Meeting Housing Needs in Libya

Towards a Responsive Owner-built Housing with Particular Reference to Benghazi City

By

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ABSTRACT

Over the past three decades, 'Owner-built Housing' (OBH) has been the predominant mode of housing provision in Libya, with state support given to prospective owner-builders including easy access to building resources. This is the first study to explore the development of Libyan OBH aiming to achieve a better understanding of its implementation and the influence of the socio-economic changes in the country. The main research question was to what extent is the OBH process adaptable and responsive to the changing housing needs of Libyan families. Three indicators were used to answer this question, concerning the accessibility and sufficiency of building resources, the management and control of construction work, the adaptability of and satisfaction with the resulting residential environment.

A case study approach was adopted to conduct the research. This enabled the integration of both documentary and empirical data gathered for five neighbourhoods reflecting the development of OBH over the past three decades in the suburbs of Benghazi. Empirical data was obtained from questionnaires, open-ended interviews and observations while documentary data was acquired from various resources such as official documents, academic literature, and other relevant printed materials. The descriptive analysis of quantitative data was integrated with and complemented by qualitative data to interpret the study findings and strengthen the discussion, and enhance the credibility and validity of the findings.

The findings indicate that the contribution of OBH to the housing supply and the ability of OBs to build their own houses over the past three decades have been strongly influenced by the different roles performed by the state and its relevant institutions. The 'active enabler' role played by the state during the 1970s gave many OBs access to sufficient and affordable building resources allowing them to meet the total costs of house construction. In contrast, the 'passive enabler' role played by the state during the 1980s and 1990s, associated with instability in the institutional and regulatory framework concerned with the management and allocation of building resources, meant that low and middle-income OBs encountered serious problems in building their houses. Shortages of available land resulted from delays in the approval of new residential subdivisions, loans were too small, materials supplies were mismanaged, and technical assistance was lacking. OBs, therefore, experienced delays and suspensions of construction work, and frequent disputes occurred with hired builders over the quality and cost of construction work. Furthermore, a lack of neighbourhood infrastructure made OBH areas less attractive and subject to social and environmental problems such as burglary and pollution which affected the residents' wellbeing and overall satisfaction with their neighbourhoods. Despite this, the results indicate that owner-built houses are adaptable and satisfactory to their occupiers reflecting the remarkable level of alterations carried out to improve their quality, as well as in attitudes among OBs regarding OBH as the most desirable and affordable mode of housing provision.

It is concluded that, improvements are necessary in the productivity of, stability in, and coordination between the different public institutions and private actors involved in the development of OBH. Key factors in making the OBH more responsive to people's need and aspirations include ensuring a regular and transparent mechanism of land supply and allocation, exerting efficient control over supplies of basic materials, providing technical assistance to prospective OBs, and ensuring the incremental provision of neighbourhood infrastructure.

DEDICATION

I would like to dedicate this work to:

The soul of my father,

My beloved mother; the first and best ever school from whom I learnt the alphabet of life,

My beloved wife; the best spouse, brilliant companion; and superior manager,

My beloved children, the source of my happiness and contentment,

For making it possible for me to come this far in my educational career.

Abdulsalam Ahmed Abdalla

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LIST OF ABBREVIATIONS

OBH	Owner-built Housing
OB	Owner Builder
PPH	Publicly-provided Housing
INVH	Investment Housing
GNP	Gross National Product
LD	Libyan Dinar (Libyan national currency)
CBs	Commercial Banks
IREB	Industrial and Real-estate Bank
REISB	Real-estate Investment and Savings Bank
RCC	Revolutionary Council Command
BPCONs	Basic People's Congresses
PCOMs	People's Committees (Ministries at national and regional levels)
LPCOMs	Local People's Committees (Local Authorities)
GPCON	General People's Congress (Parliament)
GPCOM	General People's Committee (Council of Ministries)
NCID	National Corporation for Information and Documentation
GPC	General Planning Council
GHC	General Housing Corporation
SSF	Social Security Fund
NAE	National Authority for Endowment
LIC	Libyan Insurance Company
NIREC	National Investment and Real-estate Council
ICS	Islamic-Call Society
SOH	Secretariat of Housing (ministry)
SOP	Secretariat of Planning (ministry)
GPCHU	General People's Committee of Housing and Utilities
GPCIND	General People's Committee of Industry
RERO	Real-estate Registration Office
NCLF	National Corporation for Labour Force
ASCL	Association of Construction Labour
PCHU	People's Committee of Housing and Utilities

GLOSSARY OF LOCAL TERMS USED

Bait: a house or a home

Bait-arabi: traditional courtyard house

Howesh: a terraced-house

Qasser: a palace which is often place of residence for high-ranking aristocrat or rich people

Bait-alomoor: a house for life-time residence.

Shagah: apartment in multi-storey residential building

Baladiya: municipality

Jameia-eskaania: housing cooperative

Eskann-shabiey: publicly-rented housing

Souq-alsawda: black market where goods are sold at higher prices

Salaah: living room

Saloon: reception room for male guests

Daar-maqaad: reception room for female guests

Alsoor: a fence or a boundary wall surrounding detached or semi-detached building

Tashteeb: finishing work

Muqawel: master builder

Ommal: construction workers

Najaar-musalah: concrete carpenter

Kahrabaiee: electrician

Mushreef-benna: construction supervisor

Maktaab-handasiy: an engineering office dealing with design, supervision and consultation of construction works.

Roughsat-elbeena: a building permit.

Tasjeel-alaqaryee: official registration for real-estate properties (land, buildings, farms).

Shahadat-melkia: title-deed certificate for real-estate property.

Shahadat-etmam-albenna: certificate of occupancy

Eshraff: supervision of construction work

Aqeed-maktoob: written contract or agreement between two or more parties.

Tasleem-moftah: turn-key arrangement (building the whole house and supplying materials).

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Chapter One:

Introduction to the Study

Chapter One

Introduction to the Study

"When dwellers control the major decisions and are free to make their own contributions to the design, construction, or management of their housing, both the process and the environment produced stimulate individual and social well-being." (Turner, 1978:1141)

1.1 Preface

In the field of housing studies, there is a major and ongoing debate regarding the relevance of people's control over the housing process in producing more affordable, adaptable and satisfactory residential environment that is appropriate for their socio-cultural needs and aspirations. Such debate has become wider after the apparent failure of the 'Provider' approach where public authorities are responsible and have total control over the production process of housing in meeting and satisfying the housing needs of target groups both quantitatively and qualitatively (Tipple, 1994). Historically, the housing process where the owner-occupier manages, arranges, controls, and sometimes participates in the physical act of the building process, such as in owner-built housing (OBH), has been an important form of housing provision, not only in the developing countries but also in advanced and capitalist societies (Hall, 1989, Duncan and Row, 1993, Harris, 1996, Harris, 1999, Madanipour, 1998). Despite the widespread use of the OBH process, where governments have developed programmes to assist owner-builders all over the world during the 20th century, very little is known about its history (Harris, 1999). As Duncan & Rowe (1993) argued, the relevance of housing process where the first occupants arrange for the building of their own houses is largely unrecognised in social and economic research on housing provision. In the Libyan context, OBH has been a major mode of housing provision over the past three decades, since it makes up a substantial percentage (63.5%) of what has been built during this period. This is mainly due to the remarkable level of support that the state has devoted to promoting the OBH activity, particularly during the 1970s.

1.2 Owner-Built Housing: Theoretical Perspectives

According to its advocates, housing processes such as (OBH) where the owner-builder has control over the construction and adaptation of his own dwelling have in many cases resulted in well designed and built schemes. They enable individuals to obtain their 'dream houses' which often has potential social advantages for deprived individuals and households (Goodchild, 1997). In this context, it is thought that beneficiaries of OBH enjoy more freedom and control over the various decisions concerned with the construction process of their own houses. Such freedom and control are mainly concerned with the selection of design for the house, the builder (i.e. informal contractors or hired tradesmen), and type of building materials, managing and controlling the schedule for construction according to their circumstances and sometimes the selection of the location of their plots on which houses are built. Thus, they are seen having the central role in building their own homes and shaping its surrounding environment.

