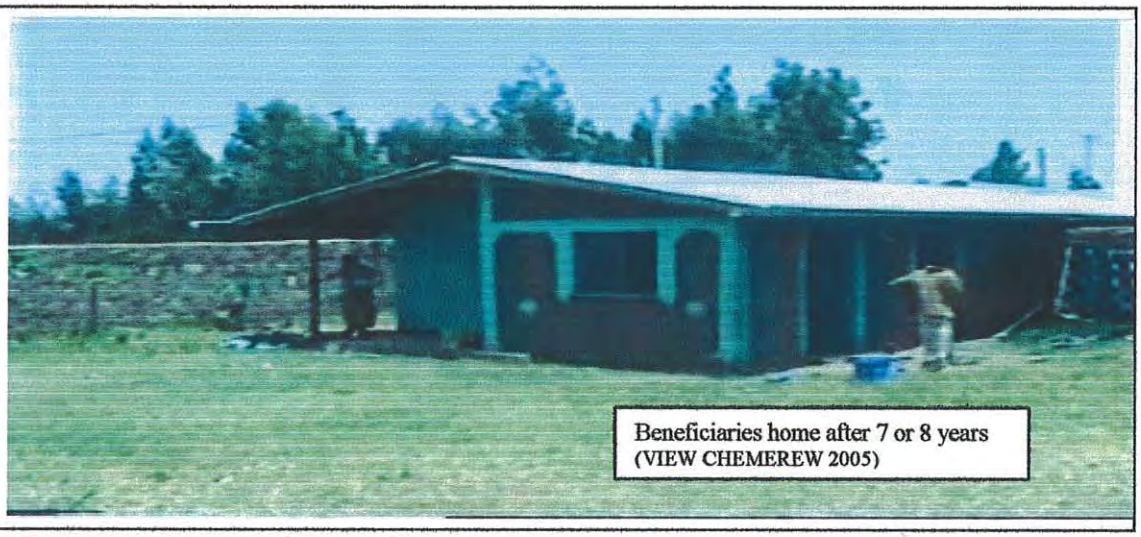
ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

MEETING HOUSING CHALLENGES: SOCIO-ECONOMIC BENEFITS OF GTZ-LOW COST HOUSING PROJECT, IN ADAMA TOWN, OROMIA

The first settlement shortly after hand-over in Nazareth (Photo R.Z.)



Beneficiaries home after 7 or 8 years
(VIEW CHEMEREW 2005)

BY: CHEMEREW MEKONNEN

ADDIS ABABA UNIVERSITY
JUNE, 2008

MEETING HOUSING CHALLENGES: SOCIO-ECONOMIC BENEFITS OF GTZ-LOW COST HOUSING PROJECT IN ADAMA TOWN OROMIA

BY: CHEMEREW MEKONNEN

ADDIS ABABA UNIVERSITY
ADDIS ABABA JUNE, 2008

MEETING HOUSING CHALLENGES: SOCIO-ECONOMIC BENEFITS OF GTZ-LOW COST HOUSING PROJECT IN ADAMA TOWN OROMIA

BY: CHEMEREW MEKONNEN

ADDIS ABABA UNIVERSITY
ADDIS ABABA JUNE, 2008

Meeting Housing Challenges: Socio-Economic Benefits of GTZ-Low Cost Housing Project In Adama Town Oromia

By: Chemerew Mekonnen

A Thesis

Submitted to the College of Development Studies in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Regional and Local Development Studies (RLDS)

Addis Ababa University
Addis Ababa
June, 2008

Addis Ababa University
School of Graduate Studies

Meeting Housing Challenges: Socio-economic Benefits of GTZ-Low Cost Housing Project in Adama Town Oromia

By: Chemerew Mekonnen

Institute of Regional and Local Development Studies (IRLDS)

Approved by Board of Examiners

1. Wldeab Teshome	
Chairman	Signature
2. SOLOMON MULUGETA (PH.D)	
Advisor	Signature
3. ISSAC PAUL (PH.D)	
Internal Examiner	Signature
4. FENTA MANDEFRO (PH.D)	
External Examiner	Signature

Addis Ababa

June, 2008

Acknowledgments

I am indebted to a large number of people who have made this study possible. I would like to express my great sense of gratitude to Dr. Solomon Mulugeta, my advisor, for his valuable suggestions and guidance on the subject matter as well as for his compassion and care. I would like to express my indebtedness to Dr.Tegegne Gebre-Egzabher for his suggestions, advice and for assisting me as assistant advisor at all levels of this research starting from the research proposal up to the end of the study. I never frigate the help of Dr. Woldeab Teshome, the Director of IRLDS, that he solved the intricacy I faced to defend my thesis because of the loss of my primary data and the serious family problems by re-looking the issue with my Advisor, with the university officials and the Institute's Committee.

The conduct of the study involved the cooperation of many-persons in several stages of the research. I would like to extend my deepest gratitude to W/o Birke Yami, architect-planner and lecturer at Addis Ababa University, in her assistance, guidance and encouragement in formulating my ideas. She has been greatly helped me in providing necessary materials and information at every level of the study.

I am thankful to the staff members of Adama Project Office, the staff members of Urban Housing and Land Development Department of the Ministry of Works and Urban Development, the Staff members of Adama City Government and the staff members of GTZ-LCHPO for their professional advice and provision of necessary data.

I am also indebted to express my gratitude to a number of persons, who have helped me to complete this thesis. The financial support, I obtained from GTZ-LCHPO was very much helpful that it covered the part of the field survey Cost. In this connection, I would like to express my heart felt appreciation to Ms Ruth Erlbeck- the project manager, and her staff members for providing me with materials and their professional advice. I am thankful also to Ato Wagari Negeri the Director of CCSLMD in ECSC and to Ato Dejene Tesemma Editor-in-Chief of the Ethiopian Herald in the Ethiopian Press Agency for their professional advice and thoroughly editing of my thesis.

Thanks are also due to W/t Kelem Asrat, W/o Fetle Asrat, Ato Endashaw, Ato Fisum, Ato Tomas, W/o Elfinesh Mekonnen and her families, W/o Tezera Mekonnen and her families the staff members of RLDS at Addis Ababa University, the Oromia Finance and Economic Development Bureau, that it sponsored my graduate study, the staff members of the Bureau for their material and moral support, specially my friends and relatives at work, schools and residence for their material, financial, and moral support they provided me at all levels of the research works.

I would also thank enumerators, supervisors, typists, and other technicians who have helped me with dedication at the different levels of the study. I owe special thanks to my wife, W/o Emebet Kassaye, for the burdens she passed through for taking care of me and the family with all the burdens while I was spending most of my time for the study.

Abbreviations and Acronyms

AARH	Agency of the Administration of Rental Houses
ADB	African Development Bank
AEG	Association of Ethiopian Geographers
APO	Adama Project Office
CBB	Construction and Business Bank
CSA	Central Statistical Authority
DPPC	Disaster Prevention and Preparedness Commission
EHSS	Ethiopia Housing Sector Study
FDRE	Federal Democratic Republic of Ethiopia
FRoG	Federal Republic of Germany
GDP	Gross Domestic Product
GNP	Gross National Product
GSS	UN Global Strategy for Shelter
GTZ	German Agency for Technical Co-operation
GTZ-LCHPO	GTZ-Low-Cost Housing Project Office
HDI	Human Development Indicators
HHI	Habitat for Humanity International
HSB	Housing and Saving Bank
IWSC	Internet World Statistics Center
LCH	Low Cost Housing
MoFA	Ministry of Federal Affairs
MoFaED	Ministry of Finance and Economic Development
NBE	National Bank of Ethiopia
NUPI	National Urban Planning Institute
ORAAMP	Office of the Revision of Addis Ababa Master Plan
PADCO	Planning and Development Collaborative International
UNCHS	United Nations center for Human Settlement-Habitat
UNDP	United Nations Development Program
USBOC	United States Bureau of the Census Population Resources Center
USD	United States Dollar
WAAS	WAAS International PLC
WIC	Walta Information Center
MoWUD	Ministry of Works and Urban Development

Abstract

This study is mainly concerned with an assessment of the socio-economic benefits of GTZ-LCHP beneficiaries in Adama town Oromia as a result of housing improvement in relation to housing shortages of low-income households in Adama town. Moreover, it looks into the problems of renters to seek solutions to address them.

A case study has been employed to assess the housing benefits of project beneficiaries and the challenges of housings .of low-income households, who seek low-cost houses in Adama intensively and in details. The targets of the study include the beneficiaries and non-beneficiaries of the project which were selected from 120 household heads selected from lists. Half were selected from the GTZ-LCHP beneficiaries list, while the others were from the potential demand list of the none-beneficiaries in the town.

According to the major findings of the study, based on selected variables and comparing the renters and the owners respondents, the owners of the project housing have benefited from the housing improvement of the GTZ-LCHP. The mortgage system provided for the beneficiaries for the loan repayment of 15 years with the total construction cost of 12000 birr benefited the owners. They have afforded the repayment cost and the payment is regular. The project has contributed to the improvement of housing conditions and shortages in urban centers through technical assistances. The new model of housing supply with comparatively low-cost have been implemented in Adama and replicated in different parts of the country either in flat or in apartments form. The housing qualities of the owners were improved compared to the renters.

From the findings, conclusions, and recommendations have been drawn underlining a participatory low-cost housing provision to benefit low-income households in a sustainable way.

List of Tables and Figure

List of figure

TABLE OF CONTENT

CHAPTER ONE

INTRODUCTION

Housing is one of the basic needs of human life. Several scholars, (Wilner et al. 1962:3, Nenno and Brophy 1982:1, Gugler and Gilbert 1992: 114, Spence et al. 1993:7) have suggested that housing plays a central role in health and well being of human beings. It constitutes a major investment and confers status on its owner. A well-built shelter provides a healthy environment. Inadequate housing increases health problems and crime; while improved standards of housing improves the productive capacity of human beings and thereby plays a significant role in overall development of a nation (Rodwin 1961:1, Solomon 1985:1, Todaro 1995:272). Moreover, housing investment has the potential to create new job opportunities in construction and input industries that generate personal income which contributes to overall social and economic development of a nation (PADCO 1996:2, Spence et al. 1993:7).

Although housing is one of the universal needs of human beings and plays a significant role in improving human life, several urban centers around the world, especially developing countries like Ethiopia are facing serious problems of housing shortage. The problem is worse for the low-income dwellers of urban centers in Ethiopia. In order to improve the housing situation of the urban poor, the government of Ethiopia (the Ministry of Federal Affairs) has been implementing a pilot low-cost housing project since 1999, with technical cooperation support from GTZ (GTZ-LCHPO 2001:1, 2003:4).

This paper presents the study of the socio-economic benefits of the project beneficiaries in solving housing problems in the city. The nature of the problem, the objectives of the study and the methods used in this study are briefly described below.

1.1 The Problem

The provision of low-cost housing in Ethiopia has a modest context and there are not substantially commendable examples to be cited. There have been on the other hand, attempts to meet the housing shortage of urban low-income groups through the provision of low-cost housing schemes in limited urban centers of Ethiopia. Through the provision of free plots of land, credit facilities and technical services, attempts have been made to enable individuals to have their own dwelling units. However, experiences show that, the housing needs of low- income urban dwellers have not been solved yet (Zeleke 1998:64, Solomon 1997:201, UNDP 2004:15, 18-23).

Adama, as one of large cities in Ethiopia, is at present characterized by housing shortage (APO 2003). Attempts have been made to enable individuals to have their own dwelling units through affordable housing schemes. One of the major ways in which this has been done was that of the GTZ-low-cost housing pilot project implemented in Adama in 1999.

The socio-economic benefits of the project beneficiaries, as a result of their housing improvement, are so far not clearly assessed. In addition, it has not yet been found out who has actually benefited from the program from the point of view of actual needs of dwelling units and income distribution. Moreover, the low-cost housing way of meeting the housing problems of low-income groups in the city and whether or not the provision of this way of low-cost housing is worth relying up on as one of the major way of meeting the future housing needs of the city demands a due explanation from the /impact assessment/ practical points of view on the housing condition.

1.2 Significance of the Study

The findings of this study have significances first for policy makers so that they use it as an input to revisit low-cost housing provision for low-income households. Second, it helps implementers to effectively and efficiently address low-cost housing needs. It also serves as a reference for researchers to undertake other researches on housing affairs.

1.3 Objectives of the Study

The study has general and specific objectives, which are explained as follows.

1.3.1 General Objective

The general objective of the study is to examine the socio-economic benefits of GTZ-low cost housing project beneficiaries, in the context of meeting housing challenges of low-income dwellers of project area taking the case study of Adama town GTZ project site Oromia Region.

In this respect the general objective of the research is aimed at contributing to solving shortage of housing of low-income sections of urban population through impact assessment of the project beneficiaries comparing to non-beneficiaries or tenants.

1.3.2 Specific Objectives

Specifically, an attempt will be made to assess some socio-economic benefits obtained by the beneficiaries as compared to renters as a result of housing improvements from tenant to owner. In

other words, an impact assessment of the project beneficiaries towards contributing solutions for the housing shortage of low-income dwellers will be assessed. Therefore, the following issues are specifically treated.

1. To identify the general characteristics and conditions of the dwelling units of owners and renters.
2. To examine the availability of certain basic public services such as water supply, electricity, public transport, and residents' daily work trips.
3. To study income and expenditure and/or consumption items of owners in relation to renters.
4. To identify asset ownership, accessibility to credit facilities, aspiration to save and/or saving status, responsibilities and social status of owners as a result of low-cost housing provision in relation to renters.
5. To assess and/or identify the most significant factors that impair the success of low-cost housing way of meeting the housing shortage of low-income dwellers in the city and to suggest some policy solutions to solve the housing shortage of low-income sections based on lessons drawn from the project.

1.3.3 Research Questions

In order to attain the objectives of the study, the following research questions are formulated:

1. What are the housing characteristics of the project target groups?
2. Did the project provide housing for female-headed households?
3. What are the gaps in income and expenditure patterns of households?
4. What are employment status of households and their location of work?
5. Do the groups have an access to social and economic infrastructures?
6. Did the project provide housing loan and facilitate collateral for the target groups?

1.4 Methodology of the Study

In this section, the methods and the research design used for survey and method of data analysis are presented.

1.4.1 Study Design

The study has adopted a quasi-experimental design. It is not robust and it is checked by triangulation method. The writer has selected this design to study the issue of low-cost housing in the specific area intensively and in details. In addition, a cross sectional survey design was

employed. This method saves time than longitudinal design to collect impact information. It is also less expensive and resource intensive since it requires only single point in time data collection.

1.4.2 Sampling Methods

The sampling technique that was used during the questionnaire survey was purposive and systematic sampling. First the project area in the town and the project target groups are purposely selected because the project was the first and new low-cost housing model implemented (after transition in 1999). Moreover, it represents the diverse practical application on low-cost housing provision, and is useful to learn from beneficiaries were who have started living in Adama. Though the study is mainly assessing the benefits beneficiaries received as the result of housing improvement, it also compares beneficiaries of the GTZ low-cost housing project and non-beneficiaries in the town. The decision in favor of such a strategy is made on the important role that the socioeconomic benefits the target groups received from the improvement of their housing as a result of their housing improvement by the project and to compare with non-beneficiaries' quality of life in relation to meeting housing challenges of the low-income dwellers in the town.

In addition, the writer can have an easy access to the sample and gather more detailed information because of their special experiences, exposures and competence to elaborate benefits obtained from the project to seek solutions for low-income households. It also minimizes cost of the research in terms of time, effort and budget availability (Wilkinson T.S. et al. 1999: 267-70, 289 - 92). Then, the respondents were selected using systematic sampling method.

The samples were selected from 112 low cost housing beneficiaries and 112 non-beneficiaries in the town. For the study, 60 household heads from beneficiaries list and 60 from non-beneficiaries (who were in the waiting list), were targeted i.e., from sampling frame or list containing sampling units, who are members of beneficiaries (experimental group hereafter) and non-beneficiaries (control group hereafter) in the sampling frames. The sampling frame for control group was drawn from the actual list of renters registered and selected for low-cost housing by the project while the experimental group was drawn from the project office beneficiaries list.

1.4.3 Method of Data Collection and Analysis

Method of data collection and data analysis are presented in the following sections.

1.4.3.1 Data Collection Instrumentation

In order to achieve the objectives of the study both secondary and primary data have been used. The data were gathered through questionnaire survey and group discussion methods.

A. Secondary Data

The secondary data sources were largely collected from the Ministry of Works and Urban Development, Ministry of Federal Affairs, GTZ Low-Cost Hosing Project Office, the Central Statistical Authority, the Adama Project Office, National Bank of Ethiopia and the Ministry of Finance and Economic Development. In addition, the works of researchers on housing were reviewed.

B. Primary Data

i. Survey Method: the primary data were obtained through a questionnaire survey. The structured questionnaires were used to collect data from the sample population according to the set objectives. Quantitative information on household demographic characteristics, educational, marital, employment, income, migration statuses, saving, expenditure or consumption behavior, infrastructure facilities, housing conditions were collected using face-to-face survey method.

ii. Focus Group Discussion: in order to understand the perception of the community, the target groups and the renters about the project, the housing problems, the town construction input price, labor availability and cost of construction, an extensive focus group discussions were done in the field survey. Discussions were made at the project office, municipality, project site kebele, and at beneficiaries and renters level.

Two types of questionnaires, with three main parts, were prepared for this purpose. The first type of questionnaire meant to be completed by owners or beneficiaries of the project whereas the second one was prepared to be completed by the renters or non-beneficiaries of the project. The three main parts of both questionnaires were demographic and socio-economic status of household, physical condition of the housing unit, and checklist for interview and documentary survey for group discussions and key informants qualitative survey purposes. In this case, similar questions might used for both groups of respondents. However, there could be also questions structured for each group of respondents.

To conduct the discussion, a checklist was prepared for each focus group and key informants. Focus groups were selected and based on time and budget availability, 3 to 5 members were interviewed at three levels; discussions were made at 1-2 different groups. The selections of

members were done through a discussion with concerned bodies.

To gather data, supportive materials: tape-recorder; video camera and hand-held camera were used to facilitate the data collection more reliable and valid, to support the writer's data collection, analysis and presentation works. For the purpose of the survey, 6 university students were employed to collect data with all the necessary orientation before the field survey started.

1.4.3.2 Method of Data Analysis

Quantitative and qualitative approaches were employed for data analysis. Quantitative approach was adopted using descriptive statistical tools such as frequency distributions percentage, mean and standard deviation to calculate like income, saving expenditure, demographic characteristics, migration, education, employment, statuses of the study population.

Qualitative approach i.e., groups and key informant discussions have been used to understand the perception of beneficiaries' benefits obtained from housing improvement and housing problems of renters on socio-economic variables explained in the thesis. Owners and renters were also asked their suggestions on how to deliver low-cost housing to minimize housing problems in the study area. In addition, some operational issues of the project and partnerships were discussed with owners and renters of sample study.

More specifically, the methods for analyzing the quantitative data have included comparison of income, asset, housing condition between owners and renters. Frequencies and percentage description of data were also used to describe the demographic characteristics of the respondents. The data entry format was designed on SPSS computer program. Finally, the location of the project site in the town is shown in map 1 (appendix 1)

1.5 Scope of the Study

As is shown above, this study primarily deals with socio-economic benefits of GTZ low-cost housing project beneficiaries as a result of housing improvement in relation to the housing shortage of renters in the context of meeting housing challenges of low-income households in the town. The sample includes the beneficiaries of the project implemented from 2/1999-1/2001 kebele 01 North West of Adama town and equivalent number of sample renters either from the town or from the project site. Therefore, the sample does not include any low-cost housing project beneficiaries in the town. More specifically, the sample deals with those beneficiaries moved into

their respective housing units before August 30, 2005. Beneficiaries those who were not moved into their, dwelling units during the survey time, were excluded from the sample. A few number of owners included in the survey other than the original beneficiaries are either buyers of the units from the original GTZ-village owners or from the project itself.

1.6 Limitations of the Study

Because of mobility, it is difficult to assign all the earlier baseline study waiting list members in the survey. Therefore, renters were purposely selected from eight offices at the survey time to fill the quota of selecting from the waiting list of the project. In the study, it is difficult to assemble control groups (renters) that are similar to experimental groups (owners that were renters before 2000) (Asmelash 2003: 54-55 in Johanson and Rogaly 1997, Kothari 1995: 52-54). Thus, the cross sectional impact analysis method was applied between owners and renters. Finally, that there was a scarce study on low-cost housing is another limiting factor.

1.7 Organization of the Study

This study is organized into five chapters. The first chapter is the introductory part. It includes the problem, significance, objectives, and research questions. It also presents, methodology of the study that includes, study design, sampling methods, method of data collection, method of data analysis, scope, limitations and organization of the study. The second chapter deals with review of relevant literature.

Chapter three is the main body of this thesis that deals with the survey analysis of the characteristics of the GTZ low-cost housing project beneficiaries and selected renters in Adama. The main sections of this chapter include the analysis of the most important socio-economic characteristics of the beneficiaries of the project in relation to sample renters in the town with respect to benefits obtained as a result of housing improvement.

Chapter four is the extension of chapter three which also presents the analysis of survey data mainly physical and environmental conditions of respondents.

Finally, Chapter five gives the conclusions and recommendations of the research findings with references and appendices presented at the end of the chapter.

CHAPTER TWO

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

2.1 Conceptual Framework

2.1.1 Housing and Market Relations

Housing is an essential component of human settlements. At its most elemental level, it addresses basic human needs by serving as shelter offering protection against excessive cold and heat, rain, high winds and other intemperate weather. If housing is inadequate, it undermines individuals' health and well being. If housing costs are excessive, this affects people's ability to meet other basic needs such as food and health care. It also provides a physical enclosure for daily activities, where people cook, eat, socialize and rest away from the public realm, and a place where, in many cultures, they are born and die. At the same time, through its location, housing forms the basis for activities in the community, such as interactions with neighbors, work, school and shopping (Habitat 2001:77).

Over the past decades, housing specialists have noted the existence of market relations throughout the housing sector. Whether the products in question are luxury or squatter shacks, the forces of supply and demand greatly influence the price and quality of housing outcomes. Even in command economies, housing is increasingly viewed as a commodity with an exchange value, rather than as a good to be produced and allocated outside the market place (PADCO 1998:27-28).

The two main components of the housing market, in turn, are housing demand and housing supply. Housing demand reflects only a part of the housing need. It refers to the desire or willingness for housing supported by economic capacity to satisfy the desire. Housing demand refers to affordability and willingness to buy, construct and to rent. Housing supply is a schedule showing how much of housing a producer is willing and able to sell at various prices during a given period of time, other things being constant (adopted from McEachern 1988: Glossary). A producer could produce a housing for own usage than selling in the market. An increase in the number of households will create pressure for an expansion of the housing supply.

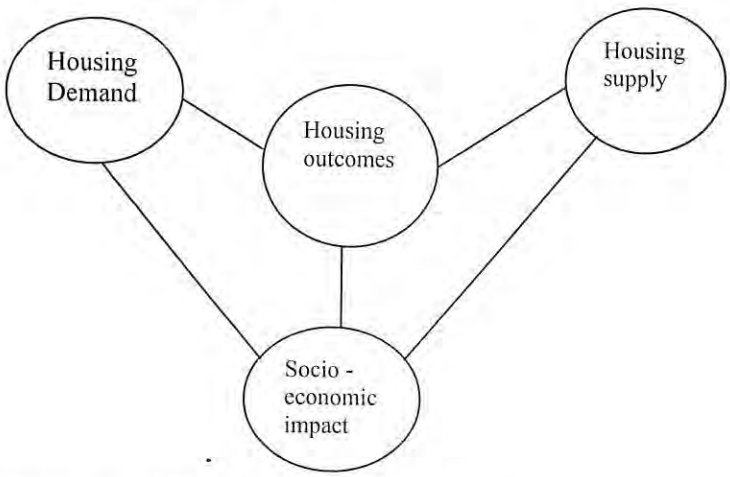
However, housing supply is directly related with the economic capacity of households. Households with low level of income could not afford to produce their own housing. It is also related with the housing policy that could affect the supply and demand through policy

instruments. Performance of each of the key inputs to the housing development process like land, infrastructure, building materials, finance, and residential construction are directly determinants of housing supply. For instance, as residential land delivery system is available to the users, housing supply will be facilitated to balance demand. Availability of housing investment capital and relax in requirement criteria in housing credit policy will support housing to be accessible for poor and low-income families, production of rental housing at low-cost and renting will help poor and low-income families to satisfy demand (Nenno K. and Brophy C. 1982: preface).

Housing demand is determined primarily by demographic conditions (population growth, new household formation) as well as macro-economic conditions affecting income. The availability of housing is primarily a function of the availability of inputs such as land, infrastructure and building materials. It is also affected by the organization of the construction industries and the availability of labor. Both the demand for and supply of housing is influenced by the regularity, institutional and policy environment (Ibid).

When housing demand and housing supply interact in the marketplace, they result in housing outcomes. The outcomes range from vacant units to purchase or rental of specific housing products to homelessness. These outcomes, in turn, often have broader socio-economic impacts on infant mortality, inflation (shortage in dwelling units my force rent price increase that may reduce household food consumption), capital formation (housing is a durable asset serve also as a source of income or as a collateral to receive loan), household savings, etc. A model of the housing sector is depicted in figure 2.1

Figure 2.1 a model of the hosing sector[1]



Source: Adopted from (PADCO Final Report 1998:27).

[1] PADCO 1998: 27 Ethiopia Housing Sector Study Final Report

It is important to note that while market relations are prevalent and influential in the housing sectors of most countries, they do not ensure equitable distribution of shelter and related resources. In the absence of government intervention, private sector producers will usually cater only to a certain percentage of the population. In most societies therefore, providing access to housing for all income groups requires that the public sector either use incentives to encourage private sector provision of housing to low-income groups or subsidize the acquisition of housing by those groups on the open market (Ibid).

2.1.2 Approaches to Low-Cost Housing Problems

Both liberal and neo-Marxist scholars have attempted to provide a solution/ Panacea/ for the urban housing problems of the Developing World (Solomon 1999:80-81, Taye 2002). Liberal writers have persistently argued that encouraging the working poor to build their own homes based on the principles of self-help housing is the best strategy to increase the supply of low-cost housing (Turner, 1963, 1972, 1976, 1978, 1988 in Mathey article Gugler 1997; and Solomon 1999). Comparatively neo-Marxists have contended that since housing is a dependent subsystem of the broader socio economic structure, low-income shelter needs can be meaningfully met only through the radical transformation of the socioeconomic formulation in question. It means that the capitalist system has to be removed to ensure equitable distribution of resources including housing (Ibid, Burgess 1978, 1979, 1982, 1988:138-57 in Gugler 1988, Fichter 1972, Mathey 1997 in Gugler 1997:280-90).

The implementation of such policies in both capitalist and socialist countries has not solved the housing shortage. The only aspect that has changed over the last three or four decades is the increase in absolute poverty in the developing countries, and this is reflected in less availability of resources for housing (Mathey 1997 in Gugler 1997:280-90, Solomon 1999). This has been particularly the experience of most capitalist and socialist African nations where self-help housing programs have invariably tended to subsidize the middle and upper income households. Some of them have tried to increase urban housing supply by decentralizing the power and encouraging popular participation in the development of urban infrastructure, which is, still modified versions of the same strategy (ibid). The neo-liberalism that came into vogue in the 1980s has translated into a tendency of the state to withdraw from all responsibility for housing the poor, and the emphasis on the notion of full cost-recovery fits this tendency i.e., removing subsidy of the World Bank approach, in other way round, enabling market to work (Mathey

1997:288, WB 1993, and Habitat 2001). Regardless of the ideological difference whether or not housing is a social service or just another item of consumption; the existing globalization and democratization in the world might re-introduce the policy of self-help even in socialist countries. Community based hosing finance and direct production of low-cost housing where market less satisfy the poor, but with continued public ownership of land might balance the force (Mathey 1997:288). In any case, similar pattern is observed and have been implemented in Ethiopia since 1991.

2.2 REVIEW OF RELATED LITERATURES

2.2.1 Definition of the Terms

Housing: it is the term used to include shelter, services and infrastructure (Habitat 1996, in APO 2003, ORAAMP 2000, 2002). It includes adequate privacy; adequate space; physical accessibility; safety, security; security of tenure, structural stability and durability, adequate lighting, heating and ventilation, adequate basic infrastructure, such as water-supply, sanitation and waste-management facilities, suitable environmental quality and health-related factors, and adequate accessible location with regard to work and basic facilities all of which should be available at an affordable cost (UN-habitat 1996, 2002 in APO 2003).

Low-cost housing: It is the housing that is produced with low financial requirement relative to similar housing production cost in equivalent standard, technically acceptable, replicable housing solutions primarily for poor and low-income sections with special attention to female-headed households (MoWUD 2004).

Housing unit: any building or construction which is principally built to serve a single household or a single family for residential use.

Overcrowding: a measure of housing quality indicating persons per room i.e., the sharing of one room by three or more persons or the sharing of one housing unit by more than one household

Substandard housing: A dwelling unit that is falling short of one or more basic services such as water supply, electricity, bathing and toilet facilities or one which in any parts of its physical shell such as foundations, floors, walls, ceilings and roofs fails to meet the minimum standards required for health and safety purposes.

Slum: unfit for human habitation because of defective design of sanitary defects, or both.

Squatter settlements: settlement created without formal authorization or legally through acceptable government channels.

Ownership status: The owners are household heads who dwell in GTZ-housing village while the renters are household heads who dwell in GTZ-village or in the town.

Kebele: The lowest administrative units in the urban areas of Ethiopia.

2.2.2 Description of the Study Area

2.2.2.1 The Historical Foundation of Adama Town

The historical foundation of Adama town began with the establishment and construction of the railway line from Addis Ababa to Djibouti and the economic changes created urban nucleus in various regions. The town was established in 1916 (APO 2003).

According to (Birke 1998) early urban development patterns in Ethiopia are related to political, religious, military hierarchical system and feudal social structure. The urbanization process in pre-twentieth century Ethiopia was intimately related with the rise of political capitals. Until the end of the eighteenth century, the capitals were political and religious related capitals. These groups mainly consisted of Axum, Lalibela and Gonder. As Emperor Minilik consolidated his power over regional kings, a series of garrison towns were setup in different regions. During this period, land was allocated following the military hierarchical system and feudal social structure. There was no clear land policy during this period as traditional land holding system was practiced. The allocation patterns were spontaneous.

In Addis Ababa, in 1886, Emperor Minilik built the first permanent structure: a palace adjoining the present hot springs in "Filwoha" area. This was the signal for his subjects to construct permanent dwelling houses, in accordance with strictly feudal land use structure. Later on, after 1907, the construction of the railway line from Addis Ababa to Djibouti and economic changes created urban nucleus in various regions historically Adama is categorized in this system. More than anything economic factors were the creators of these urban areas. Commercial activities consequently dominated the urban land use and morphology too, and occupied important sites in the towns, especially street sides (Ibid).

Generally, the need of garrisons, the feudal political system, and social structure and the construction of the railway line were the main creators of early urban development patterns in Ethiopia. The structure of towns were dominated by traditional land holding patterns which to a large extent consisted of irregular types and unlimited sizes of plots. The form of these urban areas except the railway lines was characterized by isolated settlements with clusters of housing

units. The land occupied by a family had been transferred as a family belonging from parents to children in the form of inheritance. Due to this, the original settlement patterns continued to affect the morphology and land use of these urban areas. In the case of Addis Ababa, for instance, it has continued to have a significant impact on the geographical characteristics of the present city structure even after a lapse of 100 years (Ibid).

On the other hand, towns with basic differences in morphology and land use evolved with the construction of the railway line such as Adama town. According to (Birke 1998), these towns can be categorized as street oriented commercial towns contrary to previous towns where administrative, religious, military and residential uses dominate.

Adama is now one of the biggest towns in Ethiopia next to Dire-dawa with regard to its size with estimation of more than two hundred thousand population. It is the center of manufacturing industries, commercial activities and different business activities. It is established on the Eastern central lowlands in Great Rift Valley of Ethiopia situated on 100 kilometers from Addis Ababa to the South East. The historical foundation of Adama has created favorable economic conditions that it is established on suitable position for land transportation. The Ethio-Dijibuti railway line passes in the town and it established its railway station in the town. The high way transportation road is also one of suitable economic base for the town, which connects it to the primate city-Addis Ababa, and the Southern and Eastern regions of Ethiopia. The town has attractive trade and tourism potential, since it is on the main transportation line to Djibouti and Somalia, and near Sodere hot spring recreation and hostelling accommodations.

