



Experience and Prospects of Private Residential Real Estate Development in
Alleviating Housing Problems in Addis Ababa

Submitted in partial
Fulfillment of the requirements for the degree of
Master of Science in construction management program

By
Selam Yohannes Gebremedhin

Addis Ababa Institute of Technology (AAIT), School of Civil and Environmental
Engineering

July, 2016

Advisor: Abebe Dinku (Prof. Dr. Ing)

Addis Ababa University
Addis Ababa Institute of Technology
School of Civil and Environmental Engineering

Experience and Prospects of Private Residential Real Estate Development in
Alleviating Housing Problems in Addis Ababa

By: Selam Yohannes Gebremedhin
July, 2016

Approved by Board of Examiners

Name	Signature
<u>Abebe Dinku (Prof. Dr. -Ing)</u> Advisor	_____
<u>Gashaw Yayehyirad (Dr. -Ing)</u> Internal Examiner	_____
<u>Yibeltal Zewdu (Eng.)</u> External Examiner	_____

Declaration

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

Signature: _____

Name of the student: Selam Yohannes Gebremedhin

Date: _____

Contents

List of Tables and Figures	vi
Acknowledgements	ix
Abstract.....	x
CHAPTER ONE	1
1. INTRODUCTION.....	1
1.1. Significance of the research.....	2
1.2. Problem statement	3
1.3. Objective	4
1.4. Research questions.....	5
1.5. Scope and limitation of the study.....	5
1.6. Organization of the thesis.....	5
CHAPTER TWO	7
2. GENERAL INTRODUCTION.....	7
2.1. Real Estate Development.....	8
2.2. Construction Management in Real Estate Development.....	8
2.2.1. Real Estate as a Unique Asset Class	10
2.2.2. Specific Character of the Real Estate Market	11
2.2.3. Asset Delivery Duration.....	12
2.3. Real Estate Management Process.....	12
2.3.1. Overview to the Generic Real Estate Development Process	13
2.3.2. Project Initiation (Inception)	14
2.3.3. Planning	15
2.3.4. Design.....	15
2.3.5. Pre-Construction.....	15
2.3.6. Construction	17
2.3.7. Commissioning	18
2.3.8. Project Completion / Handover	18
2.3.9. Summary of Project Management Process.....	18
2.4. Ethiopian Law on Real Estate Development	19
2.4.1. Real Estate Development and Land Tenure Systems in Ethiopia Before 1991	21
2.4.2. Real Estate Development and Land Tenure Systems in Ethiopia After 1991	21
2.5. Requirements of Construction Permit for Real Estate Development	26

CHAPTER THREE	30
3. OVERVIEW OF INTERNATIONAL REAL ESTATE DEVELOPMENT	30
3.1. Experience Real Estate Development in Other Countries	30
3.1.1. Morocco Experience	30
3.1.2. Kenya Experience	31
3.1.3. Malaysia Experience	32
3.1.4. South Africa Experience	33
3.1.5. Important Points from International Experience	33
3.2. Affordability of Housing in the Developed States	35
3.2.1. German Experience	35
3.2.2. China Experience	36
3.2.3. United Kingdom Experience	37
3.2.4. United States Experience	39
3.2.5. Turkey Experience	40
3.2.6. India Experience	43
3.3. Summary from International Experiences	44
CHAPTER FOUR	46
4. TRENDS AND IMPACTS OF HOUSING CONSTRUCTION IN ADDIS ABABA	46
4.1. Housing Developers (Actors) in Addis Ababa	46
4.2. Affordable Housing Approaches in Addis Ababa	50
4.3. Factors affecting the demand and supply in Housing Sector	53
4.3.1. Measuring affordability	56
4.4. Parties Involved in Real Estate Development	57
4.4.1. Developer	57
4.4.2. Financer	58
4.4.3. Government	60
4.4.4. End User	60
4.5. Exposure and Technology Usage in Housing Construction	61
4.6. Supervision and Quality Assurance	62
CHAPTER FIVE	65
5. RESEARCH METHODOLOGY	65
5.1. Research Approach	65
5.2. Data Analysis and Interpretation	66

5.3. Limitation of the Research Methods	67
5.4. Research Procedures and Sampling Techniques	67
CHAPTER SIX	69
6. DISCUSSION AND RESEARCH FINDINGS	69
6.1. General	69
6.2. Accessing Housing Distribution and Role of Real Estate Sector	69
6.4. Contribution of Involved Parties in Real Estate Sector	78
6.4.1. Real Estate Developers	79
6.4.2. Government	80
6.4.3. Financer	81
6.4.4. End User	83
6.5. Evaluating the Quality of Selected Real Estate Houses	83
6.5.1. Construction Work and Supervision	84
6.5.2. Completion Time and Delivery of Houses	85
6.5.3. Infrastructure and Services in Real Estate Development	86
6.5.4. Source of finance for the developer	90
6.6. Affordability Analysis of Housing Prices in Relation with Income/Expenditure	92
6.6.1. Income and Expenditure of Addis Ababa Residents	92
6.6.2. Affordability of Private Residential Real Estate Houses in Addis Ababa	95
6.6.3. Affordability of Government Condominium Housing Projects	98
6.7. Findings from Experience of the Sampled Real Estates in Addis Ababa	100
6.8. Problems Observed in Real Estate Sector	101
CHAPTER SEVEN	103
7. CONCLUSIONS AND RECOMMENDATIONS	103
7.1. Conclusions	103
7.2. Recommendations	104
8. REFERENCE	108
Appendix	111

List of Tables and Figures

List of Tables

Table 1: Project delivery strategies.....	16
Table 2: Houses constructed in Addis Ababa, (1996-2003).....	22
Table 3: Real estate in Addis Ababa.....	25
Table 4: Average salary in Germany (2011-2015) (Average salary survey, 2015).....	35
Table 5: Housing sales with mortgaged sales included.....	41
Table 6: Factors influencing demand and supply for housing.....	54
Table 7: Household Expenditure Quintiles at Country Level (Total).....	57
Table 8: Project life cycle for proper supervision.....	63
Table 9: Projects of Sunshine construction.....	75
Table 10: Household Expenditure Quintiles at Country Level (Total).....	92
Table 11: Per capita income of Addis Ababa.....	92
Table 12: The expenditure of the households (2010/11).....	93
Table 13: The expenditure of the household (2015/16).....	93
Table 14: Household income of Addis Ababa residents (2015/16).....	94
Table 15: Prices of selected real estate houses to check affordability for Addis Ababa residents.....	96
Table 16: Sampled real estate housing prices per meter square.....	96

List of Figures

Figure 1: The management triangle.....	13
Figure 2: Generic real estate development chart.....	14
Figure 3: Typical Project Life Cycle –Traditional Design/Bid/Build.....	17
Figure 4: Summary of project management process.....	19
Figure 5: Sale price in different neighborhoods for small houses.....	23
Figure 6: Sale price in different neighborhoods for medium houses.....	23
Figure 7: Sale price in different neighborhoods for large houses.....	24
Figure 8: Average salaries of residents in United Kingdom.....	39
Figure 9: Approaches in engineering and implementation.....	45
Figure 10: Basic components of housing affordability.....	59
Figure 11: Prefabricated construction Vs site built construction schedule.....	62
Figure 12: Life Cycle Phases and Tasks Accomplished by Project Phases.....	63
Figure 13: Research approach and design.....	66
Figure 14: Main gate of country club developers.....	72
Figure 15: CCD villa houses.....	72
Figure 16: Exterior look of Ayat homes.....	73
Figure 17(a): Hydra foam wall material.....	73
Figure 17(b): Safety condition.....	73

Figure 18: Exterior finish of ROPAK houses.....	74
Figure 19: Tsehay real estate 3D display.....	74
Figure 20: Tsehay real estate G+12 apartment houses	75
Figure 21: Meri-Luke villa residential village.....	76
Figure 22 (a): Lots of satellite dish visible from the outside like condominiums.....	76
Figure 22 (b): Security railings on the door & window.....	76
Figure 23 (a): Exterior look of Jember Village.....	77
Figure 23 (b): Bole apartment	77
Figure 24 (a): Meri-Luke apartments.....	77
Figure 24 (b): Main gate at the ground floor apartments.....	77
Figure 25: Main involved parties in real estate sector.....	79
Figure 26: Site plan without any green area approved by the municipality.....	88
Figure 27: Site plan approved by the municipality by the request of Sunshine real estate to account a green area.....	89
Figure 28: Source of finance.....	90

Acknowledgements

First, I would like to thank the almighty God for everything. Secondly, I want to give the deepest and sincere gratitude to my advisor Abebe Dinku (Prof. Dr. Ing) for motivating and directing me to read a lot on housing demands and in particular about real estate development in Addis Ababa.

I would also like to thank real estate developers for being cooperative in providing information and willing to allow me visit their sites.

At last I would like to thank Addis Ababa Institute of Technology, AAU for giving me a scholarship to learn post graduate program in construction management and for the knowledge and assistance to help me become a competent Engineer.

Abstract

The purpose of this thesis is to evaluate the experience of private real estate development in alleviating housing problems in Addis Ababa. This comprises assessing the current housing developments and practice, evaluating the quality of real estate houses in satisfying the functionality, aesthetics, greenery, parking and so on. Also the affordability of the real estate houses is analyzed when compared with the expenditure/income of Addis Ababa residents.

Real estate development is a complex and continually evolving business. To effectively develop, finance, or supervise a project, a person needs a fundamental understanding of the process and its many facets. A developer must manage not only their own performance, but also the collaboration of numerous professionals representing multiple disciplines.

In attaining the goal of this research, the methodologies used are qualitative and quantitative research approach through literature review, data collection, analysis and discussion. The data collection is done through site observations, interviews and mainly desk study. The research methodology incorporates the involvement of different real estate developers which are purposefully sampled and are currently operating actively on housing developments.

As a result of the study, the quality of the real estate houses was evaluated by observation and taking the pictures as a record to compare them with each other and also comment on them. The increasing demand supply gap makes the housing prices to go high and also acquiring land is not easy. The construction time is highly affected by lack of foreign currency and cost escalation. In general, each of the things that are badly affecting the affordability and quality can be minimized by involving the government and work with the real estates to construct houses for different income groups. The international exposure can also be taken as a huge input in the approaches to make the affordability situation viable.

At the end, conclusions and recommendations are forwarded regarding the activities of real estate developers in Addis Ababa, which can be implemented and used by real estate developers, city administration, municipalities, consultants or design teams and any governmental institution involved in the building construction industry of Addis Ababa.

CHAPTER ONE

1. INTRODUCTION

Ethiopia has a population of approximately 98.9 million in 2015, up from 2013's estimate of 95 million, Ethiopia is the most populous landlocked country in the continent of Africa and the second-most populous country of Africa after Nigeria (United Nations, 2015). In Addis Ababa housing now a days has become one of the complex problems and unless urgent measure is taken both at the regional and the federal levels to mitigate the housing problem, it will cause crisis on the economic and social development. The demand for housing and strong future demand indicate the need for residential real estate development and the expansion of infrastructures in the city (World population prospects, 2015).

The majority of the houses in the current slums of Addis Ababa are dilapidated. The existence of houses which are severely damaged coupled with scarcity of houses had provoked housing problems of the city. The number of housing units available in the city in year 2002 was about 60% the housing needed by the residential or a backlogs of about 230,000 housing units (Alemayehu, 2008). In addition to the house backlogs in 2002, the demand of the dwellers for residential houses increasing by 10,000 annually and that makes the situation more severe (AAHDPO, 2007). In response to these problems, Addis Ababa city government has been trying to improve the dilapidated inner city slums as well as to reduce the house backlogs under the grand Housing Program (GHP) to meet target 11 of the millennium Development Goal 7, of Cities without Slums. It is commonly known as condominium housing.

Real estate is one of the classification of housing development which are participating to solve the severe housing problem in Addis Ababa. Income property includes residential and commercial properties that are leased out and expected to provide returns primarily from periodic rental income. Residential properties include single family properties (houses, condominiums, cooperatives and townhouses) and multifamily properties (apartment complexes and buildings). Commercial properties include office buildings, shopping centers, warehouses and factories.

In Addis Ababa, the government granted land lease to the real estate sector to solve the increasing demand of housing. The real estate's affordability is in question. Because in general there are different income groups and the houses being built in Addis Ababa are in either of the options (low

income, cost effective & luxury houses) which in this research will be dig more to find out and propose mitigation measures for the unorganized and inconsistent system that creates a problem in satisfying the demand of housing in the increasing population. Targeting the risks encountered with the delay in delivering the project, quality compromise and cost increase which is not anticipated by inflation should be treated in a way it can be tolerated by the client and delivering as per the contract (Yared Mussie, 2008).

The efforts being made in providing quality houses for the different income groups is not the same as the money that is spent will be different. This is where the question of quality compromization comes. On the contrary, the issue of quality and safety must be given a greater attention.

The purpose of this thesis is to review the current trend of the real estate development and the different issues faced in Addis Ababa regarding housing development since it is vital and should be initiated by the government to alleviate the housing problem in major cities in the country.

1.1. Significance of the research

This thesis focuses on the experience and prospects of residential real estate development is an important subject that is concerned with the housing market in the growing population. Which ought to be aware to help the population understand how the housing supply is attained by real estates. Regardless of efforts so far done by the government and private real estate developers, there is still a huge gap between demand and supply in the housing market. Hence, no question that yet much has to be done in the sector. Thus, the findings of this research will add to the relevant body of knowledge regarding the quality of private residential housing developments in Addis Ababa. It can also be used to shed light on measures that can be taken by key stakeholders, namely; government, private developers and home buyers, for increasing the supply of affordable housing units.

Hence, by analyzing the cost, time and quality implications in supplying real estate houses, findings of this research paper will bring a better insight to maximize the role real estate developers would play in affordable housing production. It will also provide an important foundation for further researches in this regard and give more academic debate to come to a tangible solution in reducing limitations faced and thus maximize the production.

1.2. Problem statement

Real Estate development is considered as one of the biggest business investments in the country with the transaction of billions of birr in the market. In relation to the projected future housing demand, in addition to the existing need, the actors in the sector are increasing in number, while problems that the sector faces are growing in leaps and bounds. The current population in Ethiopia follows its current rate of growth (3.02%), its population will double in the next 20 years and cross 300 million by 2050 (World population Prospects, 2015). The housing development seen from the past trend seems insufficient with the increasing population and the trend of real estate development in the country is inconsistent and lacks uniformity. The real estate sector is not growing at the expected speed and scale, but the market demand is vast.

Housing is one of the major problems prevailing in Addis Ababa and other cities & towns across the country. Even though there is a development recently in supply by both the government and private real estate companies, there is still huge gap between housing need of Addis Ababa residents and the supply. In the demand side, with such favorable demographic features, the effective demand (because of affordability) is very few, because of different factors. On the other side, the supply from the private sector was growing, and according to the Ethiopian investment agency, the number of leased companies in A.A is really big number (that would constitute a registered capital in the market of Br.53 billion), when actually operating numbers are less than 3% of this total.

When discussing about the affordability of the real estate houses the one considered as a small household price ranges from 1.5-4 million birr and according to CSA, 92% of Addis Ababa residents earn a monthly income of less than \$167 a month (3340 Eth birr) (Yared Mussie, 2008). This issue is the major one which creates a huge doubt of the affordability for the vast number of population.

Based on ongoing trends, real estate developers have their work cut out for them to convince future customers of their trustworthiness, because of non-delivery of housing projects on time and lack of credibility from developers. From Capital newspaper written on Wednesday 30, 2015 by Muluken Yewondwossen stated that the registry of new customers at a real estate company has declined by 30% in the past few months, following Access real estate's inability to fulfil its commitments.

Real estate developers also said that at present it is difficult to obtain finance from private or state-owned financial institutions due to the government's main focus on controlling the fast growing inflation. At least there are three major reasons that can be singled out for the inability of the majority of the population in developing countries to get access to housing loans. These are absence of good collateral; informality and instability of income and lack of information on borrowers (Erhard, 1999 cited in Abraham, 2007). Delays in the original timetable due to lack of available accessible land, finances obtained from clients for housing projects being used for other purposes and the shortage of experienced and organized professional teams to handle such huge investments, have been stated to be the major challenges for the sector from registering good performance, argue experts and some major real estate developers.

The government and other important stake holders are required to play the role in creating a strong and efficient housing development market which is very crucial to economic development. Similarly, an offer of hospitable foreign direct investment as well as local projects would help for its development.

1.3. Objective

This thesis focuses on the real estate development in Addis Ababa and aims achieving the following:

- To assess the trends of housing developments and the role of private real estate developers in alleviating housing problem in Addis Ababa in meeting the construction plan
- To analyze the affordability of the real estate houses with respect to low, middle and high income groups
- To assess the effort made by the real estate developers in providing quality houses, functionality of the houses and to compare the real estate industry in developing quality houses with other housing development efforts made & being made in Addis Ababa.
- To compare the international practices and experiences in housing development and review the different efforts made to alleviate the housing problem.

1.4. Research questions

- How is the progress and trend of housing development in Addis Ababa?
- How is the real estate development sector progressing and their credibility in providing housing?
- What are the efforts made to balance the demand & supply of housing?
- Is the real estate development sector working towards alleviating housing problem in Addis Ababa? Are their focuses directed to different income groups?
- Are there enough qualified people involved in the real estate companies to guarantee quality work?
- How are the developing countries working in providing housing for the different income groups?

1.5. Scope and limitation of the study

The study will be focusing on the experience and prospects of residential real estate development in the production of quality houses which are affordable by the population. This is a basic information which can also give an insight in the supply of housings towards meeting the demand and the construction strategy they have implemented. The international aspects will be observed in order to have an exposure and wider picture in sharing their experience.

According to the data in Ethiopia investment agency, there are about 125 real estates and from those there are three classifications as pre-implementation, implementation and operation. From those, the operating ones are few in number and thus the active ones are selected for sampling. There are about seven real estates and from those the ones who respond will be selected as a sample group.

1.6. Organization of the thesis

This research paper is divided in to six chapters:

Chapter One – Introducing the study: - this chapter gives a brief introduction to the housing shortage and backlog, particularly on lack of affordable housing development for the different income groups. The chapter includes objectives of the research, research questions, problem statement and organization of the paper.

Chapter Two – Overview of the real estate development process: – this chapter discusses about the real estate development and the different branches of it as an asset class, specific character of real estate market and asset delivery duration in the management prospect. This part also elaborates the different stages of the management processes, organizational structures and the laws drafted for real estate land tenure systems as well as the requirements for the construction permit.

Chapter Three – Overview of international real estate development: – This chapter describes the experience of real estate developers in other countries (developing & developed). This part gives an insight and exposure of the international experience in providing affordable housing in the real estate sector.

Chapter Four - Trends and impacts of housing construction in Addis Ababa: – this chapter discloses the different housing sectors and actors which were involved in Ethiopia throughout the years. The efforts that are made in minimizing demand supply gap and the contribution of each parties involved in the real estate sector to alleviate housing problem. The exposure and alternative construction methodology that can be implemented and still have quality assured affordable housing is reviewed.

Chapter Five – Research methodology: – this chapter points out the research approach, data analysis and interpretation. It also explains the research procedures, sampling techniques and the limitations of the research methods.

Chapter Six – Discussion and research findings: – this chapter includes accessing housing distribution and the role of real estate sector. Evaluating the quality of the selected real estate houses and affordability analysis in relation with income/ expenditure.

Chapter Seven – Conclusions and recommendations: – this part comprises two sections which has the conclusion and the recommendation of the research.

Chapter Eight – References: – this part includes the list of references used in the research paper.

CHAPTER TWO

2. GENERAL INTRODUCTION

This part of the research presents a review of the literature on the experience & prospects of residential real estate development in alleviating housing problems in Addis Ababa. The approaches will be assessed and overviewed in order to have the clear picture of the strategies in this country and in other countries to effectively deal with the housing problems created by the increasing population.

Housing is the layout and development of residential units in which people can live in pleasant, peaceful, sustainable and healthy surroundings with social, cultural and recreational facilities and communities maintaining a decent life, a vibrant local economy and a healthy community. It is a social unit planned on neighborhood or community principles and is an integral part of the nation's economic development, (G K. Hiraskar 1993). Residents of all ages, income levels, abilities and family types rely on housing of offer a meaningful place to grow and a safe and secure place to live. Housing is one of the most important and basic merits that should be provided regardless of the capacity. The shortage of houses affect the security and affordability of almost all people at one point or another.

Different types of explanation is given for the term housing by considering the social, cultural, economic and environmental conditions. And many of them stressed that housing is not only the residential building, it includes the surrounding environment and other social service like roads, hospitals and schools as well for further understanding.

The environment in human settlements is determined by a variety of factors social, functional, spatial and so on. But the most immediate inescapable & profound issues are social factors experienced in terms of population (family units), adequacy of incomes, educational facilities, privacy in accordance with the world's vast variety of climates & cultures. The house is the core or central place as a starting point of all life in human settlements. When considering a human communities, housing should integrate water, roads, land, energy and all of the social cultural aspects of life.

According to World Health Organization of the United Nations (WHO) housing can be defined as:

“ Residential environment which includes in addition to the physical structure that the family uses of shelter, all the necessary services facilities, equipment & services needed or desired for the physical well-being of the family and the individual” (UN 1975:17)

2.1. Real Estate Development

The history of real estate dates back to the evolution of man and his first sedentary shelters. Perhaps it can be called the first attempt to create an enclosed space, which is detached from the surrounding, apparently to protect his family from coldness and attacking animals (Graaskamp, 1981). Shelter formation enhanced the livelihood of men in terms of protection and gave him longer stability to regularize the surrounding creatively.

The term real estate can be defined as, the private ownership of a limited parcel of land, which includes the right of the air above it and the ground below it, and any buildings or structures attached to the ground (Miles, 2007). Real estate can exist in the form of business and/or residential properties, which can be sold or either by a relator or directly by the individual who owns the property. Ownership of land is considered as a real property that has sale or transfer right granted by law (Miles et al, 2007). Yet, the principle of sale or transfer follows the land policy regulated by the government of a specific country.

Graaskamp (1981) also defined real estate as; “space delineated by man, relative to a fixed geography, intended to contain an activity for a specific period of time. To the three dimensions of space (length, width and height), then, real estate has a fourth dimension – time for possession and benefit. This is referred to as space-time characteristic.”

2.2. Construction Management in Real Estate Development

Real estate is often defined as a triangle of space, money and time. In this sense a particular usage is attributed to a defined space which generates an estimated cash flow over a specific period of time. Based on this understanding of real estate, the definition of development postulated by Graaskamp (1992, p. 620) “(...) the creation and management of space time units is termed as real estate development” is applicable. This definition primarily makes reference to the economic benefit derived from the space produced by the developer. The definition of the Urban Land Institute, as formulated by Miles / Berens / Weiss (2000, p. 4), also refers to the management and entrepreneurial aspect of real estate development: “Development is an idea that comes to

realization when consumers – tenants or owner occupants - acquire and use the bricks and mortar (space) put in place by the development team. Land, labor, capital, management, and entrepreneurship are needed to transform an idea into reality. Value is created by providing usable space over time with associated services.”

Efficient project management strategies & the construction industry is commercial domain of building and construction has attained significant prominence in the recent times. As such, this sector deals with huge amount of money and thus, stakes in this line of business is much higher. Any construction project invariably comes with certain constraints. These constraints include an estimated costing and a fixed deadline. Stakeholders of a project have to ensure these predetermined factors do not get skipped at any cost. Along with these estimations, one has also to ensure superior quality of construction work to a project. However, at the implementation level it seems most challenging to maintain this cost estimation and the deadline.

As such, scores of unforeseen adversities crop up revolving any construction job almost every now and then. This string of adversities either withholds the work or delays the work progress. One has to resolve all these challenges as early as possible in order to complete a project successfully. In this situation, the aspect of project management has become crucial for obvious reasons. The concept, as such, deals with organizing and managing resources with an efficient approach. As such, the resources include both labor and materials, which are essential in the building and construction sector. Thus, in other words, the aspect of management in construction industry ensures timely and successful completion of a project perfectly in the way it was expected.

Professionals involved in the domain of construction management require resolving the unforeseen issues in one hand, while on the other they require identifying the potential adversities beforehand. To put it in simpler words, the aspect of project management in construction is undoubtedly challenging. Professionals involved in this vocation require knowing all the relevant dimensions of a construction project. Moreover, they require keeping themselves promptly updated about all minute developments occurring in a project. This information helps them to take better decisions to resolve unforeseen challenges and adversities. The fraternity of project management services shoulders a host of relevant responsibilities. Starting right from finding ideal site for project owners to successful completion of the construction project, the fraternity leaves no stone unturned, to shoulder their responsibilities.

Some of the crucial aspects of their job include, evaluating the aspect of town planning and other development issues along with conducting detailed feasibility studies. The aspect of feasibility studies includes factors like a comprehensive design and cost assessment of any project. These professionals also assist project owners in acquiring lands and obtaining various permits from respective authorized agencies. Most importantly, any competent project management professional helps to resolve the engineering and architectural issues that crop up from time to time.

It is interesting to note that dedicated service of any proficient construction management firm proves to be equally helpful for all categories of projects, irrespective of size and scope. Hiring this category of service will provide a benefit for project owners on the monetary aspect. An increasing number of building projects these days are roping in adept construction management firms. This significant development which is set as an ideal theory is helpful for the entire construction sector and must be conducted in real estate developers as well.

2.2.1. Real Estate as a Unique Asset Class

The most prominent characteristics of real estate are that it is tied to its location, it is heterogeneous, it is scarce and it has limited substitutability. These factors have far reaching economic, legal and factual implications. The geographic location alone frequently determines the most likely use as well as the physical and / or structural possibilities, and the value of real estate is largely determined by external factors such as the condition and the possible uses of adjacent properties as well as the infrastructural facilities provided by the public sector.

Land cannot be reproduced, any structures built or developed on a specific piece of land are characterized by a high degree of uniqueness. The heterogeneity of real estate can be derived from its immobility. Low level of heterogeneity results in the creation of material and regional sub-markets, thereby restricting the comparability of real estate. The heterogeneity results in sub-market risks as well as property and valuation risks. Heterogeneity leads to both scarcity and limited substitutability. The possible uses of real estate are largely determined by the combination of geographical location, structural conditions and legal parameters. Thus, real estate is characterized by both scarcity and limited substitutability (Yilkal Hunegaw Mekonnen, 2011).