The desires to improve living conditions, live in a better and more satisfactory neighbourhood, and secure housing ownership are seen as the main motives for many families for becoming owner-builders. Therefore, according to its advocates OBH activity has to be encouraged because in addition to providing housing for thousands of lower-income families, it represents a real opportunity for participation as a basic human desire through exercising control over the making of one's environment (Turner, 1972:9). Thus, the necessity for adopting aid policy for OBH has been advocated by many scholars, such as John Turner (1972, 1976, 1978, 1979 and 1993) who believes that the state should assist owner-builders through regularising tenure, the provision of plots in subdivided residential land, and providing basic and affordable utility and infrastructure services.

1.2.1 What is Owner-built Housing (OBH)?

Throughout the literature, there is confusion regarding the terms used to refer to the forms of housing where end-users are involved in its production, such as self-help, self-build, self-provided, owner-built, self-promotion, self-provision, user-controlled, and informal housing (Sims, 1990, Duncan and Row, 1993, Coit, 1994). Therefore, it seems important to define owner-built housing (OBH) as the main focus of this study, before discussing the rationale behind the desire of many families for building their own homes and exploring its implementation in Libya over the past three decades. In this respect, a distinction should

be made between housing activity where the household initiates, controls and manages the design, building and renovation process of the house for its own use without actual engagement in the construction work which is *"Owner-built Housing"* and housing activity where the owner-builder and his household undertake a substantial part of the building work itself, termed *"Self-help Housing"*. A distinction must also be made between informal housing activities carried out without official permission on land that informally acquired mainly through invasion often without secured tenure, such those in slums or spontaneous settlements, and between those carried out with official permission on land within planned and approved subdivisions acquired through government distribution programmes or purchased from private landlords with full registered title deeds, as is the case in this study. Thus, it can be said that the OBH process is that where the OB has to acquire the land and finance to build the house and often does not engage in much of the actual construction tasks, but rather manage and controls the planning and construction of the house and hires builders (i.e. contractors, tradesmen, etc.) to build the house. However, in some cases the OB and his household might undertake unskilled tasks such as supplying and loading materials and tidying up the construction site aiming to reduce labour costs, but most of the skilled construction tasks are carried out by hired builders.

1.2.2 Who is Owner-builder (OB)?

Based on the above explanation of the 'Owner-built Housing' process, the owner-builder (OB) as defined by Grindley (1972) is the person who controls the planning and building process of his own home, and in many cases acts as general contractor by overseeing the design, financing, and construction processes (Turner, 1972:3). Accordingly, the OB is seen as 'an expert' through his ability to adjust his priorities to his needs, and to spend time in place of money. Additionally, he is seen capable of providing, managing and utilizing resources and labour that other builders or developers often seem unable to do. In this respect, Grindley (1972:11) stated that:

> "The owner-builder, on the other hand, is an expert in determining his mix of needs, resources, and priorities. He can do what no one can do for him: he calls on his time, energy, and talent and a network of friends and contacts to create for himself a living environment which is both feasible and desirable".

From the above discussion, it seems obvious that the effectiveness and success of the OBH process is mainly based on the extent to which beneficiaries can gain easy access to building resources and have control over the construction and adaptation of their own houses. Thus, understanding the theoretical concepts underlying the relevance of OBH in producing more adaptable and satisfactory residential environments is not enough to clarify all issues, factors, and problems that OBs might face in getting easy access to affordable and sufficient building resources, and in building and adapting their houses. This actually requires a specific context within which these issues, factors and problems can be investigated.

1.3 The Study Context

Libya is a large country in the north of Africa with a total area of about 1,750,000 square kilometres. In 2004 the estimated total population was about 6 million, of whom the great majority (95%) live along the coastal line of the Mediterranean Sea. At the end of World War II, Libya was among the poorest nations in the world since the per capita GNP in the country in 1951, the year of its independence from Italy, was only US $40 (Kezeiri, 1986:34). However, notable improvements in socio-economic conditions began to be noticed in the country following the discovery of oil in the late 1950s and particularly during the post-revolution era (1970 onwards). In 2005 and based on the UNDP 'Human Development Report' index, Libya was ranked economically 58th out of 162 countries. The housing sector was among the sectors which witnessed tremendous development during this period. The next section briefly highlights the development of housing policies and conditions in Libya.

1.3.1 Housing Development in Libya

The housing situation in the country during the pre-revolution era was characterised by the spread of shanty towns, substandard dwellings, an acute shortage of technical and skilled construction labour, and shortages of private capital and building materials for house construction activity (Awotona, 1990a, Doxiadis Associates, 1964a). During the post-revolutionary years, the principle of home-ownership formed the basis of all public housing policies adopted in the country, particularly since the application of *Part II of the*

Green Book[1] in the late 1970s, which considered that as a basic need for every individual the house should be owned by its occupier. In terms of housing conditions, the adoption of a direct state intervention strategy since the early 1970s led to tremendous achievements in the housing sector. This strategy was clearly reflected in the role of 'Provider' and 'Active Enabler' that the government played during this period to face the challenge of the shortage of 185,000 housing units including 12,000 substandard dwelling units in 1969. The government's commitment to provide an adequate housing for all Libyans was clearly declared in the *Development Plan (1976-1980)* which concluded that:

> "The State has endeavoured to provide for each family a house which is adequate in terms of quality, size and standard, taking into consideration the potential and planned changes of the economic and social conditions as well as the customs and traditions and hence their expected impact on the design and shape of dwellings and the construction of their component parts." (Secretariat of Planning, 1976)

In order to put this strategy in action, ambitious housing programmes were implemented whether in form of "Publicly-provided Housing" (PPH), "Employees Housing", "Investment Housing" (INVH), or in the form of "Owner-Built Housing" (OBH) through supporting individual OBs and members of housing cooperatives in building their own houses. These tremendous efforts resulted in the building of 293,396 housing units during the period 1970-1988. Of this total, about 37 per cent was built by the public sector and 63 per cent was privately-built mainly by OBs (Gdourah, 1994).

By the mid-1980s, a notable shift was noticed in the context of housing policy when the state decided to play the role of "Enabler" and diminish its role as "Provider" in the housing sector by encouraging the private sector to play a more effective role in housing provision. This shift was in response to serious economic conditions resulting from the sharp drop in oil prices during the early 1980s. Despite the aims of the new policy, it was obvious that the scale of house building activity in the country began to shrink during the late 1980s and 1990s due to the 'Passive Enabler' role played by the state during this period. Such an ineffective role was clearly reflected in the instability of the regulatory and institutional framework of the housing sector, a remarkable reduction in budgetary

[1] In the 2nd part of the Green Book which was written in the late 1970s, Al-Qathafi launches his ideas to solve economic problems. '*Socialism*' was based on liberating all human basic needs [i.e. housing] from the control of others [individuals or government].

allocations to the housing sector and the poor management of building resources (i.e. land, materials and labour) (see chapters 4, 5 and 6).

1.4 OBH in Libya: Statement of the Problem

In the Libyan context, the predominance of OBH activity in housing provision is not a recent phenomenon. Traditionally, the building of a home in many Arabic and Islamic countries was the responsibility of its occupier. The owner-builders of traditional houses used to apply basic principles and guidelines in the building process which were mainly derived from the essence and spirit of Islam, and were able to satisfy their housing needs using their local building materials and depending on their own resources and efforts (Hakim, 1986:112). The remarkable support that was given by the state to OBH was clearly demonstrated in the *"Development Plan"* for the period (1981-1985). In this respect, Essayed (1981a:155) stated that:

> 'A preference for owner-built housing was expressed in many studies. Therefore, this desire has been considered in the new general housing policy mentioned in the 'Economical Social Transformation Plan for 1981-1985, where the individual will be encouraged to build his own dwelling unit with access to loans, financial and technical assistance according to his income."