Recently, the town has been structured as one of Urban Local Administrative Zone of Oromia regional state towns for its political economical social and cultural development. It is expected as one of the nucleus of socio-economic center for regional-national and even international integration. Adama is expected to be as one of political and administrative center of Oromia regional state government next to Finfinne. The Adama Project Office (APO), now re-named as Oromia Housing Agency from 2006 onwards, had already accomplished the responsibility of technical advisory of the government and revised the master plan of the town respective to the new accommodating capacity of political, cultural and socio- economic perspective of one of Oromia cities and then as one of the large metropolitan urban area of Ethiopia in the urban development. Adama is organized by 14 kebeles and administered by a municipality under the

structure of Oromia regional government and Works and Urban Development Bureau (OWUDB). The town's future development is expected to be as modern planned city of the region and one of planned big Ethiopian urban centers.

However, as it is one of urban center in Ethiopia, the town suffers form different socio-economic problems. One of the serious problems is shortage of housing, the problem that perhaps causes the most concern to a majority of urban dwellers in Ethiopia as (Tegegne 2000:16) stated in his literature. To solve this problem, it requires development actors' participation such as GTZ-Low Cost Housing Project.

2.2.2.2 The Project Site

The site of the project is Adama. The project started implementation in Adama 01 Kebele for 112 households' heads from 2/1999-1/2001 (GTZ-LCHPO Technical Manual 2003:4. The project started the first phase in Adama town Kebele 01 in (2/1999-1/2002) and it had entered into the second phase in July 2006. The GTZ Low-Cost Housing Project Office (LCHPO) addressed the low-income and middle-income groups of the target groups in Adama.

2.2.3 Background of the Project

2.2.3.1 The Project Objectives and Concept

The overall objective of the project was to improve the living and housing situations of urban households with the special attention to female headed households by providing decent dwelling within new pilot urban settlement areas. It was also to contribute to the improvement of housing conditions in the country, through technical assistance to the city residents of squatter settlements. The project was a pilot project to develop and test procedures for disbursement of housing loans. In order to accomplish these goals, the existing financial institutions should establish extra financial services for housing programs by granting loans for the purpose of housing constructions, improvement like repairing, extension and replacement. The project has implemented such type of services with Construction and Business Bank (CBB) on a new site-Adama GTZ- Village.

The project was established based on bilateral agreement signed between the Ethiopia and the German Governments. An implementation agreement was signed between the former Ministry of works and Urban Development (MoWUD) later Ministry of Federal Affairs (MoFA), again recently Ministry of Works and Urban Development and the German Technical Cooperation

(GTZ). The project was implemented the low-cost through pilot project in Adama since 1999.

2.2.3.2 Selection of Project Pilot Centers

Initially, it had been planned to commence the pilot projects in three major regions of the country: Oromia Region, Amhara Region and Addis Ababa City Government. However, in the middle period of the project's first phase (2/1999-1/2002), different regions began a large and medium scale housing programs that led to the expansion of the scheme to other areas (see appendix 3). The selection of Adama town pilot project was based on the bilateral agreement and substantial requirement and expected demands in large towns.

According to the project (GTZ-LCHPO 2001:1-21) and the writer's observation, the selection of the GTZ-village or Kebele 01 as the project's area can be attributed to the following factors:

- It is located nearest to the center of the city;
- Because of its nearest location, it is very accessible to basic infrastructures, like telephone, electricity and water that diminishes infrastructures cost, time cost and also minimizes the requirement of transport and there by increase productivity;
- Topographic and soil conditions of the site are appropriate for the implementation of the technology as studied by project experts. Since steep slopes or flooded area might have required costly protection and construction measures (discussion with experts and officials);
- The site Kebele authority has shown great interest in the scheme;
- The land administered by the municipality of Adama was leased to the project without any charge.

2.2.3.3 Loan Condition

One of the project's main goals was to give access to housing credit through the existing public and private financial institutions. The project has attempted to exclude or minimize subsidy, which might apply to interest rate, that is, only by means of offering various types of loans at different repayment periods from 5 to 15 years interval. Shorter repayment period might diminish the impact of inflation and related risks.

Loan value or loan amount was determined by the beneficiaries' monthly income and the total housing construction costs as completed by the project estimation engineers. On the other hand, it was also based on the beneficiaries' ability to afford. Beneficiaries who can afford to pay 50% or above the loan amount in advance may have an access to set the loan for the remaining amount.

The total project cost for each beneficiary housing construction is 12000 birr.

2.2.3.4 Selection of Beneficiaries and the Process of Loan

To select beneficiaries, the project introduced itself through different methods like informing the residents of the town about the project's scheme through pamphlets, information meetings with the residents of Kebeles or part of the town in public buildings available like schools and public halls, registering and filling in the list or application form, collecting supporting documents such as employee's letters. Applicants submit an employment letter whether public or private sector employees. In addition to an employment letter, applicants must submit letters from their respective residing Kebeles with their family status (married or unmarried) and their housing ownership status that describes whether they have or they have no their own house and titled land. Moreover, economic status of applicants is evaluated through direct interview. This includes applicants' monthly salary and gross family income. Based on the criteria of the financial institutions (CBB), the project prepares the economic and financial evaluation in accordance with the stated monthly income. The project also computes loan repayment capacity. Finally, project analysts determine maximum loan value, loan duration and minimum monthly quota.

The socio-economic evaluations of the applicants verify the data they provided. The project confirms employment data by means of telephone calls or visits to the employees' residences or their work places. The project also visits the applicants' homes to verify the information and collect direct and personal impressions, discussing with the applicants and their families household head husband and/or wife.

Loan approval: once the evaluation is completed, the applicants' files are handed to CBB Adama Branch to get the loan. The bank again reviews the applicants' files and recommends whether to approve, reject or re-evaluate the application. Parallel to the loan approval, the bank approves the technical documents i.e. the plans, specifications and cost estimation of the houses. After the whole approval of the documents (by the bank) the applicants are invited to sign the loan contract with the bank.

Loan guarantee: A mortgage contract on the title deed of lease holding implies that borrowers shall mortgage their houses for the period of the loan repayment.

Loan administration: All loan payments are transferred to the project's account with signatory confirmation of the borrowers. The project is then fully administering the loan for the specified housing construction only (in this case the Adama LCHP or GTZ-Village).

Facts about the beneficiaries of the project: As the project office observed at the time of frequent site works (GTZ-LCHPO 2001:1-21) and the writer's observation, the beneficiaries of the GTZ-LCHP are considering themselves happy being beneficiaries of a pilot project of Adama town GTZ-Village. This is also used to replicate the model for the well being of the town's dwellers and the housing development.

In this case, it might be, relatively speaking, a high initial investment for the low-income urban dwellers. The houses were planned and constructed by the LCHP had been built according to Ethiopian Building Code (EBC) guaranteeing certain safe and improving living conditions of beneficiaries' and their families in particular for the females and children. The cost of construction per Meter Square is 333 birr, which is 50% less than the price charged by the then market price. Hence, a considerable saving is accruing to the beneficiaries compared to what one sets in exchange.

Facilitation of bank access: The Project facilitates bank loan up to 15 years loan for the beneficiaries through the existing public and private financial institutions. The beneficiaries are treated as individuals for loan agreement with banks according to their financial capabilities. Initially, a down payment of a minimum of 20% of the total construction cost is required from the beneficiaries, since the regulation allows the bank to only accept a payment of 1/3 of the monthly basic salary as payback rate.

Land provision: the beneficiaries of the project received $150M^2$ plot of land from the Municipality with title deed-free of lease payment (the case of Adama). The plots are fully accessed to basic infrastructures such as roads, electricity and water.

Application of new technology, employment and income generation: new technology concept is applied by the GTZ-LCHP. The modular and slab-system with formwork are new low cost construction system in the project technology concept. The labors to work on the construction site are introduced to the new technologies, receiving on-job training. This could help them to sell their labor elsewhere in the market even relatively at higher price. It will also used to multiply the technology applied by the project in Ethiopia. The project beneficiaries (workers) might have a chance to work in different skill applying construction works that improve their skills. It also improves the cities plan. The cumulative effect is improving in individual income and the city.

2.2.4 Housing and Socioeconomic Development

Housing is strongly related to socio-economic development. It is also one of the most important

sectors in urban economy. Housing entails not only the provision of shelter for the urban population, but also has strong links to socioeconomic development. Investment in housing makes up a significant portion of fixed gross capital formation and provides a secure channel for saving household income, which in turn brings investment and then economic and social growth (PADCO 1996:23, Nenno and Brophy 1982:1-2).

Investment in housing makes up a significant portion of fixed gross capital formation and provides a secure channel for saving household income. Growth of the residential industry creates job both in the construction sector as well as in other sectors. Standard dwelling maintains the quality of life of its inhabitants.

To relate housing sector with overall economic development we, can see briefly the main economic sectors with respect to gross domestic product (GDP). The Ethiopian economy is predominately agrarian. The agriculture sector accounted 47%, 43%, 45.1% 46.2% and 47.3% of GDP in five consecutive years from 2001/02-2005/06. Industry accounted 13.3%, 14.3%, 14.1% 13.8% and 13.5% in the mentioned years respectively. The service sector accounted 39.9%, 43.2%, 41.4%, 40.6% and 40.4% in similar pattern. The distributive services accounted 15% in 2000/01 and 2001/02 while it contributed 16% in 2002/03. Other services like banking, education and health accounted 30%, 31% and 33% from 2000/01 to 2002/03. The trend in service sector is increasing in 2003/04 - 2005/06 also (NBE 2000/01-2005/06). The agriculture sector declines in the share of GDP do not indicate significant structural transformation. Rather, it means it is still the main stay of the economy requiring more modernizing the sector (NBE 2002/03-2005/06:6-10, PADCO 1996: 2-3).

Large and medium scale manufacturing industries contribution in million birr is for instance 72% for public sector while private sector accounted 28% in 2001/02. It was 79% and 73% for the public sector in 1998/99 and 1999/00 respectively while it was 21% and 27% for the private sector in that order. The share of private sector is also accounted 29% and 33% in the year 2003-2004 respectively (CSA. 1999-2004). Therefore, the role of private sector investment in the economy is increasing since 1991 government transition as central planning was shifted to free market economy.

Observing linkages between housing and micro-economic development, housing sector in Ethiopia is adversely affected by the extent of development of the financial sector and the overall

performance of the economy. Even though relatively a growing level of development of banks are recently observed in the economy, high interest rate, collateral requirements and mandatory clearance from government institutions have all contributed to limited participation of poor and low-income sections in the financial sector for housing. As a result informal sectors fill some of the gaps left by the formal sectors that indicate backward linkages with housing (PADCO 1996:2-3, NBE 2002-2006).

The effects of the forward linkages between housing and the macro-economy are not more positive. Overall investment in the urban housing sector was 0.19 percent of GDP in 1992 while it was only 0.7 percent of GDP in the year 2007 which is low compared to the increase in the volume of GDP (see table 2.1) even if GDP is relatively growing since 1991. Over the period 1981-1992, the average annual percentage of GDP was 0.24 percent while over the period 2003-2007; it was only to 0.7 percent. However, urban housing investment is showing an increasing share of total housing investment, averaging 38 percent over the same period while it was 10% in 1981-1992 in (PADCO study 1996:5, MoFaED 2003-2007 and own compilation).

Table 2.1 Investment in Housing as % of GDP (2002/03-2006/07-Millions of Birr)

Sector/years	2002/03	2003/04	2004/05	2005/06	2006/07	Annual average
GDP	73432	86661	106473	131672	170921	113832
Total building construction	3693	4627	5511	6921	9269	6004
Building construction as % of GDP	5.0	6.3	5.2	5.3	5.4	5.3
Total housing	1548	1794	1993	2384	2979	2140
Total housing as % of GDP	2.1	2.1	1.9	1.8	1.7	1.9
Urban housing	604	659	747	900	1130	808
Urban housing as % of GDP	0.8	0.8	0.7	0.7	0.7	0.7
Urban housing as % of total housing	39	37	37	38	38	38
Total housing as % of construction	42	39	36	34	32	36
Urban housing as % of construction	16	14	14	13	12	14

Source: Compiled from MoFaED 2008, PADCO 1996:6 and NBE 2006

Note - GDP at current market price, Base year 2000 G.C. Data from MoFaED as of May 2008.

The total Building Constriction may not include Real Estate, Renting and Business Activities.

By comparison urban housing in Kenya in 1976 (before 32 years) represented 40 percent of total housing investment. In Addis Ababa in 1974, for example, housing production was only 0.64 units per thousand of population; the Sub-Saharan regional average for 1992 was 6.62 (PADCO 1996). The construction industry, as a whole, which includes housing investment, contributed 5.3

percent of GDP in 1991 while it was accounted only 5.4 percent of GDP in 2007 after 16 years. The average annual contribution to GDP was nearly 5.3 percent from 2003-2007 as compared to 3 to 8 percent for developing countries in 1996. The low level of investment, in combination with a relatively growing construction sector, means that urban housing contributed little to employment generation and fixed capital formation. While total investment in housing represented a substantial annual average of 36 percent of construction, urban housing accounted for only 14 percent, total housing nearest to 2% of GDP at annul average of fixed capital formation. Since it is only in urban areas that housing has significant multiplier effects, housing contributed little to the growth of the building materials or household goods industries while urban housing investment is increasing in recent years, after 1991, as a result of free market economy (Ibid).

Housing has also linkages with social developments. Sub-standard housing erodes the quality of life of its inhabitants. Units that are poorly constructed or built to temporary materials fail to keep out the elements and to provide sufficient security for personal or business property. As densities go beyond a certain threshold, overcrowding leads to health problems. And low service levels of shelter-related infrastructure result in unpleasant living conditions and increased incidence of transmitted diseases (Ibid).

2.2.5 Urban Growth and the Issue of Housing

In 2010, the world population will be estimate to be 6.9 billion, out of which 14.9% will be African (UN-2007). According to (UN–Habitat 2001:3, Gugler 1988:7-11, USBOC 2006:1, IWSC 2006:1-5), the world population is becoming predominantly urban. While the population of industrialized countries is already largely urban, urbanization processes are still acute in developing countries. In. year 2000, more than 40 percent of the populations of developing countries already reside in cities. By the year 2020, this figure will have risen to 52 percent. The Latin America and the Caribbean already had above 75 percent city dwellers, while in contrast; only- one third of the population of Africa and Asia lived in urban areas.

Though the proportion of the population residing in urban areas is projected to increase in all regions, the rate of growth is the highest in the regions with the lowest level of urbanization. In this respect, the greatest challenge will present itself in Africa and Asia, where an explosive demographic change is expected in the next decades. Currently, three quarters of global population growth occurs in the urban areas of developing countries, causing cities incapable of

catering for such growth. The present decade's (2000-2010) average annual population increase in developing countries' cities is estimated at 64 million. Half of this increase is caused by natural population growth while the other is by rural-urban shifts. For instance, urban population of Africa, which was about 7% during the early 1960s, grew to 31% at the start of the 1990s and recorded 37.3 percent in 1999. This was again increased to 37.9% in 2000 and projected to reach 46.5 % in 2015 and 54.5 % level of urbanization in 2030 (Tilahun 2002: 9, Habitat 2001:271, Gugler 1988:1-11, ADB: 2001:13, APO Housing Study Report 2003: Eshetu G. 2000: 17-18, WB 2003, USBOC 2006, IWSC 2006:1-5).

Like most African countries, large-scale urbanization in Ethiopia is fairly a recent phenomenon. Ethiopia has witnessed thousands of years of indigenous development of towns and cities. However, the country has not yet attained a high level of urbanization, rather less urbanized than similar countries in Africa. In fact, urban growth is increasing. For instance, in 1940, percentage of urban population was 4.9 million out of the total population of 16.3 million. In 1984 it had grown to 11.4 % out of the total population of 42.7 million, in 2004 it was 15.8 percent out of the total population of about 71.1 million. In the year 2007, it was estimated to increase to 16.5% out of the total population of 77.1 million. In 2008, it is estimated to increase to 16.7% out of the total population of 79.2 million. It is forecasted to increase to 23% in the year 2030 out of the total population of 129.1 million. The projected total population will double in 26 years and the urban population will double in 16 years (APO 2003:21, CSA 1999: 7-8, 312-315 and 328, Bekure 1999:16, NBE 2003-2006: 1-15, ADB 2001:13, MoEDaC 1999:118, Habitat 2002, Befekadu et al 2003: 76-77).

In addition to this demographic pressure, the size, locations and distribution of cities have an implication in any regional and national development since they indicate the availability of urban services and the capacity to provide modern facilities. In this respect, there are inequalities in the size, distribution and spacing of urban settlements at national, regional and sub-regional levels. At national level, Addis Ababa is the primate city having about 30% of the total urban population and contains the highest concentration of activities in the country while there are many urban centers with lower size and facilities, Adama for example, is categorized in the size category of 100,000-500,000 with estimated population of 192141 in 2004/05 and estimated to reach 215000 in the year 2008 (Tegegne 2000:2-3, 1999: 83-90, APO 2003; 22 and 95, Bekure 1999:18-22, CSA 1996 & 1999:325).

The result is that at much lower income levels, with much less institutional and financial capacity and with considerably fewer opportunities to facilitate urban housing and housing services, the challenge will remain unchanged that requires government effort solving housing problems of poor and low-income population (Tegegne 2002: 65-85, Todaro 1995:247-80, Gugler 1996:211-51, Solomon 1985:12-17, 1997:188-204, 1999:79-93, Habitat 2001:3, APO 2003:17-18 Cater 1994).

2.2.6 Urban Housing Needs

We have observed in the preceding sections that the urban growth rate of the developing countries is quite high. One of the major consequences of this accelerated urban growth is the large-scale appearance of unmet housing needs in the major cities of these countries. Almost all of the major cities of Africa, Latin America and most of Asia have failed to provide adequate shelter for the endless streams of immigrants that pour into them each year (Solomon 1985:17-21, Habitat 2001:198, Balchin 1996:2-6). Similar pattern is observed in most of Ethiopian towns and cities. Table 2.2, bellow indicates the magnitude of the urban housing needs of Adama and Addis Ababa cities.

Table 2.2 Estimated urban housing needs of Adama town and Addis Ababa city, 1994-2020

S no.	Housing required to provide for	Estimated need/unit					
		Adama		Addis Ababa		Total	
		N	%	N	%	N	%
1	Population increase	34205	82	363000	78	397205	79
2	Replacement of obsolescent stock	6000	14	51130	11	57130	11
3	Elimination of existing shortage	1595	4	50300	11	51895	10
4	Total (1-3)	41800	100	464430	100	506230	100

Source: - Compiled from APO Housing Study Report 2003:95-99 for Adama and ORAAMP 2000 - 2002:19 - 23 for Addis Ababa

As it is shown in the above table, the total average urban housing need for the two cities, that is, Addis Ababa and Adama, during the period 1994-2020 is estimated to be more than half a million dwelling units. The greatest portions of the housing units thus required were needed in Addis Ababa. During the period less than the time interval of Adama i.e., from 1995-2010, Addis Ababa has an estimated total housing need of 464430 dwelling units in its metropolitan area. The corresponding figure for Adama city between the years 1994 to 2020 is 41800 dwelling unites. The housing need for Adama is, at least, 11 times less than the required stock for Addis Ababa. The greater housing need for Addis Ababa is that, it is the primate city inhabiting an estimated population of more than 3.1 million while Adama city is inhabiting an estimated population of 215000 in the year 2008 (CSA 1999: 325, APO Housing Study Report 2003:96). Nevertheless,

the main condition that the two cities have in common as regards their urban housing needs during the corresponding periods is the fact that the bulk of their housing needs are accounted for the population increase rather than by the replacement of obsolescent stock or the elimination of existing shortages i.e., more than three quarters.

Estimate of the population of Adama city by CSA is presented in table 2.3. In 1964, the population of the town was estimated to be 27812, and in 1970 it increased to 39221.This figure reached 61510 in 1977. The results of the 1984 census revealed that the population of Adama amounted to 77237. According to the 1994 census, a total population was 127842. This would mean that with an average growth rate of 5.4 percent per annum, the population of the city grew by 50605 between the two census periods. The average growth rate for the entire period i.e., 1964-1994 was 5.1. The trends in the rate of growth generally indicate the persistence of high population growth of the city (APO Housing Study Report 2003:95, CSA 1999).

Table 2.3 Population and rate of growth in Adama, 1964-1994

Population					Rate of growth percent			
1964	1970	1977	1984	1994	1964-77	1977-84	1984-94	1964-94
27812	61510	77237	94182	127840	6.1	3.6	5.4	5.1

Source: Compiled from APO Housing Study Report 2003:95

The population of the city will continue to increase at a rate of 3.8% until the year 2020. As such, it would be 192141, 221629, 251554, and 287169 in the years 2005, 2010, 2015 and 2020 respectively,

The 1994 census results of Adama show that there were 26516 conventional households with an average household size of 4.82 and 25016 housing units accommodating 127842 persons. This increased to 173421 in 2002. The total housing need for 45579 new populations between the two periods at 4.82 household size was 9456 i.e., 1182 housing units per year. On the other hand, the total residential plots allocated between 1998 and 2002 were only 1926 while the total number of applicants were to 4647 households. The study indicated that between the year 1991 and 1998, there was no formal housing production. Assuming that all those who obtained residential plots built their houses, the maximum number of formal housing units built over eight years (1994-2002) was only 1926 units meaning an average annual formal housing production of 240 units (ibid: 97).

As a result, it was estimated that the total number of informal housing unites built within the city exceeds 10,000 units. Due to planning problems, it requires redevelopment of these settlements. Therefore, all these housing units are considered to be part of the backlog. According to the study, difference between the total need i.e., 9456 and the housing supply i.e., 1926 is 7530, which is the housing backlog within 1994-2002 (Ibid). The housing need for relieving overcrowding in the city core area was 1595 housing units. The housing need for replacing deteriorated units and solving problems of ownership were 6000 units that need to be demolished and replaced which accounted 24% out of the then existed housing stock in the city. The total population increase due to natural growth and the net migration was estimated to be 113748 people between years 2003 and 2020 i.e., 173,421 in 2002 to 287169 in 2020. Assuming that the average household size remains the same i.e., 4.82, the total number of housing units needed to accommodate the growth of population until the year 2020 will be 23600 units. This would mean that the average yearly need for housing units related to the growth of population between stated years alone is 1311 (ibid: 97-98).

In addition to this, about 3075 government employees together with their families would be estimated to live in Adama within the period of 2003-2008. Taking on average household size of 4.5 persons, the total population that estimated to live in the city would be 13838 (ibid: 96).

In general, the total of 34205 i.e., 82% of the total housing need is housing required to provide for population increase, 14% for replacement of obsolescent stock while 4% is for elimination of existing shortage (see table 2.2). The total of 34205 housing need is the sum of 7530 the housing units of 23600 and 3075 that indicate the housing need due to population increase.

2.2.6.1 Housing Demand

Considering local and international experiences, housing demand is lower than the need especially in developing countries like Ethiopia because housing supply is directly related with the economic capacity of households. Housing demand could be influenced in different ways (APO Housing Study Report 2003:99).

Various options considered regarding affordability of households in the city are availability, accessibility, cost of transportation and cost of building materials, skilled and non-skilled labor requirement and payment, overall construction cost with that of the household income and expenditure characteristics and housing rent (Ibid). According to APO Housing Study Report and

PADCO, housing affordability is extremely low. The reason for this is the low level of household income. According to PADCO 1998:28-29: the median monthly income of Addis Ababa and Adama is birr 391 and 343 respectively while median expenditure is 382 and 278 respectively. In the APO Housing Study Report 2003:99 cf. PADCO 1996, the mean monthly income and expenditure in the city was birr 460 (US$ 55) and 340 (US $ 40), respectively.

Similar to the situation in most parts of the country, unemployment rate in Adama is high which to a large extent has contributed to the low household income. According to the study, (APO 2003:99 cf. CSA 1994), unemployment was 24.76 in male 37.25 in female and 29.28 in both sexes in the city. The results of APO Housing Study 2003 show that building materials are available at 5 to 25 kms at an average within the city boundary. As compared to Finfine and other large urban areas in the country, the price of material is lower by about 5%. This mainly could be attributed to Geographical benefits that large resources of building materials to be quarried, proximity to those resources and comparatively cheap unskilled labor required. Similar to APO Housing Study, at the time of field survey group discussion, project Kebele-Adama 01 members, building workers, elderly persons and beneficiaries suggested on inputs of building in Adama. As a result, at an average, cubic meter stone costs 35 to 55 birr, a piece of HCB costs 2.5 to 3.5 birr, Brick 4.0 birr, piece of Timber 11 to 13 birr, cement 50 kg 95 to 100 birr, and CIS 47 to 67 birr. The required labor cost is dependent on type of work. For instance, fee for Mason per a day ranges from 30 to 35 birr, Carpenter 25 to 30 birr while daily laborers fee ranges from 15 to 25 birr per a day. These generally costs cheaper than Finfinne, which partly could be attributed to the lower living expenses, required in Adama (Ibid: 100).

Housing construction cost per meter square varies according to types of construction and type of builders. The unit cost of cooperative houses is estimated to be 500-600 per meter square. For instance, HCB costs 500-1000 birr and it varies from 500-600 if it built by owners and 600-1000 birr if it built by contractors. Brick costs 600-1200 birr, stone cost 800-1200 birr, apartment costs 1000-2000 birr, wood and mud 150-250 birr while stabilized earth blocks costs 100-200 birr per meter square. The cost of Hollow Concrete Block (HCB) construction is estimated from houses built through the German Technical Assistance (GTZ), Housing Cooperatives and individual builders (APO Housing Study Team 2003 Ibid: 101-2).

Housing area and estimated construction cost of typologies being assigned by city government of

Adama is that cost varies from birr 21175 to 46480 within 30.5 to 66.4 per meter square plot of land. This means that the cost varies from 694 to 700 birr per meter square for HCB. The standards of units are more than 50-meter square, 30-50 and up to 30-meter square for the high, middle and low-income groups respectively.

2.2.6.1.1 Housing Rent

The review of housing rent in Adama kebele, individuals, AARH, Government owned houses made by APO Housing study shows that the cost of Kebele rental units as the case every where in other urban areas is low. According to the study, houses owned by the kebeles in the year 2000 was 7603 i.e., 30% of the total stock in the city. The total monthly rent is birr 51260 i.e., an average rent of 7 birr per month. Again the total number of rented houses in the city is 12715 out of which 40% is kebele houses. The total housing rent is 352712 birr and the average housing rent is almost birr 28. The sample household survey carried out by the study team shows that the average monthly rent of kebele owned houses in the city is 8 birr per month, while that rented from private owned is 60 birr per month. The urban local government of Adama has also a number of housing units that are rented for 77-145 birr/month (APO Housing Study Report 2003:102-3).

2.2.6.1.2 Household Income and Expenditure

According to PADCO 1996 cf. APO 2003:103, 54, 26 and 20 percent of all the households in sample urban areas like Addis Ababa, Adama, Bahir Dar, Mekele, Harar and other small towns earn a monthly income of birr less than 340, 340-670 and more than 670 per month respectively. According to the same source, expenditure on food and water make up to 45.8 per cent of the total. Assuming that the first and second groups could allocate 20 percent and the last group 25 percent of their income for housing, the study also shows that the first group cannot afford to have access to the formal lending system, while the second group can afford to borrow part of the fund and only the last group qualifies for a full mortgage loan from bank (Ibid).

Household expenditure basket from CSA and also different offices of Oromia Regional State shows that households spend significant percentage of their income for food and clothing. Part of the remaining is spent for housing. Saving and different contributions account for only small percentage (Ibid).

The review of the monthly income of workers of sample bureaus of the region shows that 19

percent of the employees earn a monthly income of more than birr 1500. The remaining 15%, 35% and 31% get birr 1000-1500, 500-1000 and less than 500 per month, respectively. Analysis of these data shows that this cannot be representative of the different households in the city (Ibid).

The APO Housing Study-Survey in Adama shows that out of the total households covered by the survey 65 percent earn monthly income of below 500 birr, about 25 percent 500-1500 birr and the remaining 10 percent above birr 1500. Out of the 25% the detail investigation shows that 15% earn monthly income of birr 500-1000 and the rest 10% birr 1000-1500 (Ibid: 103-4). Therefore, considering household income and expenditure, how housing for low-income groups has satisfied is the challenge behind this analysis? The cost of HCB housing construction of area 30.5-meter square at 500 birr per square meter is equal to 15250 birr. According to the study, the total cost of housing including interest rate is equal to birr 19825. Taking repayment period of 15 years, the expenditure for housing is equal to 100 birr per month and the household should have a minimum monthly income of birr 500 (Ibid: 104).

The minimum cost of housing constructed using local materials is birr 7930, which requires a minimum monthly income of birr 220 to construct on the same area. With similar analysis, the study reported 500-1500 birr and more than 1500 birr monthly income for middle and high-income groups respectively. In general, the households earning monthly income of birr 500 per month could afford to build housing using HCB of area up to 30 meters square. Households earning a monthly income of birr 220-500 per month could afford to build housing units of area 30 meters square using local materials. Those earning below 220 could not afford to build housing of the proposed standard and therefore need special support from government to increase their affordability to enable them to save sufficient money for building decent dwelling units (Ibid: 106, Solomon 1985:21). Considering the APO Housing Study Report 2003, it is assumed that households in Adama and those to be relocated could afford to allocate a minimum of 20 percent of their income for housing.

Based on what was presented and discussed in the previous sections, though high and middle income groups are expected to respond to the effective demand to build or rent housing unit, it requires again government support for the poor and low income groups making them to create effective demand to build or rent housing unit.

Box -1

"Save and Build" Helps house the poorest of the poor. In some communities, poverty is so severe that even Habitat for Humanity houses are out of reach for families. And in some cultures, the concept of a mortgage is completely foreign and difficult for people to accept and embrace. To address the needs of communities like these, Habitat for Humanity Sri Lanka developed the "Save and Build" program.

Through "Save and Build," homeowners are organized into groups of 12 families. Each family saves the equivalent of 15 cents (USD) per day for six months. During this time, homeowners also collect rocks and sand both freely available through out the countryside and make their own bricks.

At the end of six months, the group's savings are sufficient to build one house, consisting of a single room with an attached kitchen and bathroom area. Within 27 months, all 12 families complete their houses. If they choose to continue with the " Save and Build" program, the families can then add an additional room to their houses by beginning the saving and brick-making process again.

An adoption of the "Save and Build" program allows an individual family to pay for a foundation and roof at the beginning of construction. Then the family thatches the walls of the house with leaves, brush and grass until they can afford to purchase bricks or blocks- sometimes a few at a time - to construct permanent walls. The opportunity to purchase building supplies a little at a time, without the commitment of a mortgage, makes homeownership a more feasible reality for the Sri Lankan people.

I think the " Save and Build " model will eventually become the traditional approach to building in many of the poorer countries, as Steve Weir, the Vice President for Habitat for Humanity's Asia and the Pacific area said. He has seen potential for programs similar to the one in Sri Lanka to become vital nations such as East Timor, Bangladesh and Nepal, as well as in impoverished countries in other areas of the world like Ethiopia.

"Save and Build" is one means of reaching families in need through flexible mortgage structures and construction processes. By respecting the realities of local communities and working creatively within them, it is possible to adapt the model in Ethiopia to solve the growing housing needs of the population. The model can fit in Ethiopia where labor and building materials are naturally available in the countryside. It also requires government commitment in realizing building code fit to the program.

Source: Adapted from file: //A: \ Habitat for humanity International 2002 Annual report.

2.2.6.2 Housing Supply

The world is rapidly urbanizing. While the movement of people to cities may reduce immediate pressure on the rural environment, it increases people's exposure to other environmental hazards. The UN Habitat 2003 estimated that in 2001, 924 million people lived in slums, where they lack basic services, live in overcrowded and substandard housing, and are exposed to unhealthy living conditions and hazardous locations (WB World Development Indicators 2004:10).

As demand for housing exceeds supply, housing deficit will exist. This, in turn, could further reduce the quality of existing housing stock particularly in high-density living slum and squatter settlement areas of cities of developing countries. The challenge is calling for improving the lives of at least 100 million slum and squatter settlers' dwellers by 2020 in those countries (WB World Development Indicators 2004:10).

