to discussion by DIA (2019) and Berry et al. (2019) in relations to development for housing; the limited integration of planning and implementation

for large urban developments; ineffective coordination between land use and other infrastructure planning, and the nature and duration of planning and development control procedure are the barriers to implement sustainable urban land for development in New Zealand. In general, the sustainability of the future cities will determine by active response to housing issues, addressed with strategic and proactive urban planning practices that considered people and human rights first (UN-Habitat, 2015).

2.2.5 The Benefits of Efficient Land Provision for Housing

Efficient land provision for the urban residents has various sociocultural, economic, environmental, and political benefits. According to Yakob et al. (2013) overcoming the key challenge in land provision for housing can generate economic growth, promote a social equity among people, and promote environmentally friendly urban development. Whereas Chiu-Shee and Zheng, (2019) indicated in their study that the Chinese cities have benefited in terms of boosting fixed asset investment, promoting human capital accumulation, and facilitating urban redevelopment from the investments in affordable housing provision through local development goals. Moreover, sustainable land provision enables the local governments to provide infrastructure includes service facilities for physical, mental health, education, culture, recreation, and sporting programmers (Kumari & Sharma, 2017). These in turn highly contribute to urban sustainability, poverty reduction, curb socioeconomic inequalities and it promote social development (Davern et al., 2017).

As the housing is the main factor affecting socioeconomic of residents, improving only housing issues problems of the citizens enables them to focus on other personal economic development and creatively that can benefit the local government and national (Liu et al., 2018a). Access to housing or land for housing has a direct benefit on political stability, promote trust among the citizen or between citizens and governments and promote resilient economic development (Gao et al. 2019). Furthermore, it facilitates and enables the citizens to combat corruptions and promotes disciplined citizen that love their country and peoples (Chen & Hu, 2015). This enables to build strong institutions, transparent, accountable, and responsible authorities (Zhang, 2014; Gao et al. 2019).

In general, access affordable housing or land is a critical element for the better living conditions of urban dwellers, and it provide development of towns and cities. (Arjjumend, & Seid, 2018). Efficient land distribution is a crucial economic growth and development and

acts as a tool for social prestige, economic security, and political power (Bello, 2007; Shahzad, et al., 2022).

2.2.6 Ways of Overcoming Residential Land Provision Challenges

Studies has indicated several recommendations on how to overcome the challenge of land provision for residential housing. Ekpodessi and Nakamura (2023) in their study recommended that to positively influence sustainable development of urban housing local governments should allow legal access to land and the protect anarchic eviction of populations. Ye et al. (2017) also conducted study on disadvantaged housing community in urban fringe of Beijing and forwarded that the housing problems in areas should be tackled through an integrated consideration of housing policy, land use planning policy, justice, creation of employment opportunity, work, and real estate. They underlined that a more comprehensive and balanced social and economic systems should be considered for the development of pro-relocated residents. Dekel, (2020) and Anacker (2019) discussed on housing provision and enabling strategies in Saudi-Arabia and suggested that the government should transfer its role from direct housing provider to enablers (i.e., enabling effective participation of private sector organizations) based on enabling factors such as efficiency of the legal, regulatory, and financial environment that are necessary for effective role of private sector, raise homeownership and increase the diversity of housing types. In addition, Shahzad et al. (2022) noted that to overcome the challenge of land development and the complex characteristics of the process, the key stakeholders that can play a vital role should be incorporated in the systems along with the strategies that enables for efficiency of operations.

On the other hand, solving the problems related to the land ownerships and tenure security issues helps to improves and provide inclusive land investment, sustainable natural resource management like preservations of agricultural production areas (Sarmiento, et al., 2020). According to Ekpodessi and Nakamura (2023) resolving the problems related to the tenure and property rights by supporting efforts to recognize and respect the customary rights to manage, use and allocate rights to land and resources are the key that can contribute to sustainable natural resource management and economic growth. Whereas Wajiha et al. (2021) conducted a study in New Zealand on the challenges of lands provisions and suggested for change in housing provision policy particularly on ways to curb demand related problems through on time provision of land for housing, intensification of urban land use or compact development and hence minimize sprawl that demand more lands, improve the

coordination of planning and implementation for large scale urban developments; increase the integration between land use and infrastructure planning, and limiting time consuming nature of planning and development control procedures, solve the fragmented nature of land ownerships. In general, providing full ownerships for farmers enables tenure security which in turn helps for easily access to land and curbing methods for squatter settlement while promoting sustainable developments.

2.2.7 Land Provision Challenge in Sub-Saharan Africa

Land provision challenge for housing in Sub-Saharan African are similar. Several studies conducted on the similar issues had reported challenges are related land ownerships or tenure problems, weak institution organization and integrations, urban poverty character, rapid urbanizations, poor governance, and corruption are the common challenges listed in the literatures. For instances, Owusu-Ansah, et al., (2019) conducted a study on the land provisions challenge in Ghana and stated that lengthy procedure involved in securing building permit, land tenure arrangements, inadequate documentation, high costs, process of land acquisition and registration were the challenging factors that affected housing supply. Another study by Boafo et al. (2023) in Ghana also indicated that the expensive and delaying procedures, unqualified or untrained middlemen, improper record keeping, lack of transparency and accountability, overlapping bureaucracies, and delays in permit approvals were the challenging factors affecting land provision for housing that calling for strict enforcement of laws and regulation, provision of adequate finance and resources.

Access to land is highly challenging in Sub-Saharan, particularly for the poor urban community who have no economic and political power to gain access to urban land (Adedeji & Olotuah, 2012). Therefore, most of these poor urban community are forced to live in slums and squatter settlements where there is high healthy problems and poor environmental quality (Arjjumend & Seid, 2018).

In general, Arjjumend, and Seid (2018) summarized those challenges of land provision in sub-Saharan Africa into rapid urbanization, corruption, urban poverty, and inadequate institutional capacity of land administration.

The effect of rapid urbanization: Sub-Saharan is general the least urbanized regional in the world, but the most rapidly urbanizing region of the world including Ethiopia (UN, 2008). These have resulted in population migration towards cities and urban centers in the regions. Along with the natural increase and housing demand in the urban centers of Sub-Saharan

African nations the rapid urban expansion as resulted in very high demand of urban land making complex the process of land provision for housing in the regions (Scheuer et al., 2016, Hasrat et al, 2018). Which in turn cause or pave ways for corruption along with the competing character for access to housing or land (Transparency International, 2011).

Land Sector Corruption in Sub-Sahara: As indicated by the report of Transparency International (2011) corruption in the land sector is the challenging factor that extended from normal or local housing related government workers to higher level political and economic deciding power government officials. The presence of corruption in the land sector of these developing nations makes the land delivery systems to be length and the decision on the housing or related activities is always distorted in the interests a few groups and new policies are always in favor of the few peoples (Palmer, et al., 2009).

Challenge of Urban Poverty on access to housing: urban poor residents are most challenged groups to access to housing or land (UNEP, 2002). Therefore, for poor it is impossible to access to land for housing because of high land prices as a results of markets failures and restrictive regulations in many urban centers of Africa (Kabuya, 2015) including Ethiopian and study city. Also, dominance of complicate corruptions, political, economic, and other socioeconomic factors more challenge the poor communities in Sub-Saharan to access to housing (Korf et al.,2005).

Weak Land Administration and Institutional Capacity in Sub-Sahara: literature has showed that poor land administration systems and institutional capacity are the cause for complicated problems housing and access to land in Africa even being the cause for corruptions (Masum, 2011). For developed nations, the adequate institutional capacity and effective land administration systems enables the land provision smoothly and quickly in a satisfactory way for community while the characters of weak institutional capacity and inefficient land administration systems in can cause delay for housing process and land delivery which in turn leads to poor governance and political system (Burns, 2006; Wijetunga, 2008). The reason of these weak system can be due to lack of transparency, absence of accountability, widespread corruption and abuse of power, lack of human resources and technology, problems with resource related capacity, expensive and bureaucratic procedures, and delays in service delivery (vander Molen & Tuladhar, 2006).

2.2.8 The Challenges of Housing Land Provisions in Ethiopia

According to World Bank (2012b) report because of high population increments migration to urban centers is challenging supply of urban infrastructures, services and access to housing for the residents in the urban areas of Ethiopia. In Ethiopia urban land can be accessed through lease system that ranging up to 99 years and a separate legislation system for condominiums housing. In general, there are other modalities of urban land transfer for housing or developments such as: auction, assignment, negotiation, award, and lot (World Bank, 2012a). However, land tender (auction) and allotment (land lease transfer without auction) are the most methods of land acquisitions known in the country.

In current context Ethiopian urban development policy had indicated equitable distribution of land to both the rich and poor for housing as one goal by developing strategies that enables, low-income groups to access to adequate land at reasonable cost (Ethiopian Urban policy, 2013). According to Belachew (2010) the Ethiopia Federal government improving access to land for the poor is key to overcome the poverty, hence urban development land policy had strived to bring good sense in addressing the cases of poor by improving land allocation process and the forwarding various policy strategies.

However, there are challenges and constraints that was disturbing the distribution of land provision for housing in the country. For instance, the rise in price, increased bureaucratic tendencies, high demand for urban land, weak monitoring and evaluation mechanisms, inadequate databank systems, shortage of financial resources, lack of participation by the poor, the poor's lack of ability to pay for the land, most land allocation procedure based on the bidding system that challenges the poor, lack of transparency in service delivery, poor being less active or not engaged in the land delivery process, and existing requirements of standards (Abuye, 2006). Furthermore, Arjjumend and Seid (2018) had studied land provision changes in Sub-Saharan Africa including in the Ethiopia and showed that constraints such as: land administrative related problems, legal blockages, over-bureaucratization, government procedures and land transfer difficulties were the major challenging factors to access to land for housing in urban areas of developing countries. However, according to World Bank, (2012a) the most challenging factor in the Ethiopian land delivery systems for housing is that the land sector is highly exposed to corruption. Thus, the lack of clarity in policies, weak integration of institutions and capacity, lack of public participation, and poor of transparency.

The other challenging factor in Ethiopian case is that the expropriation of land holdings for public purpose and payment of compensation (Proc. No. 455/2005). Regarding to the expropriation and compensation, the farmers who hold the lands were frequently showed disappointed with practical payments as it is not providing compensation for indigenous trees, communal land and overall unfair compensation and lack of transparency before and after compensation (Andrew, 2007).

In general, transferring land from the farmers and then distributing for housing or other developing purpose is challenging in Ethiopia. Land provision is a critical issues and process for land managements and development system that every urban center in the country is being experiencing as bottlenecks (Ayana, 2018). According to Share (2020) the major factors challenging land provisions bottlenecks are lack of access to enough finance, lack of efficiently and effectively using the existing land and supply, interference of local brokers in housing issues, the policy problem, the rapid rate of urbanization and weak efforts of urban administration to curb the problem and socio-demographic related challenge are factors noted in challenging access to land in Sululta town. Whereas Abraham (2007) discussed the on the challenge of access to land and housing in Addis Ababa and other urban centers and noted that the rising of price, the low supply of residential land high housing demand, weak institutional framework, lengthy land acquisition process and poor or lack of land use and detail plan preparation were challenging factors. Ayana (2018) also conducted a post graduated study on land provision challenge in Bedelle city of Oromia and showed that high demand for housing and competition to access to land, lack of good governance, illegal land use transfer and construction of illegal housing units through illegal agreement, lack of skilled manpower in the land management and controlling system, lack of land data or land is not registered and redundancies of land ownership were the challenging factors to administer and supply land on time in Bedelle town.

Regarding to effect of residential land provision on socioeconomic well-being in Ethiopia, there is not well scientifically articulated and organized study conducted regarding to the impacts it brought on the socioeconomic condition on the country. However, some studies have clued that there is the impact of land provision challenges on the socioeconomic condition. For instances, Share (2020) in his study focused on Sululta town indicated that the poor housing provision was increased the prices of rental housing, affects the socio-economic life of individuals, forced to evicted individuals to informal settlement conditional, and individuals were unable to access to adequate rent and formal houses particularly its more

challenging for household with larger family size and poor income. Bereket and Nigatu (2015) also conducted a study in Hawassa city and discussed that low household income were forced live plastics sheltered house and house with large family size were challenged by high rental and some of them who were chooses to condominium houses for residential purpose. Whereas Muleta (2014), also conducted a study in Bekoji town and noted that the majority of the residents were living in privately rented residential housing with expensive rent that characterized with lack of enough open space and challenging house size for larger family. Despite, lack of housing provision or shortage of housing, the existing housing quality characters are below the standard and most of them have no adequate spaces (MOWUD, 2008), which may cause for socioeconomic and sustainability of the urban community particularly for low-income groups.

2.3 Summary of the Literature Reviews

The literature so far reviewed were summarized based on the research objective of this study. Indicated in following Table 1 the main finding on the challenge of land provision and its effects on socioeconomic conditions and sustainable land developments are summarized with the concerned authors as follows.

Table 2.1:Summaries of Main Reviews

Authors and years	Main findings
Challenges of land provision	
Wajiha et al., 2021	very long application processes, delay in evaluations and consent of documents; scope modification; weak interaction between regulatory authorities, late response to requests by regulatory authorities; weak coordination within regulatory authorities; weak planning and scheduling; design errors and slow progress
Boafo et al., 2023	the expensive nature of the procedure, improper record keeping, overlap of bureaucracy, disorganization of the procedure, and the presence of unqualified or untrained middlemen, and lack of accountability and transparency and the delay in approval
Xiang, 2018	the function of agencies, ineffective monitoring systems, the lack of transparency of information, and the weak of legal enforcement

Zou & Chau, 2015	financial cutbacks and restriction, and rigorous requirements of governmental regulations
Alexander, 2021	the finance, unavailability of un-developed land, rigid municipal procedures, high demand than supply and understaffing of personnel in the division of property management
Jabareen, 2006	the public and private sectors conflicts, lack of building experience, cost control and capacity, and regulation specifications
Arjjumend, and Seid, 2018	legal blockages and admirative chains like authority procedures, over-bureaucratization, and handover difficulties
Albatsh, 2015	allied services, infrastructure, and facilities, complexity of land provisions guideline,
Hasrat et al., 2018 and Burns, 2007	the lack of transparency, problems related to resource capacity (e.g., lack of human resource, technology, and funding) and problems related to administrative and management capacity (e.g., abuse of power, corruption, bureaucratic, expensive procedure, and lack of coordination among intra or inter institutions)
Impacts of Residential Land Provision Challenges on Socioeconomic Condition	
Lombard & Huxley, 2011	lack of supply land for housing leads to socioeconomic inequality and reasons for the of squatters
Zhao, 2016	distributive, procedural and contextual socioeconomic inequities lead to squatter settlements expansions
Ye et al., 2017	disadvantaged communities by housing or land provision are characterized by high rates of unemployment, poverty, low income, and social exclusion, poor healthy and unsustainability
Gan et al., 2019	the overall character of good housing policies, public facilities, and neighborhood environment make community happy
Esperidião et al., 2023	the location of neighborhood, the characters of services, and other resources such as environmental resources are the factors impacting the socioeconomic condition
Helliwell et al., 2018 and Huynh and	the government's trustworthiness, performance, and responsiveness in land

Peiser, 2016	provision for residential housing,
UN-Habitat, 2011	the poor land provision is the cause for high living cost, the expansion of informal settlements, increased vulnerability of urban poor, environmental degradation.
The Effects of Land Provisions Challenge for Residential on Sustainable Land Developments	
Zhao, 2016	lack of available legal land for housing leads the fertile farmland to squatter development
Scarpaci, 2010; Wu et al., 2013	Squatter development because of housing problems challenges efficient and selective land use strategies
Cohen & Wardrip, 2011	Housing provision promotes resident health through reducing environmental hazards in the living areas and the resources over payments for health expenses and food
The Challenges of Housing Land Provisions in Ethiopia	
Abuye, 2006	the rise in price, increased bureaucratic tendencies, high demand for urban land, weak monitoring and evaluation mechanisms, inadequate databank systems, shortage of financial resources, lack of participation by the poor, the poor's lack of ability to pay for the land, most land allocation procedure based on the bidding system
Share, 2020	lack of access to enough finance, lack of efficiently and effectively using the existing land and supply, interference of local brokers in housing issues, the policy problem, the rapid rate of urbanization and weak efforts of urban administration
Abraham, 2007	the rising of price, the low supply of residential land, high housing demand, weak institutional framework, lengthy land acquisition process and poor or lack of land use and detail plan preparation
Ayana, 2018	high demand for housing and competition to access to land, lack of good governance, illegal land use transfer and construction of illegal housing units through illegal agreement, lack of skilled manpower in the land management and controlling system, lack of land data or land is not registered and redundancies of land ownership.

2.4 The Identified Gaps

Several studies have been conducted on identification of the challenges of land provision for residential housing in both developed and developing nations. There are some similarities of the challenges between the global south and global north regions of the world. In Sub-Saharan African including Ethiopia, the situation is more complex because of the several associated problems.

However, there is limited literature regarding to effect of land provision for housing on socioeconomic condition and sustainable development practices. When specifically, Ethiopia is concerned, there are few studies that had been conducted on land provision challenges, however none of them had ranked the challenges and none of them had related the issues of land provision challenges with the socioeconomic conditions and sustainable land developments.

In terms of spatial scope, generally there is a lack of study on land provision challenges for residential housing, on socioeconomic conditions and sustainable land developments in shagger city, particularly in the study area (Furi sub city). Most of the studies conducted had limited to land managements (Buta, 2019), socioeconomic effects of good governance (Udessa, et al., 2023), squatter settlements (Abagissa, 2019). These studies had tried to show some challenges however not seen from the perspective of challenges connected land provision in Shagger city and its regions. Therefore, there is understanding gaps in terms of which challenge of land provision is most impacting and what is the implication on socioeconomic conditions of the residents and as well as on the sustainable land developments in the study areas and in other areas with similar characteristics.

CHAPTER THREE: MATERIAL AND METHODS

3. Introduction

This chapter discusses the study areas and the methods followed to address the objective of this study. In line with this, the case study area is sub-sectioned into a description of the location of the study area and the background of the study area on housing issues of access to land, and the land delivery system in the study area had presented briefly. Regarding the methods, it is divided into subsections that are used to describe the process, such as research design, research methods, sampling and techniques, data source, collection and analysis methods were discussed.