Two key factors played a vital role in expanding OBH activity during the post-revolution era. The first was the remarkable programmes of housing plot allocation that were given away by municipalities or housing cooperatives to eligible and needy applicants interested in building their own houses in many Libyan cities and towns. The second key factor was the issue of the tremendous number of low or interest-free building-loans given to prospective OBs. Thus, not surprisingly, many new suburbs sprung up in Libyan cities where substantial proportion of residential development was carried out through OBH activity. Despite its predominance over housing provision, the development of OBH has been significantly influenced by trends in housing policy during the past three decades. This influence was clearly reflected in the accessibility of building resources, the management of the house construction process, adaptability and satisfactory of the resulting OBH environment particularly during the 1980s and 90s. In this respect, in contrast to the 1970s, getting access to housing plots, sufficient funds, and affordable building materials, became a difficult problem faced by many low and middle income OBs

who commenced the construction of their own houses during the late 1980s and 1990s. Such difficulties led the house construction process to take longer, with long delays and frequent suspensions, and in many cases OBs tended to move into their recently built dwellings before final completion (General People Committee, 2000a). Therefore, there is a need to understand the implementation of OBH in the country over the past three decades and to identify the key factors that influenced the ability of OBs in building and adapting their own houses.

1.5 Research Key Questions

Bearing in mind that no single study has been devoted to investigating the development of OBH in Libya and its contribution to the housing supply, the current study is the first ever attempt in this respect, centring on the following main question: To what extent is the OBH process adaptable and responsive to the changing housing needs of Libyan families?

To answer this main question, the following sub-questions need to be answered:

- How have housing policies in Libya been formulated and implemented and how have they been affected by the socio-economic and political change over the past three decades? And what has the impact of trends in housing policy been during this period on the housing conditions in the country?

- How has the OBH contributed to housing provision in the country, and what key-factors have influenced its development over the past three decades? And how has the implementation of OBH been affected by changing national housing policies during this period?

- What are the key features of the OBH process over the past three decades? What factors have influenced the ability of OBs in building their own houses over this period? And what are the key problems experienced by OBs during the construction process?

- What factors affect the adaptability and suitability of the resulting residential environment, at the dwelling and neighbourhood levels?

- What lessons can be learnt from the implementation of OBH over the past three decades? And what sort of actions would have to be taken to eliminate the key obstacles confronting the implementation of OBH?

A noteworthy point here is that the research questions in this study are based on real-world observations and dilemmas and have developed from the interplay of the researcher's own direct experience[2], theoretical concerns, and evolving scholarly interests. Thus, it is hoped that these fundamental questions concerning the implementation of OBH can be answered and illustrated by the findings of this study.

1.6 Aims and Objectives of the Study

The study's primary aim is to develop a better understanding and provide a detailed and systematic investigation of the development of OBH in Libya over the past three decades. This investigation is mainly focused on exploring and identifying the major factors and constraints that influence the development of OBH and the ability of OBs in building and adapting their own houses over this period. Such exploration would facilitate practical policy recommendations to make OBH more responsive to people's needs and aspirations. To achieve the study's primary aim, the following objectives have to be fulfilled:

- To examine and highlight the consequences of trends in housing policies for housing conditions and on the contribution of OBH to housing provision;

- To investigate the development of building resources and the key factors affecting its availability;

- To examine the regulatory framework by which the OBH process is controlled particularly in relation to acquisition of building resources, inspection of construction work and occupancy of the constructed-house;

[2] As an urban planner the researcher was involved in many public and private activities concerned with urban and residential development in the city of Benghazi over a period of thirteen years, through which he gained considerable of expertise from different positions held and studies undertaken individually or jointly with other professionals. During this period, he served as the general manager of the Urban Planning Authority (UPA) of the largest sub-Baladiyat Branch of Benghazi and in many occasions he held the position of the general manager of the UPA of the whole Benghazi Baladiyat. He was a full member of many committees concerned with housing and planning activities such as the "Urban Planning Committee" concerned with all urban planning issues for the whole Baladiyat of Benghazi and in the "Experts' Council" of the Housing and Utilities Sector in Benghazi city.

- To examine the socio-demographic and housing characteristics of those who have benefited from OBH;

- To explore how OBs built their own houses and what their attitudes and preferences are towards the house construction process particularly in relation to:

1. The accessibility and sufficiency of building resources (land, design, finance, building materials, and labour).
2. the methods OBs have adopted in controlling and managing the construction work of their house;

- To investigate how OBs have adapted their houses and to what extent they are satisfied with the resulting OBH environment at the dwelling and neighbourhood levels, and to determine what factors affect their degree of satisfaction; and

- To put forward a set of guidelines and policy recommendations for the future development of OBH to make it more responsive to beneficiaries' needs and aspirations.

However, it should be noted that the aim of this study is not merely directed to investigating the negative attributes and problems concerned with the implementation of OBH in Libya, but also to identify the key advantages of this system. Thus, it is hoped that the outcome of this research will be of great value in attracting the attention and raising the awareness of policy-makers and key-figures involved in the implementation of OBH towards formulating a rational, consistent, and responsive housing strategy; a strategy that can coordinate the roles of key figures (policy makers, planners, architects, financiers) in order to make the OBH process more responsive to future needs.

1.7 Research Methodology

Based on the exploratory nature of the study, which seeks to provide a better understanding of the implementation of OBH and explore the extent to which the OBH process is adaptable and responsive to the changing housing needs of Libyan families, a macro-to-micro analytical framework was adopted to deal with the complexity of the issues under investigation. Having such an analytical framework was seen as essential to link, highlight and clarify the consequences of trends in the formulation and implementation of national

housing policies (macro level) on the nature of the OBH process and the ability of OBs in building and adapting their own houses (micro level) over the period covered by the study. For this purpose, the case study approach was adopted to combine and utilize the relevant empirical and documentary data required to achieve the study's aims. Such integration and combination of data aimed to make the findings of this study more comprehensible, valid, reliable and acceptable.

At the macro level of investigation, relevant documentary data in form of published and unpublished studies, reports, censuses and statistics were gathered and used to explore how have housing policies in Libya been formulated and implemented over the past three decades and to examine the impact of trends in housing policy during this period on the housing conditions in the country. These documentary data were also used to explore the contribution of OBH to housing provision in the country and to identify the key-factors influencing its development as well as to investigate how has the implementation of OBH been affected by changing national housing policies over the period covered by the study.

As mentioned earlier, it was necessary to link the macro level of investigation to the micro scale in order to explore the impact of change in housing policy on the nature of OBH process as well as on the ability of OBs in building and adapting their own houses over the period covered by the study. Therefore, Benghazi, the second largest urban settlement in Libya, was selected as an appropriate setting for this purpose. The selection of Benghazi was mainly based on it being representative of the development of OBH in Libya over the period covered by the study, since the city witnessed dramatic OBH activity during this period (see chapter 7). The familiarity of the researcher with the city was another reason for selecting Benghazi as the setting for this study. However, further justifications for selecting Benghazi are illustrated in chapter 3. In order to undertake the empirical work, five OBH neighbourhoods located in two residential areas namely, El-Salam and El-Mukhtar in the suburbs of Benghazi were selected for this purpose. The two selected OBH neighbourhoods in El-Salam Area were almost completely developed, reflecting the development of OBH during the period 1970-84 while the remaining three neighbourhoods in the El-Mukhtar Area are still under development, reflecting OBH development during the period 1985-present. This means that the five OBH neighbourhoods selected reflect the development of the OBH in the city over the period covered by the study.