Housing units were constructed in Adama through different approaches. Cooperatives in the city

are successful in providing housing for different income groups. Close to 30 percent i.e., around 7505 of the housing built in the city within the past decades are undertaken by cooperatives. The other alternative approach adopted has been housing units built by different households in infill and expansion areas of the city. It is estimated that close to 30 percent of the households built housing units within their existing plots and back yards for renting purposes which contributing a lot in reliving the housing shortage and lowering the rent, bringing consolidated land development and thus efficient use of scarce land resource according to APO Housing Study Report 2003. Kebeles have been also one of the suppliers. They construct either by themselves or collaborate with local and international NGO's (APO Housing Study 2003:101).

Table 2.4 Housing stock and ownership pattern in Adama 2003

Ownership	Stock	Percent
Private	9535	38
Kebele	7603	30
Government	918	4
Others	6960	28
Total	25016	100

Source: Compiled from APO Housing Study Report 2003:84

More than 40 percent of the housing units in the center of the town are owned by the kebeles. There is a problem of management and upkeep. There is a clear distinction between kebele and private owned houses in terms of housing condition. The form of tenure affects the incentives for residents to improve their homes, the social stability and its homogeneity. It is generally agreed that the more secure the tenure and the more stable the economy, the more networks of kinship and mutual support will run through the neighborhoods. This means that the more control people have over their homes, their environment and their sources of livelihood, the better, they would be able to cope and improve their living environment in a gradual process (Ibid: 84).

As we can observe from Table 2.4, more than 38 percent of the total housing stock is owner occupied, almost nearest to 30 percent is kebele houses, nearest to 4 percent is also government owned and housing used for other functions are 28 percent. The sample household survey carried out by APO Housing Study shows that 75 percent of the houses with bad condition are owned by the kebeles (Ibid: 85). In general, since population dynamics is showing increasing population trend in the cities of developing countries, the existing housing stock is indicating insufficient in quantity and quality of stock to house lives of existing and the prospect (NUPI 1995, 1997 and 2003).

2.2.7 Urban Housing Policies and Programs

As has been discussed in the preceding topics, the unabated urban growth that has taken place in the developing countries since the turn of the 20th century has increasingly worsened their urban housing conditions. One of the principal reasons behind the large scale appearance of slums and squatter settlements is that the problem has not been met with timely and appropriate policy measures. In fact, most developing countries were very late in showing serious concern over their deteriorating urban housing situations (Solomon 1985:21-22, Satterthwaite and Hardoy 1990:111-121).

The last 60 years have seen major changes in the ways that third world governments have tried to tackle housing problems in their major cities. At one extreme, in initial stage, governments regarded public investment in housing as a waste of scarce resources, believing that economic development will itself solve housing problems. Therefore, nearly all countries of the developing world laid emphasis on investment in the directly productive sectors such as agriculture, and manufacturing industries rather than on housing and urban development. It appears that the same view was held in those days even by the international organizations that gave assistance to development projects in third world nations (Satterthwaite and Hardoy 1990:116, Solomon 1985:22-23).

However, the traditional economic misconception that regarded investment in housing as a non-productive investment could not last long since many writers seriously attacked it at least as of the early 1960s. Later on, by the early 1970s, governments acknowledged the existence of housing problems; widely accepted that investment in the housing sector had a positive and a far-reaching effect on the other development sectors. Then, many third world countries started provision or improvement of housing through different projects (Ibid).

Although Third World countries generally have begun to show serious concern over their urban housing problems recently, some of them had attempted to launch some kind of housing polices and programs as early as the 1950s, and 1960s (Solomon 1985:23). Some of them have been adopted generally four kinds of housing polices and programs by their own fund and /or with the help of foreign aids specially the Word Bank: before or after their independence to solve their housing problems. These policies and programs are:

1. Public housing development (1960s-1970s)
2. Slum upgrading (1960s-1970s)

3. Site and service development (1970s -1980s)
4. Enabling approach (late 1980s -2000s)

2.2.7.1 Public Housing Development (1960s-1970s)

Most of such programs were launched after 1960s, although there are examples of government - financed projects or programs that were started much earlier. Some of the earliest were tenements constructed with public funds in certain Latin American nations in the late 19th and early 20th centuries. For instance, in Venezuela, Peru, Chile, government financed housing schemes intended for low-income groups were in evidence before 1930. Several public housing programs were begun in Latin America between 1930 and 1950, and by the 1950s. Public housing programs were underway also in many nations of Africa and Asia, including Egypt, India, Philippines, Singapore and Thailand that had established certain types of public housing agencies prior to the 1970s (Solomon 1985, Satterthwaite and Hardoy 1990, MoFA 2004, Mohan and Hugo 1996 in Gurgler 1996). "The sole concern of the institution was to promote urban housing construction at rates that could, at least, arrest the further deterioration of their already frustrating housing deficits (Solomon 1985:23)"

However, three problems dogged public housing programs: unit costs were so high that far fewer units were built than were needed, middle-or upper-income groups ended up as the main beneficiaries; and designs, locations, and repayment conditions were ill-matched to poorer groups' needs (Ibid: 23-24 in Dwyer 1975, MoFA 2004:5-6, Satterthwaite and Hardoy 1990:126).

Similarly, in those countries where the public sector was directly or indirectly involved in large-scale construction of dwelling units, it failed to meet the needs of the households in the low-income bracket. It made hardly any difference even if the housing programs were launched under the title of low-cost housing programs (Ibid). In Nigeria, Kenya, Egypt, the Philippines, Pakistan, Bangladesh, and Indonesia the quantitative inadequacies of public housing programs and their ambitious targets during 1970s and 1980s had been cited as an example (Satterthwaite and Hardoy 1990:127).

> Such programs are simply proved to be symbolic or unrealistic, because they failed to meet the needs of the urban low-income households who actually formed the bulk of the population of the cities of the developing countries (Solomon 1985:24).

2.2.7.2 Slum Upgrading (1960s-1970s)

In 1950s and early 1960s, other than establishing various types of low-cost housing schemes, many developing countries governments became increasingly worried about the rapid growth in the size and population of their major cities and of what they called "slums" or "shanty towns." These were often seen as a cancer and thus they launched slum clearance and upgrading programs and eradication of squatter settlements as a result of their emphasis on the need for dwelling units, which met minimum, required standards. However, the slum clearance programs have increasingly proven to be detrimental to urban housing development since their practices substantially reduced the already limited urban housing stock. Moreover, slum clearance programs have proven to be one of the most expensive ventures in urban development. In most instances, undertaking large slum and shanty clearance projects were also exacerbated the housing problem by destroying some of the few housing options open to poorer groups by rarely received accommodation on the redeveloped site, leave alone all, even when it was promised (Ibid: 25, Satterthwaite and Hardoy 1990:117 & 119).

Many reasons have been given as to why most developing countries increasingly relied up on unrealistic housing policies and programs. Among the principal reasons commonly cited are: the lack of competent and committed planners in the third world countries, the unrealistic belief of the housing policy-makers of such countries during the earlier days that urban population growth could be controlled and the increasingly frustrating magnitude of the urban housing deficit itself. Underlying all these factors is, however, the fact that initially urban planning and administration agencies as well as models practiced by most of the developing countries were copied from the metropolitans. In fact, these imported policies and programs of urban development proved to be unrealistic by third world countries since they were borrowed or adopted out of context, with little modification (Solomon 1985:25-26 in Renaud 1981:7, Lewin 1981, Dwyer 1975, Wakely, et al, 1976, Satterthwaite and Hardoy 1997:265-90 in Gugler 1997).

2.2.7.3 Site and Service Development (1970s-1980s)

If one examines the evaluation of Third World governments' housing policies from early time, there is usually evidence of an important change in policy at some point. They began to look for more endogenous solutions as regards their urban housing to the urban poor. Interest of planners has been shifted in favor of basic housing programs. Emphasis has been placed on the process of service and shelter provision rather than on the physical house shell. One sign of this has been

less emphasis on slum or squatter clearance and upgrading. The fact that slum clearance destroyed some of the few cheap housing options open to the poor becomes evident to governments, and slum clearance practices has been no longer as strong as they used to be. There has been an increasing. understanding throughout the third world that slum and squatter settlements should be viewed as solutions to the problem of housing deficits rather than as problems themselves (Solomon 1985:26, Satterthwaite and Hardoy 1990:117& 119).

Thus, since the mid-1970s the most observable trend in the housing programs of many developing countries has been one of the improvements and the upgrading of squatter areas through the provision of basic services such as safe drinking water, electricity and access roads. Side by side with these on-site improvement programs, sites- and services schemes have also been launched. The sites- and- services schemes are housing programs in which serviced plots of land are provided for low-income households with or without core housing units, so that the potential occupants may build on them new low-cost dwelling units (Ibid: 26-27, Satterthwaite and Hardoy 1997 in Gugler 1997: 265-304 and 1990:140, Mathey 1997:280 in Gugler 1997).

The World Bank, through its shelter assistance programs, has been supporting squatter upgrading and sites-and-services programs in many developing countries of Africa, Asia and Latin America. These new housing programs have been more or less brought about satisfactory results not only because of the availability of international assistance but also through a large measure of self-help and community participation. It has been a long time since the self-help approach was known to be the cheapest and most appropriate way of constructing dwelling units even collectively for the majority of urban households in the developing countries (Ibid: 27 Satterthwaite and Hardoy 1990: 134-47, 1997 in Gugler 1997:280-304).

2.2.7.4 Enabling Approach (late 1980s-2000s)

While many governments have simply accepted the fact that existing building codes and norms should not be applied in officially sponsored squatter upgrading, slum improvement, and serviced-site schemes, they have been far less ready to rethink how new standards could be used to promote the improvement of housing conditions. On the question of developing the institutional framework needed to implement the enabling approach, the global strategy for shelter (GSS) to the year 2000 adopted in 1988 by the UN General Assembly replaced sites and services and squatter upgrading policies with the enabling approach focused on reform to improve the efficiency and effectiveness of housing markets (Satterthwaite and Hardoy 1990 and 1997, UNCHS- Habitat 2001:44-46 MoFA 2004:5-9).

2.2.8. Low-Cost Housing Provision in Ethiopia

Ethiopia is one of the few countries of the world with a long history of sovereign statehood. The country has witnessed thousands of years of indigenous development of towns and cities. However, like most of other Third World nations, until very recently, it has not shown any serious concern over its fast worsening urban housing problems (Solomon 1997:188). Even though most African governments responded to the urban housing questions through policies and programs explained earlier, none of these housing phases, however, has been as productive as anticipated. The Ethiopian government started to demonstrate some interest in increasing its influence on the processes of urban shelter provision in the country at least early as the 1950s. There is hardly any document that can be referred to as the national urban housing policy of pre-revolutionary Ethiopia. Historically all over the country, decision regarding building codes and housing permits were made largely based on local needs and abilities as well as in some cases with reference to vaguely defined and inadequately documented zoning ordinances. Apart from some remarks that appear in the master plans that were prepared for several regional administrative centers, much of what can be seen as urban housing strategy in the pre-1974 Ethiopia, was hardly more than attempts made to address the housing problem in the national capital (Ibid: 190)

However, the government recognized the problem and established the department of housing in the Ministry of public works in 1959. In the second five year development plan (1963-1967), the housing strategy aimed at launching large scale, moderate and low-cost housing programs. The third five-year plan (1968-1973) also recognized the development of housing sector using the results of the first urban housing survey undertaken by then Ministry of public works. The plan was to produce 25,400 new units annually in the country of which 91 percent were meant for the consumption of low-income households (Ibid: 194-95).

2.2.8.1 Urban Land and Housing Policies in Different Periods in Ethiopia

2.2.8.1.1 The Imperial Era

Under the pre-1974 imperial government, urban land and housing was largely the property of the Feudal elite, under such monopoly conditions, widespread speculation by landlords and housing suppliers led to rapidly rising land prices and little investment in new housing for low-or middle-income households (PADCO 1998:20, GTZ - LCHPO 2001: 2).

In the preparation of fourth five-year development plan (1974-1979) attempts was made to

identify urban housing needs and demands at the national level. The result were indicated the requirement of aided self-help schemes, sites and services schemes and housing cooperatives which were introduced in some cities like Addis Ababa and some other large towns (Solomon 1985:195). In early 1960s some research was made on the provision of low-cost housing. However, the programs were launched in limited urban centers such as the previous Asmara city, Addis Ababa and some large towns MoFA: 2004:27).

2.2.8.1.2 The Derg Regime

The Derg regime (1974-1991) nationalized the urban land and all apartments not occupied by their owners by the proclamation 47/1975 and issued series legal notice. In order to speed up both the formulation and the implementation of these policies, the Derg established institutions like the Ministry of Urban Development and Housing (MUDH) and the Housing and Saving Bank (HSB). The rents were reduced and frozen at a low level, which did not allow the public rental authorities-the kebele and the Agency of the Administration of Rental Houses (AARH) to assure a minimum of maintenance. Housing cooperatives and public housing were promoted through subsidized building materials and housing finance. Not withstanding, the housing needs were not covered; as a matter of fact, the urban housing problem increased dramatically during the Derg regime (Solomon 1997:197-98, PADCO 1998:20, GTZ-LCHPO 2001:2).

2.2.8.1.3 Housing Policy after Transition

Since 1991 the government has established market principles in all sectors of the economy, for instance, in housing, urban development, finance, construction inputs and related sectors. However, market principles require housing policy support like updating building regulations, land and housing programs for the better of urban poor which has been started by capacity building program supported by the World Bank (GTZ-LCHPO 2001, MoFA: 2004:10). In addition, the already issued Urban Planning and Building Code and Urban Development Policy in 2005/06 are the progress that support to the development of urban housing and related issues (MoWaUD 2006).

Urban land by the constitution is public property. Land allocation requires more transparent. It is still time-consuming procedure. Though since 1993 the new lease holding law provides the framework for an orderly land allocation through proclamation no 80/1993, in most regions only high income groups have legal access to developed land; the vast majority of households are actually excluded from land allocation. High development, layout and building standards (usually

full services for the entire settlements with individual water and electricity connections) imply high costs, which the urban poor cannot afford (Ibid).

Many municipalities are overwhelmed by rapid urban growth and cannot cope with the corresponding tasks of development planning and control, land development and management. A private rental market is developing very slowly; most of the run down rental apartments are still operated by public authorities (Kebele and the Rental Housing Agency Ibid), even if the private real estate are growing only for high income groups.

There is only one mortgage bank, the Construction and Business Bank owned by government. It normally does not grant loans to low-income households; a permanent job in a formal enterprise or with government and property of urban land are among the requirements the urban low-income house households cannot fulfill as most of them are immigrants and depend on employment in the informal sector (Ibid).

After many housing cooperatives formed under the Derg had collapsed, some have been revived or newly founded, in part with support from international donors and NGO's. Generally, these cooperatives solve only the housing problems of a few; requiring high levels of subsidy they contribute to poverty mitigation in a limited way rather than building up structures with a potential of satisfying the housing needs of the urban poor. Housing programs co-financed by the World Bank and other multilateral institutions have so far almost exclusively catered for the better off (GTZ-LCHPO 2001:3).

The government still largely organizes the production of building materials; privatization progresses sluggishly. Centralism also prevails in the construction industry; despite substantial differences of climate and culture, the type of formal housing construction is pretty much the same all over the country. There is a lack of knowledge concerning the construction quality and the potential uses of local building materials; only a few plants produce building materials taking into consideration environmental aspects and only a few contractors know how to use them economically in construction that all remains unsolved challenges of housing in Ethiopia (Ibid: 3, PADCO 1998:20-25).

2.2.8.2. Experiences of Low-Cost Housing in Ethiopia

Even though much had been said on paper about planned development of low-income urban housing in pre-revolutionary Ethiopia, the country hardly witnessed any meaningful shelter

program on the ground. There have been on the other hand, different schemes that have in one way or another led to some appreciable low-cost housing provisions though not on the scale commensurate with prevailing problems and the people's needs. The modest venture of low-cost housing provision in the county is a Swedish-aided project of the Kolfe Scheme in Addis Ababa. It had been a pilot project financed by Swedish Non Government Organization and constructed in the late 1960s during Imperial era. Swedish experts who had their base at the then Ethio-Swedish Institute of building Technology (ESIBT) designed the site and layout. It was to provide housing for about 91 low-income households who's originally inner city dwellings were razed to give way for the construction of larger public and commercial buildings. It was reported that 12 of those dwellings were built through aided self-help while contractors constructed the rest. The program was quite a success in light of the fact that all of the dwellings met the minimum required standards while the reported income of the target households was between 50 and 100 birr per month (Solomon 1997:195-96, Zelleke 1998:66).

The other oldest low-cost housing program was the "Bole home" that was implemented in Addis Ababa in Bole area in the late 1960s during Imperial era. The units were 150 in number, constructed by the government on the bank loan bases for the middle-income employees (MoFA 2004:18).

Some of the public low-cost housing project in Addis Ababa in addition to the previous are the Kolfe 74 housing project, the Behere Tsege low-cost housing schemes, the Flood Victims housing scheme and others low cost housing in Addis Ababa and in other urban centers (Zeleke 1998:71). The Kolfe 74 low-cost housing project was constructed for resettling the Filowha residents who had to abandon old settlement place meant for the construction of a Congress Hall, as planned by the government then. The project is located about 6 kms away from the Markatto in the South Western part of Addis Ababa with the total of 362 plots (Ibid). The Behere Tsege low-cost housing scheme consists of 255 units with the total cost of 5 million including electricity and water supplies (Ibid).

The Flood Victims housing scheme is located in previous Woreda 17 Kebele 24 of Addis Ababa close to the Haile Gebre Sellasse road. The scheme consists of 96 units (Ibid: 72). The Lafto (Gofa-Sefer) self-help low-income housing and settlement project is also the other low-cost housing scheme located in the Southern development Zone of Addis Ababa about 10 kilometers away from the city centre and about 2.9 kilometers from the Addis Ababa Debre-Zeit main road

to the West. The project was United Nations Center for Development Fund (UNCDF) funded project, which had been formulated in 1989 and signed in 1990. It had targeted at offering loan to 1500 low-income beneficiaries for constructing low-cost housing. It was the root of the inception for the project laid in the Teklehimanot (Merkato area kebeles) slum-upgrading scheme, under the first project (Zelleke 1998:82-3).

Though modest in context, there have been efforts thus far made to provide low-cost housing for citizens in Addis Ababa, the capital city, as well as other major urban centers of the country.

Table 2.5 Summary of some low-cost housing projects implemented in urban centers

Town	Types of building	Number of housing units	Building cost /birr (000)
Gonder	HCB	30	780
Awasa	"	25	625
Jimma	"	50	1250
Nazareth	"	50	1250
Addis Ababa	"	680	7240
Harar	"	50	1500
Bahir Dar	"	25	750
Dire Dawa	"	100	1998
Kombolcha	"	NA	2400
Nazareth	"	NA	2646

Source: - Zelleke 1988:73, Table 2

According to Zeleke 1998:73 cf. Gastonne AVe's study, the number of low-cost housing provided in some ten urban centers including Addis Ababa made a total of over 1000 (see table 2.5). Even if the number have been expected to increase, this figure could not be considered substantial taking into account the number of residents seeking shelter in Ethiopia in general and in Adama in particular (Ibid: 73)

Other individual, cooperatives, assisted self-help and pure self-help construction efforts have been made since 1975 in different urban centers in Ethiopia. For instance, 63526 housing units and 9357 housing units have been constructed in Addis Ababa and other 25 urban centers respectively from 1986-1993 (MoFA 2004:22, Zelleke 1998:79-80).

One basic component among others that made low-cost housing low price or an affordable relative to other constructions prevail is that its consideration of construction cost. According to (Zelleke 1998:76) construction costs are presented in the following tables in per unit price.

Table 2.6 Approximate unit prices per m^2 for houses built out of different materials 1976-1983 in birr.

Year	Chica	HCB	Brick
1976	200	230	250
1977	220	250	280
1978	270	320	350
1979	330	370	390
1980	365	410	450
1981	390	450	490
1982	405	465	510
1983	415	470	525

Source: Zeleke 1998:76 Table 3.

Note: - From 1979-1983 all column are computed and averaged

As shown in the table 2.6 approximate unit price per m^2 for houses built out of Chica, HCB and Brick is increased more than double in all cases in eight years interval. The study made by (PADCO 1997:48) supply side report volume 1. Jan. in Zelleke 1998: 76) shows that construction cost by town category.

Table 2.7 Construction cost and development process data by town size category (birr).

	Building cost mean m^2		Avg. annual cost	Est.% units Built
Size category	Chica	HCB	increase 1993- 1995	With out permit
Addis Ababa	545	1042	41	59
Large towns	485	1067	38	36
Medium towns	525	925	47	60
Small towns	300	825	18	20
Total	486	996	35	36

Source: PADCO 1998:58 Final Report and Zelleke 1998:76.

As presented in Table 2.7 the mean m^2 construction costs of housing unit in different materials in different size category of towns vary of which cost have increased in all cases. According to (PADCO studies 1998:9)-for instance, large towns are Adama (Nazareth), Bahir Dar, Mekle and Harar, medium-sized towns are Awasa and Jijiga, while small towns are Gambella, Asayita and Asosa including the metropolis Addis Ababa for that particular study (PADCO 1998 Final Report, Zelleke 1998).

Some other factors constrained housing constructions are also materials availability, loan interest rates, and level of demand, management and land policy among others. The same source indicated the problem as presented in Table 2.8.

Table 2.8 Constraints on the performance of construction firms by town size category (% of firms identifying factor as a constraint)

Size category	Materials price	Materials availability	Loan interest rate	Level of demand	Land policy
Addis Ababa	75	58	33	75	75
Large towns	59	12	23	77	8
Medium towns	33	11	14	57	14
Small towns	100	30	20	100	20
Total	67	27	24	79	31

Source: Zelleke 1998:77, PADCO 1997:48 Supply side vol.1.

We can observe easily from Table 2.8 the constraints regarding materials prices, level of demand and land policy stand at a staggering 75 percent. Small towns also face greater constraints concerning materials' prices and level of demand, both at 100 percent. Adama in this respect is categorized in large town of which it shared the problem especially with respect to level of demand at 77 percent.

Regarding cost of building, according to (Zerezghi 1981:3 in Zelleke 1998:80), who done a research on self-help and cooperative housing construction in Ethiopia since 1974, aided self-help schemes financed and technically assisted by the MUDH had been underway since 1976 as a pilot project. Thus, the cost of construction of those houses increased markedly from the year 1977 to 1981 presented in tables 2.9 below.

Table 2.9 Range of costs of building houses from 1977-1981

Year	No of houses	Total cost in birr	Average cost in birr	cost increase per year avg.
1977	160	276827	1730	
1978	112	228248	2038	18.0
1979	60	134196	2237	9.8
1980	270	891907	3303	47.7
1981	320	960000	3000	(9.2)

Source: Zelleke 1998:80

The increase in cost per house from 1977 showed a dramatic increase of 47.7 percent especially in 1980.

Table 2.10 The GTZ low-cost housing project implemented in Ethiopia 1999-2004

Region	Town (city)	No. of housing units	Total cost in birr	Average cost per m^2 in birr
Tigray	Mekele	106	4915687	703
Amhara	Bahir Dar	104	1576000	417
Oromia	Adama	112	1344000	333
Addis Ababa	A.A	178	9373650	905
Dire Dawa	D.D	223	4179030	770
Somali	Jijiga	34	3000198	862

Source: Compiled from the GTZ low cost housing project office 2004 unpublished data.

Note: - in Tigray the project implemented also in Adigudom town.

The GTZ low cost housing project has been constructed low-cost housing in four regions of town and city administrations. The four regions are Tigray, Amhara, Oromia and Somali while the two city governments are Addis Ababa and Dire Dawa. The project started its pilot project in Adama town in 1999 and extended the scheme in other towns like Mekele and Adigudom, Bahir Dar, Addis Ababa, Dire Dawa and Jijiga. As shown in table 2.10, the minimum average cost of construction per meter square in Adama is 333 to 354 Birr for $36m^2$ per housing unit for 112 housing units with the total production cost of birr 1.43 million excluding on the job training cost amounting 0.613 million while the initial cost was 12000 for each housing unit. In the other hand, the maximum cost of production was recorded 905 birr per meter square in Addis Ababa. We can observe that the cost of construction in square meter is low relative to costs of producing low-cost houses in Ethiopia in previous years while the price is increasing as the time passed (see the table). The project has produced 757 houses with the total construction cost estimated to be 24.4 million from 1999 to 2004 (see the detail in appendix 3).

Similarly, the Addis Ababa city government has started the new condominium low-cost apartments in the year 2002 with the help of technical support of the GTZ. The city government has extended its program through Addis Ababa Housing Agency (AAHA) to produce more than 100,000 low-cost apartments in three years. It constructed more than 800 apartments in Gerji site and it extended similar projects in ten sites of Addis Ababa sub-cities. To this end, the city government has been planned to produce 45,000 apartments in the year 2004-2006. Out of these, 31883 housing units of 895 blocks of condominium apartments were ongoing projects out of which 31522 housing units were completed up to June 2007. Even if the plan seems an ambitious plan, the consideration given to housing sector to solve housing problems is encouraging in the city (MoFA 2004:24-25, AAHDPO 2007).

The Nigerian, Egypt, Kenya, Pakistan, Bangladesh and Peru governments' target of building different types houses in 1960s to 1980s were some of examples similar to this plan even if the actual production of public housing units were below targets in some cases (Satterthwaite and Hardoy 1990: 127, 1997:292-93 in Gugler 1997).

It is expected that the low-cost housing program will be replicated in the country through urban local governments, private real-estate developers, individuals, cooperatives and GTZ Low-Cost Housing Projects (MoFA 2004:24). To support the program, the World Bank has started capacity building programs in urban management and policy support areas through Ministry of Federal Affairs (MoFA) (Ibid).

Despite considerable progress has been achieved in developing countries in the past two to three decades in policy formulation, facilitating a shift of the public sector's role to strengthening of enabling strategies and focusing on the utilization of the potential and capacity of informal sectors, there is a widening gap between policy formulation and the implementation process, and the status of poor and low-income housing delivery is far beyond being satisfactory (Erguden 2001).

There are many constraints for this situation. Lack of effective implementation strategies, poor promotion of security of tenure, inadequate supply of affordable land and infrastructure, inadequacy of housing finance systems, poor utilization of local building materials and technologies, lack of support to small-scale construction activities, lack of appropriate standards and legislation, inadequate participation of communities shelter development process and support to self-help, lack of focused research and experimental projects, poor utilization of research findings, are amongst such major constraints. The change in the housing policy and formulation of implementation strategies towards enabling concepts started with the first United Nations Conference on Human Settlements (Habitat) held in **Vancouver, Canada in 1976**. This concept then became the core of the Global Strategy for shelter to the year 2000 adopted by the UN General Assembly in 1988. In the Habitat Agenda, the outcome of the second UN Conference on Human Settlements (Habitat II) held in **Istanbul, Turkey in 1996** more focus was placed on the enabling aspects, decentralization with more roles to local authorities and diverse modalities through stakeholders and partnerships (Habitat 2001:48, Erguden 2001:3-4). I think, this is the solution nearest to poor and low-income families to solve their still unresolved puzzle of housing shortage. In any case, the Ethiopian new Urban Development Policy issued in the August 2005/06 is acceleration in the housing development to solve the low-income housing problems (MoWUD 2006).

CHAPTER THREE

PART ONE: DATA ANALYSIS ON BENEFITS OF LOW-COST HOUSING IN ADAMA

This chapter presents the analysis of data collected about the socio-economic benefits of the low-cost housing project implemented by GTZ-LCHP for low income dwellers of Adama. The findings are presented in line with objectives of the study.

3.1 Socio-Economic Characteristics

In this section, an attempt is made to know respondents individual and household demographic and socio-economic characteristics related to their housing improvement. An attempt is also made to elaborate selected socio-economic benefits of owners as a result of housing improvement in relation to renters. With respect to this, some relevant and useful items of information on the socio-economic characteristics of the sample survey population are presented in specific sub-sections. Sex and age structure of the respondents, their marital status, family size education attainment and employment status are analyzed. The income and expenditure pattern of the household is presented.

3.1.1 Sex of the Head of Household

An important aspect that has begun to receive greater attention in the fields of urban development in recent years is the gender issue. In this respect, the project purpose stated as "the target groups, with special attention to households headed by females, have a home owned by themselves which they have acquired in a financially sustainable manner" is probably exceeded. Almost half i.e. 47% of the leasehold titles in Adama GTZ-LCHP were registered in the name of women. In similar pattern, after five or six years, the survey result shows (see table 3.1) almost equivalent percent females have benefited from the housing project of Adama GTZ-village.

Table 3.1 Sex of head of household with ownership status (respondents)

Adama GTZ-LCHP

Respondents	Count	Sex of the HH head		Total
		Male	Female	
Test-Owners	N	41	19	60
	%	68	32	100
Control-Renters	N	33	27	60
	%	55	45	100
Total	N	74	56	120
	%	62	38	100

Source: Field survey result

Note: The sum may not add up to 100 due to rounding in some cases throughout the text tables.

As Table 3.1 shows, 68% male and 32% female from test groups, 55% male and 45% female from control groups are obtained from survey result. This shows that the project has selected both sexes and benefited housing proportionate to similar sex distribution of non-beneficiaries in the town. On the other hand, it implies that renters with similar sex pattern in need of low-cost housing are living in rental housing elsewhere in the town. In addition, this high share of women successful in achieving home ownership shows that the role of women in an urban context is undergoing important changes.

3.1.2 Age of Head of Household

The age structure of the sampled household heads at the time of the survey is presented in the following table.

Table 3.2 Age of the household head with respondents'

Respondents	Count	Age of the household head								Total
		20-24	25-29	30-34	35-39	40-44	45-49	50-54	55^{+}	
Owners	N	0	1	15	20	14	5	3	2	60
	%	0	2	25	33	23	8	5	3	100
Renters	N	11	26	9	6	6	1	1	0	60
	%	18	43	15	10	10	2	2	0	100
Total	N	11	27	24	26	20	6	4	2	120
	%	9	23	20	22	17	5	3	2	100

Source: Field survey result

Note: The sum may not add up to 100 due to rounding in some cases throughout the text tables.

The data in the table indicate that most of the respondents in the two ownership status are within the economically active age. Most of the owners are between age's groups of 30 to 49 and most of the renters are between the age's groups of 20 to 45. A closer look at the records of the selected beneficiaries, field observation and survey result reveals that most of the Adama GTZ-LCHP beneficiaries are younger, and only a few are older. This is because the mortgage housing loan bank is requiring employees between age 18 to 40 and loan is repaid between 5 to 15 years that employees can pay within their economically active age while renters are similarly requires similar privileges.

At the survey time, renters were younger than owners that were more than 60% of them were less than 30 years while more than 90% owners are more than 30 years of age (see the table). This implies that the households within younger age groups suffer from the housing shortage in the city requiring similar mortgage loan regardless of their affordability. From the groups of owners the age groups above 50 years occurrence shows that the project offered a few model houses

selling at market price and unfortunately, the retired elderly persons bought houses offered. Since an opportunity of mortgaging were limited to economically active ages in this case (18-40) years of age.

3.1.3 Marital Status

In terms of marital status (Table 3.3), it is found that the majority of both owners and renters are married, 82% and 54% respectively. However, in the case of renters, i.e. 39% of them are single while only 7% owners are still single. A few numbers are divorced and widowed both from owners and renters registering not more than 7%. Accordingly, a frequency of marital status between the two groups (owners and renters) show that there is significant difference between the two groups respondents marital status indicating that the owners are married than renters. This is because the renters are younger people that could take sometime to find their spouse. On the other hand, owner's family formation might benefit them to have their own shelter with more household income to struggle the life together.

Table 3.3 Marital Statuses of Respondents.

Respondents	Count	Marital Statuses of Respondents				Total
		Single	Married	Divorced	Widowed	
Owners	N	4	49	4	3	60
	%	7	82	7	5	100
Renters	N	22	31	3	2	57
	%	39	54	5	4	100
Total	N	26	80	6	5	117
	%	22	68	5	4	100

Source: Field survey result

In addition, one can observe from the table that in both cases, the percentage of widow and divorce are less in number. Relatively, families in both respondent groups are in stable socio-economic groups.

Respondents were also asked the time of their marriage whether it is before the year 2000 or after 2000. This means, whether it is before or after the construction of the unit. The data indicate the majority of both owners and renters are married before the construction of the unit. 91% owners and 43 % renters were married before 2000 while about 2% owners and 17% renters were married after the construction of the unit. On the other hand, more than 7% owners and 41% renters are still single. In this respect also there is significant difference between owners and renters frequency of time of marriage. The result indicates housing does not have a significant impact on marriage of the respondents. Probably a marriage enforced the owners in search of shelter. Moreover, housing problem does not seem to be a bottleneck for marriage.