3.1 Description of the Study Area

3.1.1 Study Site Selection Criteria

As the main purpose of this study was to identify challenging factors that hinder land provision for residential housing and the effects on socioeconomic conditions and sustainable land developments, to find appropriate case study areas where there was access to land and housing challenge was the first issues. In line with this, the researcher had a greater exposure and knew in detail characteristics of housing and access to land challenge in Furi sub city and the surroundings.

Therefore, the areas previously known as Wollattie area (kebele 03), Furi (kebele 04), Karabu (kebele 08), Alem Gana (02) and Furi Garabollo (kebele 09) were the areas characterized by high land demand for housing, high numbers of land applications for housing, squatter settlement, and illegal land transfer. Unlike other areas or kebele in Furi sub city, the areas listed above are more known by their housing problems, and the effects and problems of housing in Addis Ababa are more clearly reflected. On the other hand, there was a socioeconomic challenge and unsustainable development that highly motivated the researcher to understand the issues based on scientific investigations.

Therefore, the above areas formally known as kebele 03,04, 08 and some parts of 02 & 09 kebeles are now regrouped as one administrative as Furi sub-city under Shagger city. To name the study area a simplified name Furi-sub-city was appropriate and used only for the purpose to indicate the study boundary. Hence, the name Furi-sub-city has no effect on the data and output.

3.1.2 Location of the Case Study Area

Before the establishment of Shagger City by merging Sebeta City, Laga-Tafo, Burayu, Gelan, and other regions surrounding Addis Ababa, the case study area (Furi sub city) was under the local government of Sebeta City. Formerly, the area was known as Furi Kebele (04 Kebele), which also included some parts of 03 and 08 Kebeles. Currently, the Furi Sub-City includes the areas formerly known as Kebele 08 (Kerabu, including some parts of the area known as Alemgena), 03 (known as Wolatte), 04 (Furi), and 09 (Garabollo).

According to the current location, the area is located 15 km away from the western part of Addis Ababa on the road to Jimma. Based on the formation history of Sebeta, including Wolatte areas, it started to be urbanized in the 20th century. Geographically, the Sub-city is located within an approximate geographical coordinate of 8°52'10.50''N_9°01'10.17''N latitude and 38°44'90.91''E_38°36'00.75''E longitude on the globe, and its average elevation is 2365 meters above sea level (OUPI, 2008). In terms of relative location, the current Furi sub-city of Shagger shared common boundaries with Addis Ababa in the north-eastern direction by Kolfe Karanio sub-city of Addis Ababa, in the eastern direction by Kolfe Karanio and Nifas Silk sub-city of Addis Ababa, Southern by Gelan Guda sub-city, in the west by Gelan Guda and Sebeta sub-city of Shagger, and in the north by Gefersa Nono sub-city of Shagger. According to the previous structure plan of Sebeta City, the total administrative area was 9,900 hectares (OUPI, 2008). The sub-city currently has three administrative woredas.

In terms of climate condition, the area is classified under the woina dega (sub-tropical) zone, which has the same general characteristics of climatology as Addis Ababa. Globally, it is a part of a tropical humid climatic region that is characterized by warm temperatures and high rainfall (OUPI, 2008).

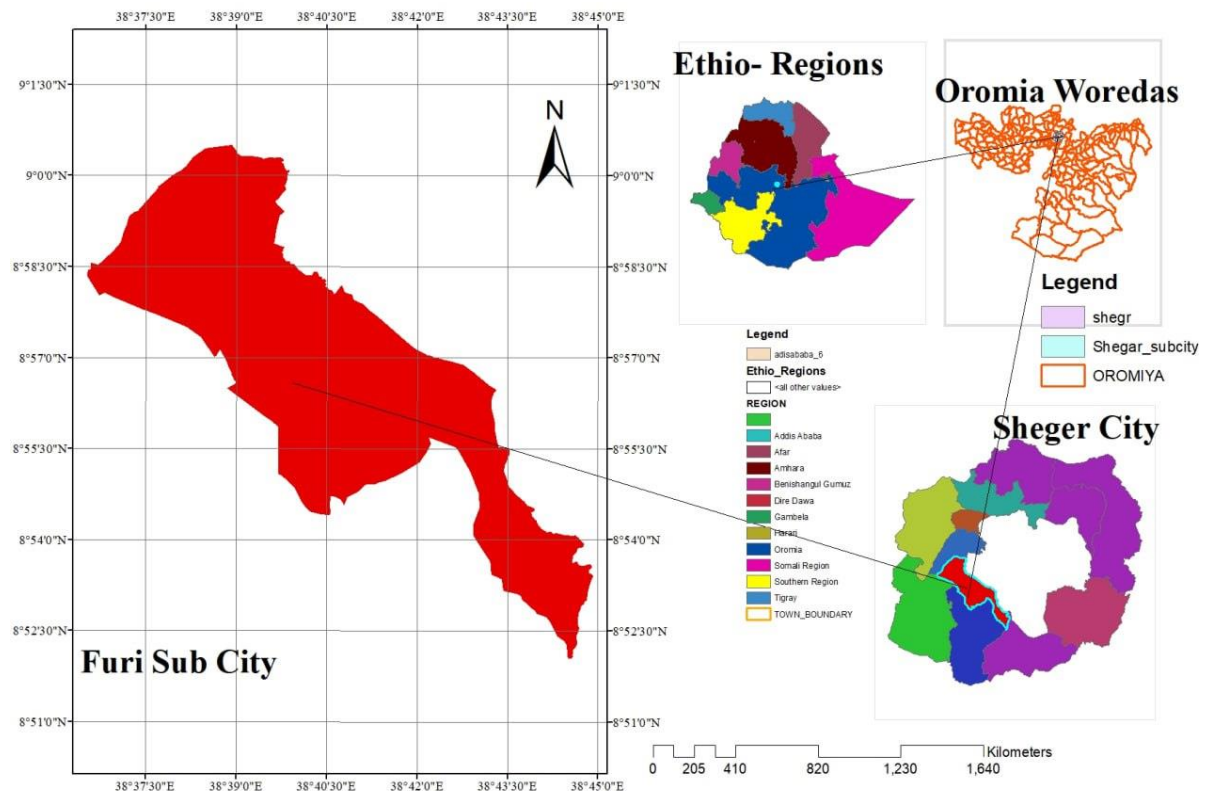


Figure 3.1. Location Map of the Case Study Area (Furi sub-city)

3.1.3 Development Trends of the Furi- Sub City Areas

As result of location factor near to Addis Ababa, Furi areas and entire Sebeta is one of the fast-growing urban centers of Oromia, with very dynamic spatial expansion and high population in migration from Addis Ababa, rural areas of the regional and huge investment areas. The industry and factories accumulations in the areas of this sub-city had significantly increased the housing demand and the challenges access to land for residential housing and for other development. The land question was complex and challenging for the Sebeta city's authority because of investment and other development floods to the areas.

Based on the history of Sebeta City, the area got its first spatial plan in 1967. Also, during 1998 EC, the Oromia's Bureau of Works and Urban Development prepared a development plan for Wolete and Furi areas of the town, but it was not functional due to the need of the regional government to combine all satellite towns in the surrounding area for administrative purposes (OUPi, 2018).

According to a recent structure plan for Sebeta and information from local elders, Alemgena and Sebeta emerged in 1935, which is before the Italians invaded the country and got municipal status in 1954. Regarding the formation of these settlements, areas currently

known as Sebeta, or former kebele 01 and 07; Wolete, the former parts of kebele 04 and 03; and Alemgena, or formerly known as kebele 02, were developed separately on their own following the road from Addis Ababa to Jimma and Butajira. During the 1990s, these settlements and centers became strong and merged physically with each other's as well as with Addis Ababa (OUP, 2018). As indicated in the recent structure plan of Sebeta in 2018, which includes the study area, the entire administrative area of the city was projected to be 17,500 hectares. This has increased the boundary of the city by 7,600 hectares from the earlier total boundary of the city for the next ten years of development period.

3.1.4 Overview of Land Provision Challenge and Housing in the Area

Furi-sub-city is found in the western direction of Addis Ababa, physically merged and sharing the same boundary, the same transportation facilities and infrastructure, strongly integrated services, strong economic activity connections that can be operated alone, strong sociocultural, and all others. The only difference between the case study sub-city and Addis Ababa is the administrative issues. As a result of the case study (Furi-sub-city) proximity of the capital city with complex housing demand, i.e., located on the verge of Addis Ababa, the area is now under pressure of rapid urbanization and very high housing demand, where the land demand for housing problems in Addis Ababa is also being manifested. Since there is a large migration from numerous rural areas from countries and from Addis Ababa into the study sub-city. Furthermore, the peripheral area around the study area serves as one of the national industrial zones. As a result, the peri-urbanization development continues, and the peripherals of the study area are highly vulnerable to land grabbing because of industrial and factory development, other investments, and housing needs by migrant people from rural Addis Ababa, industry workers, and the natural growth of the town's population (Tadesse & Imana, 2017).

These have transformed the peripheral farming land into squatter housing and illegal land transfers from farmers. Most of the urban poor residents who have no capacity to rent a residential house reside in the squatter settlements, which are characterized by no sanitation facilities, no access to electricity, and other formal services (Terfa et al., 2020). In addition, the houses are structurally very poor, inadequate for living spaces, and characterized as very overcrowded and inaccessible, making them prone to disasters such as flooding or fire.

On the other hand, the situation in the areas had made farmers transfer their land illegally rather than through formal transfer, as they received more land values than through formal transfer for investments and other urban developments (Debele, 2017). This turn has brought a challenging deal with the farmers to transfer land and provide for housing in the study area (Furi-sub city).

3.2 The Research Methodology

3.2.1 Research Design

The design of this research is a descriptive research design. Descriptive research is used to obtain information concerning the status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation. This method was chosen as the study describes and explore the challengers of land provision for residential housing using Furi sub-city of shagger as a case study.

The respondents were selected purposely based on their exposure to land transferring issues and provision, challenges associated with land process for development. Along with purposive selection of the respondents, snowball sampling method was also applied to select the concerned stakeholders and offices workers in the sub-city to fill the questionnaires.

Finally, the collected data were organized and encoded to excel and then changed to SPSS for advanced statistical based analysis. The data were analyzed and described using the mean, mode, skewness, and standard deviation while relative importance index analysis was applied to rank the challenge of land provision, the effect on socioeconomic conditions and sustainable land development. To determine the relationships of land provision challenge with the socioeconomic conditions and sustainability, the correlation analysis and regression analysis were applied. Furthermore, the qualitative data were organized and coded into major themes and sub themes in a way easy for analysis.

3.2.2 Research Approach

To appropriately address the research question of this study mixed research methods that based on qualitative and quantitative data were applied. In line to this, the present study was a correlation study that aimed to understand the that challenge of land provision for residential housing have on socioeconomic condition and sustainable land development in the study area.

Hence, the questionnaires developed had both qualitative and quantitative data. In general, the questionnaire has three parts. The first part was a closed ended and was about brief background of the respondent such as how he/she able knew about land provision problems, impacts on socioeconomic condition and sustainable land development impact in the areas, for how long he/she stayed in the areas, the education, age, name of office and the roles were included. The second part was also a close ended and was about challenge of land provisions, associated impacts on socioeconomic condition and sustainable development. Here, the about 18 list of challenging factors (i.e., variables or parameters) that hindering the process of land provision was proposed based on the literatures and real context in the cases study area. Regarding to the socioeconomic effects about 13 parameters or indicators of the socioeconomic effects of lacks access to land for housing where proposed while regarding to sustainability issues about 10 parameters were included in the questionnaires. The experts, workers and other all stakeholders asked to rate using Likert scale ranging from one to five. The third part of the questionnaire were open ended and about qualitative data based on semi-structured questions. Accordingly, three question were prepared and the respondents were asked to fill the questions.

The questions in the first part were used as independent variables against to challenge of land provision, socioeconomic conditions, and sustainable land development. However, for correlations and regression analysis, the parameter (variables) of challenges of land provision were used as independent variables to understand the effects of land provision challenges on socioeconomic condition and sustainable land development character in the area.

3.2.3 Data Sources and Types

This study was based on both secondary and primary data sources. The secondary data sources were collected from case study sub-city based on previous kebele structures and land for housing related information. Accordingly, secondary data was based on the overall land provision data in selected study area i.e., in previous kebele on the information such as: numbers and history of housing cooperate groups application, numbers and history of land supplied to housing cooperate groups, numbers and history of illegal land transfer, and previous land use or coverage of the lands that transferred illegally or to squatters and the proposed land uses of squatter's areas.

Regarding to the primary data, it was based on the information collected from the purposely selected or through snowball methods such as: experts, offices workers and stakeholders who

knew about land provision and related challenges in the case study area. Both of this data carefully organized and interpreted to address the research objective of this study.

3.3 Sample Design

3.3.1 Sampling Populations

All the offices worker, experts who related to land issues or who have exposure about land provision challenges, and other stakeholders, all who were eligible to be a respondent for the study's questionnaires was a target population for this study. Accordingly, workers and experts of construction and design office, land management's office, cadaster office, Micro and Small Enterprise (MSE) and job creation were a population of study. In addition to from stakeholders, private consultants (planners, constructions, on the other services providers), brokers, prominent elders from cities and rural kebeles, kebele and woreda administrators were the target populations of the study.

3.3.2 The Sampling Size Determination

Regarding to sample size, the researcher had tried all the best and effort to include all eligible experts and workers in the offices who know and have enough exposure about land issues in the city, particularly regarding to the challenge of land provision for residential housing, and its effect on socioeconomic condition and sustainable development in study area. Therefore, all the experts and workers indicated in offices, agencies, and authorities (Table 2) those identified through purposive selection and all the stakeholders, who identified by snowball methods were included and considered for the distribution of the questionnaires. The snowball sampling method is effective way of gathering information with potential to increase the number of respondents (Denscombe, 2014). In line with this, 75 sample size from workers and experts of land issue were able to collect while 15 samples were contacted for questionnaire through snowball referring and all together 76 total samples were collected successfully (also refer Table 2 and 3).

3.3.3 Sampling Techniques

In general, two types of sampling techniques had been used, i.e., purposive and snowball. The purposive was used in this study site selection to respondent selection. Accordingly, as also described under site selection criteria to select the study site, it was selected purposively depending on the criteria such as high squatter, high illegal land transferring, proximity to Addis Ababa, areas where land transfer for housing is challenging, areas where high land

demand is experienced, convenience regarding to research time, budget and near the resident residence, and areas that familiar for the author. These were the main points used to select purposively the study site (Furi- sub-city).

Secondly, the selection of respondents' offices and bureaus were based on purposive depending on their level of connection and exposure to land related issues in the sub city, who knows about the problems related land for housing in the sub-city and well experienced about land problems in the study area.

Regarding the selection of respondents both purposive and snowball methods were applied. The workers and experts in the selected offices were selected purposively based on their exposure to land provision and associated challenges, effects on socioeconomic conditions and sustainable developments. However, some places it was difficult to identify expert and workers who knows about land provision challenge in the area, as a result snow ball methods were applied such cases to include all eligible respondents to elicit all the information. Addition, snowball methods also applied to include the other stakeholders such as prominent elders, private consultants (planners, constructions, on the other services), brokers, rural kebele officials and elders who know about land and associated problems and effects both from cities and adjacent rural kebeles, and woreda administrators for questionnaires responses indicated in Table 2.

Table 3.1: Sampling Techniques and Size and Character of Participants

Included offices/bureaus/agencies and others	Total number of workers/ experts/staffs	Purposive based selected	Snowball (chain-referral sampling approach) based	Total selected numbers of respondents	Return Rates
Land management and development office	35	17	2	19	16
Land cadaster office	22	8	1	9	8
Construction office	17	7	-	7	5
Job creation office	15	7	1	8	6
Good governance office	9	5	-	5	5
Woreda administration workers	27	9	1	10	7
MSE groups working on cadaster	2 groups	8	-	8	7
MSE groups working on planning and design	2 groups	8	-	8	6
Prominent elders from peri-urban and urban	No data	-	7	7	7
private consultants	No data	3	2	5	3
brokers	No data	3	1	6	6
Total	>127	75	15	90	76

3.4 Data Collection Instruments

The most challenging issues were the process of identifying the eligible respondents who knew well about the challenge of land provision and associated effects in the case study towns. Once this process was finalized, the questionnaires were interpreted to Afan Oromo and distributed for test to ten individuals. The pre-testing had improved the reliability and validity of the questionnaire and helped to measure, consistently and without bias (Sekaran & Bougie, 2016). Hence, the questionnaire was readjusted based on the test input and the data collection were immediately started.

During the collection time different techniques were applied to include all the respondent identified and to collect the maximum sample size. Accordingly, face to face collection, sending the questions papers, using online (telegram and email) and through appointment for face-to-face collection were applied (also refer Table 3).

In this regard most of the respondents filled out the question through face to face at their offices while some of them chose to take home the question and fill back to the researchers. However, some of the respondents were not available in the offices and other who selected through snowball were also chose to send them through the person who referred them and others who can meet frequently. While some others were preferred to send them the soft copy of the questionnaire through their email or telegram and then to fill back to the researcher online.

However, something challenging was to get respondents such as prominent elders, rural kebele officials and other who selected through snowball methods, particularly those who have no email or telegram were told to the researchers that he could access them by appointment. As per their request the researcher able to collect the data through scheduled appointments (see also Table 3).

Table 3.2: Sampling Techniques and Size and Character of Participants

Data collection techniques	No of question papers distributed	No of question papers returned on actual
By face to face	24	21
By home take	32	28
By online using email and telegram	6	5
By sending the question paper	13	10
By appointments	15	12
Total	90	76

3.5 Data Analysis Method

After the data collected, some of the questionnaires that not collected face to face were checked and validated for encoding. All quality questionnaires response were properly encoded into excel 2021 version and then transformed to SPSS 25 software for further analysis. While the qualitative data were organized and categorized into major and sub-themes to analysis with the quantitative data and the secondary data collected from the offices.