At the micro level of investigation, both documentary and empirical data were gathered and used to achieve the study purpose at this level. Relevant data obtained from many published and unpublished reports, studies, censuses and statistics together with information gained from interviews with key-figures involved in the implementation of OBH in the city were used to explore the development of OBH in Benghazi. These documentary and empirical data were also used to explore the regulatory framework by which the OBH process in the city is controlled.

At the level of selected OBH neighbourhoods and aiming to examine the socio-demographic and housing characteristics of beneficiaries of OBH and to explore how OBs built and adapted their own houses and to what extent they are satisfied with the resulting OBH environment, quantitative and qualitative data gathered from both empirical and documentary sources were used. In the empirical survey which was conducted between February and May 2003 in Benghazi, quantitative information was gathered using a structured face-to-face questionnaire conducted with beneficiaries of OBH in these neighbourhoods. The qualitative information, on the other hand, was mainly derived from open-ended interviews conducted with various OBs in the selected neighbourhoods, and semi-structured interviews with knowledgeable people and key-actors involved in the design and implementation of OBH such as designers, builders, officials in the housing and banking sectors, planners, and materials suppliers. Added to this, site observations and physical surveys including photographic surveys and dwelling measurements were carried out to determine the residential and infrastructure conditions of the selected OBH neighbourhoods. Documentary data relevant to the study in form of published and unpublished official documents, government archives, journals, books, reports and other relevant printed materials were also used for this purpose. It was believed that the adoption of such a mixed methods approach would facilitate a more flexible, reliable and integrated framework for data collection and analysis in this study. Moreover, the findings from such as approach would in turn clarify important issues, describe implementation processes, and identify the main constraints preventing OBH from responding adequately to its beneficiaries' needs and aspirations.

Prior to conducting the main empirical work, a pilot study was carried out in order to test the reliability and validity of the instruments and tools of data collection. Once the empirical work was completed, all data gathered were processed and analyzed using

statistical and interpretive techniques. A detailed and further discussion of the research methodology adopted is presented in chapter 3.

It is noteworthy that, although the main fieldwork was conducted between February and May 2003, data collection was not confined to this period only. In this regard, whenever available before or after the main fieldwork, data relevant to the study were collected from different sources. It was hoped that this research strategy would properly answer the research questions and clearly identify some of the overriding constraints challenging the implementation of OBH in Benghazi city and in Libya in general.

As Figure 1.1 illustrates, the development of the research process begins by building the theoretical framework of the study, which involved the review of concepts relevant to the study purpose and identifying the key aspects and issues of OBH in Libya. This was followed by the development of a research design and methodology to conduct the study, involving the selection of the study setting and the micro level of investigation as well as the methods of data collection, pilot study and the operational framework to carry out the empirical work. Finally, the last phase of the research process involves the techniques adopted for data analysis, interpretation and discussion to draw the conclusions and implications of the study.

1.8 The Scope of the Study

As mentioned earlier, this study is mainly concerned with investigating the implementation of OBH as a predominant mode of housing provision in Libya over the past three decades. At the micro level, the study seeks to explore the extent to which OBs have succeeded in building their own houses in Benghazi. However, different types of dwellings can be built through OBH activity, such as terraced dwellings and detached or semi detached dwellings. Such a variety in the typology of OBH within the city is mainly owing to the variation in residential density, as classified in the approved master plan of the city (Chapter 7). In this study, the focus is only on detached dwellings, or "villas"[3] built within the approved residential subdivisions of Benghazi. The reason for selecting detached dwellings as the type of OBH to be investigated in this study was mainly that it is the most

[3] The physical characteristics of detached dwellings (Villas) can be easily distinguished from other types of OBH dwellings such as terraced or semi-detached dwellings, because they are surrounded by setbacks on all sides and are separated from neighbouring dwellings by a ground-to-roof wall (or fence) (see chapter 8).

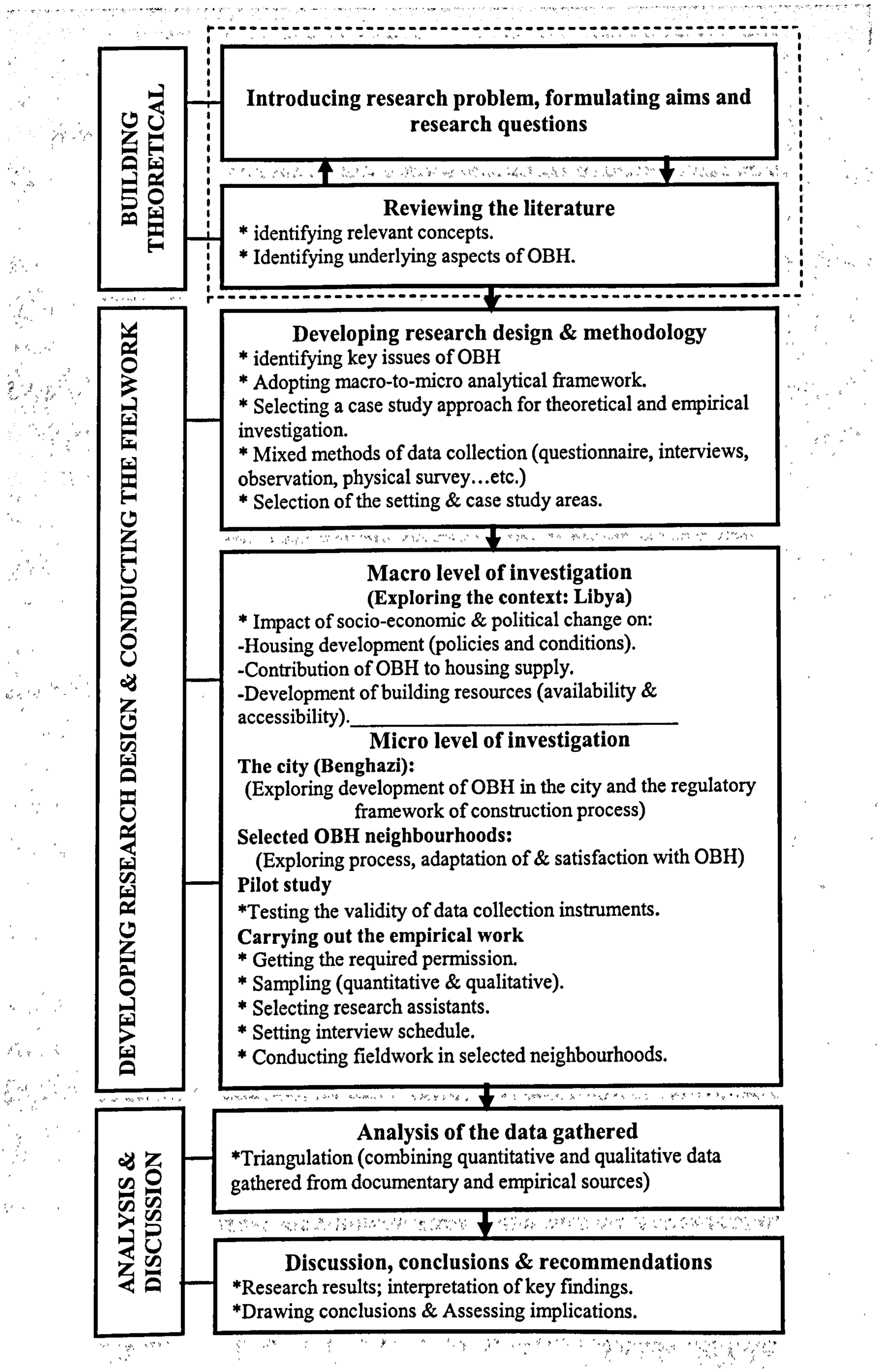
preferred type of housing for many Libyan families due to the flexibility that such detached dwelling offer in terms of design, construction and adaptation. Added to this, the rather larger size of detached dwellings compared to other types often requires more resources such as funds and materials to be devoted to its construction. Moreover, based on the approved master plan of Benghazi, most of the future residential development in Benghazi city will be carried out at low density, where most subdivisions are planned to accommodate detached dwellings mainly to be built by owner-builders.