3.1.4 Family Size

Table 3.4 Family sizes of respondents

Respondents	Count	Family Size					Total	Mean	Std. Diva.
		1	2	3	4	5+			
Owners	N	3	1	7	22	27	60	4.93	2.11
	%	5	2	12	37	45	100		
Renters	N	18	8	8	11	15	60	3.25	2.09
	%	30	13	13	18	25	100		
Total	N	21	9	15	33	42	120	-	-
	%	17	8	13	27	35	100		

Source: Field survey result

The answer to the question on the frequency of family size is presented in Table 3.4. As presented in the table, the range of differences for the family size between owners and renters is shown from single to four family size and five or above. Interesting variations are observed that 56% owners are with less than 5 families while 74% renters are also in the range less than 5. A closer look at the table indicates that for instance, 37% owners are having four family members while only 18% is for renters. In some cases, a few owners were observed at the survey time having even a size of up to 10 members of households.

Generally, as shown in the table, in most cases, the variation is increasing as one goes from single family to four family members or above for owners while the reverse is true for renters. The mean and standard deviation are 4.93 and 2.11 for owner's family size while 3.25 and 2.09 for renters respectively. This shows that there is significant difference between owners and renters family size. This reveals that the majority of owners are couples, married, they have one or more children, relatives and/or non-relatives with them; that the project allowed them to enjoy and consolidate their families in their own property while renters are stressed living families consolidating in sub-standard rental housing in most cases.

In some cases, like ethnic groups and religion, both sample groups are similar in the pattern of distribution. Regarding ethnic groups of the head of households, Oromo is the highest percent followed by Amhara, Tigray others and Gurage respectively that others includes (Kambata, Hadya, Wolaita and Gamo). The Oromo, as a dominating group, reveals that historically and geographically, they are probably the indigenous ethnic group settled in the area. With respect to religion, Orthodox is the dominant religion followed by protestant, Muslim and Catholic in the pattern of the religion of the head of households. As a result, there is no significant difference between the owners and renters with respect to these variables.

3.1.5 Education of Head of Household

This section of the thesis attempts to show the level of education of studied population. Table 3.5 presents respondents by study groups and their level of education.

Table 3.5 Level of education of respondents Adama GT2- LCHP

Respondents	Count	Level of education				Total
		Primary	Secondary	Vocational	University	
Owners	N	1	28	10	21	60
	%	2	47	17	35	100
Renters	N	12	19	17	12	60
	%	20	32	28	20	100
Total	N	13	47	27	33	120
	%	11	39	23	28	100

Source: Field survey result

The analysis shows that level of education is significantly associated with respondent's ownership status i.e. owners and renters groups. The highest record is observed in secondary school and university level attainment i.e. 47% and 35% respectively for owners followed by 32% secondary school and 28% vocational school attainment for renters.

The percentage share in primary school level is only 2% for owners while 20% is registered for renters. Hence, the level of education is higher in owners' respondents than renters that there is a significant difference with respect to their level of education (between owners and renters). This shows that probably the higher education level for owners than renters contributed to aware of project housing and/or the owning of the house contributed to higher level of education. In any case, level of education is highly related with income.

Low level of education has a negative impact on income of households. This might result in low paying works, which also reduces the affordability to be engaged in housing project. It indicates that improving education of low-income households has a great role to improve their income and thereby their shelter.

3.1.6 Employment status, occupation and income level

With regard to employment status, the vast majorities of respondents are civil servants.

Table 3.6 Employment statuses of respondents Adama GTZ-LCHP

Respondents		Employment status				Total
	Count	Employed	Unemployed	Retired	Housewife	
Owners	N	55	1	3	1	60
	%	92	2	5	2	100
Renters	N	60	0	0	0	60
	%	100	0	0	0	100
Total	N	115	1	3	1	120
	%	96	1	3	1	100

Source: Field survey result

Table 3.6 shows that 92% owners and all renters are employed while 5% owners are retired, a few owners are housewife and unemployed. As explained earlier, retired, housewife and unemployed beneficiaries in the project housing are that those who bought the model house in the pilot project. Survey records of selected beneficiaries for the pilot center-Adama in 2003 show that 90% civil servants, 6% private employers and 4% NGO workers (GTZ-LCHPO report 2003 unpublished data). The writer understands from the field survey result and from the project office (report 2001:4) that most of beneficiaries are teachers, nurses, administrative, and technical staff. The same is true for renters' occupational status (not shown in the table and in the questionnaire).

During field survey also the writer understood that majority of the respondents were civil servants. Purposely, renters are selected to be compared with owners. The predominance of civil servants in the beneficiaries group is that applicants before the construction of the unit should have constant work and monthly salary with an interval of birr 300-1300 to be provided with a bank loan for the construction of units. However, it would have solved the housing shortage if this type of project had given chance of having access to shelter who do not belong to mostly constant work like private employees, in formal sector employees and self-employed workers.

3.1.7 Household Income and Expenditure

Income: Income varies considerably between owners and renters. Initially, mean monthly household income was 738 birr for owners before the construction of the unit with standard deviation of 506 while it was mean of 368 birr and standard deviation of 310 for renters in that order. The analysis of field survey data shows that the highest mean monthly household income is 1193 birr for owners while it is birr 665 for renters in after the year 2000 period i.e., after the construction of the unit.

With this, the highest variation is observed in the after period that the standard deviation for owners is 654 while it is 540 for renters. The minimum monthly household income for owners in before period is 282 birr while it was 345 birr in the after period. The maximum monthly household income in the before period for owners is 3744 birr while it was 3635 birr in the after period. Similarly, the minimum monthly household income for renters in the before period was none while it was 218 birr in the after period. With this order, the maximum monthly household income for renters in the before period was 1330 birr while it was 3680 birr in the after 2000. The change of income between before and after period is that owners mean household monthly income is 454 birr with standard deviation of 588 which shows higher record than renters. The renters mean monthly household income is 323 birr with standard deviation of 364 (See the table in appendix 4).

This shows that there is no significant difference between owners and renters mean monthly household income in before and the change but significant difference is observed in the after construction of the unit for the owners. It shows also that the mean monthly household income of owners is higher than renters in the after construction of the unit. The owners monthly household income is improved probably due to stable own shelter that could minimize mobility cost. Owners could establish their additional household income sources and/or increased their salary since better educational level and improved housing could improve household income.

During field survey, through discussion, the better off in their life now than they were then (i.e. before seven or eight years) responded that their monthly salary increased, additional income sources were established, family members have employed and/or savings than renting housing. For instance, one of the owners said that her monthly salary has increased from 500 birr per month then to 3000 birr per month now that shows an increase of six fold. Similarly, an improvement was observed due to either non-housing related reasons or housing related reasons. The writer observed that there is a similar improvement in some of owners unit due to additional sources like shops in front of their home, breeding and fattening cattle, wood and metal work-shops, small hostelling, fruit production in their small garden and even renting their classes (houses). Based on the result of table appendix 4, per capita income for the owners is estimated to be 2900 birr per person (about 337USD) [2] and per capita income for renters is 2455 birr (about 285USD) in the after period. The average household income of this study is almost similar to

[2] Note: 1USD = 8.62878 at the time of computation, mean family size owners 4.93 renters 3.25

study results obtained in a recent survey conducted in Adama by Adama project (APO 2004).
In addition, respondents were asked: "With in a year time, is there a fluctuation in you income or the same? The result shows that 87% of owners responded that their monthly household income increased, 10% remains the same, while 3% of them responded their monthly household income decreased. Regarding renter respondents, 68% of them responded that their monthly household income was increased, 32% reported the same and none of them responded that their monthly household income was decreased. A few respondents in the owners group responded that their monthly household income decreased is that due to the fact that a few of them were retired that their main monthly income is based on pension payment. In the other way, most of owners household income is improved compared to renters income.

Analysis of the reason for increase in their monthly income shows that 96% of 53 owners responded there was an increase in their monthly salary, 20% received an additional income source and 2% of them responded some members of their household got job. With regard to renters, out of 41 respondents 100% revealed that their monthly salary increased. The finding has shown that there is no significant difference between the reasons of the renters and owners.

Generally, the mean of income change between the two respondent groups also shows that there is a significant variation between the two groups with respect to income, sex, , age, and level of education (part of it is not shown in the table A, appendix 4). This means that owners are better off than renters.

Household expenditure: In one-way or another, assessment of household expenditure is an indicator of once family life. An assessment has been made on respondents' household monthly expenditure at survey time. Respondents were asked: "compared to Six to Seven years ago (2000), what is your average monthly household expenditure in birr?" With this, respondents reported their monthly household expenditure on food, water and other utilities comparing the existing (2005) and the past. Table B, in the appendix 4, shows mean monthly household expenditure of respondents on selected area of expenditures.

From the Table B, appendix 4, we can understand that the mean monthly household expenditure on food for owners in before the time was birr 208 while it was birr 175 for renters. In a similar pattern, mean monthly expenditure in the after period for the owners was birr 306 while it was birr 234 for renters. From these figures excluding water and cooking fuel, we can see that expenditure on food was 28.2 percent for owners in before the time while it was 47.6 percent for

renters in similar period. Similarly, expenditure on food in the after period for owners was 25.6% while it was 35.2% for renters. The data show that the gap or the change of expenditure on food between the before and the after period for owners for instance, on food was 50.7% while it was only 43% for renters. From the analysis, we can understand that owners are better off than renters regarding the amount of expenditures spent only on food, than renters in both before and the after period. However, there is no significant difference on mean of food expenditure both for owners and renters in before and after periods and even the change or its gap. The mean expenditure on food obtained in this study is similar with PADCO private limited company study that is 48.9% while it is less than the APO study i.e. 64 percent.

If we analyze in the after period only a total of 52.4% of owners monthly household income is spent on daily and monthly needs alone while it is 72.6% for renters for similar purpose even worse than owners i.e. (less income more expense than owners) indicating owners are better off than renters with this respect. Generally, we can understand that as household expenditure increases with relatively fixed income, it minimizes household saving capacity and thereby is considered as one of bottlenecks for housing development. Therefore, this shows that future development mechanisms should focus on income and saving improvement activities of low-income households to realize housing development in urban centers like Adama.

3.1.8 Assets Ownership Status

An assessment was made to determine whether housing intervention has an impact on investment of household assets. Concerning housing or non-housing related reasons, respondents were asked: both in the "before" and "after" periods, whether or not they possess household assets to assess survey groups improvement in the quality of life. The argument of this analysis is that the overall household income and expenditure, housing is also expected to improve the ownership of key household assets such as furniture and appliances used. Accordingly, Table 3.7 summarizes the survey results.

Table 3.7 Ownership statuses of key assets Adama GTZ-LCHP

Respondent	Response	Ownership of key assets (%)					
		Radio & Tape	TV& Furniture	Refrigerator	Sofa set	Stove	Bicycle
Owners	Yes	91	85	28	48	35	18
	No	7	15	72	52	65	82
Renters	Yes	75	34	5	10	10	7
	No	25	66	95	90	90	93

Source: Field survey result

As shown in Table 3.7 significant number of owners' households have possessed household assets such as Radio/Tape (91%), Television and Furniture (85%), Refrigerator (28%), Sofa set (48%), Stove (35%) and Bicycle (18%). If we compare the possession of owners with renters, there are differences: Radio/Tape (75%), Television and other Furniture (34%), Refrigerator (5%), Sofa set (10%), Stove (10%) and Bicycle (7%). Therefore, the results are indicators of higher quality of life deference between owners and renters.

Similarly, a study carried out by (Tilahun Girma 2002:69-70) on housing in Addis Ababa shows that, Refrigerator (7.5%), Sofa set (20%), Television (27.1%), private Car (4.5%), and Radio (76.3%), which is less than ownership status of owners in this study. Regarding duration of possession of these assets, this study is categorized in the before and after construction period to identify whether the possession is related with housing improvement. As a result, the study identified that most of the owners and renters possessed durable assets after the period. It apparent from the study that GTZ-LCHP project in Adama improved household key assets ownership of owners compared to renters' quality of life. This is probably due to an improvement in owners' income and level of savings.

3.1.9 Place of Birth and Original Residence

Respondents were asked their place of birth and where they lived before they started residing in Adama. The analysis of place of birth shows that out of the total respondents 17% owners were born in Adama, 63% in Oromia other zones and 20% were born in other regions. As concerns renters, 12% responded Adama as their place of birth, 65% in Oromia other zones while 23% responded that they are immigrants from other regions. It shows that the pattern of migration for owners and renters is similar. Therefore, housing development of GTZ-LCHP provided low-cost housing with similar proportion of social mobility status of sample renters and other renters in the town.

A similar question was raised to both owners and renters to identify where they lived before they started to live in Adama. As a result, 34% owners have been living in Adama since birth, 56% owners in other Oromia zones and 10% in other regions. In the pattern, there is a significant difference between owners and renters regarding where they. This also indicates that migrants are challenged with housing shortage requiring policy of solving housing shortage for migrants by supplying shelter and facilitating housing supply side elements. The GTZ-LCHP benefited more migrants from Oromia zones than those from the town and other regions. If we observe their duration of continuous living, we can categorize into three main residential areas. That is in Adama, in rental unit and in current dwelling. Therefore mean duration of continuous living in Adama for owners is 16 years while standard deviation is 9. Mean duration of continuous living in rental unit for owners is 9 years while standard deviation is 7. Finally, mean duration of continuous living in current dwelling for owners is 5 years while standard deviation is 1. With similar pattern, mean duration of continuous living in Adama is 12 years with standard deviation of 11, mean duration in rental unit is 7 years, with similar standard deviation of 7 and mean duration of continuous living in current dwelling is 4 years with similar standard deviation of 4 for renters. There is no significant difference between owners and renters with regard to mean for years of continuous living in Adama and in rental units but there is a significant difference between mean of owners and renters with regard to duration of continuous living in current dwelling. This shows that renters are staying in rental units not more than 2 years with mean and standard deviation of 4 years while owners of GTZ-village are living in their own house continually more than five years with stable living style of moral and psychological makeup. Since owners dwelling is expected as their constant residence, without fear of mobility.

3.2 The Impact of Housing on Household Socioeconomic Characteristics

In previous sections, we have discussed that some general and specific socio-economic characteristics of respondents related with their housing improvement. In this section, we are going to discuss also the extension of previous sections relating with owners housing improvement comparing with renters.

3.2.1 The Impact of Housing on Diet

An assessment of household diet is an important indicator of household diet. An argument of household improvement here is that improved housing and their income is expected to improve with household diet condition. Therefore, to identity this, respondents were asked their household diet condition or trend in a year.

Table 3.8 Diet condition of respondents Adama GTZ-LCHP

Respondents	Count	Household diet condition			
		Improved	Stayed same	Decreased	Total
Owners	N	36	21	3	60
	%	60	35	5	100
Renters	N	20	29	11	60
	%	33	48	18	100
Total	N	56	50	14	120
	%	47	42	12	100

Note: Diet condition was asked at survey time in 2005, saying "for the last 12 months"

As indicated in the table 3.8 above, respondents were asked whether their household diet was improved, stayed the same or worsened. As a result, 60% owners responded that their household diet was improved in the last 12 moths (2005), 35% stayed the same and 5% said decreased from the last year. With renters side, 33% of them responded stayed the same and the rest 18 % said their household diet was decreased. Those who said their household diet was decreased, from owners and renters side were reason-out that the increase in basic food items from time to time with relatively constant household income and even decrease in monthly household income especially for retired household heads makes household diet to decrease. There is significant difference between owners and renters household diet improvement.

Therefore, from this argument, the GTZ-LCHP housing provision has improved also household diet to some extent. This is probably an improvement in income and housing condition of owners, as they own their stable living home that minimizes their mobility and thereby facilitates their food preparation opportunity at any time in their own compound other things being constant.

3.2.2 The Impact on Access to Education

Assessment of household access to education was made specifically on the questions like "children currently attending school, school age children that did not attend school, the reason that did not attending school and children educational performance of promotion." Since children and other school age dependents of the poor households have marginal access to education mostly because of low level of family income. However, improved housing quality may thus play significant role in school performance (examination result pass-fall) and children enrollment. In this case, the survey result is summarized in the following table.

Table 3.9 Number of children currently attending school Adama GTZ-LCHP

Respondents	Statistical variables				
	Number	Minimum	Maximum	Mean	S D
Owners	51	1	8	2.39	1.52
Renters	34	2	5	2.15	1.13

As we can understand from the table 3.9 above, the maximum number of children attending school for owners is 8 per household while it is 5 for renters. The mean of children's education attendance for owners is 2.39 per household and 1.52 standard deviation while it is 2.15 and 1.13 for renters respectively. Therefore, the finding on school age children enrollment in the owners group is better than renters group during the last 12 months (2005). There is no evidence in the data for the mean difference in number of children between owners and renters currently attending school. However, the writer observed that the owners have better opportunity to send their children to school than renters. Since it is expected that renters move suddenly in search of rental housing somewhere, when disagreement happen between landlord and tenant that might loose once children school attendance.

During survey time, 65% of owners responded that there were no children not attending school while 35% responded yes. With respect to renters' side, 68 % of them said no while 32 % of them responded yes in that order. Both owners and renters reason out that for their children not attending school were not being in school age and a few were reason out other cases like respondents mobility, and low level of income. Respondents were also asked their children performance on examination results. As a result, 46% of owners responded that their children pass examination every year, 2% said their children fail examination sometimes, 2% do not understand lessons but pass examination and 50% pass examination with higher rank. Renters also responded that on similar points i.e. 47% renters said that their children pass examination, none of them said their children fail, 3% responded that they do not understand the lessons but pass examination, and 50% said they pass with higher rank. There is no significant difference between owners and renters household children school performance. However, one can easily understand that owners' children have opportunity to achieve better performance than tenant children since they use their own home to follow their lesson without inferiority of being tenant. Gradually they gain moral and material support than renters from their housing improvement. They could also improve their educational performance by studding with better space without family disturbance because of better than renters family space.

3.2.3 Household Access to Medical Facilities and Health Condition

This section presents respondents medical facilities responsiveness improvement against episodes of illness in a year at survey time by asking respondents "how is your medical facilities responsiveness improvement in the last 12 months?". Table 3.10 summarizes the result of the survey by respondents categorically.

Table 3.10 Medical facilities responsiveness improvement response in a year GTZ-LCHP

Respondents	Count	Medical facilities responsiveness' improvement in the last 12 months		Total
		Yes	No	
Owners	N	57	3	60
	%	95	5	100
Renters	N	58	2	60
	%	97	3	100
Total	N	115	5	120
	%	96	4	100

Table 3.10 shows that 95% owners were responsive to any episodes of illness on time while 97% of renters' responded similar answer. Therefore, except a few respondents from both respondents, almost all are responsive enough to any episodes of illness if any in their respective households. The basic assumption in this section is that, comparing the number of responses on action to take on episodes of illness on both households, the owners households are better off than renters' households. Since owners were moved from slum areas to new settlement area constructed by the project. However, the result shows that, there is no evidence in the data that owners are better off than renters with respect to treatment taking against diseases or any episodes of illness in their respective households. As any one can suggest, this type of evaluation might be subjective to respondents' response. However, we can understand in general, from the reality, household response to the treatment of any episodes of illness in the family is dependent on family income. In this case, owners are better off than renters as we have seen in the previous sections and in addition to this; they are in their own home compared to renters paying for landlord. Moreover, their settlement area is newly established village that less likely contaminated than renters city center slum area. Therefore, episodes of illness are expected less likely occurred in owners village than renters' village.

Respondents also asked questions like "how do you fell about living in this neighborhood in terms of health and child rising?" As a result 85% of owners responded that it is very good[3] as a

[3] Note: Very good: Standard housing and livable area for human habitation. Farley good: Falling short of standard in some degree, but can be renovated. Not good: Unfit for human habitation because of defective design or sanitary defects, or both.

place to live, 15% responded it is fairly good while none of them were complaining their new village established by the project. With respect to renters, 56% of them responded that their living area is a very good place to live, 36% were said fairly good while 9% responded not very good as a place to live. The result shows that, there is significant difference between owners and renters responses about feeling of their living area in terms of health and child rising (group discussion). It is also expected that the new settlement area of owners is better than renters living area in terms of health and child rising (observed by the researcher).

3.2.4 Saving Status of Household Heads

The study was assessed the saving status of both owners and renters household heads in this section. The first question raised to them was "do you have saving account?" The result was that 78% owners responded yes and 22% owners responded no while 48% renters responded yes and 52% renters responded no. The data shows there is significant difference between saving response of owners and renters. We can also understand that from the data, more than three quarter of owners have saving account compared to little more than half renters. The next question respondents asked were that "If you have saving account, where do you save? " As a result, 50% owners answered they are saving in government bank, 13% are saving in private bank, 10% on Iqub and 5% are saving in their respective offices credit and saving union while some 22% have no saving account. On the other hand, renters reported that, 15% saved in government bank,12% in private bank,7% on Iqub (in formal saving and credit association), 9% used to save at home, 5% used to save in their respective work place (offices) credit and saving union while 52% have no saving account. There is significant difference between the percentage of depositors in which the institutions where respondents saving. In this case, more owners than renters have saving account in the formal institutions used them to construct their house.

The third question that respondents asked was that "Identify if savings were before the housing constriction or after the period?" Owners answered this question that 75% of them started saving before the period while 25% started after the period (2000). From the renters' side, 40% started saving before the period while 60% of them started recently after the period. We can understand that most of the owners started their saving before the construction that helped them to pay-down payment on time. If we analyze the year they started saving, most of the owners started saving in the year 1998 while most of the renters started their saving account in the year 2004.

The forth question respondents asked were that "how much do you save monthly from your

income?" As a result, owners answered that minimum 2% of their monthly income, maximum 30% while mean and standard deviation is 12% and 6 respectively, Renters responded that minimum 2% (i.e. similar to owners), maximum 23% with mean and standard deviation of 12% and 4 respectively. Here we can understand the mean is the same for both. There is no significant difference between owners and renters with respect to the percentage of saving they saved from the percentage to their monthly income. The trend of their saving was assessed that in a year the survey was taken. The question asked was" what is the trend of your saving in cash during the last 12 months?" As a result, respondents answered as follows: 27% owners responded it is increasing, 35% responded stayed the same while 17% said it is decreasing. Renters also responded that 13% increasing 28% stayed the same and 7% decreasing. There is significant difference between the trend of saving of owners and renters in cash during the last 12 months (during survey time). Since owners are better off in most of previous variables so far discussed like income and their saving status, we can easily observe that the trend of their saving will increase as they used frequent transactions to construct their house and even to improve their home compared to renters. In other side, improving rent house is less likely attractive than own home; in addition, renters' average monthly income is less than owners' average monthly income that might make difference between their saving trends.

The study also asked respondents for what purpose they mainly save? As a result, owners responded that, 22% of them are saving for loan repayment, 27% for safety of cash (putting in bank) 25% to construct house, a few are for health care and to get interest. Renters responded that, 22% of them are saving for safety of cash, 25% planned to construct their own house if they shall accessed to land, and a few to purchase furniture. There is a difference between them. We can understand from the data that most of the owners have been using their saving to repay the loan and for safety of cash while renters are still saving and planned to construct house and also for consumption purposes.

Finally, a few respondents were asked that why they have no saving account? Owners' reason out that 18% of them said, because they have shortage of money, and a few have no interest to save. Renters also answered that; because of shortage of money saving is difficult to them. Therefore, for those reason out shortage of money, it requires to raise their income through education, employment opportunities and entrepreneurial ability while for others initiating to save is better to solve housing shortage since saving can easily mobilized to investment on housing.

3.2.5 Housing and Social Security

Housing is powerful instrument to strengthening social security in Ethiopia specifically the traditional "Idir" used for death servicing or death security. Respondents were asked that, "do you have Idir?" As a result, 95% of owners were answered yes and only 5% said no while 45% renters answered yes and 55% renters have no Idir. There is significant difference between variables (owners and renters). We can conclude that owners have Idir than renters since they live in their own home that they can participate in social security like Idir than renters. Provision of land and shelter might solve renters' social security problem that they could participate in traditional "Idir" in their home (constant neighborhood settings) until modern death servicing shall take over the system as modern life style is coming up in big cities of Ethiopia like Adama.

3.2.6 Loan and Repayment Status of Respondents

As explained in section 3.1.3 and 3.1.4 above, beneficiaries of the project were accessed to loan from the Construction and Business Bank-CBB by evaluating their respective monthly salary and their respective deposit accounts. The selected applicants were required to indorse initially a down-payment of a minimum of 20% of total construction cost i.e. 2400 Birr of 12000 Birr. The beneficiaries were asked "did you have accessed loan through this housing program?". As a result, 97% owners answered yes and only 3% owners answered no while 41 % renters were responded yes and 59% renters responded no. The renters in this case were asked only based on their individual program other than GTZ-LCHP program. The writer identified that the project was already implemented the housing loan through technical assistance almost for all beneficiaries except a few those directly bought model houses. In the other side, renters were accessed to loan by less than half respondents. This shows that, there is significant difference between loan accessibility of owners and renters.

Respondents were asked the source of their loan. The result is that 64% of owners responded that they got from government bank, 29% mix (i.e. government and private banks), 2% from saving and credit union and 2% from their respective relatives. With respect to renters, 18% renters were answered they used from Iqub and their friends, 16% from saving and credit union, 6% from their respective relatives. We can conclude from this data that, there is significant difference between the sources of loan owners and renters have access. This shows that most of the owners have access to government bank while renters have access to their offices credit and saving union or relatives for short term and forced to higher cost to solve their family problems. It also requires collaterals that might impede to fit to get bank loan.

As the project expertise interview response indicates and field survey result shows, almost more than 90% owners responded that their collateral or promise allowed to borrow from bank were their building permit and title deed i.e. mortgaging their building for the whole loan period or for 15 years while renters were using their respective monthly salary for maximum of a year. And this shows also significant difference between owners and renters. The project office and Adama municipality has processed the loan for almost all owners while renters are answered they themselves were processed at the time they required loan from their respective organization. Most of the owners were borrowed minimum of birr 2400 and maximum of 9600 birr at mean and standard deviation of birr 7000 and 2500 respectively while most of the renters were borrowed a minimum of 200 birr and a maximum of birr 1000 with a mean and standard deviation of 300 birr and 200 respectively. Regarding the amount of many that borrowers repay per month for the repayment period is that owners have been paying a minimum of 53 birr and a maximum of 250 birr with mean and standard deviation of 118 birr and 33 respectively. With respect to renters, they have been paying a minimum of 26 birr and a maximum of 250 birr with mean and standard deviation of 76 birr and 57 respectively. In this case, there is significant difference between mean repayments between respondents. This shows that, the amount of money they have repaying is different including the repayment period. We can easily understand that, owners are benefited from the project in loan accessibility and repayment conditions than renters.

In addition, almost 90% of the owners answered that the repayment is an affordable while only 33% of renters answered that the repayment amount is an affordable. Then when we analyze the number of the year of the total repayment period, the minimum and maximum repayment period is 7 and 15 years with mean and standard deviation of 13 years and 2 respectively for the owners while the minimum and maximum repayment year is two months and 1 year with mean and standard deviation of eight and six months respectively for the renters. There is significant difference between mean repayment period in years and months that owners are paying for more than 7 years while renters are paying maximum within a year. The owners have paid minimum for 4 years and maximum for 6 years at mean of 5 years while renters have paid minimum for 2 months and maximum for a year at mean and standard deviation of 4 months and 2 respectively. The result shows that, there is significant difference between the periods the loan amount already paid. This is true that owners were started repaying the loan immediately after the construction while renters were borrowed and repaying only for the year survey has undertaken. Owners also reported that 80% of them are paying regularly on time and 20% of them are paying after a few missed

repayment period. With respect to renters, 96% (almost all) were paying on time while only 4% were missed the repayment period.

Therefore, regarding the repayment period, renters are paying regularly on time than owners; since the burden of repayable amount and repayment period are less than owners' repayable amount and period. It is expected that loan repayment amount and period are difficult for owners since the loan is taken for the construction of houses while renters' loan is to cove family problems. However, significant numbers of owners have been paying on time and even some of them were to complete repayable amount before the end endorsement period. They have paid more than the monthly repayment rate.

3.2.7 Household Head Responsibilities and Participation Status

Housing is a major influence on its physical and social environment. Most of the owners of standard shelter are participating in different organizations. A person who has own shelter has respected in social and economic participations. In this section the study presents respondents responsibilities and participation status in their respective neighborhood settings. An assumption here is that owners of the project housing are expected to participate in any association more than renters' respondents. Table 3.11 presents the percentage distribution of respondents participating in different socio-economic neighborhood settings.

Table 3.11 Percentage distribution of respondents participating in any associations in their respective neighborhood settings GTZ-LCHP

Respondents	Count	Were you a member of any association?		Total
		Yes	No	
Owners	N	51	9	60
	%	85	15	100
Renters	N	26	34	60
	%	43	57	100
Total	N	77	43	120
	%	64	36	100

Table 3.11 shows that, 85% owners were a member of socio-economic associations but only 15% were not a member while only 41% of renters are a member of different organizations in their neighborhood settings. The response shows that, there is significant difference between owners and renters participation response in any associations of their respective neighborhood settings. Therefore, housing is also a powerful asset in enabling its owners to participate in socio-economic organizations.

Respondents those answered they are a member of associations responded also their position in that organizations. As a result, 78% of them are members, 10% are leaders and 12% of them are responded that they are members of committees from the owners side while 73% of participating renters are responded they are members, 8% are leaders, 19% are members of committees. Therefore, we can understand from the data that, there is no any significant difference between owners and renters for positions that they have been participating in different associations or organizations. Therefore, housing plays a significant role in enhancing owners to participate in different socio-economic associations which also significantly useful to strengthen social relationships in once neighborhood settings.

Housing is also significantly important to empower its owners in administration and decision making on household assets and income. Table 3.12 presents the survey result in this respect.

Table 3.12 Respondents decided on household income GTZ -LCHP

Respondents	Count	Who decided on household income?				Total
		Husband	Wife	Both	Single	
Owners	N	1	3	45	11	60
	%	2	5	75	18	100
Renters	N	2	4	26	28	60
	%	3	7	43	47	100
Total	N	3	7	71	39	120
	%	3	6	59	33	100

Source: Field survey result

Table 3.12 shows that, insignificant number of household head were decided on household income both from owners and renters respondents. Therefore not only housing but also other factors even not studied under this study might there that made owners' and renters' households heads and wives to decide on household income together except single heads that decide individually. We can see from the table that 75% of owners are deciding on household income by together i.e. both are deciding on household income by together i.e. both husband and wife while 43% of renters are deciding together and most of renters are single (47%) that can decide alone. Here we can easily understand as assets ownership ness increase, decision on household assets and income requires spouses' decision rather than either of the two. The result shows that, there is significant difference between owners and renters status of decision on household income.

Therefore, housing is a powerful social instrument to make spouses deciding together on household income as it possessed compared to those who decide individually or those renters shared their income to landlords or have not own it.

3.3 Respondents Opinion on Low-Cost Housing (LCH) Provision

3.3.1 Applicants Source of Information

Beneficiaries were asked the question "who informed you about the housing program of GTZ?" The aim is to identify mode of information in the process of housing provision of the project. As a result, respondents were answered that 8% of them from their respective Kebeles, 12% from municipality, 17% from GTZ-LCHP office, 33% either from relatives or friends and 30% from the project advertisement modes like invitation by posted notices and public meetings made by the project office. Therefore, the data shows that, relatives or friends are the most significant mode of information followed by the project office offers. It is true that friends and relatives are the most important socio-economic information modes in transferring information in Ethiopia.

Beneficiaries were also asked the reason (why) they decided to join the project. The result shows that, 78% of them were decided to join the project because rental housing is not available or too expensive, and the other 22% of them are reason out that, a house is an important asset to own and the project technical support like constructing the house, and bank loan are attracting them to join the project. In case rental house is available at reasonable price, would you have not joined the project? Was the other question raised to the owners? The result is that 92% of them were said no while only 7% said yes indicating that they want to live in rental house if it is available at reasonable price and livable shelter. Therefore, most of the owners were responded that they want to have their own home even if rental housing is available which is true for most of Ethiopians opinion in reality.

