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**Assessment of Challenges on The performance of  
Government Housing Projects:  
In the case of Addis Ababa City**

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**Addis Ababa, Ethiopia**

**The Assessment on the performance challenges of  
Government Housing projects in Addis Ababa city.**

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**ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES**

This is to certify that, this project work prepared by Tilahun Debele Dabessa entitled “Assessment on the Performance Challenges of Government Housing Projects in Addis Ababa City” Prepared and submitted in fulfillment of the requirements for the Degree of Master of Arts in Project Management. This MA thesis complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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## **Declaration**

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

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## **Acronyms**

AAHDAA	Addis Ababa housing development & administration agency
AAHPCO-	Addis Ababa Housing Projects Construction Office
AAHDA-	Addis Ababa Housing Development Agency
BOFED-	Bureau of Finance and Economic Development (Addis Ababa)
CSA-	Central Statistical Authority
CGoAA-	City government of Addis Ababa
EEC-	European Economic Commission
ORAAMP-	Office for the Revision of Addis Ababa Master Plan
FDRE-	Federal Democratic Republic of Ethiopia
MCUD-	Ministry of Construction and Urban Development
MDG-	Millennium Development Goal
MoFED-	Ministry of Finance & Economic Development
MSE-	Micro and Small Enterprises
GDP-	Gross Domestic Product
IHDP-	Integrated Housing Development Program
IMF –	International Monetary Fund
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
SDPRP-	Sustainable Development and Poverty Reduction Program
WB –	World Bank
UNCTAD-	United Nations Conference on Trade and Development

UNESCO- United Nations Education, Science and Culture Organization

UNDP- United Nations Development Program

UNECA- United Nations Economic Commission of Africa

UNFPA- United Nations Population Fund

UNO- United Nations Organization

UN-HABITAT- United Nations Human Settlement Program

## Abstract

*This study assesses the performance of government housing projects in Addis Ababa city. A sample of 16 interviewees from the Addis Ababa housing projects construction office (AAHPCO) used as a primary source by using purposive sampling approach and secondary data obtained from the federal and City government of Addis Ababa bureaus were analyzed In the process of answering the basic questions. After the data has been collected, it was analyzed using the descriptive analysis for the first research question, and the content analysis applied to address the rest research questions. The result of the study indicates that there is a poor performance exhibited in the Addis Ababa housing projects. With respect to the housing demand in the city, the achievement of the government to meet the demand is only 18% in the past 11 years. The major cost related challenges contributed for this poor performance includes shortage of finance, inflation, lack of foreign exchange, poor financial management. The major schedule related challenges for this weak performance found out in this research are, poor schedule planning, failure to secure a continuous supply of project inputs and currently, the rapid spread of novel corona virus (Covid-19) pandemic affected the schedule of the projects. Lastly, the quality related performance challenges existed in the housing projects includes the application of backward construction technologies, lack of skilled man power and inadequate attention paid for the quality management of projects negatively affected the performance of the projects. Based on the major findings, the study forwarded recommendations for the city government of Addis Ababa, the supreme Authority of the given housing projects.*

**Key Word:** Performance challenges of housing projects in Addis Ababa

# CHAPTER ONE

## Introduction

### 1.1. Background of the study

Addis Ababa, which means “New Flower” in the Amharic language, is the capital city of the country and its population is estimated to be around 3.5 million. As the national capital, Addis Ababa remains the economic, political and administrative hub of Ethiopia. In the last 50 years, the city has gained international significance as the headquarter of the African Union (AU), UN Economic Commission for Africa (UN-ECA) and a regional office for a number of international organizations including UNDP, UNESCO and the European Economic Commission (EEC). On top of this, Addis Ababa is reputed as the fourth city to have the largest collection of diplomatic missions in the world. (Wubneh, 2013)

The city is founded by Emperor Menilik II about 133 years ago. Addis Ababa situated on a rocky and self-draining landscape with an average altitude of 2,400 meters above sea level. That makes Addis Ababa the city with the Highest Altitude in Africa. It has an annual average rainfall of 1,161 millimeters and its area is estimated to be 54,000 hectare. (MCUD, 2017) The previous centralized political and economic systems of the country put Addis Ababa to be a primate city. Addis Ababa alone accommodates nearly 30% of the urban population of the country and most of the manufacturing industries are located in or the surroundings parts of the city. (MCUD, 2017)

Addis Ababa has its own administration led by a mayor and is accounted to the prime minister office. The city administration is divided into ten Sub city which is commonly known as “Kifle-ketema” and these Sub cities are also sub-divided in to 100 districts which is commonly known as “Wereda”. Weredas are the lowest administration body of the city, which is responsible for executing routine municipal activities. like solid waste management, tax collection, registration of vital statistics, issuance of identity cards, social court service and sub-city & neighborhood level development such as construction of local roads and drainage networks. Tilahun (2010).

The city administration is limited itself to city level policy making, city level tax collection, city level development works, capacity building, and supervision activities among others. (CGoAA, 2018).

Millions of urban families in developing countries face a severe housing problem. They live in homes that lack adequate sanitation, have an irregular electricity supply and are built of fragile materials. However, the form that the housing problem takes varies greatly between and within countries: homelessness is significant in some places, elsewhere the main problem is one of overcrowding or the unavailability of infrastructure and services. In many Developing cities most poor families rent accommodation, elsewhere they are forced to live in their own flimsy shelter. The housing in the countryside is generally worse than that in urban areas. There are no easy solutions to the developing world diverse housing problems because a lack of adequate shelter is merely one manifestation of generalized poverty. Decent shelter for all can never be guaranteed so long as there is widespread poverty. (Gilbert, 2015)

Despite Addis Ababa`s position in the Africa and International stage, the city also shares the similar problem as like as many developing cities. Half of the population of the city is living under the UN set poverty line (less than two dollar income per day). The rate of unemployment is closer to 42%. Majority of the residents are characterized by low and unreliable source of income, limited financial resources, and engagement in home-based micro businesses and other informal economic activities (it accounts 60% of the total economy) characterize life for most of the city dwellers. (UN-HABITAT, 2011)

When it comes to the provision of housing in the city, there was a shortage of 400,000 housing units in the city ten years back. After nine years in 2019 however, the number rose considerably after a decade. if we add the large number of public owned houses (46% of the total housing stock of the city) that require major maintenance or replacement. A study conducted to design the implementation strategies of the Millennium Development Goals (MDG) has found out that 80% of the population of Addis Ababa is living in slums. Out of which 24.8% of households are overcrowded where more than two persons per room are living (the UN-HABITAT minimum standard).

Near to 9% of the households completely do not have a toilet facility and 51% of households share the poorly constructed toilet facilities. Almost 30% of all households in Addis Ababa do not have separate rooms for cooking. The urban poor in general, the women and the disables in particular are the most affected by this severe condition of the city. (IHDP, 2016) When we see the state of tenure security, only 43% of the residents have the legal documents of home ownership. These people either owning or renting the properties they occupy on a long-term basis.

## **1.2. Background of the organization**

In order to solve the prolonging housing problem of the city, the Addis Ababa city Government established the housing development & administration agency (AAHDAA) and the housing construction project office (AAHCPO) by dividing the Addis Ababa Housing Development Agency (AAHDA) in two by 2016. While the former mainly deals with transferring the already finished houses, looking for finance and researches, the later engaged in constructing quality and standardized houses for low and middle income residents of Addis Ababa and enable them be owners of houses.

Besides, it targets alleviating house shortage in Addis Ababa city by upgrading integrated system that involves contractors, counselors, small and micro enterprises, as well as strengthens construction industry by using vast labor power, build up condominium houses and make the residents house owners through fair distribution. This study mainly focuses on the performance challenges related to the construction of housing projects by the Addis Ababa city housing construction project office.

## **1.3 Statement of the problem**

Addis Ababa`s growing population and rapid rate of urbanization is placing substantial pressure on housing, especially amongst the lower income population. The government has taken part massively in the development of a housing project with the intention of addressing the housing demands of the lower income earning sect of the population. Despite all these, provision of residential housing still remains the major challenge in Addis Ababa and, at least, it will remain for a while. Although a number of policy and practical issues have been claimed and being



argued over the last decade, there are still major challenges facing the various housing projects in the country.

There are several studies were conducted to describe or explain the initiatives taken to address the housing problem of the Addis Ababa city Tesfaye (2007), opportunities and challenges regarding those projects Kagne (2010), specific challenges to the given projects Seyoum (2018), correlation between the housing projects and the city's economic development Kumelachew (2019) and so on. However, none of them didn't assess the challenges related to the performance side of the projects specifically. In addition to that, to the best of the researcher's knowledge there is no study undertaken to show the performance side challenges of the Addis Ababa city government housing projects. Therefore, in this study the researcher will assess the performance challenges of the Addis Ababa government housing projects. By doing so, this research updates the existing knowledge regarding to the challenges of the government housing projects in Addis Ababa.

#### **1.4 Research questions**

The performances of the projects are the function of an efficient implementations of the project cost, project schedule and project quality parameters of the project. Based on this fact, the study tries to answer the following basic research questions:

- How is the overall performance of the housing projects?
- What are the challenges related to the cost of the projects?
- How could it manifested, the challenges regarding the schedule of the projects?
- What are the major quality challenges of the housing projects?

#### **1.5 Objectives of the study**

The contribution of this project work will be the theoretical explanation, to assess, identify and analyze the performance challenges faced by the government housing projects in Addis Ababa city and to provide possible recommendations based on the principles and concepts in the literature review, and the findings of the study.

Furthermore, this study will:

- Describe the overall performance of government housing projects in Addis Ababa city.
- Assess the performance challenges of the housing projects on its cost side.
- Analyze the performance challenges related to the schedule of the housing projects.
- Identify the quality performance challenges of the housing projects.

## **1.6 Significance of the study**

This research attempted to formulate recommendations which uses as a tool to cope the performance challenges and improving government housing projects of the city. The research will use to update the existing knowledge in the given area. It initiates other researchers for similar studies on the major challenges of housing projects in Addis Ababa. The findings of this study will help the Addis Ababa city Government to use it as an input for the future housing development policy formulation and implementation practices. Furthermore, it might serve as a reference for further studies by other researchers.

## **1.7 Scope of the study**

The scope of the study has focused on performance challenges with regard to government housing project in Addis Ababa. Although housing projects have so many challenges that should be given considerable attention, this study only concentrated on the performance side challenges of project cost, project schedule and project quality which the housing projects faced. The study was conducted in Addis Ababa which is the seat for government ministries & supervisory authorities, financial institutions and other organizations, and the municipality of the city as well.

## **1.8 Limitation of the study**

The major challenge to carry out this study is the spread of the Corona virus pandemic across in our country and in the entire globe as well. Due to the rapid spread of the Covid-19 pandemic while this research have been carrying out, almost all of the federal and regional government offices were in shut down. The shutdown makes it difficult to access both primary and secondary data's for this research. Besides, since the given virus are transmittable in so many ways, that makes the data collection process too much difficult for the researcher.

Moreover, the researcher believes that further research is necessary as the housing projects are too much connected with various factors like land policy and governance, legal issues, government priority areas with respect to poverty reduction strategy, capacity of city administration in providing quality service, etc.

## **1.9 Organization of the paper**

This study paper is organized into five chapters. The first part provides the introductory aspect of the study which encompasses the background of the study, statement of the problem, objective of the study, the research question, significance of the study, scope of the study. The second chapter explores the related literature on the subject matter. Chapter three mainly focus on description of the methodology and data sources for the study. Chapter four presents the data analysis and interpretation that support the conclusion of the study. The fifth chapter winds-up the study with a conclusion and recommending a solution to the problem

## **CHAPTER TWO**

### **Literature Review**

In the following section, the paper will try to assess the literature on effects. Including theoretical literatures will briefly explain, empirical literatures will be succeeded. Then historical background of housing in Ethiopia will take part. Finally the conceptual framework will be built on.

#### **2.1. Theoretical literatures**

##### **2.1.1. The Housing Provision models**

There are three commonly known housing provision categories. According to Drakakis-Smith (1980) and Van Vliet - (1990) and cited by Chen & Gao (1993), these three categories are the industrialist model, the socialist model and the third world model. The industrialist model where housing is perceived as a commodity and its consumption largely depends as other products, on the supply and demand of the economy. The second one, communist model emphasizes an equal political and economic system in which the state has an obligation to provide consistent and subsidized housing opportunities to all urbanities. The third, which is the third world model, its name coined after the countries that apply it most, it avails the opportunity of housing only to the wealthy and parts of the middle class leaving out a huge mass of the population with low income, inevitably leading to an accelerated growth in informal slums and squatter settlements.