1.9 Significance of the Study

As mentioned earlier, although the OBH has been the predominant mode of housing provision in Libya over the post-revolutionary years, it is still under-researched, inadequately understood and remarkably neglected in the field of research. Such neglect is apparent since no independent, single, and detailed piece of research has been devoted to investigating and assessing its implementation and performance. In addition to being the first study ever carried out to explore the implementation of OBH in Libya, the significance of the current study also stems from the uniqueness of the socio-economic and political context within which it has been carried out which has to a large extent influenced the formulation and the implementation of housing policy as well as the scale of housing provision in the country during this period (see chapter 4, 5 and 6). Therefore, a comprehensive exploration that facilitates in-depth investigation giving a chance to owner-builders and other stakeholders involved in the implementation of OBH to state their assessments, attitudes, experiences and preferences could be considered as an important step in filling the current gap in knowledge in the literature regarding OBH in Libya.

It is also believed that by exploring the implementation of the OBH and identifying the key obstacles confronting its development the conclusions of this study could help coordinate and boost the relationships between all actors involved in OBH activity and make it more responsive to people's needs and aspirations. From an academic point of view, this study would develop a methodological approach and analytical framework which could be used by other researchers and scholars in carrying out similar or further studies in other contexts.

Figure 1 - 1: Development of the Research Process



1.10 The Structure of the Thesis

This thesis consists of twelve chapters which are organized from general ideas to specific results and findings in the conventional way as follows:

Chapter One acts as introductory chapter and sets out the purpose and significance of the study. The key issues and the problem that the study aims to address are clarified, the key research questions are enumerated, the aims and objectives and the setting of the study are identified and the methodology used to collect the data is illustrated, while the scope, significance and structure of the study are specified.

Chapter Two reviews the literature to establish the theoretical basis for the study, aiming to identify the main concepts and variables underlying OBH to be used in developing the methodological framework according to which the study is carried out.

Chapter Three explains and justifies the research methodology adopted in the study. In this chapter, the analytical framework is discussed, methods and instruments used for data collection are explained, sampling procedures are discussed, the operational framework for conducting the main survey is explained and the techniques used for data analysis are also presented.

Chapter Four provides more information regarding the context of Libya, and its historical background, urbanisation, population growth, and socio-economic and political changes are illustrated. The chapter focuses on how socio-economic and political change has affected the formulation and implementation of public policies.

Chapter Five discusses the development of housing policies and their impact on housing conditions. The development of OBH and the key factors influencing its contribution to housing provision are illustrated.

Chapter Six discusses the development of key building resources (funds, land, materials, and labour) and how their availability and accessibility have varied.

Chapter Seven introduces Benghazi city as the setting of this study. It presents a brief background to the historical and demographic development of the city. It discusses housing

development and typology and describes the characteristics of OBH areas as well as the regulatory framework by which the house construction process is controlled.

Chapter Eight analyses the data gathered from the empirical work concerned with the socio-economic, housing and population characteristics of the case study areas. It gives a brief introduction to the planning and housing characteristics of selected neighbourhoods in both the El-Salam and El-Mukhtar areas. In addition, it discusses the socio-economic and housing characteristics of the target group in the selected neighbourhoods.

Chapter Nine analyses and discusses the practices and attitudes, and preferences of OBs towards getting access to building resources (land, design, funds, labour, and materials) in order to explore the extent to which these resources were accessible and sufficient.

Chapter Ten analyses and discusses OBs' practices, attitudes and preferences concerning managing and controlling the construction works of their houses.

Chapter Eleven analyses and discusses how OBs have adapted their own houses. In this regard, the type of and reason for any intervention (changes and maintenance) undertaken by OBs to improve or restore the condition of their own houses are discussed. In addition, the degree of satisfaction with the resulting environment at the dwelling and neighbourhood levels is discussed. In this respect, both physical and social satisfaction attributes are discussed and comparisons between present homes and neighbourhoods and previous residences are illustrated.

Finally, ***Chapter Twelve*** reviews the study and concludes and synthesises its key findings, and discusses their implications for OBH policy and practical application. This final chapter also makes some recommendations for enhancing OBH and to make it more responsive to its beneficiaries' needs and aspirations, and suggests areas for further research which need to be looked into for the better functioning of OBH based on a better understanding of its beneficiaries' needs and requirements.

Chapter Two:

Literature Review and Development of Relevant Concepts

Chapter Two

Literature Review and Development of Relevant Concepts

2.1 Introduction

The many scholars who are in favour of a housing process where people are involved and have control over the design, construction and adaptation of their own houses argue that such involvement and control often results in the production of affordable, satisfactory and adaptable residential environments. Thus, it seems necessary to discuss and understand the different strands of thoughts and concepts underlining this type of housing process in order to provide a basis for achieving the study's aim in exploring the implementation of OBH in Libya during the post-revolution era. For this purpose, this chapter starts by reviewing and discussing concepts of housing, houses and homes, and housing needs, choices and constrains. In addition, definitions of housing quality and residential satisfaction are also discussed. In this respect, concepts such as the adaptability and flexibility of housing and their role in producing satisfactory residential environments are discussed. The modes of housing provision adopted in developing countries to house their citizens are then considered. Following this, the meaning of and rationale for user participation in housing process and different approaches to it used in developed and developing countries and their implications for the housing conditions of beneficiaries are discussed. Moreover, the criteria by which any construction process can be regarded as successful are assessed.

2.2 Housing and Its Role in Socio-Economic Development

Although many governments tend to regard housing as a matter of numbers in terms of the quantity of units that should be built, housing for all mankind means something more than merely shelter. It plays different social, cultural and economic roles in affecting people's lives and at the same time its production, form and use are influenced by people's socio-cultural and economic characteristics (Smith, 1970, Turner, 1979, Arku and Harris, 2005, Silos, 2007). From a social perspective, housing both influences and reflects social trends concerning individual opportunities and societal well-being (Maclennan and Bannister, 1995, Morris and Winter, 1978, Setha and Chamers, 1989, Cameron and Field, 2000). As

Bourne (1981) argued, housing should be viewed in terms of its social dimensions and perceived as dwelling units, as places for living, and as components in the building and maintaining of social order, not simply as a means of satisfaction for designers, builders, governments, or researchers. This is because socio-cultural forces such as traditions, values, beliefs, and norms influence the shaping of forms of housing form and the patterns of neighbourhoods. In this respect, Rapoport (1969:47) stated that:

> "The built environment sought reflects many socio-cultural forces, including religious beliefs, family and the clan structure, social organisation, ways of gaining a livelihood, and social relations between individuals. Buildings and settlements are the visible expression of the relative importance attached to different aspects of life and the varying ways of perceiving reality."

Thus, the socio-cultural values of a society make a notable contribution to the modes of housing provision as well as to the attributes of the residential environment (Rapoport, 1977). In addition, housing plays a major role in improving the wellbeing, satisfaction and health of people (Rapoport, 1969). Economically, in addition of being expensive to build or buy, housing is also seen by some researchers as a non-productive sector, since it requires substantial capital input and produces little output when it has historically been an individual's responsibility. Nowadays, however, it is seen as a motive for investment and savings and as an indirect contributor to income and production in all societies. Added to this, it is seen as the starting point for a person to organize his actions, stabilize his mind and undertake plans and programmes for doing something meaningful, and thus is an important sector of the national economy (Tipple, 1993, Bourne, 1981). This importance, as Bourne (1981) argued, can be measured in terms of the levels of investment, employment or consumer expenditure generated by housing activity.