Accordingly, the data were analyzed quantitatively using descriptive (i.e., mean, mode, frequency, and skewness) and inferentially statistics (i.e., relative importance index methods, correlation analysis and regression analysis). Inferential statistics were used to identify the most challenging factors in the land provision and the effective on socioeconomic conditions and sustainable land developments. Whereas qualitatively using themes and subthemes based of data categorizations.

3.5.1 Qualitative Data Analysis

The qualitative data which collected along with the open-ended question were organized according to their similarity and areas of relationship. The organized qualitative results were grouped into themes. The major themes also described further by dividing into sub themes based on concern of the response. The identified themes and subthemes were discussed with the results of closed ended questionnaires. The among the similar response categorized under the same theme, best examples of the response were referred as an example throughout the report of the result and discussion.

3.5.2 Descriptive Analysis

The descriptive statistics were used to analysis both the qualitative and quantitative collected data to simply describe the data using frequencies, means and skewness of the data on challenge of land provision and the effects on socioeconomic condition and sustainable developments. Furthermore, using narration the major themes and their number along with the numbers of subthemes were discussed along with secondary data collected from the offices.

3.5.2.1 Relative Importance Index (RII) Method

This method was used to identify the most influencing factor or challenging in the provision of land for residential housing, and its effect on socioeconomic condition and sustainable land development. Relative importance method (RII) was applied to calculate the rank of the listed challenges of land provision and effects that measured with five-point Likert scale using the formula (Gunduz et al., 2014; Sambasivan & Soon, 2007) indicated in equation 1 of the following.

$$RII = \frac{5(n5) + 4(n4) + 3(n3) + 2(n2) + n1}{5(n1 + n2 + n3 + n4 + n5)} \dots\dots\dots (1)$$

Accordingly, RII represents the relative importance index; n1, n2, n3, n4, and n5, are the number of participants who rated the 18 lists of challenges of land provision and its 13 and 10 list of effects on socioeconomic and sustainable land developments respectively: 4, for strongly agree; 3, for agree; 2, for neither agree nor disagree; 1, for disagree; and 0, for strongly disagree, respectively.

As indicated by Akadiri (2012), values of RII estimated between the range of 0 - 1, where the higher values of RII is the higher agreement towards the 18 listed land provision challenges and its 13 and 10 effects on socioeconomic conditions and sustainable land development in the Furi sub-city by respondents but (0 not inclusive). Accordingly, RII values is calculated and have five ranges: high (H) ($0.8 \leq RII \leq 1$), high-medium (H-M) ($0.6 \leq RII \leq 0.8$), medium (M) ($0.4 \leq RII \leq 0.6$), medium-low (M-L) ($0.2 \leq RII \leq 0.4$) and low (L) ($0 \leq RII \leq 0.2$) (Akadiri, 2011).

3.5.2.2 Factor Analysis

Factor analyses were applied to further minimize 18 parameters of residential land provision into some few challenge factors for land provision in study sub city and the establish correlation and regression analysis using reduced parameters by factors analysis. Furthermore, the 13 parameters of socioeconomic conditions and 10 parameters of sustainable land developments were applied to factors analysis / dimension reduction to reduce the into few effects areas. The values of challenging factors of residential land provision, and its effect on bioeconomic conditions and sustainable land developments were calculated based on the Likert scale-based rate of each parameter loaded on the factors. To

run the factor analysis SPSS 26 software used by considering only factors with Eigen value greater than one and Varimax with Kaiser Normalization.

3.5.2.3 Correlation Analysis

The correlation analysis was employed to understand the relationships between 18 listed parameters of land provision challenges with the 13 parameters of socioeconomic condition and 10 parameters of sustainable land development in the case study sub-city. This, furthermore, initiated to apply regression analysis to understand and measure the effect of land provision challenges on the study area.

3.5.2.4 Regression Analysis

In this case to run the regression analysis, the parameters of land provision challenge were used as independent variables against the parameters of socioeconomic conditions and sustainable development. Therefore, the parameters of socioeconomic conditions and sustainable development were used dependents variables to understand how the change in parameters land provision challenge affects the socioeconomic conditions and sustainable development in the case study area (i.e., Furi sub city) sing the following equation 2.

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_n x_n + e \dots u \dots \dots \dots (2)$$

Where, y is the 10 and 13 parameters of sustainable land development and socioeconomic conditions, respectively. $x_1 + x_2 + \dots + x_n$, is the 18 the parameters of land provision challenges (i.e., $n=18$) and $\beta_1, \beta_2, \beta_3, \beta_n$ are estimation coefficient, while α is a constant, and e denotes error or residual.

3.6 Ethical Consideration

For this study, the author had clearly explained the aim of the study while data collection and had used different explanation on the questionnaire. For instance, on the questionnaires the author explained this collection only for the purpose of education and used the logo of Addis Ababa university and EiABC (Ethiopian institute of Architecture, Building Construction and City development) along with data collection letter from the institute. In addition, the author insured the confidentiality of the respondents by using coding instead of writing their names and working offices.

CHAPTER FOUR: RESULTS AND DISCUSSION

4. Introduction

This section had two main sub sections: the results and discussion parts. The results section organized into descriptions or profiles of respondents and the study's objectives-based results. The descriptions or profiles of the respondents is based in a way to describe the quality of data and know how about the objectives of the study. Whereas the rating results, correlation and regression analysis are discussed and presented as per the respective objective of this study in the results section. While the discourse of the previous study brought under literature section of this study had related under discussion part of this study with results as per the sequence of the objective or research questions of this paper. Along with the quantitative rating the qualitative results from open-ended questions were organized and discussed.

4.1 The Results

The results were organized into descriptions of the samples in terms of their demographic and socioeconomic characteristics, such as age, gender, occupation, and level of education. In addition, the roles of samples in the sub city, their duration of experience with the roles, their know how about the spatial expansions, directions of rapid spatial expansion and what land demand is higher were asked the respondent to be sure and understand whether they fit or not for this study's objective.

The other subsection is descriptions of results as per the objective of the study, i.e., the rating results and ranks of the challenge of residential land provision, the effects of land provision challenge on socioeconomic conditions and sustainable land development in the study areas are presented as follows.

4.1.1 Descriptions of the Respondents Socioeconomic Characteristics

The survey of different offices workers and other key informants who have a good knowledge regarding to the land provision and related problems were included into the data collection. Accordingly, the results indicated that out of 90 samples distributed questionnaires only 76 of them properly attempted all the questionnaires. Hence out of the total 76 successfully samples 80.3 % of them were males while the 19.7% were females (Fig.4.1(a)). Most of them (about 42.1%) are aged between 31-40 years old followed by those age group between 41-50 years old (Fig.4.1(b)). In terms of level of educations of the respondents,

about 44.7% of them said that they attended secondary and elementary school while 20.3 % of them attended up to higher educational diploma and first-degree level and 22.4% are master level or above (Fig.4.1(c)). In general, the respondents attended up to higher educational diploma or above of that is 42.7% (Fig.4.1(c)). In the same way, when occupation characteristics of the respondents are concerned about 19.7% were farmers and 55.3% are government employee while the left said they are unemployed or self-employed (Fig.4. (d)).

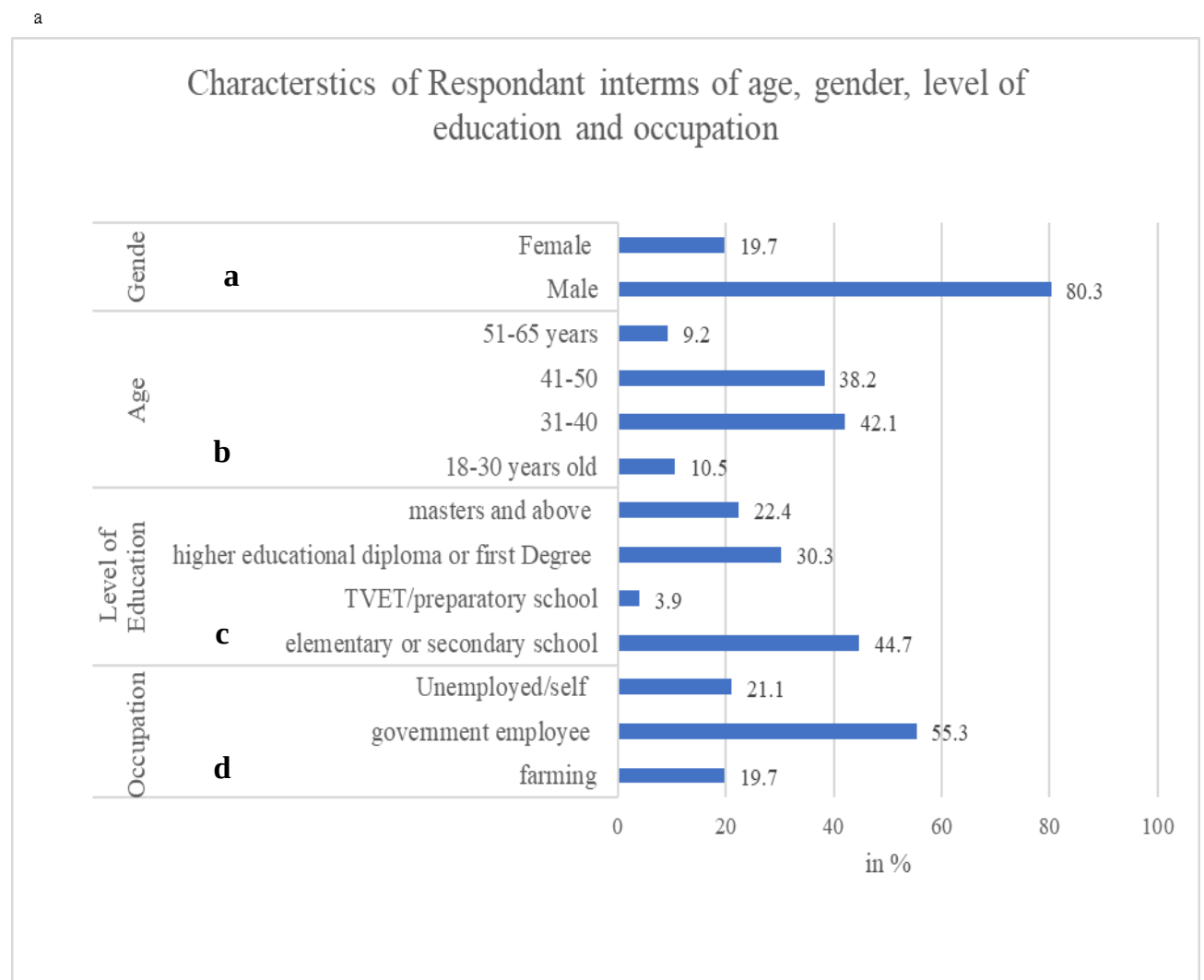


Figure 4.1. Characteristics of the Respondents in Terms of Their Age, Gender, Level of Education and Occupation.

4.1.1.1 Respondents' Profiles in Terms of Know How About the Study Sub City

Some questionnaires were included into survey to characterize the respondents and to understand know how about the study city i.e., Sebeta, particularly Furi sub city. Accordingly, respondents were asked to answer question such as how long they stayed in the areas, what was their roles and experience in that roles, level of their knowledge and understanding regarding the spatial development of the sub-city and areas that experienced rapid urban expansion, land development or land use reason for that rapid expansion and problems and character of residential land provision.

The results indicated that 19.7% of the respondents were born the study area while 28.9% of them live more than 20 years and 32.9% of them are lived more than 10 years (Fig 4.2). Indicating that 48.6% of the respondents know and can explain about the area a least the change over last 20 years while in total 54% of them know and can explain about change in 10 years in the areas (Fig.4.2).

Furthermore, respondents were also tried to characterize in terms of their roles to know whether they know about spatial development and land provision process and its challenges in the areas because of their role or profession and daily activities. As indicated in Figure 4.3 (a), most of the respondents are from municipality offices that categorized in planner (2.6%), socioeconomic related experts (9.2%), environmental related expert (13.2%) and land surveyor (30.3%) which is in total take up to 55.3% of the total respondents. The left 23.7% and 6.6% are community leader or prominent elders and brokers respectively, that the author believed that these respondents are powerful and know about land provision and its challenge in the study areas. Most importantly most of these respondents are services or experienced by above roles or professionalism five years, i.e., about 34.2% of them were worked more than 10 years with the roles (Fig.4.3 (b)).

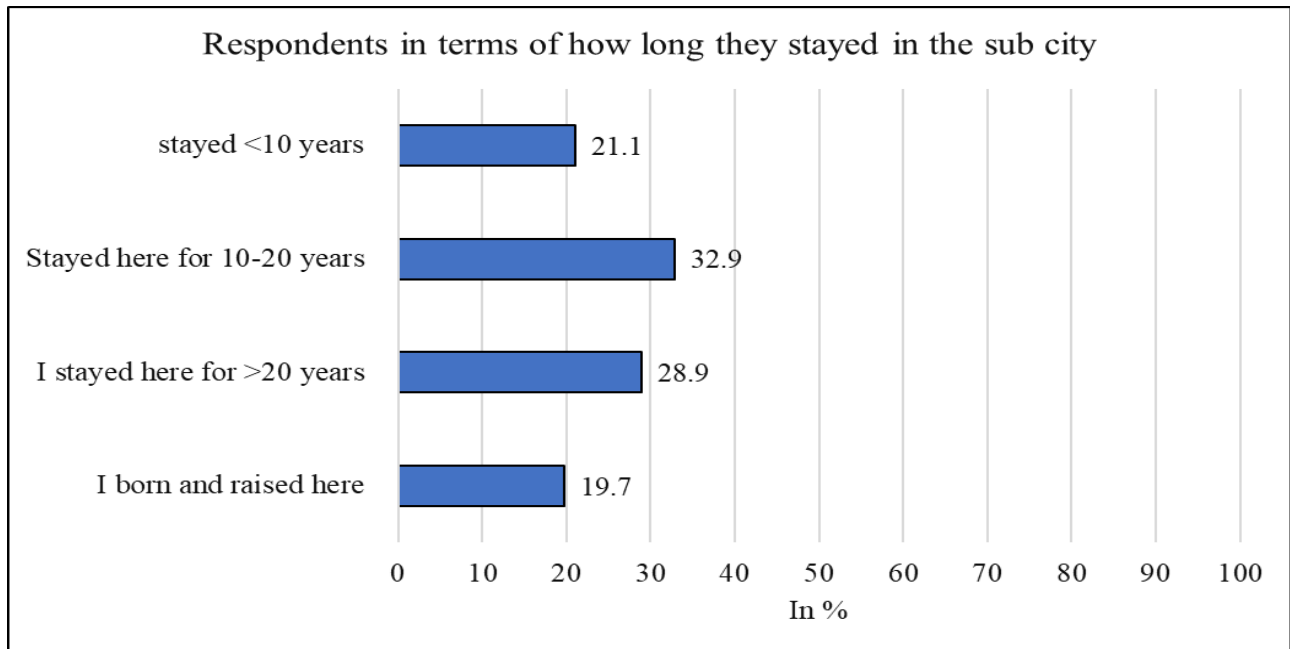


Figure 4.2. Characteristics of the Respondents in Terms of How Long Stayed in the Study Area

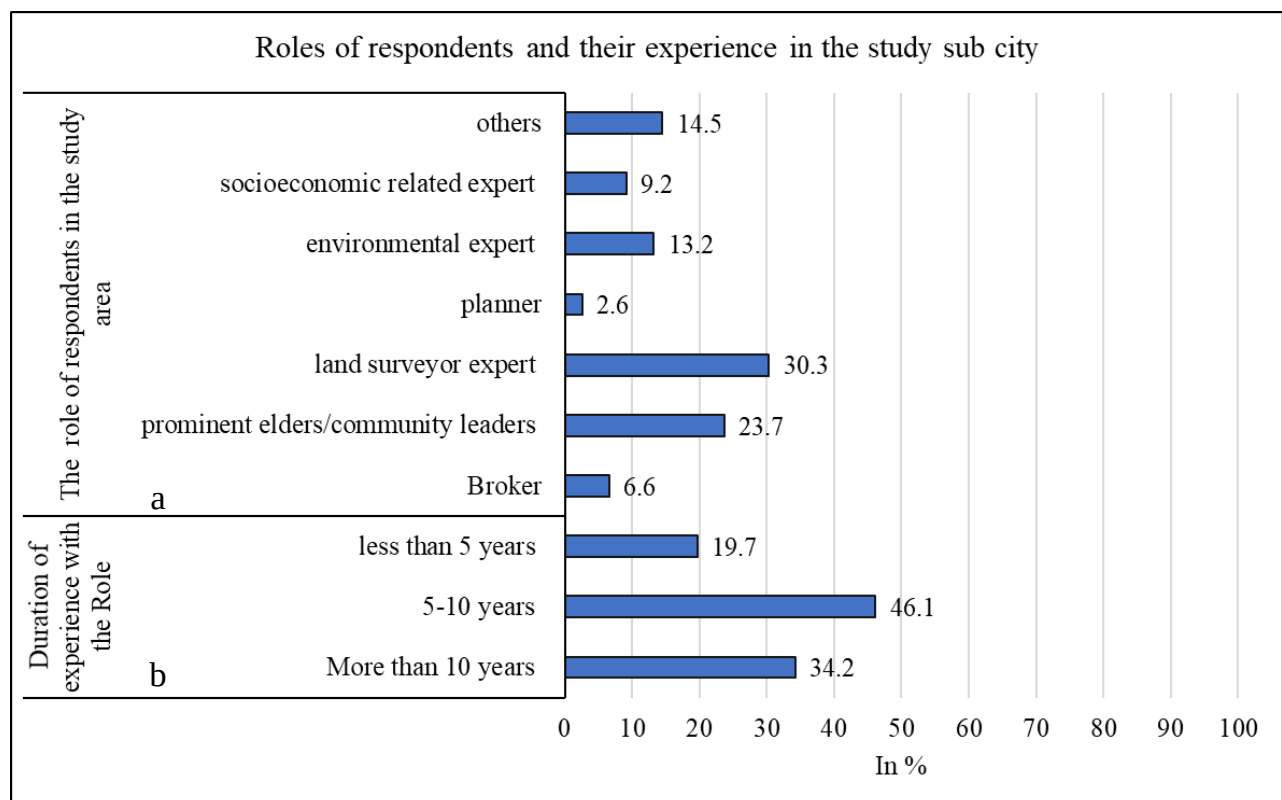


Figure 4.3. Roles of Respondents and Their Experience in the Study Area

In terms of land use that become the main reason for rapid urbanization towards the indicated areas, most of the respondents (63.2%) said that residential housing followed by industrial development (22.4%) is reason for expansion (Fig.4.5(a)). In the same way, about 78.9% of the respondents indicated that land demand for residential housing is most type of land demand in the sub-city and asked the city land management and development office frequently (Fig.4.5(b)). Indicating that land demand for residential housing is the challenging as it is the most land used under demand in the sub-city.