As like as many developing countries, Ethiopia categorizes in to the third world model. Bahir (2010), states that the ongoing urban land lease policy of Ethiopia favors the rich in the country with its policy of market economy obstructing any chance of the urban poor to afford and compete for accommodation, ultimately paving the grounds for more slums.

The highest, the urban population living in slums is located in Sub-Saharan Africa and Ethiopia is one of the countries shares the large portion of slum dwellers (Gilbert, 2007; Davis M., 2006). An estimate by UN-habitat shows that more than 70% of the urban population in Ethiopia lives in slums and shanty area (UNHABITAT, 2008).

The slums of Addis Ababa clearly portray the phenomenon of “Spiral of Decay” (Knox and McCarthy, 2005) which symbolizes how neighborhoods that are composed of substandard houses and occupied by legitimate low-income households are exposed to serious risks of converting into slums. The “Non-planned old inner-city settlements”, which have now become the spiral of decay starts with substandard houses being occupied by low-income residents incapable of renting large rooms and thus renting the smallest amount of space. The overcrowding that follows on top of causing more ruin to the already physically and structurally deteriorated house brings about more pressure on the surrounding infrastructure of educational and health institutions, recreational areas and roads. The required maintenance that can help relieve these problems is absent lacking from the individual households that can’t afford to pay for the maintenance costs and the landlord’s lack of will to find solutions when the demand for houses are very high.

According to (Knox & McCarthy, 2015) lastly, since these dwellers are low income households, they tends to have an insignificant tax contribution, subsequently, the government authorities marginalizes them with political power and social services. On the other end of the spectrum, the fate of the businesses in their neighborhoods will be the same. They will characterized by low income, low profit thus scarcity of funds for maintenance. At the end of the day, small and infant business in the wake of loss and unable to relocate to profitable neighbors start to leave the commercial building vacant for indefinite periods of time and finally in the event of lack of renters or buyers, the faith of such properties proves to be abandonment.

What follows is the “contagion effect” which is the collective gloomy nature of vacant Properties making it more accessible for crimes to rise and more importantly the “psychological abandonment” of these neighbors by outside realtors, investors and property owners who stop to invest in these neighbors and public authorities that start to cut back on providing basic services. Slums then simply become an inevitable disheartening conclusion (Knox and McCarthy, 2005).

It takes but a flip through the pages of Ethiopian history to understand that in Ethiopia, the “Spiral of Decay” of neighbors as illustrated above is largely the product of generations of unsuccessful policies and strategies related to land and housing provision of the country.

### **2.1.2. The urban situation in Addis Ababa**

Researches indicate that the magnitude of slums in Addis Ababa is one of the highest in the world. Despite the fact there is slight difference in numbers, the revised Addis Ababa City Development Plan and the Millennium Development Goals Needs Assessment Study asserted that 80 % of the housing in Addis Ababa is accounted to slum (ORAAMP, 2001). The situation is not different in the other urban parts of Ethiopia. (CSA, 2015). Despite the fact that the definition and the extent of Ethiopian slum might remain arguable, the common consensus existed on the presence of poor conditions of housing, social services and infrastructural development in most urban areas across the country.

The major causes of physical corrosion of urban centers in developed countries are related to transport improvement, suburbanization, the withdrawal of large firms and higher income groups from city centers, and related emerging social problems due to the decreasing attractiveness of such centers for investment. Such causes are not the major reasons of inner city deterioration in the developing countries and in Ethiopian as well. The physical condition of city centers in Ethiopia is deteriorating. However, the locations are still in high demand because of insignificant development in transport, low level of suburbanization and nature of the economic activities. The social problem is not as such a push factor to leave the central locations. (CSA, 2015)

The causes of physical deterioration of Ethiopian city centers are related to the way the areas were built i.e., an absence of appropriate planning, an application of sub-standard construction materials and in rural tradition. The significant majority of the houses in Addis Ababa are similar to those in the peripheries, as they do not have toilets, bathing facilities and modern kitchens (CSA, 2015). The other cause of deterioration is lack of proper management. Though the demand for central locations is very high, residents cannot make meaningful improvements to the housing units because they are predominantly state owned. Besides, the majority of the residents are low income families with below two dollar per day income. Thus, government is the one who is responsible for renewal intervention.

The Addis Ababa`s urban re-development effort is not a consequence of suburbanization as it was in the United States and in Europe. Though there are recent trends of high income real estate developments on the down town and outskirts of cities, Ethiopian urban history has not come across suburbanization in the real sense of the term. In previous times, physical urban

development was basically carried out through expansion to the outskirts; as land for expansion has become scarcer and the cost of infrastructure has become very expensive, Ethiopian urban local governments have returned to renewal approaches to meet their development goals and objectives. Thus, it is no surprise that the government recently decided to redevelop the existing urban fabric and make maximum use of land, infrastructure and services which are already within urban areas. This, in general, is a commendable policy. (MCUD, 2018)

### **2.1.3. Challenges of housing projects in developing countries.**

According to the UN –HABITAT (2017) the major challenges and a bottleneck for the housing development includes the following issues:-

**Shortage of finance** The perceived risks, high costs of doing business and longer term for returns create a situation where the affordable housing sector lands directly in competition with other types of real estate investment like commercial spaces, luxury segment and high-end housing which are perceived to reap greater and faster benefits on investment.

**Land governance** multiple contradictory land tenures and agreements, out-of-date land registries, lack of computerized land titling systems, inadequate incentives coupled with varied disagreements between the local and central policies make land policies for affordable housing, counterproductive.

**Infrastructure** the construction happens first followed by provision of infrastructure facilities like reliable electricity, clean water supply, sanitation services and efficient transport system. This puts a huge pressure to pump in more money, incur higher lead times and face the risk of the long wait to dispose the units.

**Building technology** The equipment, innovative techniques and alternate building materials all provide for expedited and highly cost-efficient, large-scale housing projects which then go on to justify the investments into the project. Unfortunately, most housing projects face resource and capacity limitations along with insufficient incentives, to capitalize on these aspects resulting in weak competition in terms of affordability of the housing units.

**Inadequate housing policies** Due to inconsistencies in decentralization processes and the urban planning strategies, the local governance has a limited control on the implementation of these

strategies resulting in unnecessary cost escalations usually accompanied with delays in project development. Also coupled with the fact that, multiple ministries are often involved in developing the housing policies and urban plans at large tend to function with different objectives and incentives, further make the development and implementation of comprehensive housing policies difficult.

**Low priority for housing in construction sector** with most African countries highly dependent of certain few, high-return sectors, to drive their economies, a drastic change in government's priorities towards affordable housing would be unlikely since this step might have a ripple effect on multiple aspects of a nation including the economic and social development.

### **2.1.3. The urban development strategy in Ethiopia.**

The two most prominent urban development strategies in Ethiopia are the Sustainable Development and Poverty Reduction Program (SDPRP) and PASDEP. In particular PASDEP implemented between the years 2001 to 2004 with an objectives of improving human and rural development, food security and capacity building. Specially, PASDEP has been served as Ethiopia's guiding strategic framework for the period between 2005 and 2010. In addition to the objectives of SDPRP, it has paid principal attention to achieving economic growth, boosting investments in housing and infrastructure and strengthening all activities to achieve the Millennium Development Goals (MWUD, 2006).

In October 2005, the "then" Ministry of Works and Urban Development (MWUD) was established to bring a significant attention on the ground for the urban development, taking over responsibility for urban affairs from the "then" Ministry of Federal Affairs. To achieve the objectives of PASDEP, an urban development strategy that founded on four pillars, was devised one of the four pillars was integrated housing development program.

The IHDP, stands in line with Millennium Development Goals seven, Target ten, that aims to reduce by half residents without access to safe drinking water and sanitation by 2015 and Target 11 that seeks to bring about substantial improvements in the lives of at least a 100 million slum dwellers by 2020. It is also concerned with the objectives of upgrading the living conditions in urban areas, achieving multi-dimensional development and trimming down the cost of infrastructure, lowering the rate of urban trail and reducing slums in Ethiopia by 50%. Through



this program, the government aims to finance by giving priority to the interest of middle and particularly low-income households and construct much needed accommodations.

In spite of these aims, the ambitious vision set by the government as part of PASDEP and particularly the Integrated Housing Development Program for the years between 2005 and 2010 comprised of five major goals (MWUD, 2007). Which includes: - Constructing 360,000 residential housing and 36,000 commercial units nationally. Simultaneously IHDP have an objective of creating 200,000 job opportunities, which avails the necessary infrastructure, planned and serviced land for housing, Boosting the performance of the contractors, consultants and engineers and finally, delivering adequate assistance to property developers, housing cooperatives and private homebuilders, so that they can construct an extra 125,000 housing units per annum. Since the launching of Integrated Housing Development Program in 2005, half of the initially targeted number of housing units (213,000) have been built nationwide, presenting low-income residents a chance to secure tenure in accommodations with basic services and infrastructure (MoFED, 2010).

Unfortunately, these houses are still financially unaffordable to the “poorest of the poor” in the country with government estimates suggesting that as much as 70 percent of the low-income tenants that receive these houses rent them out to households with higher income as they can’t make the bank loans or the necessary monthly mortgage payments (UN-HABITAT, 2010b).

#### **2.1.4. The Addis Ababa Integrated housing program (AAIHP)**

The AAIHDP aims to improve the provision of the housing and creating an employment opportunity and support SMEs, tackle simultaneously the problems of a housing shortage and unemployment. The specific objectives of the program include ‘promotion of micro and small-scale enterprises, which can absorb more labor force and operate at a lower overhead cost’ as well as ‘promotion of cost efficient housing construction technology’ (HDPO, 2004, p1).

To achieve these objectives, the AAIHDP aims to construct 192,500 houses, generate 80,000 job opportunities, support 1,300 existing small and micro enterprises and create another 1,000 new ones. To construct housing affordable by low-income dwellers, the IHDP designed a production technique that differs from the one traditionally used in the construction sector. The low-cost feature of the program consists in building a less luxurious, similar type of housing using low

cost construction technologies such as pre-cast beams and ribs labs, fixed-price contracts and standardized production procedures permitting greater specialization.

The IHDP offers comprehensive support to companies take a part in the program by providing a place of work, facilitating access to credit, issuing training and inputs on credit, subsidizing machinery for firms producing bars or blocks, providing training to firms engaging in pre-cast beam and hollow block production and awarding contracts to program firms. With an exception for contracts assigned to contractors all contracts are awarded exclusively for SMEs created by the IHDP. All new SMEs are not awarded the contracts by IHDP yet. By providing these different types of support the program alters the factor prices different firms face, which in turn affect technology adoption and factor choices and thus labor demand.

## **2.2. Empirical literatures**

### **2.2.1. Rapid urbanization and housing shortage in Ethiopia**

The race to urbanization is something also joined by Ethiopia a very long time ago. Over the past couple of decades, Ethiopia, being a predominantly rural country has shown a gigantic 164% increase in the rural population between 1984 and 2007. Whereas the urban area has also shown a significant increase of 75%, when we see it numerically, in the number of urbanities reached to 11.9 million in 2007 from a population of 6.8 million in 1984 (CSA, 2010a). It is expected the figure will reach 22 million by 2022 and 17.8 million by the year 2015. (CSA, 2017)

Taking in to account the state of poverty in the country, this high urban growth will explicitly lead to a considerable increase in the urban poor and shake the already deficient efforts of the government to accommodate the needs of the rising urbanities. According to UN-HABITAT (2018), at present, housing deficit in the country lies between 900,000 and 1,000,000 units, with over 400,000 of those housing deficits are being estimated in Addis Ababa. In connection with the implication this rising population has on the shortage of housing in Ethiopia. Tesfaye (2007) states that the consequent rise in the number of households' is yet another fact that best echoes and provides a measure of the level of demand for housing in the country. According to the 2007 National population and Housing Census, the ratio of number of housing to number of households, the number of housing units in Addis Ababa (approaching 629,000) was about 4%

less than the number of households (around 655,000) creating shortage of housing for close to 26,000 households in the city (CSA, 2010b).