3.3.2 Opinions on LCH Provision

Under this sub-section the writer forwarded the question "what measures do you think will help low-cost housing provision (LCHP) or implementation of housing program for low-income households in Adama?" The analysis shows that 90% of owners responded setting standard criteria which fit to the affordability level of low-income groups will help them and only 10% of them answered that revising land acquisition process that transparent to low income groups, revising housing standards that affordable to them and provision of credit services only with title deed and mortgaging system. In this respect the out-weighing response is setting standard criteria fits to lower income groups. Relating with this owners were asked whether the building standard already given to them is affordable or not to them. The result is that, 90% of them were responded; yes it is affordable while only 10% of them said no it is not affordable. Those said it is not affordable are indicating that still they are in treble to repay the loan.

Therefore, this also shows that significant number of low-income groups in the town are not afford even the GTZ-LCH construction cost that requires revision to provide for others less than embraced income level (300-1300 birr) or raising the income level of the poor through employment, credit and enabling capacities to fit to the level of market price. The owners again asked the question "should building standard be revised?" As a result, 80% of them said yes while 20% said no. The renters also asked their opinion on rental houses where they residing in. The result is that, 90% said yes it should be revised and only 10% said no. Therefore, there is no difference between respondents' opinion on the prevailing building standards in the city to be revised. The writer observed also whether the owners or renters, some of them were complained of common wall, luck of utilities and services and also absence of kitchen. Since most of Ethiopians need not common shelter but common feeding.

Both owners and renters were asked "would you like to build your house at cheaper cost if the building code was allowing for that?". Owners responded that, 28% yes and 72% no. Meaning most of the owners are satisfied with the cost minimizing technical assistance of the project that could not build by their own way with similar cost of the project if they were provided the opportunity while 52% renters responded yes and 42% said no, indicating renters require either the project provision mechanisms or to build by them with revised and affordable building standard be allowed. However, Owners were complaining the housing construction quality of the project that as explained earlier, the question raised was "do you feel that the housing construction of the project has problem to be revised regarding its quality of construction /building/ and facilities". With this, 62% owners responded yes, 37% owners said no and only 2% do not know any thing. Therefore, significant number of owners were criticizing that the house has no kitchen constructed, very small safety-tanker made for lavatory which is common for two households, common wall which is very short that is mostly do not fit to Adama hot weather condition. When we compare with renters, the renters living condition is even worse than the project beneficiaries; that presented in the next chapter in detail.

Then respondents suggested that low-cost housing should be constructed with the collaboration of beneficiaries to include the interests of the users. In addition, if individual urban centers dwellers required having their own shelter, the municipality should set low level and affordable standard in lease system that fits to the income level of the poor. In other words, poor and low-income families do not afford the existing down-payment and building standard of the municipality rather than direct provision of actors to supply for long term mortgaging system even condominium of new practice if not researched.

CHAPTER FOUR

PART TWO: DATA ANALYSIS ON PHYSICAL AND ENVIRONMENTAL CONDITIONS

As the owner families moved to the GTZ-village in Adama, they became the owners of their new shelters and the member of their new neighborhood. Findings of the impact of the low-cost housing project on the owner group constitute the subject matter of this chapter. Actually, the chapter is an extension of the previous chapter. In this chapter the most important physical and environmental conditions of the survey population are described in accordance with the study objectives.

4.1 Housing Conditions

A residential house is a durable, physical product in a neighborhood setting. Its physical characteristics constitute the most visible indicators of quality of life of dwellers as well as the overall physical environment of a given place. Therefore, this section examines some of the characteristics that indicate the quality of life of the study subjects based on their responses.

4.1.1 Physical Conditions

4.1.1.1 Function of the Housing Unit

Owners and renters were asked about the function of their housing units. Accordingly, the respondents-92% of house owners and 97% of the renters said they are using the houses for residential purposes, while 8% of the owners and 3% of the renters are using the houses for business and residential purposes. In this regard there is no significant difference between the two groups of respondents' housing functions.

4.1.1.2 Presence of Separate Service Quarter

Subjects of the study were asked whether the housing units have separate service quarters. It was found out that 90% of the owners' houses have separate service quarters for general uses and 10% have no service. On the other hand only 17% renters' dwelling units have separate service quarters. This indicates that there is a significant difference between owners and renters respondents. One can easily understand that most of the owners are using separate service quarters for multi-purposes as opposed to the renters.

4.1.1.3 Building Materials

Although the type of materials used in the construction of houses do not necessarily indicate the

standard and quality of the housing units, identifying the types of building materials used for the housing project in question is important to compare the project houses and the sample renters' dwellings. Therefore, this section provides the percentage distribution of the sampled housing units by the type of constriction materials used for wall, floor, roof and ceiling.

4.1.1.3.1 Floor Finishing Materials

Respondents were asked to identify materials used for floor finishing and the result is compiled in the following table.

Table 4.1 Floor finishing materials

Respondents	Count	Floor finishing materials			Total
		Earth mud	Wooden parquet	Cement screed	
Owners	N	0	0	60	60
	%	0	0	100	100
Renters	N	19	2	39	60
	%	32	3	65	100
Total	N	19	2	99	120
	%	16	2	82	100

Source: Field survey result

The above table shows that all GTZ-LCHP constructed houses are made from cement screed floor and only 65% of renters' houses floor finishing material is cement screed. The table also shows that 32% of renters' housing units are made of earth mud floor. That means the difference between the two groups significantly shows that the owners houses are in a better quality than that of renters'.

4.1.1.3.2 Walling Materials

It should be noted that one or more materials can be used for the construction of walls. However, here, only the principal materials used to construct the houses are presented. The following table shows walling materials distribution in percentage as described by respondents.

Table 4.2 Walling materials

Respondents	Count	Walling materials					Total
		Mud blocks	Bricks	Masonry	Wood & mud	HCB	
Owners	N	0	1	0	0	59	60
	%	0	2	0	0	98	100
Renters	N	18	0	3	26	13	60
	%	30	0	5	43	22	100
Total	N	18	1	3	26	72	120
	%	15	1	3	22	60	100

Source: Field survey result

From the table above, it can be observed that almost all of the GTZ houses are constructed from Hollow Concrete Blocks (HCB) walling materials while only 22% of the renters' houses are constricted from HCB walls. The study also shows that 30% of walls of renters' houses are constructed from mud blocks which are common in Adama area. Only 5% of renters' houses are constricted from masonry. And 2% of owners' houses are also constructed from bricks while the share of wood and mud walling materials is 43% for renters' houses. Then, one can easily understands from the data that walling materials of owners are durable than that of renters' houses. That means, the renters' houses would require periodical repair. This shows that the owners' houses are in a better quality than renters' houses with respect to walling materials.

4.1.1.3.3 Roofing Materials: All of the owners' and renters' houses are covered by Corrugated Iron Sheet. In this case, there is no difference in roofing materials between owners' and renters' houses.

4.1.1.3.4 Ceiling Materials: Table 4.3 presents a percentage of ceiling materials of owners and renters houses.

Table 4.3 Ceiling materials

Respondents	Count	Ceiling materials					Total
		None	Fabrics	Ply-wood	Chip wood	Others	
Owners	N	31	19	0	10	0	60
	%	52	32	0	17	0	100
Renters	N	28	25	1	5	1	60
	%	47	42	2	8	2	100
Total	N	59	44	1	15	1	120
	%	49	37	1	13	1	100

Source: Field survey result

Table 4.3 indicates that 52% of owners' houses and 47% of renters' houses have no ceiling while 32% of owners' and 42% of renters' houses ceiling materials are made from fabrics. 17% of owners' houses and 8% of renters' houses are made from chip wood while only 2% of renters' houses are made from ply-wood. As can be observed from the data, most of the owners' houses have no ceiling because of the fact that the houses are low-cost housing aimed at enabling the beneficiaries have their own house at minimum possible cost. It is aimed at providing a decent shelter that keeps up the basic requirements. In contras the renters' houses are mostly situated around the center of the city and as they are used for long periods of time and are constructed gradually for renting purposes, they have ceilings. In this case, there is no significant difference between ceiling materials of sample survey houses. However, the ceiling materials used in the owners' home seem to be in a better position than that of the renters' which are found in the slum area.

4.1.1.4 Occupancy: It is a measure of housing quality or residential standards including density and overcrowding. According to APO housing study report (2003), there is of course, no definite universal standard and much depends on the characteristics of the particular population, the social and cultural aspects.

It is difficult to define overcrowding because what considered as overcrowding in some circumstances may be acceptable in other circumstances. Occupancy standards of the USA Baltimore Housing Authority applied to Lafayette courts and other projects were, for instance, one bedroom apartments that housed 2-3 persons. Two-bedroom apartments housed 3-5 persons and three bed-room apartments housed 4-7 persons and so on (Wilner 1962:142). In most developed countries like USA and UK people live in standard and comfortable homes while in developing countries residents in most cases may use same area for more than two persons even with below standards (Todaro M. 1995: 3-8).

Thus, discussions on minimum space standards such as floor area or plot size could be more effectively based on practical knowledge of what is taking place in cultural, socio-economic context, what is acceptable to the people who actually live in the space, rather than mere theoretical considerations.

Overcrowding is usually measured in terms of the average number of persons per room and it is also expressed by the relationship between the average size of household and the number of rooms in the housing unit. In this study both methods are considered and are presented in the following sections.

4.1.1.4.1 Number of Rooms: According to CSA 1999:264, a room is defined as a space enclosed by walls reaching from the floor to the ceiling or roof at least to a height of two meters and has a size large enough to accommodate a bed for an adult. The data collected from the sample survey shows that number of rooms in dwelling units of owners is varying between 3-5 with mean and standard deviation of 4 and 1 respectively. The project provided three rooms unit for each beneficiary initially. In addition, some of the owners have constructed additional rooms after they moved in to their respective units like storerooms and multi-purpose service rooms. With respect to renters, their rooms range from 1-5 with mean and standard deviation of 1.5 and 1 respectively. With respect to equality of means, there is no significant difference between the two sample survey data of number of rooms. However, the minimum average rooms' number per owner is 3 while it is only1 for renters. When examined further, number of persons living in one room for the owners is varying with a mean of 0.3 to 2 and standard deviation of 1and 0.5 respectively while it ranges from 0.8 to 7 mean for renters and a standard deviation of 2 and 1 respectively. The mean difference between the mean number of persons' living in one room of owners and renters is significantly different. Therefore, the result is that owners are in a better position than renters in this respect.

4.1.1.4.2 Area of Units: The owners housing unit area is uniformly 36 meter square at the time of construction. But at the survey time, it was varied from 36 to 93 meter square with mean and standard deviation of 55 and 12 respectively, while it is varying from 9 to 65 meter square with mean and standard deviation of 18 and 10 respectively for the renters. The mean is significantly different between owners and renters. This shows that also the owners are better off than renters' enjoying better unit area with a moderate number of households than renters.

4.1.1.4.3 Plot Size: The total plot size in meter square was also uniformly fixed to be 150 for owners at the time of construction. At the survey time, it was between 150-165 with mean of 150 and standard deviation of 2 while it varies from 100 to 1000 meter square plot size with mean and standard deviation of 324 meters square and 200 respectively for the landlord of the renters' home. Therefore, the mean plot size in meter square between the owners of the housing project and the sample renters is significantly different. This shows that the sample renters' living home plots are less crowded because the landlord plot size are larger in most cases than the new GTZ-village plot size settlement area. As explained earlier, the GTZ-plot size is fixed to 150 meter square before owners moved into their respective units. However, some of the owners' plots were

larger than initial size at the time of field survey. This is because some of the owners extended their plots including project green area. The renters' home plots are situated in the center of the city and are the oldest plots possessed when land allocation was in abundant size than the project plots. That makes vast difference between owners and renters' plots area.

4.1.1.5 Age of the housing unit: The age of the owners unit is uniformly Seven to Eight years while the age of the housing unit of the renters is varying from a year to 60 with mean and standard deviation of 18 and 13 respectively. Therefore, it is significantly different from the owners' units with respect to the mean age of units. This indicates also the area of the renters' house is mostly old and is located in the center of the city than GTZ-village units.

4.1.1.6 Types of housing: Regarding types of the housing units, all of the owners' units and 20% of the renters' units are conventional while 68% of renters' house units are unplanned legal (legal title but illegal housing units), 12% are unplanned illegal which are squatter settlement. This makes also a difference between the two. Legal houses are safe for any legal process of development- to improve services and utilities, stable for any use and city planning improvement while squatter settlements, in contrary, are spontaneously constructed without formal planning process. As a result they are not suitable improvement, for use and city development.

4.1.1.7 Types of Building: All the owners' houses provided by the project and 17% of the renters' homes are duplex villa while 80% and 3% of the renters' houses are attached raw and detached villa respectively. Therefore, there is major difference between the types of buildings of owners and renters. All of the buildings of the owners have foundation while only half of the renters' houses have foundation. This indicates that the owners' houses are durable and can be used for a long period of time than some of the renters' houses.

4.1.1.8 Housing Tenure: Regarding their tenure status owners are the beneficiaries of the GTZ-housing units while 93% of the renters are destined to rent from private individuals. Yet, 4% of them have rented from government organizations and only 3% are sublet users. Difference is observed between the two groups of survey subjects with regard to housing tenure. The owners are benefited because they are living in their own home without paying rent and they have the opportunity to improve their lives having permanent dwelling houses and neighborhood in a setting better than that of the renters. The owners were asked how they obtained their houses. Accordingly, 95% of them responded they secured their houses through the GTZ-LCHP technical

assistance. Only 5% of them bought the project model houses and also a few said they bought from the beneficiaries of the project.

4.2 Users' Opinions on the Condition of Their Housing Units

In this section, the writer presents the physical condition of respondents' housing units based on their opinions. Accordingly, the sample household heads were asked how they feel about the present condition of their dwelling units during the survey time. The result is presented in table 4.4 below.

Table 4.4 Physical condition of GTZ-LCHP dwelling units and rented houses from users' point of view

Respondents	Count	Response on physical condition			Total
		Very good	Fairly good	Not good	
Owners	N	43	17	0	60
	%	72	28	0	100
Renters	N	9	49	2	60
	%	15	82	3	100
Total	N	52	66	2	120
	%	43	55	2	100

Source: Field survey result

Note: very good-standard housing for human habitation

Fairly good-falling short of standard in some degree, but can be renovated

Not good-unfit for human habitation because of defective design or sanitary defects, or both

The study indicates that the most deteriorated housing stocks are concentrated in the renters' living area, mostly in the center of the city. As shown in table 4.4, 82% of renters' household heads responded that their housing condition is fairly good while 72% of owners' household heads responded their present housing condition is at the level of standard housing for human habitation. 3% of the renters responded their dwelling is not suitable for human habitation for it needs demolition and rebuilding. In fact, the writer observed and discussed with key persons in Adama city administration that they are aware; there are significant number of deteriorated stocks of houses in the center of the city that deserve demolition or renovation. This requires Adama city administration to conduct renewed urban planning program by reconsidering also the affordability level of low-income households in planning revision. As mentioned earlier, one can conclude based on the opinions of dwellers that the quality of owners' houses are better off in physical condition than that of the renters.

4.2.1 Cost of Housing Unit

Regarding cost of housing units the owners responded that the construction of GTZ-housing is cheaper than other individuals housing construction the quality being equivalent. That means, 83% of them said it is cheaper while only 17% of them said not cheaper than private construction costs. As repeatedly explained the cost of construction of owners' unit is uniformly 12,000 birr initially and individuals have been improving their houses after construction (see appendix 3).

4.2.2 Duration of Construction Period

The owners were asked about duration of construction period. In this regard, 67% of them answered the construction of the GTZ-units were completed within short time as per the planned period. 33% of them answered the construction period was fairly enough. Those who said it was fairly enough time were expected the unit construction to be completed at exactly the planned time or in less than the expected time of the project. It was learnt that the project was completed within one and half to two-year period. The project office responded this happened because of delay in land acquisition, service and infrastructure delivery and municipal processes which required the construction time to extend by more than 6 months.

4.2.3 Target groups' Opinions on the Construction Quality of their Units

Beneficiaries of GTZ-LCHP were asked about the quality of construction of the units of the GTZ-LCHP. They responded that the housing units are standard for human habitation. 32% of the owners said the units are of high quality walls, foundation that makes them strong buildings. 49% said the units are of medium quality walls, foundation. 16% said the units are fairly enough, fit to low-income group with their affordability level while 3% said they are of less quality. They said of less quality complaining about absence of service quarters, kitchen and separate toilet facilities.

Assessment on renters' opinions about their dwellings construction quality shows that 70% consider their dwellings lack quality. Only 19% of them said they are living in a medium quality housing units. The rest 11% said the quality is deteriorating and rebuilding is required. Then, the difference is significant. It indicates the project households are benefited having better housing quality compared with their previous situation of rental dwellings.

4.3 Infrastructure and Utility Services

The previous sections described the physical condition of target groups' units. This section will concentrate on the supply of basic urban services that are useful for health and sanitation of

residents. Besides, the condition of the shelter structure and its spatial distribution, the infrastructure and utility services such as water quality, electricity, sewerage and drainage facilities, refuse collection and disposal, roads and footpaths, and mode of transportation, all that affect the quality of housing and have the consequences for the sustainability living environment are treated here.

4.3.1 Main Sources of Drinking Water

In this study an attempt is made to address the question of availability of tap water provided to the project village in relation to renters' living areas in the center of the city. Based on field survey and village observation, the result is presented in the table below.

Table 4.5 Main source of drinking water for GTZ-LCHP & Renters' areas

Respondents	Count	Main source of drinking water					Total
		Tap in the house	Tap in compound private	Tap in compound shared	Public tap	Vending	
Owners	N	4	47	1	4	4	60
	%	7	78	2	7	7	100
Renters	N	0	6	38	6	10	60
	%	0	10	63	10	17	100
Total	N	4	53	39	10	14	120
	%	3	44	33	8	12	100

Source: Field survey result

As can be seen in the above table all sampled households, other things being constant, obtain water from piped line. The survey result shows that, 7% of owners' responded their source of drinking water is tap in the house, 78% said their source of drinking water is tap in the compound used privately, 7% of them said they are using public tap in the village while 7% of the sampled owners are still vending from their neighborhood tap water. With respect to renters' source of drinking water and relative distance from their housing unit, most of the respondents said their water source is share tap in the compound. The data shows, the share as follows: 10% of them use private tap in the compound, 63% are using tap in compound, 10% use public tap and 17% are vending from private individuals while none of them are using tap in their houses.

Therefore, owners are better off than renters by the distance from their units, in use of drinking water as most of them (78%) are using private tap in their compound while most of renters (63%) are using shared tap in the compound. The difference is significant between the two sample respondents.

4.3.2 Wastewater Disposal and Toilet Facilities

If human excreta and wastewater after use is not properly removed through standard alternatives like well constructed flush toilet facilities and sewage disposal systems, it is mostly the cause for many diseases (deprivation). In terms of sewage disposal and wastewater system (facilities), Adama city as one of developing urban centers in Ethiopia, is extremely at low level (APO 2003:54-56). In any case, in terms of toilet facilities the sampled respondents' response is presented in the table below.

Table 4.6 Type of toilet facility

Respondents	Count	Type of toilet facility by respondents.					Total
		None	Dry pit private	Dry pit shared	Flush private	Flush Shared	
Owners	N	2	18	33	2	5	60
	%	3	30	55	3	8	100
Renters	N	3	5	50	1	1	60
	%	5	8	83	2	2	100
Total	N	5	23	83	3	6	120
	%	4	19	69	3	5	100

Source: Field survey result

The above table shows, that most of the respondents are using dry pit shared toilet (55% owners and 83% renters respectively). In extreme case, a few owners (3%) and renters (5%) have no toilet while with the other extreme, 3% of owners use modernized flush private and 8% of renters use shared flush. And 2% renters use flush private and other 2% use shared flush toilet. Lack of proper toilet facility is one of the problems faced by both side respondents during the survey time. This is a problem for the city which is characterized mostly by extremely below standard shared dry pit. The result is visible as usual indicating that owners are in a better position than renters in toilet facility. It is obvious that a few of them are using flush toilet privately while shared toilet is less in number than renters' standard. Then, the majority of users' dependency on shared dry pit latrine with an average number of 5 household members per latrine and even shared with two households in some cases indicates that the level of wastewater disposal and human excreta toilet faculties is at a very low level with both sample groups. Therefore, this needs reconsideration of all actors of housing providers.

4.3.3 Bathing Facility

Bathing facility is one of the important human hygienic facilities for cleaning is essential for human body in order to prevent diseases and illness. In this regard, the survey samples were asked whether they have bathing facilities or not. The result is presented in table 4.7. The result shows the test families housing quality in terms of bathing compared with the position of control

families. Accordingly, 20% of owners have bath tub or shower used privately and 5% of them have shared showers while only 3% of renters have private showers and 17% of them use shared showers. It is understood from the data, however, that both owners and renters face shortage of private or shared bathing facilities. More than 75% sample dwellers from both sides lack bathing facilities. Despite similar problems faced the two survey groups, the owners are still in a better position in bathing facilities. But the coverage and standard level of available bathing facilities are not sufficient.

Table 4.7 Type of bathing facility

Respondents	Count	Type of bathing facility			Total
		None	Bath tub or shower, private	Bath tub or shower, shared	
Owners	N	45	12	3	60
	%	75	20	5	100
Renters	N	48	2	10	60
	%	80	3	17	100
Total	N	93	14	13	120
	%	78	12	11	100

Source: Field survey result

4.3.4 Type of Refuse Collection

Respondents were asked whether they have accessed to refuse collection means in their neighborhoods. As a matter of fact, most municipal disposal systems are inadequate and inefficient in their management systems in many urban centers of Ethiopia (APO 2003:55). Adama is no exception. Table 4.8 shows the status of means of refuse collection deployed by respondent groups explained in numbers and percents.

Table 4.8 Type of refuse collection

Respondents	Count	Types of refuse collection			Total
		None	Municipal dust bin	Private enterprise dust bin	
Owners	N	55	0	4	59
	%	93	0	7	100
Renters	N	27	17	16	60
	%	45	28	27	100
Total	N	82	17	20	119
	%	69	14	17	100

Source: Field survey result

The survey data clearly indicates that proper wastewater disposal and toilet facilities are lacking. Solid waste disposal means are not also well organized in sufficient amount. As shown in table 4.8, more than 90% of owners in the GTZ-village have no means of refuse collection while

almost half of the renters have similar problems. However, few owners (7%) are using private enterprise dust bin that are organized recently by the city government. Nearly 60% of the renters have access to municipal and private dust bin in their respective neighborhood settings. In fact, since most of the renters are living in city center, they are in a better position than GTZ-village established in a new settlement area. The data shows that, there is considerable difference between owners and renters with respect to waste disposal. The writer observed during the time of the field survey, both the problem of wastewater disposal and solid waste was critically resolved in Adama despite the encouraging effort being made by the city government to solve the problem. As a case in point is the solid waste disposed in the South East Gorge (under GTZ-built bridge) in the city during the time of field survey testifies the magnitude of the problem of refuse collection. Such waste pile is one of the sources of diseases and environmental pollution. It needs proper management and legal controlling mechanism.

4.3.5 Availability of Kitchen

A kitchen is a room is used mainly for cooking. In this study, availability of kitchen is evaluated by accessibility of respondents to either private or shared kitchen or none. In most literatures, APO for instance, a modern kitchen is a room which has electric, gas, kerosene etc stove, as fuel to cook with piped water or sink. In contrast, a traditional kitchen is a room used mainly for cooking using firewood, charcoal, etc, as fuel in a traditional way with no stoves, piped water or sink. This type of kitchen is not appropriate to keep the room clean and then it is one of the sources of health problems (APO 2003:56, Wilner 1962:137-47). In any case, the assumption is that whether private or shared, a kitchen is a traditional room. The study identifies how many of respondents could access at least the traditional of kitchen facility. Table 4.9 presents the result of a field survey. The data reveals that the majority i.e., 92% of the owners are using private kitchen and only 8% have no kitchen while 60% of renters are using shared kitchen with other renters or with their landlords. Significant percent (28%) of renters have no kitchen while 12% of them are using private kitchen. In most cases shared kitchen (room) is not suitable to use whenever required. Because of overlap of interests in usage, disagreement might occur between or among users.

Table 4.9 Availability of kitchen

Respondents	Count	Availability of kitchen			Total
		None	Private	Shared	
Owners	N	5	55	0	60
	%	8	92	0	100
Renters	N	17	7	36	60
	%	28	12	60	100
Total	N	22	62	36	120
	%	18	52	30	100

Source: Field survey result

Those households who have no kitchen use their living houses for cooking. The distribution of the housing units by the type of kitchen facilities in the above table clearly shows that in spite of the availability of privately owned kitchens in the GTZ-village than in renters' homes, facilities of kitchens are more or less found at similar level. What so ever the level of the quality, owners are more benefited than renters as they use their kitchens privately.

4.3.6 Source of Energy for Lighting and Cooking

This section presents the share of the source of energy for lighting and cooking in the sampled housing units. An adequate supply of energy either for light or cooking is essential to human needs. In terms of efficiency, quality and appropriateness, electricity is the best source of energy to meet basic household needs especially for lighting and cooking. The study attempts to identify main source for light and energy (for cooking) as reported by sample respondents.

4.3.6.1 Source of Energy for Lighting

The two sample groups were asked to identify the main source of energy for lighting' Table 4.10 presents answers of respondents in accordance with main source of light energy.

Table 4.10 Main source of energy for lighting

Respondents	Count	Main source of light energy			Total
		None	Private meter	Shared meter	
Owners	N	0	58	2	60
	%	0	97	3	100
Renters	N	1	5	53	59
	%	2	9	90	100
Total	N	1	63	55	119
	%	1	53	46	100

Source: Field survey result

In terms of access to light energy the main source is electricity and the owners have private meter per household while 90% of renters are using shared meters. The data shows also that few owners (3%) are still using shared meters and (2%) of renters have no electric sources for lighting.

Therefore, with regard to source of energy for lighting owners are privileged to possess private electric meter. However, they are complaining that the cost was not included in the total housing constriction including water and telephone line. They said they paid for utilities like electricity, telephone and water after they moved in to their respective units. They reported they organized themselves and requested the Adama city government to help them have these utilities and installed to their village after the project was phased-out. They propose that such projects should include cost of those utilities in the total constriction cost so that beneficiaries could be able to repay them in the long-run. As regards the status of both groups in terms of energy source, the owners' position is better.

4.3.6.2 Source of Energy for Cooking

Another assessed energy was the energy for cooking. The sample respondents were asked what type of energy source they are using to cook their foods. The survey result is presented in table 4.11

Table 4.11 Main source of energy for cooking

Respondents	Count	Source of energy for cooking				Total
		Electricity	Kerosene gas	Firewood	Mixed	
Owners	N	6	1	1	52	60
	%	10	2	2	87	100
Renters	N	1	16	9	34	60
	%	2	27	15	57	100
Total	N	7	17	10	86	120
	%	6	14	8	72	100

Source: Field survey result

From the above table one can observe that main source of energy for cooking for both owners and renters to be more than one. Nearly 90% of owners and 60% of renters use mixed sources for cooking. This means that they could use electricity, kerosene gas, firewood or charcoal for cooking purposes. However, significant number of renters are using kerosene gas and firewood (27%) and (15%) respectively while some 10% of owners are using electricity as energy source for cooking. Irrespective of the similarity between the two groups with respect to energy source for cooking, the owners are still in a better position to use electric energy. One can conclude that there are only few households that rely only on electric energy for cooking. Instead, the majority of households utilize mixed domestic energy sources. According to a study conducted in 2000 by CSA (Welfare Monitoring Survey vol. 11 April 2001, Addis Ababa cf., APO 2003:58) on the type of fuel for cooking, there were only less than 3 percent of the housing units in Adama that were using electricity, whereas 35% used kerosene, about 31% charcoal, slightly more than 16% firewood.

As the findings of this study shows, in study groups like in Adama, there has been a high level of dependency on biomass fuel. There is no doubt that there is similar trend in other cities of Ethiopia. With the growing demand for fire wood and other uses rapid deforestation around the city are witnessed. Even though forests are renewable resources, inappropriate management and continuous abuse would lead to a variety of environmental impacts. In addition to environmental impact health risks and fire hazards there could occur where these fuels are used and the rooms are poorly ventilated. The optimal strategy to reduce exposure to in-door air pollutants it needs to facilitate conditions for alternatives energy sources like electricity which is environment friendly.

4.3.7 Availability of Telephone

The study groups were asked whether they have telephone lines or not in their respective units. The following table shows the survey result.

Table 4.12 Availability of telephone line

Respondents	Count	Do you have telephone?		Total
		Yes	No	
Owners	N	45	15	60
	%	75	25	100
Renters	N	13	45	58
	%	22	78	100
Total	N	58	60	118
	%	49	51	100

Source: Field survey result

One of the important infrastructure facilities for a living unit is a telephone line. It is observable in table 4.12 that, three quarters of the sample survey owners have telephone line in their respective units and this is a significant development in telephone line distribution. However, a quarter units from owners and almost half of renters' have no telephone line in their units or in their living compounds. Yet, owners are in a better position by far than renters.

4.3.8 Place of Work and Means of Transportation

Another important physical infrastructure in a housing environment is access to units-location and mode of transportation in socio-economic development of a community. The availability of road and transportation with an appropriate location of units would improve the quality of housing and the development of a safe and comfortable physical environment. Contrarily, lack of roads and transportation would impede use of vehicles especially in fire accidents or any emergency cases in one's dwelling place. Place of work that is closer to living environment would save travel time and contribute to productivity of workers. Nonetheless, closeness in a modern city doesn't mean to be the sole factor to ease all the economic, social, or cultural problems.

There may be also differences among neighbors in relation to the degree of access to transportation Question was posed to the sample groups-test and control, about the relative distance of their areas and their feelings towards access to transportation. The distance is to be measured in terms of closeness to: work place, shopping, school, hospital or clinic and other community centers.

4.3.8.1 Location of the Unit

As explained earlier in sections 2.2.2.2 and 2.2.3.2, beneficiaries of the GTZ-LCHP housing units are located in Adama Kebele 01 or GTZ-village while the renters are located mostly in the center of the city. In this case, renters are more advantageous than owners since owners have settled in specific residential area selected by the project in Kebele 01 of Northwest Adama town. Renters are settled everywhere in the town searching for the most suitable place, in fact according to affordability. They evaluate suitability in terms of access to transportation, transportation other things being constant. At the time of field survey, the writer observed that the owners' sites were relatively accessible to transportation.

4.3.8.2 Access to Unit

To identify neighborhood access to units, respondents were asked whether or not they have motor able access roads. Regarding to this issue, the data is summarized in the following table.

Table 4.13 Respondents answer to access to roads

Respondents	Count	Do you have access road (Motor able?)		Total
		Yes	No	
Owners	N	60	0	60
	%	100	0	100
Renters	N	42	18	60
	%	70	30	100
Total	N	102	18	120
	%	85	15	100

Source: Field survey result

As shown in the table, all of the beneficiaries and 70% of the none-beneficiaries of the project are accessed to motor able roads while 30% of none-beneficiaries still have no motor able road in their neighborhood setting. The difference is significant between the two groups respondents showing owners are better off than renters' respondents even if most renters are located in the center of the city. This is probably a few renters are still out of access roads to use trim down price of rental units.

4.3.8.3 Place of Work of Respondents

Table 4.14 Summarizes place of work of respondents

Table 4.14 Place of work of respondents' in Adama

Respondents	Count	Place of work of respondents				Total
		In the house I live in	In kebele I live in	Other place in the town	Outside the town	
Owners	N	2	6	35	15	58
	%	3	10	60	26	100
Renters	N	1	9	50	0	60
	%	2	15	83	0	100
Total	N	3	15	85	15	118
	%	3	13	72	13	100

Source: Field survey result

From the above table, one can observe that most of the owners and renters are working outside their home or in other places in the town i.e., 60% owners and 83% renters. On the other hand, a significant number of owners are working outside the town i.e., 26% while none of the renters are working outside their residing town (Adama). Statistically, there is substantial difference regarding place of work between owners and renters. Some of the owners who are working outside the town are factory workers and others are office workers.