Real estate development is a highly complex, dynamic and multi-disciplinary challenge. The duration and complexity of the development process involves a considerable amount of time

and, as a consequence, real estate developers lack the relative flexibility to respond and adjust quickly to any fluctuations in tenant and investment markets. This results in increased economic risk. Furthermore, the construction of real estate and the acquisition of a completed property require a considerable investment (Dubben / Sayce, 1991). Against this background and also in view of the objective of maximizing the return on equity, external funds are often necessary to cover capital needs as not all property developers are also property investors. As a result, the development industry and capital market are closely interrelated.

Finally, real estate is also characterized by its long life cycle and useful life. Depending on the purpose of real estate, its capability of being used by third parties and its usage concept, the economic life of real estate ranges between 20 and 100+ years. During this long period of time properties have to be maintained, refurbished or re-positioned.

2.2.2. Specific Character of the Real Estate Market

This market involves transactions for the rights to use land and buildings. On the demand side of this market, are people and other entities that are willing to pay to use space for consumption or production purposes. The supply side of the market involves property owners who are willing to sell such space to users. The price of use in the space market often called rent, even if the owner/occupant of the space.

Users of space often have specific requirements for the type of space they demand and the locations of that space. A family for example, wants comfortable, attractive living, space near shopping, education, and entertainment resources. But a manufacturing firm is likely to be more concerned with functionality and proximity to its customers or raw materials suppliers. Suppliers in the space market have buildings that was designed for specific uses and are fixed in their locations. Because supply and demand is location and type specific, real estate space markets are highly segmented (Yilkal Hunegaw Mekonnen, 2011).

Real estate space markets can be categorized by property usage and by geographic boundaries. The major segments of real estate space market include residential, industrial, retail, office, agricultural, and lodging.

The participants in this market are concerned with the amount and timing of the cash flows a building is capable of producing rather than the building's configuration for a particular use. These

market participants make their decisions about buying and selling by comparing real estate assets with other capital market assets such as stock and bonds. On the topic of real estate asset market Charles & Marcus (1994, p.163) states: “Real estate asset market prices are determined by three main factors: opportunity of capital, growth expectations and risk.”

2.2.3. Asset Delivery Duration

The passing of time is the most critical risk in the development process. Time permits the power of compound interest to erode the developer’s resources, and it allows the conditions of competition and consumer needs which were true when the project started to change significantly. Perhaps it is the impact of compound interest which is least understood by most government regulators and most often used for extortion by those few who do understand it. Remember that a project with \$1,000,000 invested at a nominal construction interest rate as low as 12 percent per annum is costing \$10,000 interest for the first month, \$333 a day, and then \$11,200 the second month, etc. If the developer had hoped for a net profit of \$50,000, a total delay of 4 months in completing the project will not only cause the loss of that profit in additional interest charges, but also may give the tenant the right to break his lease, the owner the right to invoke a loss of use penalty, the mortgage lender the right to re-negotiate more expensive terms than those in the original commitment, and a competitor the opportunity to finish first and capture the market (Graaskamp, 1981).

2.3. Real Estate Management Process

All building construction projects include some elements in common - design, financial, and legal considerations. These all leads to coordinated construction project which should be managed according to the management triangle. The success ratio in a real estate development is dependent upon a number of factors.

The management triangle (time, cost and quality) shown on figure 1 below points out the fundamental basis serving as a wide-ranging representation of what is of importance concerning real estate development. Within this triangle there are a couple of concrete factors that can be pin-pointed. The three areas (time, cost and quality) shown on figure 1 are the main points in construction management. The most common understanding is that if the project time is shortened the project quality will be poor, which is not always true. Of course, different time

contributes to different time contributes to different procedure quality. On the other hand, the project cost is reflected in two aspects. In the first aspect, it is the cost generated by the construction sector in order to guarantee the project time, such as the increasing cost originated from increasing resources, and updating technologies. In the second aspect, the prolonged project time may cause new cost. If the prolonged project time is caused by construction environment or natural environment, the contractor can gain compensation from owners. But if the loss is caused by internal factors, the developer has to shoulder it by itself. Therefore, during the construction process, the developer should make proper adjustment according to the changeable relationship of time, cost, and quality in the system.

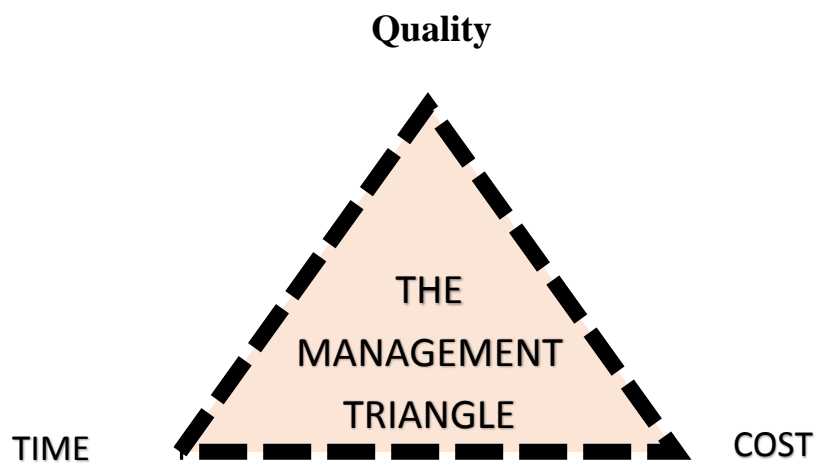


Figure 1: The management triangle

2.3.1. Overview to the Generic Real Estate Development Process

Projects go through a life cycle of phases between their beginnings and ends that for construction projects are typically: initiation, planning, design, preconstruction, construction, commissioning, and closeout. On the other hand, projects have project initiation, conception, realization management and project marketing are shown on figure 2 below. The figure elaborates that each project is unique and must have a written requirements document that takes into consideration operational needs, level of service, regulatory requirements. The scope evolves as new information becomes available through the project life cycle. Consequently, every project needs a budget to initially define its funding requirement. The objectives of project management are to execute a project so that deliverables can meet scope requirements on budget and schedule, and at acceptable risk, quality, safety, and security level.



Figure 2: Generic real estate development chart (Federal Transit Administration, 2007)

In project management plan there are different brunches, such as project overview, organization and staffing, project management and controls, conceptual design phase, final design phase, construction phase, closeout phase, quality and risk management, procurement and contract administration should be planned and managed properly.

2.3.2. Project Initiation (Inception)

This is the first stage in a project which usually includes the client and the project management firm. It is required to make all the issues clear/ brief regarding client objectives, project management objectives and managing the different issues raised according to client's cost, preferred quality and delivering the property as per the schedules set.

2.3.3. Planning

The planning stage includes feasibility and strategy stage. The strategic plan looks to the developer's mission that in turn defines its vision for the future and the strategies it will adopt to achieve the mission's goals and objectives. The developer can then determine what assets it needs to accomplish its strategies and identify any gaps between its existing and needed assets. Simply stated, a capital project is developed as a means of filling the gap between the needed and the existing assets. This part of the process requires a careful balancing of project costs against available financing and is a complex mix of public policy, public financing, and capital and operational budgeting.

2.3.4. Design

In the designing phase the active parties are the client, consultant and project manager. The project manager has a role from the beginning in project organizing, detailed work plan, advises the client on choice of consultants and many other activities up to the end. The client specifies the aesthetic needs and other consideration in function of the building. The consultant makes analysis design studies, schematic design, prepares proposal and cost plan for the project.

2.3.5. Pre-Construction

Building construction is procured privately or publicly utilizing various delivery methodologies, including bid, negotiated price, traditional, management contracting, construction management-at-risk, design & build and design-build bridging.

A project manager may contract out any one or all of the project management, design, and construction functions to acquire the capability and capacity needed for the project. Contracting out a function also results in transferring, from the Agency to the contractor, responsibility for and control of the means and methods of how the work is executed, as well as the risks associated with the performance of the work. Table 1 describes alternative project delivery strategies along with the corresponding transfers of control and risk from the owner organization to the contractor.

Strategy	Sub-Strategy	Description	Owner Control/Risk
Own Forces	Total Project	Owner manages, designs, and constructs project with own forces	Owner has total control and accepts all risks
	Construction	Owner manages and constructs project with own forces, and retains design consultant for design work	Owner has total control and accepts all risks except for design errors or omissions
D/B/B Design/Bid/Build	Owner Managed D/B/B	Owner manages project, contracts out design to engineering consultants and construction to contractors	Maintains overall project control and transfers detailed engineering design/construction tasks and risks to contractors
	GEC	Owner retains a GEC to manage the design and design consultants	Owner transfers control of design and design management tasks and risks to GEC
	CM	Owner retains CM to manage construction contractors	Owner transfers control of construction and construction management tasks and risks to CM
	PMC	Owner retains a PMC to manage the project including consultants and contractors	Owner maintains control of project scope and transfers project management tasks and risks to PMC
CMAR Construction Manager at Risk	Owner may also retain a GEC and PMC	Owner retains a CMAR contractor in final design, who participates in design review, estimating, and value engineering and at some agreed point guarantees a fee to manage and carry out construction	Owner transfers a share of control of scope through design to the CMAR contractor and all of the control and risk of the management and execution of construction
D/B Design/Build	Owner may also retain a GEC and PMC	GEC completes design through preliminary engineering (approximately 30 percent). Owner retains a D/B contractor to complete design and construct the project	Owner maintains control of scope through concept design (30 percent) after which control and risk of design and construction is transferred to D/B contractor
D/B/O/M Design/Build/ Operate/Maintain	Design/Build/Operate or Design/Build/Operate & Maintain	As for D/B plus contractor is responsible for the operations and maintenance of the facility for a specified period	Owner transfers control and risk of operations and maintenance to the contractor
Turnkey	Could be used for D/B or D/B/O/M	Owner prepares a performance specification that is bid on by turnkey contractor, who may also participate in financing the project	Owner controls scope of performance specification after which control and risk of conceptual/detail design and construction transfers to turnkey contractor, including operations and maintenance if D/B/O/M

Table 1: Project delivery strategies (Federal Transit Administration, 2007)

Note: GEC is general engineering consultant; CM is construction manager; PMC is project management consultant

In a traditional design/bid/build (D/B/B) project the life cycle shown on the figure 3 explains that the project life cycle begins with the initiation of planning (including environmental and funding), and design (including conceptual design). These phases overlap to some extent. During these phases the project evolves through consideration of various alternatives and the concept for the preferred alternative is formed. The design phase continues through the preliminary engineering effort to further analyze, validate, and define the preferred alternative and arrive at the baseline scope, budget, and schedule. Then the design phase concludes with the final design, which further details out the design features to provide the permitting agencies and the contractor a set of construction drawings and specifications to permit and build the project. The construction phase

proceeds with the bid and award process. At the end of the construction phase, the work of the contractor needs to be integrated with operations and Agency furnished activities, technology, and equipment, and evaluated for acceptance through the commissioning phase to bring the project to a successful completion. Figure 3 shows a typical project life cycle for traditional design/bid/build delivery.

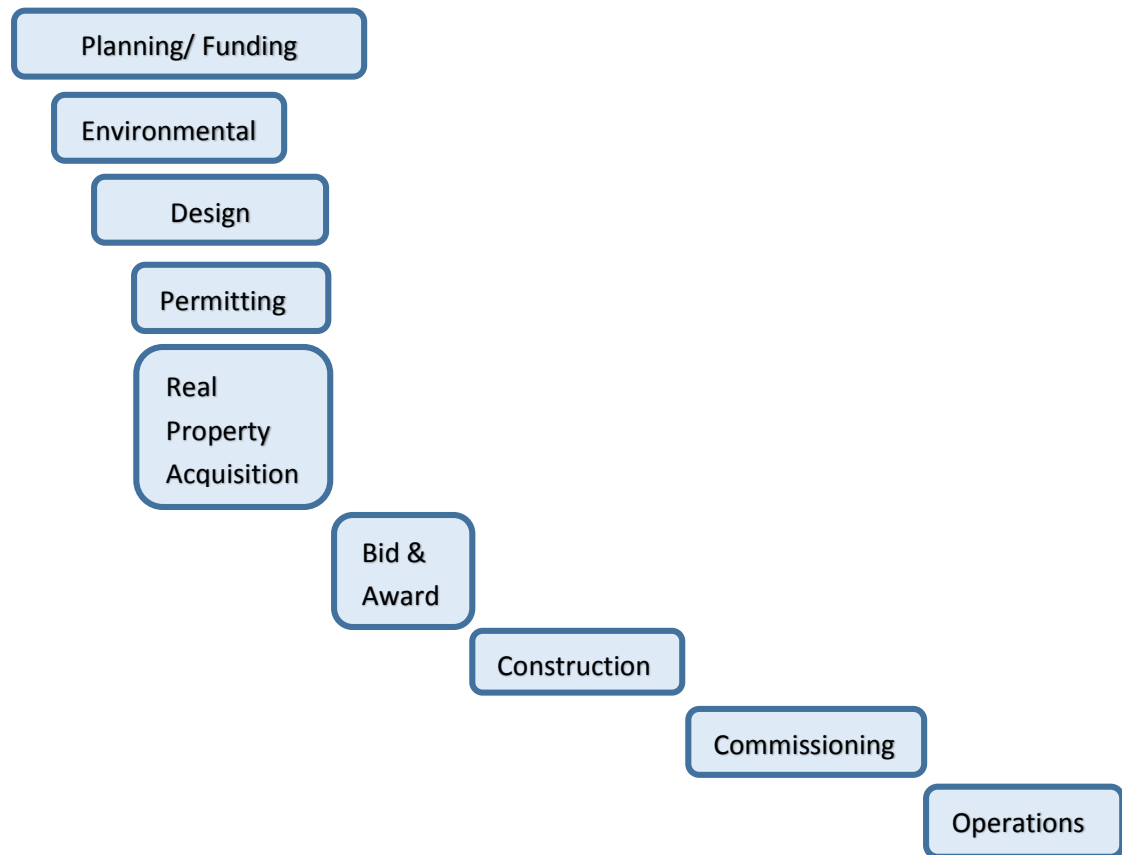


Figure 3: Typical Project Life Cycle –Traditional Design/Bid/Build (Federal Transit Administration, 2007)

2.3.6. Construction

The project manager communicates with the client, consultant and contractor to coordinate the team members, work together to satisfy the client needs and deliver service also by considering the internal and external factors.

In the construction stage, the client will be visiting the site and make any changes if any such as partitions. The consultant assists with any changes in the field (variation orders), facilitates the completion of the project by communicating with the project manager and contractor to make regular inspections and observe if the work is executed according to the set of valuation standards.

The contractor is the main party that plays a huge role in this stage who is responsible for the work being executed on site according to the drawings and specifications set on the contract document. The contractor appoints sub-contractors, procure building materials, prepares machineries and manpower to implement the work.

2.3.7. Commissioning

At this stage the client's aims include agreeing to a handover plan and schedule and client/supplier responsibilities, especially in terms of criteria for acceptance, provision of necessary project documentation, and defects liability, commissioning arrangements, and any instructions as to future occupation. The client is also to agree and implement the handover method and agree a defect rectification plan if necessary and transfer of documentation. Also an initial post-occupancy review may be undertaken at this stage to highlight any immediate issues for rectification.

This is the final stage of work executed by the contractors and consultants prior to acceptance of the facility by the client. They are carried out under the continued co-ordination and supervision of the project manager, in close working relationship with the consultants (Mike E. Miles, Gayle L. Berens, Mark J. Eppli, Marc A. Weiss, 2014).

2.3.8. Project Completion / Handover

At this stage the client should be satisfied that the engineering installation has been installed correctly, in a safe manner, and that it performs to the requirements of the design. The project manager's objective is to ensure that the works is properly planned and executed, so that the installation as a whole is fully operational at handover without delay to the schedule. The consultant inspects the construction works prior to practical completion and lists outstanding works and also prepares schedule of defects to agree on the final corrected snag lists. The contractor provides the client with records of as built drawings, complete outstanding works, correct defects, collaborate in inspection and hand over the keys (Mike E. Miles, Gayle L. Berens, Mark J. Eppli, Marc A. Weiss, 2014).

2.3.9. Summary of Project Management Process

It has been discussed in detail on the previous sections about each and every project management process. It is fundamental to go through this stages when involving in a project. As the famous

saying, client is a king, a healthy project is the one which involves the clients in every step of the project. The summary of the project management process is shown on the Figure 4 below:

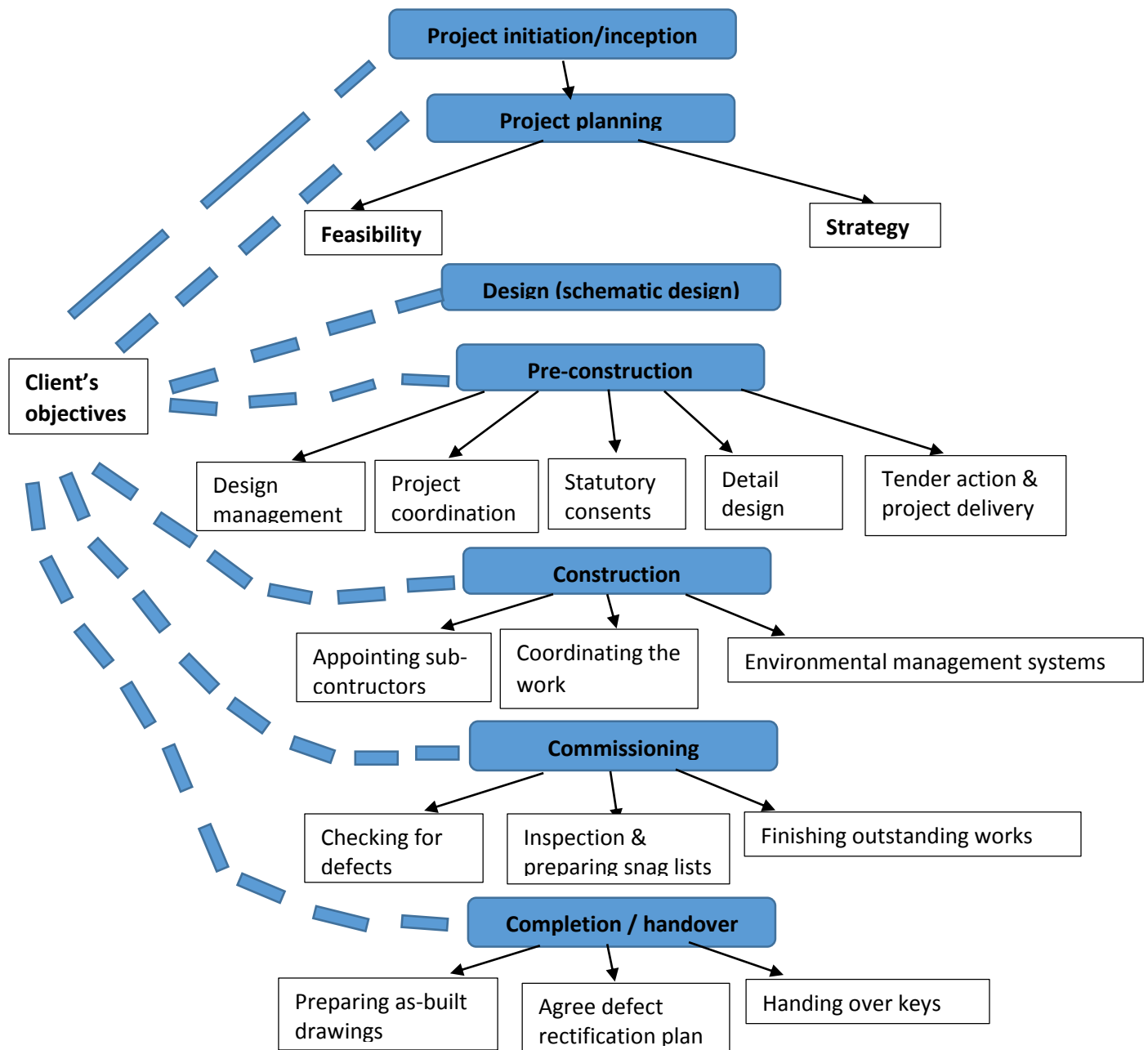


Figure 4: Summary of project management process

2.4. Ethiopian Law on Real Estate Development

Ethiopia had no clear urban land and housing policies before July 1975. However, to some extent there were land use provisions during the reign of Emperor Haile Selassie. Feudal lords, aristocrats,

high government officials and capitalists owned urban land. During this period, only that class of people who could produce as security their ownership title of urban land or house benefited from the facilities provided by banks and insurance companies.

The underestimate of the importance of housing for national economic and social development seems to be one of the most relevant deficiencies in housing policies implemented so far. Besides, the efforts made by the consecutive Ethiopian governments in the field of housing showed a general tendency to underestimate the complexity of the housing problem, viewing it mainly as a problem of shortage of resources. In doing that, inadequate attention has also been paid to the role people played in the housing process (Bisrat Kifle, 2008).

Real estate in broad terms has a meaning of land and everything made permanently a part of it and the nature and extent of one's interest therein. (Ethiopian Bankers association, March 2008). The report indicates that there must be land ownership in order to have exact meaning of real estate. Article 40(3) of the constitution of the federal democratic republic of Ethiopia (FDRE) provides that land, either urban or rural, shall not be subjected to sale or other means of exchange. This in turn has a constitutional prohibition for private ownership of land, which automatically works against the establishment of real estate.

Large scale private housing construction by real estate developers and private rental of housing were prohibited in the previous regime, hence making private real estate development a new phenomenon in the current Ethiopian setting. Private investment above birr 250,000 was legally prohibited by policy guidelines during the Derg. Even the introduction of mixed economic policy later did not bring about significant changes in this category of investment, for policy guidelines and incentive frame works favored government investment programs.'

It was after 1992 that studies were made in this category of investment. Following the lifting of capital ceilings, the broadening of investment areas open to private sector participation long with equal access to credit and establishment of the Ethiopian investment Authority and investment bureaus, a number of investment certificates on real estate have been issued (Biruk Tesfaneh, 2012).

Investors in real estate, renting and business activities have been steadily increasing since the early nineties. The number of certificates issued for real estate development was about 33 in 1987 EC. This steadily grew to 121 in 1993 and jumped to 1,734 in 1994 E.C. The highest recorded figure

for real estate development was in 1998 E.C when 2,328 projects were licensed. This is clear manifestation of how much the demand for real estate development, renting and business activities has been increasing over the years. The total housing need encompasses housing required for accommodating newly formed families, replacing dilapidated houses, easing overcrowding and housing need associated with the desire to accommodate homeless households.

2.4.1. Real Estate Development and Land Tenure Systems in Ethiopia Before 1991

It is difficult to decide where real estate development, in its commercial form had been put in action, in the history of Ethiopia. Yet, the prevalence of unplanned settlements in urban areas displays real estate forms of development in the country (Wubshet, 2004). The development of real estate is the outcome of urbanization and systems of urban land ownership (Wubshet et al, 2004). Apparently, real estate development is directly associated to the state of land tenure system and investment policies of a country. The history of contemporary Ethiopia illustrates that varied regulations were practiced concerning land tenure system, in three different periods. The land tenure arrangement before 1975 was developed according to the feudal regime of the time, where by the king proclaimed as the sole owner of urban and rural land (Daniel, 2013). Between 1974 and 1991, due to the outcome of the revolution, the system of land tenure was regulated as public, which defined land as a public property. The third period displayed a similar path, which defined land as a state property, where by the government is the sole owner of land in Ethiopia. The EPRDF government regulated the ownership of a real property only in terms of the lease sale, which is a land use right for specific period only (Daniel et al, 2013).

2.4.2. Real Estate Development and Land Tenure Systems in Ethiopia After 1991

After the downfall of the ‘Derg’ regime in 1991, the victorious allies of EPRDF and other parties took control over the political power and established the Transitional Government of Ethiopia (TGE). The government introduced land lease system for the first time in the country, by containing the land law in the constitution, in 1993 (EPRDF constitution, article 40, 1993). Despite the law was included in the constitution, it was not in the form for execution. As a result, the House

of Representatives (HPR) declared three successive proclamations in 1993, 2002 and 2011, where by clarifying the effecting of the land lease law (Daniel, 2013).

In this period, the history of real estate development comprises government built public housing program, private developers and cooperative housing. According to a comprehensive data from Addis Ababa Investment Agency (AAIA), more than 1300 private real estate developers were registered, who had submitted their proposals in the office, from year 1992 up to 2012. This data is inclusive of mixed and commercial rental buildings, and real estate housing.

No.	Housing Supplier	No. of Houses	Percentage Share
1	Public	7,409	8.4
2	Cooperatives	24,820	28.2
3	Individuals (formal)	22,225	25.3
4	Real estate developers	3,520	4.0
5	Informal sector	30,000	34.1
6	Total	87,976	100

Table 2: Houses constructed in Addis Ababa, (1996-2003)

Source: Condominium Housing in Ethiopia, CGAA (2011), cited in UN Habitat (2011)

Access Capital, in its sector report in 2010, assessed the function of the real estate sector and market conditions in Ethiopia. The report exhibited the growth of the real estate sector from the dimensions of macroeconomic measurements, investment registrations at Ethiopia Investment Authority (EIA), license certificates granted by Addis Ababa investment agency (AAIA) and real estate tax revenues (Access Capital, 2010). The real estate and the construction sectors accounted for 14.9% of the GDP in 2008/9, with real estate comprising 9.1% and construction comprising 5.8% with annual growth rate of 14.1% and 10.4% respectively (Access Capital et al, 2010). This data had shown the crucial role of the sector on macroeconomic evolution of the country, which was presented as a double-digit growth for successive five years.

The empirical report by Access Capital also illustrated the prices of residential real estate surveyed in 2010, which are presented in the following figures below. The analysis by the report displayed

the fact that the real estate market offered a great deal of investment opportunity for developers (Access Capital, 2010). Yet, the level of affordability was minimal for low and middle income group, showing reality of the gap as compared to the high income group.