### **2.2.2. The demand side of the housing sector**

About three million inhabitants of Addis Ababa live in some 500,000 housing units with an average density of approximately 6 persons per household. Low rise, and mud and wooden structures are the city's dominant features. Some 30% of the households live in informal settlements, and 5% are homeless, sleeping on the streets, worn out physical structures, high-levels of congestion, abundant solid waste and severe shortage of services and infrastructure facilities are the dominant characteristics of most neighborhoods (CSA, 2005; ORAAMP, 2002).

More than 80% of the housing units are built from wood and mud. The majority of these housing units are mixed commercial and residential houses. It is rare to find a housing unit solely used for residential purpose in the old central parts of the city in particular. Usually, the front rooms are used for selling of goods and services, while the rear rooms and backyards are used for processing and production of goods and services and also for residential purposes.

The city has already used over 75 percent of its potential expansion area for development within its administrative boundary. According to ORAAMP (2002), the potential expansion area of 10,000 hectares within the city's administrative boundary was expected to get exhausted by 2010. As a result of natural population growth and the arrival of population from the surrounding area and the regions, the city is expected to grow markedly in the next few decades. Studies indicate that the city's population will reach the 6 million thresholds in the coming 20 years, and the mega city level of more than 10 million residents in the coming 40-50 years.

## **2.3. Historical backgrounds of housing policy and projects in Ethiopia.**

Dating from the Emperor Haile Selassie regime who reigned from 1930 to 1974, the challenge of providing sustainable affordable housing is the major concern of the government since then. During the imperial regime over 70% of the state land was owned by less than one percent of the population. This left over 80% of the population that principally comprised of low income groups at the mercy of and with no alternative but to rent land from the privileged few (Kebede and Jacob, 1985).

The imperial rule was succeeded by the “Marxist” revolution of 1974 in favor of a fairer distribution of land and the consecutive proclamation 47/1975, “Government Ownership of Lands and ‘Extra’ Houses” that led to the nationalization of all urban land. The administration of all houses below a rental value of 100 birr was then placed under the Kebele Administration units while all other properties were placed in the hands of government-owned rental units, supervised by the Agency for the Administration of Rental Houses (Alemayehu, 2008). Following the nationalization, rents in Addis Ababa were cut by 30% for about 80% of the residents to increase affordability for the low-income households. The low rental charges however left little room for investment in the commonly known “Kebele houses” resulting in physical and structural deterioration owing to the lack of appropriate management and maintenance (UN-HABITAT, 2017), ultimately creating the first step of the “Spiral of Decay”, Substandard and slum Houses.

Currently, low-income households occupy over 82% of these Kebele houses with nearly 64% of these households paying less than 10 birr per month for rent while the collective rest pay less than 30 birr monthly (Alemayehu, 2008). This largely reflects on the low living standards of these residents paving the path for the next step of the “Spiral of Decay”, Crowding. In Ethiopia, where urbanization has sky rocketed and thousand migrate to the capital on a daily basis, overcrowding of low-income households strongly relates to the “Spiral of Decay”. This is because in addition to the fact that these households are incapable of affording many rooms and thus cohabit, they also share what little space they have if new relatives shall arrive in search of better lives in the city. What results is a logical progression of the “Spiral of Decay” and the present reality of the non-planned old inner-city settlements, the slums of Addis Ababa.

During the EPRDF regime since 1993 – 2005 the plot of land were provided to the real estate developers and housing cooperatives. However, such initiatives strongly criticized for lefting aside the enormous majority housing problem of low income families of the country. Since 2005 yet, the government were committed to address the housing problems with the provision of condominium housing projects, 10/90, 20/80 and 40/60 housing schemes. However, still those housing schemes are in a far deviation from the income level of the low income dwellers of the city and it is failed to meet the shortage of the housing in Addis Ababa and in the country as

well. With the current pace, to meet the demand of housing with the supplies it requires an extra 150 years. (AAHDA, 2019)

As per the slum definition of the (UN-HABITAT, 2015), currently, over 80% of Addis Ababa is a slum of which 70% of the dwellings are located in the central part of the city and are government owned Kebele houses. These slums are the peak of worst living conditions typified by multiple shelter deficiencies including poor physical conditions, inadequate basic facilities like safe water and sanitation, terrible waste management systems, overcrowding and health risk (Asfaw, 2005).

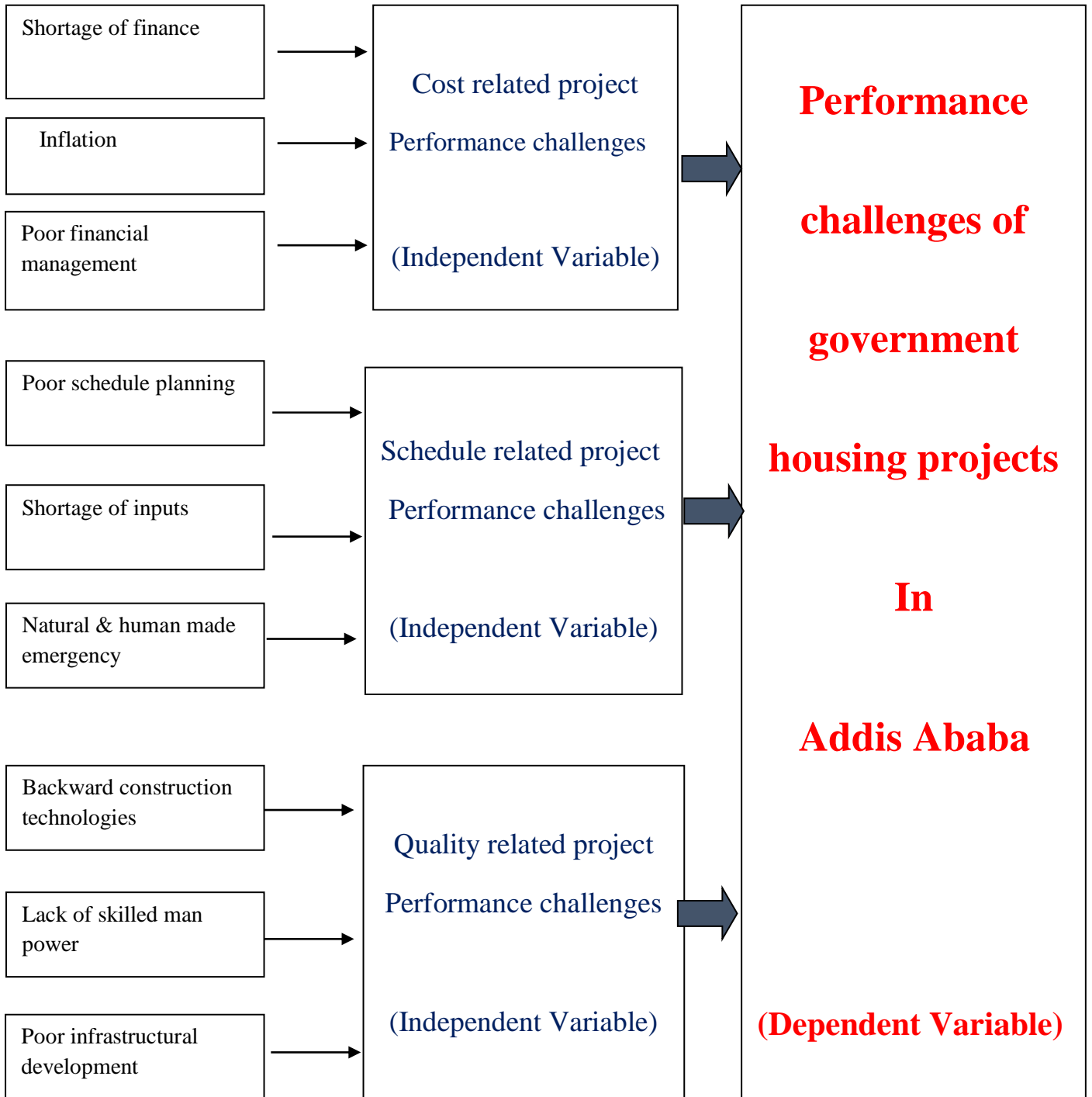
Studies by UNFPA (2007), states that slums in Ethiopia claim more lives of their residents with mortality rate in slums 180 per 1,000 live births being almost double the mortality rate of the formal shelters of 95 per 1,000 live births.

Several studies were analyzed in the literature review section. Substantial amount of studies were mainly focused on describing and explaining the initiatives taken to address the housing problem of the developing cities like Addis Ababa. Some of the studies are employed to assess an opportunities and challenges regarding to housing projects. Further studies undertaken to analyze the specific challenges to the housing projects. In accordance to the relationship between the housing and the national economy, the economic correlation between the housing projects and the city`s economic development are subjected to be studied.

However, none of them didn`t assess the challenges in particular to to the performance side of the projects specifically. In addition to that, to the best of the researcher`s knowledge there is no study undertaken to show the performance side challenges of the Addis Ababa city government housing projects. Therefore, in this study the researcher will assess the performance challenges of the Addis Ababa government housing projects. By doing so, this research addresses the existing knowledge gap regarding to the performance challenges of the government housing projects in Addis Ababa.

## 2.4. Conceptual frame work

**Figure1: Conceptual frame work**



Source: Addis Ababa housing construction project office (AAHCPO), 2020

## **CHAPTER THREE**

### **Research Methodology**

This section outlines and justifies the methods chosen to answer the research questions. Methodology refers the process used to collect information, data for the purpose of making a research. It informs the reader of the approaches utilized to collect and analyze the data, including what types of data were collected and why this was considered appropriate. The aim is to explain the motivation and suitability of the chosen methods to the reader.

#### **3.1. Research Approach**

The approach used in this research is a qualitative research approach. Qualitative research is a scientific method of observation to gather non-numerical data, while focusing on meaning-making. This often occurs through "case study, personal experience, introspection, life story, interview, artifacts, and cultural texts and productions, along with observational, historical, interactional, and visual texts." This type of research answers questions related to why or how a certain phenomenon may occur, rather than how often it occurs. Kothari (2004) qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior.

#### **3.2. Research design**

Research design is a master plan specifying the method and procedures for collecting and analyzing the need of information. Research design is needed because it facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximal information with minimal expenditure of effort, time and money (Kothari, 2004:32). It helps the study to be relevant to the problem and it uses economical procedures. It specifies which approach will be used for gathering and analyzing the data.

The type of research design employed under this study is descriptive research. The major purpose of descriptive research is description of the state of affairs as it exists at present. Then this study described and critically assessed the performance challenges of government housing projects in Addis Ababa.

### **3.3. Research Methods**

#### **3.3.1. Sources and data collection techniques**

##### **3.3.1.1. Primary data**

Primary data used in this study through Interview questions. The interview respondents selected by the purposive sampling technique. Purposive sampling also known as judgment, selective or subjective sampling is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study. Patton (2002) Therefore, it gives a green light for the researcher to deliberately select the respondents based on their relevancy to the study.

Based on the above fact, the researcher interviewed four relevant officers from departments of construction management & technologies, to obtain a data related to factors affecting the schedule of the projects, four officers from the project finance division to assess the performance challenges related to cost of the projects. Another four officers from the project quality assurance division to identify the quality challenges of the projects and four more officers interviewed from the planning, monitoring and evaluation division so that to assess the extent of deviation between the desired and actual performance.

In total, sixteen relevant senior and operational officers are subjected to an interview process. Due to the spread of novel coronavirus pandemic, all the interview sessions were carried out by the phone. Depend on the demand of the interviewees, Both Amharic and English languages are applied in an interview sessions. The interview collected through Amharic language translated in to English by the researcher so that to facilitate the data analysis process.

In order to triangulate the data, the researcher were planned to physically visit the housing construction site besides collecting the data by the interview process. However, the spread of corona virus in particular in Addis Ababa made such data triangulation process very difficult and dangerous as well. Thus, the researcher failed to do it.



### **3.3.1.2. Secondary data**

It is not inclusive and holistic to assess the performance challenges of the housing projects only based on collecting and analyzing the interview questions. Therefore, the researcher also employed the analysis of relevant secondary data. In order to obtain the given data, the researcher physically visited both federal and city government institutions such as Addis Ababa city housing development agency, Addis Ababa housing project construction office, Ministry of Construction and urban development, the researcher also reviewed different Annual Reports, Journals, Publishing's and profiles regarding housing projects and construction from UN-habitat other relevant sources.