From the above discussion, housing should be viewed as a multi-dimensional issue, in the sense that it provides different kinds of benefits to its users and to society as a whole. These include shelter, security, space for working and socializing, status, and attachment to local communities. Thus, better housing has to guarantee a reasonable fulfilment of social needs, enough space for privacy and a sufficient supply of social relationships and services. In contrast, bad housing can generate various adverse external effects (social costs), and vice versa. Accordingly, issues of the planning and design of housing projects should be given reasonable attention in the light of the social needs of residents (Blitzer et

al., 1981). This conclusion concurs with Turner's (1976a) argument that housing should be seen as an essential feature of personal development, and thus its value concerns 'what it does' for people rather than 'what it is'.

2.2.1 Housing as Process and End-product

> "Architects have historically been interested in the product of their design and not in the administrative and urban development processes through which designs are implemented. (Madanipour, 1996:104)

Throughout mankind's history perceptions of housing among scholars and practitioners has evolved dramatically. These perceptions have been mainly based on viewing how housing as a noun, the 'end-product' or as a verb, the 'process', interacts with its broader social, economic and political contexts (Turner, 1976a, Maclennan and Bannister, 1995, Madanipour, 1996, Awotona, 1999, Kellett and Moore, 2003, White and White, 2007).

As an end-product, housing is regarded by some scholars as an economic commodity much as any other material object, and thus possesses an exchange value which is largely affected by the mechanisms of the housing market. In addition, housing is considered as the largest single purchase decision made by homeowners in their life-times; and is just ranked second only to food (Bourne, 1981).

On the other hand, those who regard housing as a verb, a 'process', mainly base their views on the concepts of participation and interaction at the different levels of the housing process in terms of production and consumption. For instance, Turner (1972) believes that housing is not just a commodity but is a sphere of action and a complex process in which everyone takes part. This point of view regarding housing as a 'process' is also emphasised by Habraken (1970), who sees the housing process not only as the production of a product (house) but also as a process that leads to the continuous interactions between humans and their houses through adaptation, alteration, maintenance and repair. He regards housing as meaning to dwell, and to dwell is to take action. Thus the dweller living in a dwelling which he did not participate in producing can be regarded as a mere guest in his own house (Habraken, 1980b).

It is worth mentioning that, the production and consumption processes of housing may occur concurrently or separately depending on the mode of housing provision through which the dwelling was produced. For instance, in housing processes based on the 'provider paradigm' of housing provision, such as publicly-provided housing projects (PPH), as will be discussed later, production and consumption processes are separated from each other since the consumption process often begins with the occupation of the finished dwelling. In contrast, in housing processes where the end-user is involved in and has control over the construction of his dwelling, such as in owner-built housing processes (OBH), both the production and consumption processes occur concurrently. This is mainly due to the incremental nature of the process where the owner-builder builds and occupies his house in stages and can incrementally extend, alter and improve his dwelling based on his financial capabilities and changing needs. Regarding the necessity to regard housing as process based on people's requirements, needs and values, Alexander et al (1985:16) stated that:

> "We have tried to construct a housing process in which human feeling and human dignity come first; in which the housing process is re-established as the fundamental human process in which people integrate their values and themselves, in which they form social bonds, in which they become anchored in the earth, in which the houses which are made have, above all, human worth, in the simple, old-fashioned sense that people feel proud and happy to be living in them and would not give them up for anything, because they are their houses, because they are the product of their lives, because the house is everything to them, the concrete expression of their place in the world, the concrete expression of themselves."

Thus, in contexts where housing is regarded merely as an object or end-product, housing policy is mainly focused on the quantitative aspects of housing production, while in contexts where housing is regarded as a process more emphasis is put on what housing does for its users.

2.2.2 The Meaning of House and Home

Extensive research within disciplines such as anthropology, psychology, human geography, history, architecture, sociology and philosophy has examined what meanings people assign to the concept of house and home and the relationship between the individual and the residential environment. Despite this, the meanings of home and house can still not

be clearly distinguished from each other and are often even used in many studies interchangeably (Coolen et al., 2002, Clapham, 2005, Gram-Hanssen and Bech-Danielsen, 2004, Easthope, 1994). Added to this, many researchers, such as Altman and Werner(1985), Duncan (1981), Lawrence (1987), Oliver (1987), Kent (1990), Stea and Turan (1993), Benjamin et al (1995) and Kellett (1995), argue that the meaning of house and home is not only complex and elusive, but that it also varies from person to person, between social groups in the same society, and across cultures. Thus, as Coolen et al (2002) argued, a distinction has to be made between the physical structure (house) from the set of social relationships (psychological, social, cultural, affective, and behavioural) that people have with this structure (home). Such a distinction between house and home is related to the distinction between housing as product and process discussed earlier.

2.2.2.1 House as Physical Product

As Clapham (2005) pointed out, many analytical approaches tend to treat houses as units of accommodation that can be described by a number of objective physical attributes such as size, form, amenities or physical condition. Based on these approaches, the physical structure of the dwelling is the main concern of many academics, professionals and policy makers who regard the house as merely physical shelter. However, the interpretation of the house made by Le Corbusier (1960) as a 'machine for living' or in more precise terms as a ' machine to live in' does not mean, as Goodchild (1997:34) argued, that a house is similar to other machines such as cars or washing machines. This is mainly because, as Habraken (1971) argued, typical machines perform certain functions for people while houses enable people to function and practise all of their social relationships and activities. Thus, as Burnett (1986: 267 quoted in Clapham, 2005:126) argues: "People did not want 'a machine for living' so much as 'a vehicle for living out a fantasy". Thus, a dwelling should facilitate its user's access to an acceptable degree of shelter and a better quality of life.

2.2.2.2 The Concept of Home: What Makes a House a Home?

The above discussion concerned with the meaning of house as a physical structure shows that the house, with its interior layout and appearance, is the physical product of the housing production process. However, most people perceive their place of residence (house) in terms of symbolic meanings as the home, referring to mental and social well-being and as experienced space. Lawrence (1987:117) stated that:

> "The house is attributed to personal and social functions, as a haven for withdrawal from society and as a credential for esteem and the respect of others."

Thus, the meaning of home goes beyond the physical structure of the house, which should be regarded as the setting or locale for certain social practices that might be called 'home life'. But what makes a house a home, what does a home symbolise, what does 'home' mean to people in the context of their particular ways of thinking and cultures, and how do people define their homes and describe their importance?

To answer these questions, it is essential to widen the discussion of the meaning of home, and of what makes a house a home and not merely a place of residence. We should focus on the different components of home which play a role in the construction of the concept deriving from identity, culture and gender. This is mainly because the form and use of houses are largely affected by the cultural milieu, the way of life of a society (Despres, 1991, Easthope, 1994, Kellett and Moore, 2003, Moore, 2000, White and White, 2007). To regard a house as a home which comprises the 'life world' of the self and others, as Goodchild (1997:33) argued, means that certain quality considerations and attributes have to be found in the house such as stability and security where issues such as privacy and the control of interaction and appearance are covered. This more comprehensive meaning is also well highlighted by the Habitat Agenda, Chapter IV published by the UNCHS in 1996 as follows:

> "Adequate shelter means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; ...; adequate basic infrastructure; ...; and adequate and accessible location with regard to work and basic facilities: all should be available at an affordable cost".(UNCHS (Habitat), 1996d: 22)

The difference between the meanings of house and home was also discussed by Clapham (2005), who argued that home is mainly related to the emotional and meaningful relationships between people and their residential environments. Thus, the house can be seen as the major setting for the meaning of home, which is more than just a neutral physical location and itself influences and is in turn influenced by the social interactions within it (Clapham, 2005). The feelings that people have about their residences can then

also be expressed in the form of changes that they might make to the physical structure of houses to satisfy their changing needs and aspirations.