According to the report, empirical surveys illustrated the following facts based on the analysis of plot areas and number of bedrooms, concerning the price of houses in the market, (Access Capital, 2010):

‘Large homes are defined as 1000 square meter plots with four or more bedrooms. Medium-size homes are 500 square meter plots with at least 3 bed rooms and small size homes are 250 square meter plots with two or three bed rooms’

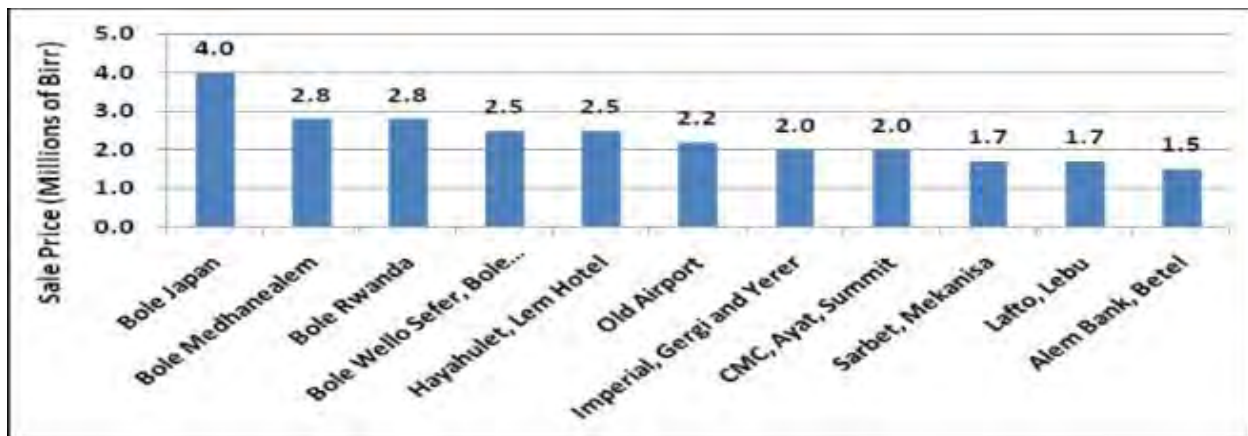


Figure 5: Sale prices in different neighborhoods for small houses

Source: Investing in Ethiopia, Access Capital (2010)

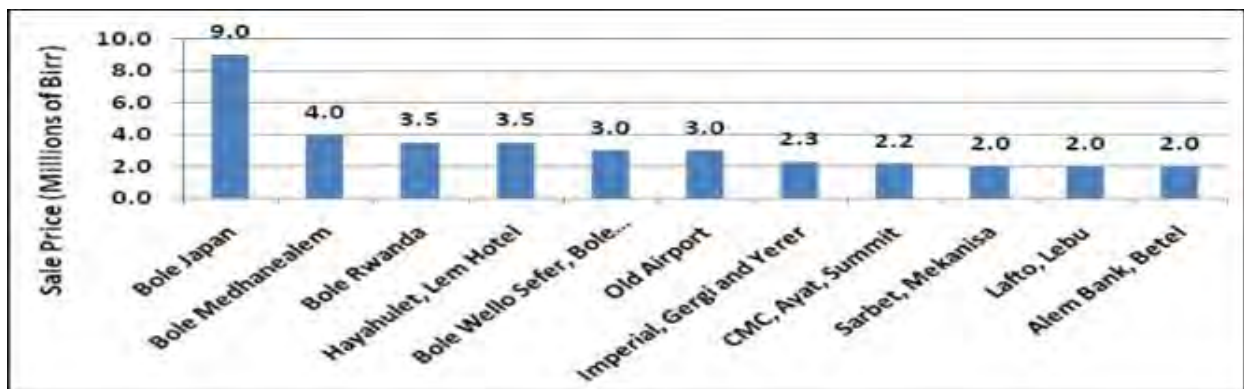


Figure 6: Sale prices in different neighborhoods for medium size houses

Source: Investing in Ethiopia, Access Capital (2010)

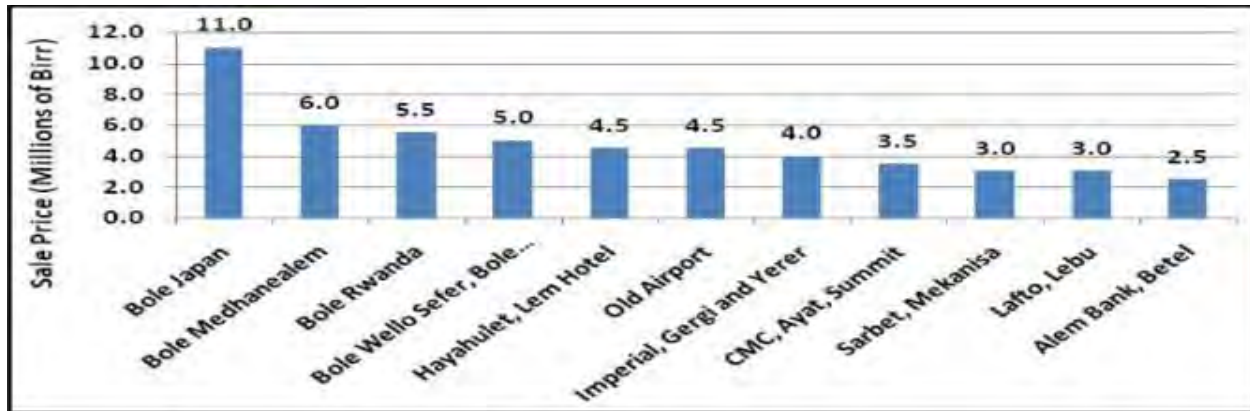


Figure 7: Sale prices in different neighborhoods for large houses

Source: Investing in Ethiopia, Access Capital (2010)

Within the same year 2010 where Access capital published its report, Addis Ababa city Administration evaluated the former development plan of the city. According to the paper titled ‘Performance Evaluation on Development Plan of Addis Ababa 2003-2010, Housing Component’, by a team of professionals in EiABC and other organizations, real estate development was considered as the main activity in the housing supply sector, holding a share of 8% in the development plan (EiABC, 2011). As a result, the city’s government supplied land with very low lease price which was as low as 151.45 birr/m² (EiABC, 2010).

The problems discussed by the evaluation were; “Missing of the social mix plan, price escalation, taking large amount of bank loan with the leased land, illegal and substandard construction, commencing construction without any construction permit, ignoring land use plan, poor registration and filling, illegal ownership transfers and illegal land subdivision” (EiABC, 2011).

The assessment by Tesfaye (2011), presented the level of affordability of real estate houses in six real estate companies, through analyzing 33 ongoing projects. The six developers studied were Gift, Access, Yotek, Flinstone homes, Habesha and Afro Tsion real estates. Although, the assessment was made before three years and the findings show low level of affordability, it has displayed the fact that real estate developers were playing a crucial role in the sector.

On table 3 below categorizes the number of real estates in each sub-city by their area in sq. m, number of houses to be constructed, number of lots where construction is started, not started and halted.

2.5. Requirements of Construction Permit for Real Estate Development

In order to get the construction permit and approval for developing houses by real estate developers, the plan has to include a specific size for villa and condominium and also sufficient space for green area and parking. Those things will be checked by the responsible governmental bodies. In addition, to have the legal understanding of the contractual agreement between the real estate and the client, a clear legal requirements regarding the transfer of houses built up in real estate, registering clients & collecting payments, obligation of the real estate developer, contractual obligation of the real estate developer and violation of contractual agreements are listed on Addis Negarit Gazeta and Ministry of Urban Development and Construction published on March, 2013. The laws which are relevant with this research paper are pointed out below:

Size of real estate land and green area:

The regulations issued to provide land for real estate development, the proportion of space for constructing villa houses and apartments shall be 40% for villa houses and 60% for apartments.

The average share of communal of the house built up in a condominium shall not exceed 50 square meters in size.

The proportion of space for green areas and roads in lands allotted for real estates shall not be lesser than 25% of the size of the land permitted for development.

The density rate of the land to be developed as real estate shall be in accordance with the master plan of the urban center.

The price of land permitted for villa on the expansion area shall be the highest auction price of the area. However, if the negotiation price exceeds the auction price the negotiation price shall be implemented. The lease price of real estate expansion area shall be by negotiation price.

Extinction of incentive: - the right to be issued free from lease payment for 50 sq. m previously shall be rescinded; and plots outside the reserved real estate shall be entertained by auction means.

Insurance of land where the developer requests land by lease for the first time, the size of land to be permitted shall be up to 25,000 sq. m and where the developer requests additional expansion of land, completion of 75% of the previous project shall be ascertained.

Transfer of houses built up in real estates:

Any house built up by any real estate developer may be transferred to a client where the construction of such house is proved by an expert of the urban administration or an entity authorized by the urban administration to have been carried out according to the permitted plan and standards; and the construction is completed in accordance with the contract for building and delivery of the house or is completed by 50%.

The developer may not, under any circumstance, transfer to clients houses the construction of which is not completed by 50%.

Any client may file his grievances with the urban administration or the authorized entity where he/she has grievances on the quality of such house transferred to him.

Registering clients and collecting payments:

The advance payment of real estate according to Addis Negarit Gazeta and Ministry of Urban Development and Construction is fixed as 20% of the total payment.

The real estate developer shall be liable in accordance to the law, for crime of deception on those clients who have been registered and effected payment in good faith where such developer has registered clients and collected payments in violation of Article 10(4) and Article 11(3) and (4) of this proclamation.

The developer shall compensate the loss sustained on the client, where such client affects down payment and incurs losses as a result of fallacious or misleading information contained in the announcement publicized by the developer.

Obligation of the real estate developer:

The real estate developer may not have announcement about his construction work released through the mass media, or public his activities, register clients and collect down payments only after he receives title deed from the appropriate entity over the land sufficient for building the houses.

The developer shall not register clients beyond the accommodating capacity of the land he obtained lawfully.

The real estate developer shall notify the real provider, in detail, of the list of names of clients who have registered and entered into contracts, on the land given to him for development, the types of the houses such clients purchase and the sizes of their plots.

The real estate developer shall use the land for the permitted purpose, in accordance with the contract he entered in to the detail plans he submitted and the building permit issued to him as well as construct timely and quality houses.

The real estate developer shall at any time cooperate during the inspection activities to be carried out by experts, assigned by the real provider in accordance with article 8(5) of this proclamation.

An expert assigned by the developer shall be present at the permitted land at any time during the construction period by holding the building permit issued for the site.

Contractual obligation of the real estate developer:

Any contract of sale made by the real estate developer and the client for the construction and delivery of houses shall be submitted and authenticated by the appropriate government entity.

The contract made by the real estate developer and the clients shall specify the amount of down payments paid by the client , the outstanding payment paid by the client, the outstanding payment expected from him and the payment expected from him and the period for effecting the remaining balance of payment, the duties and responsibilities of the developer and the client, the location of the site on which the house is to be constructed, the time of completion of the construction and delivery of the house and the conditions for the termination of the contract.

The real estate developer shall provide to the client along with the contract, true copies of the title deed/ title deed issued by the appropriate and authorized government entity, building permit and the real estate development license.

The real estate developer shall give legitimate receipt or a warranty approved bank guarantee against any payment effect by the client.

The developer shall deliver the house in accordance with the agreement made between the real estate developer and the client upon completing of the construction according to the prescribed time limit and standard quality; and the client shall also take delivery on the specified time.

The extension of the time limit for the delivery may not under any circumstance extend for more than 50% of the time limit stipulated in the contract.

Without prejudices to the provisions of the civil code on force majeure, the party requesting for the extension of time limit in accordance with sub article 6 of this Article shall have the liability for the damages sustained on the other contracting party.

The section of the civil code on non-performance of contracts shall be applicable to the party who violates sub-article (5) and (6) of this article.

The real estate developer shall notify to his client, of the time schedule set for the respective phases of the construction up to the project's completion period.

Violation of contractual agreements:

The developer shall have the obligation to rectify the defect or correct the problem at his own cost, where the client files a grievance stating that the building has main structural problem or defect within one year of the transfer to the client, of such house constructed by the developer , and where such defect has been verified by the urban administration or by such entity which it authorizes; the developer may pay to the client the appropriate damage where the developer fails to comply with this obligation.

CHAPTER THREE

3. OVERVIEW OF INTERNATIONAL REAL ESTATE DEVELOPMENT

3.1. Experience Real Estate Development in Other Countries

3.1.1. Morocco Experience

The government has tried different approaches to strengthen the policy guidelines. One of the policy is establishing 16 investment agencies support them by giving incentives and creating enterprises. At this time, in order to solve the housing problems the real estate developers are one of the classifications that are playing a huge role. The real estate industry has shown a great improvement over the last 15 years. The real estate industry creates a wide market opportunity and this is the case because most of the houses have excellent quality, sold at a reasonable price. Therefore, in the country the most encouraging economic factors that contributes to investment on a real estate are (City development strategy construction minister and household development, 2012):

- The houses are located in a good location (In terms of transportation, work, market area,.)
- When compared to other European countries the price of the houses have 50% discount
- Good for middle and low living standards
- It contributes to the country's GDP
- Capital gain tax is in 0-20% range.
- Tax during the transfer of real estate house to family member is 0%
- There is no yearly property tax for the first 5 years
- People who just bought real estate house can rent the house free of tax for 5 years
- To buy the real estate house a customer can get 60 – 70% loan of the total property price from the bank depending on the ability to buy and the interest rate is fixed to be 5.5-7%.
- As the tourism industry is increasing it is creating a good ground for renting real estate houses
- There is an increase of capital in average of 15-30%
- There is 85% market for real estate houses

3.1.2. Kenya Experience

There is a huge debate and meetings whether the real estate development in Kenya is profitable or not. Country's investors and real estate managers say that the sector has a lot of problems and on the other side there are speculators who support that the real estate development is working towards delivering the houses on time and in the future they will be profitable.

During the last two years, in the capital city of Kenya, Nairobi, the demand for real estate houses has grown dramatically and as a result the real estate houses increased the price by 50% which will only benefit the high income society. This is a concern for the residents there as the price is increasing from time to time.

Therefore, it cannot be concluded that the house in Kenya are affordable. Because it can be said that the real estate development is working towards alleviating housing problems only if the sector is taking account the different income groups (low, middle and high) and work towards minimizing the demand supply gap (City development strategy construction minister and household development, 2012).

According to the global property portal focusing exclusively on emerging markets, the Kenyan property market has increased by 25 per cent, including increases in commercial and residential real estate. Dan Karua the managing director for Lamudi told CNBC Africa, "I think it [real estate] is looking quite good, that is one thing we have going for Kenya. It is a very vibrant market, you have a lot of investor confidence especially with how the trend has been in the last couple of years and it has grown immensely" (Elayne Wangalwa, 2015).

East Africa's biggest economy is growing at a rate of 2.7 per cent annually. During the country's rebasing – replacing of the old base year used for compiling the constant price estimates to a new and more recent base year that saw the country attaining a lower middle income status, the real estate sector contributed 5.9 percent accounting for most of the change in the level of the country's GDP (Elayne Wangalwa, 2015).

Meanwhile, a survey by the country's central bank revealed there were less than 20,000 mortgage loans in the country in 2013, a fraction to that of the population of the capital city, Nairobi at over four million. Nonetheless, the real estate sector in the country grew by 2.6 percent in the second quarter of 2014 according to the county's statistics bureau.

Lamudi co-founder Kian Moini said in a press statement, “The Kenyan real estate market is focused on renting properties, with 70 percent of house hunters looking to rent. Although there is an imbalance between the supply of housing and the current demand, this gap provides investors and developers with a great opportunity to make capital gains and fuel the economy. Especially with lower interest rates, the real estate market has great potential for growth.” A housing price index is set to be launched this year to help policymakers take a broader view of changes in the economy and to assist investors in managing risk as the country currently has no independent tool for tracking real estate (Elayne Wangalwa, 2015).

3.1.3. Malaysia Experience

Currently, real estate development in Malaysia seems to have a good path. The main reason is that country has a strong economic policy and this lead the foreign investors to have faith in contributing in the country. In addition to that, Malaysia is famous in terms of people who want to buy houses in Asia and for tourists to visit the different cultural heritages and enjoy the nature.

Regarding the real estate market, the government is working towards creating new strategies and approaches in fulfilling the different requirements to bring fast economic development. There is an increasing demand which shows that there is an opportunity for the real estate market. Place located at Dinkson southern border which is main place for relaxation/ resort is working hard in real estate development and as a result the price of the houses is increasing. But before 15 years, real estate was not working effectively and the market had decreased.

In general, real estate investment is profitable in Malaysia due to the points listed below (City development strategy construction minister and household development, 2012):

- The government has given grace period for foreign investors and laws regarding the purchase of real estate houses has been made clear and defined;
- The government has given focus to improve the development and economy of the country
- There is stable state and economy
- Malaysia currency named ‘ringgit’, when compared with euro, dollar and pound, is very cheap for foreign investors when they buy with their own currency.
- For the quality houses that are built the foreign investors have a high interest to buy them

- Price in meter square of a property when compared with London and New York is reasonably low and affordable
- From 53 tourism countries, Malaysia is one of the best three tourist countries
- Malaysia is not affected by natural catastrophes such as: earth quake, volcanic eruption and tornado

3.1.4. South Africa Experience

South Africa is the most credited country in terms of foreign investors contributing in real estate development. The main reasons for this is (City development strategy construction minister and household development, 2012):

- There is a strong relation between /dollar and euro/ with south Africa's /Rand/
- There is no limitation for foreigners to have a fixed asset like a house
- Any activity of selling houses is coordinated and held by legal agents who have licenses or real estate representatives
- For foreign investors, they have a privilege of getting 50% loan form local banks and the other 50% can be by facilitating the transfer of money from the foreigner's destined country.
- During money crises from 2008-2009, country's banks has deceased the interest rate to 6%
- From 2008-2010, even though the price for real estate house is by average 1,000,000 Rand and above, it is reasonable when compared with other states. For instance, two bed room villa house was sold for 6 million rand in London, 4 million Rand in Toronto, 7 million Rand in Madrid and 360,000 Rand only in Johannesburg.
- Where the prices are 500,000 and less, there is no payment during transfer of house.

Generally, the economy of the country is increasing from time to time and this has created a nice ground for real estate investment as listed on the above points.

3.1.5. Important Points from International Experience

It is understood from **Morocco** experience that the real estate sector is profitable and especially villa houses are sold to investors which has a great significance in the market. Also renting the houses is profitable and having this kind of development is highly supported.

The main points that can be raised as a supporting side for economy of morocco real estate is the fact that (City development strategy construction minister and household development, 2012):

- The purchased houses are not to pay yearly property tax for 5 years
- New renters who bought a house are not supposed to pay rent tax for 5 years
- There is a 60-70% loan from a bank to buy real estate houses
- In any region of the country the interest rate is 5.5 – 7%

In Addis Ababa, when different situations are considered, a lot of the residents have financial problems (not capable) of buying real estate houses. From the above mentioned points, Addis Ababa is considering of having 9.75% interest rate in bank loans.

From **Kenya** experience, it is seen that real estate development is not practiced well. This is because a country is said to have a good ground and condition if the developed houses are built and a sold by considering different income groups (low, middle & high). The actual experience is that it is considering only high income groups (foreign investors). As a result, the government is working towards giving incentives and support to middle and low income to alleviate housing problems. By implementing this type of procedure, it is planned to build houses by considering mixed income.

From **Malaysia** experience, real estate development especially at a western south border / Dickson boundary/, the price of real estate houses when compared with other western countries is very low. It is made clear that if foreign investors invest, it is considered as a profitable business.

From **South Africa** experience, during economic crisis from 2008-2009 there was a decrease in real estate market but it drew up again to the original position. At this time the government reduced bank interest rate and this enabled the real estate market to be in suitable condition which as a result made the foreign investors to invest more and made the price go high. This situation is a bad thing which discouraged the country's residents to invest on housings together with increase in construction materials; this is now a fear to all citizens of high and middle income people.

3.2. Affordability of Housing in the Developed States

3.2.1. German Experience

The housing situation in Germany ranges from nearly impossible to a piece of cake, depending on the city. In some cities, increasing numbers of immigrants, largely from Eastern European countries as well as the increase in mobility of Germans themselves since the opening of the German-German border have added new dimensions to an already serious housing problem. The quality and cost of housing facilities vary greatly among different German cities. The salary of German residents over the years (2011 – 2015) is tabulated on table 4 below:

Year	Polls	Salary (EUR)	Salary (Dollar)
2015	141	65,267	74,215
2014	389	63,776	72,323
2013	155	64,728	73,402
2012	226	56,000	63,504
2011	171	63,444	71,946

Table 4: Average salary in Germany (2011-2015) (Average salary survey, 2015)

Renting a Property: Despite continuous government efforts to increase the number of property owners, rental accommodation is still the most common form of housing in Germany.

A wide variety of private rental accommodation is available, particularly in the cities, but it is expensive, particularly if a person wants to rent furnished accommodation for a relatively short time period. Rental accommodation in Germany varies widely in price and availability. The rent can be anywhere from EUR 300-800 for an apartment and EUR 1,550-2,550 and higher for a house. The majority of rental properties are unfurnished, excluding even basic facilities such as curtains and kitchen equipment.

German Real Estate financing can be done either with mortgage banks or with any usual bank or financing institute is done for about 60-70% of the buying price by mortgage loan. Anything above that up to 100% of the buying price needs to be secured either by additional securities like insurance (with actually that exact value) or other financial securities that have to be deposited at

the financing bank. It can sometimes be done based on the income of the person or company alone buying but that case is very rare as of 2015.

Buying a Property: Houses and apartments are very expensive in Germany, and buyers are expected to make a down payment of up to 50% of the purchase price. As a consequence only around 40% of Germans own their own home, and relatively few expatriates buy property while they are living in Germany. However, there are no restrictions on foreign nationals buying property in Germany, whether or not they are living in the country.

Average purchase prices for a property in Germany are relatively low for central Europe at EUR 1,500–2,500 per square meter. The average price for a 30 square meter property (a small apartment) is EUR 60,000, while a 100 square meter apartment averages around EUR 250,000.

The majority of properties for sale are advertised in the local and regional newspapers, and are sometimes sold directly by the owners but most commonly through a real estate agent. The agent typically charges a commission of 5-7% of the purchase price plus VAT, which depending on the agreement negotiated will be paid by the seller or the buyer, or split between the two (1.5-3%).

As well as this commission there are additional house-buying costs including property transfer tax and a notary fee, in total adding around 10% to the purchase price. Property tax is set at 3.5% of the price, and is payable by the buyer. Notary fees are usually around 1.2-1.5% of buying price.

3.2.2. China Experience

High housing price is a major issue in a number of big cities in China. Municipal governments have responded to the calling for increase housing supply to middle and low-income families by a number of policies and housing programs, among which are the Affordable Housing Program and the Housing Provident Fund Program.

The Affordable Housing Program (commonly known as the "Economical and Comfortable Housing Program", is designed to provide affordable housing to middle- to low-income households to encourage home ownership. In 1998 the Department of Construction and Ministry of Finance jointly promulgated "The Method of Urban Affordable Housing Construction Managing," marked the start of the program. Aimed at middle- to low-income households (annual income less than 30,000 to 70,000 RMB according to size of household and the specific area), this

public housing program provides housing (usually 60–110 square meters) at affordable price usually 50–70% market price (Lou. Jianbo; Joyce Palomar, 2015).

Within the policies and mandates set by the central and local government controlled the profit for real estate developers to be less than 3%, so as to keep the price of housing at the affordable level (Lou. Jianbo; Joyce Palomar, 2015).

The program is controversial in recent years because of insufficient construction, poor administration, and widespread corruption. Local government has limited incentive to provide affordable housing, as it means lower revenue from land-transferring fees and lower local GDP. As a result, the funding of the program has been decreasing ever from its inception, and the affordable housing construction rate dropped from 15.6% (1997) to 5.2% (2008) (Lou. Jianbo; Joyce Palomar, 2015). Because of the limited supply of affordable housing and excessive housing demand from the middle- to low-income populations, affordable housing are usually sold at high market price. In many cities ineligible high-income households own affordable housing units whereas many qualified families are denied access.

Housing Provident Fund (HPF) Program is another policy effort to provide affordable housing. China introduced the Housing Provident Fund (HPF) program nationwide in 1995. It is similar to housing fund programs in other countries such as Thailand and Singapore. HPF provides a mechanism allowing potential purchasers who have an income to save for and eventually purchase a unit dwelling (which may be a formerly public housing unit). The HPF includes a subsidized savings program linked to a retirement account, subsidized mortgage rates and price discounts for housing purchase.

3.2.3. United Kingdom Experience

A high proportion of homes in the UK were previously council-owned, but the numbers have been reduced since the early 1980s due to initiatives of the Thatcher government that restricted council housing construction and provided financial and policy support to other forms social housing. In 1980, the Conservative government of Margaret Thatcher introduced the Right to buy scheme, offering council tenants the opportunity to purchase their housing at a discount of up to 60% (70% on leasehold homes such as flats). Alongside Right to Buy, council-owned stock was further diminished as properties were transferred to housing associations. Council Tenants in some instances have chosen to transfer management of the properties to arms-length non-profit

organizations. The tenants still remained Council tenants, and the housing stock still remained the property of the Council. This change in management was encouraged by extra funding from central government to invest in the housing stock under the Decent Homes Programme.

Many people can't afford to buy a home on the open market. It can be an expensive commitment. But there are some interesting new ways to help bring home-owning within reach. Most schemes are for households earning less than £60,000 a year who would otherwise be unable to buy. In this case it is possible to buy a share of between 25% and 75% of a newly-built property through savings or a mortgage. There is an equity loan available from April 2013 for buyers of new properties worth up to £600,000. An equity loan of up to 20% is available if the buyer saved a minimum 5% deposit towards a new property he/she wants to buy and live in. The equity loan is charge free for the first five years, and can be repaid in stages, at the end of the 25 year mortgage or the property is sold.

Most parts of the region have a ratio of average prices to average wages of around 3.5 to four times, making securing a mortgage a possibility. The most affordable areas are **Wigan**, where the average price is £93,308. 3.6 times the average wage of £25,707, and **Oldham**, 3.7 times average wages. In **Manchester**, the average home costs £98,569, four times the average wage of £24,600. The least affordable area is **Trafford**, where the average price is £194,164, 6.3 times the £30,768 average wage, followed by **Stockport**, where prices are 5.4 times wages.