### **3.3.2. Data Analysis Technique**

The data analysis method used in this study is both descriptive and content analysis. The descriptive analysis employed to address the first research question which assess the overall performance of the housing projects. The Content analysis used to answer the rest of research questions. The content analysis is one of the most common methods to analyze qualitative data. It is used to analyze documented information in the form of text, media, or even in physical items. When to use this method depends on the research questions. Content analysis is usually used to analyze responses from interviewees (Bhatia, 2018). There are two general types of content analysis: conceptual analysis and relational analysis. Conceptual analysis determines the existence and frequency (quantitatively) of concepts in a text. On the other hand, Relational analysis develops the conceptual analysis further by examining the relationships among concepts in a text. Each type of analysis may lead to different results, conclusions, interpretations and meanings.

This project work made use of qualitative data collected from the interview and secondary sources. Hence, the analysis take in to account the relationship between performance challenges and independent factors contribute for it. Therefore, the type of content analysis employed in this research is relational analysis. Besides, this project work didn't take into account of numerical data that would be analyzed through tools of statistical methods.

In this project work, the purpose is to understand the phenomenon being researched better rather than predicting (Bhattacharjee, 2012). Consequently, in undertaking the task of qualitative data analysis under this project work, the researcher made use of interviews and produce data in the form of notes, summarizing, categorization and structuring of the data. Finally, the qualitative data collected were analyzed through the use of relational content analysis techniques to see the effects on the ground in a meaningful way.

### **3.3.3. Ethical considerations**

All the research participants included in this study were appropriately informed about the purpose of the research and their willingness and consent was secured before the commencement of undertaking an interview. Based on their willingness, the respondents name were attached with their response during the analysis stage. However, their names will remain confidential for those respondents who refuse to be called by their name. Thus collective names like ‘Interviewee 1, Interviewee 2..., and Interviewee n’ will be used.

## **CHAPTER FOUR**

### **Data Analysis and presentation**

#### **4.1. Introduction**

In the assessment of the performance challenges of housing projects in Addis Ababa city, research findings based on Interview and secondary data analysis are presented in this chapter. The presentation is organized in line with research objectives and questions. To address this objective the researcher presented his own interpretation and reflections of the issue along with the research participants' own direct interpretation and understandings. This chapter is organized into five sections. Section one deal with the overall performance of housing projects in Addis Ababa, Section two presents the cost related performance challenges of housing projects in the city. Section three deals with the schedule aspects of performance challenges of the government housing projects, Section four assesses the quality assurance challenges of housing projects in the Addis Ababa city.

#### **4.2. General characteristic of the interviewees**

The Addis Ababa housing construction project office is the highest authority in undertaking the government housing projects in the city. In fact, the project office is not directly involves in the construction activities but it is a client for a given projects. besides, it plans, budgets, hire a consultants, offers a bid for a contractors, awards a contract for the winner, to some extent it participate in the procurement practices, analyze and interpret the information gathered by a hired consultants about the project cost, project schedule and project quality constraints. Finally, the project office uses such information's for the future planning and implementations.

This study included 16 officers from the variety of Addis Ababa housing project construction office departments. The departments included in this study are project planning, monitoring & Evaluation, project finance division, construction management & technologies department and project quality assurance divisions. Four staffs from in each department, 16 in total were taken a part in the interview process.

#### 4.2.1. Gender composition of the interviewees

When we review the gender composition of the interviewees, 5 of interviewees (31%) are females the rest 11 (69%) of the respondents are male.

**Table 1: Gender composition of the interviewees**

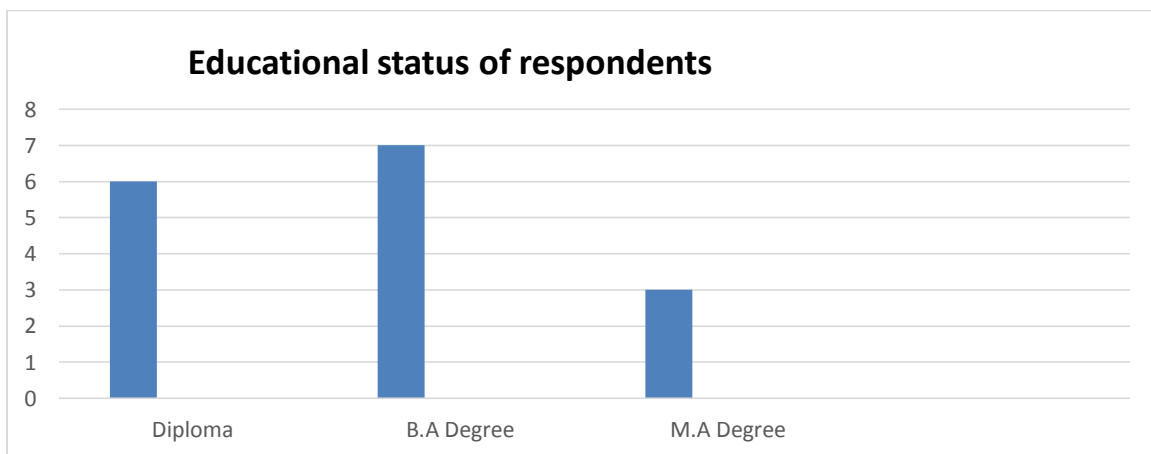
Gender composition of the interviewees		
Gender	Number of interviewees	percentage
Male	11	69%
Female	5	31%
Total	16	100%

**Source: survey data: 2020**

#### 4.2.2. The educational status of respondents.

The educational status of the interviewees are summarized as follows: 6 of the interviewees are Diploma holders. Seven of the interviewees have a first degree. The rest of 3 interviewees have a master`s degree.

**Figure 2: Educational status of Respondents**

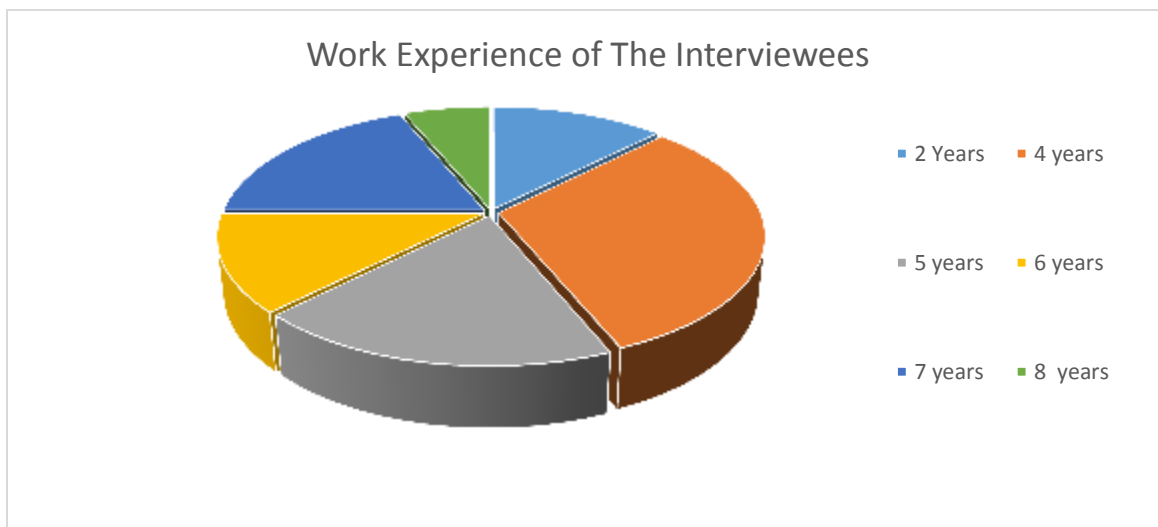


**Source: survey data, 2020**

### 4.2.3. The work experience of the respondents

When we see the work experience of the interviewees in the Addis Ababa Housing construction project office, two of the employees have a two years' work experience. Five of the interviewee`s have a four years' work experience. Three of interviewees have a five year work experience. Two of an employees have a six years', one interviewee have eight years' experience and the rest three interviewees have a seven years work experience in Addis Ababa housing construction project office.

**Figure 3: Work Experience of the Interviewees**



**Source: Data survey, 2020**

In Addition to that, the interview process included one senior official from each department which means four of a total interviewee`s works in a senior position in the Addis Ababa city housing construction project office. The rest of the interviewees engaged at a medium and operational level post.

Before conducting any kind of interview process, the interviewees were met personally and their willingness was granted for an interview session by phone. Besides, with an exception of one interviewee, the rest allowed to be called by their name in this study. The names and other general profile of the interviewees are summarized in the following table as follows.

**Table 2: Summary of the General profile of the interviewees**

<b>Interviewee name</b>	<b>Gender</b>	<b>Educational Status</b>	<b>Work experience</b>	<b>Department</b>
Etalemahu Gebre	F	Diploma	4 years	Planning, monitoring & evaluation division
Biruk Diribssa	M	BA Degree	2 years	Planning, monitoring & evaluation division
Leulseged Eramo	M	BA Degree	6 years	Planning, monitoring & evaluation division
Meaza Yimenu	F	Diploma	4 years	Planning, monitoring & evaluation division
Daniel Berri	M	MA Degree	7 years	Project Finance Division
Jemal Edris	M	Diploma	7 years	Project Finance Division
Interviewee 01	F	Diploma	4 years	Project Finance Division
Kirubel Tariku	M	BA Degree	5 years	Project Finance Division
Nebiyu Gebissa	M	BA Degree	7 years	Project Quality Assurance Division
Fikre Mulugeta	F	Diploma	2 years	Project Quality Assurance Division
Challa Hordofa	M	BA Degree	4 years	Project Quality Assurance Division
Alemneh Girma	M	Diploma	6 years	Project Quality Assurance Division
Fekade`ab Gebru	M	MA Degree	8 years	Construction Management and Technologies
Temam Halimo	M	BA Degree	5 years	Construction Management and Technologies
Zinash Bedilu	F	MA Degree	5 years	Construction Management and Technologies
Yidnekachew Deribe	M	BA Degree	4 years	Construction Management and Technologies

**Source: survey data, 2020**

### 4.3. The overall performance of housing projects in Addis Ababa.

The Addis Ababa city government have been engaged in providing a low cost housing for those in need in our capital since 2005 pilot low cost housing project. According to Seyoum (2018), Even though the housing program planned to address the people with a low income segment of the society, however, whether it is benefited the genuinely poor segment of the society or not is under scrutiny.

Based on the quantitative figures obtained from the AAHCPO, When the researcher observe the overall performance of the housing projects in our city, the overall actual performance is by far deviated from the desired performance. In a simple term, according to the briefing from the Addis Ababa housing construction project office (2020), with the current pace of project performance it takes a 150 years to fully satisfy the housing demand of the city. Based on the given table which obtained from the AAHCPO, it is possible to observe the overall performance of the Addis Ababa city government owned housing projects for the past eleven years.