Furthermore, as indicated in Fig. (4.5(c)) the respondents asked that “how did majority of residential owner acquired lands in peri-urban areas?” and the results showed that most of the respondents (60.5%) perceived that they acquired through informal means of land transfer while only 11.8% of them thinks that they acquired through formal land transfer from the city land management and development office.

In addition to the respondents’ response and perception were grasped regarding to land provision challenge and associated problems in the study sub city. Accordingly, as indicated in Fig. 4.6 about 84.3 % of the respondents perceive that access to land is challenging of which 46.1% said that access to land for residential housing is very challenging in the city. In general, almost all the respondents perceive that access to land residential housing is challenging in city even though their perception degree is seemed varying. Regarding to their knowledge level about the overall land provision system and associated problems in the city, most of respondents i.e., 39.5% knows very well while 32.9% of them knows well (Fig.4.7).

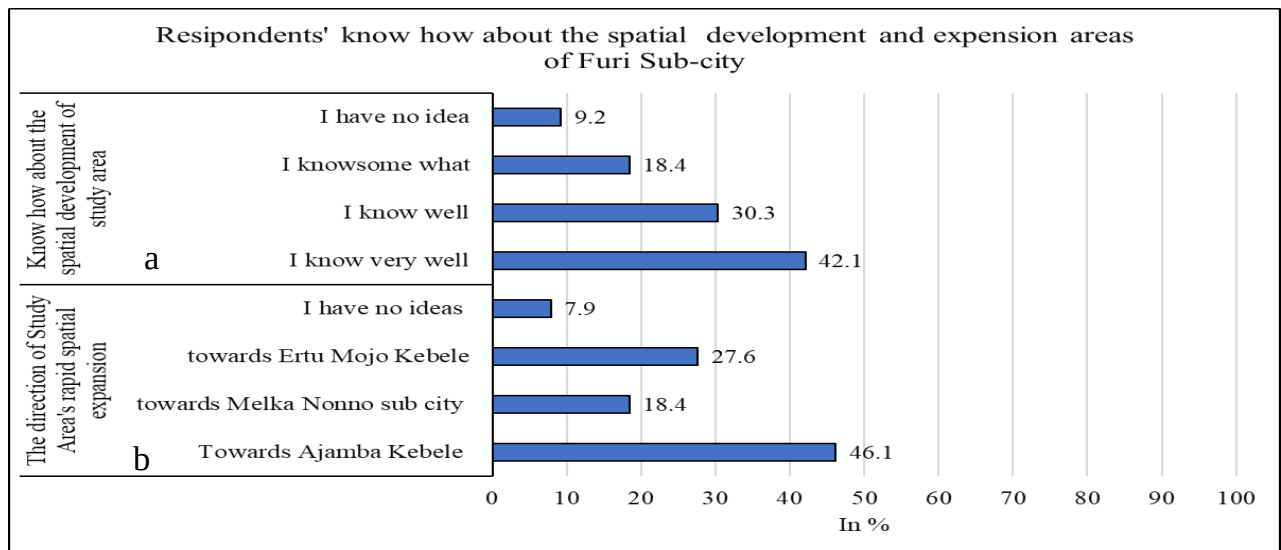


Figure 4.4. Respondents Know How About the Spatial Development and Direction of Urban Expansions

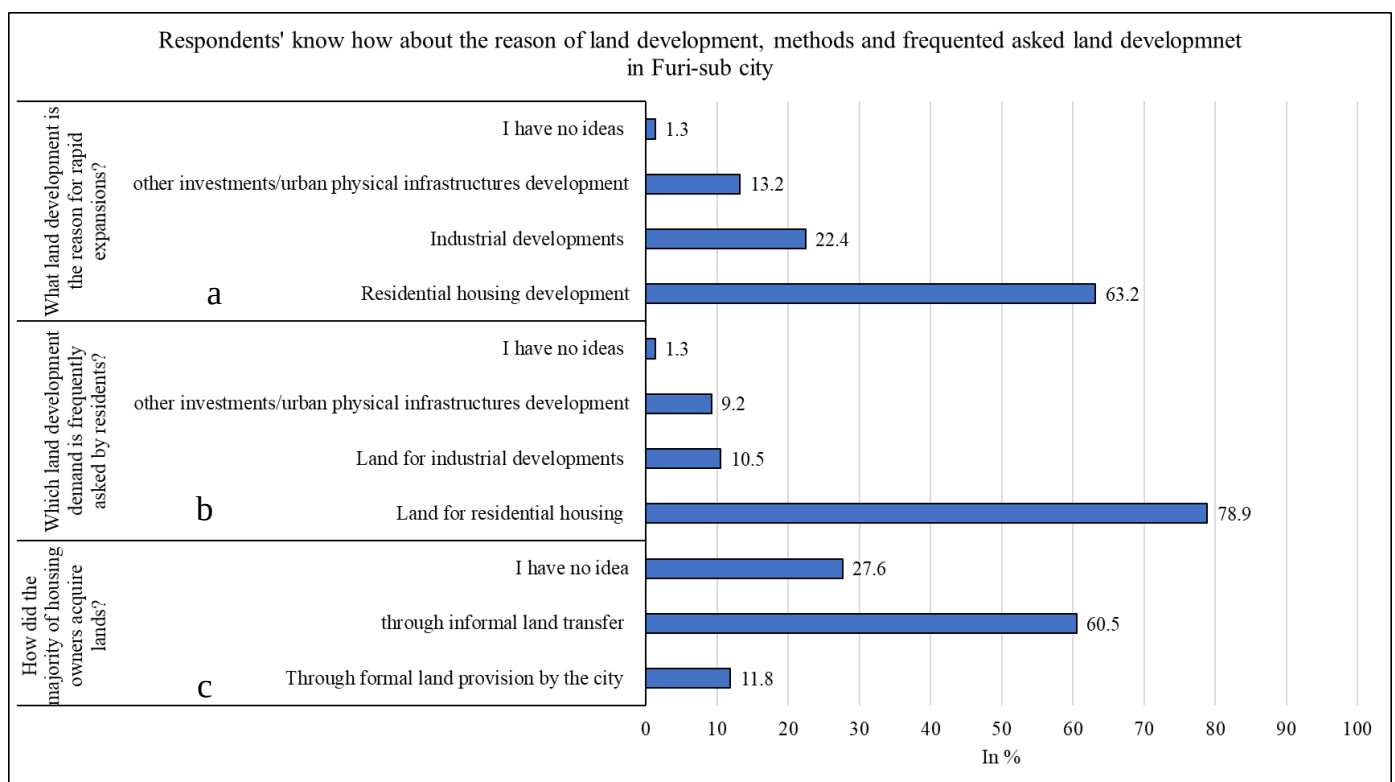


Figure 4.5. Respondents' Knowledge Level Regarding to the Reason of Land Development Expansion, Methods of Land Acquisition and the Most Land Development Demand in the Study Area.

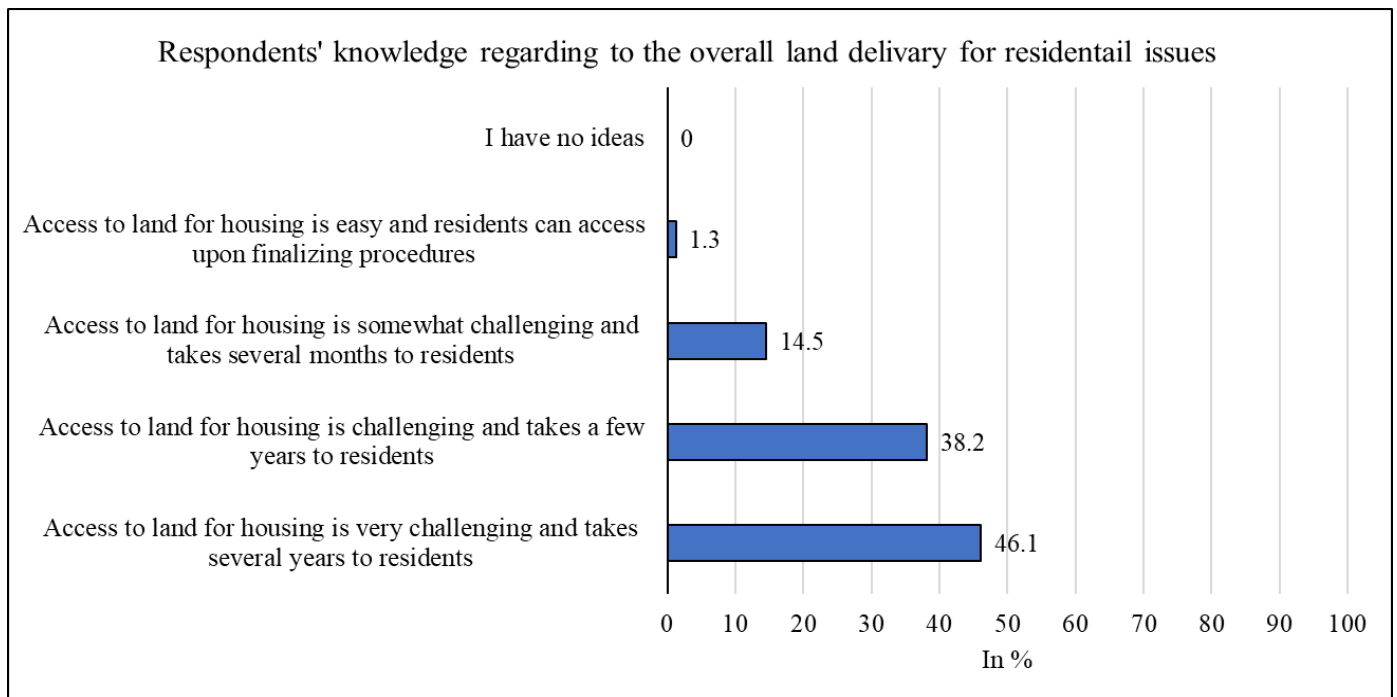


Figure 4.6. Respondents' Understanding and Rating Level Regarding to the Current Land Provision Issues

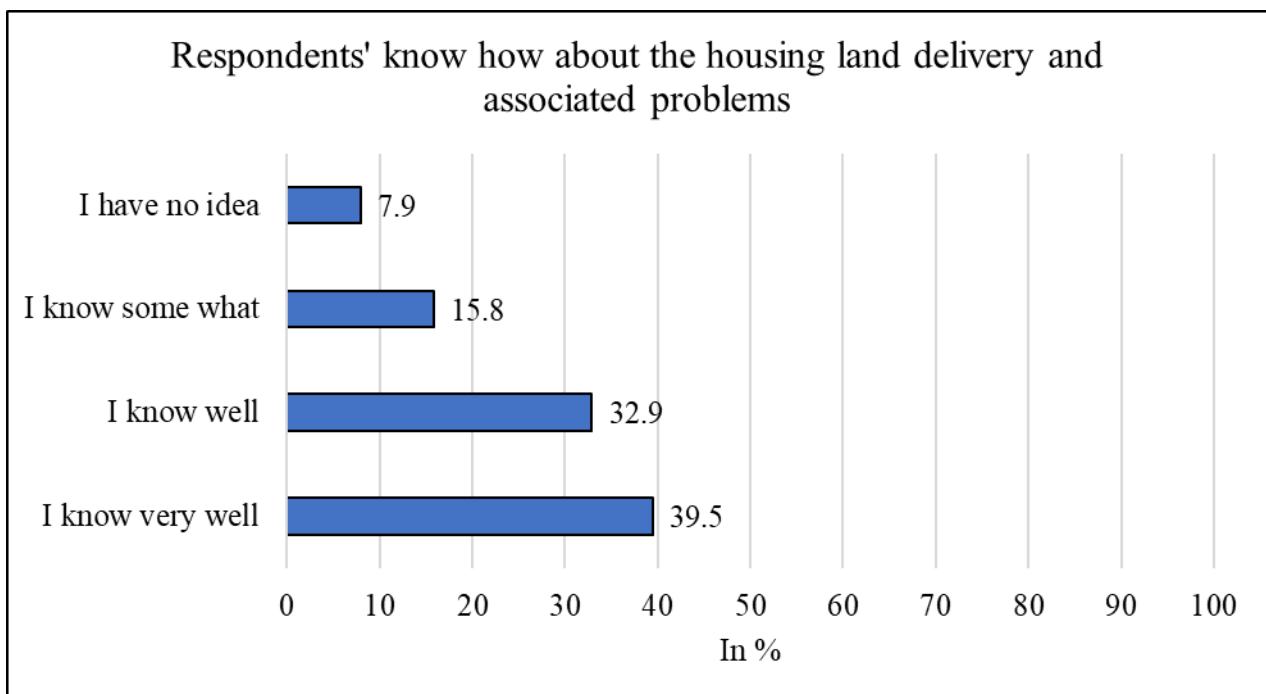


Figure 4.7. Respondents' Character in Terms of Know How About the Land Provision Challenges

4.1.2 The Results of Qualitative Response

The results of qualitative response from open-ended questionnaires indicated that out of the 76 successfully attempted respondents only 12 of them responded to the open-ended survey questionnaires. All the 12 qualitative responses were carefully analyzed and related to objective of the study by coding into major themes and sub-themes. Some of the major themes have more than one sub-theme while a few major themes have one sub themes. Accordingly, all the 12 qualitative responses were coded into four major themes such as *“farmers’ unwillingness to transfer lands”*, *“lack of strategies and planning to balance land demand and supply and weak institution”*, *“Socioeconomic consequence delay in land provision on individuals and revenue generations of the sub-city”* and *“lack of defined time frame on land provision”*.

Those four major themes were further break down to sub-themes. For instance, *farmers’ unwillingness to transfer lands* have three sub-themes with overall 4 responses such as *“farmers lack of trust on local government”* with one response entry, *“low land compensation”* with one response entry and *“experience from farmers who already gave their lands”* with two response entry. This major theme and subthemes focus on lack of farmers or lose hope on development of necessary service and infrastructures after they gave their lands and characters of low land compensations and their experience from the farmers who already their lands were takes as challenge for on time land provision and transfer.

The second major i.e., *“lack of strategies and planning to balance land demand and supply and weak institution”* has four sub-themes with six overall entries such as *“lack of strategies on land data and potential applicant”*, *“lack of creating awareness”*, *“lack of prioritizing and pre-planning on land preparation”* and *“lack of facilitation and providing budget for land transfer process”*

Regarding to *“socioeconomic consequence of delay in land provision on individuals and revenue generations of the sub-city”* the third major theme, has two subthemes such as *“land delay on economic potentials of applicants”* and *“lack of on time land development”* with four total response entry. The fourth major theme, i.e., *“lack of defined time frame on land provision”* has only one sub theme with one entry that related to the lengthy and complicated procedures and character of land provision process. For instance, the response said by one respondent that *“another thing that is holding up the provision of land is the lengthy and*

complicated procedures in government offices.” Indicated that challenge of land provision because of long time to process after land is transferred from farmers.

4.1.3 Residential Land Provision Challenge in Furi Sub-City

As its able to be understood from the results of respondents’ profiles and background particularly on the levels of their know how about the city, the expansion areas and direction, their stay duration and know how about the housing related land development and associated problems indicated promising data to address the research objective of this study. In general, the profile of respondents discussed above indicated that all systematically selected respondents are optimum and the information they gave can fully address the research question of this study.

Therefore, to understand the challenging factors of land provision for residential in Furi sub city; 18 parameters that can indicate residential land provision challenges were prepared based on the process/steps of land provision and other challenging factor which directly influence land provision system in the city. Based on the rating result those 18 parameters were ranked using relative importance index methods and factor analysis methods as discussed in the following pages.

The result showed all the proposed parameters were rated high by the respondents where most of them rated high as agree and strongly agree (Fig.4.8). Accordingly, more than 65% of respondents perceived and have positive attitude towards all the 18 parameters where they rated agree or strongly agreed. However, as it’s indicated in Fig.4.9; more than 70% of the respondents agreed or strongly agreed towards all the indicated parameters of residential land provision challenges except for parameters, “The lack of on time decision by city’s land management and development office and city cabinets, after land transfer process is finalized, is the main challenge” and “Farmers’ kebele leaders are unwilling and not always cooperate in organizing and activating farmers for discussion” Which rated less relatively by the respondents. Furthermore, it is important to notice which parameters are rated high by more than 80% or above. With this regard out of the 18 proposed parameters of land provision challenge 14 of them are rated high by more than 80 % of the respondents (also refer Fig. 4.8).