The average salaries of residents in some of the above listed regions are shown on the figure 8 below:

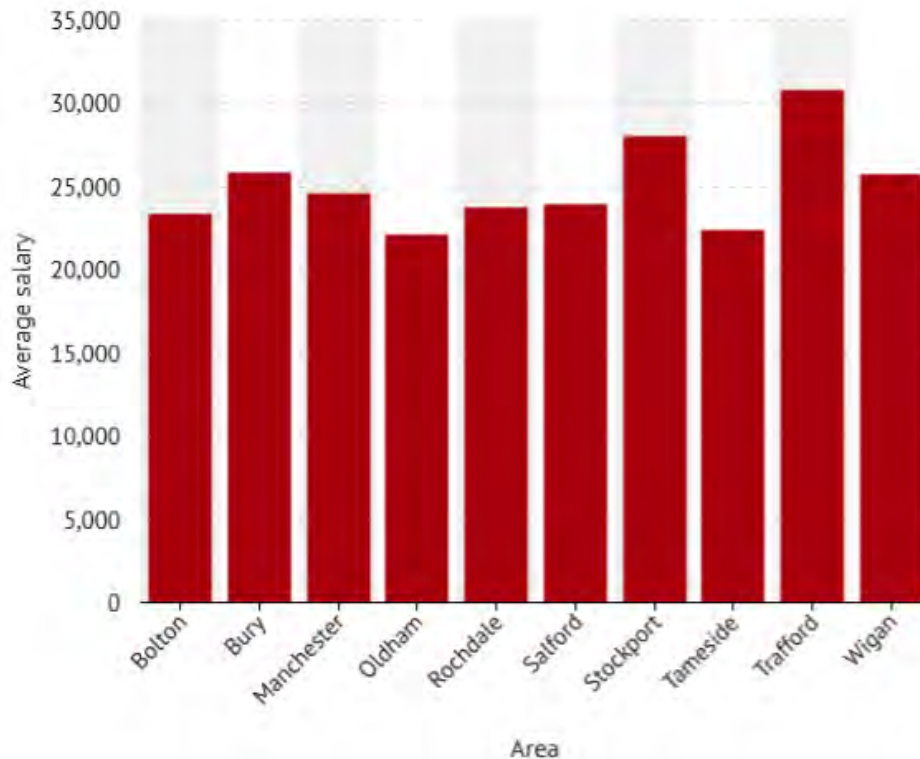


Figure 8: Average salaries of residents in United Kingdom

For people buying as part of a couple, they may be able to double their income, and half the ratio between prices and earnings. The Financial Conduct Authority defines high income multiple loans as above 3.5 times income for a single applicant and over 2.75 times for a joint application. With new mortgage affordability rules in place, it is more difficult to get loans up to five times income.

3.2.4. United States Experience

The Median Multiple indicator, recommended by the World Bank and the United Nations, rates affordability of housing by dividing the median house price by gross annual median household income. In United States, 50% affordability for the median home indicates a balanced market.

In the United States and Canada, a commonly accepted guideline for housing affordability is a housing cost that does not exceed 30% of a household's gross income. Canada, for example, switched to a 25% rule from a 20% rule in the 1950s. In the 1980s this was replaced by a 30% rule. India uses a 40% rule.

The most common approach to measure the affordability of housing has been to consider the percentage of income that a household spends on housing expenditures. A full-time workers will

be able to afford at least a small apartment in the area where they work. Some countries look at those living in relative poverty, which is usually defined as making less than 60% of the median household income. In their policy reports, they consider the presence or absence of housing for people making 60% of the median income.

Costs are being driven by a number of factors including demographics shifts (rapid urbanization & population growth), supply and demand, shifts in economic policies and innovations in financial instruments (availability of housing finance, low interest rate & mortgage market innovations) , public policy in land use zoning, etc...

Affordable housing needs can be addressed through public policy instruments that focus on the demand side of the market, programs that help households reach financial benchmarks that make housing affordable. This can include approaches that simply promote economic growth in general—in the hope that a stronger economy, higher employment rates, and higher wages will increase the ability of households to acquire housing at market prices.

The average income of United States residence is 80,513 US\$. For U.S. housing subsidies, households are categorized by federal law as follows:

- Moderate income households earn between 80% and 120% of AMI.
- Low income households earn between 50% and 80% of AMI.
- Very low income households earn no more than 50% of AMI.

Before the real estate bubble of 2007, the median household paid \$658 per month in total housing costs (Census 2002). A total of 20% of households were deemed to be living in unaffordable housing, 9% of all households are renters in unaffordable housing, and 11% of all households are homeowners with high housing costs (American housing survey, 2008).

3.2.5. Turkey Experience

The real estate sector in Turkey represents 19.5% of the total GDP and offers great investment potential. Following the enactment of the reciprocity law, sales of real estate to foreigners started to increase and reached USD 2.64 billion in 2012. The Ministry of the Environment and Urbanization declared that real estate sales to foreigners increased from 2% to 5-6% in the last 10 months of 2013. The number of construction licenses and occupancy permits were 225,000 and 177,000 respectively in 2012. The total number of houses sold in the property market

reached 290,000 in 2012. The number of tourists are expected to reach 60 million by 2023. As of 2012, there were a total of 2,870 licensed hotels with a total bed capacity of more than 700,000 and there is still a gap between supply and demand, especially in Istanbul. The overnight interest rates have been steadily decreasing over the years and were around 7.5% in September 2013.

Turkey's population in 2023 is expected to reach more than 84 million people and Istanbul will be home to almost 20% of them. Turkey has a young, dynamic and educated population. However, monthly wages are relatively lower than the EU or the US. In regards to minimum monthly wage, Eurostat reports that Turkey's minimum monthly wage was EUR 415 in October 2013. The Foreign Direct Investment Law in Turkey which complies with international standards – was enacted in 2003. The objective of this law is to regulate the principles that encourage foreign direct investments; to protect the rights of foreign investors; to define investment and investor in line with international standards; to establish a notification-based system for foreign direct investments rather than screening and approval; and to increase foreign direct investments through established policies. With this law, unless stipulated by international agreements and other special laws stating that, foreign investors are free to make direct investments in Turkey and shall receive equal treatment to domestic investors.

As a result, the number of expats has increased significantly. According to the Ministry of Labor and Social Security, the number of work permits given to foreigners increased by 86% in 2012 reaching 32,272. Since 2003, a total of 125,697 permits were provided to foreigners. It is also crucial to note that the availability for the free transfer of funds in Turkey adds positively to its investment friendly environment. According to the Doing Business 2014 report by the World Bank, Turkey is ranked 69th among 189 countries on the ease of doing business. House sales exhibited an increase of 5.9% compared to the same quarter of the previous year. Throughout the year housing sales increased by 2.9%.

Year	Turkey	Istanbul	Other cities
2011	177,068.75	42,253.75	94,119.00
2012	175,405.3	41,777.5	95,515.75
2013	287,384.67	58,278.33	175,442.67

Table 5: Housing sales with mortgaged sales included (Source:-TurkStat)

As indicated on Table 5 above points out that in the third quarter of 2012, the tendency to purchase houses hit its lowest level. However, it started to increase in the last quarter of 2012 and the increase trend continued throughout the first quarter of 2013 as well.

A rapid decline was observed in interest rates for housing loans in the last quarter of 2012. The decline continued in the first quarter of 2013. The average monthly interest rate for housing loans with a term of 5 years was 0.97% in the last quarter of 2013. Interest rates declined from 1.29% to 0.90% in 2012, leading to a 15.4% increase in mortgage loans. 55.3% of mortgages are medium-term loans with the duration of 5 to 10 years. The research shows that 5-10 year housing loans are the preferred type of loans (Deloitte Turkey, 2013).

Average sale prices for homes have increased over time, reaching over USD 10,000 per sq. m in some regions. The average unit sale price per sq. m on Istanbul's European side is USD 6,725, while it is around USD 3,500 per sq. m on the Asian side for urban regions. Suburban regions have relatively lower sale prices with USD 1,950 on the European side and USD 2,300 on the Asian side per sq. m where price ranges in Istanbul are exhibited by regions.

Housing Development Administration of Turkey – TOKİ: - To deal with fast urbanization and rapid population growth, TOKİ was founded in 1984 to solve the problems of distorted urbanization and housing. It also undertakes construction projects of facilities such as schools, trade centers, hospitals, libraries, and sports arenas. As of the last quarter of 2013, TOKİ has built more than 615,000 houses in 800 different towns including every city in Turkey. TOKİ finalized more than 5,000 tenders' worth over TL 6 billion including construction and planning phases. TOKİ's main mission is social housing and it targets low and middle-income people who cannot buy housing under existing market conditions. 85% of their current housing projects are social housing projects constructed on TOKİ-owned lands. 39.7% of social housing projects are for middle-income people. 25.4% are for the low-income population and the poor. Urban transformation projects in Turkey account for 12.4% of TOKİ's projects.

As noted on TOKİ's official website, existing demand far surpasses current supply. Even a pioneering agency such as TOKİ is not able to completely satisfy the demand for housing in Turkey. As a part of the 2023 goals in honor of the 100th anniversary of the founding of the Turkish Republic, TOKİ plans to build a total of 1 million housing units for the citizens of Turkey (Deloitte Turkey, 2013).

3.2.6. India Experience

Rapid urbanization has fuelled inflow of massive population from the countryside and smaller towns into the major cities of the country. In urban India, the population is increasing at a fast pace while there exists about 85% of India's housing shortage of 18.4 million units in 2012 and still demand supply gap is increasing. The public sector faces scarcity of resources and has limited access to modern technology aimed at developing modern real estate at a mass scale within stipulated timelines. Hence, involvement from the private sector is required to invest in research and development of new technologies, systems and processes (CREDAI, 2013).

While the sector offers ample opportunities for development across verticals, there are certain intrinsic challenges that hinder growth of the sector. Factors such as high borrowing costs for developers, lack of institutional funding, liquidity issues and slow (and uneven) development of urban infrastructure are some of the key challenges facing the sector. Foreign investment is also a critical factor primarily on account of the capital intensive nature of the sector. While domestic financial institutions have been willing to lend to developers for real estate development, their borrowing costs are high and regulations are very stringent. Unlike developed nations, India still does not allow concepts such as real estate mutual funds and investment trusts. Such challenges limit the sources of funding for the sector, which in turn restrict private sector involvement in large scale construction activity in the country.

India's household income is expected to increase by an average INR 60,000 per annum over a period of six years from 2009-10 to 2015-16. Industry research indicates that out of the top five priorities of household spending, three categories belong to the retail segment. Also, as per the Centre for Monitoring Indian Economy (CMIE), close to 30% of a total household's income is spent on retail categories such as grocery, apparel and food & beverage. The most noticeable increase in income is likely to be observed in urban areas, which will result into further investment in the development of organized retail real estate. The synergies between the construction and the real estate sector cannot be ignored as real estate accounts for a significant portion of the construction segment. India is expected to become the third largest construction market in the world by 2020, with the real estate sector expected to reach a size of USD 180 billion. In addition, an untapped housing demand (estimated housing shortage of 18.4 million units by 2012), has also

provided developers with an opportunity of catering to buyers across the affordability spectrum in multiple cities and towns (CREDAI, 2013).

There is no doubt that India's real estate sector is poised for significant growth, thriving upon opportunities such as growth in income levels, increasing urbanization and demand for new housing. With a share of 6.3% in the country's Gross Domestic Product, the sector makes a sizeable impact on India's economic growth, both in terms of employment generation as well investment creation. However, this footprint is restricted by numerous challenges as mentioned above inhibiting the sector such as high borrowing costs, lack of institutional funding, lengthy approval processes and slow & uneven infrastructure development.

Once these bottlenecks are addressed, we can expect the economic contribution of the sector to increase considerably, with its share of the GDP to more than double from 6.3% in 2013 to almost 13% by 2025. This will be a direct consequence of the voluminous construction churn generated by the projected completion of more than 8.2 billion sq. ft. of real estate space in 2025, up from about 3.6 billion sq. ft. in 2013. Additionally, the sector is expected to contribute significantly towards bridging the employment gap in the economy, by generating employment opportunities for almost 17 million people in 2025 (CREDAI, 2013).

However, this projected expansion of the real estate sector can be achieved at an earlier stage before 2025, if the government provides relevant policy measures to create a more conducive environment for growth in the sector.

3.3. Summery from International Experiences

In Kenya, the central banks gives mortgage loans which contributes to the growth of the real estate sector. The huge demand supply gap serves as a great opportunity to make capital gains and fuel the economy by linking with the financiers to provide loan with low interest rate.

In Malaysia, the government has given grace period for foreign investors thus they contribute a lot in real estate development. And in South Africa, there will be no transfer fee if the payment is below 500,000 RAND to support the low class.

In Germany, there is 60-70% mortgage loan provided for buying price which can be secured by additional securities like insurance.

In China, for the residents who owns an annual income less than 30,000 – 70,000 RMB middle to low income household, the public housing program provides housing 60 – 110 sq. m at affordable price (usually 50-70 % market price). The government also controls the profit of the real estate developers to be less than 3% and supplement in providing incentives so that the housing can be kept affordable. It is understood that if incentives decrease, the real estate developers increase the prices which will make it unaffordable. In addition, there is an approach called housing provident fund (HPF) to provide an affordable home for those who have income and can save to buy a unit dwelling which is subsidized with mortgage loan and price discounts.

In United States, the main reason that has made housing unaffordable are rising unemployment, interest rates, availability of mortgages and demand. The government is trying to provide a subsidized housing facilities for the ones who cannot afford. These are tenant based, project based and public housings.

Affordable housing as majority of the developing and developed countries agree is to have a housing unit within reasonable walking distance to public transportation, maximized resident opportunity for quality education and employment. The government's input has a lot of impact in bringing a huge contribution to bridge the employment gap, civilization and generate employment opportunities by drafting relevant policy measures in the real estate sector.

There are different approaches and methodologies they use to manage the real estate house construction and trying different ways to deliver the right type of housing to the right type of community.

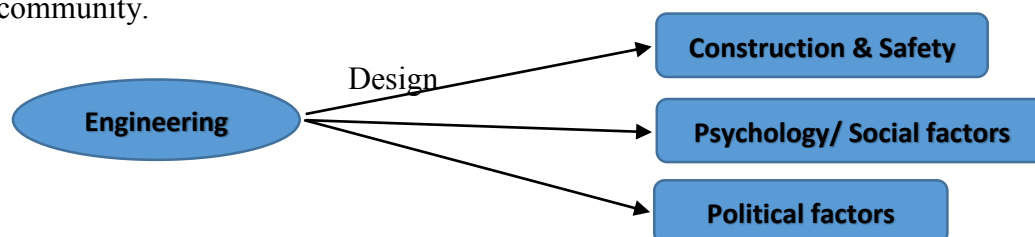


Figure 9: Approaches in engineering and implementation

As shown on the above figure appropriate housing can be implemented by involving the government in making a strong policy guidelines which accounts a mixed income society.

CHAPTER FOUR

4. TRENDS AND IMPACTS OF HOUSING CONSTRUCTION IN ADDIS ABABA

4.1. Housing Developers (Actors) in Addis Ababa

Housing developers during 1975-93 periods in Addis Ababa are divided as housing associations, individuals, central government (Agency for rental housing administration –ARHAO, municipalities and Kebeles (low cost houses), parastatal institutions (temporary accommodations), international NGOs (upgrading and minor redevelopment works), informal settlers (developers of Chereka bet) at urban fringes, squatter settlers (Urban fringe) and pavement dwellers (city centers), and sites & services. (Wubishet, 2004)

In this study, the actors are summarized in to five. They are:

- i) Market, the private developer (Real estate)

The private sector involvement has been restricted during the Derg regime. This was mainly due to the socialist ideology of the government that was dictated by the 1974 proclamation. A report by the World Bank in 2005 shows that 0.6% of the housing stock was by real estate developers. Currently, there are more than 125 real estate developers in Addis Ababa. Ayat real estate development is the largest of all with an ultimate goal to develop 6,500 dwellings (Wubishet, 2004).

Housing provided by the real estate sector aims at fulfilling the demands of a certain upper class market. All of the current real estate housing is affordable by an affluent few. Although real estate may have a minor effect on housing provision at middle and low income levels through filtering, it does little to improve the situation of low income housing in the inner city. Various real estate housing schemes can be mentioned such as Ayat real estate, Ropack international, Berta, Sunshine/in the CMC area/ and others in the inner city that have been constructing apartments. Compared to the housing shortage faced in Addis Ababa, efforts are very minimal (Pawlos Birhanu, 2011).

- ii) Public, the government

The government involvement in the housing sector has always been insufficient compared to the housing need in the urban area. The Addis Ababa city government has tried to construct houses

for different income groups at different places. The 2005 report of World Bank shows that 16% of the total housing stock was Government housing for civil servants & others including AARH units. This comprises housing for government employees and constitutes about 34 percent of the formal housing stock, which includes roughly 16,000 rental housing units managed by AARH. (Proclamation 47/1975 by the Derg regime placed under Kebele administration all those units with rents less than 100 birr per month; those over 100 birr were placed under the control of the AARH). These are mostly units acquired by the government during nationalization, which had rents above 100 Birr per month by that time (Bisrat Kifle, 2008).

The other one is the recent phenomena in Addis Ababa which is the condominium. They came about as a response to a growing shortage of land and housing. Condominium is an individual ownership of a unit in a multi-unit structure /as an apartment building/ also a unit so owned. The construction of these units is being carried out by the government. The construction technique that is being used is claimed to be low cost. Technical and management assistant is being provided by the GTZ. The provision of housing through condominiums is an ongoing project. Its success or lack will be proved in the years to come. The approach however can be criticized from the outset for a number of reasons. One is direct provision by the government is seldom a sustainable solution for the shelter problem. The failure of public housing as a viable solution for housing especially the poor has been a bitter lesson in many other developing countries. The other is the choice of locations for these units which disregards the future aspect of the city. These condominium units, most of which are targeted for low income groups, are in many cases, built on main street fronts. This is against the principles of hierarchy as it is more conducive to leave major street fronts for more commercial and public oriented functions and give the quieter spots for housing.

iii) Co-operatives

Housing cooperatives are the primary mode of housing construction in Addis Ababa constituting over half of the city's total formal sector housing stock. Co-operatives are formed by groups of people who come together as an entity to perform the function of a developer. In the absence of an active private sector in the real estate development, the cooperatives are the ones filling in the gaps. It was one of the most practiced forms of housing between 1975 and 1991. Cooperatives were given land free of charge and infrastructure were provided. These cooperatives purchased

building materials at subsidized rates. They were also provided with technical assistance in areas of the construction process and the organization of co-operatives (Mihertu Tesfaye, 2005).

The preferential loans was 4.5 % interest rate while the normal interest rate at that time was 10%. They are recognized as legal entities by the government and allocated land up on which to design and construct the development (residential for most part). The contribution of co-operatives accounts for 66.7% of the total houses produced in 10 years after the revolution in 1974. The government used to provide up to 500 m² per head for cooperatives. This figure has gone down to 175 m² and 105 m² in the past decade. Few years back, cooperatives have been issued 94 m² for the high income and 72 m² for middle income groups at the expansion areas of the city (Bisrat Kifle, 2008).

This system of housing provision had its pros and cons. It was successful in promoting planned housing development. It encouraged the mobilization of resources. The participation of the community was encouraged in the housing production process. However, low income people did not benefit much from it. For one the minimum salary /200 birr/ that was eligible for subsidized loans made financing inaccessible for 80percent of the population. The requirement for formal and stable employment further limited the contribution of the system could make to low income people and their housing needs. The above aspects together with institutional inefficiencies, incompatibility between local knowledge and capacities, professional expectations and standards, poor planning in locating these settlements, have limited the success of these efforts.

iv) NGOs/ CBOs

NGOs and CBOs have been mainly engaged in upgrading urban houses and provision of facilities and services. Their efforts have been effective in alleviating infrastructure problems such as local roads and drainage facilities. Concern, Oxfam, Norwegian save the children fund and Emmanuel Baptist church have all been involved in up grading of slum areas and working together with communities in poverty mitigation efforts in both rural and urban centers in Ethiopia (Paulos Birhanu, 2011).

v) Stakeholder, the squatter and informal settlements by the urban poor

Informal housing refers to those rentals or residential housing units built on public owned land without the legal claims, authorization and permit from the concerned authorities. Within the past

the informal sector has produced the largest number of residential units in Addis Ababa due to the weakness in the formal land supply system (Paulos Birhanu, 2011).

Kityas (extensions) are the other forms of informal settlements that have been affecting the physical structure of the city for the last years. Many of the original households have made additions; legal or not; for additional income from rent or to accommodate a bigger household. It either involves subdividing a bigger house or compound into smaller units or adding buildings within one compound. This system has absorbed a significant proportion of the housing requirements within the city. It has also given rise to more overcrowding within the city. The demand for inner city locations that offer small rooms at affordable prices is high in a situation where there is an increasing urban population. There is a high demand for this type of conversions because the city population has been growing. The majority cannot afford to own houses and desire the advantages of the inner city.

vi) Individuals or private efforts for own housing

A small proportion of city dwellers buy land on lease basis from the government or from individual owners to build their own houses. Such approaches are affordable by a limited number of city dwellers. This is not widely spread within the inner city as the inner city is in the majority targeted for commercial projects or high and medium rise real estate housing. However, it has some effect on supply at the lower end of the market through filtering.

vii) Sites and services

There have been experiments with this kind of housing in the 1980's during the Derg regime. Their success has been limited because of many weaknesses. Among these, the fact that most of the housing has ended up in the hands of the untargeted group is worth mentioning. More recently, it has become the major approach by which most of the middle income people can get housing. The problem so far has been the difficulty that the city government has faced and is facing in order to provide the necessary infrastructure. In many of the locations such as Bole Bulbula, some of the house construction was completed three or more years before any provision of infrastructure services was effected. A large portion of this new housing remained idle for a number of years while the shortage of housing has been one of the most crucial among the problems of the city. The fact that such huge amount of assets have to remain unused for a number of years is a waste of scarce resources.

4.2. Affordable Housing Approaches in Addis Ababa

The truly affordable housing is the one that is not very expensive to build, but inexpensive to own and maintain. Affordable housing in general is indeed dynamic due to different factors such as absence of innovative, practical and economical designs, concepts, techniques and other important issues to address the problem of affordability. This, it dubs for a determined effort and requires strong commitment of various actors to meet the demand.

In *conservative approach*, it was in the 1960s that the government recognized the state of the urban housing problem and started to take measures by looking ways to channel funds for the construction of houses for low and middle income groups, (Wubshet Berhanu, 2000). It was a time where concerns about the adequacy and supply in many locations as well as about the cost, financial viability and quality of federally subsidized housing led to the creation of new approach, which provides tenant-based subsidies to mitigate the costs of private market rental housing. At the same time the government didn't intend to get involved directly in the financing and established two housing finance institutions (Imperial Saving and Home ownership public association-ISHOPA in 1962 and Mortgage company of Ethiopia-MCE in 1965) to encourage thrift and to provide a means for borrowing money at reasonable interest rates to motivate home ownership. However, it accomplished little compared to the demand due to the high costs of construction and land ownership where 95% of land belonged to 5% of the whole population. (Girma Kebede, 1992).

One of the beneficiaries of formation of ISHOPA was the Bole Homes project (750 homes) built on an area of 30 hectares. The houses were about 75m² each in area at a cost of about \$ 18,500. Beneficiaries made as low as 10% down payment and were obliged to pay the balance in installments over 20 years (CBE- 1970, PP.81-2 cited in Wubshet-2000). During this period, private apartment living quarters accommodating only high middle class educated professionals were built on the southern portion of the city following the construction of wide avenues constituting the present CBD and had revitalized the construction.

The second housing development tries during 1960s was the cooperative housing project of Kolfe Pilot Housing of 1964. It was implemented by using funds obtained from Municipality of Addis Ababa, the United Nations and the Government of Sweden on municipal land leased for years. It showed the way for an affordable housing for low income people (Wubshet Berhanu, 2000).

Socialist approach, 1974 - 91: there was an opportunity and incentives for those who had capacity, patience and interest to invest in their houses. The reasons was that:

- The government gave land free of charge for individuals and cooperatives by further subdividing privately owned bigger plots of the earlier households. The maximum allowed plot size was set at 300-500 sq. m per family (1978-1986) which later (in 1986) reduced to 108-250 sq. m due to master plan revision. Moreover, it became evident that the demand for housing grew despite efforts to supply land. The nature of households' movement, high population growth rates and the type of development has indicated that demand continued to outstrip supply and government quickly realized that full provision was not sustainable.
- Infrastructure service
- Building materials as subsidized prices, which was on average less than 65% of market value
- Mortgage loans at lower rates: aiming to facilitate financial support (loans) for the housings from construction housing and saving bank (HSB) was established by merging the former MCE and ISHOPA which could be accessed at subsidized interest rates of 4.5% for cooperatives and 7.5% for individuals form 1975-95. However, it was only accessible for those who had formal and stable jobs with minimum income ranges.
- Technical assistance in organizing cooperatives, construction process and sometimes providing standard designs or house plans.

From all the house producing actors in this period, the government gave strong support and incentives to the cooperative development system due to smaller land size that they need; and to promote sharing of infrastructure and the main structure to reduce costs to make it more accessible by low income groups too. It also marginalized those (homeless) who did not have formal and stable job.

The result was provision of wide range plots of different standards at different parts of the city. These include Gergi (brick houses), Saris G+0 & G+1 houses. T1 and T2 MoUD standard homes, UDP projects of Alem bank, Lafto and Asco, (Alazar Assefa, former planer at Addis Ababa city Municipality and now lecturer at EiABC) occupying large agricultural land and redefining the boundary of Addis Ababa expanding to Oromia Region [20]. In addition, the

government has built and delivered rental apartment blocks for white collar public servants along the Bole Road.

In the *Liberal approach (1991 – date)*: urban housing is theoretically under private ownership. Conversely, all nationalized houses during the socialist era remain under the government administration. The basic ideology was to promote multi-stakeholder participation in housing provision as well as community involvement through lease policy, which has made land a very scarce and rare commodity resulting in very high monetary value.

Following the policy change, the only financial institute (previous HCB) which used to support the housing sector with very low loan rate was restructured to Construction and Business Bank (CBB) to harmonize the banking system with the market led economic policy. This has resulted in increased interest rates of 16% which discouraged any housing loans access (NUPL: 2003). It has an impact in exacerbating the housing shortage and financial problem of the society. All banks have established their own internal loan policy, which has excluded not only the low income but also the middle and high income households due to lack of subsidies on the interest rates and lack of collateral equivalent to the loan amount.