4.3.8.4 Mode of Commute to Work Place

With regard to mode of transportation to work place, respondents were asked what type of transportation they use in their daily trip (See Table 4.15)

Table 4.15 Means of transportation to work place

Respondents	Count	Mode of transportation to work place					Total
		Trek /walk/	Bicycle and Motor Bicycle	Taxi	Official Vehicle	Mix	
Owners	N	15	6	12	6	17	56
	%	27	11	21	11	30	100
Renters	N	38	1	5	8	8	60
	%	63	2	8	13	13	100
Total	N	53	7	17	14	25	116
	%	46	6	15	12	21	100

Source: Field survey result

From the table, it can be seen that significant number of owners i.e., (30%) use mixed means of transport like taxi, horse cart, bicycle, walk and office vehicles, or service to go to work place... With respect to renters, most of them use walk i.e., (63%). Since most renters are situated nearby

their work place. They rent houses nearest to their working place to minimize transport and time cost. As can be observed from the table, few renters also use office vehicles or services (13 %). Similarly, 13% use also mixed of transports. Majority of the renters are users of own foot (walk).

4.3.8.5 Distance to Work Place

Distance to work place in kilometers for those who are working outside their home, both owners and renters, is analyzed using average values. As a result, mean distance to work place in kilometers for owners is 11 kilometers with standard deviation of 20 kilometers while mean distance to work place in kilometers for renters is only 2 with standard deviation of a kilometer. This shows a significant distance difference to work place between owners and renters. However, owners' benefit is considered from entailment to possession of their houses what so ever the distance might be. According to officials of Adama city Administration vertical growth of the city would solve the existing residential area distance from public facilities.

4.3.8.6 Average Travel Time to Work Place

Travel time for those who walk on foot to their work place is 23 minutes with a standard deviation of 10 for owners while it is 24 minuets with standard deviation of 14 for renters respectively. Similarly, travel time in minutes by vehicles for owners is 22 minutes with a standard deviation of 11 while it is also 22 minutes with an average standard deviation of 15 for renters in that order. Time taken by horse carts or bicycles for owners to their work place is 12 minutes with 8 standard deviation while it is an average of 10 minutes for renters with none standard deviation. This shows a significant difference with respect to time in minutes by vehicles to the work place between owners and renters while there is no such difference for walk, cart or bicycles. Generally, an average time to reach work place for both owners and renters is alike. It can be also said GTZ-village is situated at an appropriate distance for owners to reach their notwithstanding that few owners working outside the town travel more than 50 kilometers per week. Statistically the daily trip distance of owners seems exaggerated than that of the renters, since the SPSS output is loaded including the highest value distance even 100 kilometers in exceptional cases. Those working in the premises of their homes are females and pensioned persons involved in small businesses.

4.3.8.7 Average Cost of Transportation to Work Place

The study assessed sample groups' average cost of transportation to work place. In this section,

the weekly and yearly total average cost is presented for both owners and renters (See appendix 5). As presented in table "A" of appendix 5, the average cost of transportation to work place for owners is 15 birr per a week and 274 birr per a year with a standard deviation of 18 for a week and 206 for a year while the mean transportation cost for renters is birr 15 for a week and birr 228 for a year with a standard deviation of 38 for a week and standard deviation of 174 for a year. The maximum transportation cost is incurred on the owners than the renters either per a week or per a year i.e., 70 birr per a week and 750 birr per a year. There is no significant difference between the two groups of respondents with respect to travel cost per a week or per a year to work place. However, as explained in previous section owners go far distance and spend more cost than renters.

4.3.8.8 Amenities Mode of Transportation, Travel Time and Transportation Cost

This section examines some of the amenities in terms of average transportation cost and travel time that respondents use in their daily life. The topic presents selected amenities like shopping, school, and clinic or hospital travel time and, their average weekly or yearly cost to use these amenities. The study presented detailed analysis in comparison in (appendix-5) of tables (B-D).

1. Mode of transportation to shopping/ market centers/

Shopping is of one the important socio-economic aspects for dwellers. The study subjects were asked how far they go for shopping to the market centers. 35% of owners and 59%, of renters are walking on foot for shopping to the market centers. However, 5%, 2%, and again 5% of them from the owners' side use horse cart, bicycle and mixed of means respectively for shopping while 53% are using taxi.

Table 4.16 Shopping mode of transportation

Respondents	Count	Shopping mode of transportation					Total
		walk	Horse Cart	Bicycle & motor Bicycle	Taxi	Mix of means	
Owners	N	21	3	1	32	3	60
	%	35	5	2	53	5	100
Renters	N	35	0	0	22	2	59
	%	59	0	0	37	3	100
Total	N	56	3	1	54	5	119
	%	47	3	1	45	4	100

On the other hand, 3% of renters use mixed means of transport to shopping centers while 37% of them use a taxi. The data shows that most of the renters are in proper distance from the shopping centers. Thus, they are better off than owners.

2. Mode of transportation to school

The sample groups were also asked about their mode of transportation to school. Table 4.17 shows the result.

Table 4.17 Mode of transportation to school

Respondents	Count	Mode of transportation to School						Total
		Walk	Bicycle & motor Bicycle	Taxi	Private Vehicle	Official Vehicle or service	Mix of means	
Owners	N	36	0	17	0	1	1	55
	%	66	0	31	0	2	2	100
Renters	N	39	1	7	1	3	1	52
	%	75	2	14	2	6	2	100
Total	N	75	1	24	1	4	2	107
	%	70	1	22	1	4	2	100

Source: Field survey result

As indicated in the above 66% and 75% of owners and renters respectively walk on foot to school. Almost none of the owners and renters are using bicycles or private vehicles to travel to school. However, 31% of the owners and 14% of the renters use taxi to travel to school while the other 4% of owners and 8% of renters are using either office vehicles or mixed of means to travel to school. Generally, there is no significant difference between owners and renters' in terms of mode of transportation to school. One can conclude from the data that most of the schools in Adama are located in appropriate place for users.

3. Mode of transportation to hospital/clinic/

Similarly, respondents were required to tell their means of transport to health facilities/hospital, clinic/.

Table 4.18 Mode of transportation to hospital/ clinic

Respondents	Count	Mode of transportation to hospital /clinic					Total
		walk	Horse Cart	Taxi	Official vehicle (service)	Mix of means	
Owners	N	15	1	40	1	3	60
	%	25	2	67	2	5	100
Renters	N	26	5	24	0	1	56
	%	46	9	43	0	2	100
Total	N	41	6	64	1	4	116
	%	35	5	55	1	3	100

Source: Field survey result

The data shows that, 67% of owners and 43% of renters use Taxi while 25% of owners and 46% of renters travel on foot to got to hospitals or clinics in the city.

The table also shows that, 5% of owners use mixed means of transpiration and the other 4% of

owners use either horse cart or office vehicles while 9% and 2% of renters use horse cart and mixed transport means respectively. It shows that considerable a number of renters are living in a location where they can walk on foot to reach hospital or clinic services. In the meantime owners are also in a better position to use similar services since they have access to transportation.

4. Travel time and cost of transportation

Cost of transportation and travel time of the study subjects in using basic amenities (shopping, school and hospital/clinic) are further analyzed here. Appendix 5 tables (A-D), shows the study finding.

Shopping: An average travel time to shopping for owners is 18 minutes with standard deviation of 9. The cost of transportation for shopping per a week for owners is 3 birr with a standard deviation of 2 while mean travel cost for a year is 118 birr with standard deviation of 98. Similarly, the study analyzed renters' travel time and cost of transportation to shopping. As a result, mean travel time of renters to shopping is 17 minutes with a standard deviation of 11. Meanwhile, the travel cost of shopping per a week for renters' is 5 birr with a standard deviation of 3 while it is 225 birr and 145 respectively for a year. The equality of means shows that travel time and cost of transportation for shopping is not much different between the two groups of respondent.

School: In appendix-5 table-C, travel time and cost of transportation for respondents in Adama is presented. According to the data, the mean time in minutes for owners to travel to school is 21 with a standard deviation of 16 and the mean cost of transportation per a week is 8 birr with a standard deviation of 13 while the mean cost of transportation per a year is 245 birr with a standard deviation of 136. With respect to renters, the mean travel time to school is 19 minutes with a standard deviation of 11 and the mean cost of transportation per a week is 5 birr with a standard deviation of 3 while cost of transportation per a year to school at an average for renters is 225 birr with a standard deviation of 145. The result is that, there is no much difference between owners and renters with respect to mean travel time of weekly cost and yearly cost to go to school. This shows that both owners and renters are located at similar distance from schools.

Hospital /clinic/: The other basic amenity that the respondents were asked to report was the travel time and cost of transportation they spend to go to hospitals or clinics. Detail analysis of this aspect is presented in appendix-5 table-D. To give summary of the table, the data shows that the mean travel time of owners to hospital or clinic is 20 minutes with a standard deviation of 8 and

the mean travel cost per a week is 2 birr with a standard deviation of 1 while the mean travel cost per a year is 91 birr with a standard deviation of 62.

The study also analyzed mean travel time and mean cost of transportation for renters to use hospitals or clinics in the city. The mean travel time is equivalent for owners i.e., 20 minutes with a standard deviation of 11 and the mean travel transportation cost of 2 birr per a week with a standard deviation of 1. The cost and time spent by renters is again more or less similar with that of the owners. However, the mean travel cost of transportation for renters per a year is 128 birr with a standard deviation of 74. In relative terms, the mean cost of transportation to hospital or clinic for renters is higher than owners cost per a year.

This writer observed during the survey time that renters frequent health services than the owners. This may be attributed to the poor standard of the residences of the renters as compared with the owners.

4.3.9 Street Lighting

Street lighting enables urban dwellers or any users to move along the street at the night time. It is one of an important service in a given city. It is a kind of service provided by a city administration. It also protects residences from urban crime at the night time. In this respect, the subjects under discussion were asked whether they have access to street lights in their dwelling areas. The following table presents the survey result.

Table 4.19 Responses on access to street light

Respondents	Count	Do you have access to Street lighting		Total
		Yes	No	
Owners	N	28	32	60
	%	47	53	100
Renters	N	24	36	60
	%	40	60	100
Total	N	52	68	120
	%	43	57	100

Source: Field survey result

From the above table, 53% of the owners and 60% of renters responded that they have no street light in their neighborhood. There is no significant difference between the two respondents regarding access to street light. Street lighting installation is still at a minimum level along the main streets of Adama. The city government is expected to provide street lights.

4.3.10 Flooding

The study assessed whether residential areas or compounds of respondents are prone to flooding and what prevention mechanisms are in place in case of any possibility of flooding. below is the summary of the response.

1. Vulnerability to flooding

Respondents were asked if their living area or compound is prone to flooding. As shown in table 4.20, 68% of owners' and 48% of renters' area is not prone to flooding while 32% and 53% of owners' and renters' respectively living areas are prone to flooding. Therefore, most of the renters living area is prone to flooding than that of owners' neighborhood.

Table 4.20 Response to flooding vulnerability

Respondents	Count	Is the area prone to flooding?		Total
		Yes	No	
Owners	N	19	40	59
	%	32	68	100
Renters	N	31	28	59
	%	53	48	100
Total	N	50	68	118
	%	42	58	100

Source: Field survey result

Despite the slight difference between owners and renters with respect to vulnerability to flooding prevention mechanism should be designed for both areas since as they have similar problems.

2. Flooding prevention

The survey subjects were if they have flooding prevention mechanisms.

Table 4.21 presents summary of their answers.

Table 4.21 Flooding prevention mechanisms

Respondents	Count	Flooding prevention mechanisms			Total
		Open ditches	None	No flood incidence	
Owners	N	2	16	40	58
	%	3	28	69	100
Renters	N	13	16	28	57
	%	23	28	49	100
Total	N	15	32	68	115
	%	13	28	59	100

Source: Field survey result

Table 4.21 shows that, only 3% and 23% of owners and renters respectively have opened ditches for flood prevention in their respective living areas. Almost one third of owners and renters do not have any flood prevention mechanisms whereas they are still prone to flooding in their respective compounds. Protection mechanisms (open ditches) are prettily available in the renters living area

than in the owners' compounds. True, the renters living area is mostly in the center of the city and virtually it is privileged to have flood protection mechanisms. In fact, GTZ-village is a new settlement which has been given due attention by developers and city government. Thus, it requires giving more attention flood protection.

Of course, vulnerability to flood is less in the renters' area than in the owners' village i.e., 49% and 69% respectively. (See the table). During the time of field survey, the writer observed that the city government was constructing flood protections like open ditches and drainages in most areas of the city side by side with the ongoing road construction projects.

4.4 Respondents' future plan about housing

Sample groups were asked to share their future plans on their housing units. The owners' were asked if they have any plan to sell their units. Almost all i.e., 95% of them said no while only 5% answered yes. The study further assessed why those few owners said yes. They answered so to get a better unit. Meanwhile, renters were asked if they have any plan to buy house units. 5% said yes while the rest 95% answered no. Renters that said no reasoned out financial shortage (97%) and have no access to loan (3%). Whether they have a plan to build their own house was also another question. 83% of them said yes while the rest (17%) said no. The reason they put was still lack of finance. It can be simply deduced how serious financial challenge is in Adama to buy or build one's own house. Lack of access to loan mainly because of collateral requirements from financial institutions needs further insight from the concerned actors

Renters seem to invest their little money on other needs like education instead of planning to possess a living house for they think they can't afford, even though they wish they had their own homes. One can also conclude that projects undertaken by institutions like GTZ to address housing problem are of paramount importance to guarantee possession of housing units to those who cannot to buy or build houses. Such an approach can also balance renters plan between investing on other needs like education and shelter (See education data in chapter 3).

4.5 How Sample Dwellers View their Units and Neighborhood

Unit holders were inquired to reflect o what they like most and what they like least about their respective units. Their responses are analyzed as follows.

4.5.1 What They Like Most

The purpose of eliciting likes and dislikes of beneficiaries about their units is through closed question is to identify their interest about key housing variables. In the process, the respondents' value judgments are identified on their housing quality i.e., identifying the problem areas in their housing units. The assumption here is that the owners will maximize their satisfaction being owners their units while the renters will maximize location of their units.

Table 4.22 what owners and renters like most

Respondents	Count	What do you like most about the housing unit?						Others	Total
		Size & number of rooms	Cost	location	Construction quality	Utilities	My ownership		
Owners	N	2	16	35	1	0	6	0	60
	%	3	27	58	2	0	10	0	100
Renters	N	2	14	35	2	4	1	2	60
	%	3	23	58	3	7	2	3	100
Total	N	4	30	70	3	4	7	2	120
	%	3	25	58	3	3	6	2	100

Source: Field survey result

Table 4.22 indicates that almost all of the respondents expressed their interests similarly on cost and location of their respective living units. To identify respondents' reflection statistically, most of them liked their locations. They consider them a appropriate living areas i.e., 58% of owners said they liked their location and renters also selected this item with equal percentage with the owners i.e. (58%). They assume their locations are appropriate to access transpiration and other socio-economic services like health centers, schools, market places, and recreation areas. Some of the owners said they like most the cost of construction unit i.e. (27%). 23% of the renters also said the same. The owners think they are benefited to own GTZ-LCHP at a minimized cost while renters also suggested housing rent is mostly reasonable in Adama. In some cases, utilities like water are better accessed by renters than by owners.

It is obvious that owners possessed decent houses with a minimum cost compared with current h construction costs. Renters are also happy to b in the center of the city to minimize transportation.

4.5.2 What They Like Least

This is the area where the respondents are expected to identify constraints about their housing units.

Table 4.23 what owners & renters like least

Respondents	Count	What do you like least about the housing unit? Inadequate space /rooms	Poor quality of construction	Expensive cost	Lack of Utilities	Location	Others	Total
Owners	N	37	6	0	11	0	6	60
	%	62	10	0	18	0	10	100
Renters	N	15	7	8	23	6	1	60
	%	25	12	13	38	10	2	100
Total	N	52	13	8	34	6	7	120
	%	43	11	7	28	5	6	100

Source: Field survey result

As presented in table 4.23, (62%) owners' household heads and 52% household heads from renters responded that, they have no enough space or rooms for the households. 18% of the owners and 38% of renters reported that utilities like water, toilet facilities and kitchen services are not available. This shows significant difference between owners and renters regarding their dislike about their units. Owners also complain about shortage of enough rooms. Renters' cause of dislike is mostly lack of utilities. The project beneficiaries' complaint about shortage of enough space or rooms for household and utilities needs correction in the future project implementation.

4.5.3 Features that interest owners and renters most

In this section respondents were asked what they like about their respective neighborhood. Table 4.24 presents the details of the respondents' opinion on their neighborhoods.

Table 4.24 features liked most liked by owners and renters

Respondents	Count	What feature do you like most about this neighborhood? Proximity to work place	Access to utilities	Familiarity with area	Clean area for life	Proximity to social services	Good social security /Idir, Iqub/	Total
Owners	N	5	3	8	13	24	7	60
	%	8	5	13	22	40	12	100
Renters	N	20	5	12	4	17	2	60
	%	33	8	20	7	28	3	100
Total	N	25	8	20	17	41	9	120
	%	21	7	17	14	34	8	100

Source: Field survey result

In the table 4.24 above, owners reported that, they liked their neighborhood because of its proximity to social services (40%) while renters liked most, their neighborhood because of its proximity to work place (33%). In a number of cases both groups of respondents selected location as an important feature to access social services and their work place easily. The owners' neighborhood in particular is close to social services like kindergarten health centers, kebele centers, market places. Renters' selection of residential place is mostly associated to proximity to work place.

4.5.4 Features Most Disliked By Owners & Renters

This section describes owners and renters dislike about their neighborhood features

Table 4.25 Least liked features GTZ-LCHP

		What feature do you like least about this neighborhood?						
Respondents	Count	Poor drainage	Poor infrastructure	Poor access to jobs, social services	Insecure area	Pollute area sound, air, water	Others	Total
Owners	N	44	6	6	1	1	2	60
	%	73	10	10	2	2	3	100
Renters	N	23	11	10	5	6	3	58
	%	40	19	17	9	10	5	100
Total	N	67	17	16	6	7	5	118
	%	57	14	14	5	6	4	100

Source: Field survey result

As figures in the table above shows that73% of owners and 67% of renters reported they dislike the poor drainage system. 10% of owners reported shortage of infrastructure facilities and job opportunities. 19% and 17% of renters' reported that poor infrastructure and poor access to job and social services are problems to be considered in their settings. Therefore, the GTZ-village neighborhood requires enough road and drainage facilities and investment that can attract job seekers specially, women and youth urban dwellers. Similarly, renters' pointed out shortage of drainage facilities and lack of job opportunities in their respective areas. The result shows that, renters' area is better off than that of owners' in drainage and infrastructure facilities.

4.6 The Level of Units' Construction at the Time Beneficiaries Moved in to GTZ-Village

This section presents progress of the housing units as reported by owner respondents after they moved into the units. It also discusses the year they moved in and how the rest of the construction cost was covered.

4.6.1 Year of Move to Units

Most of the owners moved into their housing units in the year 2001 i.e., 83% while the other 9% and 8% moved in 2002 and 2003 respectively. Regarding renters, at the survey time, most of the renters' said they rented their residences in different years i.e., from the year 1981 up to the year 2005. But most of them started to live in their respective units recently i.e., from the year 2002 to 2005. For instance, 20% of them moved into the current units in the year 2005, 25% in 2004, 17% in the year 2003, 13% in 2002, 10% in 2001, 5% in 2000 and the rest started to live in their units from 1981 to 1999 G.C. From this data one can understand that the renters were forced to move from place to place in search of units due to rent cost or other factors. Therefore, there is

significant difference between the owners and the renters with respect to time of occupancy of their respective residences. The housing project assures stability while renting forces renters move from place to place in search of home.

4.6.2 How Construction Cost Covered

Question was specifically posed to the owners of the GTZ-LCHP beneficiaries to identify how the housing construction cost was covered as per the policy of the project office and the Construction and Business Bank (CBB) of Adama Branch. The result is that almost all, (95%) of the beneficiaries answered that they covered the cost through the loan they obtained from the CBB and only 5% used their own fund. They bought the model houses directly offered by the project office. With regard to renters, question was not forwarded to them since they don't own private houses.

4.6.3 Construction Status of Units at the Time Beneficiaries Occupancy

The survey identified that, all the GTZ-village project units were uniformly completed at a similar period and all the units were at a similar construction level when they were handed over to the beneficiaries. Foundation, wall and floor areas were completed; utilities like water, electricity telephone, toilet facilities, kitchens and access to roads were partially completed. On the other hand, ceiling, plastering, painting, service rooms and fencing were not started at the time when the users moved into their respective units. Those beneficiaries who didn't move into their respective units in time were able to improve some works like utilities, toilet, ceiling, plastering and, painting. With regard to renters, more than half of them said that their rented units lacked foundation (45%) sub-standard floor (28%), sub-standard ceiling (47%), in complete plastering (27%) and incomplete painting (24%). In addition, only 9% of the renters' said they had complete service rooms.

In general, both the owners and renters responded that the units were completed partially (97%). Most of the variables, however, show difference between owners and renters.

It can be easily understood that, despite the shortfalls in terms of construction standard, owners were benefited compared to renters who moved from place to place in the city in search of rental units. The renters were asked whether their landlords could repair or improve their rental units. 90% of them responded, 'Never', 8% reported got their units repaired every year and painted partially and 2% responded that they got their units repaired roughly every two years. In general,

the landlords do not seem interested to make their units ideal and satisfy their customers.

4.7 Unit Improvement

This section presents unit improvement or other works that have been done since the users had moved to their respective units and the source of fund used to improve or construct the new units. The survey assessed the basic housing units and utilities improvement.

4.7.1. Construction Works and Utilities Improvement

The respondents said improvements or new works have been conducted after their occupancy of the units. Same question was also forwarded renters. 93% of the owners constructed service rooms as the project did not provide them other than the design while only 3% of the renters constructed service rooms in their landlords' compounds, but not refunded. Most of the owners improved service quarters from 2001 up to 2005 while the renters undertook improvement works between the years 1995 to 1999. Out of the surveyed owners 9% of them improved the original project unit i.e., subdivided, extended units, widened or built additional rooms or modified the original design from the years 2003 to the years 2005, after they moved into the units. The cost of additional works made by the owners is estimated to be at a mean of birr 500 to 25000 while it is at a mean of 1000 to 2000 for renters (See appendix 7).

The respondents also improved their units as a part of finishing works which was not included in the cost of the project. There are similar cases with the rented houses. 90% of the owners and 26% of the renters said undertaken finishing works like ceiling, plastering and painting from the year 2001 up to the year 2005. Utilities like toilet, bathing, water line, electricity, and telephone lines are improved by the owners and by few of renters from the year 2001 up to 2005. Few of the owners improved toilet and bathing rooms (3%) while only 1% of the renters improved toilet, bath rooms and other utilities like water, electricity, and telephone lines. In this regard, there is significant difference between the owners and the renters housing improvement. There is no major difference between the two groups in terms of utilities (toilet and bathing facilities). Out of all items only finishing works are significant between owners and renters showing that owners are better off than renters in this respect. The data indicates that, the owners have shown improvement in their housing units since they have an opportunity and capacity to improve their units while the renters have limited chance and little interest to improve rental units. Some have not yet improved their units mainly due to lack of finance. Few owners (3%) and most of the

renters (50%), said they don't have money to improve their units. Eventually, the owners could improve their units from year to year since mobility is less despite the shortage of fund they face while the renters are not interested to improve rental units mostly because of mobility in search of alternatives. The writer suggests provision of land plot or shelter for renters through projects like low-cost model in medium or large cities like Adama. Condominium housing models the ones being undertaken in Addis Ababa could solve the housing problem of low-income households. In terms of land plot provision, low income households should be supported to build a minimum standard shelter using local construction materials and family labor to improve progressively with provision of infrastructures.

4.7.2 Source of Fund for Additional Works

This sub-section discusses respondents' main source of funding for additional works. The cross tabulation data shows different sources of funding that respondents utilized to improve their respective units. The dominant source for both owners and renters was personal saving 72% and 94% respectively followed by relatives' assistance (12%), Iquib (7%) for owners and private banks (6%) for renters. The other source of fund for owners is government banks loan and private lenders. Here, the result shows no significant difference between owners' and renters' source of funding for additional works. Personal saving is the major source of funding for both groups of respondents. It can be also concluded that personal saving plays an important role to undertake housing construction once employment opportunities are obtained in the urban economy. Bank loan, social institutions like Iqub and Idir (social welfare) are also very important.

4.8 Gains from involvement in the Housing Project

This sub-section elaborates on respondents' reflections about the benefits they consider have achieved being embraced in the housing project. The owners were asked to explain what they think they have gained after getting into the housing project. Appendix 6 summarizes the result of their responses as they reacted to twelve sub questions under the above main question. Their replies are presented in such a way that each question is answered using number and percentage for "yes" or "no". In addition, the total is summed up in the final column of the table (See appendix 6).

One can understand from the table of appendix 6, as reported by beneficiaries that by getting into GTZ housing project they said they acquired (90%), residential houses, (57%) access to loan,

(52%) minimized cost of construction (52%) technical support, (38%) utilities. Similarly, the respondents value their benefit beyond possessing the units. They relate other factors. 37% of them said accessed services like health, education and other socio-economic necessities. 43% of them also liked the project location as an ideal place to raise children because it is secured residential area which is out of high traffic movement and sound disturbance. In addition, they said the site is found an appropriate location to participate beneficiaries in cultural and social activities which are valuable in the community life. 38% of them said that their participation has been increasing in social security organizations like Idir and Equb. Finally, 33% of the respondents said that the quality of their housing units have been improving compared to their previous rental units.

Generally, the survey indicates that, the project beneficiaries have been gaining from the GTZ LCHP. They said, they acquired modest low-cost housing units through long term mortgage. The model is beneficial except that they complained about the common wall; common services (like common toilet for two households). The renters on the other hand frequently suggested that the Adama GTZ low-cost housing project is useful in terms of housing provision system through which they aspire to require similar opportunity.

4.9 Main Problems of the Respondents

This final section of chapter four is devoted to main problems raised by the owners and renters during the study time. The problems are summarized in the following manner. The data were obtained through discussions with key individuals and groups during the field survey.

4.9.1 Major Problems Regarding Owners

1. Less participation of owners (beneficiaries) in the project housing construction to suggest unit plan, design, and related services.
2. Shortage of utilities like water, electricity, and telephone lines at the time of construction and after construction for a few years.
3. Common utilization of dry pit toilet which is not convenient for use
4. Additional cost incurred to install electricity, piped water line, telephone service that were not included in the project mortgage system. This has created burden on owners' repayment rate of the bank loan.
5. Absence of service quarter which forced owners to spend additional fund as it was not included

as a part of the bank loan.

6. Utilization of common green area by few individuals while tax payment is common
7. Absence of consumers' association in the area either by the villagers or by others
8. Shortage of inner roads, open ditches, drainage, solid waste disposal and street lighting in the neighborhood setting.
9. Shortage of kindergarten, clinic, market area and absence of permanent transportation system in the area

These are some of the problems raised by the owners the survey time.

4.9.2 Major Problems of Renters

The renters also raised some major problems:

1. Lack of residential land plot to construct shelters
2. Lack of an affordable pre-payment system and long process of securing residential land plot for low-income groups
3. Unaffordable construction code that hinders constructing progressive shelter using local construction materials /through approaches like Save and Build/method.
4. Shortage of standard rental houses and ever rising house rent with deterioration of quality
5. Shortage of mortgage system for housing in the city to enable get an opportunity that considers income level of renters as GTZ-LCHP did

4.9.3 Major Problems Regarding the Project Office

The project office complained about the bureaucratic process of land acquisition in spite of the grant made by the city government free of lease. They said it took them quite a long time to acquire plots of land. The office was also displeased with the lack of cooperation the city administration showed while the project office expressed interest to extend its technical support. The office was ready, it was learnt, to construct shelters for low, middle and high income groups had it been supported by the Municipality of Adama city. In addition, infrastructures like electricity, water, telephone and road construction were also time taking and line departments in charge of these services were unorganized to support the speed up of the construction process.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This is a concluding chapter that summarizes major findings and then wind up the thesis by presenting some recommendations based on the findings.

In order to improve the housing situation of the urban poor, the Ministry of Workers and Urban Development (MoWUD) has been implementing housing projects. A pilot low-cost housing project has been implementing since 1999, with technical cooperation support from GTZ. The GTZ-LCHP Adama site was the first pilot low-cost housing project implemented in Adama town kebele 01. This thesis enquired the benefits of the project target groups under the title "Meeting Housing Challenges: Socio-economic Benefits of GTZ-Low Cost Housing Project, in Adama Town, Oromia Region.

The study has dealt with employment status, education status, transportation situation, location of work place, amenities status on the area, infrastructures facilities, respondents' access to financial institutions, loan and repayment status of the respondents, and the role of the project in facilitating the low-cost housing provision under the technical support. Finally, the thesis presents a few problems forwarded by the respondents at the time of field survey through face - to – face, individual key persons and selected groups discussions.

In this study, the data were obtained mainly from a household survey of 60 household heads selected from 112 owners and 112 renters, respectively. The study adopted case study and a cross sectional survey design to assess the benefits of the owners. The sampling technique that used during the questionnaire survey was purposive and simple random sampling methods.

The sampling units were the owners' and the renters' lists. The source lists or the sampling frames were the lists of the owners and the renters obtained from the project office. The size of the sample to be studied was 112 household heads selected from the owners and 112 renters' lists. An optimum sample was selected to study the problem.

The study has compared the housing conditions of renters and owners to elaborate the benefits the owners obtained. In order to achieve the objectives of the study, both primary and secondary data were used and the secondary data were gathered from different federal and regional offices.

Historically, Adama town was established in 1916 following small business and railway line. The project site was also established in 1999. It was the pilot low-cost housing project implemented by the Ministry of Workers and Urban Development with technical cooperation support from GTZ. The project site was implemented in kebele 01 and it was constructed the low-cost flat mortgage houses for 112 low-income employees. This study was enquired the benefits of the target groups as a result of their housing improvement and the quality of life difference between owners and renters in line with meeting housing challenges in the town.

As a result of the project implementation, the owners have been benefiting from the technical support and mortgage housing. The houses were built based on the Ethiopian building code. The housing loan was provided through construction and business bank (CBB). The duration of the loan was for 15 years mortgage. The socio-economic aspects are also the source of enquiry. The creations of new employment opportunities, training, income generation, and contribution to the development of small scale and construction industries are a few from the benefits.

Regarding socio-economic characteristics, some relevant and useful items of information on housing and related variables were collected and analyzed. If we re-mind some of them, data on the sex of respondents was one of the variables analyzed. In this respect, the project was provided low-cost shelter both for male and female respondents.

This shows that the project has been selected both sexes and benefited with housing proportionate to similar sex distribution of the settlement area. On the other hand, it implies that similar sex pattern households are still in need of low–cost housing that could be solved through the market and the government actions.

Regarding respondents age, a closer look at the data in the presentation of analyses shows that most of the respondents in both groups were in between groups of 20 to 45 years, since an opportunity of mortgage housing were for between 18-40 years of age. A closer look at the data also shows that both groups of respondents were in the economically active age. Most of the owners were between age groups of 30 to 49 and most of the renters were between the age groups of 20 to 45. The mortgage bank is requiring employees between ages of 18 to 40 years. The writer identified that most of the renters were younger than the beneficiaries. This implies that the household within younger age groups are being affected by the housing shortage in the city requiring similar mortgage housing supply regardless of their affordability level.

In terms of marital status, the majority of owners and renters were married, 82% and 54%, respectively. Thirty-nine% of renters and 7% of owners were single. A few were divorced and widowed both from owners and renters. It indicates that the owners were married than renters. This is because the renters were younger that could take sometime to find their spouses. On the other hand, owners' family formation might benefit them to have their own shelter with more household income to struggle the shelter problems together. In addition, significant marriage before possessing of own shelter shows shelter shortage did not protect them to be married that contributed to natural increase of urban population. This further, indicates policy measures of population control towards urban economy.

The pattern of family size of the respondents shows that, more owners than renters have possessed large family size even more than 5 persons per households than renters. The mean and standard deviation was 4.93 and 2.11 for owners respectively while it was 3.25 and 2.09 for renters. There is significant difference between owners and renters. This shows that the majority of owners are couples, married; they have one or more children and/or dependents with them. This further shows that, the project allowed them to enjoy and consolidate their families in their own shelter while the renters are still living in sub-standard rental accommodations requiring similar supply.

In some cases, like ethnic groups and religion, both sample groups are similar in the pattern of distribution. Regarding ethnic groups, Oromo is the highest percent while with respect to religion, Orthodox is the dominant. There is no difference between both groups that the project selection was similar (related) with the real situation of the population.