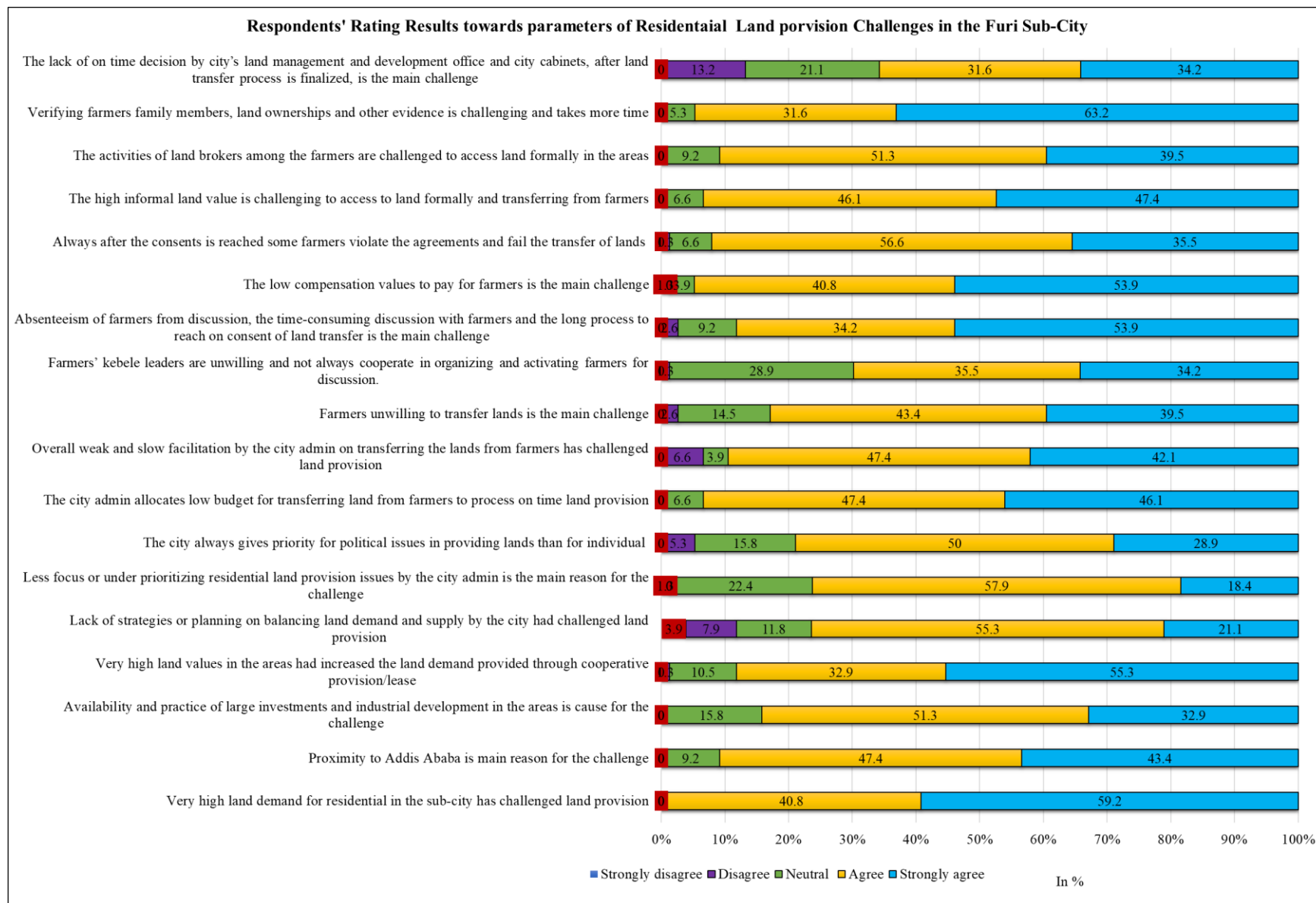


Figure 4.8. Respondents' Rate Result as Towards the 18 Parameters of Land Provision Challenge in Furi Sub City

4.1.3.1 Rank of the Residential Land Provision Challenges in Furi Based on Relative Importance Index (RII) Method

Based on the formula indicated in chapter three and respondents rating results, the relative importance index was calculated for all the 18 parameters as indicated in the Table 4.1. The RII value ranges from 0 to 1, where the values around 1 is very important and have high influence while the value of RII around zero is less important and the influence is in significant.

For this study's 18 parameters of residential land provision challenges, all variables rated high and their RII values are ranged between 0.5 to 0.72 which falls in high medium and medium RII ranges (Table 4.1). Most of variables (15 variables out of the 18) are ranked in high medium RII values range i.e., ($0.6 \leq RII \leq 0.8$). However, there is slight difference among the parameters as it indicated by the RII values attached to each individual parameter. Hence, there is also the difference in terms of their level of importance and influence on overall residential land provision challenges in Furi sub city. *For instance, variables of parameters "Very high land demand for residential in the sub-city has challenged land provision" and "Verifying farmers family members, land ownerships and other evidence is challenging and takes more time"* are the most influencing and ranked the top; according to this data and results with RII values of 0.718 and 0.716 respectively (Table 4.1).

On the other hand, only 3 parameters out of the 18 are relatively ranked at lower with RII values ($0.4 \leq RII \leq 0.6$), falling in medium RII range. However, still the values of these variables are on the top level of the range with 0.584, 0.574, 0.563 approached to 0.6 RII values. This showing that these parameters are important and have significant influence on the process of residential land provisions in the sub city with slight difference from the parameters ranked under RII values with $0.6 \leq RII \leq 0.8$ or high medium range (also refer Table 4.1).

Table 4.1: RII Based Rank of the 18 Parameters of Residential Land Provision Challenges in Furi

Parameters of Residential land provision challenges	N	Mean	Weighted average value	RII	RII ranges
Very high land demand for residential in the sub-city has challenged land provision	76	3.59	273	0.718	Higher high-medium
Verifying farmers family members, land ownerships and other evidence is challenging and takes more time	76	3.58	272	0.716	
The low compensation values to pay for farmers is the main challenge	76	3.46	263	0.692	high-medium ($0.6 \leq \text{RII} \leq 0.8$)
Very high land values in the areas had increased the land demand provided through cooperative provision/lease	76	3.42	260	0.684	
The high informal land value is challenging to access to land formally and transferring from farmers	76	3.41	259	0.682	
The city admin allocates low budget for transferring land from farmers to process on time land provision	76	3.39	258	0.679	
Absenteeism of farmers from discussion, the time-consuming discussion with farmers and the long process to reach on consent of land transfer is the main challenge	76	3.39	258	0.679	
Proximity to Addis Ababa is main reason for the challenge	76	3.34	254	0.668	
The activities of land brokers among the farmers are challenged to access land formally in the areas	76	3.30	251	0.661	
Always after the consents is reached some farmers violate the agreements and fail the transfer of lands	76	3.26	248	0.653	
Overall weak and slow facilitation by the city admin on transferring the lands from farmers has challenged land provision	76	3.25	247	0.65	
Farmers are unwilling to transfer lands is the main challenge	76	3.20	243	0.639	
Availability and practice of large investments and industrial development in the areas is cause for the challenge	76	3.17	241	0.634	
The city always gives priority for political issues in providing lands than for individual	76	3.03	230	0.605	
Farmers' kebele leaders are unwilling and not always cooperate in organizing and activating farmers for discussion.	76	3.03	230	0.605	
Less focus or under prioritizing residential land provision issues by the city admin is the main reason for the challenge	76	2.92	222	0.584	Medium ($0.4 \leq \text{RII} \leq 0.6$)
The lack of on time decision by city's land management and development office and city cabinets, after land transfer process is finalized, is the main challenge	76	3.43	218	0.574	
Lack of strategies or planning on balancing land demand and supply by the city had challenged land provision	76	2.82	214	0.563	

4.1.3.2 Rank of Residential Land Provision Challenge in Furi Sub-City Based on Factor Analysis

The main objective of using factor analysis is to understand in depth by grouping those 18 parameters of the residential land provision into some few areas that can be called as challenging factors. Furthermore, it enables us to understand potential challenge or variance in overall the land provision system in the city beside ranking the 18 parameters by grouping them. Accordingly, factor analysis run by considering only factors with Eigen value greater than one and Varimax with Kaiser Normalization using SPSS 26 software. The results indicated seven factors with clear rank were identified (Fig.4.9). These factors are named based on the name and meaning of parameters highly loaded onto that factor. According to this data these seven factors have up to 72.4% influence on the overall residential land provision system in the sub city; indicating that if these all factors are improved the residential land provision system in the area will be improved by 72.4% (Fig.4.9). The details of each factor are discussed as follows.

The 1st challenging factor: Availability of large investment and lack of priority and strategies: *Availability of large investment and lack of priority and strategies* is the first challenging factor resulted from highly loaded three parameter such as “*Availability and practice of large investments and industrial development in the areas is cause for the challenge*” with loading value of 0.693, “*Lack of strategies or planning on balancing land demand and supply by city admin had challenged land provision*” with loading value of 0.767 and “*The city admin always gives priority for political issues in providing lands than for individual services*” with loading value of 0.819. In addition, the results of qualitative response from open-ended questionnaires indicated major challenges in the provision of residential housing. These were a lack of strategies for balancing land demand and supply and an under prioritization of residential land provision issues, rather than prioritizing political issues.

Because of the overall influence and potential of this factor as indicated by greater Eigen value and percentage of variance; *availability of large investments and lack of priority and strategies* is the first influence factor with overall influence potential of 17.97% on the land provision system in the city.

The 2nd Challenging Factor: *Because of location, brokers activities and high land values*

Because of location, brokers activities and high land values factor is the second most influencing factor with the overall challenging potential of 15.03% on the residential land provision system in the sub-city. The factor is the result of seven highly loaded parameters as indicated in Fig.4.9. The main reason associated with this factor is the location of Furi sub-city which almost seems parts of the capital city i.e., Addis Ababa. Because of the housing demand and challenges in the area's landowner farmers sell their lands at very higher values than they get from normal transfer to the government. In line with this the results of from open-ended questionnaires indicated that farmers resist the transfer of land for development because of low compensation procedure that ignores the land value of the area. Farmers previously relied on agriculture on their land to provide food for their families, which are not comparable with the compensation in the long run proposed by the government. Local governments have not taken exceptional measures to improve farmers' lives, especially once their land is taken away.

Furthermore, land brokers are playing major roles in transferring lands from farmers illegally at higher values considered to the land compensation. Hence, this situation become the challenging factor in residential land provision formally in the city identified as the second most challenging factor of land provision and if improved it will improve land provision system by at least 15.03% (Fig.4.9).

The 3rd Challenging Factor: *Weak land providing institution and high residential land demand*: *Weak land providing institution and high residential land demand* factor is only considered high land residential demand while above two factors focus on overall land values and demand unlike only residential type of use. This factor is the 3rd most challenging land provision with overall variance of 11.22% on the process of land provision in the sub city. The name is based on the meaning of highly loaded variables i.e., “*very high land demand for residential housing in the sub-city has challenged land provision*” with loading values of 0.858 and “*overall, weak and slow facilitation by the city admin on transferring the lands from farmers*” with loading values of 0.837.

The 4th Challenging Factor: *Unwillingness of farmers and their leaders*: *Unwillingness of farmers and their leader's* factor is the 4th most influencing factors on process of land provision for residential housing in Furi with the variance challenging potential of 9.3%. It is the result of two highly loaded variables i.e., “*Farmers' kebele leaders are unwilling and not*

always cooperate” with loading values of 0.797 and “Absenteeism of farmers from discussion, the time-consuming discussion with farmers and the long process to reach on consent” with loading values 0.669.

The 5th Challenging Factor: Low land compensations: *Low land compensations related factor is the 5th most influencing resulted from the merge of “The low compensation values to pay for farmers is discouraging farmers from transferring their lands” with loading values of 0.843 and “always after the consents is reached some farmers violate the agreements and fail the transfer of lands” with loading values of 0.637. according to this study’s result it can challenge the residential land provision process up to 6.7%.*

The 6th and 7th Challenging Factors: *considerably these 6ths and the 7th factors have low influence with overall challenging potentials of 6.55% and 5.68% respectively (refer Fig.4.9).*



Figure 4.9. Rank of Residential Land Provision Challenges in Furi Sub-City Based on Factor

Analysis

4.1.4 Effect of Residential Land Provision Challenges on Socioeconomic Conditions

To understand the effect of delay in residential land provision on socioeconomic condition, about 13 parameters describing the socioeconomic condition were prepared (Fig.4.10). The results showed that all the respondents agreed with indicated parameters of socioeconomic condition and rated high with agree and strongly agree (Fig.4.10).

Accordingly, all the parameters are rated as agree and strongly agree by more than 80 %for the respondents. Showing that according to this result all the respondent experienced with effect of residential land provision on the socioeconomic condition in the sub-city and perceived positive rating.

on the other hand, those 13 parameters of socioeconomic were applied to dimension reduction or principal component analysis. Following the methods and procedures followed for parameters of residential land provision challenge. The main objective of apply factors analysis for parameters of socioeconomic condition is to reduce the numbers of the 13 parameters into some few parameters and then to use these identified parameters for both correlational analysis and regression analysis. The results indicated that the 13 parameters were reduced into four (4) major effects areas of socioeconomic condition (refer Table 4.2).

The 1st effect of land provision challenge on socioeconomic condition is named as “*socioeconomic opportunity and consequences for individuals*”. The name of this effect is named after the five parameters highly leaded into this socioeconomic condition effect parameters and by summarizing their meaning. The *socioeconomic opportunity and consequences for individuals* is more influencing with the overall potential variance of 28.272% compared to the other effects of socioeconomic condition (Table 4.2).

The 2nd area of effect on socioeconomic condition is “negative impact on construction materials’ business, and livelihood of farmers and encouraged rent housing investments”. This socioeconomic parameter is the results of the three highly loaded parameters such as *it had negatively impacted construction materials business* with loading values of 0.717, *the lack of on time residential land provision created a good opportunity for rent housing investment* with loading values of 0.663 and *the livelihoods of farmers are negatively impacted because of low or lack of land development activities* with loading values of 0.780.

This parameter of effect is the second most effect with overall potentials of 15.106% (Table 4.2).

The 3rd area of effect on socioeconomic condition is “impacted land development, revenue generations and job creation potentials”. The name of this socioeconomic effect based on the meaning of parameters which are highly loaded such as *lack of on time land provision has negatively impacted the revenues generation potential from land development and related activities* with leading values of 0.555, *it had negatively impacted and locked the job creation potential of the sub-city/city* with leading values of 0.846 and *after lands is transferred from farmers, its stayed for long time without any production* with leading values of 0.567. Also, this effect is important with influencing potential of 11.015% on the overall socioeconomic condition (Table 4.2).

The 4th effect is named as “effects on activities of daily labors and opportunity for informal land selling”. In the same way, this also named based on the name and meaning of the variables which are highly loaded into this effect which are *it had negatively impacted the life of the construction daily labors activities in the sub-city* with leading values of 0.791 and *the lack of on time residential land provision had created a good opportunity for farmers to sell illegally* with leading values of 0.717. Even though it is relatively the least effect still it has overall effect of 8.19% on the socioeconomic condition of the sub-city according to this study results. In general, the overall effect of socioeconomic condition resulted because of residential land provision challenges have a potential of up-to 62.584% (Table 4.2).

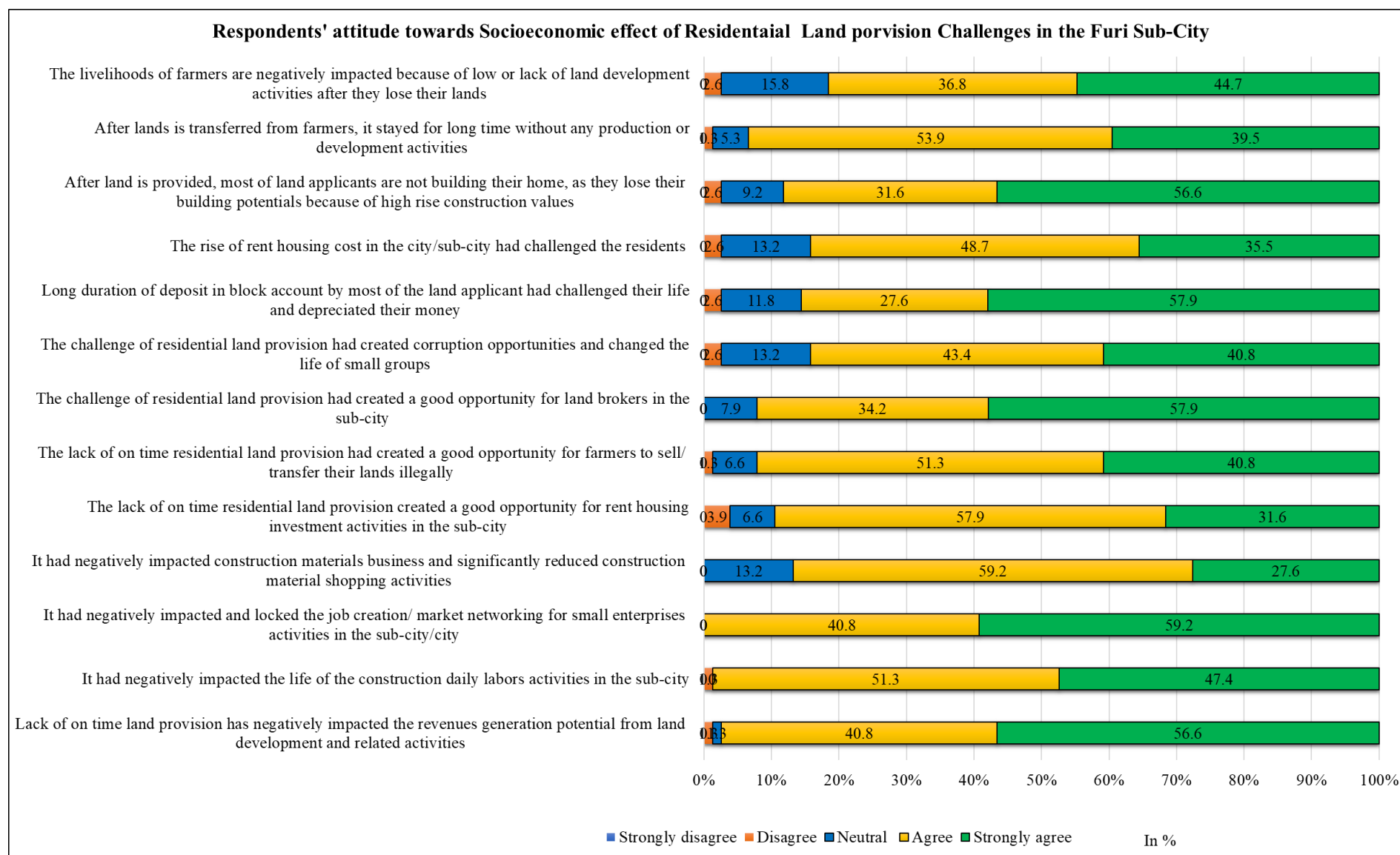


Figure 4.10. Respondents' Attitude and Rating Towards Socioeconomic Condition Effect of Land Provision Challenges

Table 4.2: Main Areas of Socioeconomic Effects of Residential Land Provision Challenges

Areas of socioeconomic effects	Variables	higher loaded values	Eigen value	% of Variance	Cumulative %
socioeconomic opportunity and consequences for individuals	The challenge of residential land provision had created a good opportunity for land brokers	0.547	3.675	28.272%	28.272%
	The challenge of residential land provision had created corruption opportunities and changed the life of small groups	0.745			
	Long duration of deposit in block account by most of the land applicant is negatively affect applicants	0.488			
	The rise of rent housing cost in the city/sub-city had challenged the residents	0.846			
	After land is provided, most of land applicants are not building their home	0.838			
Impacted construction materials' business, and livelihood of farmers and encouraged rent housing investments	It had negatively impacted construction materials business	0.717	1.964	15.106%	43.378%
	The lack of on time residential land provision created a good opportunity for rent housing investment	0.663			
	The livelihoods of farmers are negatively impacted because of low or lack of land development activities	0.780			
Impacted land development, revenue generations and job creation potentials	Lack of on time land provision has negatively impacted the revenues generation potential from land development and related activities	0.555	1.432	11.015%	54.393%
	It had negatively impacted and locked the job creation potential of the sub-city/city	0.846			
	After lands is transferred from farmers, its stayed for long time without any production	0.567			
Effects on activities of daily labors and opportunity for informal land selling	It had negatively impacted the life of the construction daily labors activities in the sub-city	0.791	1.065	8.192%	62.584%
	The lack of on time residential land provision had created a good opportunity for farmers to sell illegally.	0.717			

4.1.4.1 Relationships of Land Provision Challenge and Socioeconomic Condition Effects

The relationships of land provision and socioeconomic condition are examined by using correlation and regression analysis. Correlation is used to test and understand the level of association between the parameter while regression is applied to examine the influence of land provision challenges on socioeconomic condition parameters.