However, the two main actions taken to curb housing shortage since the 1991 revolution are lease policy and condominium housing.

In the lease policy, proc. No. 80/1993, the main aim of the policy was to provide monetary value for the utilization of urban land by increasing income for the urban areas to provide better service through increased land permit system transparency and appropriating gains during land transfer. The main policies are:

- All rural and urban land belongs to the government
- Individuals can acquire land if they pay the required fees
- Urban land leased to individuals on auction
- Land for owner occupied houses is free of charge provided a special condition is met. This leaves out the poor who cannot afford the building costs
- A semi-autonomous government body called Urban Development Project Office (UDPO) provides funding for cooperative housing but by virtue of it being a funding agency, it was not able to provide loans to the poor

- Indirect privatization through a low cost condominium housing development project has been implemented and is still found to be very expensive for the urban poor except for the studio type.

The in-affordability and inefficiency of the process of formal land provision versus limited capacity of the city population to pay for the urban lease land and housing has been the major cause for the affordable housing shortage and development of informal land markets.

In the condominium approach, the scheme keeps many waiting lists (almost 9 years) and has no criteria to identify those with immediate housing need except through lottery. The other problem is that the down payment of the scheme is too high and inhabitants are forced to pay within a very short period. The ones' who failed to pay 20% down payment lose the lottery chance and the opportunities is transferred to the next person on the waiting list.

However, the supply still falls short of meeting the registered demand of 1,052,972 housing units of 2005 E.C without considering the housing demand increase due to population increase either by migration or by birth. Migration accounts for 120,000 people per year, which is equivalent to 26,087 new housing units per year in addition to the total registered backlog.

Moreover, these days the government has come up with a new housing development schemes called 10/90, 20/80, 40/60 and cooperative housing for low, middle and high income communities respectively. It was found that the number of households who are registered for these scheme 10/90, 20/80 and 40/60 are (29,064), (858,908) and (165,000) respectively. This indicates that even the poorest of the urban poor did not want to be one of the beneficiaries of the project due to the project nature. Many subsidies put in material, land, infrastructure and other resources used for its construction. However, the housing affordability problem of the low income groups has to do with not only the cost of the houses but also the unit area needed to accommodate their big families. It is obvious that the low income people cannot afford a house with an area greater than this but it is still a problem to accommodate their big families in such a smaller room and would not be interested in it.

4.3. Factors affecting the demand and supply in Housing Sector

A number of reasons decelerated the production and supply process, which resulted in people having to spend longer years of waiting period, in contrast to the promised one. Given the presumed general fact that the main target of real estate developers are the so called the upper class

of the society, the affordability issue remains a big concern to investigate on housing supply. Furthermore, the Ethiopian government banned land allocation and incentives as well as loans from government banks to private real estate developers starting from 2010, which affected the affordability of houses offered by the real estate developers, and minimized their role (MoUHC, 2011).

Urbanization is directly related with demographic changes which are then followed by requirements for more services and basic human needs in the urban area. Housing is one of the basic human needs along with food and clothing. Several studies conducted on housing show that the city has shortage. Housing demand is influenced by affordability or the economic capacity. Some of the factors that affect the supply and demand for housing is shown on table 6 below:

Factors influencing demand	Factors influencing supply
<ul style="list-style-type: none"> • Income and distribution within the population • Nature and security of employment • Household priorities (ownership, renting investment or savings) • Availability of housing finance • Household size, structure and age • Occupation (e.g. middle aged engineering graduate opting for real estate house or renting) • Location needs • Credibility of the real estate developers 	<ul style="list-style-type: none"> • Price and availability of land • Price and availability of skilled and unskilled labors • Efficiency of the official framework for construction exchange • Official standards on building, materials, services and infrastructure • Policy towards illegal settlements • Building material costs • Presence of an organized manual or proclamation for a real estate development • Availability and price of infrastructure services • Price and availability of rental housing • Design and mode of construction

Table 6: Factors influencing demand and supply for housing

There was an estimated 210,000 housing backlog by the year 2000 (ORAAMP, 2002). The figure has increased to 300,000 housing shortages in three years' time by 2003. (AAHA, 2004). According to global report on human settlements in 2005, the current housing backlog of slum dwellers is about 925 million excluding the replacement of deteriorated and substandard housing stocks in urban areas (Global report on human settlement, 2005). The housing backlog is mainly

due to the gap between demand and supply of housing. The need for shelter mainly occurs due to overcrowded situation, population increase and replacing obsolete houses. With the existing land delivery system and the impossibility of getting financing for the majority of the city population, only 4 percent of the city population is in a position to fulfil its needs for housing.

Property development in Ethiopia is considered as promising and profitable business even though there are limited developers. As can be seen practically, the rate of development of real estate developing companies is way below the state they should reach. The status of provision of houses and land shows a high rate of informality. Since there is a lack of clarity and insufficient provision from the formal markets the informality coverage is wider than that of formal market. This is an indication of the formal market process failure. The potential for formal private sector supply is significant but the amount of transaction is limited because of the constraints in the title registry and ownership problems (Paulos Birhanu, 2011).

Policy and legal frameworks of a certain government lay a foundation for any activity in the country. As an investment activity, real estate development entertains the common policy and regulatory advantages or face disadvantages in effect. The FDRE government regulated real estate development as an activity that is not eligible for income tax exemption and excluded for discharge of capital goods and construction materials from customs duty (Federal Negarit Gazette, Nov 29th, 2012). Perhaps the regulation is an indication of the government's political decision towards private real estate development following the frequent occurrence of crisis in the sector. The government also proclaimed in 2011, the illegality of possessing urban land without the leasehold system and mentioned the particular case of illegal expansion towards adjacent areas (FNG et al, 2012).

The comprehensive strategy of urban housing development, which was approved by the government in 2013, considered public private partnership between the government and private investors, which can build more than 1000 houses. This system allows the government to ease land supply for developers in exchange for equitable supply of affordable housing. This system avoids the investment initial cost on land purchase from the over increasing lease tender market. The partnership basis is planned to be established on the means of land supply from the government's side, and the means of housing production and supply from the investor's side.

4.3.1. Measuring affordability

Apparently, residents of Addis Ababa had been experiencing the consequences of housing affordability for long and failed to have a final solution to the problem. So that it stayed as the crucial point of attention to be addressed enrolled for generations. The history of the city revealed that many of its neighborhoods had been established as squatter settlements and rental huts or sold estates of land lords spontaneously (which are the Kebele houses currently). As a result, the organic pattern evolved as the image of the city, which has created complex physical problems in the following periods. These settlements served more than generations simply untouched or slightly upgraded for successive regimes due to the issues of economical capacity for change. Despite the economic hindrance, the former two regimes (the imperial and military governments) before 1993 had their own varied policy concerning public housing and real estate development. Wubshet (2004), explained these differences based up on land ownership as private land ownership (pre-1975 period), Public ownership with use right only (1975-93) and public ownership with leasehold rights (post -1993) (Wubshet, 2004).

Defining affordability in the Ethiopian context is the most essential basis for this type of research. Yet, it had been very difficult for researchers to find the right information concerning the level of housing affordability in cities. It had been experienced that the data gatherings usually base the income approach. Generally, the major fault of such data usage was displaying lesser percentage of housing affordability level, in the past. However, irregular earnings and remittance income, in which households receive often, were not usually considered seriously. The expenditure approach display better facts because it tells how much households afford for ownership.

“Expenditure levels can be the most obvious tool to compare welfare across populations and time. However, they can also be complicated by a number of factors including inflation, spatial price differences and the level of analysis” (CSA, 2011).

The definition for affordability of housing can be derived for consecutive years by using projections of the expenditure per capita for the required year and the purchasing capacity of households for specific years of amortization period (payback period). Table 7 shows the annual household expenditure in birr. By multiplying each value of the expenditure quintile with 3.9 (the average household size of Addis Ababa’s population), the expenditure of the household can be

found. For instance, the affordability of households in a year 2014, the per capita income is assumed to grow proportionally with the GDP.

Quintile	% of HHs	Annual Household Expenditure in Birr-Country Level		
		Lower Limit	Upper Limit	Range
I	20	1,471.48	11,369.98	10,898.50
II	20	11,369.99	15,765.28	4,395.29
III	20	15,765.29	20,657.00	4,891.71
IV	20	20,657.01	28,346.50	7,689.49
V	20	28,346.51	53,572.83	25,226.32

Table 7: Household Expenditure Quintiles at Country Level (Total)

Note: - At 2010/11 National average prices where prices are not spatially adjusted for regional price differences

4.4. Parties Involved in Real Estate Development

4.4.1. Developer

A developer has to focus on the satisfaction of the needs of both target and client groups, example:- the users of the property and the investors. The quality of a project from the user's perspective (user's goal system) relates primarily to the three aspects of quality of use, rental price and service or building management. Developers may be viewed as the risk-taking entrepreneurs who combine land, labor and capital to plan, manage and market facilities which they believe will provide services demanded by space users.

To overcoming critical factors, a company has to stimulate idea creation processes and making sure those ideas are conceptualized and brought into the organization effectively and with great precision. To be successful within real estate development, it is important that the whole organization think and breathe project development. This is a matter of engaging and stimulating all roles within a company to embrace the creative process called real estate development.

There are five major expense categories in real estate development: (Yilkal Hunegaw Mekonnen, 2011)

- Land acquisition costs: Buying the actual land and paying for broker fees and permits.

- Hard costs: Buying the raw materials and physically excavating, demolishing and constructing the building.
- Soft costs: Paying architects, designers, lawyers and engineers to design the building.
- Furniture, fixture & equipment (FF&E): (Operating expenses of the company) paying for tables, desks, chairs, computers and so on.
- Tenant (buyer) improvements (TIs): Paying for items specific to certain tenants (buyers) - for example, if one tenant wants a different style of window, carpet or arrangement of desks.

These expenses differ according to magnitude and timing: Hard costs tend to be most expensive followed by soft costs and land acquisition costs and then FF&E and TIs after those. You have to pay for the land first and then you pay for the hard costs and soft costs throughout the development of the project. FF&E and TIs come near the end when tenants are about to move.

The Overhead expenses of real estate firms which is during the phases of real estate appraisal, construction and rent/transfer of an income producing property, developers expend some amount of the total project costs to operating expenses. These expenses are reviewed on the preceding portion of operational costs in real estate development (Furniture, fixtures & equipment (FF&E). Furthermore, operating expenses include; accounting expense, license fees, maintenance and repairs such as snow removal, trash removal, janitorial service, pest control and advertising, office expense, supplies, utilities, insurance, legal fees, property management, including resident manager, property taxes, travel and vehicle expenses (Yilkal Hunegaw Mekonnen, 2011).

4.4.2. Financer

The only formal institutions offering housing loan is the construction and business bank. This bank under the name housing loan on subsidized rates of 4.5 percent for cooperatives and 7.5 percent for individuals. By that time the interest rate got to 16 percent discouraging any housing loan. The increase in interest rate is a result of the government policy to remove subsidies from the housing sector. This will have the largest negative impact on the poor residents of the city who do not have any financial means to construct houses.

The concept of affordability is directly linked to the economic dimension of a certain country since the transaction considers demand, quality of production, amortization, rate of return and interest rate and so on. Furthermore, affordability is a relative term based on the level of quality of

production in terms of space, building material and location. The behavior of the demand also varies according to the financial range on the affordability ladder.

The basic components of housing affordability are house purchase costs, occupation costs and financial ability. The components of housing affordability are mainly affected by two distinct variables; capital and occupation variables. Capital variable is associated with costs in purchasing a house from the market and the ability to finance purchase, whereas occupation variables are associated with costs in keeping the house. As the report of UN Habitat (2010) discusses, occupation variable comprises the ability to carry the costs related with land lease and rates, service costs, building maintenance, loan repayment and interest rates (UN Habitat, 2001). Figure 10 below shows the capital and occupational variables explaining the material inputs, finance, saving and debts. / income and expenditure respectively.

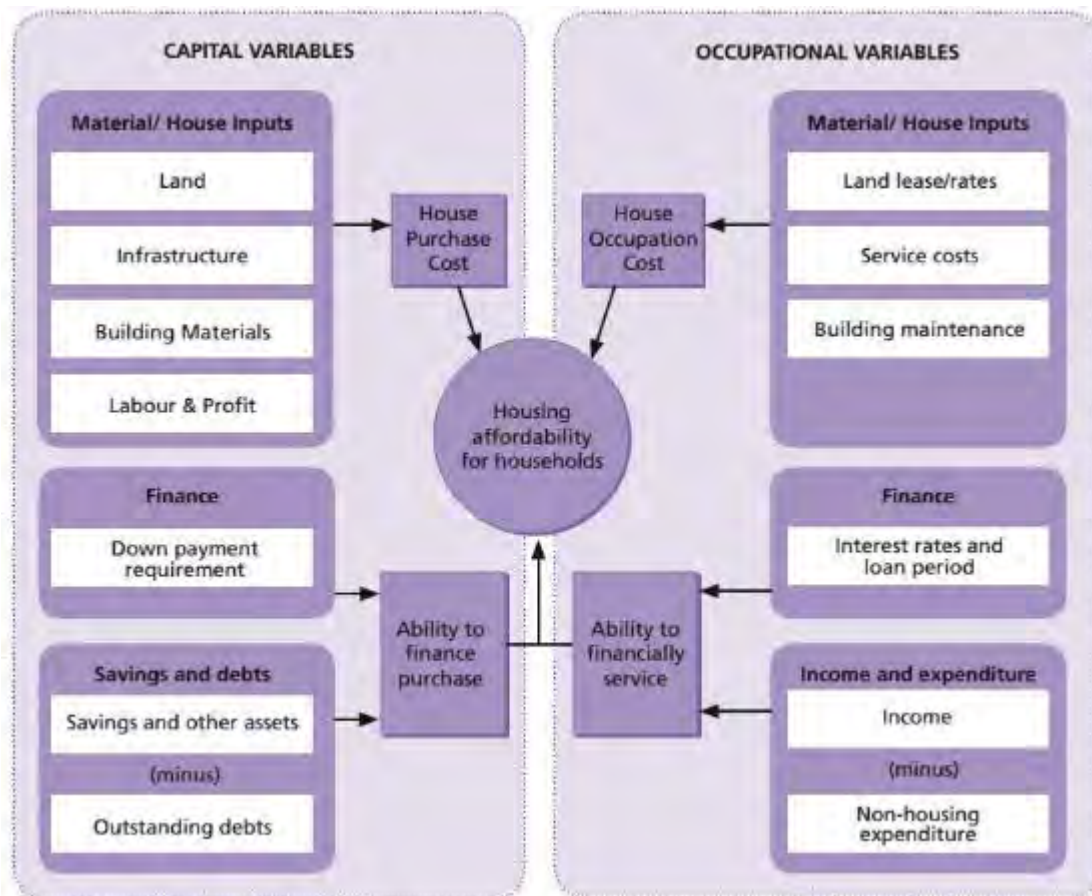


Figure 10: Basic components of housing affordability (Source: Affordable land and housing in Africa, UN Habitat (2001))

A real estate development can be financed in different ways; as such short or long term mortgage from lenders, milestone payments of customers and affordable housing subsidies from government. Most developments comprise both the buyer's equity investment in the property as well as the use of borrowed funds for the balance. Either of these financing schemes could be applied based on market analysis and feasibility of commencing projects in current market. Investing on affordable homes seems a difficult task for most developers, where as it is also considered as a potential investment alternative. Yet, the financing of such activity requires tremendous amount of money to succeed. As a result, projects should be favored to base long-term mortgage financing and government subsidy in many cases (EPA, 2010)

4.4.3. Government

The government has sold land by lease in 2011 and since then land selling has ceased. There are some real estates that has received land after winning bid. Major issue that is raised by real estate is the issue of land, even access real estate was complaining about the land lease problem. Access real estate was executing a construction for detached houses where it was supposed to construct for apartment houses.

During cooperate housing there was a provision that land was free of charge, infrastructural service was given by the government, the materials was sold at subsidized prices which was on average less than 65% of market value, mortgage loans at substantially low market interest rates (4.5% against 10% percent paid by individual). This type of approaches are not practiced presently but all is by market price which has discouraged the developers and constructors as a whole (Bisrat Kifle, 2008).

If the government promotes the prefabricating technology, the whole modular units largely finished prior to arriving at the construction site can significantly limit construction waste generated at the site and contribute directly to construction site waste management. Up to 90% reduction can be achieved by reducing wastes such as wood pallets, timber, concrete, bricks and cement by increasing the use of off-site manufacture and modern methods of construction.

4.4.4. End User

The user has a role only during commissioning stage because as he/she uses it for occupation and operation after commissioning. He/she receives operating manuals, as-built drawings and

keys. The user reports defects, which require immediate action and keep records of defects occurring during defects liability period.

4.5. Exposure and Technology Usage in Housing Construction

The modular construction industry has made significant advances in implementing processes and materials to build and deliver more sophisticated and complex facility types. The job site for a large construction project is a dynamic place, involving numerous contractors, subcontractors, trades people, and laborers, all of whom require equipment, materials, and supplies to complete their tasks. Managing these activities and demands to achieve the maximum efficiency from the available resources is difficult and typically not done well. Time, money, and resources are wasted when projects are poorly managed, causing workers to have to wait around for tools and work crews' schedules to conflict; when work crews are not onsite at the appropriate time; or when supplies and equipment are stored haphazardly, requiring that they be moved multiple times. Improved jobsite efficiency also requires a skilled labor force with communication, collaboration, and management skills as well as technical proficiencies. Prefabrication, preassembly, modularization, and offsite fabrication involve the fabrication or assembly of systems and components at off-site locations and manufacturing plants. Once completed, the systems or components are shipped to a construction job site for installation at the appropriate time. These techniques offer the promise (if used appropriately) of lower project costs, shorter schedules, improved quality, and more efficient use of labor and materials. Various obstacles stand in the way of the widespread use of such technologies, including building codes that hinder innovation as well as conventional design and construction processes and practices (The Modular Building Institute, 2010).

It is identified that there are five breakthroughs to improve the efficiency and productivity of the construction industry, including breakthrough number three: "Greater use of prefabrication, preassembly, modularization, and off-site fabrication techniques and processes." Manufacturing building components off-site provides for more controlled conditions and allows for improved quality and precision in the fabrication of the component. Interoperability is the ability to manage and communicate electronic data among owners, clients, contractors, and suppliers, and across a project's design, engineering, operations, project management, construction, financial, and legal units. Interoperability is made possible by a range of information technology tools and applications

including computer-aided design and drafting, three dimensional visualization and modeling programs, laser scanning, cost-estimating and scheduling tools, and materials tracking.

Effective use of interoperable technologies requires integrated, collaborative processes and effective planning up front and thus can help overcome obstacles to efficiency created by process fragmentation. Interoperable technologies can also help to improve the quality and speed of project related decision making; integrate processes; manage supply chains; sequence work flow; improve data accuracy and reduce the time spent on data entry; reduce design and engineering conflicts and the subsequent need for rework; improve the lifecycle management of buildings and infrastructure. Offsite manufacture already offers the construction industry benefits in terms of time and cost predictability, health and safety and skills. Summary of the benefits of prefabricated and related technologies that allow for more controlled condition are; fewer job site environmental impacts, compressed project schedules, fewer conflicts in work crew scheduling, reduced requirements for onsite material storage and exposure to different weather conditions and a safer construction environment.

Time saving is a major and important issue that real estate developers requires. Therefore, the time saving extent is shown on the figure 11 below:

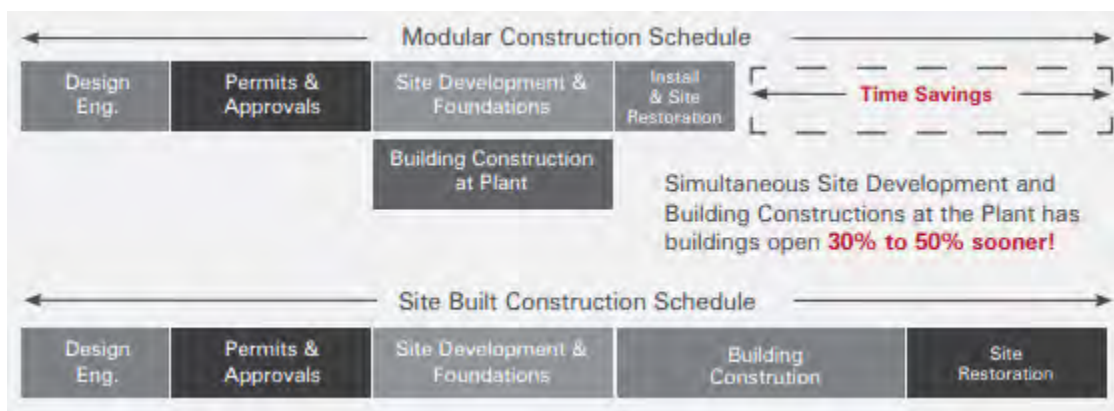


Figure 11: Prefabricated construction Vs site built construction schedule (The Modular Building Institute, 2010)

4.6. Supervision and Quality Assurance

The basic life cycle concept holds for all projects and systems. Life cycle management is heeded because the life cycle reflects every different management requirements at its various stages. In the beginning, for example, in terms of manpower, human resources-research personnel

predominate, subsequently, their role diminishes at the planning stage. The execution which is more of concrete work features more of engineers and finally marketing and sales personnel become more important. In a product development, for example, performance would be assessed by the degree to which the product meets the specification or goal set for it. The detailed explanation of the activities of the four phases is reflected on figure 12 below.

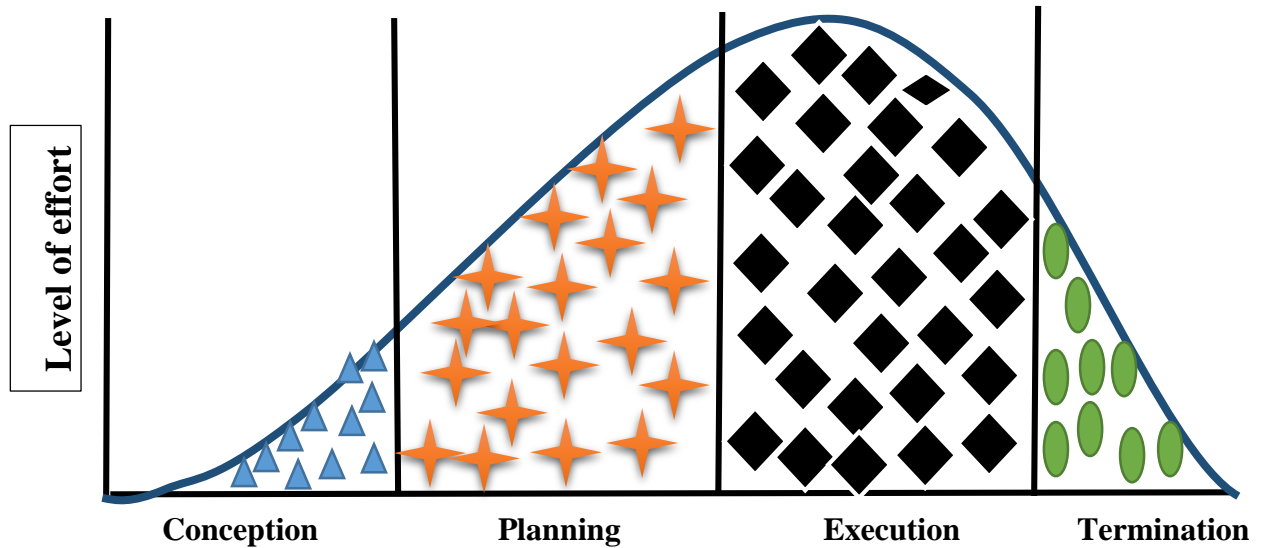


Figure 12: Life Cycle Phases and Tasks Accomplished by Project Phases

Conception Phase	Planning Phase	Execution Phase	Termination
Identify need	Implement schedule	Procure specified materials	Train functional personnel
Establish feasibility	Conduct studies and analysis	Build and test tooling	Transfer materials
Identify alternatives	Design systems	Develop support requirement	Transfer responsibility
Prepare proposal	Build and test prototypes	Produce system	Release resources
Develop basic budget and schedule	Analyze results	Verify performance	Reassign project team members
Identify project team	Obtain approval for construction	Modify as required	

Table 8: Project life cycle for proper supervision (Source: project management handbook)

Table 8 above elaborates four of the different phases named as conception, planning, execution and termination phases. To assure the quality of the houses built, there should be project planning process: - this facilitates an effective management which gives the best assessment of how the project will be implemented and measure the performance against the control group. Work breakdown structure (WBS) is a representative of work in a hierarchical structure and this work has a tangible result referred to as a deliverable. (Paddy Lewis, 2009)

For proper quality assessment there should be quality manager who assigns quality personnel to follow and inspect the job. He shall be responsible for monitoring on site the execution of the job, collecting relevant quality records and makes sure if the records are properly filled out and archived. He shall be responsible for performing all necessary inspection and verifies that the activity is being carried out as per requirements and standards, as established in this document and in the quality control plan inspection and test matrix filing out the correspondent quality report.

The housing sector of the city has problem in both quality and quantity. Housing quality can be measured by the physical condition of the house, the availability of adequate space and amenities. Qualitatively the housing characteristic of the city is described by poor physical condition, lack of appropriate housing facilities and inadequate space. The low level of services, amenities and infrastructure, and scarcity of open spaces are further indications of the poor quality of most housing neighborhoods in the city.

CHAPTER FIVE

5. RESEARCH METHODOLOGY

5.1. Research Approach

This research is exploratory and observational in its type. The research aims at studying the experience & prospects of private real estate developers in alleviating housing problems in Addis Ababa. Qualitative & quantitative research approach will be adopted for this research that requires the collection of data by a means of survey and also some analysis that will be elaborated by some mathematical calculation. This research contains literature review and data collection by means of critical observations, written and oral interviewing techniques with open-ended questions which will be used to understand the processes and acquire organized information regarding the real estate development in alleviating housing problems.

These above mentioned ways are the most reliable ways of primary data collection for this particular study. There is a need to incorporate both methods because the researcher believes that a face to face meeting will give a straight forward answer to those questions that are not answered on the questionnaire due to different personal reasons.