**Table 3: The performance of housing projects**

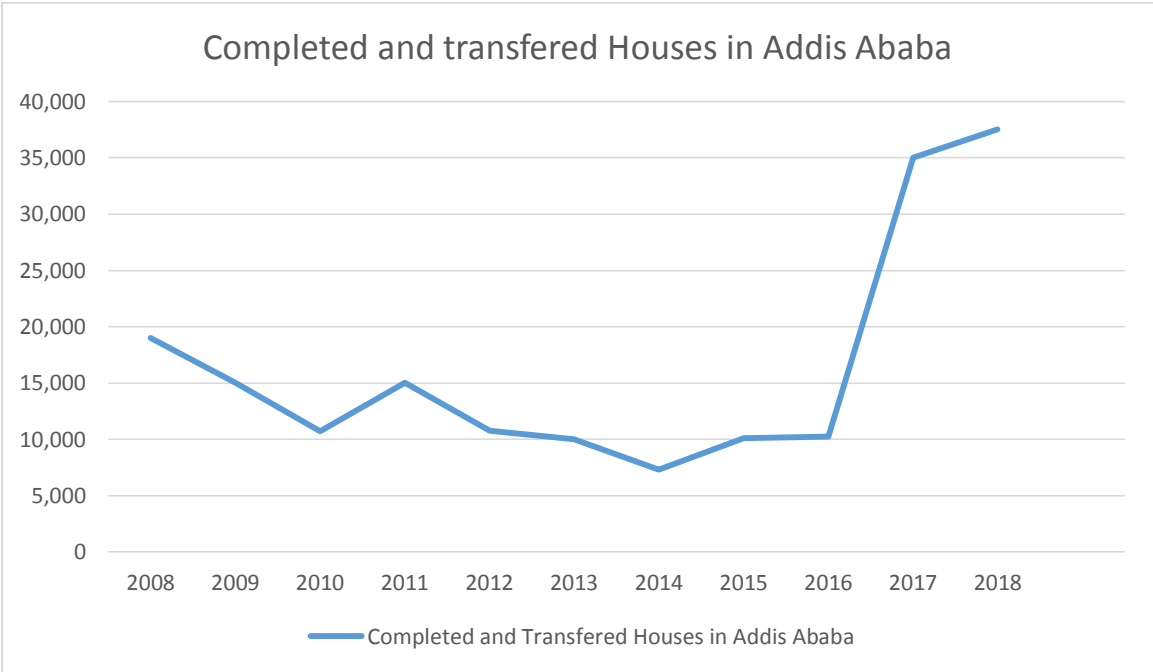
Round	Studio (10/90)	Studio (20/80)	One Bed room	Two bed room	Three Bed room	Total
2008	0	4,118	5,677	6,548	2,645	18,988
2009	0	2,592	5,070	6,263	1,106	15,031
2010	0	2,695	3,679	3,626	735	10,735
2011	0	2,797	6,755	4,108	1372	15,032
2012	0	3,088	4,719	2,028	934	10,769
2013	0	1,255	4,467	2,747	1,531	10,000
2014	0	2,952	3,594	433	321	7,300
2015	0	1,326	4,665	2,952	1,155	10,098
2016	0	2,570	4,423	2,330	934	10,257
2017	960	6,734	15,670	7,309	4,327	35,000
2018	23,016	2,449	6,262	3,316	2,489	37,532
Total	23,976	32,576	64,981	41,660	17,549	180,742

#### Status of Condominium Housing Projects Performance

**Source: Addis Ababa housing construction project office, 2019**

As it is shown in the above table, based on the information was obtained from Addis Ababa Housing Project construction Office (AAHCPO, 2018), once the sites are completed it is not taking so many times for the lottery draw. Thus we can consider delivery of the house for the final users as a completion of project and performance indicator. The demand for condominium housing before 2019 was around one million people. But the total houses delivered to the beneficiaries with in eleven years are only 180,742 houses. That means the project could address only 180,742 (18%) of the need even after eleven years. shows that the number of condominium housing being built and transferred to the final users compared to the demand for housing is inadequate that means the demand for housing increasing at an increasing rate but the performance of condominium housing project does not show growth in quantity from time to time.

**Figure 4: Completed and transferred houses in Addis Ababa**



**Source: Addis Ababa housing construction project office, 2020**

Not only the deviation from the desired performance and the actual performance, however when we see the above chart for Instance, in the third round lottery in 2008, the total number of housing transferred to the beneficiaries was 18,988, however starting from the fourth round to eleventh round of housing transfer for the final users, the number of condominium houses



delivered failed to skip the limit of 15,000 for the consecutive nine year. The performance after 2016 is by far better with a significant number of an increase and a completion of housing projects in the twelfth and thirteenth rounds with the number of 34,040 and 37,532 houses respectively. The performance in the twelfth and thirteenth rounds doubled the performance years between those two consecutive years. The implication of it would be there is an improvement in the performance of the completion and delivery of housing projects. However, in contrast to the demand of housing in the city, the performance of the housing project is far from being called significant.

The housing projects faces the challenges from both internal and external factors. The internal factors contributed for such challenges are related to the project cost, project quality and project schedule parameters. The external factors contributes for those challenges includes political, socio economical and market related challenges. The performance and completion of those projects didn't face the same challenges from the external factors in all project sites. The challenges are particular for particular areas and situations. For instance, when we see the political factors, According to AAHCPO (2019) the fourteenth rounds 20/80 condominium housing project performance information indicates more than 52,000 Houses by the end of the Fiscal Year expected to transfer for the winners. More than 50,000 of this condominium houses were built at Koye Feche project sites, the koye feche project site characterized by being a controversial area between the Oromia region and the Addis Ababa city. The Addis Ababa city housing project office launched the given project nine years ago by the decision of the then mayor Diriba Kuma. The project was planned to be completed within five years. However, from the very beginning controversial status of the given site exposed it for so many challenges other than the directly project related problems. The challenges were as imminent as a threat especially after the political uprising broke out against the government by 2016. This condition persuaded the project to be suspended for a while. Even the given project were frequently attacked by the local youths claiming the given project displaced the local farmers. With such confrontation, the given projects have been completed after the change of the government by 2019. Three years later the deadline set for the completion of the project.

This situation reveals how the housing projects have been exposed for the challenges from the external situations. According to the information obtained from the Addis Ababa housing

transfer and development Agency (2019), Even after the projects in the given site have been completed and the lottery drawn for the final users/ winners, the controversial status of the site erupted a protest and political instability among the local youths and the city government of Addis Ababa. Since the houses were built the boundary between those two regions (Oromia and Addis Ababa) are not clearly demarcated. The federal government intervened to freeze the transferring of those houses for the lottery winners till further notice after enquiring to whom the region the site belongs to (That is why the researcher failed to include the performance of the housing projects by the year 2019)

The study finding indicated that challenges, that the performance of housing projects in our capital city is by far deviated from fulfilling the overall housing shortage and demand. The current performance is not even progressive enough to have a hope of things will go better in the coming years, since the output registered in the past consecutive 11 years are very volatile and uncertain. With the current housing construction and completion performance rate an additional one and half century (150 years) requires to bring the housing demand and supply in to an equilibrium position. The performance challenges emanates from both internal and external factors. Once we agreed the housing construction projects performance in Addis Ababa city is very poor, volatile, uncertain and by far deviated from the desired performance.

The next step will be assessing what are the major internal factors contributed for performance challenges of Addis Ababa housing projects and the analysis presented as follows.

#### **4.4. The cost related performance challenges of housing projects.**

Addis Ababa's growing population and rapid rate of urbanization is placing substantial pressure on housing, especially amongst the lower income population. The challenges for lower income households to acquire their own home are twofold. Lack of affordable, good quality housing stock and the difficulty of obtaining housing finance to address this, the Government has launched an ambitious subsidized housing program. But this program is not free from stresses. Tebarek (2017) it face with so many challenges regarding its performance. In the field of housing projects finance, starting from only one bank has a mortgage book of any size and working in collaboration with the government there are several pitfalls regarding the cost of housing projects.

The cost related performance challenges of the housing projects includes but not limited to, the shortage of finance and budget, macro-economic turbulences and poor financial management. The above three major sources of cost challenges for the housing projects are assessed in this section.

#### **4.4.1. Shortage of finance.**

The availability of finance is one of the major factors which keeps the contractors to complete the project in the given time. Since the project constraints of project cost, project schedule and project quality are highly interrelated to each other, when the project faces the shortage of finance it affects both the quality and schedule scopes of the project. In return it leads to a project failure.

*According to Daniel “the shortage of finance is the most frequent and imminent problem that the housing projects are facing in Addis Ababa city housing projects. The only source to finance the housing projects in Addis Ababa city is the city government. Our project office (AAHCPO) disburse funds by phase. When the housing projects faces the shortage of budget the contractors frequently appeals for extra injection. However, the project office also faces the shortage of finance since we undertakes multiple projects at the same time. When we (the AAHCPO finance division) are facing such a shortage also the commercial bank of Ethiopia is the only bank the project office goes for credit. Almost in all cases, the housing projects faces the budget deficit and it forces us to appeal for the loan from the commercial bank of Ethiopia. However, the state-owned Commercial Bank of Ethiopia (CBE) dominates the banking sector, partly because of preferential treatment from the government, such as its exclusive access to mortgage funding through the IHDP (Integrated housing development program) and its long years of operation. When it comes to assessment and disbursement of the requested loan by the project office for the housing projects it clients for, the loan process takes a very long period of time.*

*As I said earlier, when it comes to the provision of the loan, the bank provides a loan after a careful analysis and it takes several time. Therefore, it will leave us (AAHCPO) with no choice but to reschedule of the project so that to meet them with the expected time of disbursement of the loan from the bank. The major problem in this regard is, the projects might extend for more than two years just because of the failure to disburse the loan at a time we planned. During the extension period, the price for the project inputs will be sky*

*rocketed and the contract agreement privileges the contractors to claim extra income for the cost they incurred which arise from exaggerated increase in the price of the cost of materials. Due to that, even though the funds are released after a while, the previously demanded amount of money might not be enough to cover our expenses in the moment. Therefore it forces us (the AAHCPO finance division) to appeal for an injection of extra finance. At the same time, the project schedule also be extended for several weeks. We (the AAHCPO finance division) observed that such vicious circle of the shortage of finance affected the completion of projects at a time and project failures.”*

As it is pointed out earlier by Daniel, the budget deficit is the very normal trend almost in all housing projects. Based on this fact, they file for credit from the commercial bank of Ethiopia. Due to a careful analysis of loans by the commercial bank to avoid the bankruptcy and giving a priority for the loan request from the prioritized sectors, it left the project office with no choice but to wait until the CBE approves and disburse their loan request. During this waiting time, an increase in the price of the variety types of project resources decreases the value of the already disbursed loan. In return it usually affects the cost performance of the housing projects in the Addis Ababa city.

While agreeing with all the issues raised by Daniel, his colleague “Interviewee 1” also reflects her experiences about how the projects faces the shortage of finance. As “Interviewee 1” states:

*“The financing of the housing projects are the victim of complicated corrupt practices. Unclear bids and sometimes without no bid parts of the projects will be awarded to the contractors. Since the project office (AAHCPO) to some extent involves in the procurement activities, the malpractice severely experienced in the procurement activity. Which makes the situations even worse is the documents related to the procurement activities are not presented timely. Thus, the Auditing activities faces several difficulties. Even if the receipts are presented they are subject to highly exaggerated price in contrast to the items bought. We (the AAHCPO finance division) filed our complaints so many times about such malpractices for our superiors. However, there is no or minimal measures have been taken to solve the problems. This lack of commitment to take serious measures led to aggravate the adverse situations related to finance instead of improving it.”*

Based on Interviewee 1's experiences and attitude, the corrupt practices are deep rooted in the housing projects of the Addis Ababa city. Unclear bids so that unqualified winners, malpractices in the procurement activity, an absence and delay of supporting documents to perform prompt auditing activities and lack of commitment from the superiors to take a serious measures on such discrepant activities led to the frequent shortage of finance and poor performance on the housing projects in the city.

Something to note on the dependency of the project office (AAHCPO) only on CBE for looking an extra source of finance for the housing projects, excluding the private commercial banks, surprisingly, the microfinance institutions (MFI) can play an important role in housing and construction financing of the city. According to the World Bank (2018), the country had 37 microfinance institutions, with nearly 1 800 branches, 4.7 million borrowers and 16 million accounts as of March 2018. Although the microfinance institutions are intended to serve the financial needs of the poor, 80 percent of the poor depend on informal lenders, suggesting that MFIs can achieve greater outreach for the government housing projects.

Still, MFIs are better than private banks in financing private housing and construction projects, with at least 82,540 housing construction loans in the country by them, versus 6,728 loans by private banks, and total exposure of Br 2.8 billion (US\$95 million). Loans offered by MFIs are cheaper with an interest rate of 14.3 percent a year compared to 17 percent charged by private banks, and they charge lower fees. The city government's failure to look in to multiple source of financing instead of being dependent on single state owned bank, took it in to frequent shortage of finance so that failure of the housing projects. (World Bank, 2018)

Regarding source of finance yet, Kirubel's attitude differs from his counterparts:

*“Since Construction and Business Bank stopped mortgage services and was swallowed by the giant Commercial Bank of Ethiopia in 2016, no bank specializes in mortgages or loans to the construction sector. In a country where no more than 16 percent of the population receives a formal salary, collateral requirements leave only a few households eligible for mortgage loans. Therefore, the city residents demands the city government to meet their problem for the housing. This persuades the government to engage in*

*multiple housing projects at the same time with a limited financial resources. This situation coupling with so many other factors makes almost all housing projects to hit by the shortage of finance, poor performance and failure”*

As Kirubel shared his thought and experience, the failure for overriding the shortage of finance by promptly having a loan for housing projects arises from, the absence multiple banks specialized in mortgage and capable enough to disburse fund for both private and public demands. This problem forced the city dwellers with no hope but demanding from the government for the provision of low cost and affordable houses. This situation puts way too much pressure on the shoulder of the government. With so many priorities and budget constraints, this situation made the government to be inefficient and ineffective to address the housing problems of the city.