4.1.4.2 Correlation Results

The correlation analysis results between the parameters of residential land provision challenge and socioeconomic condition indicated that there are very high positive relationships. As presented in Table 4.3, it showed that the strong association between land provision challenge and socioeconomic condition that any change in land provision system also directly affect the socioeconomic conditions. All the correlation values between each parameter are greater than 0.7 that confined between 0.773-0.914 very approached to 1; showing very strong positive association (refer Table 4.3).

<i>Correlation</i>	<i>Availability of large investment and lack of priority and strategies</i>	<i>Because of location of the area, Brokers activities and high land values</i>	<i>Weak institutional and high land demand</i>	<i>Un-willingness of farmers and their leaders</i>	<i>Low land compensations</i>	<i>The lack of on time decision by the city</i>	<i>Less focus or under prioritizing residential land provision issues</i>
<i>socioeconomic opportunity and consequences for individuals</i>	0.790	0.842	0.773	0.866	0.858	0.831	0.833
<i>Impacted construction materials' business, and livelihood of farmers and encouraged rent housing investments</i>	0.814	0.903	0.793	0.819	0.873	0.875	0.880
<i>Impacted land development, revenue generations and job creation potentials</i>	0.787	0.854	0.847	0.893	0.890	0.841	0.887
<i>Effects on activities of daily labors and opportunity for informal land selling</i>	0.811	0.886	0.840	0.871	0.889	0.848	0.914

Table 4.3: Correlation Analysis Results of Residential Land Provision Challenge

4.1.4.3 Regression Results

Multiple regression was applied by using residential land provision challenge as a predictor (independent variables) and socioeconomic parameters as dependent variables (Table 4.4). For the discussion and interpretation of the results R-square, P-value and coefficient are used as follows (Table 4.4).

The results showed that for socioeconomic condition variables overall model test is valid and significant. Accordingly, for parameters *socioeconomic opportunity and consequences for individuals*, all the seven predictors together can variance it by 41.1% (R square .411). Hence, change in all the seven predictor of residential land provision challenge will change the *socioeconomic opportunity and consequences for individuals* by 41.1%. However, if individual predictor is concerned, only three predictors such as *availability of large investment and lack of priority and strategies* and *because of location of the area, brokers activities and high land values* and *the lack of on time decision by city* were statistically significant and important predictor at $p\text{-value} \leq 0.05$. Such that one percent change in *availability of large investment and lack of priority and strategies* predictor will change *socioeconomic opportunity and consequences for individuals* by 0.238 times in positive direction as indicated by coefficient attached to the predictor. Whereas one percent change for predictor *because of location of the area, brokers activities and high land values* will move *socioeconomic opportunity and consequences for individuals* by 0.510 times towards positive direction (increase by 0.510 time). In the same way one percent change in *the lack of on time decision by city* will increase *socioeconomic opportunity and consequences for individuals* by 0.186 times (Table 4.4).

Regarding to *Impacted construction materials' business, and livelihood of farmers and encouraged rent housing investments* parameter, all the seven predictor of land provision challenge are valid and statistically significant and change in all these predictors can variance the indicated socioeconomic condition by 59.3 % as indicated by R-square value. However, if individual predictors are concerned, only predictor, *un-willingness of farmers and their leaders* is statistical important at accepted p-value. Accordingly, for instance one percent down from status in predictor *un-willingness of farmers and their leaders* will further reduce *impacted construction materials' business, and livelihood of farmers and encouraged rent housing investments* parameter by 0.335 time as verified by attached coefficient. However, regarding to parameters like impacted land development, revenue generations and job

creation potentials and effects on activities of daily labors and opportunity for informal land selling few predictors were valid statistically. But in overall model test it is important and significant to consider as varied by R-square values attached and significance levels (Table 4.4).

Concerning to effects of activities of daily labors and opportunity for informal land selling all the seven predictor of land provision challenge are valid and statistically significant and change in all these predictors can variance the indicated socioeconomic condition by 37.1 % as indicated by R-square value. However, if individual predictors are concerned, only predictor, because of location of the area, brokers activities and high land values is statistical important at accepted p-value Table 4.4. Accordingly, for instance one percent down from status in predictor because of location of the area, brokers activities and high land values will further reduce effects of activities of daily labors and opportunity for informal land selling parameter by 0.203 time as verified by attached coefficient.

Table 4.4: Regression Analysis Results of Residential Land Provision Challenges

Parameters Residential land provision challenge and model information		socioeconomic opportunity and consequences for individuals			Impacted construction materials' business, and livelihood of farmers and encouraged rent housing investments			Impacted land development, revenue generations and job creation potentials			Effects on activities of daily labors and opportunity for informal land selling		
		Coefficients	t-Stat	P-value	Coefficients	t-Stat	P-value	Coefficients	t-Stat	P-value	Coefficients	t-Stat	P-value
Availability of large investment and lack of priority and strategies		0.238	2.636	0.010**	0.168	1.457	0.150	0.026	0.275	0.784	0.155	1.752	0.084
Because of location of the area, Brokers activities and high land values		0.510	4.608	0.000**	0.239	1.817	0.074	0.059	0.541	0.590	0.203	2.016	0.048*
Weak institutional and high land demand		-0.143	-1.419	0.160	-0.205	-1.699	0.094	0.017	0.175	0.862	-0.015	-0.161	0.873
Un-willingness of farmers and their leaders		-0.065	-0.740	0.462	0.335	3.101	0.003*	0.268	3.022	0.004*	0.048	0.584	0.561
low compensation		0.091	0.931	0.355	0.107	0.912	0.365	0.036	0.375	0.709	-0.030	-0.332	0.741
The lack of on time decision by city		0.186	2.413	0.019*	0.139	1.456	0.150	-0.026	-0.337	0.737	-0.101	-1.380	0.172
Less focus or under prioritizing residential land provision issues		-0.048	-0.574	0.568	-0.168	-1.695	0.095	-0.008	-0.104	0.918	0.066	0.872	0.386
Overall model statistics	Multiple R	0.641			0.770			0.678			0.609		
	R square	0.411			0.593			0.460			0.371		
	Significance	0.00			0.000			0.000			0.000		

*Statistically significant at $\geq 95\%$ and **statistically significant at $\geq 99\%$, confidence interval

4.1.5 Effect of Residential Land Provision Challenges on Sustainable Land Developments

To understand the effect of residential land provision challenges on sustainable land development about 10 parameters describing sustainable land development and activities were prepared (Fig.4.11). The results showed that all the respondents agreed with indicated parameters of sustainable land developments and rated as agree and strongly agree towards the indicated 10 parameters (Fig.4.11).

Accordingly, all the parameters are rated as agree and strongly agree by more than 60 % of the respondents which showing that all the respondent experienced with effect of residential land provision challenges on sustainable land developments in the sub-city and perceived as negatively impacting factors on sustainable land developments (Fig. 4.11). Out of the ten indicated parameters of sustainable land development 8 were rated high and which more than 54% of respondents were strongly agreed with except to parameters *delay in land provision is the main cause for urban plans violation in the sub city* and *delay/ challenge of land provision had created/opened opportunity for illegal housing development*. Furthermore, more than 80% of the respondents rated high as agree and strongly agreed towards all the indicated parameters except towards parameter *delay in land provision is the main cause for urban plans violation in the sub city* (Fig. 4.11).

In the same ways to socioeconomic parameters, the 10 parameters of sustainable development were also applied to dimension reduction or principal component analysis. The main objective of applying factors analysis is to reduce the numbers of the 10 parameters into some few parameters and then to use these identified parameters of sustainable land development for correlational and regression analysis to understand effect of residential land provision challenge on the sustainable land development. The results indicated that the 10 parameters were reduced into four (4) major areas of sustainable land development issues and other indicators of sustainability in the sub-city (refer Table 4.5). Accordingly, as indicated in Table 4.5, major areas of sustainable land development issues such as *resulted in violation of plans and poor living condition; conversion of naturals green areas, spatial inequality and disaster risk; paved ways for rapid illegal housing on fertile production lands and it had resulted in an overall unbalanced and unsustainable land use systems* were the major sustainable issued identified by reducing the 10 parameter of sustainable land development with 65.25% of variance together. *Resulted in violation of plans and poor living condition* is

the most effect caused by land provision challenge with overall variance of 20.19% and formed from the highly loaded parameters that name after those parameters. Whereas *conversion of natural green areas, spatial inequality and disaster risk* is the second identified effect with variance of 19.13% formed from parameters such as *delay in land provision is the main cause for conversion of all natural green areas to squatter housing in the sub-city* with loading values 0.780, *residents of illegal housing areas are being challenging by poor environmental quality and prone to disasters* with loading values of 0.766 and *lack of on time land delivery had caused spatial in quality in providing infrastructures in the sub-city* with loading values of 0.789. *Paved ways for rapid illegal housing on fertile production lands* and *it had resulted in an overall unbalanced and unsustainable land use systems* are the 3rd and 4th effect identified with overall variance of 15.26% and 10.67% respectively (refer Table 4.5).

Furthermore, the results from open-ended questionnaires indicated that a lack of on-time land provision over a long period of time had adverse impacts on sustainable land development and use systems in different ways. Delay in land provision is the main cause of urban plans Violations in the sub-city also cause inaccessible lands to illegal land grasping, illegal housing, and overcrowding, which leads to below-standard housing spatial quality in providing infrastructure.

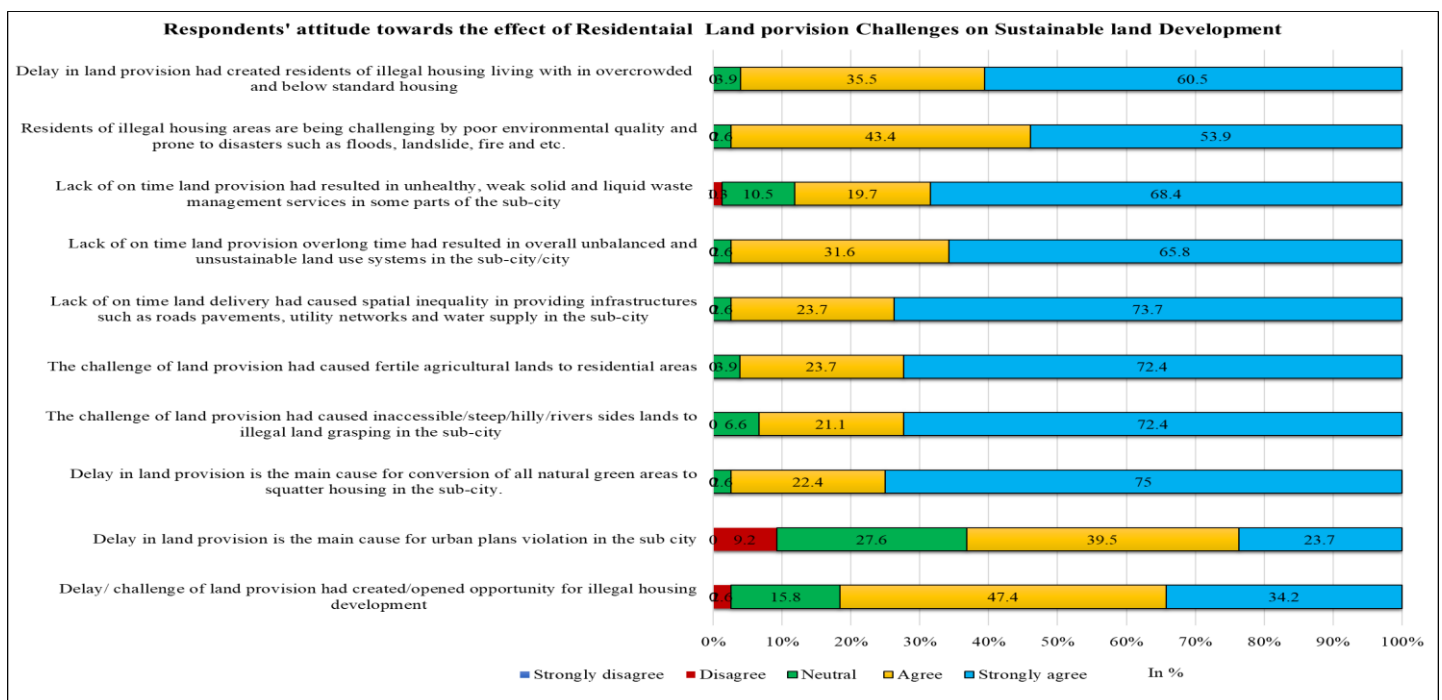


Figure 4.11. Respondents' Attitude and Rating Results Towards the Parameters of Sustainable Land Developments

Table 4.5: Main Areas of Effects on Sustainable Land Development -Based on Factor Analysis

Areas of socioeconomic effects	variables	higher loaded values	Eigen value	% of Variance	Cumulative %
Resulted in violation of plans and poor living condition	Delay in land provision is the main cause for urban plans violation in the sub city	0.722	2.019	20.19%	20.19%
	The challenge of land provision had caused inaccessible/steep/hilly/rivers sides lands to illegal land grasping in the sub-city	0.730			
	Lack of on time land provision had resulted in unhealthy, weak solid and liquid waste management services in some parts	0.603			
	Delay in land provision had created residents of illegal housing living with in overcrowded and below standard housing	0.695			
conversion of naturals green areas, spatial inequality and disaster risk	Delay in land provision is the main cause for conversion of all natural green areas to squatter housing in the sub-city	0.780	1.913	19.13%	39.32%
	Lack of on time land delivery had caused spatial in quality in providing infrastructures in the sub-city	0.789			
	Residents of illegal housing areas are being challenging by poor environmental quality and prone to disasters	0.766			
paved ways for rapid illegal housing on fertile production lands	Delay/ challenge of land provision had created/opened opportunity for illegal housing development	0.692	1.526	15.26%	54.58%
	The challenge of land provision had caused fertile agricultural lands to residential areas	0.733			
It had resulted in an overall unbalanced and unsustainable land use systems	Lack of on time land provision overlong time had resulted in overall unbalanced and unsustainable land use systems	0.919	1.067	10.67%	65.25%

4.1.5.1 Relationships of Land Provision Challenges and Sustainable Land Development Effects

The relationships of land provision and sustainable land development are examined by using correlation and regression analysis likewise to socioeconomic condition discussed above. Correlation is used to test and understand the level of association between the parameters while regression is applied to examine the influence of land provision challenges on sustainable land development parameters as follows.

4.1.5.2 Sustainable Land Developments Correlation Results

The correlation analysis results between the parameters of residential land provision challenge and sustainable land development indicated that there are high positive relationships. As presented in Table 4.6, it showed that the association between land provision challenge and sustainable land development that any change in land provision system also directly affect the sustainable land development. All the correlation values between each parameter are greater than 0.4 that confined between 0.641-0.832 approached to 1; showing strong positive association (refer Table 4.6). However, *weak institutional and high land demand and it had resulted in an overall unbalanced and unsustainable land use systems* have relatively weak correlation with relatively low values of 0.370 (Table 4.6).

Table 4.6: Correlation Analysis Results of Residential Land Provision Challenges with Sustainable Land Development Parameters

Correlation	<i>Lack of priority and strategies and because of large investments</i>	<i>Because of location of the area, Brokers activities and high land values</i>	<i>Weak institutional and high land demand</i>	<i>Unwilling of farmers and their leaders</i>	<i>low compensation</i>	<i>The lack of on time decision by city</i>	<i>Less focus or under prioritizing residential land provision issues</i>
<i>Resulted in violation of plans and poor living condition</i>	0.770	0.716	0.727	0.760	0.759	0.832	0.732
<i>conversion of natural green areas, spatial inequality and disaster risk</i>	0.553	0.643	0.803	0.647	0.734	0.711	0.734
<i>paved ways for rapid illegal housing on fertile production lands</i>	0.658	0.683	0.699	0.641	0.735	0.703	0.715
<i>It had resulted in an overall unbalanced and unsustainable land use systems</i>	0.515	0.405	0.370	0.407	0.444	0.506	0.582

4.1.5.3 Sustainable Land Development Regression Results

Multiple regression was applied by using residential land provision challenge as a predictor (independent variables) and sustainable land development parameters as dependent variables (Table 4.7). The results showed that overall model test is valid and significant for all sustainable land development parameters.