Literature review probably took the longest duration of this study as the major research methodology is the desk study. During this period different documents are gathered and those relevant to the research with respect to the objectives were selected, and their credibility was studied thoroughly. The literature portion will be carried out in order to get a feel for the issues in question and identify the gaps to be filled. The existing local experiences and international contexts are reviewed to have the exposure of the two and to define the parameters for analysis.

The collected relevant information by means of literature review, observation and interviews will then be discussed, analyzed and finally conclusions and recommendations will be given based on findings.

The procedure taken from the inception of the topic to the last step (conclusion and recommendation) is shown on figure 13 below:

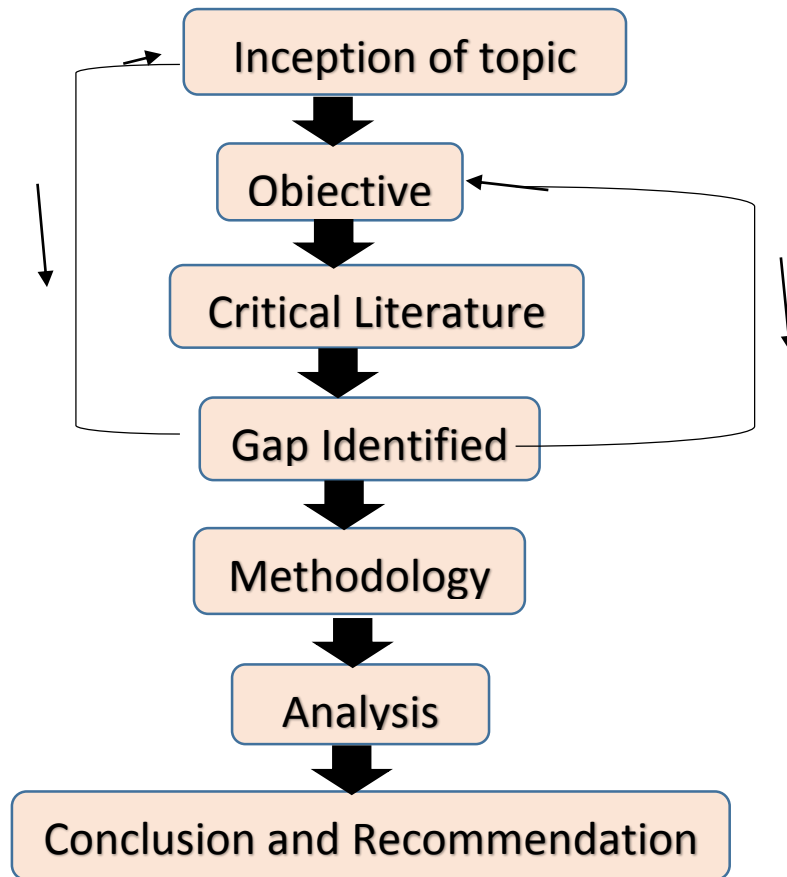


Figure 13: Research approach and design

5.2. Data Analysis and Interpretation

The major and critical issue in an evaluation research or process is the preparation of evaluation framework. This includes two major issues: the first is the identification of parameters and the second is assigning logical relative weight to the parameters. These issues are critical for the success of the research for determining the outcome and credibility of the research. In this study the evaluation framework will be prepared after analyzing and merging the result of: literature review, contextual review and evaluation case studies as a whole. This is very important to insure that the framework does not miss or misconceive any relevant issue.

Then the evaluation process undergoes and findings will be drawn from the process followed by conclusion. Based on the final outcome a possible recommendation will be prepared.

5.3. Limitation of the Research Methods

The study will be focuses on the experience and prospects of residential real estate development to study the production of quality houses which are affordable by the population. This is a basic information which can also give an insight in the supply of housings towards meeting the demand and the construction strategy they are implementing. The international aspects will be observed in order to have an exposure and wider picture in sharing their experience. According to the data in Ethiopia investment agency, there are about 125 real estates and from those there are three classifications as pre-implementation, implementation and operation. Pre-implementation investment project refers to licensed investment projects that have not yet started implementation. Implementation investment project refers to licensed investment projects in which practical undertakings such as construction of civil works provision of machinery and equipment, etc... are underway but not yet started production of goods or provision of services. Operation investment project refers to investments which have either partially or fully begun production of goods or provision of services. From those, the operating ones are few in number and thus the active ones are purposefully selected. There are about seven real estates sampled which are representative to give a good response to the research questions.

5.4. Research Procedures and Sampling Techniques

A desk study, observation and interview will be chosen for the researcher work in Addis Ababa, Ethiopia. From the registered total number of real estates which are 125 in Addis Ababa, the main data sources are going to be from previous researches, real estate developers, governmental offices involved in housing development, consulting companies and other paper or documentation done.

Sampling techniques: From the total number of real estates, selection is based on systematically pointing out the most active real estates and purposefully selecting the active operating candidates to be incorporated in the research. The real estates selected are the ones which are representative for analyzing the objectives set.

On Yilka Hunegaw (2015) research paper, real estates sampled was Eniy, Flintstone, Gift and Muller real estate which were considered to study the affordability situation in Addis Ababa. As a finding, Fintstone homes was found to be a risk taker to provide affordable housing with in the

current policy and market condition. On this research, seven real estates that are sampled are the ones which were not considered in previous researches or studies.

The study participants are the real estate developer, financier, government and end user. Each and every participants affect the real estate sector one way or another. Therefore, after the literature is thoroughly done the gap were identified and analyzed based on those critical issues.

All the relevant information gathered from the formerly mentioned sources will be carefully compiled and it will be used to analyze the data that are going to be collected through observation, and interviews, here whatever the outcome may be there will be no doubt that the research will rely on true professionalism.

The procedures are summarized below:

Study area ---→ Addis Ababa

Study design ---→ { - Explanatory study from documentations & desk study
- Observational studies for quality assessment }

Study participants ---→ { - Real estate developers
- Financers
- Government
- End users (Customers) }

Sampling techniques ---→ From the set of active real estate { - Quality assessment: ones having the same topology
- Affordability assessment: comparing the housing prices with different income groups }

Method of data collection ---→ { - Observation
- Publication, research papers
- Interview }

Methods of data analysis ---→ { - Desk study
- Identify the parameters and allocating weight to the parameters
- Evaluating based on the parameters }

CHAPTER SIX

6. DISCUSSION AND RESEARCH FINDINGS

6.1. General

There are about 1575 registered real estates in Ethiopia; where 1436 are in pre-implementation, 81 are in implementation, and 58 are in operation stage (AAIA, 2015). In Addis Ababa, 125 real estates and from those there are only few which are in operating stage. Having all these real estates and observing that they are not active seems to indicate that there are a lot of issues that should be seriously considered. One main thing is that all the real estates are not working towards alleviating housing problems but working for business or commercial purposes. The drawback seen in the country as a whole is that there is no ratio set in the allocation of area for residential, commercial and industrial development. This is to mean that as there is ratio set for condominiums and villas, there should be ratio standard set for residential and other infrastructural developments. When seen from the historical background with regards to the government giving incentives for the different actors in housing development has chased or lost its interest due to bad performance of the developers by using the land for other aims which made the housing development weak in its performance.

6.2. Accessing Housing Distribution and Role of Real Estate Sector

According to recent UN estimates, the urban population of Ethiopia is expected to triple between 2010 and 2040, growing at an average rate of 3.5 percent per year (World population prospects, 2015). The combination of high population and urban growth rates, coupled with a high prevalence of urban poverty has placed enormous strain on Ethiopian cities and the economy's ability to create sufficient employment opportunities.

Like many other African countries, Ethiopia has a great need for affordable housing delivery. Housing finance markets are destined for growth at virtually all income levels, but particularly within the lower to middle income ranges. Real estate developments have tended to focus on the high end of the market. Ethiopia's housing deficit is between 900,000 and one million units in urban areas, and about 300,000 housing units are required in Addis Ababa alone every year in order to meet the projected demand of 1.5 million new homes by 2025.

As stated in the literature review, there are different actors who are involved in housing development, from those the main ones are four named as; government-initiated condominium buildings, residential neighborhoods initiated by developers, owner-built housing dwellings and new home activity driven by housing cooperatives.

Government-built Condominiums: Since 2005 Ethiopia has been implementing the Integrated Housing Development Programme (IHDP), an ambitious government-led low and middle income housing programme. The first phase of the IHDP has tried to finish building 171,000 housing units. There were, however, a number of unanticipated challenges facing the program. The most pressing is the affordability of the units for low-income households who earn monthly income less than 1200 birr monthly, with the cost increases in the price of condominium houses deeming them no longer an option for many of them (CSA, 2011). The inability to pay the monthly mortgage and service payments forces many households to move out of their unit and rent it out rather than risk losing it through bank foreclosure.

In order to address these challenges, a new and enhanced second phase of the IHDP was launched in 2011. This phase involved a new housing project in Addis Ababa divided into four different groups based on payment arrangements: 10/90 (involving a 10 percent deposit and a 90 percent CBE mortgage loan), 20/80 (80 percent LTV), 40/60 (60 percent LTV), and for housing associations, a full up-front payment is required.

In 2014 alone, some 22,000 condos were handed over to beneficiaries but still it didn't satisfy the requirement of 400,000 houses required in a year. More recently, the Ethiopian Ministry of Urban Development, Housing and Construction recently announced plans to construct 2.45 million houses in housing schemes between 2015 and 2020. Out of the residential houses, the government has planned to build 750 000 in urban areas and 1.7 million in rural areas. The government assumes that construction project is in line with the GTP2 currently underway and will be erected in the housing schemes of 10/90, 20/80 and 40/60. But, according to the previous experience, it is difficult to think that this target will be attended if the government is not adding up new technology and strategy or modular construction techniques. Out of the 150 000 ha of allocated land, 40 percent will be set aside for the construction of houses, 30 percent for its infrastructure and the remaining 30 percent for green areas.

Housing cooperatives having 12 to 24 members is mainly targeted for the middle and higher income groups both for local residents and the diaspora. Members of the housing cooperatives are expected to cover 100 percent of the housing costs 50 percent at the time of registration and the remaining 50 percent when securing the land and construction permit. Housing cooperatives are established under four categories, the first is on the basis of neighborhoods, the second is based in work places and the third is the diaspora who live abroad. The housing modalities are G+4 apartments with one to three bed rooms with estimated price of 210 000, 280 000 and 385 000 Eth. Birr respectively for local residents. For the diaspora the typology of the housing units are G+4 apartments and town houses with two, three and four bedrooms with estimated prices of 533 000, 720 000 and 979 000 Eth. Birr respectively. The diaspora are expected to establish their coops in each Ethiopian embassy and councils with the help of the ministry of Foreign Affairs and the construction of the houses is expected to be implemented by either the government housing enterprises or by their own private contractors.

Cooperative housing developments, organized by groups that share a common employer or membership, have been a long-standing feature of the residential real estate market. The city administration has registered more than 500 housing cooperatives. In recent news, Ethiopian Airlines has invited nine companies to bid to take over an employee housing project from a Chinese contractor. The project entails the construction of 2,502 housing units in two phases on a 313,300 m² plot in the Bole District.

Residential neighborhoods initiated by Real Estate Developers: There are 125 real estates in Addis Ababa but the operating ones are few in number. According to this paper there are seven real estates sampled and surveyed. The supply of housing looks as follows:

Country Club Development Plc found at Legetafo, Oromia Regional State site in Ethiopia which was established in 1998 G.C (developers for 18 years) has delivered 350 villa houses to the clients and 910 houses all structural works are finished and are in finishing stage. The gated community will include a hospital, school from KG to grade 12, football field, 18-hole golf course, swimming pool, volleyball pitch, baseball fields, supermarket, horse riding fields and organic farm ones the residential houses are finished. According to CCD classification, there are low cost and high cost depending on the material they use to build the houses in the range of 150-350 plot in which 160 are under construction. In the coming few months, the company plans to hand over a total of 2000

houses. By the end of their project there will be 22,000 houses (long term) constructed and handed over to the clients. The date for this long term plan is unknown. And the short term is to construct 2,400 houses including G+ villas and apartments (G+7 to G+11) which is forecasted to be within the next 7 years. CCD real estate looks like the ones shown on figure 14 and 15 below:



Figure 14: Main gate of Country club developers



Figure 15: CCD villa houses

Ayat real estate being the first of all housing development which was established in 1989 G.C (developers for 27 years) has constructed 5000 houses and delivered it to residents. It used to be the versioned developer who has started it but currently it has slowed down and is dormant in the housing supply development. Ayat real estate's G+ house is shown on figure 16 below:



Figure 16: Exterior look of Ayat homes (Picture taken by: Gojo suites)

ROPACK international plc was established in 1998 G.C had secured 600,000 sq. m plots and had built 270 villa houses having 500-1000 sq. m plot area. The villa houses are shown below:



Figure 17(a): Hydra foam wall material



Figure 17(b): Safety conditions



Figure 18: Ropack villa houses

In Tsehay real estate plc there are 13 building blocks each having 20 apartments and 4 pent houses. Therefore there are a total residential housing of 312 which will be delivered in April 30, 2016. They want to continue expanding and building more residential housing because they have invested a lot in the machineries and equipment. The exact information regarding future expansion is not known. The most frequent buyers are diaspora, athlete, local investor and artists.



Figure 19: Tsehay real estate 3D display



Figure 20: Tsehay real estate G+12 apartment houses

Sunshine Real estate was established in 1996 G.C (developers for 20 years) has a target groups that are mostly business men and Diasporas. They have different sites in different parts of Addis Ababa. From among the major activity area, Meri luke having 124,368 sq. m, Gergi having 28,760 sq. m, Bole Beshale having 100,000 sq. m and CMC no. 2 having 138, 500 sq. m are the major development areas. Meri luke and Gergi are the areas where they have finished construction and delivered to the clients whereas the ones found in Bole Beshale and CMC are the ones under construction. So far in 2015/16, Sunshine has delivered 210 villa in the gated compound in Meri luke, 34 apartment and 15 villa in Gergi area, 155 villa in Bole Beshale area and 14 apartment (1 apartment can accommodate 12 households) in CMC area. There are also expansions in Bole Beshale which are 42 Villas and 14 apartment and in CMC area, 20 are almost in finishing stage and 94 villas are under construction. It is summarized on table 9 below.

Project title	Projects	Remark
CMC No. 1 real estate project	14 apartments, 20 villa	Completed
	14 apartment, 61 villa	Under construction
Meri-luke Real Estate	210 villas	Completed
Gerji Project	15 villas & G+4 (34) Apartments	Completed
CMC No. 2 real estate project	G+4 (11) Apartments	Completed

Table 9: Projects of Sunshine construction

The Villas and apartments of sunshine real estate is shown on figure 21 and 22 below. The apartments found at CMC area doesn't have a main gate thus the residents apply additional railing systems for security which is as shown on figure 22(b).



Figure 21: Meri-luke villa residential village



Figure 22(a): Lots of satellite dish visible Figure 22(b): Security railings on doors & windows

Noha real estate established in 1996 G.C (developer for 20 years) has target groups of the upper middle and upper class, Noha has delivered housing on the different sites they have. There have been 16 households at an apartment located at bole mini, 15 villas in CMC area, 140 houses will be delivered in three months at Simmit area, 400 households at Ayat area and 70 houses at apartment located around Dessalge hotel delivered to clients. Therefore, it will add up to be 625 households delivered by February, 2017. Figure 23a and 23b below shows the villa and apartments.



Figure 23(a): Exterior look of Jember Village

Figure 23(b): Bole apartment

In Habesha construction materials and development S.C, supply of housing is not significant because over the five year period they have delivered 32 apartments and villas. There is one new site which is in excavation stage at Cherkos a confined area, they are building G+12 apartment which can accommodate 14 household, i.e, the seven floors are residential where each floor has two households and the first five floors are reserved for shops. Figure 24 below shows apartments found at Meri-Luke.



Figure 24(a): Meri-Luke apartment

Figure 24(b): Main gate at the ground floor apartment

For instance, in the site located at CMC which is called Fame, they have constructed:

- Villa A accounting high class in a total of 2855 sq. m (1000, 935 & 920) for 11 families each villa has 4 bed rooms
- High class villa B accounting an area of 1480 sq. m (500, 500 & 480) for 3 families where each villa has 3 bedrooms

- Middle class villa for 25 families each having an area of 250 sq. m where each villa has 3 bed rooms
- Condominium accommodates total of 329 families,
 - ✓ High class town house condominium: has 27 units each having three bed rooms
 - ✓ High class condominium: has 32 units each having three bed rooms
 - ✓ Low class 12 blocks accounting a total of 12,375 sq. m plot area where one of the condominium accounts 1031 sq. m plot area. The condominium has 2 bed room, 1 bed room and studio which is 240, 10 and 20 units respectively.

The other site Habesha construction has constructed are at Meri Luke and sunset site which are at the finishing stage.

Generally, the average housing provided in a year are less than 500. This means including the different actors involved like the government, cooperatives, individuals and real estates. At the end of 2013, the last year for which official figures were available, about 900,000 people were on a waiting list for a flat in Addis Ababa, whose population is set to more than double to 8.1 million by 2040. According to the current trends of housing development in Addis Ababa, it is hardly possible to balance the demand and supply. If there is no effort of implementing a new technology, machineries, approach and methodology on the housing sector, it is likely to see the demand and supply increasing dramatically which becomes the factor to increase the pricing of the houses. From the international experiences seen on this research, the government, financiers and the developers are seen to work together and as a result minimizing the demand supply which consequently decreases the housing price and makes it affordable. This is something to take from the international experience and implement it in Addis Ababa.

6.4. Contribution of Involved Parties in Real Estate Sector

There are four parties as shown on figure 25 who are highly involved in the real estate industry who are highly linked with each other. They are the real estate industry who constructs housing and provides within the deadline and facilitates loaning situations from the banks if any. The other one is the government who is responsible for permit and inspect if the construction is started and finished with in the intended approval. The last one is the end user who conducts periodic meetings with the developer and at the end receives the house after checking all the instalments are according to the contract.

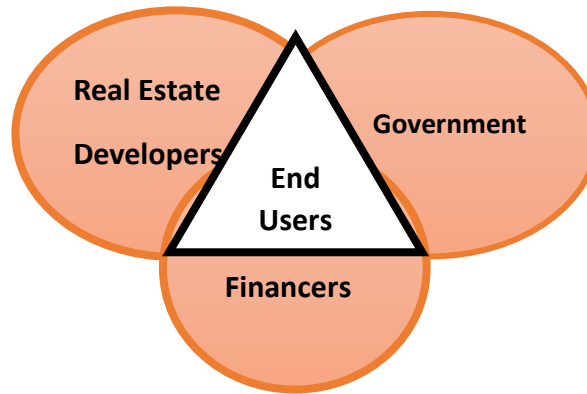


Figure 25: Main involved parties in real estate sector

6.4.1. Real Estate Developers

As in many countries of the world, the Ethiopian real estate has been booming for much of this decade. In many areas, prices doubled and even tripled in a span of a few years. Home prices vary widely from region to region. Even within the same city, there can be wide variation in home prices. Homes in upscale areas such as Bole in the capital are worth much more than homes found in out laying areas.

The real estate build villa and apartment on the allocated land by either subcontracting the contractor or from their own company. The real estates have their own guide line that enables them to manage their clients and be governed by it. Marketing offices are the ones that play critical role in convincing both sellers and buyers to come to terms. They get involved with the client and real estate in completing the legal paperwork needed to complete the transaction.

The real estate boom has slowed considerably over the past year or so. And the ones most affected by the slowdown are the real estate developers. The Ethiopian diaspora has been the main client of these companies, and most of these clients have been from the United States which is in unstable economic situation in 2008-2009.

Currently, there are 125 real estates that exist in Addis Ababa. Few are in operating stage and the majority ones are in pre implementation/implementation stage. For this paper, there are seven real estates selected to be surveyed and assessed.

6.4.2. Government

The government has lost the interest of giving any incentives due to the intention of the developers to use the land for other business purposes instead of the original aim allocated for residential development. Therefore the government has a plan to implement the following:

- There will be a person allocated for the purpose of who will supervise the development process in close coordination and make the procedures go according to the guidelines with properly set regulatory unit.
- The inspection activity to be performed in a short period of time (3-4 months)
- Taking the appropriate measures for the developers that are not obeying the laws set
- There will be a ground to implement and control the work which were not obeyed previously.

In addition, after observing the experience from international context, the government has a plan to support the development by encouraging the following:

- Create an investment centers in different parts of the country
- Amend laws regarding cash (fiscal) related issues
- Periodical inspection to support the market of real estate houses in relation to the quality of the houses.

As the demand for housing increased, there will be an increase in material demand. Traditional construction techniques involving the heavy use of bricks, block and cement are expensive, inefficient, and time consuming. There are few factories producing construction materials, and locally available inputs are in short supply. The development of the Derba Cement Factory reduced the cost of cement by more than half. Derba announced that it would offer three months credit to contractors who made a 50 percent payment and provided a bank guarantee. Bulk orders at the reduced price are placed through the Commercial Bank of Ethiopia and Dashen Bank to avoid middlemen and protect affordability. Cement production was given a further boost with investments by Dangote Cement as well as South Africa's Industrial Development Corporation and Pretoria Portland Cement (PPC), such that Ethiopia is now able to export cement. Dangote commissioned a US\$500 million cement plant in Ethiopia in June of this year. Located in the industrial center just outside Addis Ababa, the cement plant will initially produce 2.5 million

metric tons per year to meet rising demand within the Ethiopian market but is expected to double its production in the near future. The Habesha Cement Share Company, which has been established by South Africans will have a yearly production capacity of 1.4 million tons of cement, has begun production in November 2015. (Africa housing finance year book 2015)

6.4.3. Financer

Ethiopia lacks a public credit registry or private credit bureau, making it hard for financial institutions to assess the creditworthiness of borrowers. The World Bank's 2015 Doing Business Report showed that almost 70,000 individuals and 20,000 firms were recorded on the public credit registry (an increase from the previous year), but representing just 0.2 percent of the population. (Africa housing finance year book 2015)

Home mortgages are almost none existent in Ethiopia. Most real estate transactions are conducted on cash basis. This has limited the liquidity of homes but it may also have prevented the kind of real estate bubbles we witnessed elsewhere. Mortgage financing may be obtained for some homes, primarily for new homes built by developers. These companies negotiate financing terms with local banks in advance for all of their clients, current and future one. They basically arrange group deals for those who can put the required down payment. Down payments vary from 20 to 50%. Although most mortgages are for 2 to 10 years. Typically, interest rates are variable and depend on the prevailing interest rate fixed by the central bank. A major problem with homes built by the real estate companies is the time it takes for completion. In the past, some of these homes were completed many years past their due dates. And some never made it to completion.

There are many different banks in Addis Ababa. Some banks were contacted in order to understand their contribution for the housing development either by providing loan or minimizing the interest rate. For the purpose of this research five representative banks were interviewed to know their stand in loaning money for customers as well as real estate developers. Their response is as follows:

Zemen bank: can finance up to 50 - 70% of the total construction cost where the customer must at least invest 30% of the construction cost so that by that time the plan agreement will be ready and the customer can give the plan as the only collateral. From the common type of loaning, long term and short term loans are frequently practiced. Short term loan is 1-2 years with an interest rate of 13% and long terms are greater than five years with an interest rate of 16%. The payback

period will be set according to the term of loan and the instalment will be every month which is a constant instalment of one third of person's income as per labor law.

Real estates are not usually eligible for any loaning support due to their low credibility in delivery of houses on time as per the contract. The trusted real estates are very few such as sunshine real estate and Country club. Sunshine real estate are usually found to obey their contract agreement in delivering housing on time and Country club has a good asset when compared with Ropak which has hydra foam walls. This all will be assessed to check the eligibility of the real estate developers for money loan.

From the 2015 annual report, it states that there have been loan of 11% business construction, 2% personal loan and 1% for real estate developers (for credible ones).

Dashen bank: can finance up to 60% of the total construction cost where the customer should at least invest 40% of the construction by their own finance. Their interest rate is 15% and the loaning period is 5 years. In order to be eligible to borrow, the customer must have a monthly net income of 10,000. Up to now, Dashen bank has given a personal loan of 1 million to a trusted customer. Currently, the loaning activity has been suspended due to many reasons. Real estate developers are not eligible to receive any loans.

Commercial bank: currently involved in the investment for condominium houses and thus doesn't give any loaning services for other developments except in manufacturing/ industries. It used to be a mortgage lender in the country, the CBE, disbursed 1 022 mortgage loans in 2010/11. For the 2010/11 financial year, CBE had Birr3.48 billion (US\$175 million) loans outstanding for building and construction.

United bank: can finance up to 50% of the total construction cost if the customers are eligible for loan which is when the house is 70% complete, thus by that time the map/plan of the house being built will be ready as a collateral. The usual loan period is 5-10 years with an interest rate of 15.5%. The instalment will be every month which is a constant instalment of one third of person's income as per labor law. Before any loaning activity is issued to the customer, there will be a surveyor who will be sent to inspect the house even the customer bank transaction and credibility is good.

In 2014, there have been 9.1% of loan given for commercial purposes, 1.3% of personal house purchase loan and 0% loan for real estate developers. In 2015, united bank has given clean loan to

one person because his/her transaction was smooth and healthy. Currently, all personal loans has been suspended.

Abyssinia bank: currently doesn't provide any loans. In the future they have a plan of giving different type of loaning facilities, from those one will be long term loan of 10 years with 15.5% interest rate and short term loan of 2 years with 12% interest rate. The instalment will be every month which is a constant instalment of half of person's income which is not as per labor law. A complete fixed asset (house) is required as a collateral. Personal and real estate loans are not activated (0%) currently due to insufficient collateral (fixed asset).

Generally, all loaning activities are limited to high class people which have a lot of assets and clear cash flows. Even this trend is minimal due to money shortage that the governmental and private banks are facing. Lack of finance, particularly long-term finance, is a widespread constraint facing private business in Ethiopia and the real estate sector is no exception. The consequences of inadequate finance may be particularly more pronounced in the real estate sector, however, given the effects on both sellers (who find it difficult to start and complete their developments without adequate funding) and on buyers (who are often unable to secure sufficiently affordable mortgages). In the current financial environment, both project finance (for developers) and long-term mortgages (for buyers) remain scarce, implying that most real estate developers tend to self-finance a majority of their new constructions while most home buyers tend to pay in full for the purchase of their homes or apartments. Unless the financial system can, over time, provide such long-term financing to both sellers and prospective buyers, affordability will remain difficult and the underdevelopment of the financial system will continue to act as a drag on what could otherwise be much faster and broader growth in the real estate sector.