The thesis also studied education statuses of the respondents. As a result, the analysis shows, the level of education is significantly associated with respondents ownership status. The highest record is observed in secondary school and university level attainment i.e., 47% and 35% respectively for owners followed by 32% secondary school and 28% vocational school attainment for renters. Further analysis shows that, the percentage share in primary school level is only 2% for owners while 20% is registered for renters. Hence, level of education is higher in owners' respondents than renters. This shows that there is significant difference with respect to their level of education. This shows that probably the higher education level for owners than renters contributed participating in the project housing. Obviously, education is the base of development.

Low level of education has negative impact on income of households. It indicates also improving education level of low-income groups that has a great role in improving their income and shelter provision. With regard to employment status, the vast majority of the respondents were civil servants and some of them were private organizations workers. The data analyzed shows that 92% owners and all renters' respondents were employed while only 5% owners were retired beneficiaries. The data of participants before the project shows that 90% of them were civil servants, 6% private employers and 4% NGO workers studied by the project office in 2003. The writer observed from the field survey that most of the beneficiaries were Teachers, Nurses, and Administrative and Technical staffs while similar pattern were observed in the renters respondents occupational status waiting for similar housing programs.

Income varies considerably between owners and renters. Initially, mean monthly household income was 738 birr for owners with standard deviation of 506 while it was 368 and 310 for renters in that order before the construction of the unit. The analysis of field survey data shows that the highest mean monthly household income is 1193 birr for owners while it is birr 655 for renters in after the years 2000 period. With this, the highest variation was observed in the after period that the standard deviation for owners was 654 while it was 540 for renters. The minimum monthly household income for owners in before period was 282 birr while it was 345 birr in the after period. The maximum monthly household income in the before period for owners was 3744 birr while it was 3635 birr in the after period. Similarly, the minimum monthly household income for renters in the before period was none while it was 218 birr in the after period. With this order, in the before period the maximum was 1330 birr while it was 3680 birr in the after 2000. The change of income within before and after period was that owners mean household monthly income was 454 birr with standard deviation of 588 which shows higher record than renters. The renters mean monthly household income was 323 birr with standard deviation of 364 (appendix 4).

This shows that, there is no significant difference between owners and renters mean monthly household income in before and the change but significant difference was observed in the after construction of the unit for the owners. Probably the mean monthly household income was improved due to stable own shelter obtained through the project that could minimize mobility cost. The owners were established their additional income sources other than monthly salary. Even most of their monthly income was increased in gross terms. The writer also observed that

owners are better off in their life now than before period compared with renters now in the after period (at survey time) due to housing or non-housing reasons explained earlier in chapter 3.

Assessment has been made on respondents' household monthly expenditure at survey time. The mean monthly household expenditure on food for owners in before the time was birr 208 while it was birr 175 for renters. In similar pattern, mean monthly expenditure in the after period for the owners was birr 306 while it was birr 234 for renters. From this figures, excluding water and cooking fuel, we can see that expenditure on food was 28.2 percent for owners' in before the time while it was 47.6 percent for renters in similar period. Similarly, expenditure on food in the after period for owners was 25.6% while it was 35.2% for renters. The data shows that the gap or the change of expenditure on food between the before and the after period for owners for instance, on food was 50.7% while it was 43% for renters.

From the analysis above we can understand that, owners are better off than renters regarding the amount of expenditures spent only on food, than renters, in both before and the after period. Statistically there is no significant mean difference on food expenditure both for owners and renters in before and after periods and even the change or its gap.

An assessment was made to determine whether housing intervention has an impact on possession of household assets. As housing or non-housing related reasons, respondents were asked: both in the before and after periods, whether they possess or not household assets and to identify survey groups' improvement in the quality of life with this regards. The argument of this analysis is that, in addition to the impact on the overall household income and expenditure, housing is also expected to improve the ownership of key household assets such as furniture and appliances used in the daily life.

As a result significant number of owners' households possesses household assets like Radio, Tape, Television and furniture than renters. The study indicated that most of the owners than renters possessed durable assets after the period. The frequency of household furniture of owners is significantly higher than the frequency of household furniture of renters. This shows that, housing improvement of the project was improved the ownership of household key assets of the owners compared to what was actually observed in renters survey results. This was probably also due to an improvement in owners' income and level of savings.

The pattern of migration of the respondents was similar that most of them were migrants. The project provided shelter for the beneficiaries that it was similar with the renters social mobility states that requires similar treatment. Most of the respondents were lived in other Oromia Zones before they migrated to Adama. This shows that migrants are mostly affected with shelter shortage that requires solving also the renters housing shortage. There is no significant difference between respondents mean years that they lived in the town. But there is significant difference between them regarding mean of continuous living in current dwelling at survey time was. This shows that renters were stayed in rental units not more than two years while the owners were living more than five years with stable living style.

The project housing provision was improved household diet, access to education and health than renters' households. It also improved access to health and medical facilities of owners than renters' households. The owners responded that their village is a very good place to live in terms of health and child rising than renters living in the city center.

We can understand from the data that more than three quarter of owners' respondents had saving account than little more than half of renters account. With regard to the place they saved, more owners than renters were saved in the formal institutions. Again, more percentage of owners were started saving before the period while more percentage of renters started saving after the period that might made difference the ownership status. The average saving share was 12% both for owners and renters out of their respective income. The owners' respondents were saved in formal institutions for safety of cash while renters' respondents were saved to construct their own houses. Finally, a few respondents had no saving account that they reason out that their shortage of money to save. Housing is also powerful instrument to strengthening social security. The data showed most of the owners than renters have social securities like "Idir".

With regard to loan and repayment status of respondents, the owners than renters have access to loan from formal institutions and their repayment status are regular and effective. Housing is a major influence on its physical and social environment. Most of the owners of standard shelter than renters were participant of different organizations. One who own shelter is respected in social and economic aspects.

Housing is also significantly important to empower its owners in administration and decision making on household assets and income. The data shows that more of owners' spouses than

renters were decided on household assets and income together.

The study assessed also physical and environmental condition of the respondents. The analysis shows that the housing conditions of the owners are better off than renters' respondents. Almost all (90%) of the owners dwelling units have separate service quarters while only 17% of the renters respondents dwelling units have separate service quarters for general uses. Response from both groups shows that more than 90% of their dwelling units are using for residential purposes. Regarding physical structures of the respondents, almost all units of the owners are constructed from durable construction materials like cement screed for floor finishing materials, Hollow Concrete Blocks for walling, fabrics and chip wood for ceiling materials. In the other side, the renters dwelling units are substandard that their building materials are mud blocks, wood and mud for walling materials, earth mud for floor finishing materials and none or fabrics for ceiling finishing materials. However, all of the respondents i.e., (both owners and renters) dwelling units roofing material are constructed from corrugated iron sheet.

Occupancy of the respondents units were analyzed in terms of common variables like numbers of rooms, area of units, plot size, age of the units, types of housing, types of building, and the housing tenure. In this regard, the owners are better off than renters. For instance, the average room numbers in dwelling units of owners is varying from 3-5 with mean and standards deviation of 4 and 1 respectively while it was 1.5 and 1 for renters with that order with range varies from 1-5.

Statistically, mean difference between the mean numbers of rooms of the two respondent dwelling units is not significant. The analysis also shows the number of persons living per room for owners is varying from 0.3 to 2 with mean and standard deviation of 1 and 0.5 respectively. While it ranges from 0.8 to 7 for renters with mean and standard deviation of 2 and 1 respectively. Mean difference is significantly different between the mean number of persons living per room of owners and renters showing owners are better off than renters.

The owners area of units are 36 meters square at the time of construction. But at the survey time, it was varied from 36 to 93 meters square with mean and standard deviation of 55 and 12 respectively while it is varying from 9 to 65 meters square with mean and standard deviation of 18 and 10 respectively for the renters. It is significantly different that owners are better off than renters enjoying with better unit area with moderate number of households.

The total plot size in meters square was also uniformly fixed to 150 for owners at the time of construction. At the survey time, it was 150-165 meters square with mean of 150 and standard deviation of 2 while it was vary from 100 to 1000 meters square plot size with mean and standard deviation of 324 meters square and 200 respectively for the landlords of the renters plots. The difference is significant shows that the renters dwelling plot are less crowded because most of the landlord plots were possessed before long years in the center of the city. Similarly, if we analyze age of the units, the owners units are seven to eight years while the renters dwelling units are more than 60 years with mean and standard deviation of 18 and 13 respectively.

Regarding types of the housing units, all of the owners units and 20% of the renters units are conventional while 68% of renters dwellings are unplanned legal (legal title deed but illegal construction), 12% are unplanned illegal (squatter settlement). With regard to types of buildings, all the owners building types provided by the project and 17% of the renters' dwellings are duplex villa while 80% and 3% of the renters' houses are attached raw housing and detached villa respectively. All of the buildings of owners have foundation while only half of the renters houses have foundation that shows owners dwellings are durable than renters units. Regarding tenure statuses, owners are beneficiaries of the project while renters (93%) are rented from private individuals. Eighty-two % of renters household heads responded their dwelling condition is fairly good while 72% of owners heads responded that their home are at standard dwelling level for human habitation.

Regarding cost of housing units, the owners responded that the construction of GTZ-housing is cheaper than other individual housing construction at equivalent level. For instance, 83% of them assured yes while only 17% of them said not cheaper than individual construction cost. The owners were asked about construction period. The owners responded that almost more than two-third (67%) of the construction of GTZ units was completed within planned period of time. They also have reported that the construction is up to the standard. However, 70% of the renters responded that their dwelling have no quality.

Services like infrastructure and utilities are in a better quality as far as beneficiaries are concerned. Moreover, owners are better off than renters by the distance from their units in use of drinking water that is most of them (78%) are using tap in compound private while most of renters (63%) are using tap in the compound shared.

With regard to wastewater disposal and toilet facilities, Adama is extremely at low level. However, the city government has been constructing drainage in the main street sites. From the survey result, most of the respondents responded that i.e., 55% owners and 83% renters were using dry pit shared toilet while a few owners (3%) and renters (5%) had none of toilet facilities. In the survey result, a little modernized toilet, (3%) flush private for renters and 8% flush shared for owners were used. The problem of toilet facility was one of critical problems reported.

Bathing facility is one of an important human hygienic facility that can help to keep human body and related facilities clean. In this regard the owners were in a better position that more than 20% of them are using bathtub or shower privately owned while only 3% of the renters' respondents were using private shower.

Respondents were asked whether or not they have access to refuse collection means. In most cases, municipal disposal systems are inadequate and there are inefficient management systems. As a result, 93% of owners and 45% of renters' respondents responded they have no access to any refuse collection means.

Regarding availability of kitchen, at the time of field survey, 92% of the owners were using private kitchen while 60% of the renters respondents were using shared kitchen. With this, owners were in a suitable situation than renters mainly for cooking of foods. The renters were using their living houses for cooking that there is significant difference between the two respondents groups that owner are in a better position in this respect also. In addition, source of energy for lighting is electricity both for owners and renters while both are using mix of means as a source of energy for cooking. That is, they could use electricity, kerosene gas, firewood or charcoal for cooking.

Availability of telephone service was one of the survey questions assessed by the study. As a result, the three quarters of the sample survey owners have access to private telephone line in their respective units while half of the renters' respondents have no access that the significance was high.

With regard to place of work, almost 60% of the owners and 83% of the renters were working in the town which is accessible to their units. Respondents were assured that mode of commute to work place are mix means including trek (walk). The distance to work place is not more than 11

kilometers for renters. It shows that they are in a better position than owners relating to their work place. The average travel time is also 23 to 24 minutes for both respondents. The study also made clear average cost of transportation to work place. As a result, the average cost of transportation to work place for owners is 15 birr per week and 274 birr per a year with standard deviation of 18 for a week and 206 while the mean transportation cost for renters is also 15 birr for a week and 228 birr for a year with standard deviation of 38 for a week and standard deviation of 174 for a year. With this, there is no significant difference between the two respondent groups with respect to transportation cost showing both groups were in appropriate position of residential area. In addition, the respondents were responded that they are in appropriate position to market centers like shopping and other amenities (schools, hospitals or clinics) with access roads and transportations.

Fifty-three % owners and 60% renters responded that there is no street lighting in their neighborhood settings. One third of the owners and half of the renters' area are prone to flooding with no or a few prevention mechanisms. Generally, the study identified that the owners are benefited from the GTZ-LCHP comparing the level of renters living in rental units. The owners are happy to live in their units while the renters are planned to have similar units' through the support of similar projects. The owners have obtained decent housing through the project while the renters are still in searching of land and private own residence with similar project support. The beneficiaries of the project are improving their units and utilities while the renters are using sub-standard units as the study identified construction works and utilities improvement situations. The source of funding for additional works is own fund for owners that the owners income is improving after the project. The survey indicted that the project beneficiaries have been benefited from the GTZ-LCHP as a result of housing improvement.

5.2 Recommendations

Based on the findings of study, the following recommendations have been drawn.

1. Replicating similar project in Adama and other urban centers to solve housing shortage of low-income households,
2. Creating job opportunities, training on housing and construction inputs to encourage urban dwellers to have own income for housing finance,
3. Accelerating land allocation process of urban governments through improvement of human and material needs of municipalities,

4. Encouraging building industries through policy support on residential housing and inputs production,
5. Facilitating utilization of domestic naturally available building materials for housing construction,
6. Providing trainings on utilization of local housing construction inputs and low-cost housing, saving and, job creation,
7. Encouraging traditional financial institutions (Iddir, Iqub) and modern saving and credit associations to mobilize finance for low-cost housing supply,
8. Encouraging formal financial institutions to mobilize finance for residential housing through policy instruments,
9. Encouraging housing supply actors (government bodies, private investors, and individuals, NGOs, Associations) to invest on housing and land development through policy support,
10. Finding funds either locally or internationally from different sources and establishing housing Development fund to solve housing shortage of urban poor,
11. Establishing separate Ministry of Housing Development (MoHD) to solve the policy areas, human and material development, housing finance land allocation and development, standards and norms and construction development, training and follow-up research and laboratory test on housing development,
12. Providing opportunities to have houses for non-government and informal sector employees
13. Involving beneficiaries through participatory method in supply of low-cost housing.
14. Housing provision system should be strengthened involving different actors for a sustainable replication to solve low-income housing problems.

Glossary

Garrisons: a group of Soldiers living in a town, the Buildings that Soldiers Live in (Hornby A.S. 2000: 489).

Household: Household is defined as persons living in a housing unit together and has common cooking arrangement; it refers to either a single person or a group of persons in a housing unit.

Housing shortage: the discrepancy between the total number of households and the total number of housing units in a given geographic unit as a result of a marked excess of the total number of households over the total number of housing units.

Low-cost housing: is a production of housing with relative cost minimization of building cost, price of input materials, labor, technically acceptable or sound for living, habit, friendly with environment among others (see also 1.4 in the text).

Morphology: Urban Morphology is defined as the form and structure of urban areas. The main elements of urban morphology are the type, size and layout of buildings, plots and streets (Birke 1998: 5).

Open Market: A situation in which companies can trade without restrictions, and prices depend on the amount of goods and the number of people buying them (Hornby A.S. 2000: 818).

Overcrowding: is usually measured in terms of the **average number of persons per room** and it is also expressed by the **relationship between the average size of household and the number of room in the hosing unit** (see also 5.1.1.4 in the text).

Real interest rate: the interest rate in real term with out inflation (increase in price).

Squatter Shacks: Small buildings usually made of wood or metal, that has not been built well (Horny by A. S. 2000: 1080, PADCO – Ethiopian Housing Sector Final Report 1998: 27).

REFERENCES

AAHDPO. 2006. Addis Ababa Housing Development Project Office Unpublished Document: Addis Ababa.

ADB. 2001. Selected Statistics on African Countries. Human Development Indicators (HDI); Abidjan: ADB Publication.

African Development Indicators. 2003. Washington, DC: WB.

APO. 2003. National Regional State of Oromia Adama Project Office: Adama Master Plan Revision Project Housing Study: Addis Ababa: APO.

Asmelash Haile. 2003. The Impact of Micro-finance in Ethiopia; The Case of DCSI in Ganta-Afeshum Woreda of Eastern Tigray, MA Thesis in RLDS: Addis Ababa University.

Bachman John K. and Cole Roddie L. 1996. Housing Sector Overview, 15 April; Addis Ababa, PADCO, WAAS, NUPI, MoWUD: UDSS.

Balchin Paul. 1995. Housing Policy an Introduction, 3rd edi. London and New York: Routledge.

Bekure Woldesemait. 1999. For More Urbanized Ethiopia in Migration and Urbanization in Ethiopia; editors, Beyene et al. Addis Ababa: AEG.

Birke Yami. 1998. The History of Urban Morphology and Land Use in Ethiopia in the Context of Changing Land Policies in Urban Fields Development in Ethiopia (Editors Zewdie Serbarro et al.); Addis Ababa: MoWUD.

Carter Harold et alia. 1994. The Study of Urban Geography 3rd edi. London, New York; University College of Wales: A Member of the Hodder Headline Group.

CSA. 1996, the 1994 Population and Housing Census of Ethiopia, Results for Oromia Region Vol. I: Part IV; Statistical Report on Housing Characteristics; Addis Ababa: CSA.

CSA. 1999. The 1994 Population and Housing Census of Ethiopia Results at Country level, Vol. II; Analytical Report, June; Addis Ababa: CSA.

CSA. 1999. The 1994 population and Housing Census of Ethiopia Results for Oromiya Region Vol. I: Part IV, Statistical Report on Housing Characteristics Apr.1996: Addis Ababa. CSA.

CSA. 1999-2004. Large and Medium Scale Manufacturing Industries and Electricity survey, CSA: Addis Ababa.

Debrai Ray. 1998. Development Economics; Princeton NJ: Princeton University Press.

EEA. 2003. The Role of Urbanization in the Socio-Economic Development Process (editors Befekadu and Berihanu), Addis Ababa: EEA.

Erguden S. 2001. Low-Cost Housing: Policies and Constraints in Developing Countries; International Conference on Spatial Information for Sustainable Development, 2-5 Oct.; Nairobi-Kenya: Habitat.

Eshetu Gurmu. et al. 2000. Migration, Gender and Health Survey in Five Regions of Ethiopia: 1998; Aug. 2000: Addis Ababa: AAU. IDR-DTRC.

GTZ-LCHPO. 2001. LCHP Progress Review; Oct.; Addis Ababa: LCHPO-MoFA.

GTZ-LCHPO. 2003. Technical Manual, Addis Ababa: GTZ-LCHPO, Ministry of Federal Affairs.

Guglar Josef (editor). 1996. The Urban Transformation of the Developing World (Mohan. Rakesh), New York: Oxford University Press Inc.

Guglar Josef (editor). 1997. Cities in the Developing World: Issues, Theory, and Policy. New York: Oxford University Press Inc.

Gugler and Gilbert. 1992. Cities, Poverty and Development, New York: Oxford University Press.

Gugler Joseph. 1988. The Urbanization of the Third World; New York: Oxford University Press.

Gugler Joseph. 1996. Urbanization in Africa, the Urban Transformation of the Developing World; New York: Oxford University Press.

Habitat. 1996. Sustainable Financing Strategies for Housing and Urban Development, a Contribution to the City Summit, the 2nd UN-Conference on Human Settlement; Istanbul, Turkey 3-14 June: Habitat.

Habitat. 2001. Cities in a Globalizing World; Nairobi, Kenya: Habitat.

HHI. 2002. Save and Build Helps House the Poorest of the Poor: file: //A:\ HHI, Annual Report.

Hornby A. S. et alia. 2000. Advanced Learner's Dictionary, 6th edi. Oxford, New York: Oxford University Press.

Hugo G. 1996. Urbanization in Indonesia: City and Countryside Linked (editor Gugler); New York: Oxford University Press Inc.

Kothari C.R. 1995. Research Methodology; 2nd edi, New Delhi: Wishwa Prakashan.

Linden and Nientied. 1988. Approaches to Low-income Housing in the Third World (Editor Gugler Joseph); the Urbanization of the Third World; New York: Oxford University Press.

Mathey Kosta. 1997. Self-Help Approaches to the Provision of Housing: The Long Debate and a Few Lessons (Editor Gugler Joseph); Cities in the Developing World Issues, Theory, and Policy; New York: Oxford University Press.

McEachen W. 1988. Microeconomics: A Contemporary Introduction; Ohio: South Western Publishing Co.

MEDaC. 1999. Survey of the Ethiopian Economy: Review of Post Reform Developments; Addis Ababa: MEDaC.

Miniwatts Marketing Group .2006. Internet World stats; Usage and Population Statistics for Africa.

MoFA. 2004. Low-Cost Housing Research Proposal Apr., Urban Housing Research Group; Addis Ababa: MoFA.

MoFaED.2003-2007. Investment in Housing as Percentage of GDP in Ethiopia Economy, Addis Ababa: Unpublished Data.

Mohan R. 1996. Urbanization in India: Patterns and Emerging Policy Issues (Editor Gugler Joseph); New York: Oxford University Press Inc.

MoWUD. 2006. Housing Assessment: Lia G. Mariam and Eyasu Kumera: Addis Ababa: MoWUD.

MoWUD. 2006. Urban Development Policy, Amharic Version; Addis Ababa: Artistic Printing Enterprise.

NBE. 2002. National Bank of Ethiopia Annual Report; Economic Research Department: Addis Ababa.

NBE. 2003. National Bank of Ethiopia Annual Report; Economic Research Department: Addis Ababa

NBE. 2004. .National Bank of Ethiopia Annual Report; Economic Research Department: Addis Ababa.

NBE. 2005. National Bank of Ethiopia Annual Report; Economic Research Department: Addis Ababa.

NBE. 2006. National Bank of Ethiopia Annual Report; Economic Research Department: Addis Ababa.

Nenno and Brophy. 1982. Housing and Local Government, New York: International City Management Association.

NUPI. 1995. Nazareth Master Plan: Final Report-Executive Summary; Dec.; Addis Ababa: NUPI.

NUPI. 1997. (Editors Tegênge G/E. and Daniel S.) Urban and Regional Development Planning and Implementation in Ethiopian, Proceedings of the National Conference on Urban and Regional Development Planning and Implementation in Ethiopia, Addis Ababa: NUPI.

NUPI. 2003. Widening Perspectives and Improving Capacities Central Tasks for Planning of Our Towns, Proceedings of the 3rd National Conference on Urban Planning and Related Issues, Feb. Addis Ababa: NUPI.

ORAAMP. 2000. Housing; Summary of Major Problems, Recommended Solutions, Implementation Strategies and Mechanisms, Aug.; Addis Ababa: ORAAMP.

ORAAMP. 2002. Housing Components, Improvement and Development Strategy; Sept. Addis Ababa: CGoAA-WaUDB.

ORAAMP. 2002. Land Use and City Structure Studies of Addis Ababa and the Metropolitan area, Addis Ababa; Dec. 1999: ORAAMP.

ORAAMP. 2002. Market Hierarchy; Addis Ababa: ORAAMP.

ORAAMP. 2002. Norms, Standards and Guidelines of the Addis Ababa Structure Plan and its Components; Addis Ababa: ORAAMP.

PADCO. 1996. Housing Sector Overview; 15 April, Addis Ababa: MoWUD.

PADCO. 1997. Household Survey Report: Revised Final Version 27 Jan.; Addis Ababa: PADCO-MoWUD.

PADCO. 1998. Ethiopia Housing Sector Study (EHSS): Final Report, February, Addis Ababa: UDSS-MoWUD. PADCO Inc.

Rodwin Lloyd. 1961. Housing and Economic Progress, Cambridge: Harvard University Press.

Satterthwaite and Hardoy. 1990. Housing Policies: A Review of Changing Government Attitudes and Response to City Housing Problems in the Third World, Urban Management Issues; New York: Oxford University Press.

Satterthwaite and Hardoy. 1997. Building the Future City; New York: Oxford University Press Inc.

Solomon Mulugeta. 1985. Meeting the Housing Shortage in Addis Ababa, MA Thesis: Addis Ababa University.

Solomon Mulugeta. 1997. Ethiopia in Broader Perspective Policy Responses to the Urban Shelter Problem in Ethiopia, the Case of Pre-1991 Addis Ababa; 13th International Conference of Ethiopian Studies Vol. I, 12-17 Dec., Kyoto: Nakanishi Printing Co., Ltd.

Solomon Mulugeta. 1999. Public Ownership of Urban Land and Low-income Home Ownership, EASSR, Vol. XV. 1, Jan.: Addis Ababa University.

Spence Robin et al. 1993. Jobs from Housing: Employment, Building Materials, and Enabling Strategies for Urban Development, Cambridge: Crown, Cambridge Architectural Research Ltd.

Taye Tadesse. 2002. Squatter Settlement in Pre-Urban Addis Ababa; MA Thesis: Addis Ababa University.

Tegegne Gebre Egziabher. 2000. Perspectives and Issues of Urban Development in Ethiopia, Working Paper No. 10, Sep., Addis Ababa; RLDS: AAU.

Tegegne Gebre Egziabher. 2002. Urban Policy and Strategy in Ethiopia: Some Major Issues for Consideration; in Proceedings of the 2nd National Conference on Urban Development Planning and Implementation, Addis Ababa: NUPI.

Tilahun Girma. 2002. Squatter Settlers in the Periphery of Addis Ababa: Characteristics and Links with the Inner City, MA Thesis; IDR: Addis Ababa university.

Todaro Michael P. 1995. Economic Development, 5th edi. New York: Longman Publisher.

UN – Center for Human Settlements (Habitat). 2001. Cities in a Globalizing World: Global Report on Human Settlements. UK and USA: Earthscan Publications Ltd.

UNDP. 2004. Secondary Cities: Urban Poverty Participatory Action Research Initiative, Vol. I. Adama City Profile and Action Plan, Mar. Addis Ababa: UNDP-DAG.

UNDP. 2004. Secondary Cities: Urban Poverty Participatory Action Research Initiative, National Report (Including Adama), May; Addis Ababa: UNDP-DOAG.

UN-Habitat and RLDS. 2002. (Editor Theo Van der Loop) Local Democracy and Decentralization in Ethiopia; Addis Ababa: Addis Ababa University-RLDS/ISS.

UN-Population Division. 2007. Population Division of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2007 Revision, http://esa.un.org/unup, may 2008.

United States Bureau of the Census. 2006. Population Statistics; Pre@prcdc.org: Washington, D.C.

WB. 1991. Urban Policy and Economic Development: An Agenda for the 1990s, Washington, D.C.: WB.

WB. 1993. World Development Report; Washington, D.C.: WB.

WB. 2003. World Development Report: Sustainable Development in a Dynamic World; Transforming Institutions, Growth and Quality of Life; USA: Washington, D.C. Oxford University Press.

WB. 2004. World Development Indicators, Selected Statistics; Washington, DC: WB.

WIC. 2003. http://www.waltainfo.com/EnNews/may/29may03/may29e7.thm. Housing Policy Said Crucial in Solving Urban Housing Problems, Addis Ababa: WIC.

Wilkinson T.S. and Bhandoarkan.1999. Methodology and Techniques of Social Research, Mumbi: Himalaya Publishing House.

Wilner Daniel et al. 1962. The Housing Environment and Family Life, Baltimore: The Johns Hopkins Press.

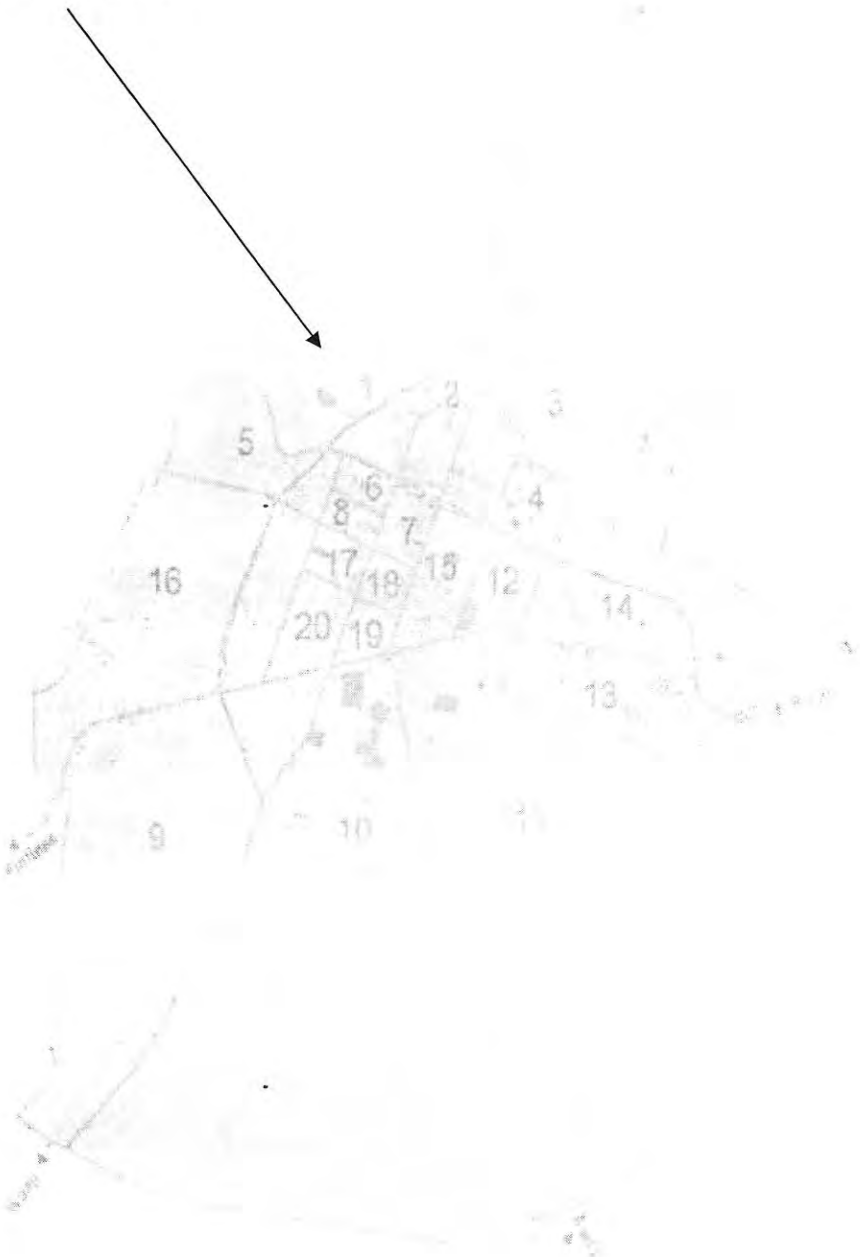
Zeleke Zewdie. 1998. A Review of Experiences in Low-cost Housing Provision in Ethiopia, the Proceedings of the Workshop on Urban Fields Development in Ethiopia and Other Related Issues; May, Addis Ababa: MoWUD.

Appendix 1 Map 1

The location of GTZ low-cost housing village (project site) in Adama Town Implemented in (1999-2000) Keble 01 North –west.