Accordingly, for parameters *resulted in violation of plans and poor living condition*, all the seven predictors together can variance it by 75.9% (R square 0.759). Hence, change in all the seven predictor of residential land provision challenge will change the *resulted in violation of plans and poor living condition* by 75.9%. However, out of the seven predictors of residential land provision challenge only the first, fourth and sixth predictors were significant, i.e., *Lack of priority and strategies and because of large investments* with p-value ≤ 0.05 , *Unwilling of farmers and their leaders* with p-value ≤ 0.05 and the *lack of on time decision by city* with p-

value ≤ 0.01 respectively. Indicating that one percent increase by those three predictors will affect *resulted in violation of plans and poor living condition* parameter of sustainable land development by 0.232, 0.187 and 0.345 times respectively (Table 4.7).

Regarding to *conversion of natural green areas, spatial inequality and disaster risk*, overall model test is valid at P-value ≤ 0.01 and affects the parameters of sustainable land development by 69.9% as verified by R-square values attached (R-square 0.699). When each predictor is considered, *Lack of priority and strategies and because of large investments* with p-value ≤ 0.05 is statistically significant effect on the parameter showing that one percent improvement in *lack of priority and strategies and because of large investments* will down(decrease) the *conversion of natural green areas, spatial inequality and disaster risk* parameters of sustainable land development by (-0.198) times. However, if *lack of priority and strategies and because of large investments* continued as its current state or further downed by one percent from the current state the parameter of *conversion of natural green areas, spatial inequality and disaster risk* will increase up from the current state by continuing conversion, spatial inequality and disaster risk (Table 4.7).

However, for predictors weak institutional and high land demand with p-value ≤ 0.01 and less focus or under prioritizing residential land provision issues with p-value ≤ 0.05 have an impact on the parameter of *conversion of natural green areas, spatial inequality and disaster risk* in positive direction as indicated by attached coefficient. Regarding to, it had resulted in an overall unbalanced and unsustainable land use systems parameter of sustainable land development, the overall model test is important with p-value ≤ 0.01 and overall variability of 40.9%.

Table 4.7: Regression Analysis Results of Residential Land Provision Challenges with Sustainable Land Development Parameters

Parameters of residential land provision challenge (predictors) and model information	Resulted in violation of plans and poor living condition			conversion of naturals green areas, spatial inequality and disaster risk			paved ways for rapid illegal housing on fertile production lands			It had resulted in an overall unbalanced and unsustainable land use systems		
	Coefficients	t-Stat	P-value	Coefficients	t-Stat	P-value	Coefficients	t-Stat	P-value	Coefficients	t-Stat	P-value
Lack of priority and strategies and because of large investments	0.232	2.204	0.031*	-0.198	-1.823	0.073	0.090	1.010	0.316	0.113	1.030	0.307
Because of location of the area, Brokers activities and high land values	0.085	0.708	0.481	-0.056	-0.452	0.653	0.084	0.830	0.409	-0.201	-1.598	0.115
Weak institutional and high land demand	0.012	0.110	0.913	0.452	3.973	0.000**	0.115	1.239	0.220	-0.179	-1.558	0.124
Unwilling of farmers and their leaders	0.187	1.890	0.063	-0.073	-0.717	0.475	-0.072	-0.866	0.390	-0.088	-0.851	0.398
low compensation	0.060	0.561	0.576	0.138	1.252	0.215	0.149	1.651	0.103	0.069	0.621	0.537
The lack of on time decision by city	0.345	3.954	0.000**	0.070	0.777	0.440	0.040	0.536	0.594	0.104	1.144	0.257
Less focus or under prioritizing residential land provision issues	-0.127	-1.401	0.166	0.222	2.382	0.020*	0.067	0.874	0.385	0.323	3.435	0.001**
Over all model statistics	Multiple R	0.871			0.836			0.780			0.639	
	R square	0.759			0.699			0.609			0.409	
	Significance	0.00			0.00			0.00			0.00	

*Statistically significant at $\geq 95\%$ and **statistically significant at $\geq 99\%$, confidence interval

4.2 Discussion of the Results

The objective of this study was to rank the challenge of residential land provision in Furi sub city of Shagger and then explore the effect of the challenges on the socioeconomic condition and activities in the sub city and as well as the effect on the sustainable land development. It is an explanatory study with the aim to understand the challenges and effects from the perspectives of experts, government workers or professional in the areas and other prominent stakeholders who have exposure to the areas were selected purposely and through chain referral approach. This study was aimed to answers three research question that focused on the character and hierarchy of land provision challenges mainly focus of the process and its effects on socioeconomic condition and as well as on the sustainability of land development in the study area.

In line to those study's objectives, the finding based on the perspective of experts and other stakeholders who closely related to the issues, indicated there were significant challenges of residential land provision in the sub city where most of them perceived and rated high as agree and strongly agreed towards to the indicated parameters of land provision challenges and its effects on the socioeconomic conditions and sustainable and development in the areas. The details of the discussion are presented as follows as per each study's objectives.

4.2.1 Consistence of Data

In general, the first part of the questionnaires was aimed to understand and characterized weather respondents and information they gave are important and to understand their know how about the study areas in spatially and thematically about character of residentials land provision and associated challenges in the sub city. In line to this, respondents were asked to answer question such as how long they stayed in the areas, their experience, level of their knowledge and understanding regarding the spatial development of the sub-city and areas that experienced rapid urban expansion, land development or land use reason for that rapid expansion and problems and character of residential land provision. According to the results stated above most of the respondents know and can explain about the area as they had lived more than 20 years, most of them were working in the municipality and have experience and exposure to challenge of residential land provision. Furthermore, most of them said that they know very well about the spatial development and said land provision and formal ways of access to land is challenging in the sub-city.

Therefore, as its able to understand from the results of respondents' profiles and background; it indicated it's a promising data to address the research objective of this study. In general, the author believes all selected respondents were fit to address the objective and research question of this study and they are valid primary source depending on the background and information they gave. Based on the on the scope and sample or methods this study is fully address the issue under study. Hence, the finding of the current study can be served as firsthand understanding on the issues of land provision challenge and its effect on the socioeconomic condition of the sub-city. However, to fails to consider the perspective of housing applicants, the farmers, other random residents in the sub city, construction materials business shops and other quantitative reports and data is a major limitation for study that future study should focus methodologically.

4.2.2 Residential Land Provision Challenges in Furi Sub-City

The result of respondents rating showed all the proposed parameters (18 parameter) were rated high by the respondents where most of them rated high as agree and strongly agree. Accordingly, more than 65% of respondents perceived and have positive attitude towards all the 18 parameters where they rated agree or strongly agreed. With this regard out of the 18 proposed parameters of land provision challenge 14 of them are rated high by more than 80 % of the respondents. Land provision is a complex process and take more time in its nature and always perceived negatively among the services seekers. Which also replicated finding of Honrao (2015) who argued that the time-consuming nature of land provision alone is the responsible challenges and basic problems in land provision system.

In the same way for this study the process of land provision and the steps to prepare land for developments by transferring from farmers takes more time. Particularly, the process of land transfer from farmers, such as dealing with farmers and kebele leader, preparing discussion and verifying farmers ownership and family members and conducting payments takes more time. In general, each steps have its own process and takes more time that leads to a delay, hence that why almost of the respondents rated all the parameters being challenging issues in the sub-city. This study is line with finding of Wajiha et al. (2021) who conducted a study in New Zealand on the challenges of lands provisions for residential housing and found that very long application processes, delay in evaluations and consent of documents; weak interaction between regulatory authorities, late response to requests by regulatory authorities; weak coordination within

regulatory authorities; weak planning and scheduling; and slow progress while design development were the challenges significantly influencing the provision. Furthermore, in a very similar way to this study Boafo et al., (2023) discussed in their findings that the expensive nature of the procedure, improper record keeping and, disorganization of the procedure, and the presence of unqualified or untrained middlemen, and lack of accountability and transparency on the part of the traditional authorities and the delay in approval were the main obstacles challenging land provision in Namibia.

Regarding to relative index based ranking results of this study, all the 18 parameters of residential land provision challenges were rated high and their RII values were ranged between 0.5 to 0.72 which falls in high medium and medium RII ranges. Of the 18 parameters, 15 were ranked in high medium RII values range i.e., ($0.6 \leq RII \leq 0.8$). However, three (3) parameters out of the 18 were relatively ranked at lower with RII values ($0.4 \leq RII \leq 0.6$), falling in medium RII range. But still the values of those variables are on the top level of the range with 0.584, 0.574, 0.563 approached to 0.6 RII values. These indicated that all the prepared parameters residential land provision in Furi sub city were important and influencing the systems of land provision in the sub city. Likes wise to this study Wajiha et al. (2021) also used RII methods to rank and set hierarchy of land provision challenges in New Zealand and they identified nine (9) challenges such as: very long application processes, delay in evaluations and consent of documents; scope modification; weak interaction between regulatory authorities, late response to requests by regulatory authorities; weak coordination within regulatory authorities; weak planning and scheduling; design errors and slow progress while design development were the challenges significantly influencing the provision.

Results from factors analysis indicated 18 parameters of residential land provision were reduced into seven factors with clear rank that have up to 72.4% influence on the overall residential land provision system in the Furi sub city; indicating that if these all factors are improved; then the residential land provision system in the sub city will be improved by 72.4%.

Accordingly, *availability of large investment and lack of priority and strategies*, was the first challenging factor with overall influence of 17.97% on the land provision system in the sub-city. This result agrees with discussion of Hasrat et al, (2018) who summarized the challenge and major causes for residential housing land provisions into three main issues namely: rapid

urbanization, urban poverty, and corruptions related land provision challenges. Which means in Furi areas and its regions because of rapid urbanization phenomenon that resulted from large industrial developments and other investments and proximity, major emerging towns and location of Addis Ababa that fueled by lack of strategies and priority on land provision low-income groups had resulted in complicated challenge to access to land for residential or housing. Furthermore, discussion of Zou and Chau, (2015) and Alexander (2021) also supported this finding as they argued that in most of the nation or cities along with in the rapid urbanization, finance, unavailability of un-developed land and high demand than supply is the challenge to balance the supply of large land parcels for the development of affordable housing and sustainable development.

Because of location, brokers activities and high land values factor is the second most influencing factor with the overall challenging potential of 15.03% on the residential land provision system in the sub-city. The main reason associated with this factor is the location of Furi sub-city which almost seems parts of the capital city i.e., Addis Ababa. Because of the housing demand and challenges in the areas, landowner farmers sell their lands at very higher values than they get from normal transfer to the government. Furthermore, land brokers are playing major roles in transferring lands from farmers illegally at higher values considered to the land compensation. This indicated that for poor it is impossible to access to land for housing because of high land prices as a results of markets failures and fueled by land brokers or corruption activities which also support the finding and discussion of Transparency International (2011). Furthermore, the activities of land brokers may include public officials, outside investors, local leaders with strong chain that challenge formal land provision and protect landowners to transfer their land formally (UN-Habitat, 2012). Therefore, according to Hasrat et al, (2018) rapid urbanization, poverty and corruptions along together challenges the overall systems of land provisions systems for residential housing development that lead to socioeconomical and sustainable land developments.

Regarding to the *weak land providing institution and high residential land demand*, which is the 3rd most challenging land provision with overall variance of 11.22% on the process of land provision in the sub city. This finding agrees with study by Xiang (2018) who stated that weak efficiency and the function of agencies, ineffective monitoring systems, the lack of transparency

of information, and the absence of legal enforcement were found to influencing the land provision system. Furthermore, this results also supports the discussion by Hasrat et al. (2018) and burns (2007) stated that institutional arrangements and capacity for housing and land related have high influence on determining land provision characteristics for housing. In general, if the systems have not well defined and disciplined procedures, transparency, legal framework, inclusiveness, honesty, and responsibility, it highly disturbs the efficient use of urban land (Transparency International, 2011). This will let the urban land provision system to speculations, illegal procedures, market failure, squatter settlement, poor services and infrastructure, inadequate collection of revenue and more many other challenges. This created cases and opportunity for land brokers, and corrupt bureaucrats to challenge the land provision system.

Unwillingness of farmers and their leader's factor is the 4th most influencing factors on process of land provision for residential housing in Furi with the variance challenging potential of 9.3%. where it aligns with study by Arjjumend, and Seid (2018) who indicated in their study; legal blockages and land handover difficulties were the major constraints to get land for housing development in urban centers of developing nations. On the other hand, the complexity and time-consuming characteristics of land provisions and process is not always aligned according to the available resource (Berry et al. 2018), resulting in another gaps and challenges on housing provision. Which agrees to the current study that farmers of Furi areas were always unwilling to transfer their land because of low compensation and inadequate resource allocated by the city during land transferring process. Furthermore, this finding also in line with the discussion of Udom & Innocent, (2019) who stated that because of the desire of only profit oriented of landowners easily transfer land is always challenging.

4.2.3 Effect of Residential Land Provision Challenges on Socioeconomic Conditions

All the 13 parameters explaining the effect of land provision challenges on the socioeconomic conditions were rated as agree and strongly agree by more than 80 % of the respondents. Showing that all the respondent experienced with effect of residential land provision on the socioeconomic condition in the sub-city.

on the other hand, those 13 parameters of socioeconomic were applied to dimension reduction or principal component analysis. The results indicated that the 13 parameters were reduced into four

(4) major effects areas of socioeconomic condition. There were also strong correlations with four identified effects on socioeconomic condition with the seven ranked challenges of residential land provision. This is in line with finding of Lombard & Huxley, (2011) who stated that weak land administrations systems and lack of on time supply land for housing leads to socioeconomic inequality and reasons for the development of squatters. In the same way currently, in Furi sub city most of the residents particularly on the areas of peripherals owned lands through informal ways that they have no guarantee and tenure security that may leads socio-political problems, in adequate living environments and overcrowded areas. This finding also supports the discussion of UNECE, (2009) explained that delays of residential land provision create the tenure insecurity, low physical standards of housing and community spaces, lack of access to infrastructure and poor general environment which in turns reason for the community health problems, weak social interaction, and overall socioeconomic challenges. Furthermore, delay in provision of land for housing or if the residents cannot access to lands, they are forced to rent or find low housing prices and reside in informal housing neighborhoods, where the quality of life is treating for healthy and happy urban life (Bremen, 2003).

Furthermore, the results of factor analysis showed that the 1st effect of land provision challenge on socioeconomic condition was *socioeconomic opportunity (e.g., corruptions and high land brokers activities) and consequences for individuals (e.g., rise rent housing)*, with the overall potential variance of 28.272% compared to the other effects of socioeconomic condition. This finding also consistent with study of Share (2020) in Sululta town that indicated the poor housing provision was increased the prices of rental housing, affects the socio-economic life of individuals, forced to evicted individuals to informal settlement conditional, and individuals were unable to access to adequate rent and formal houses particularly its more challenging for household with larger family size and poor income. In addition to the finding of Bereket and Nigatu (2015) conducted in Hawassa city also agreed with this study which discussed that low household income were forced live plastics sheltered house and house with large family size were challenged by high rental and some of them who were chooses to condominium houses for residential purpose. Whereas Muleta (2014), also conducted a study in Bekoji town and noted that the majority of the residents were living in privately rented residential housing with expensive rent that characterized with lack of enough open space and challenging house size for larger family.

The 2nd area of effect on socioeconomic condition was *negative impact on construction materials' business, and livelihood of farmers and encouraged rent housing investments* with overall potentials effect of 15.106%. This finding is in consistent with of most of literature that discussed lack of on time residential land provision will results in high investment on rental housing and rise of rent price. For instance, the study of Muleta (2014) conducted in Bekoji town, Bereket and Nigatu (2015) conducted in Hawassa city, study of Share (2020) in Sululta town and many others had stated in a similar way to present study. Currently, in Furi and its areas there are large activities of investments and industrial expansions that had led to rent housing shortage and encouraged house owners to build more rent housing in the areas. This intern creates socioeconomic inequality by challenging peoples who have no house while it became an opportunity for peoples who owns house.

The 3rd area of effect on socioeconomic condition is *impacted land development, revenue generations and job creation potentials* with influencing potential of 11.015% on the overall socioeconomic condition. The 4th effect is named as *effects on activities of daily labors and opportunity for informal land selling and* have a potential of up-to 62.4%. Furthermore, if there is a weak or low legal constructions activities in the areas it leads to significant challenges on the revenue generation potentials of the city and as well as negatively affects the business in the areas.

4.2.4 Effect of Residential Land Provision Challenges on Sustainable Land Developments

Regarding to the 10 rating of sustainable land development of residential land provision challenges; more than 60% of the respondents agreed with indicated parameters and rated as agree and strongly agree. Furthermore, more than 80% of the respondents rated high as agree and strongly agreed towards all the indicated parameters except towards parameter *delay in land provision is the main cause for urban plans violation in the sub city*. These results supported the discussion and reports by WHO, (2011) which stated that the lack of formal housing, coupled with other factors such as rapid urbanization and population increase in developing nation has increased unsustainable the number of residents in slums and informal settlements characterized with no basic infrastructure like sanitary services, no formal planning and building regulations, environmental deterioration like life-threatening problems related to sanitation and pollution,

pollution of air and water from garbage and sewers, prone to environmental hazards (such as flooding and poor drainage), health risks, overcrowding, and crime.

The 10 parameters were reduced into four (4) major areas of sustainable land development issues and other indicators of sustainability in the sub-city such as *resulted in violation of plans and poor living condition, conversion of natural green areas, spatial inequality and disaster risk, paved ways for rapid illegal housing on fertile production lands* and it had resulted in an overall unbalanced and unsustainable land use systems.