The World Bank (2019) estimates that mortgages represent only 1.87 percent of GDP of the country, small even by African standards. The government works with the state-owned CBE to provide mortgages to IHDP (Integrated housing development program) beneficiaries, to be paid over 15 years at 9.5 percent a year. As a result, CBE dominates the existing small mortgage market, issuing up to 69 percent of total mortgages through the IHDP. Private Banks' capacity to offer mortgages is constrained by lack of long-term funds, risks of non-performing loans due to low levels of income of urban residents and the high price of houses, lack of house supply, financial illiteracy, and crowding out of the market by CBE. Thus, their mortgages are restricted to their own employees or well paid employees of large international organizations. Bank employees receive preferential treatment: lower interest rates (7.7 percent versus up to 18 percent for regular customers) no or a lower down payment and longer amortization periods (25 years versus 10-15 years for regular customers).

This situation strengthens Kirubel's idea of the adverse effect of an absence of multiple mortgage banks and why the majority of city residents left with no choice other than too much to depend on the government for their housing demand. The insufficient budget, the emergence of CBE as the sole source of extra finance for the government housing projects, the absence of mortgage banks, weak private banks and other external and internal factors led to much dependency on the government for the provision of houses, almost as a sole provider of housing in the city that the low income people can depend on. This increasing demand forced the government to launch

multiple projects at the same time with slightly increase in the annual budget for housing projects in the city. This condition worsening the shortage of finance in the government housing projects in our city.

#### **4.4.2. Macro-economic turbulences.**

Housing construction projects involve extensive use of materials. According to Obiegbu (2003), the housing construction projects is vulnerable to inflation in prices of materials. Materials needed for erecting and completing construction works could amount to about 35-45 percent of the total project cost while in some other projects, the materials cost may be as high as 60 percent.

The above situation is also one of the major bottlenecks of housing projects in Addis Ababa city. Yidnekachew Deribe is a Construction technology and management officer at Addis Ababa housing projects construction office:

*“An increase in the cost of materials is dramatically increasing the total cost of housing construction and subsequently putting a pressure on the completion of the housing projects.”*

He stressed that:

*“Inflation and a frequent unexpected increase on the cost of materials which arisen from it continued to be a sickness on the contractors and housing construction projects. Inflation puts a pressure on every citizen and in all sectors of the economy. Inflation is thus felt in the construction sector of the economy by the increase in construction material prices. The inflationary increases in material cost is the major cause of housing construction cost overruns and project suspension in Addis Ababa city”*

Yidnekachew further established that:

*“The prices of building materials in Addis Ababa have increased steadily over the years and this inflationary trend has led to higher housing construction costs so shortage of finances. These frequent increases give rise to cost overruns and challenge on the project performance. For every purchase of materials it has become normal to expect a price increases of 40 to 60% on the cost of materials. During the seasons of the construction boosts on the behalf of the private sectors the cost of materials might increase up to double*

*of the previous purchase. The worst part is, even the necessary construction materials might totally disappear from the market. When such a thing happens we (AAHCPO) might focus on other unrelated tasks or even freezing the housing projects till further notice. In general, construction cost estimate losing usefulness within short periods, difficulty in forecasting and planning, and frequent contract price variations, all of which often leads to project cost overrun and abandonment”*

The above take from Yidnekachew speculates, inflation plays an important role in the performance of housing projects. The cost of materials for the construction of housing projects inflates up to 60 percent. During the seasons of the construction boosts the inflation might raise up to 100 percent. This condition made the construction cost estimation worthless for both the contractors and project office.

In a similar view, Zinash submitted that,

*“The Addis Ababa housing construction projects has been going through a very challenging period. The primary objective of housing projects to help in solving the housing problem and uplifting the standard of living in a reasonable period of time have either been abandoned or did not take-off at all due to lack of funds arises from rising cost of construction material. Construction costs within a preceding year can move up to as about 60 percent. Inflation causes serious problem to contractors.”*

The above takes by the two officers witness that the micro-economic turbulences, such Inflationary forces threatening the housing projects to the high cost overruns and shortage of finance. Subsequently, leading the project office up to abandoning the housing projects.

Etalemahu, from the planning, monitoring & evaluation division also shares Zinash`s point

*“The higher the inflation rate on the construction materials has made contractors’ and quantity surveyors more aware of the need to price inflationary risk at the pre-contract stage. Thus, it is making them to offer a very expensive prices during a bid stage in contrast to what the government taken as a budget. Because of the inflation didn’t take in to an account or roughly analyzed in the planning stage, the calculation of cost-in-use of alternative design solutions is often done almost without considering the impact of inflation on construction material prices.”*



Standing from this point, beyond the cost problem rose around the housing projects by the inflation, the failure to plan and taking the inflation in to account during the planning process made the housing projects to pay a huge price in to failure which arise due to cost overrun. This is the exemplary situation for the saying of “Failure to plan is planning to fail.”

The other most important macro-economic constraint which severally challenged the performance of the housing projects furthermore is, the shortage of hard currencies. As Alemneh from quality assurance division argues that

*“A number of inputs for the housing construction projects are either not fully or partially produces in our country. This situation takes the housing projects to be dependent on the imported items from abroad which requires a massive supply of hard currency and unfortunately the hard currency is one of the critical economic factors our nation faced with a critical shortage particularly at this time. The uncertain waiting time and delay to obtain the imported items of the project inputs and the consistent increase on the foreign exchange rate, not only makes the cost overrun against the projects but also the reduction on the quality of the housing projects because of using an alternative option of using items with less quality but available locally by the contractors as an excuse for the waiting time of the desired item and a consistent increase on the foreign exchange rate.”*

Alemneh`s point indicates that the inflation is not the only macro-economic factor creates a performance challenge on the cost of the project but the shortage of foreign exchange also. The shortage of hard currency have a two sided effects on the project performance. First, the longer the waiting time to earn the hard exchange and importing the desired project material directly affects the project schedule plan. Second, the daily and consistent increase on the foreign exchange rate (i.e. US Dollar against Ethiopian Birr) devalues the purchasing power of the budget allocated for the housing projects. This situation directly contribute to the cost overrun even shortage of finance of the housing projects. According to NBE (National Bank of Ethiopia, 2019) In order to solve the prolonging and critical shortage of hard currency most banks including the state owned commercial bank have launched a diaspora mortgage as one of the mechanism to tackle this problem, whereas diaspora members are expected to pay loans in US dollars, pounds or Euro. However its impact in solving the hard currency demand in the housing construction projects is not still viable. NBE (2019).

#### **4.4.3. Poor financial management.**

Project Financial Management is a process which brings together planning, budgeting, accounting, financial reporting, internal control, auditing, procurement, disbursement and the physical performance of the project with the aim of managing project resources properly and achieving the project's objectives. Prunier et al. (2015) it also deals with the use of a company's financial resources for the given project in a day to day activity. This includes the use of cash and other assets such as equipment.

The poor financial management is one of the problem the Addis Ababa housing projects failed to cop up. As Jemal from the finance Division, states that:

*“The problems related to financial management is not only related with the project contractors. The AAHCPO also have a critical problem on that regard. The financial planning process lacks to assess whether the financial position of the project office is stronger enough in order to decide whether to launch a bid on a large and multiple housing projects at the same time. This arises due to an ambitious desire for achievement from the senior officials and their interference on the finance planning process.*

*In a shorter period of time, the poor planning process puts a pressure on the budgeting, which faces a deficit due to launching of multiple project at the same time. It puts a pressure on the release of fund for the project contractors. Then, the poor planning coupled with deficit of budgeting and a delay to disburse funds for the contractors, it have a great impact on the procurement process for the acquisition of project materials. In the last couple of years yet, we (AAHCPO) are working to solve such a problem and to make the planning process to be more realistic and independent from senior official's interference, with an ambition to complete a reasonable number of housing projects with a limited financial resources.”*

As per the information obtained from Jemal, the project financial management was weak enough due to poor planning, budgeting and disbursing practices coupling with an ambitious intervention from the senior officials to launch and complete so many and large projects at the same time without or barely considering the total budget allocated for the housing projects in the given fiscal year. This unrealistic project financial planning frequently created a huge deficit of budgeting and a bottleneck for the effective procurement for both project and administrative cost of materials. However, such a trend have been reducing in the last couple of years and the project

financial planning division earned a demonstrated independence from the unreasonable influence of senior officials.

Daniel also shares the same view and he added:

*“One of the major source for of failure for our (AAHCPO) many housing project performance is poor financial management. It includes improper accounting procedures and systems, failure to manage the project office’s cash flow from the government budget and the bank loans, failure to accurately track and manage job, project resources and equipment costs, excessive overhead, excessive debt, and failure to make project decision based on sound financial data. Without sound financial management, our project office (AAHCPO) are setting themselves up for failure.”*

As Daniel establishes his attitude as many government institutions, the Addis Ababa housing construction project office also have a complicated and inefficient financial management system, characterized by improper accounting procedures and systems, failure to manage the project office’s cash flow from the government budget and the bank loans, failure to accurately track and manage job and its related cost, project resources and equipment costs, excessive overhead, excessive debt, and failure to make project decision based on sound financial data. Which negatively rewarded the housing projects with high performance challenges related to the cost of the projects.

In general, the cost related performance challenges related to the Addis Ababa government housing projects are complicated, multi-channel, and deeply rooted. The major problems in this framework includes housing budget deficit, single source of loan for housing finances, micro economic turbulences such as, high inflation rate on the construction materials and the poor financial management practices tends to be the bottlenecks for the desired effective cost performance for the housing projects in our city.

#### **4.5. The schedule related performance challenges of housing projects.**

The project schedule is the tool that communicates what work needs to be performed, which resources of the organization will perform the work and the timeframes in which that work needs to be performed. Gilbert and David (2007). The project schedule should reflect all of the work associated with delivering the project on time. Without a full and complete schedule, the project

manager will be unable to communicate the complete effort, in terms of cost and resources, necessary to deliver the project.

Despite the fact there are so many factors affecting the schedule of the housing projects, this research mainly assess issues related with poor project schedule planning, shortage of project inputs (resources) and Natural & human made emergencies.

#### **4.5.1. Poor project schedule planning.**

Project schedule planning plays a biggest role in the housing projects. The project planning expected to be realistic and dynamic. It needs to take account the current and presumably continuous situations during the project plan formulations.

According to Meaza, however:

*“Although the project schedule planning process in the planning, monitoring and evaluation department tries to take a multiple factors such as, current situations, the capacity of the project contractors and lesson learned in the past in to the schedule planning process, the reality on the ground implicates that it is symbolic and not deeply rooted as a culture. In this competitive, dynamic and fast changing construction environment, our schedule planning process yet carried out as business as usual. Due to the rough analysis of external and internal factors in the schedule planning process the project schedule planning so many times also became unrealistic.*

*Not only that, the tone at the top is very ambitious. They (senior officials) demand the housing projects to complete as soon as possible not even by considering the existing situation on the ground. In fact we (AAHCPO) all need to complete the projects as soon as possible and that is why we disperse the projects across many contractors at the same time. However, the senior official’s ambition also affects the planning process adversely. Due to those two factors of, poor schedule planning process and demand by the senior officials to complete projects hurry, the project schedule is poorly analyzed and unrealistic. Such things are the main factors for the performance challenges related to the schedule of the projects.”*

As Meaza from planning, monitoring and evaluation division pointed out, it is possible to understand that, the schedule planning process considers a multiple factors in to an account, such as lesson learned from the past, the current market situation, the capacity of the project

contractors, the budget allocated for the project etc. however, when it comes to deciding the final decision on the scheduled timeline for the given projects, there is a frequent and too much interference from the senior officials to complete the project as soon as the pre-determined date which have been set out by the project schedule planning process despite the fact they disperse the projects across many contractors to complete the housing projects early from the preset date. Such an interference from the senior officials might arises from the demand for reputation of promptly completing the housing projects or the influence from the authorities above them. This unrealistic situation paved a ground for a frequent failure of planned timeline of the projects. It has become a new normal for the projects to complete with schedule overrun.