N

GTZ village area Kebele 01



Source: Scanned and compiled from APO Housing Study report 2003:87

Appendix 2 List of renters selected from eight offices in Adama to form sample frame for control group in addition to baseline renters

S. No	Name of the office	No of selected renters
1	Adama police -1	2
2	Bakalcha transport	14
3	Capacity building	12
4	EELPCO	8
5	G T Z - village rentres	2
6	Health center -12	7
7	Municipality	10
8	Telecommunication	5
	Total (1-8)	60

APPENDIX - 3 GTZ Low-Cost Housing Project Implemented in Ethiopia 17/09/2004

Region 1	Town/city 2	Type of Building 3	Tot.No.of Housing units 4	Cost of housing units, birr 5	Total cost of houseing units, birr 6=4x5	Built up area, m2 7	Ttotal built up area, m2 8=4x7	Starting year 9	Completion year 10	Cost of housing units per m2 11=5/7 birr
Tigray	Mekele	Type A, G+1	24	77415.34	1857968.16	101.74	2441.76	2002	2003	760.91
		Type B, G+1	22	77788.79	1711353.38	101.78	2239.16	2002	2003	764.28
		Ttype C, G+1	4	78344.01	313376.04	100.79	403.16	2002	2003	777.30
		Type D, Villa	2	19997.86	39995.72	31.14	62.28	2002	2003	642.19
		Type G, Villa	4	14496.13	57984.52	26.13	104.52	2002	2003	554.77
	Adigudom	Type D, Villa	10	23237.70	232377.00	31.14	311.40	2002	2003	746.23
		Type G, Villa	40	17565.81	702632.40	26.13	1045.20	2002	2003	672.25
			106		4915687.22		6607.48			
Amhara	Bahir Dar	Type 1, Villa, in phase one	48	13000.00	624000.00	36.00	1728.00	2000	2001	361.11
		Type 1, Villa, in phase two	56	17000.00	952000.00	36.00	2016.00	2001	2003	472.22
			104		1576000.00		3744.00			
Oromia	Adama	Type 1, Villa	112	12000.00	1344000.00	36.00	4032.00	1999	2000	333.33
Addis Ababa	A.A	Type 1, G+1	78	66532.54	5189538.12	84.10	6559.80	2002	2004	791.11
		Type 2, G+0 growing	69	44158.03	3046904.07	42.05	2901.45	2002	2004	1050.13
		Type 3, Villa	31	36684.15	1137208.65	42.05	1303.55	2002	2004	872.39
			178		9373650.84		10764.80			
Dire Dawa	D.D	Type 1, one G+0 growing	28	22800.00	638400.00	25.59	716.52	2002	2004	890.97
		Type 2, two G+0 growing	9	41800.00	376200.00	51.19	460.71	2002	2004	816.57
		Type 3, one G+1 & one G+0 growing	1	62100.00	62100.00	76.78	76.78	2002	2004	808.80
		Type 4a, two G+1 with two bridges	1	78400.00	78400.00	102.38	102.38	2002	2004	765.77
		Type 4b, two G+1 with one bridge	1	74300.00	74300.00	102.38	102.38	2002	2004	725.73
		Type 5, one G+1 with terrace & one G+1	1	73400.00	73400.00	89.85	89.85	2002	2004	816.92
		Type 6, one G+1	4	39100.00	156400.00	46.16	184.64	2002	2004	847.05
		Type 7, Villa	7	17800.00	124600.00	33.39	233.73	2002	2004	533.09
		Type 1, one G+0 growing	38	26170.00	994460.00	25.59	972.42	2002	2004	1022.67
		Type 2, two G+0 growing	2	45615.00	91230.00	51.19	102.38	2002	2004	891.09
		Type 7, Villa	31	19340.00	599540.00	33.39	1035.09	2002	2004	579.22
		Baby house, Villa	100	9100.00	910000.00	16.80	1680.00	2001	2002	541.67
			223		4179030.00		5756.88			
Somali	Jijiga	Type 1, two G+1 with two bridges	34	88241.13	3000198.42	102.38	3480.92	2001	2003	861.90
		Total	757		24388566.48					

Source: Compiled from GTZ LCHPO A.A 2004

Appendix 4 Table - A Households income Adama GTZ-LCHP 2006

Respondents	Statistics	Average monthly household income in birr		
		Before	After	Change
Owners	Number	59	59	59
	Mean	738	1193	454
	Std. Dev.	506	654	588
	Minimum	282	345	1444
	Maximum	3744	3635	3135
Renters	Number	53	60	53
	Mean	368	665	323
	Std. Dev.	310	540	364
	Minimum	0	218	218
	Maximum	1330	3680	2350

Appendix 4 Table - B Mean monthly household expenditures Adama GTZ-LCHP 2006

Respondents	Area of expenditure	Statistics	Average monthly HH expenditure (birr)		
			Before 2000	After 2000	Change/gap
Owners	Food	Mean	208	306	104
		Std. Dev.	79	125	109
	Water	Mean	11	15	11
		Std. Dev.	6	8	8
	House rent	Mean	77	0	0
		Std. Dev.	39	0	0
	Electricity	Mean	14	23	19
		Std. Dev.	10	12	13
	Telephone	Mean	18	30	21
		Std. Dev.	11	26	26
	Cooking fuel	Mean	29	44	17
		Std. Dev.	15	26	25
	Transport	Mean	26	48	28
		Std. Dev.	23	47	45
	Education	Mean	59	96	52
		Std. Dev.	60	79	72
	Health	Mean	22	36	16
		Std. Dev.	21	40	31
	Others	Mean	39	66	28
		Std. Dev.	74	137	70
	Total exp.	Mean	427	625	205
		Std. Dev.	171	326	247
Renters	Food	Mean	175	234	76
		Std. Dev.	81	118	56
	Water	Mean	10	13	4
		Std. Dev.	6	8	11
	House rent	Mean	78	104	75
		Std. Dev.	37	62	42
	Electricity	Mean	14	18	7
		Std. Dev.	10	16	9
	Telephone	Mean	15	21	11
		Std. Dev.	22	13	17
	Cooking	Mean	23	31	15
	Fuel	Std. Dev.	13	17	13
	Transport	Mean	23	27	10
		Std. Dev.	27	22	23
	Education	Mean	63	59	26
		Std. Dev.	109	55	95
	Health	Mean	18	33	18
		Std. Dev.	20	39	26
	Others	Mean	22	37	22
		Std. Dev.	20	34	29
	Total exp.	Mean	327	483	228
		Std. Dev.	187	267	212

Appendix-5 Transportation cost and travel time for neighborhood amenities (HH head) GTZ-LCHP 2006

A) Average travel time and cost of transportation to work place GTZ-LCHP 2006

Respondents	Statistics	Average travel time and of transportation cost to work place		
		Time(minutes)	Cost/week/birr	Cost/year/birr
Owners	Number	54	28	21
	Mean	29	15	274
	Std. dev.	28	18	206
	Minimum	5	2	60
	Maximum	160	70	750
Renters	Number	52	15	15
	Mean	23	15	228
	Std. dev.	14	38	174
	Minimum	2	2	1
	Maximum	80	150	500

B) Travel time and cost of transportation for shopping

Respondents	Statistics	Average travel time and cost of transportation for shopping		
		Time in minutes	Cost in week birr	Cost in year birr
Owners	Number	58	40	38
	Mean	18	3	118
	Std. dev.	9	2	98
	Minimum	2	1	30
	Maximum	60	10	500
Renters	Number	50	24	24
	Mean	17	3	130
	Std. dev.	11	2	106
	Minimum	3	1	25
	Maximum	50	10	500

C) Travel time and cost of transportation to school

Respondents	Statistics	Average school travel time in minutes and cost of transportation in birr		
		Time in minutes	Cost in a week birr	Cost in a year birr
Owners	Number	52	18	16
	Mean	21	8	245
	Std. dev.	16	13	136
	Minimum	2	2	60
	Maximum	120	60	500
Renters	Number	43	11	11
	Mean	19	5	225
	Std. dev.	11	3	145
	Minimum	3	1	50
	Maximum	50	10	500

D) Travel time and cost of transportation to hospital /clinic

Respondents	Statistics	Average travel time and cost to Transportation for shopping		
		Time in minutes	Cost in week birr	Cost in year birr
Owners	Number	57	44	44
	Mean	20	2	91
	Std. dev.	8	1	62
	Minimum	10	1	25
	Maximum	35	6	300
Renters	Number	47	27	28
	Mean	20	2	128
	Std. dev.	11	1	74
	Minimum	1	1	10
	Maximum	45	5	250

Appendix 6 Beneficiaries response on benefit of getting into the housing project GTZ-LCHP 2006

S. No.	Questions	Count	Owners benefit responses		Total
			Yes	No	
1	Acquisition of housing unit	No	54	6	60
		%	90	10	100
2	Access to loan	No	34	26	60
		%	57	43	100
3	Minimized cost of construction	No	31	29	60
		%	52	48	100
4	Personal saving increased	No	22	38	60
		%	37	63	100
5	Quality of the housing unit improved	No	20	40	60
		%	33	67	100
6	Acquiring utilities	No	23	37	60
		%	38	62	100
7	Participation in the community increased	No	23	37	60
		%	38	62	100
8	Acquiring technical support	No	31	29	60
		%	52	48	100
9	Raising children	No	26	34	60
		%	43	57	100
10	Access to services	No	22	38	60
		%	37	63	100
11	Access to transportation	No	21	39	60
		%	35	65	100
12	Personal satisfaction increased	No	3	57	60
		%	5	95	100

Appendix-7 Cost of housing improvement and items improved by respondents Adama GTZ-LCHP 2006

Respondents	Statistics	Cost and items improved in birr								
		Service quarter	Extended units	Original units Sub-division	Finishing works	Utilities, Toilet	Water	Electricity	Telephone	Kitchen, Bathing room, Shop, Animal house, Fence, Others
Owners	Number	55	5	3	53	1	50	57	44	24
	Minimum	500	80	100	500	1500	300	700	285	100
	Maximum	10000	25000	1200	10000	1500	6000	1000	1000	3000
	Mean	3433	5076	833	4341	1500	985	881	486	1280
	Std. dev.	2160	11138	635	2460	0	756	45	127	969
Renters	Number	2	0	0	14	0	2	1	1	1
	Minimum	100	0	0	50	0	550	850	340	900
	Maximum	2000	0	0	7000	0	700	850	340	900
	Mean	1050	0	0	851	0	625	850	340	900
	Std. dev.	1344	0	0	1889	0	106	0	0	0

Note: Out of all items the independent sample test for equality of means using t-test (ANOVA) shows that only finishing work is significant difference at 5% significance level. This further shows that owners have been improving their units regarding finishing works than renters.

Addis Ababa University

School of Graduate Studies

Inistitute of Regional and Local Development Studies (IRLDS)

Household survey questionnaire

Questionnaire Code _____

Identification _____

Name of Household Head: _____

Wereda _____ Kebele _____ house No _____

Interviewer _____ Date _____

Part One: Demographic Characteristics and socio-economic Status of Household.

S No	Relation to Head	Sex	Age	Ethnic Group	Religion	Marital Status	If Married When?	Level of Education	Employment Status	Monthly income (Birr)	
	1	2	3	4	5	6	7	8	9	10	
										Before 2000	After 2000
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Code:

Relation to Head 1	Sex 2	Ethnic group 4	Religion 5	Marital Status 6	If Married When? 7	Level of Education 8	Employment Status 9
1. Head	1. Male	1.Oromo	1.Orthodox	1.Single	1.before Construction	1.No Schooling	1. Employed
2. spouse	2. Female	2. Amhara	2. Catholic	2. Married	2. After Cons. of unit	2. Primary School	2.Unemployed
3. Child		3.Gurage	3. Protistant	3. Separated		3.Secondary School	3. Retired
4. Relative		4 Tigre	4. Muslim	4.Divorced		4. Vocational	4. Housewife
5. No Relation		5. Others	5.Others	5. widowed		5. University	5. Student

Individual questionnaire for household Head

11. Place of Birth

____ 1. Adama

____ 2. Oromia (other Zones)

____ 3. Other Region

____ 4. Others

12. Duration of Continuous Living

____ 1. In Adama _____ years

____ 2. In rental unit _____ years

____ 3. In current dwelling ____years

13. Where did you live before?

_____ 1. In Adama

____ 2. In other Oromia Zone

14. Place of Work

____ 1. In the house I live in

____ 2. In Keble I live in

____ 3. Other place in the town

15. Distance of work place in km (if you work outside your home) ____ km.

16. Mode of transportation to work place

____ 1. Walk

____ 2. Cart

____ 3. Bicycle and Motor Bicycle

____ 4. Taxi

____ 5. Private vehicle (own car)

____ 6. Official vehicle (service from employer)

____ 7. Mix of means

____ 8. Others

17. Travel time in minutes, _____ minutes

18. Household Expenditure

Area of Expenditure	**Average Monthly Expenditure (Birr)**	
	Before 2000	**After 2000**
Food		
Water		
House rent		
Electricity		
Telephone		
Cooking fuel		
Transport		
Education		
Health		
Others		
Total		

19. Which of the following facilities /assets/ does your dwelling have?

S. No	Item	1.Yes	2. No	Expense (price) in Birr		When did you buy?	
						Before	After
1.	Working radio						
2.	Tape Player						
3.	Working TV						
4.	Refrigerator						
5.	Sofa Set						
6.	Stove						
7.	Bicycle						
8.	Motor Bicycle						
9.	Car						
10.							

20. During the last twelve months your household income_____

____1. Increased ____ 3.Decreased

____ 2. Stayed the same

21. If increased why your income did increased?

____ 1. Monthly salary increased

____ 2. Transfer from relatives or friends acquired

____ 3. Additional income sources established

____4. Members of household got job

____5. Part of a house is rented

____6. Others

Assessment on household diet improvement

22. During the last twelve months has your household diet

____1. Improved ____3. Worsened (Decreased)

____2. Stayed same

23. If worsened (decreased) how has it worsened? _____

Assessment of household access to education

24. How many of your children currently attending schools (total number in school?

_____

25. Are there school age children that do not attend school in the household?

_____ 1. Yes _____ 2. No

26. If Yes, reasons for not attending?

_____ 1. Low household income _____ 3. Others

_____ 2. Lake of services near by

27. How is your family member's educational performance?

____1. Pass examination every year.

____2. Fail examination sometimes

____ 3. Do not understand lessons but pass examination

____ 4. Pass examination with higher rank

____ 5. Others

Household access to medical facilities and health condition

28. Do you think that access to medical facilities responsiveness has been improved for the last 12 months?

_____ 1. Yes _____ 2. No

29. In general how do you feel about living in the this neighborhood in terms of health and child raising

_____ 1. Very good as a peace to live _____ 3. Not very good as a place to live

_____ 2. Fairly good, or

Saving status of household head

30 Do you have saving account?

_____ 1. Yes _____ 2. No

31. If yes, where do you save?

____ 1. In government bank _____ 4. at home

____ 2. In private bank _____ 5. Others

____ 3. Iqub

32. Is yours saving before housing provision of GTZ or after the program? (For beneficiaries)

_____ 1. Before _____ 3. Do not

_____ 2. After

33. When did you start saving _____ (year) (for renters and beneficiaries)

34. How much do you save monthly from your income_____%?

35. During the last 12 months have your saving account (cash?)

_____ 1. Increased _____3. Decreased

_____ 2. Stayed the same

36. For what purpose do you save?

_____ 1. For loan repayment _____4. To purchase furniture

_____2. For safety of cash _____5. To get interest

_____3. To construct house _____6. Others

37. If you have no saving account why?

_____1. Shortage of money _____ 3. Has no information

_____ 2. Less aspiration to save _____ 4. Others

38. Do you have "Idir"? ____ 1. Yes ____ 2. No

Household head access to Loan and Repayment Status

39. Did you have access to loan (fund?)

_____ 1. Yes ____ 2. No

40. If yes what was the sources?

____ 1. Government bank _____ 4. Relatives

____ 2. Private bank _____ 5. Mix

____ 3. Saving and credit union _____ 6. Others

41. What was your collateral (promise) to borrow?

_____1. Building permit and title deed _____ 4. Relatives and friends

_____2. Monthly salary _____5. Others

_____3. My house

42. Who processed loan fund to acquire

_____ 1. Municipality _____ 4. Relatives and friends

____ 2. My self _____ 5. Others

____ 3. GTZ- Low Cost Housing project

43. How many birr did you borrow _____ birr

44. How many birr you repay per month _____ birr.

45. Do you think it is an affordable repayment?

_____ 1. Yes _____ 2. No

46. How long is the total repayment period?

47. How many years already paid _____ years?

48. Which of the following best describes your loan repayment?

____1. Regular ___ 4. Seldom

____2. A few missed payments ___ 5. Others

____ 3. Repaid at one time

49. How much birr did deposit in addition to loan from bank? _____ Birr

50. Did you borrow money other than original housing construction?

_____ 1. Yes _____ 2. No

51. Was loan issued timely_____?

_____ 1.Yes _____ 2. No

52. If repayments are in arrears, what are the main cases?

_____ 1. Unemployment income _____ 3. Used loan for unintended purpose

_____ 2. Decrease in monthly income _____ 4. Others

53. Do you have access to credit from other sources other than banks?

____ 1. Yes ____ 2. No

54. If yes, from which sources?

_____ 1. Relatives' ____ 4. Money lenders

_____2. "Iqub" ____ 5. Others

_____ 3. "Iddir"

55. Why did you borrow?

_____1. Easier to get _____ 4. Access in short period of time

_____2. Less or no collateral _____ 5. Others

____ 3. Cheaper than banks

56. For what purpose did you get loan?

____ 1. To construction house ____ 3. Family problem

____ 2. For business activity _____ 4. Others

Household head responsibilities and participation status

57. In the last twelve month were you a member of any association?

____ 1. Yes _____ 2. No

58. If yes; what your position in that organization?

_____1. Member _____ 3. Member of Committee

_____ 2. Leader _____ 4. Other

59. Who decided on household income?

_____ 1. Household head (husband) ____ 4. Single

_____ 2. Wife ____ 5. Not applicable

_____ 3. Both

Additional information on (Beneficiaries)

60. Who informed you about the housing program of GTZ?

_____ 1. Keble _____ 4. Relatives/friends

_____ 2. Municipality _____5. Advertisement

_____ 3. GTZ-LCHP Office _____ 6. Others

61. Why did you decide to join the project? Because _____

_____1. Rental Housing is not available

_____ 2. Rental housing is too expensive/unaffordable

_____3. Housing is an important asset

_____4. Cost of construction is very low in the project

_____5. House is constructed by the project

_____6. Housing loan is provided by bank through project

_____7. Others

62. In case rental house is available at reasonable price, would you have not joined the project?

_____1. Yes _____ 2. No

63 What measures do you think will help low cost housing provision or implementation of housing programs for low-income households in Adama?

___1. Setting standard criteria, which include low-income groups affordability level

____ 2. Revise land acquisition process

____3. Revise housing standard and building procedures

____4. Provide credit service

____ 5. Provides serviced plot

_____6. Others

64. Do you think municipality is effective in providing building lot for low-income households on time?

____ 1. Yes ____ 2. No ____3. Do not know

65. Is the building standard already given to you an affordable?

_____ 1. Yes _____ 2. No

66. Should building standard be resaved?

_____ 1. Yes _____ 2. No

67. Would you like to build you house at cheaper cost if the building code was allowing for that?

_____1. Yes _____ 2. No

68. Do you fell that the housing construction project and provision procedure have some problems to be revised?

_____ 1. Yes _____ 2. No ____3. Do not know

69 If yes, Please explain the problems and suggest solution.

_____

70. What is the effect of current lease policy on housing for low-income households?

Part Two: Physical Conditions Questionnaire Survey

71. Function of the houseing Unit

____ 1. Residence ____ 3. Business

____ 2. Residence and establishment ____4. Others (mixed)

72. Dose the house has separate service quarter?

_____ 1. Yes _____ 2. No

73. Number of rooms in dwelling unit (excluding all bath rooms, toilets, lobbies, and corridors)

___ 1. Single room
____ 2. Two
____ 3. Three
_____ 4. Four
_____ 5. Five or more

74. Size of the unit (floor area) in square meters_____

75. What is your tenure statue in this unit? _____

_____ 1. Owner
_____ 2. Rented from private
_____ 3. Rented from government organization
_____ 4. Rent free
_____ 5. Sublet
_____ 6. Others

76. How did you get the house?

____ 1. By GTZ-low-cost housing project
____2. Given building plot free of lease by municipality and constructed
____ 3. Bought a house
___ 4. Bought a plot use right
____ 5. Complete already started construction
____ 6. Others

77. Is the building standard already given to you affordable?

_____ 1. Yes
_____ 2. No

78. Total plot size in meter square_____.

79. Age of the housing unit? _____ Years

80. Unit type _____

_____1. Conventional
_____ 2. Unplanned (legal)
_____ 3. Unplanned illegal

81. Building type_____

_____ 1. Duplex villa type
_____ 2. Attached row housing
_____ 3. Detached villa
_____ 4. Others

Construction Material and Physical Condition (Structure)

82. Dose the building has foundation?

_____ 1. Yes
____ 2. No

83. Floor finishing material

_____ 1. Earth mud
_____ 2. Wooden Parquet
_____ 3. Cement Screed
_____ 4. Clay tile
_____ 5. Plastic tile
_____ 6. Others

84. Walling materials

_____ 1. Mud blocks
_____ 2. Bricks
_____ 3. Masonry
____ 4. Wood and Mud
____5. Hollow-Concrete Blokes (HCB)
____6. Others

85. Roofing materials

____ 1. Corrugated Iron Sheet
____ 2. Thatch
____ 3. Others

86. Ceiling materials_____

____ 1. None
____ 2. Fabrics
____ 3. Ply -wood

87. Physical condition

_____ 1. Excellent
_____ 2. Very good
_____ 3. Good

88. Does the cost of construction cheaper than other individual housing construction?

_____ 1. Yes
____ 2. No

89. How do you evaluate construction period?

_____1. Too short
_____2. Too long
_____3. Fairly enough time
_____4. Others

90. How do you evaluate quality of construction?

_____ 1. High quality
_____ 2. Medium
_____ 3. Fairly enough
_____ 4. Others

91. Availability of kitchen

_____1. Private
_____2. Shared
_____ 3. None

92. Owner, do you have planned to sell?

____1. Yes
____2. No

93. If yes, (why)?

____1. To get a better unit
____2. To get cash
____3. Mobility (migration)
____ 4. Others

94. Renters, do you have planned to buy?

_____ 1. Yes
____ 2. No

95. If no, why?

____ 1. Bad condition
____ 2. Inappropriate location
____ 3. Too expensive
____ 4. Too small
____ 5. Financial shortage
____ 6. Others

96. Do you have planned to build?

_____ 1.Yes
____ 2. No

97. If no, why?

____1. Financial shortage
____2. Difficult land acquisitions process
____3. Unaffordable down payment
____4. Unaffordable building standard
____5. I do not fit housing criteria set by housing project and the municipality
____6. Others

98. Main source of drinking water

____1. Tap in the house
____2. Tap in compound-private
____ 3. Tap in compound-shared
_____ 4. Public tap
____ 5. Vending
_____ 6. Others

99. Main source of light

____ 1. Private meter
____ 2. Shared meter
_____3. None
_____ 4. Others

100. Telephone

____ 1. Available
_____ 2. Not available

101. Fuel/energy

____ 1. Electricity
____ 2. Kerosene Gas
____ 3. Firewood
____4. Charcoal
____ 5. Mixed
____ 6. Others

102. Bathing facility

_____1. None
_____2. Bath tub or shower, private
_____3. Bath tub or shower, shared
_____4. Others

103. Toilet facility

____ 1. None
____ 2. Dry pit private
____ 3. Dry pit shared
_____ 4. Flush private
_____ 5. Flush shared
_____ 6.Others

104. Refused collection

____ 1. None
____ 2. Municipal dust bin
____ 3. Private enterprise dust bin

105. What do you like most about this unit?

____ 1. Size and number of rooms'
_____2. Cost
_____3. Location
_____ 4. Construction quality
_____5. Utilities
_____6. Fact that I own it
_____7. Others

106. What do you like least about this unit?

_____1. Not enough space or rooms for household
_____ 2. Poor quality of construction
_____3. Expensive in cost
_____4. Utilities not available
_____5. Location
_____6. Others

107. Which year was the unit occupied (moved in) _____

108. How was the construction cost covered?

_____1. Own fund
_____2. Loan from relatives /friends
_____3. Loan from the construction and business bank and own fund
_____4. Combined
_____5. Others

109. What improvement or other works have been completed since you occupied the unit? (this question may include renters)

S. No.	Description	1. yes	2. No	Cost in birr		Year Improved
A	Built service quarters					
B	Extended unit (widening or additional room)					
C	Subdivided original unit					
D	Improve construction-finishing work					
E	Improve utilities					
	Water					
	Electricity					
	Telephone					
F	Toilet					
G	Others					

Note: ***If no additional works skip***

: All years in this questionnaire is in G.C.

110. If no, why?

_____1. Shortage of money

_____2. Improvement is not required

_____3. Mobility

_____4. Others

111. Main sources of funding for additional work(s)

_____1. Government bank

_____ 2. Private bank

_____ 3. Personal saving

_____ 4. Relatives /friends'

_____5. Other government agencies

_____ 6. Private lenders

_____ 7. "Iquib"

_____ 8. Others

112. How was the progress of your housing construction at the time you moved in?

Parts of the house (1)	Completed (2)	Partially completed (3)	Just started (4)	Not started (5)	At the survey time (6)
1. Foundation					
2. Walls					
3. Floor					
4. Roof					
5. Ceiling					
6. Plastering					
7. Painting					
8. Service rooms					
9. The whole unit					
10. Utilities					
11. Fence					
12. Road					
13. Others					

Renters

113. How often does the owner do major repairs and maintenance?

_____1. Never
_____2. Every year
_____3. Every 2 years
_____4. Every 5 years
_____5. Others

Neighborhood characteristics:

Location and access

114. Which amenities does the household use, how does it take to get there, how does it cost?

Amenities	Mode of Transportation	Time in minute	Cost	
Work (household head			Week	Year
Shopping				
School				
Hospital				
Others				

Code for mode of transportation

1. Walk
2. Cart
3. Bicycle and motor bicycle
4. Taxi
5. Private vehicle/own car
6. Official vehicle/ service form employer
7. Mix of means
8. Others

115.What feature do you like most about this neighborhood?

Select one

_____1. Proximity to work place

_____2. Access to utilities

_____3. Familiarity with area

_____4. Clean area for life/ residence

_____5. Proximity to social services

_____6. Good social security / Iddir/ Iquib

116.What feature do you like least about this neighborhood

Select one

_____1. Poor drainage

_____2. Poor infrastructure

_____3. Poor access to jobs, social service

_____4. Insecure area

117.Access road (motor able)

_____1. Yes _____2. No

118.Street lighting

_____1. Yes _____2. No

119.Is compound or area prone to flooding

_____1. Yes _____2. No

120.If yes, what infrastructures for prevention are there?

_____1. Open ditches _____3. Others

_____2. Covered pipes _____4. None

121.In general how do you like your neighborhood?

Would you say you like it _____

_____1. A lot _____3.Others

_____2. Quite a bit _____ 4.Not at all

122.what do you think is the benefit of getting into the housing project

_____1. Acquisition of housing

_____2. Access to loan

_____3. Minimized cost of construction by the project

_____4. Personal saving increased

_____5. Quality of housing improved

_____6. Acquiring utilities

_____7. Participation in community increased

_____8. Acquiring technical support from the project

_____9. Raising children

_____10. Access to services

_____11. Access to transportation

_____12. Personal satisfaction increased

_____13. Others

123. What were your main problems, before you acquired project housing, through the Project? _____

124. Renters, what are your main problems?

_____

_____

125. Suggest some solution

_____

_____

Thank you!

Enumerators' _____

_____

Signature _____ Date _____

Part Three: Checklist for Interview and Documentary Survey

Group Members _____ **Date** _____

_____

_____

01. Adama town Urban Local Government

1. Land provision profile since 2000
2. Pervasive problems faced by low income households on
   - housing loan, land provision, infrastructure, legislation on housing standard and building procedures.
3. Availability of rental housing for low income groups, constructed by different actors.
4. Is the building of municipality is affordable to households'? How and why?
5. Is current land lease policy advantageous for low-income groups for residential housing? How and Why?
6. Is land provided for low-income groups according to their level of income?
7. How can the low-income dwellers housing problem will be solved in the town?
8. How GTZ-Low cost housing project was constructed low cost housing in the town?
9. What partnership activities did the municipality done with the project office?
10. What support was made by the municipality for the project implementation?
11. How the beneficiaries got water, electricity etc for construction?
12. Are there municipal regulations that promote low income groups housing program?
13. Is there project similar to GTZ-Low cost housing project, which targeted low-income groups?
14. What were the criteria to be member of the project housing beneficiaries?
15. What experiences do urban local government acquired to promote urban residential housing program?
16. Do you have enough land to provide building lot for urban dwellers?
17. What benefits do you think the project beneficiaries acquired?
18. What were the most challenging problems at the time of project implementation?
19. Learning from experience, what measure should be taken to promote low-income housing in the city?
20. Does the 1995 town development plan consider low cost housing for low income households?

02. Project Site Beneficiaries (Experimental Groups Group Discussion)

Group members' _____ **Date** _____

_____

_____

1. How did you become members of the project beneficiaries?
2. What were criteria to be a member of the housing program ?
3. How did you acquire building lot?
4. Do you have title deed? If Yes, How did you obtain title deed?
5. What benefits did you acquire from housing improvement?
6. Was your site serviced land?
7. What services were provided before and at the time of construction?
8. Who provided you?
9. How do you evaluate the project housing provision in terms of benefits you obtained?
10. What are main problems in the area?
11. How do you think the housing problem of low income groups will be solved?
12. Do you think the housing program is affordable?
13. Do you think such program is solving housing problem?
14. Did the project office promoted gender equality with respect to female headed housing provision?

03. Renters (Non-beneficiaries/Control Groups) Group Discussion

Group members' _____ Date _____

_____

_____

1. Did you apply to municipality to have building lot for residential housing?
2. When did you apply?
3. What are the problems of land acquisition you faced?
4. What are the problems of housing construction?
5. Why did you not beneficiaries of the project-housing program?
6. What problems you faced when you lived in rental housing?
7. Do you afford the lease holding regulations-terms and conditions of acquiring building lot, building procedures?
8. What are solutions you propose to become owner of the house in the near future?

04. GTZ -Low Cost Housing Project Office Key Informant Interview Guide

A. For Project Office

Name of the interviewee _____

Position/responsibility _____

Date _____

1. What was the main objective of the project office?
2. When was the project office established?
3. When the implementation program started?
4. Was the project countrywide program or for limited regions in the country?
5. If it is countrywide program, where was it implemented in Addition to the one in Adama?
6. How many beneficiaries benefited from the program at different sites?
7. What was total construction cost with its respective housing typologies at respective site?
8. How do you think housing problem of low-income households in Ethiopia will be solved? Adama too?
9. What experiences do you think your project office is transferring for the development of housing sector in Ethiopia?
10. What benefits do you think (Adama site) your project housing program beneficiaries did get.
11. What challenges was your project office faced at the time of project implementation in Adama site?
12. How did you process land acquisition of the site?
13. Was the site serviced?.
14. What services were provided? Who provided?
15. Is low cost housing means low-income housing?
16. What were the role and responsibilities of target groups?
17. Who were your partners?
18. What were duties and responsibilities of your partners?
19. What mechanisms you used meeting housing needs of beneficiaries to promote the program?
20. What was the source of housing construction cost?
21. How did you solve financial and collateral problems of low-income groups?
22. How do you identify affordability of beneficiaries for loan repayment, period and amount of payment?

23. Suggestion on low income housing program?
24. Site plan of project site?
25. Housing model or map-completed view.
26. List of beneficiaries/experimental group/ and demand list (control group) non-beneficiaries
27. Will your project office continue this type of housing program in the near future? If yes when and where?

05. GTZ-Low Cost Housing Project Adama Site

Key Informant Interview Guide

B. For Female Headed Household Head

Name _____ Position/occupation_____ date_____

1. What benefits did you acquire from the housing provision?
2. How do you evaluate the site for living?
3. What problems did you face in the process of housing provision?
4. What solutions do you think will be solve housing problem of low-income groups (specifically) female headed households?

06. Key Informant Interview Guide

C. For elderly person (from the project site or the nearest Kebele)

Name _____ position/occupation_____

Date_____

1. Do you know GTZ-Low Cost Housing Project site?
2. Project benefits for housing of low-income households?
3. Problems of housing in the town?
4. Land provision processes and problems?
5. Infrastructures situation of the area.
6. Utilities situation of the area?
7. Other facilities situation in the area?
8. Social services in the area?
9. Neighborhood features regarding livable area?
10. History of Adama and project site?

11. Construction materials and nature of the area?
12. Population and migration?
13. People cooperativeness?
14. Availability of social security? "Iddir", "Iqub", associations.
15. Experiences of executing social duties regarding housing?
16. Comment on housing provision of low-income groups in the town?

07. Construction and Business Bank Adama Branch

1. Conditions of loan repayment (status)
2. When did the repayment of loan started?
   2.1. After handover of the building or before?
   2.2. Is there grace periods for loan repayment
3. How is the repayment of the beneficiaries? Is it smooth, regular or difficult?
4. Are there beneficiaries who repay the whole amount in advance?
5. Is the bank benefiting from the project scheme?
6. Did the scheme fits to your objectives (bank's objectives)
7. Do you encourage such programs in the future?
8. How you adjusted or improved your normal loan procedure, directives and regulations due to GTZ – housing program? Such as, amount of loan interest rate, loan period contract agreement, etc....

Thank you!

DECLARATION

I, the undersigned declare that this thesis is my work and all the sources of materials used for the thesis have been duly acknowledged,

Name: CEMEREW MEKONNEN GEBRE

Signature: ----------

Place and date of submission: Addis Ababa

Addis Ababa University,

June, 2008

This thesis has been submitted for examination with my approval as a University advisor.

Name: SOLOMON MULUGETA (PH.D.)

Signature: ----------

Date ----------