Resulted in violation of plans and poor living condition is the most effect caused by land provision challenge with overall variance of 20.19%, whereas *conversion of natural green areas, spatial inequality and disaster risk* is the second identified effect with variance of 19.13%. Lack of land use planning and poor implementations has multiple negative consequences, however in this case the violation of land use plans is resulted from the lack of land management based on plans (i.e., it also includes management of land supply and demands). For instance Server, (1996) discussed that if land use plans are not effective, there would be no control on the development of urban lands, hence lead the local authorities to the complicated land development without planning taking place outside these schemes, demolishing the number of green spaces and trees, negatively impacting the sensitive environmental resources. Land use is a vital to addressing sustainability problems and govern land systems with the principles of sustainability (Meyfroidt et al., 2022). According to discussion by DIA (2019) and Berry et al. (2019) which is also like this study indicated that lack of on time residential land provision leads to limited integration of planning and implementation for large urban developments; ineffective coordination between land use and other infrastructure planning, which in turn affects the implementation of sustainable urban land for development.

Paved ways for rapid illegal housing on fertile production lands and it had resulted in an overall unbalanced and unsustainable land use systems are the 3rd and 4th effect identified with overall variance of 15.26% and 10.67% respectively. This finding is in consistent with the study of Zhao (2016) that lack of affordable housing and available legal land for housing lead the fertile farmland to squatter development. Accordingly, the study indicated, the lack of urban land use planning and dual tenure systems along with delay land supply for housing in peripheral areas of Beijing had brought unsustainable socioeconomic inequities. Squatter development because of

housing problems challenges efficient and selective land use strategies (Scarpaci, 2010; Wu et al., 2013). Furthermore, this study's finding supported discussion by Sarmiento et al., (2020) noted that characteristic of insecure land tenure encourages agricultural production land to housing and unsustainable natural resource management (Sarmiento et al., 2020) which in turn challenges sustainable land development for local governments.

The correlation and regression analysis results between the parameters of residential land provision challenge and sustainable land development indicated that there are high positive relationships. All the correlation values between each parameter are greater than 0.4 that confined between 0.641-0.832 approached to 1, showing strong positive association.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

5.1 Conclusions

This study was conducted in Furi sub city of Shagger with the aim to identify the challenge of residential land provision and it's the effect on the socioeconomic condition and sustainable land development. It was an explanatory study that based on 18 parameters of residential land provision challenges, 13 parameters that explaining effects of socioeconomic condition and 10 parameters that explaining the effect of sustainable land developments based on the views and perspectives of experts, government workers or professional in the areas and other prominent stakeholders who have exposure to the areas that selected purposely and through chain referral approach. In line the above research objectives relative importance (RII), factor analysis, correlation and regression were used to examine the effect of residential land provision challenge in Furi on the socioeconomic condition and sustainable land development.

The results indicated that the challenges of residential land provision in the sub city and its effects on sustainable land developments and socioeconomic conditions were rated high as agree and strongly agreed by most of the respondents. Accordingly, more than 65% of respondents perceived and have positive attitude towards all the 18 parameters where they rated agree or strongly agreed. The 13 parameters explaining the effect of land provision challenges on the socioeconomic conditions were also rated as agree and strongly agree by more than 80 % of the respondents whereas more than 60% of respondents rated high as agree and strongly agreed towards all the indicated parameters of sustainable land developments.

The challenges of residential land provision were ranked using RII and factors analysis. Accordingly, all the 18 parameters of residential land provision challenges were fall in RII values ranged between 0.5 to 0.72 which is high medium and medium RII ranges. 15 of the parameters were ranked in high medium RII values i.e., ($0.6 \leq RII \leq 0.8$) while left 3 parameters were relatively ranked at lower with RII values ($0.4 \leq RII \leq 0.6$), falling in medium RII range. These resulted indicated that all the parameters of residential land provision challenges were important and influencing the systems of land provision in the sub city. Results from factors analysis indicated seven factors with clear rank that have up to 72.4% influence on the overall residential land provision system in the Furi sub city. Accordingly, “availability of large investment and lack of priority and strategies”, “because of location, brokers activities and high

land values”, “the weak land providing institution and high residential land demand”, “unwillingness of farmers and their leaders” were the top four land provision influencing factors.

In similar ways, the 13 parameters of socioeconomic were also reduced into four (4) major effects areas of socioeconomic condition. Accordingly, “socioeconomic opportunity (e.g, corruptions and high land brokers activities) and consequences for individuals (e.g, rise rent housing)”, “negative impact on construction materials’ business, and livelihood of farmers and encouraged rent housing investments”, “impacted land development, revenue generations and job creation potentials” and “effects on activities of daily labors and opportunity for informal land selling” were the four effect areas of socioeconomic condition in the sub-city. Regarding to effects on sustainable land developments also the 10 parameters were reduced into four (4) major areas such as “resulted in violation of plans and poor living condition”, “conversion of natural green areas, spatial inequality and disaster risk”, “paved ways for rapid illegal housing on fertile production lands” and “it had resulted in an overall unbalanced and unsustainable land use systems”.

The findings of this study indicated there is a strong correlation between the seven challenges of residential land provision with socioeconomic conditions and as well as with sustainable land development. All the correlation values between each parameter are greater than 0.4 that confined between 0.641-0.832 for sustainable land development while greater than 0.7 that confined between 0.773-0.914 very approached to 1 for socioeconomic condition.

In general, this filled the gaps by identifying the challenges of residential land provision and able to characterize and ranked them according to their level of challenges based on the evaluation and rating of perspectives experts and other stakeholders who know the challenges. Furthermore, this study filled and explained the effects of residential land provision challenges on the socioeconomic condition and sustainable land development in the study area.

5.2 Recommendations

Even though this study had tried to fill out the gaps-based on objective of the study by identifying and ranking the challenges of residential land provision and its effects on socioeconomic conditions and sustainable land developments there are a major limitation to this study. The major limitation is that failure to consider ideas and the perspective of housing applicants, the farmers, other random residents in the sub city, construction materials business shops and other quantitative reports and data is a major limitation for study that future study should focus methodologically.

Furthermore, the author recommends other researchers, city administrators, planners and any other concerned stakeholders who may be affected and benefited in the issues, policy makers and politician should consider another spatial scope such as parts of Shaggers city or at level of Shagger to develop further understanding and rank the challenging factors in land provision in the areas.

However, the author believe that this study had clearly insighted and filled the gaps of understanding on areas of land provision challenge and associated effect on the socioeconomic condition and sustainable land development. Therefore, based on the results, the following areas of improvements are identified for the study areas and other similar with characters to the study areas.

According to the results, the location of Furi on the verge of Addis Ababa and the availability and practice of larger investment, industrial developments, and main centers of the nation that being attracting peoples through migration from all regions of nation; the areas need special managements particularly on the areas of land managements and housing provision. The author recommends that there should be special consideration int terms of policy formulation and new strategies on land managements, housing provision and residential land provision in Shagger exclusively in away promote urban good governance, sustainable land development and inclusive socioeconomic and cultural transformation that also considered the landowners and others. Therefore, concerned body should emphasize on factors of rapid urbanization in the areas and how to manage it particularly on meeting housing demands and sustainable land development and socioeconomic condition.

Furthermore, the current authority or any concerned body of the sub-city should give a priority just as any political issues for the issues of land provision for residential and minimize the associated effects on sustainable land development and socioeconomic condition. Therefore, the city's authority should develop a strategy on how to meet residential land demand and supply in the areas. For instance, the author like to suggest areas that need strategies such as:

- Strategies and mechanism to activated and encourage farmers on land transferring and so that negotiations time will be decreased,
- Strategies that included farmers for development and change their real live in a way that change their quality of life from what they had before,
- Strategies and mechanism of increasing the land compensations and payment process,
- Strategies and mechanism on farmers evidence verifications and increases negotiator and experts' capacity.
- Strategies and mechanism on quickly making decision by land management and development and city cabinets on land provision.

The most challenge identified by this study is that because of high land values and activities of land brokers and land demands; farmers prefer to transfer the land informally. This leads to unsustainable developments and socioeconomic inequality in the areas. Therefore, the city authorities, and other hierarchical concerned authority of Oromia regional state and federal should work on strategies to increase the farmers benefits and as well as the benefits of residential land applicants in the study areas and any other areas with similar characteristics. Furthermore, the performance of land transferring and processing institutions should be improved and as well as modernized in a way that benefits the city socioeconomic conditions and sustainable land developments.

Regarding to policy improvements and recommendations, the government and other all concerned body should work to improve policy by considering city's characteristic and time limitation for residential land provision.

The author highly encourages and recommends governments to develop policy on the city characterization in terms of rapid urbanization forces and investments opportunity and hence high land demand for housing, such as that cities with high land demand for housing should

considered as special and residential land provision issues should be prioritized by organizing a task force which only focus on provision of residential land with no other overlapped task.

The times to deliver land for applicants should be limited based on the characters of urban centers based on its urbanization intensity and rates as discussed above. The author recommends, the time frame should be based on city land demand and supply challenge, i.e., in very lower land demand urban centers may be 3-4 Months and in very high demand such as the study areas one years.

Therefore, to improve housing needs of residents all the concerned bodies should work together in a way benefits the city socioeconomic condition, sustainable land development, promote good urban governance, inclusive development that highly encouraged farmers landowners' improvements and all urban housing applicant communities. Finally, the author recommends other researchers to conduct further study by expanding the spatial consideration and methodological improvements or repeating this study to understand and explain challenges of land provision and its associated effects on sustainable land development and socioeconomic condition.

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Appendix: Questioners

The Challenges of Residential Land Provision on Socioeconomic Conditions and Sustainable Land Developments. The Case of Furi Sub-City of Shaggar

Dear respondents, this survey is only for the education purpose, to fulfill my MSc degree in urban planning at AAU (EiABC). Please feel free and confident to help me by providing your valuable information as per the demand of each question. The questionnaire has two parts, the first is about participants your background information to the study's main objectives, while the second part is easily answerable based on your knowledge and experience that you had built in the study sub city, and you are required to help me by writing at the end section if there is missing information but very important for this study.

Part I: Background of Respondents

1. **Age:** ☐ 18-30 (1) ☐ 31-40 (2) ☐ 41-50 (3) ☐ 51-65 (4) ☐ above 65 years old (5)
2. **Gender:** ☐ Male (1) ☐ female (2)
3. **Level of educations** ☐ illiterate (1) ☐ Elementary or secondary school (2) ☐ preparatory school or TVET (3) ☐ higher educational diploma or first Degree (4) ☐ masters and above (5)
4. **Occupation:** ☐ Farming (1) ☐ government employee (2) ☐ unemployed/self (3) ☐ retired (4) ☐ other (5)
5. **For how long did you stay in Furi sub city?** ☐ I born and raised here (1) ☐ I stayed here for >20 years (2) ☐ Stayed here for 10-20 years (3) ☐ stayed <10 years (4)
6. **How about your roles in the community/sub city/areas?** ☐ Brokers (1) ☐ prominent elders/community leaders (2) ☐ land surveyor expert (3) ☐ planners (4) ☐ environmental expert (5) ☐ socioeconomic related expert (6) ☐ others (7)
7. **For how long did you served with the above roles?** ☐ More than 10 years (1) ☐ 5-10 years (2)
☐ less than 5 years (3)

8. How much you know about the spatial development of the Furi-sub city over the past years?

☐ I know very well (1) ☐ I know well (2) ☐ I know somewhat (3) ☐ I have no idea (4)

9. If you know very well or well towards which direction of the sub-city does rapid spatial expansion have been taking places? ☐ Towards Ajamba site (1) ☐ towards Melka Nonno sub city (2) ☐ towards Ertu Mojo site (3) ☐ Towards Gelan sub city (4) ☐ I have no ideas (5)

10. Which land development is more the reason for those rapid sub-city expansions in the study areas? ☐ Residential Housing development (1) ☐ industrial developments (2) ☐ other investments/urban physical instructors' development (3) ☐ I have no ideas (4)

11. If your answer is residential housing development for the above questions, how did the majority of housing owners acquire lands? ☐ Through formal land provision by the city (1) ☐ through informal land transfer (2) ☐ I have no idea (3)

12. Based on your stay and experience which of the following land development demand is frequently asked by residents or by developers? ☐ Land for residential housing (1) ☐ Land for industrial developments (2) ☐ other investments/urban physical instructors' development (3) ☐ I have no ideas (3)

13. If your answer for the above question is land for residential housing, how did you rate the following delivery issues in the sub-city.

☐ Access to land for housing is very challenging and takes several years to residents (1)

☐ Access to land for housing is challenging and takes a few years to residents (2)

☐ Access to land for housing is somewhat challenging and takes several months to residents (3)

☐ Access to land for housing is easy and residents can access upon finalizing procures (4)

☐ I have no ideas (5)

14. In general, how do you rate your knowledge regarding the housing land delivery and associated problems in the study areas? ☐ I know very well (1) ☐ I know well (2) ☐ I know somewhat (3) ☐ I have no idea (4)

Part II: Challenge of land provision and its impacts of socioeconomic and sustainable land development

1. **Based on your experience and knowledge, how do you rate and agree with the following the challenges of land provision for residential housing in Furi-sub city? Please indicate by marking √ or X in the table under your level of agreements.**

s/n	Challenges of land provision for residential housing	Strongly agree (4)	Agree (3)	Neutral (2)	Disagree (1)	Strongly disagree (0)
1.1	Very high land demand for residential housing in the sub-city has challenged land provision					
1.2	Proximity to Addis Ababa is main reason for the challenges of land provision for housing					
1.3	Availability and practice of large investments and industrial development in the areas has brought challenge to on time land provision for housing					
1.4	Very high land values in the areas had increased the land demand provided through cooperative provision/lease					
1.5	Lack of strategies or planning on balancing land demand and supply by city admin had challenged land provision					
1.6	Less focus or under prioritizing residential land provision issues by the city admin is the main reason for challenge.					
1.7	The city admin always gives priority for political issues in providing lands than for individual services such as land provision for housing cooperatives groups and lands for others residential purpose					
1.8	The city admin allocates low budget for transferring land from farmers to support on time land provision					
1.9	Overall, weak and slow facilitation by the city admin on transferring the lands from farmers has challenged land provision					
1.10	Farmers unwilling to transfer lands is the main challenging for land provision					
1.11	Farmers' kebele leaders are unwilling and not always cooperate in organizing and activating farmers for discussion					
1.12	Absenteeism of farmers from discussion, the time-consuming discussion with farmers and the long process to reach on consent of land transfer is the main challenge					
1.13	The low compensation values to pay for farmers is discouraging farmers from transferring their lands, hence it's the main challenge					
1.14	Always after the consents is reached some farmers violate the agreements and fail the transfer of lands					
1.15	The high informal land value is challenging to access to land					

	formally and transferring from farmers					
1.16	The activities of land brokers among the farmers are challenged to access land formally in the areas					
1.17	Verifying farmers family members, land ownerships and other evidence is challenging and takes more time					
1.18	The lack of on time decision by city's land mgmt. and devt. Office and city cabinets, after transferring process is finalized from kebele, is the main challenge					

2. **Do you have any different comments or ideas that not listed above regarding to the challenges of land provision in the sub-city? If please state**

here _____

3. **Based on your experience and knowledge, how do you rate and agree with the following consequences or impacts of land provision challenges on the socioeconomic condition of the sub-city/city/residents? Please indicate by marking ✓ or X in the table under your level of agreements.**

s/n	Impacts of land provision challenges on the socioeconomic condition	Strongly agree (4)	Agree (3)	Neutral (2)	Disagree (1)	Strongly disagree (0)
3.1	Lack of on time land provision has negatively impacted the revenues generation potential from land development and related activities.					
3.2	It's had negatively impacted the life of the construction daily labors activities in the sub-city					
3.3	Its had negatively impacted and locked the job creation potential of the sub-city/city and market networking activities for small enterprises					
3.4	It had negatively impacted construction materials business and significantly reduced construction material shopping activities					
3.5	The lack of on time residential land provision created a good opportunity for rent housing investment/construction activities in the sub-city					
3.6	The lack of on time residential land provision had created a good opportunity for farmers to sell/ transfer their lands illegally					
3.7	The challenge of residential land provision had created a good opportunity for land brokers in the sub-city					
3.8	The challenge of residential land provision had created corruption opportunities and changed the life of small groups					
3.9	Long duration of deposit in block account by most of the land applicant had challenged their life and depreciated their money					
3.10	The rise of rent housing cost in the city/sub-city had challenged					

	the residents					
3.11	After land is provided, most of land applicants are not building their home, as they lose their building potentials because of high rise construction values that resulted by lack of on time residential land provision					
3.12	After lands is transferred from farmers its stayed for long time without any production or development activities					
3.13	The livelihoods of farmers are negatively impacted because of low or lack of land development activities after they lose their lands					

4. Do you have any different comments or ideas that not listed above regarding to the consequences or impacts of land provision challenge on socioeconomic condition in the sub-city? If please state here_____

5. Based on your experience and knowledge, how do you rate and agree with the following consequences or impacts of land provision challenges on the sustainable land development in the sub-city/city/residents? Please indicate by marking ✓ or X in the table under your level of agreements.

s/n	Impacts of land provision challenges on the sustainable land development	Strongly agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly disagree (1)
5.1	Delay/ challenge of land provision had created/opened opportunity for illegal housing development					
5.2	Delay in land provision is the main cause for urban plans violation in the sub city					
5.3	Delay in land provision is the main cause for conversion of all natural green areas to squatter housing in the sub-city.					
5.4	The challenge of land provision had caused inaccessible/steep/hilly/rivers sides lands to illegal land grasping in the sub-city					
5.5	The challenge of land provision had caused fertile agricultural lands to residential areas					
5.6	Lack of on time land delivery had caused spatial in quality in providing infrastructures such as roads pavements, utility networks and water supply in the sub-city					
5.7	Lack of on time land provision overlong time had resulted in overall unbalanced and unsustainable land use systems in the sub-city/city					
5.8	Lack of on time land provision had resulted in unhealthy, weak solid and liquid waste management services in some parts of the sub-city					
5.9	Residents of illegal housing areas are being challenging by poor					

	environmental quality and prone to disasters such as floods, landslide, fire and etc.					
5.10	Delay in land provision had created residents of illegal housing living with in overcrowded and below standard housing					

6. Do you have any different comments or ideas that not listed above regarding to consequences or impacts of land provision challenges on the sustainable land development in the sub-city? If please state here_____