Leulseged, also have something to add in to:

*“We (AAHCPO) gather Performance reports from our consultants from multiple project sites and we will make surprise visits either to our project sites. In most of cases the delay on the schedule happens that the project team members are not to follow the schedule set out for each tasks by their contractors. The project team members will have no clear picture of what is expected of them as they work on the projects. There will be no strict deadlines to meet hence creating a lazy atmosphere among the team members.*

*This means that the project will not be completed on time and the result will be a poorly done work. Besides, the project schedule planning process in our department is not accompanied with the genuine capacity of most of the contractors to deliver the project timely. Furthermore, there is the absence of relevant technologies which enables us and the contractors to formulate a demonstrated and realistic project schedule. Not only for the planning but during the project implementation process also if there is a presence of a project management software as like as many advanced projects, it allows project managers to track project schedules, resources, budgets and project related assets in real time. Besides, the project schedule can be viewed and updated by team members associated with the project, keeping everyone well informed on the overall project status.”*

Concerns raised by Leulseged, more deals with the project monitoring process. As it is observable from his statement, there is a schedule assigned for each work packages in the housing project environment. But the failure by the project staffs not to follow the already set out

schedule for the given work package coupling with an absence of strict control whether the work packages are performing in line with the already set schedule, made the lazy atmosphere in the project environment. Technically, it implicates the absence of continuous follow up of measuring the performance of project activities by comparing the actual performance with the planned performance cost and schedule assigned for the given activity. Which is a dictionary term for “poor monitoring”.

Leulseged`s point is not limited to the poor monitoring only, he also suggested an absence of relevant technologies, failure to embed the project office`s planning with the planning of project contractors, software in the made the project schedule planning process made the completion of the project on the pre-set time line more difficult and unachievable.

The major sources of poor project schedule planning includes too much interference from the superiors with an ambition to complete the project as soon as possible without taking several internal and external factors in to an account, poor monitoring process, the project stuffs failure to act in accordance with the schedule set for the given activity in the project site so the lazy atmosphere created out of it. Besides, the absence of an advanced project management technology and software`s for tracking the project schedule planning in contrast to achievement on the ground. The sum of all the above pitfalls contributed for poor project schedule planning process and schedule related performance challenge on the Addis Ababa housing construction projects.

#### **4.5.2. Shortage of project inputs and resources**

Even if the projects are properly planned, all the financial resources are gathered at a time, all the required personnel`s are in charge of the project, an active support from the top management are secured, however, the failure to secure a continuous supply of project resources makes the project fail to deliver on the planned period of time.

The situation is also the same for the Addis Ababa housing projects which is experiencing an interruption on the supply of project resources so many times. Temam, from the construction management division with a frustrated manner states that

*“There is no continuous and reliable supply of resources for the project contractors to proceed their projects in compliance with the pre scheduled*

*completion date of the projects. I have been attended so many housing construction projects since the fourth round. However, all the projects where I have been, passed through the same scenario of shortage of supplies and termination of activities until the delivery of the items in demand.*

*In some situation, some crucial project resources especially those imported items might consume the time more than half a year to deliver in to the project sites than they expected to be delivered. In a simple term it means an extra six months added up in to the project schedule simply because of the failure of a single item logistics supply. Even if the given project resources are delivered us after consuming a significant portion of our project schedule, they incurs us (AAHCPO) with an exaggerated increase on the cost of the project resources. Due to this and other multiple factors, Most of the projects faces more than three years, in some contexts more than seven years of lagging from the previously scheduled date for the completion of the projects.”*

According to Temam`s view for the reason behind the delay of the projects, The housing projects have no secured continuous supply line for each project resources. In particular, the imported project resources consumes a significant portion of time allocated for the projects. Even if the given items are delivered after consuming a precious time of the housing projects, the huge price increase hits the cost allocated for the acquisition of those items very badly.

Most of all it indicates, the project performance indicators of project cost, project schedule and project quality are highly correlated and inter-related to each other. The situation experienced in one indicator have a direct and deep impact on the other one. As it is observed from the above conditions a shortage of finance, a high level of an inflation leads to an increase in the price of the project resources and made it difficult for the projects to acquire the necessary project items at a time. On the other hand, a shortage of hard currency lags the import of some locally unavailable but crucial project inputs not to deliver at a time. The aggregate impact of these factors are the failure for the projects not to meet their schedule. Thus, the problems related to the cost and quality of the project directly stretches its muscles in to the schedule of the projects.

### **4.5.3. Natural and human made emergencies**

Addis Ababa barely affects by large scale natural and human made catastrophes. If such things are going to happen the impact is not limited to the housing construction projects but the impact

of such factors triggers large-scale disasters cause considerable damage to the built environment, resulting in serious disruptions to normal human activities and billions of Birrs in property damages. Such disasters reveal vulnerabilities in infrastructure design and construction and test to the limit the planning, design, and construction abilities of civil engineers.

*“The major natural and human made incidence happening in the housing project is right now. The prevalence of the corona virus pandemic made the project contractors not to fully operate. Most of the skilled personnel are on their annual leave to protect themselves from the virus. Even though both skilled and unskilled labors are partly operating in the housing project sites, due to the higher the level of attachments among the workers in the construction projects, it is difficult to implement a physical distancing.*

*With a threat of this potentially creates a fertile ground for the spread of the pandemic. It persuaded the project office (AAHCPO) to instruct an executive order for the entire project site employees to work slowly and with the great caution. The agreement also reached with the contractors that, their working hour also not to be as like as they used to work in the normal times. In general, it adversely affected the overall performance of the project, In particular the supply of project resources and the project schedule set for the number of housing projects in a multiple sites.”*

That is the take from Fekade`ab who is the senior official in the construction management division. Based on the take from Fekade`ab, it is explicit to understand the undesired impact of the Covid-19 pandemic on the supply channel and the schedule of the housing projects. The worst part is, it is uncertain to call the day for the end of the corona virus pandemic so that to operate with a full capacity in the housing projects. The current situation even made the schedule related project performance more difficult for the housing projects.

To summarize, the schedule of the housing projects are affected by multiple factors such as to much an interference from senior officials on the project schedule planning process, lack of working in collaboration with project contractors, poor monitoring process, failure by the staffs to perform based on the schedule set for each work packages, an absence of well demonstrated monitoring practices, an absence of advanced project management technologies in order to track the actual performance with the planned performance, the failure to create a secured route for the continuous supply of project resources so a scrambled project input supplies, an outrageous



increase on the price of the project inputs and lastly, the current spread of coronavirus particularly in Addis Ababa made the challenges too big to tackle against meeting the planned schedule for the housing projects in Addis Ababa.

#### **4.6. The Quality performance challenges of housing projects.**

Project quality management encompasses the processes and activities that are used to figure out and achieve the quality of the deliverables of a project quality is simply what the customer or stakeholder needs from the project deliverables. Patton (2002). Project quality management is broken down into three main processes: quality planning, quality assurance, and quality control.

In this section of the study, the researcher tries to assess major sources of quality challenges on the performance of government housing projects, from the perspectives of backward construction technology, lack of skilled man power and poor quality management.

##### **4.6.1. Poor Quality management.**

Quality management system (QMS) is defined as “all activities of the overall management function that determine the quality policy, objectives and responsibilities, and implement them by means such as quality planning, quality control, quality assurance and quality improvement within the quality system” (MS ISO 8402, 1994). QMS have many applications in the construction industry and implemented either at the company level or at the project level. Gondo (2011). The quality in the construction industry is linked with client’s satisfaction and the implementation of a quality management system is a key tool in consistently and reliably managing the goal of client satisfaction. Quality management system (QMS) could be implemented either at the organization level or at the project level itself.

Based on the Nebiyat’s view:

*“Although our project office (AAHCPO) put the project consultants in charge of controlling the quality of the projects, in some project sites it is exhibited that most of consultants subjected for bribery from project contractors for the fake report of they met the quality standard set by the project office. This prolonging trend made the projects to complete with the poor quality below the standard set by AAHCPO.*

*We have the firm principle of the housing construction projects should create a flexible and conducive organizational atmosphere which encourages the*

*development of quality management system in all aspects of their work. So that to assure the desired quality standards and due to lack of credibility from the project consultants, as a department we made a research with the questionnaire survey and interviews of participants of project. The participants of project include government officials, project management consultant, contractor, various consultants and suppliers.*

*The questionnaires have been prepared by authors based on quality aspects in construction project for government officials, consultants and customers / housing lottery winners. Moreover, several tools and techniques were identified as part of the quality implementation process, like benefit-cost analysis, benchmarking, and cost of quality, quality audits, inspection and control charts.*

*Our findings implicates that the Project quality is often earned inadequate attention by the most of project contractors. Every year we report formally that the quality management practices requires in almost all of projects however our findings not implemented on the ground. Subsequently, in the absence of effective quality management procedures, considerable time, and resources are wasting every year. Therefore, the problem is not the absence of quality assurance division but failure to implement the suggestion by the given department.”*

As per the interview session carried out with Nebiyat, from the project quality control & assurance division, there is the presence of quality management practices in the housing projects. The quality assessments mainly focuses on the satisfaction of the customer/ client of the housing projects. Since the projects are carried out by the project contractors the Addis Ababa Housing project office (AAHCPO) would be a client and put the consultants in charge to assess the satisfaction level of the project office with the pre-determined standards. This trend yet lost its credibility due to miss-use of trust experienced among many project consultants.

The project office quality assurance division makes its own quality assessment in addition to the report from the project consultants, the quality assessment mainly targets the satisfaction of final users. In order to carry out the quality of the housing projects, the Quality control & assurance division implements several quality assurance techniques includes benefit-cost analysis, benchmarking, and cost of quality, quality audits, inspection and control charts. Their findings implicates that enough attention didn't paid for the assurance of quality in every segments of the housing projects by the project contractors. Such reports are submitted almost every year

however the commitment from the stakeholders to improve the quality of the housing projects is not viable.

According to Alemneh:

*“Making a research and assessment is not the only mechanism we (AAHCPO quality assurance & control division) used to assure the existence of quality control measure used on construction site. In addition to that, the quality workmanship in all construction activities followed by quality control laboratory at site, maintain sequence of construction, regularly maintain the formats, study duties and responsibilities, site review meetings with staff, observe regular schedule, do proper sampling and testing, set procedures to control quality, keep spare parts/materials for laboratory equipment, follow the prescribed curing and schedules, practice sound housekeeping methods and coordination with the project procurement department. However, this mechanism also faced some barriers. Those barriers are still the report by the quality workmanship is not earn enough attention. Therefore, the problem existed on the implementation of the quality management practices provided by our department but not from our quality management plan.”*

Based on the view from the officers from the project quality control & assurance division, it is unacceptable to call a poor quality management system plays an adverse role in a quality performance of the projects. The quality control & assurance division periodically assess the quality gaps on the housing projects by means of quality management techniques, workmanship and even quality laboratories. At the end of it they suggests recommendations for almost all stakeholders of the projects. However, lack of an attention from the different stakeholders operating and managing the construction activities made the projects to pay a huge price on the quality of the houses. Quality used as an expense to complete the projects timely.

Moreover, lack of proper training/Inadequate human resource development, abdication of responsibility/management, lack of leadership for quality, lack of effective measurement of quality improvement, an absence of management commitment and resistance of the workforce for the implementation of quality management are the major factors coupling with other forces became a great sabotage in assuring the quality of government housing projects in Addis Ababa city.

### 5.6.2. Backward construction technologies.

The other factor which adversely contributes for the performance of quality on the government housing projects is the application of a backward construction technologies in the project implementation. It is too often called for the housing construction project demands a sophisticated and an updated technologies so that to ensure an optimal project implementation which is accompanied by the efficiency and effectiveness in the utilization of project resources on the entire process of the project activity.