6.4.4. End User

The end users are usually involved from the beginning to an end. This facilitates the communication process in giving comments on the design and be aware of any changes. The client should know everything in detail before signing any contract.

6.5. Evaluating the Quality of Selected Real Estate Houses

Due to the discontinued land provision (incentive) since 2006 and the prohibition of bank loan for housing, the number of developers registering in AAIA decreased instantly. As a result, it became very difficult for the researcher to find the exact number of operational real estate developers in

the city. The developers were selected based on systematically pointing out the most active real estates and purposefully sampling the active operating candidates to be incorporated in the research. The real estates selected are the ones which are representative for analyzing the objectives set and not considered on previous studies as explained on chapter five the methodology section. The real estates selected are Country club developers, Tsehay real estate, ROPACK International PLC, Ayat real estate S.C, Lemual real estate PLC, Sunshine real estate PLC and Noha real estate PLC.

6.5.1. Construction Work and Supervision

There are different classifications of housing construction in real estate development. The plot size differs from 150-1000 sq. m for villa and apartment has different ranges depending on the number of bed rooms. The housing provided are either finished or semi- finished. In the case of semi-finished villas, the villas are only finished externally i.e. The following won't be done by the developer: all wooden doors except main entrance door, kitchens and bath room cabinets, bed room closets, wooden stair hand rails, wooden plank floor and skirting, ceramic decoration wall and floor tiles, aluminum ceiling, gypsum frames and ceiling centers decoration, PVC tiles and skirting, lobby marble with designed granite, marble fire place cladding, mirror frame and kitchen cabinet top, internal stair marble, sanitary fixtures and electrical fixtures.

Each real estates has their own way of rating their prices depending on the type of construction material that they use to build it. For instance in CCD, there are three classifications named as top quality for brick walled material, high quality for HCB wall material and low cost when the slab is ribbed type with prefab beam is used like the condominium houses. The consultant for CCD is MH engineering which is also the owner. This arrangement is not good because being the owner and consultant creates a conflicting ideas during supervision and in terms of making the construction economical but making the selling prices high.

On the other hand, Ropack real estate used hydra foam wall making material which is low cost when compared with brick or HCB. Lemual real estate uses agro stone partition wall material which is low cost and ribbed slab. Even using this type of low cost material, the cost of the apartment is still high which makes the aim of the real estate working for a high profit/business. The method the real estate mostly use to speed up the construction is by using ready mix concrete or night construction permit to work for 18 hours a day.

The sampled real estates has a consultant but some of them lack proper supervision. Most of the real estate adopt design bid build type o project delivery method where the contractor is selected for the project and the new emerging real estate use design build transfer type of project delivery method where the contractor usually has a share with in the real estate.

Both the design and construction of Tsehay real estate is done by Chinese engineer and Forman respectively in Chinese language which makes the design difficult for an Ethiopian to understand and even impossible for the municipality supervisors to inspect their design. On the site, there is a Chinese Forman in charge of quality control who can only speak Chinese.

The monthly report for each sites and regular site follow up is important in order to make any modifications clear with the client. All modifications from the client side are entertained if the client is involved. First the client is supposed to write on the modification form and sign on it. Then after that depending on the extent of modification, additional pricing will be requested from the client.

During the interview with the manager of real estate department of sunshine, he stated that the way to improve the production and performance of the real estate is by the active participation of the government in the proper implementation of laws, by equipping the architects and urban planners to work professionally and give the response/ permit by setting a deadline to be governed by it, solve the problem of supervision and availability of responsible government officials. The performance of the municipality in land related issues should be made right with regards to having a proper master plan.

6.5.2. Completion Time and Delivery of Houses

The reply from almost all real estates sampled is that the real estate developers are willing to finish all the construction and deliver the houses for the client in maximum of 2 years and 5 months which is not practically seen from their experiences and performance.

The most common factors creating delay and challenging the real estate developers are:

- Delay in the delivery of finishing material
- Price escalation
- Lack of foreign currency
- Access to loan

- Unavailability of the municipality supervising inspector up on the request during the different stage of the project
- Delay in client approval or modification request
- Design change either from the client or the design team
- Unpredicted condition happening on the site , For instance: soil condition, ground water level

As the rule on the contract document, there is a penalty that the real estate developer pay if the house is not delivered as per the set time but this rule is not obeyed by most of the real estates and thus creates a disagreement with the client.

If there is a breach of contract or the client fails to pay according to the schedule, there will be a delay in transferring the houses until this issue is settled. The other most complain raised is due to increase of construction cost (cost escalation) and if the client was asked to pay for it, which as a result causes a breach of contract.

In general, cost escalation and time constraints are the main challenges that affects the completion of the project.

6.5.3. Infrastructure and Services in Real Estate Development

Most of the real estates sampled have perimeter fencing except Ropack Real estate which only has fence for the individual metal grilled gate and even the electric meter is positioned outside the gate. The metal grill makes the security level very low.

For the apartment houses such as Lemual and Tsehay estates they have planned to install video entry system and the building will be managed by the service management team.

On the other hand, for the apartment buildings where there is no main entrance gate at the ground floor, the residents who have bought the apartment are fixing additional metal grill door and window for security purposes.

Depending on the location, the commercial amenities around the real estate differs. This are facilities like shopping malls, supermarket, gymnasium, etc... from the site visit held, there was hardly any commercial buildings built with in the real estate housing compound. Therefore, this is something to take a note and implement it.

Regarding the greenery and parking area, there has been a standard set by the Municipality where most of the villa houses satisfy parking and greenery requirement but the apartments as observed from the sampled ones, the area is either confined or doesn't have space for greenery especially the once found near Bole area. The parking space is underground where one parking space is provided for one household.

From the sampled real estates, there has been no playground, commercial mall and shopping centers for the already built in the real estate compound.

There is one experience from sunshine real estate, according to the interview held with the manager of sunshine real estate department, even if the government has a law regarding the greenery and parking area, the government doesn't have the right professionals in the municipality who can implement the rules set. Even sunshine real estate was told not to waste any land by having more greenery and was given a permit which doesn't have any greenery but later up on the request and repetitive question of sun shine real estate the plan was modified to have greenery for the apartment. This is shown on the plan figure 26 and 27 below:

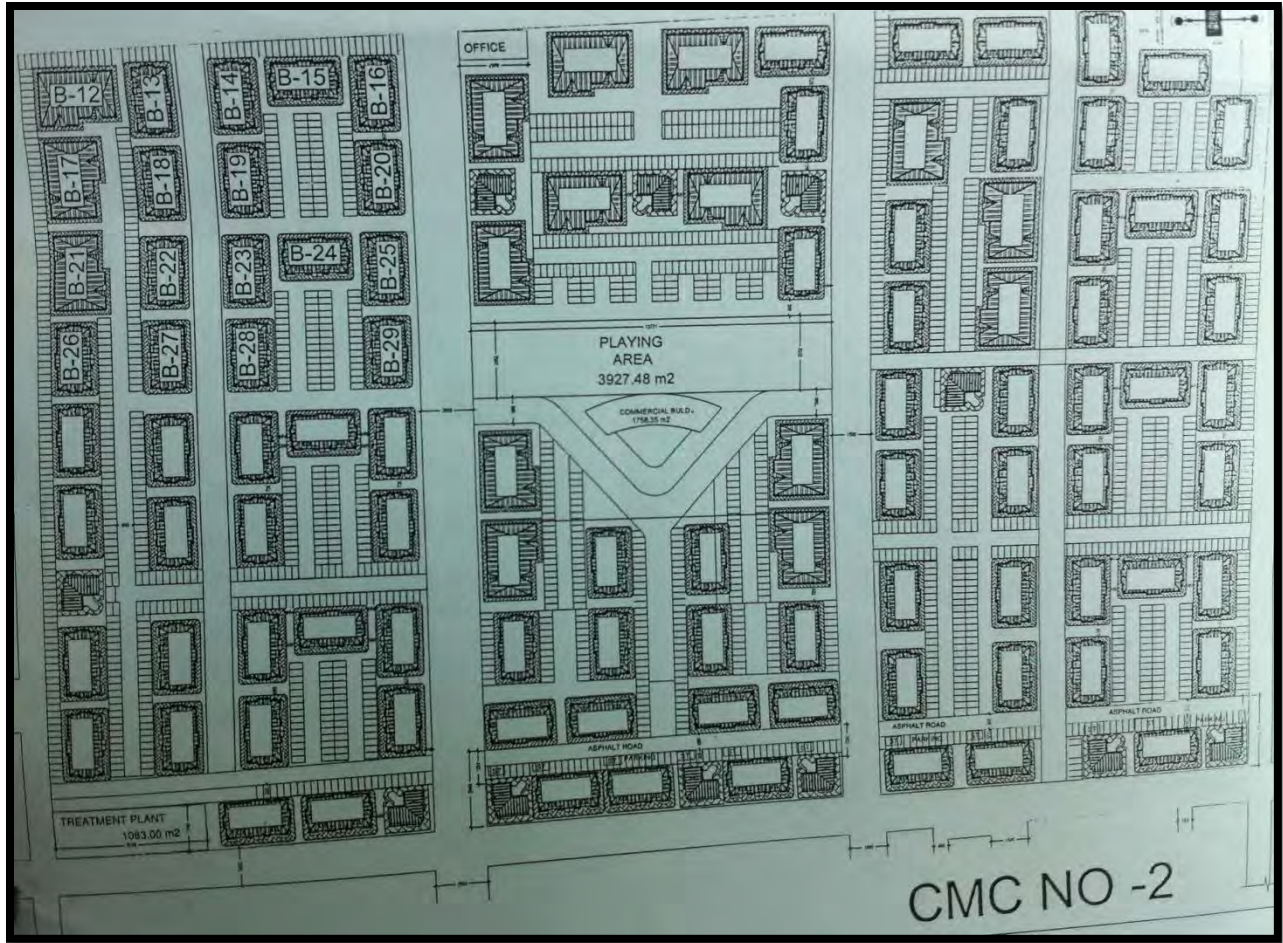


Figure 26: Site plan of G+4 apartments without any green area approved by the municipality

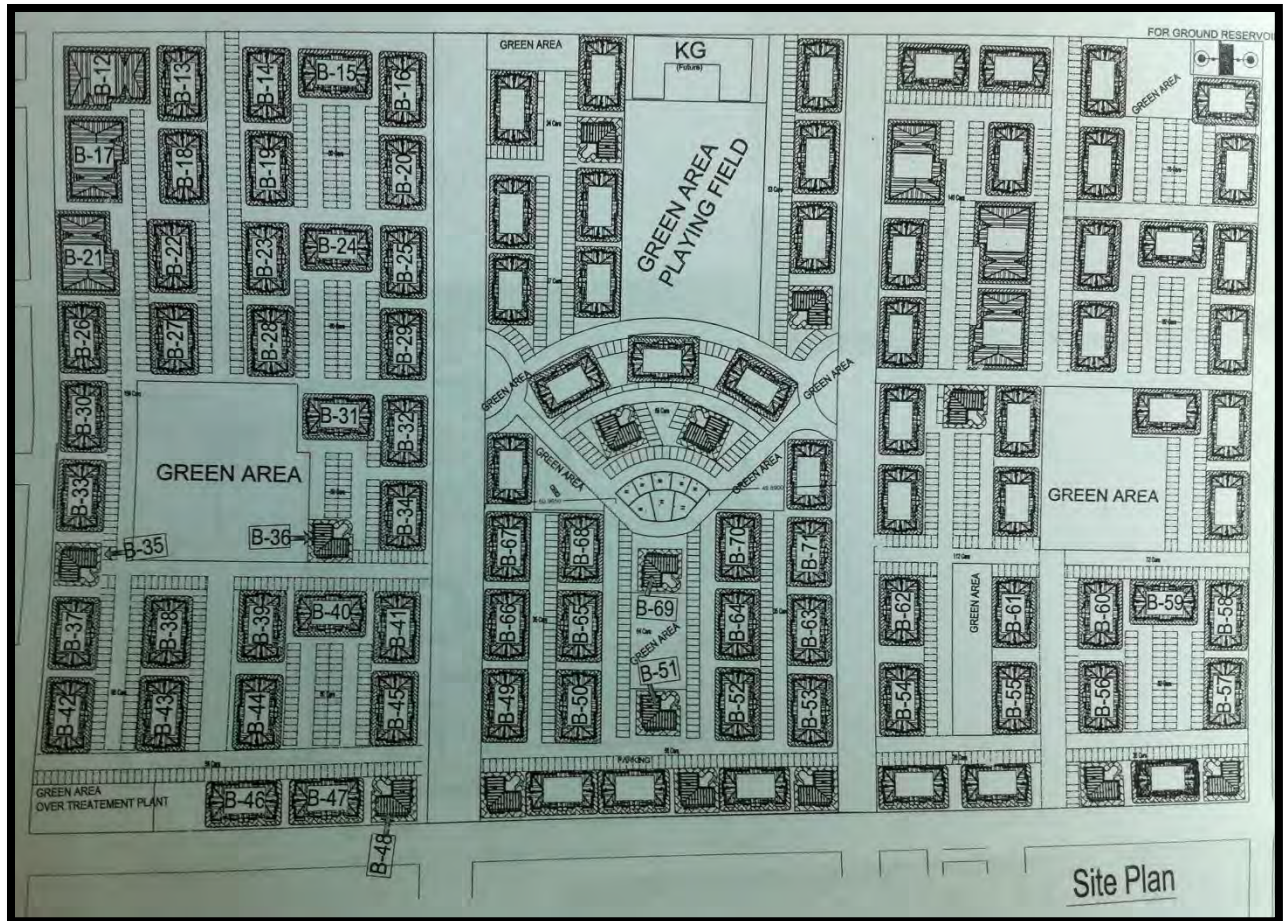


Figure 27: Site plan of G+4 apartments approved by the municipality by the request of Sunshine real estate to account a green area

The above plan shows that there is a huge policy implementation problem and lack of proper professional in the permit giving office (municipality). The parking facility they have provided is the ground floor at the side of the apartment.

Workshop: - Most of the real estates sampled have been established for 18 years or more. Therefore, they have formed a workshop that manufactures parquet flooring, kitchen cabinets, closet, handrail, bricks, HCB and pavement tiles. This helps to save time in the delivery of materials.

6.5.4. Source of finance for the developer

Acquiring finance is easy for those real estates which are classified as credible. The different ways of getting finance is bank loan, client's payment and real estate's own equity. The financiers responded that they don't give loan for the real estate's for the development and construction activity. But the exception is that if the developers' what to get loan after they have finished 70%, the banks especially Zemen bank will be willing to loan money by taking the houses as a collateral.

The opportunity of acquiring finance from the different ways are shown on the figure 28 below:

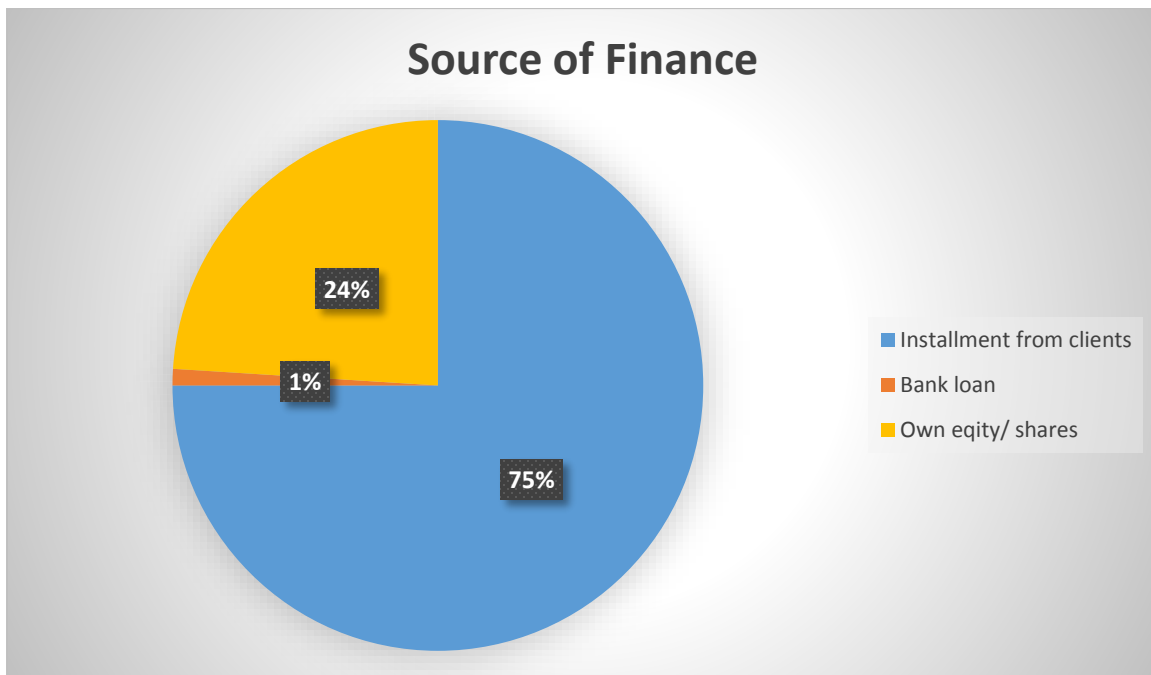


Figure 28: Source of finance

As shown on the figure 28 above the source of finance for the real estates are 0-1% from financiers, 75 % from client installed payments and 24 % from their own equity/savings. It is obvious to see that banks involvement in giving loan to the developers is minimal. Most of the finance from the banks are related with supporting the client to buy a house by giving them a loan of certain percent after the client install some of it. Therefore for that purpose, the real estates have partnership with banks. For instance; CCD has a partnership with Zemen bank, Awash international bank, Enat bank. The banks offer both local currency and foreign currency accounts to receive money when importing finishing materials from china. Moreover, the banks will provide loan after the client pays the 30 % down payment and the loan is from the 70% payment remaining only 30% will be

available from the banks. Which is considerably low. But for the Diasporas this is a huge benefit because they can install the payment and transfer in dollar to the banks.

Similarly, Tsehay real estate has a partnership with Abay bank SC, Bunna international bank, institute of architectural design & research of the Chinese academy of science and CGCOC. From listed partners there are 2 bank partners, which are Abay Bank and Bunna Bank, to offer both local currency and foreign currency accounts to receive money. Related bank information will be issued by the real estate when necessary. And the only extra money shall be assumed by the customer is transfer fee from banks. Moreover, Abay Bank will provide loan for the 50% payment for diaspora purchasing apartments from Tsehay Real Estate PLC.

Loaning opportunities for their clients is the main aim who can afford to pay the major amount of payment. The banks that sunshine has a connection with is Zemen bank that provides 50% loan after the client first pays 50% of the housing price. Construction and business bank used to provide loan to the real estate but currently it is involved with condominium housing projects therefore there is no enough loan to give to private real estate developers.

Almost all clients are made to buy using foreign currency (USD) in Noha real estate which has a financial partnership with Zemen bank and Wegagen bank. They have been working with Zemen bank for long and they provide loaning facilities to the clients, i.e: after the client pays 40% from their own finance, the bank loans 60% of the purchase price. On the other hand, the real estate gets financial support from its sister company with YES mineral water, Coffee Abyssinia, and others. Because of this, there is no huge foreign currency problem.

On the contrary, HCMD have no connection with banks to give loan to the clients. The main reason is in order to get loan the government requires the real estates to pay 27% of bond as a national reserve rate which has discouraged the developers. HCMD's main financial support is from the sister company (Habesha cement) which is one of the biggest cement factory and produces also other construction materials which can act as a financial support for the real estates.

6.6. Affordability Analysis of Housing Prices in Relation with Income/Expenditure

6.6.1. Income and Expenditure of Addis Ababa Residents

Household income of Addis Ababa residents was gathered in order to determine the average household income and relate it to the average housing price as well as the least cost entry housing unit in private residential developments in Addis Ababa.

There is no available household income data of Addis Ababa residents in central statistics agency data. The income measurement is, therefore, based on the expenditure data obtained from the 2010 /11 household Income, Consumption and Expenditure survey by the Central Statistics agency.

Income Quintiles - is a method to measure the household income of residents, ranking them from poorest to wealthiest, and then grouping them into 5 income quintiles (1 being poorest and 5 being wealthiest), each quintile containing approximately 20% of the population. Households are often divided into quintiles according to their gross income or expenditure. Each quintile represents 20%, or one fifth, of all households.

From CSA data, the expenditure for different quantile ranges are given on table 10 below:

Quintile	% of HHs	Annual Household Expenditure in Birr-Country Level		
		Lower Limit	Upper Limit	Average
I	20	1,471.48	11,369.98	6,420.73
II	20	11,369.99	15,765.28	13,567.64
III	20	15,765.29	20,657.00	18,211.15
IV	20	20,657.01	28,346.50	24,501.76
V	20	28,346.51	53,572.83	40,959.67

Table 10: Household Expenditure Quintiles at Country Level (Total)

Note: - At 2010/11 National average prices

Per capita income of Addis Ababa residents for 2015/16 fiscal year is shown on table 11 below:

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
GDP	10.4	11.4	8.8	9.7	10.5	8.5	8.7

Table 11: Per capita income of Addis Ababa Source: Mofed and /www.africaneconomicoutlook.org/

By multiplying the growth rates in the five years, starting from 2011/12 the growth rate at the final year can be known;

$$= 1 + \text{the } n^{\text{th}} \text{ GDP growth at current price} = 1.088 \times 1.097 \times 1.105 \times 1.085 \times 1.087$$

$$= \underline{1.56}$$

Therefore, the total income per capita of Addis Ababa residents has grown with 156% for the year 2015/16.

By multiplying each value on table 19 of the expenditure quintile with 3.9 (the average household size of Addis Ababa's population), the expenditure of the household can be found. Therefore, the expenditure of household in 2011/12 is shown on table 12 below:

Quintile	Average household size	Annual expenditure in birr per household		
		Lower Limit	Upper Limit	Average
I	3.9	5,7380.77	44,342.92	25,061.85
II	3.9	44,342.96	61,484.59	52,913.78
III	3.9	61,484.63	80,562.30	71,023.47
IV	3.9	80,562.30	110,551.35	95,556.83
V	3.9	110,551.35	208,934.04	159,742.70

Table 12: The expenditure of the households (2010/11)

As a result the household expenditure quintiles for 2015/16 is the multiplication of the growth factor (156%) with the average expenditure quintile of 2010/11 fiscal year. The multiplied figures are tabulated on table 13 below:

Expenditure Groups	Expenditure Quintiles				
	I	II	III	IV	V
Annual expenditure in birr on 2010/11	25,061.85	52,913.78	71,023.47	95,556.83	159,742.70
Annual expenditure in birr on 2015/16 (Multiplied by 1.56 growth rate (%))	39,096.49	82,545.50	110,796.61	149,068.66	249,198.61

Table 13: The expenditure of the household (2015/16)

Based on the interview in CSA, even though the household income is equal to household expenditure, for analysis purpose let's say 10% of the total income is saved by Addis Ababa residents.

For Quintile I;

Total income – Expenditure = Saving

Total income – 39,096.49 = 0.1*Total income -----→ Total income = 43,440.54 birr

Conducting the same calculation for all the quintile (1-5), the total household income of Addis Ababa residents are tabulated on table 14 below:

Expenditure Groups	Expenditure Quintiles				
	I	II	III	IV	V
Annual expenditure in birr per household (2015/16)	39,096.49	82,545.50	110,796.61	149,068.66	249,198.61
Household income of Addis Ababa residents (2015/16)	43,440.54	91,717.22	123,107.34	165,631.84	276,887.34

Table 14: Household income of Addis Ababa residents (2015/16)

Table from above shows that the household income for those in the average highest quintiles, median quintiles and low quintile being 276,887.34; 123,107.34 and 43,440.54 respectively. This shows that there is a large gap in income level. From the annual household income of Addis Ababa residents, it is possible to know the monthly income by dividing the number by the number of months in a year (12 months). As a result, 23,073.95; 10,258.95 and 3,620.05 for average high quintiles, median quantiles and low quintile respectively.

One of the objectives of this research paper is to determine the affordability of the houses with respect to low, middle and high income. However, as detail income data at the different household is not available, for the average (middle high family income) the 5th quintile group will be considered. These income will be used as a basis to assess the overall level of affordability of the housing units developed by private residential real estate developers in Addis Ababa.

6.6.2. Affordability of Private Residential Real Estate Houses in Addis Ababa

One constraint which is challenging people while making a decision to buy house, is the access to loan. In Ethiopia, there is no such thing as mortgage loan which is a loan for 25-30 years that the household pays periodically and lives in it. On the previous section the purchasing power of the households in Addis Ababa has been estimated. And the monthly income is calculated to be 23,073.95, 10,258.95 and 3,620.05 for high, middle and low income. Based on the requirement and eligibility of the households there is a limit in the amount of loan they can qualify for.

Currently, Zemen bank is the only one which has a link with real estate developers and make a good ground for the clients to borrow money by providing the housing as a collateral. Table 15 shows the payment schedule together with assessment if the clients are eligible for loaning facilities:

Payment Schedule											
CCD (157 sq. m) 3 bed			Sunshine RE (94.70 sq. m) 2 bed			Sunshine RE (Studio- 30.84 sq. m)			Noha RE (87.9 sq. m) 2 bed		
Total cost	%	Birr	Total cost	%	Birr	Total cost	%	Birr	Total cost	%	Birr
3,580,100	30	1,074,030	1,583,351.29	20	316,670.26	510,625.50	20	102,125.1	2,637,000	30	791,100
	10	358,010		25	395,837.82		25	127,656.4		25	659,250
	20	716,020		25	395,837.82		25	127,656.4		30	791,100
	20	716,020		25	395,837.82		25	127,656.4		15	395,550
	12	429,612		5	79,167.57		5	25,531.3			
	8	286,408									

Payment Schedule								
Tsehay RE (114 sq. m) 2 bed			Lemuel RE (174 sq. m) 3 bed			Habesha construction (Hakomal RE) (94.48 sq. m) 2 bed		
Total cost	%	Birr	Total cost	%	Birr	Total cost	%	Birr
2,775,849	50	1,387,924.5	5,735,500	30	1,720,500	2,144,025	25	536,006.25
	50	1,387,924.5		15	860,250		70	1,608,018.8
				15	860,250			The 70% payment can be installed in 4-5 month interval
				5	286,750			
				5	286,750			

Table 15: Prices of selected real estate houses to check affordability for Addis Ababa residents

The prices of the real estate houses per meter square is shown below on table 16:

No.	List of real estates	Area in m ²	Total Price	Price per m ²
1	CCD (3 bed room)	157	3,580,100	22,803.2
2	Sunshine (2 bed room)	94.70	1,583,351.3	16,719.7
3	Sunshine (Studio)	30.84	510,625.5	16,557.2
4	Noha (2 bed room)	87.9	2,637,000	30,000
5	Tsehay (2 bed room)	114	2,775,849	24,349.6
6	Lemual (3 bed room)	174	5,735,500	32,962.6
7	Habesha construction	94.48	2,144,025	22,692.89

Table 16: Sampled real estate housing prices per meter square

Analysis by checking eligibility to get loan from the banks

The houses are expensive when observed as a person who earns monthly income. The 5th quantile house hold income value of 14,790.99 will be taken for the analysis purpose. Since the prices are expensive, a Zemen bank loan will be checked if they qualify for it.