It seems clear that the home is a more intangible notion than the house, since it is seen as a part of the experience of dwelling and as a way of living life in a particular geographical space. In this respect, Saegert (1985; quoted in Lawrence, 1987:5) stated that:

> "The notion of dwelling highlights the contrast between house and home. First it does not assume that the physical housing unit defines the experience of home. It connotes a more active and mobile relationship of individuals to the physical, social and psychological spaces around them. It points to a spiritual and symbolic connection between the self and the physical world and emphasizes the necessity for continuing active making of a place for ourselves in time and place. Simultaneously, it points to the way in which our personal and social identities are shaped through the process of dwelling".

As Clapham (2005) argued, since the concept of home in every culture has a number of meanings, thus the question of whether or not home can be perceived as a space, place, feeling, practice, and/or an active state of being in the world has to be raised. Mallett (2004:65) attempts to answer this question by saying that:

> "It is a place where space and time are controlled and structured functionally, economically, aesthetically and morally and where domestic communication practices are realized."

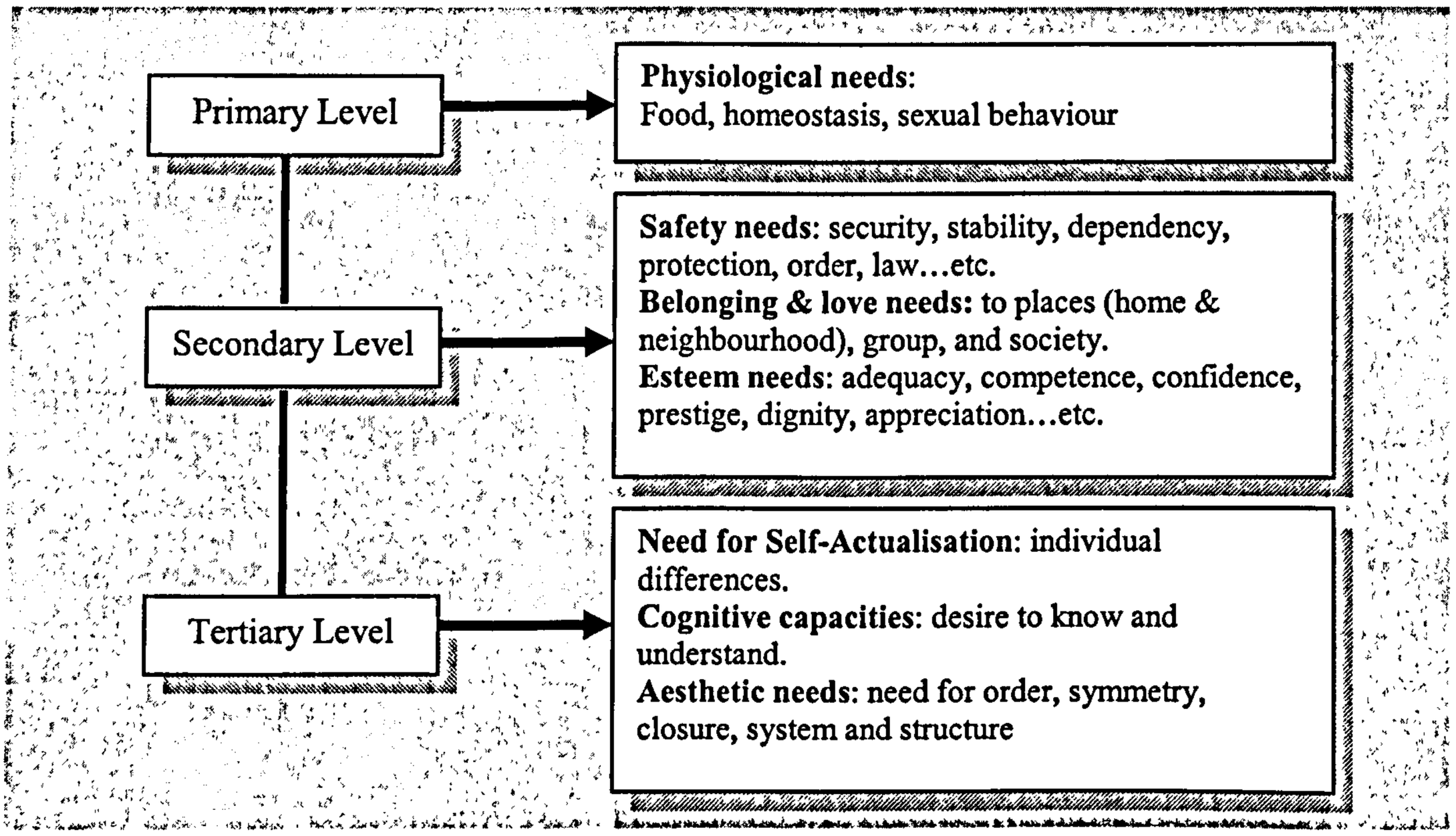
As the above discussion reveals, housing has to be seen as a basic need for human survival, because it plays a fundamental role in people's daily lives, shaping their physical environments as well as their lifestyles and social relationships. It also contributes to social stability and the economic development of society as a whole.

2.3 The User's Housing Needs: Socio-Cultural and Physical Dimensions

The needs of buildings users have increasingly been addressed in recent years by social scientists and designers (Lawrence, 1987). Despite this, the word 'needs' is used very loosely since no explicit distinctions are usually made in these studies between psychological and biological needs (Gutman, 1975, Darke and Darke, 1979, Balchin, 1981, Golland and Gillen, 2004, Ytrehus, 2001). However, based on Levine's (1995:31)

perspective, needs are things *'imposed upon me independently of my will'*, whilst wants are things *'we choose for ourselves as a way of expressing who we are'*. Added to this, studies of user satisfaction, as Vischer (1985) argued, are mainly concerned with the fulfilment of needs whereas studies of user preferences are mainly concerned with the users' wants. Accordingly, and as Levine (1995) argued, wants have to be met through the market whereas needs have to be met by government action to ensure human wellbeing, social stability, and the economic development of society.

Figure 2 - 1: Hierarchy of Basic Human Needs



Source: adapted from Lawrence (1987), pp.159-160

Thus, as Lawrence (1987) argued, the user's housing needs can be explained within the framework of the hierarchy of basic human needs as classified by Maslow (1954) and broadened by Cooper (1975) and Max-Neef (1992) (see Figure 2.1). Cooper (1975) modified the hierarchy of human needs proposed by Maslow (1954) to establish a hierarchy of housing needs including shelter, security, comfort, socialization and self-expression, and aesthetics. Based on his interpretation of human needs, Cooper (1975) considered shelter as a more basic need than security. Thus, as Lawrence (1987) argued, many empirical studies have been conducted to measure residents' satisfaction with their home environment, particularly in relation to the fulfilment of housing needs of security, socialization and self-expression. In this respect, the frustration of housing needs can have

many physical and psychological consequences which result from people's attempts to arrive at a congruence between their needs and goals and what is provided by the physical and social environment (Zimring, 1982).

2.3.1 Socio-cultural Dimension of Housing Needs

Bearing in mind the discussions above regarding the meaning of home, the study of user housing needs should be focused on the socio-spatial dimension which results from the interaction between household and dwelling, rather than on the dwelling and household separately. In other words, the focus has to be on the social setting that any residential environment has to create in order to form a coherent society or community through enhancing the interaction between residents, which in turn would fulfil their sense of belonging as a basic human need. To facilitate such interaction, certain social facilities have to be provided in the residential environment, such as schools, parks, playground areas, mosques, social clubs, health facilities, and shopping centres. In terms of cultural needs, the residential environment has to reflect the way of life and cultural norms and values of the community or society. These cultural factors are not static or written rules to be followed but, as Lang (1987) argued, they are always under change and modification to fit the setting and time and are transmitted through the process of socialisation from one generation to another.