Yidnekachew, the construction technology manager at the Addis Ababa housing projects office shared the same idea either

*“The housing projects are carrying out with the conventional practices. I have been there for the past half a dozen of years. However, an improvement in the use of technology in the housing projects are very insignificant which is minimal to zero. The marginal difference of technology before six years ago to this date equates to zero in most of activities. That is may be most of domestic contractors are not financially strong.*

*When there is a weak or no progress at all in the construction technology, the housing projects are incurring an excess cost even more than the contingency reserves. The time table set to perform every work packages are trespassing. Most of all, the quality of the projects are very critical and worsening. In fact technological backwardness is not the only reason for the deteriorating quality of the projects. In my experience, starting from the cement to the steels to pipes and ceramics (tiles) the procurement activity doesn't fulfill the minimum acceptable level of quality for the given items. That might be arises due to low budget since they are supposed to be low cost housing or the malpractices on the procurement activity. One way or another such a things are threatening and worsening the minimum acceptable quality standard for the housing projects by our project office.”*

As per the Yidnekachew`s stance, the marginal change in the technology progress by the project contractors from the date he started to work in the housing projects six years ago to this date is very insignificant. The application of advanced technology improves the quality of project implementation, ensures the timely completion of work packages and avoids a cost overrun due to efficient use of project resources. The reverse is true when there is no progress in construction technology yet. Besides, the deviation from the expected quality of the deliverables from the

housing projects is not only accounted to the progress in the technology. In addition to that, from the acquirement of the small to the big and most critical project inputs, the procurement activity both by the project office and the project contactors doesn't fulfill the minimum acceptable level of quality for the given items. That arises due to low budget since they are supposed to be low cost housing or the malpractices on the procurement activity.

According to Challa yet, the quality problems regarding the housing projects are includes but not limited to the above factors of poor technological transformation, low budget procurement malpractices. As he states

*“per the government sub objective of creating an employment opportunity for youths who they operating in micro and small enterprises while constructing low cost houses, some tasks such as producing blocks for the housing projects are provided by those enterprises, even though it has a positive impact of creating a job opportunity, the quality of the inputs produced by the micro and small enterprises are by far deviated from the minimum requirement. Which in return affected the quality of the housing projects. In fact the training offers for those enterprises by the micro and small enterprises cooperation agency. However, the quality standard that we (AAHCPO) are expecting from those enterprises are remain unchanged.”*

Based on the above points we can understand that a little or no improvement are exhibits regarding technology improvement in the housing construction projects and it created the performance challenge on the quality scope of the projects. However, it requires further studies to assess the impact of construction technology improvement on the housing projects. In addition to that, the quality standards set for housing projects frequently breached by, project inputs below the acceptable standards, the mandatory supply of project inputs from less experienced micro and small enterprises in order to promote job creation, the low budget allocated for the housing projects, procurement malpractices.

#### **4.6.3. Lack of skilled man power**

As it is a great asset in every parts of the housing projects, the Quality of the housing construction projects is also the function of skilled man power. And unfortunately there are a shortfalls in skilled workers in the housing construction projects.

According to Fikre,

*“The causes of the shortage for skilled labor are many. First, construction projects tends to have a bad reputation for being dangerous or outdated, with work that isn’t relevant to today’s workers. In reality, most of those hazardous and difficult jobs have been outdated. Second, there has been a failure of policy by the government for a decade to mainly to focus for the importance of a five year university’s civil engineering classes but the outcome of it is not as it is desired. Those two factors accompanied with the lack of knowledge about the nature of the housing projects and the high wages provided by the giant private construction firms for those who are fit enough academically and experience, the skilled labor shortage begins to become quite obvious in the government owned housing projects. And the impact of it in the quality of the process and output of the projects are viable.”*

Fikre’s stance speculates, the major sources of a shortage of skilled man power in the housing construction projects goes to, a bad reputation for being dangerous or outdated, a failure of policy by the government for a decade to mainly to focus for the importance of a less qualified civil engineering classes with less productive outcome, the lack of knowledge about the nature of the housing projects and the high wages provided by the giant private construction firms for those who are fit enough academically and experience crowds out them from government housing project. Such a factors contributed for the critical shortage of labor in the government housing projects.

*“With the skills shortage being experienced by the government owned housing projects across Addis Ababa, when I think just what is it that has led to this deteriorating workforce? A combination of factors can be credited with forcing the housing construction skills gap, but put simply, there aren't enough trained staff to cover the demand. This is largely due to a diminishing acceptance of the profession, ageing staff and a boom in investment. The Ethiopia construction sector is one of the country's leading economic drivers, however a perceived shortage of skilled professionals is becoming a challenge for a field that relies on its workforce more than most. Employers and specialist construction recruitment agencies are experiencing the lack of qualified candidates. The trade recruitment market is always crying out for qualified workers. Such a factors are overshadowed the quality of government housing projects”*

That is the take from Nebiyou. As Nebiyou’s point reflects the shortage of skilled man power arises from the boom on the construction investment and the failure of the development of skilled man power in balance with the growing construction sector. The already existed skilled

man power are also diminishing, ageing and the acceptance of the given profession is diminishing. The sum of such a factors with attractive payment from the giant private housing construction such as Teklebirhan Ambaye construction, Afro- Zion construction.....crowds out the professionals from the government owned housing projects and failure of the government educational policy not to bring the desired outcome, contributed for the diminishing quality in the government housing projects.

## CHAPTER FIVE

### Conclusion and Recommendations

#### 5.1. Conclusions

The demand for condominium housing before 2019 was around one million people. But the total houses delivered to the beneficiaries within eleven years are only 18% of the total demand even after eleven years it shows that the number of condominium housing compared to the demand for housing is inadequate that means the demand for housing is increasing at an increasing rate but the performance to complete the condominium housing projects does not show growth in quantity from time to time. Therefore, the government housing projects performance in contrast to the housing demand of the city is very weak.

The shortage of finance is the most frequent and imminent problem that the housing projects are facing in Addis Ababa city. The budget deficit, an increase in the price of the commodities, and time consuming banking process for the extra demand of finance from the state owned bank affected the performance of the housing projects in the Addis Ababa city. Not only that, the financing of the housing projects are the victims of complicated corrupt practices, the absence of a multiple banks specialized in mortgage, unclear bids un-procedural procurement activity. An absence of administrative measures also made the projects to face shortage of finance in the short run and cost overrun in the long run.

The results of the effect of macro-economic turbulence on the housing projects showed that an increase in construction material prices is not only caused by inflation. Other macro-economic factors such as an importation of project inputs and a shortage of hard currency arise from it, also contributes to the discussed price increases and have an effect on the unstable price movement.

The poor financial management is also one of the problem of the Addis Ababa housing projects failed to cop up. The optimal financial planning, budgeting, disbursing, accounting and purchasing practices are the most poorly exercised financial management practices in the housing projects. The decision to bid on a large and multiple housing projects at the same time have a great impact on the finances of housing projects. Besides, when deciding whether to bid the project, the senior officials of the housing project office are barely considers if the project



office have sufficient and strong cash resources to perform multiple housing projects at the same time. Not only that, the assessment if the project need to visit outside financing is also poor.”

The project schedule planning process affected by weak schedule analysis, an influence from the top official to complete the projects as soon as possible regardless of considering several factors. The intention which arises from building the political capital by delivering the houses as early as they promised and an absence of relevant technologies, software in the made the planning process more difficult and unachievable. The sum of all the above pitfalls contributed for poor project schedule planning process and schedule related performance challenge of housing projects in general.

Shortage of project inputs and the failure to secure a sustainable supply line of project inputs, made the projects to lag behind the predetermined completion date. On the other hand, even though Addis Ababa barely hosting human and natural made accidents, currently, the prevalence of the corona virus pandemic made the housing projects not fully operate. Such a factors adversely affected the overall performance of the project. In particular the schedule of it.

A little or no improvement are exhibits regarding technology improvement in the housing construction projects and it created the performance challenge on the quality scope of the projects. It requires further studies to assess the impact yet. In addition to that, the quality standards are frequently breached by project inputs below the acceptable standards, the low budget allocated for the housing projects, procurement malpractices and lack of experience so lack of qualified items from the micro and small enterprises which they are engaged in supplying construction project inputs and resources.

Despite the fact, there is a presence of project consultant`s supervision for quality control and quality management plan by the AAHCPO quality control & assurance division for the housing projects, lack of an attention from the different parties operating in the construction activities made the projects to pay a huge price on the quality of the houses. Quality used as an expense to complete the projects timely. Moreover, the project teams lack of commitment to operate in accordance with the schedule of each work packages, lack of proper training, abdication of responsibility, lack of leadership for quality, lack of effective measurement of quality

improvement, lack of management commitment and resistance of the workforce for quality made the projects performance challenging related to quality.

In general the project performance indicators of project cost, project schedule and project quality are highly correlated and inter related to each other. The same is true for Addis Ababa housing projects. The failure to secure an effective cost control, severely affects the schedule for the projects. The intention to complete with the given schedule despite there is a shortage in finance, makes the quality of a projects an expense.

## **5.2. Recommendations**

The performance of housing projects are very weak for more than a decade. The failure to a significant improvement throughout a time indicates that there is a deep rooted problem existed in both administrative and operational system of the Addis Ababa housing project construction office. The city government need to be carefully review the entire structure and system of the given office, the process of project contractor recruitment and selection, and prompt measures required to avoid the weak performance.

In order to cop up the finance shortage problem, the city government need to allocate sufficient budget for the housing construction. The budgeting system need to take in to account some macro-economic factors such as inflation and shortage of hard currency. The city government must ease too much dependency on the commercial bank of Ethiopia and it is better to visit other alternative financial sources as well. The bidding process in every segment of the activity have to carefully and transparently carry out. The city government must make some stakeholders accountable for the procurement malpractices.

The financial management system need to be accompanied with contemporary financial management techniques. The financial planning, budgeting, purchasing and auditing practices must be free from an interference for political ambition. Besides, the financial soundness of the AAHCPO must carefully analyze before engaging in to multiple housing projects at the same time. The use of financial management software helps the project to perform better.

The project schedule analysis must be realistic, carefully analyzed, it must be free from any kind of influence from the politicians. The experts must get a priority to take a part in project schedule

planning process. Relevant technologies and software must put in place while performing the schedule planning process.

The impact of the rapid spread of coronavirus pandemic on the housing projects must be studied by the given project office. The alternative course of actions must be developed so that to minimize the impact that the virus might create on the project scope of cost, quality and schedule.

The biggest priority and attention must be paid for the transformation of technology in the housing construction projects. In the current highly technologically advanced construction era, performing with the traditional construction technology and practices will have a huge negative influence in cost, schedule and quality of the projects,

Even though the quality management plan is formulated by the quality assurance division, if it is not implemented on the ground the exposure of the projects to the failure on quality remain unchanged. The division must work tirelessly to win the support of the senior management and the all stakeholders must dedicated in the quality assurance not to trade it off for just the completion of projects.

In general, the Addis Ababa housing construction project office need to give equal weight for the project constraints of project cost, project quality and project schedule. The decision regarding one of the constraint must carefully analyzed whether it has an intended or unintended consequence on the rest of the constraints. The project office need to follow a holistic and harmonious approach in the implementation to improve the performance of the housing projects in Addis Ababa.

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## **Appendix**

### **Interview**

#### **Addis Ababa University School of commerce**

#### **Project management**

##### **Note:-**

This interview is proposed for Addis Ababa housing construction project office employees.

This interview used as an input for the academic research purpose only.

The respondent name is not necessary to be filled in this form.

I would like to say Thanks in advance for your cooperation and hospitality to take this survey.

##### **1. Interview questions on performance challenges on the cost of the projects.**

- What is the nature of the finance allocation for the projects?
- What degree of deviation exist between the planned and actual cost of projects?
- What is the impact of the country`s macro-economic situation on the cost of the projects?
- How effective it is, the financial management of the projects?

## **2. Interview questions on performance challenges on the schedule of the projects**

- What is the impact of the availability of project resources and inputs on its schedule?
- How realistic the project planning, regarding the schedule of the projects?
- What are the basic inputs for the schedule planning of housing projects?
- What the extent, natural and human made emergencies affects the schedule for the projects?

## **3. Interview questions on performance challenges on the quality of the projects**

- How the construction technologies affect the quality of the projects?
- How sufficient is, the presence of skilled man power in the housing projects?
- Is there any correlation between the infrastructural development and quality of projects?
- What are the major bottlenecks for the planning not to achieve its project quality objectives?