For long term loan of 5 years from the bank, the instalment will be every month which is a constant instalment of one third of person's income as per labor law. Therefore, from the income 14,790.99 the instalment will be $23,073.95/3 = 7,691.32$ per month.

For CCD, Zemen bank gives loan ones the client pays 30% down payment and gives loan of 30% from the remaining 70% payment. Therefore, the remaining 70% when summed from the above table comes to be 2,506,070 birr. 30% of loan that the bank gives for 16% interest rate, the payment for every month is calculated using Excel PMT function. PMT calculates the payment for a loan based on constant payments and a constant interest rate. The equation below is an excel PMT function:

Monthly payment to the bank = PMT (rate, nper, pv, [fv], [type])

Where; - Rate is interest rate for the loan

Nper: Total number of payments for the loan

Pv: Present value or the total amount worth now

Fv: Future value

OR by using the following formula below:

$$A = P \left\{ \frac{i(1+i)^n}{(1+i)^n - 1} \right\}$$

Monthly payment for loan to the bank = PMT (16%/12, 30, 751821) = 30,570.61 birr

As pointed out, the monthly installment shouldn't exceed (one third of household income = 7,691.32 per month). Which in this case, 30570.61 > 7691.32. Therefore, the person cannot get loan from the bank and can't also buy the house by themselves.

For 2 bed room sunshine houses, it costs 1,583,351.29. Zemen bank have an agreement to lend 50% of the total property price which is 791,675.65 birr. When this is calculated using PMT (monthly payment to the bank) it equal to 35,108.11 birr. Again, the monthly payment to the bank is greater than one third of the income. Bank cannot lend money and the client can't afford to buy it. Also, for the studio, having the total price of 510,625.5 birr the bank can lend 50% of it after the client pays 50% of the construction. But, after calculating the PMT the value comes to be 11,322.25 which is greater than one third of the income. Thus, the client is not eligible to get loan from the bank and couldn't pay it from their salary.

Generally, the houses are not affordable even on the rest of the real estate houses. The government, real estates and financiers need to work together to make the houses affordable and alleviate housing problems. To make it affordable doesn't mean the quality has to be compromised like the majority of condominium complex found on the edge of the capital where one building was reeked from a burst sewerage pipe, walls had cracks and wires protruded. And a lot of them doesn't have the proper infrastructural services like water.

6.6.3. Affordability of Government Condominium Housing Projects

The housing scheme led by the government has introduced housing schemes with initial down-payment options (10, 20 or 40 percent of the house value) that can be saved over a specific period of time (3, 7 and 5 years respectively) at the government-owned Commercial Bank of Ethiopia (CBE), who is also the mortgage provider for the remaining 90, 80 and 60 per cent. The construction cost of the buildings for the house seekers under the scheme is, however, adjustable based on the market price of the construction materials.

10/90 Scheme: aims to provide homeownership to lower-income households with monthly income under 1,200 Birr. This scheme offers only one house type: a studio flat of approximately 31sqm with separate kitchen and bathroom in G+1 and G+2 buildings (ground plus 1 or 2 floors). Each floor has 8 studios and they sell for 40,000 Birr (2,000 USD) each. The construction cost for such a studio is 67,000 Birr (106 USD/sq. m) and the scheme is cross subsidized using other programmes.

The 10/90 scheme registrants provide 10% of the housing cost, i.e. 4,000 Birr, over a saving period of 3 years with 187 Birr monthly payments to a savings account at the CBE. The remaining 90% is financed with a long term bank loan. During the saving period the potential buyers have to keep

meeting their rental commitments, which in Addis easily amounts to half their income, and this makes the saving target a bit of a challenge.

20/80 Scheme: targets lower-middle and middle-middle income households who provide deposits of 20% of the housing cost, saved over 7 years, while the remaining 80% is provided with a long term bank loan. This scheme is in G+4, G+7 in G+12 buildings (ground + 4, 7 or 12 floors) and offers one, two and three bedroom flats. The one bedroom flat is 50sqm and costs 127,000 Birr, the two bedroom is 70sqm and comes at 224,000 Birr and the three bed is 85sqm at 304,000 Birr.

The monthly savings for each scheme are 206, 423 and 514 birr respectively. The flats come without wall and floor finishes and internal doors. The lightweight partitions are non-load-bearing agro stone panels and could be removed to join spaces. This scheme includes commercial spaces up to 10% for cross subsidy.

40/60 Scheme: targets upper-middle income households, who over the course of 5 years are able to save 40% of the housing cost, before getting the 60% loan from the CBE. For this group savings will earn 5.5% interest over the 5 years and the loans will carry 7.5% interest, instead of the 9.5% market rate, to be paid in 17 years.

This scheme welcomes diaspora Ethiopians and encourages those with savings to pay the deposit upfront. 40/60 registrants have preference over other registrants, and more so if they can save in a shorter period than established.

The 40/60 one bedroom flats are 55sqm and cost 162,645 Birr; the two bedroom units are 75m2 and cost 250,000 Birr and the three beds, 100sqm at 386,400 Birr. The monthly saving payments are 1033, 1575 and 2453 birr respectively. This scheme has higher qualities than the previous two and includes commercial spaces up to 20% for cross subsidy.

All the different schemes are arranged to by the government which can be affordable by the different income groups registered in CSA. The low income, middle income and high income ranges are (828.9 - 6,405.1), (8,881.1 - 11,636.8) and (15,968.5 - 30,179.4) respectively. The monthly payments when compared with their incomes is in affordable situation. But the fact that the prices increases with time is a huge concern for Addis Ababa residents. There was a recent debate about this situation that, the clients were asked an increase in average of 120,000 birr which

is not fair because cost escalation due to increase in material cost was not included in the original contract.

6.7. Findings from Experience of the Sampled Real Estates in Addis Ababa

Real estate development is one of the housing sector working on providing a housing where only small portion of the dwellers in Addis Ababa mainly those in high income levels and Diasporas remained the buyers in the real estate market. The factors that are influencing the real estate prices are price escalation, expensive land lease and availability of land. One of the main factors that affects the real estate prices and affordability are the location and demand of housing. As many of the real estate's say, the developers are in the housing sector for a profit but not to alleviate housing problems.

Due to limited supply of land, absence of infrastructure facility in some areas, difficulty in accessing finance and no incentive from the government there are small number of real estate developers which are currently operating.

Ethiopia's banking system is dominated by state-owned institutions. There are about 16 private banks, but they are required to invest the equivalent of 27 percent of their loan portfolio in low-yielding state development bonds. Which has discouraged the real estate's seeking a loan from the financial institutions. As a result, the high income people are the ones who can and will afford the houses.

The main reason for the insufficient supply of housing is that there are small number of developers who are actively operating in the supply side of real estate market and a small number of potential affording buyers.

It is difficult to meet the target of building 1.5 million homes by 2025 if the government doesn't facilitate the financial loaning benefits and provide subsidized mortgages to the poorest. The country is not said to have a good ground and condition in the housing because the developed houses are built and sold by considering only the high income groups.

In Addis Ababa, there is long standing backlog of unmet housing demand. From government condominium lottery in April 2010, a total of 485,000 individuals (almost one seventh of Addis residents) applied for condominium units though only 10,700 were made available (2.2 percent of

the demand). In real estate, there is not even close to 500 houses provided from among 125 real estates registered in Addis Ababa investment agency.

Most of the real estate developers says that they will deliver in 24 months but hardly any of them have managed to meet this deadline. Real estate developers face a lot of issues regarding infrastructure, material shortage and escalation. This contributes to delay in the construction of housing. The other factor that creates delay between the customer and real estate developer is due to a late instalment of payment from the client side and from the real estate side mostly it is caused due to material shortage, lack of foreign currency and delay in the delivery of imported finishing materials.

Some of the real estate's run out of money or when they face shortage of finance to complete their projects, they have threatened buyers with terminations of contract unless they agreed to new terms and conditions which includes new price. People are afraid to invest any money in real estate houses because a lot of unsettled issues regarding land lease issues.

The real estate developers are involved in the housing development not for the purpose of alleviating housing problems but for the profitability of the business. Even some of them are observed to use the land for some other purpose or sell the land for a higher price.

Real estate developers construct houses for the higher and middle higher income groups which has made the lower income people to be driven away from their places to a further area because the land is taken from the farmers and leased to the real estate developers. This brings a lot of problems for the low income people who are furtherly pushed away from the city center where there is less or no employment, social life, market place which makes them disadvantageous.

Most of the real estate's know that they have to use new technology to construct a lot of houses having a modular designs but currently the methodology they are using is by involving ready mix batching plant. For instance, Noha real estate has a night construction permit where they prefer increasing the daily laborers to facilitate the construction.

6.8. Problems Observed in Real Estate Sector

There are different problems faced in the real estate sector and the main ones are elaborated below:

- Developers who have received land did not start any work on the land within 18 month according to lease agreement.

- Even with the ones who have started construction, except some of the developers most of them only started construction within small portion of the land which is to be considered to have started work. This has resulted most of the land to be waste without investment.
- There are a lot of people that have received a land at low cost or with no lease because they are involved in city administration who then sell the land with a minimum price to a third party and get unappropriated advantage.
- The real estate developers has been transferring to a third party which are not in accordance to the rule. It is mainly transferred or sold after starting the foundation or constructing a small store in the compound.
- Before the real estate proclamation was issued on November 28, 2007, there was an investment incentive rule that was issued which states that for one family house there is 50 square meter of land given free of lease payment. The real estate developers use this law for each family houses but design the housing as an apartment. Thus, by this strategy they will gain a lot of land free of lease payment.
- There are a lot of real estate developers who have taken land and then use the land as a guarantee or bond to borrow a huge amount of money.
- There are developers who have expanded their lands informally and constructed beyond their borders.
- Transfer of land to a third party and implementing a construction for other purpose.
- There are conflicting issues regarding the land transfer which are to be given to real estate developer but the compensation money for the former residents is way more than the money received by lease payment from the developer. This situation did not receive any final answer from the land administration and they are still discussing about it.
- There is unclear procedure and practice during land approval and name transfer to real estate developers. In addition, due to unorganized procedure during transfer and preparation of individual plan, there is an ambiguity in installment of lease payment, period of payment, right and burden. Which are not included in a contract basis. Due to this, there are a lot of real estate developers who have an accumulated dept.
- Poor supervision and documentation regarding land issues both in municipality and sub city.

CHAPTER SEVEN

7. CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the outcomes of the study and provides possible solutions or recommendations in order to minimize housing problems by targeting four of the main actors involved in real estate sector. The first section of this chapter is dedicated to the conclusion part and based on these summarized findings recommendations are given last.

7.1. Conclusions

As the objective of this thesis is to assess the contribution of private real estate developers in alleviating housing problems, analyze the affordability of the real estate houses with respect to different income groups in Addis Ababa and also assess the effort made by the real estate developers in providing quality houses. The conclusions from this research is listed below:

1. There are 125 Real estates in Addis Ababa but there is no enough actively operating real estates to alleviate the housing problems and compared with the back log of housing in years, there is insufficient supply.
2. There is a limited source of finance from private banks and no support from the government in providing subsidized facilities where only small portion of households in Addis Ababa would be in a position to access the bank credit under existing housing and loan regulations which has made most of Addis Ababa residents (low and middle) to be less interested in buying real estate houses.
3. Real estate developers are involved in the housing development not for the purpose of alleviating housing problems but for the profitability of the business.
4. Only small portion of the dwellers in Addis Ababa mainly those in high income levels and Diasporas remained the buyers in the real estate market.
5. Real estate developers don't usually finish the construction as per the set construction deadline on the contract document.
6. There are small number of developers actively operating therefore, compared with the backlog of housing in years, there is insufficient supply.

7. In a country like Ethiopia, where there is high demand in housing, there is no one real estate implementing the prefabricated concrete technology. This is due to lack of exposure and the preference of the developers to implement the traditional way of concrete construction.
8. There is minimal supervision procedures noticed in the real estate where only some of the real estates are supervised from the municipality inspectors and has a proper consultants.
9. Almost all real estate's execute the traditional way of concrete construction.
10. There is no set law that the real estates are governed which is in terms of contract, issues related with design and so on. The late awakening (the draft Real Estate Home Developers Proclamation) by the authorities to fill the gap in regulation may be a step in the right direction to safeguard customers by ensuring better standards in the real estate market but it comes too late for those already trapped in a whole series of problems with their sellers.
11. The act of cross financing is mostly practiced in the real estate sector where the money paid by the client is taken to other projects instead of being invested on housing development.
12. There is a high demand of housing in every part of the world. Which shows an increase in prices due to the increase in demand supply gap.
13. At the beginning Ethiopia's government main intention was to work with the society to alleviate housing problems and this gradually changed to money making project which is highly related with politics.

7.2. Recommendations

To alleviate the housing problem in Addis Ababa, all the parties involved namely the government, financier, contractors, designers/consultants, real estate developers and end users should work together for the common good of the country. Therefore, recommendations are given as follows:

Recommendations for government/ municipality or sub-cities:

- There should be clear and understandable manual regarding building permit system and inspection work.
- The permitted design should include recreational area, hospital and school facilities with in it.
- There should be capacity building support for construction as well as supervision activities.

- There should be an adjustment in the lease price of land to encourage real estate sectors to construct houses that accounts all income groups.
- The government should provide support by minimizing tax and by providing financial incentives.
- The government should work on increasing the average income of the population or find a way to facilitate support and arrange the housing price margin. And also contribute in reducing unemployment rate of the city which will help in raising the resident income, purchasing and saving power in housing development.
- To avoid any risk associated with real estate disagreements with the client, the government should ban installment of 100% payment when conducted before the house is finished.
- Should enforce the real estate developers to reduce their profit margin and the government should involve in subsidizing the construction materials, land market, finance and infrastructural service.

Recommendations for consultant/ design offices and construction managing team:

- Consultants should consult and assist the real estate developers in deciding what type of construction method best fits their needs with respect to meeting (cost, quality and time) constraints and the use of prefabricated technology.
- Construction managing company should have international exposure in order to know the most effective and efficient method to execute mass housing project.

Recommendations for end users:

- The end users should assess the credibility of the real estate and visit the site before signing any contract. For instance, the real estate developer should pay the clients for any failure to deliver the house as per the contract. The client should also check if the real estate company legally owns the proposed building site, has an approved building design and can show a construction license given to it by the local municipal authority before signing any contract.

Recommendations for financiers:

- Should work with the government to give loan with low interest rates for a longer duration such as the mortgage loan (25-30 years).

- Link with the government to work in facilitating loaning facilities and supply good foreign currency to avoid any delay that occurs during the shipment of finishing material.

Recommendations for real estate developers:

- Should hire proper consultant, contractor, site supervisor and project manager before any construction starts who will be responsible for a safe, sound and healthy construction.
- Real-estate developer could be negotiated to construct 20-30% of their development for low and middle income group of the society. This can be affordable houses for middle and low income group applied through the compensation of selling cost for rich and focused subsidy of the government.
- Encourage real-estate developers those who want to develop affordable housing units for low and middle-income group through facilitating land and infrastructure, importing tax free building material production machineries and introduce the application of low-cost materials and construction technology, etc. This is after making clear that the real estate developers shouldn't only think of their profit but also make effort in alleviating housing problem by targeting different income groups.
- The real estate developers should minimize their risk of failure by willing not to bend the rules in a greedy drive to maximize profit.
- Should have ways to make the units affordable by designing different range of houses starting from smaller units to higher ones by having the operational excellence that incorporates of housing efficiencies in terms of resource utilization and manage products which also likely to have a way in keeping the costs down.
- Should use cheaper and conventional construction material which can reduce cost and construction efficiency without compromising the quality and have it finished as per the deadline. One of the promising prospects is to use prefabricated concrete boards and steel based construction of condominium and apartments. Throughout the cost saving or low cost construction strategies, there should be a proper supervision and quality assurance so that the safety and health conditions are not compromised. Therefore, applying a SWOT analysis of innovative construction technique can be a way which is identifying the strength, weakness, opportunity and threat.

Recommendations from international experience:

- The Ethiopian government should provide incentives just like in Morocco, where in a purchased house the residents are not supposed to pay property tax for five years. The residents also should have the facilities to get 60-70% mortgage loan with an interest rate as low as 5.5% in order to have a housing supply that considers the mixed income groups.
- There should be a mortgage loan facilities where a person can purchase a house by the support they get from banks which is usually 25-30 years. And the payment will be made after the person paid certain amount usually 30% and the rest of the payment will be made per month while the person is living in the house.
- In the Western countries, deposit for new houses are backed by the government to increase confidence into investing. If builders are not done by the time set on the contract, buyers should be able to get their money back and void their contract. If not, government should intervene.

Generally, Ethiopia should take the good experiences to support and bring a change in housing development. In relation to this, proper rules and proclamations should be drafted and implemented which are related with money (fiscal) issues.

Future research recommendations:

- Assessing the current trends of real estate registration and practice in Addis Ababa
- Evaluating the city administration capacity towards improving the housing development and database system
- Assessing the social, economic and political views given to the housing development and the effort being made to account those in the development of housing in Addis Ababa

8. REFERENCE

Addis Ababa city Government, ORAAMP, (2002), City development plan, Addis Ababa.

Addis Ababa Housing Development Project Office, AAHDPO. (2007), Agrostone Production Technology in Addis Ababa.

Addis Negarit Gazeta and Ministry of Urban Development and Construction (2013), A Proclamation to provide for real estate development and transaction, Addis Ababa.

Alemayehu 2008, Revisiting «Slums», Revealing Responses: Urban upgrading in tenant-dominated inner-city settlements, in Addis Ababa, Ethiopia. (PhD Thesis) Trondheim: Norwegian University of Science and Technology.

American Housing survey (2008), Table 1A-7: Financial Characteristics All Housing Units: American Housing Survey for the United States.

Bisrat Kifle (2008), Public housing: the condominium approach the case of Addis Ababa, Addis Ababa University, Addis Ababa.

Biruk Tesfaneh (2012), Property department challenges of real estate, Addis Ababa University, Addis Ababa.

City development strategy construction minister & household development (2012), Worldwide real estate law guide.

Elayne Wangalwa (2015), Kenya's middle class spurs growth of real estate sector, CNBC Africa.com.

Federal Transit Administration (2007), Construction project management handbook, Revision 1.

Graaskamp (1981), Fundamentals of real estate development, Urban land institute, University of Wisconsin-Madison, USA.

Tesfaye (2011), Level of affordability of real estate houses, Addis Ababa University, Addis Ababa.

H. Flippo & son publishing Co. LLC (2015), Average Salary Survey: <http://www.averagesalariesurvey.com/germany>, German Housing/House and Home - Apartments, condos, houses _ The German Way & More.htm, updated on, 2015.

Hulchanski, David J. (2011), Canada: The State of the Federation 2004: Municipal-Federal-Provincial Relations in Canada, Institute of Intergovernmental Relations. McGill-Queen's University Press.

Kiros Aquubamicheal (2009), Factors affecting the real estate market: the case of Addis Ababa city. (M.Sc thesis) Addis Ababa: Department of accounting and finance.

Lou, Jianbo; Joyce Palomar (2015), Housing Policy in the People's Republic of China: Success and Disappointments, China.

Mihretu Tesfaye (2005), Housing strategies in inner city areas the case of low income housing in inner city, EiABC, Addis Ababa.

Mike E. Miles, Gayle L. Berens, Mark J. Eppli, Marc A. Weiss (2015), Real Estate Development: Principles and Process, Edition 4 , Urban land institute.

Ministry of Urban Development Housing and Construction, MoUHC, (2011), Addis Ababa.

Mortgage status (2008), Mortgage Status and Selected Monthly Owner Costs, United states survey, United states.

M.-Y. Haregewoin (2007), Integrated Housing Development Programs for Urban Poverty Alleviation and Sustainable Urbanization: The Case of Addis Ababa, ENHR International Conference on Sustainable Urban Areas. Rotterdam.

Paulos Birhanu (2011), Study on private residential real estate development in Addis Ababa, Addis Ababa Institute of Technology, Addis Ababa.

Provisional military government (1975), Government ownership of urban land and extra houses proclamation, Negarit Gazeta 24th year, No. 41.

The Modular Building Institute (2010), Improving construction efficiency and productivity with modular construction, National research council, USA.

Yared Mussie (2008), Real Estate Development in Ethiopia, Nazret.com Merkato blog.

Yilkal Hunegaw Mekonnen (2015), Exploring real estate affordability in the housing supply in Addis Ababa: the case of Flintstone homes (M.Sc thesis), Addis Ababa: EiABC, 2015.

United Nations (2015), World Population Prospects, Global demographic estimates and projections.

US office of management and budget (2008), Initiative for Affordable Housing – Glossary, USA.

@lloexpat Germany (2015), Housing in Germany:
http://www.germany.alloexpat.com/germany_information/housing_in_germany.php?page=0%2C2, updated on, 2015.

Appendix

Representative Villa house prices in 2016 by sampling the highest and lowest prices:

Type of houses CCD	Built up area	Top quality fully finish		Semi finish	
		T.C including VAT	Advance 30%	T.C including VAT	Advance 30%
Type A: G+1 on 1000 sq. m plot (3 bed room)	310.18	7,182,284	2,154,685.2	6,348,300	1,904,490
Type C: G+1 on 1000 sq. m plot (3 bed room)	429.81	8,649,122.00	2,594,736.60	6,918,175.00	2,075,452.50
Type G: G+1 on 1000 sq. m plot (4 bed room)	426.85	8,897,490.00	2,669,247.00	7,108,550.00	2,132,565.00
Type H: G+1 on 1000 sq. m plot (4 bed room)	513.06	9,394,245.00	2,818,273.50	7,498,945.00	2,249,683.50
Block B: G+1 on 150 plot type 1 (3 bed room type)	157.00	3,580,100.00	1,074,030.00	2,669,500.00	800,850.00
Block B: G+1 on 200 plot type 4 (3 bed room type)	174.00	3,856,000.00	1,156,800.00	2,986,000.00	895,800.00
Block B: G+1 on 250 plot type 7 (3 bed room type)	194.00	3,898,200.00	1,169,460.00	3,169,000.00	950,700.00
Block B: G+2 on 350 plot type 10 (4 bed room type)	300.00	5,499,000.00	1,649,700.00	4,299,000.00	1,289,700.00

Representative Luxury Apartment houses (Riche Tower in 2016):

Type of houses (Habesha construction G+11)	Built up area	Fully finish		Price/m ²
		T.C including VAT	Advance 25%	
Type 1: (3 bed room)	159.25	3,531,825	882,956.25	22,177.865
Type 2: (2 bed room type)	90.00	2,025,000	506,250	23,000.000
Type 3: (2 bed room type)	94.48	2,144,025	536,006.25	22,692.898

Representative middle class Apartment (CMC in 2016):

Type of houses (Sunshine real estate construction G+4)	Built up area	Semi finish			
		T.C including VAT(USD)	Advance 20% (USD)	Price/m ² (USD)	Price/m ² (Birr)
Type A: (3 bed room)	171.00	3,531,825	706,365	20,653.95	444,679.5
Type A: (2 bed room)	122.47	95,107.11	19,021.42	776.57	16,727.32
Type A : (2 bed room)	105.90	82,239.26	16,447.85	776.57	16,727.32
Type A: (1 bed room)	94.70	73,541.63	14,708.33	776.57	16,727.32
Type D: (2 bed room)	84.56	70,096.52	14,019.30	828.96	17,847.51
Type D: (2 bed room)	88.64	73,412.34	14,682.47	828.21	17,831.36
Type D: (1 bed room)	56.36	46,719.96	9,343.99	828.96	17,847.51
Type D: (Studio)	30.84	23,716.93	4,743.39	769.03	16,557.22

Representative middle class Villa (Bole Beshale No-2) selling price on 2014:

Middle class villa (Sunshine real estate)	Plot area	Total in USD	Built up area	Cost/ built up area in dollar
B1-1	270	191,594.72	174.80	511.19

Representative Luxury apartment houses (CMC in 2016):

Type of houses (Tsehay real estate G+12)	Area in m ²	Total price (USD)	Price/m ²
2 bed room	114.26	120,119.25 - 137,739.46	1,051.3 – 1,205.5
3 bed room	144.71	160,425.5 – 186,794.56	1,108.6 – 1,290.8
4 bed room	164.35	191,783.3 – 221,681.48	1,166.9 – 1,348.8
Penthouse	250	244,000 – 335,000	976 – 1,340

Representative Luxury apartment houses (Bole in 2016):

Type of houses (Lemuel real estate G+13)	Area in m ²	Total price (Birr)	Price/m ²
3 bed room	174	5,735,500	32,962.64
Penthouse	348	10,471,000	30,089.08

Representative high class apartment (Bole in 2016):

Type of houses (Noha real estate G+5)	Area in m ²	Total price (Birr)	Price/m ²
3 bed room	120	3,600,000	30,000.00
2 bed room	87.9	2,637,000	30,000.00
Penthouse (4 bed room)	240	7,200,000	30,000.00

Representative Villa (Legetafo in 2016):

Type of houses (ROPACK International real estate)	Area in m²	Built up area in m²	Total price (Birr)	Price/m²
3 bed room Villa (G+0)	500	375	3,500,000	9,333.3
3 bed room Villa (G+0)	1000	750	7,500,000	10,000