Thus, it is not surprising that the way people practise their daily life activities and the way they look at things differs from one society to another and across time. In addition, people's experiences and exposure to other cultures have a great impact on change in their own culture. Such exposure to other cultures has become much easier all over the world using advanced communications systems which enable people to travel and interact with those from other cultures (Moughtin, 1992).

However, for full satisfaction of people's cultural needs, the resulting residential environment has to take into consideration and be able to maintain cultural diversity and to support people's way of life (Beer, 1990). Therefore, the way the residential environment is created and its components can be regarded as reflecting the characteristics of that culture. In addition, any modifications or adaptations made by residents to any residential environment can be perceived as making that environment more responsive to their needs and to reflect their way of life at that time. Thus, the shaping and adaptation of any

environment by people is largely based on their cultural norms and values which have evolved over a long period of time. For instance, as Rapoport (1969) argued, the design of a house may reflect the socio-cultural values of the household because the structure of the family, gender roles, the way basic activities are carried out, attitudes towards privacy, and processes of social intercourse. These are the five major aspects of culture which the interior layout of a dwelling often reflects. This point of view is also supported by Lawrence (1987), who stressed that these cultural factors have a great influence upon house design.

From the above discussion, it is clear that the shaping of any residential environment and particularly the design of houses is mainly influenced by and can be seen as the material expression of certain socio-cultural variables. As Lawrence (1987:83) argued, social variables encompass the existential being of people, the reality of their daily life activities and their interpretation of idealised concepts, while the cultural variables are sets of normative and value-laden concepts and meanings encompassing moral and aesthetic principles that formulate their idealised models of how the world ought to be.

2.3.2 Physical Dimensions of Housing Needs

Residential environments consist of many materials and easily identifiable objects and elements, such as dwellings, open spaces, facilities, and infrastructure, which could be privately or publicly provided and owned and used for one or many purposes. In many cases, however, the planning, layout and design of such residential environments are still determined and undertaken by planners, architects and designers based on their own judgements. Thus, any problems or inadequacies experienced in such residential environments are to a large extent physical and mainly result from mismatches between the planning, design and conditions of the physical environment provided and the socio-cultural needs of residents. These problems, which may be attributed to poor planning and design, can be identified through the assessment of the attitudes and preferences of residents concerning their residential environment (Banerjee and Bear, 1984).

However, governments in the Third World have rarely managed their cities very well in terms of the provision of adequate infrastructure (Gilbert, 1992). This is obvious from the common problems experienced in many developing countries concerning the lack of water supplies, shortages of electricity power, and the bad condition of roads and sewage

networks. In Africa and the Indian sub-continent such problems are often attributed to lack of resources or corruption and poor management, but, as Gilbert (1992) argued, even where neither of these reasons is critical, governments seldom seem to have produced acceptable solutions to urban problems.

Thus, it is important that the planning and design of physical environment considers the socio-cultural characteristics of residents in order to create a residential environment that is more satisfactory and responsive to their needs and aspirations. This is because physical environment where people live and interact can have direct positive and negative impacts on people based on the extent to which it responds to their socio-cultural needs and aspirations. Therefore, it is important to look at the physical aspects of the residential environment from the perspective of the socio-cultural needs of residents.

2.4 Fulfilment of Housing Needs: Between Choices and Constraints

Two main perspectives have been used by scholars and researchers to look at the extent to which the housing needs of people are satisfied. The first perspective deals with housing needs as a quantitative matter, where certain numbers of dwellings have to be provided to satisfy demand. Based on this perspective, housing could be considered sufficient and adequate if the supply of housing meets the quantitative demand in terms of households. In contrast, the second perspective sees housing needs from a qualitative point of view, where certain socio-cultural and physical quality attributes have to be provided in the residential environment to fulfil the housing needs of its residents based on their socio-cultural characteristics, aspirations and lifestyles.

Thus, as Turner (1978) argued, the poor should be involved in the design and construction of their own housing in order to meet their needs and demands. In addition, he argued that the housing process involves everyone, and basic needs can be met depending on the assertion of people's rights to determine their priorities and to make demands within the limits of their personal and local circumstances as well as on the provision of support for local action by the market and the state, rather than by monopolies imposing goods and services over which people have no effective control. In choosing residences, however, individuals and households make two kinds of choices; of a certain type of housing and of

a certain residential environment (Dieleman and Mulder C. H., 2002:35). This joint choice of housing and environment is termed residential choice.

2.4.1 Features of Residential Choice

The choice made by a particular household is guided by needs or preferences and restricted by income and by opportunities offered by the housing market. The choice of a particular dwelling concerns a wide variety of characteristics of the dwelling. The type, size, quality, price, and tenure (owner-occupation, public rent, and private rent) are considered to be among the most important relevant characteristics. The choice of a specific dwelling, however, is inextricably connected with the choice of a residential environment and the geographical location in terms of site and situation (Broek, 1966). The reason for this connection is that a dwelling has a fixed geographical location and a long life, and thus, once constructed housing cannot ordinarily be moved somewhere else. In this respect, site refers to the characteristics of a place (home and neighbourhood) in terms of its physical layout, social composition, climate and other salient factors. These site characteristics are very important for residential choice, and people may variously regard cleanliness, security, safety, amount of greenery, and density of traffic as priorities. Regarding situation, residential choice refers to the position of a place in relation to other places, mainly in terms of distance to workplaces, schools, shops, and cultural and sports facilities. Thus, some sort of compromise has to be made by people between site and situational characteristics after weighing up their advantages and disadvantages (Mulder and Hooimeijer, 1999).

2.4.2 Residential Choice: Moving or Improving

Residential choice and decisions to adjust housing consumption by moving or improving are seen as major consequence of the environment on the behaviour of residents. Alternatives available to people in adjusting their housing consumption in order to satisfy their housing needs are often between improving and moving or both (Clark et al., 2006). In this respect, a decision is often made after assessing the relative costs and benefits of alternatives. The costs of adjustment include both financial costs and psychological consequences, such as losing social ties and attachment to the original housing environment. Thus, no action may be taken if the perceived benefits from a decision to adjust housing consumption by moving or improving are lower than those gained from the

original housing conditions. In most cases, decisions to move are often taken by renters or when the location of residence has to be changed, while decisions to improve via alterations and extensions will most probably be taken by owner-occupiers to meet their changing housing needs and preferences (Seek, 1983, Dynarski, 1986, Mayo, 1987, McClure, 2006). However, it has been argued that people do not move unless the relative advantages of the new residential environment exceed those of the original one (Dieleman and Mulder, 2002).

2.4.3 Constraints on Residential Choice

People often make choices between what they need and what is available to them. The relationship between residential constraints and personal choices has been considered by many researchers such as Kellett (1995:34), who believed that in traditional environments personal choices face strong natural constraints. In terms of the type of potential constraints that users might face in the process of shaping their residential environments, Rapoport (1985) mentioned resource constraints, market constraints, ability to cope, the willingness and ability to move, knowledge and information, and finally external constraints as the main constraints that might be faced by any user. However, he argued that in some cases these constraints are quite severe such as those concerned with the availability of resources, while others are quite weak, such as official building codes and planning regulations (Rapoport, 1985). The main constraints that can be faced by any user in shaping and improving his residential environment can be classified into the following three main categories concerning finance, tenure and planning and building regulations.

2.4.3.1 Financial Constraints

> "In the market economy, money is the major medium through which development agencies relate to each other, to their contexts, and to their factors of development. Availability of financial resources enables development agencies to have access to land, to acquire the building materials and technology, and to employ the workforce. At the same time, they are subject to the dynamics of the market and the rules which regulate the process." (Madanipour, 1998:187)

Housing is very expensive to build or improve and low income families often have very limited financial resources to devote to satisfying their housing needs. Spending on

housing in terms of building or buying a satisfactory home represents one of the most ever expensive investments made in their whole lives (Bourne, 1981). King (1998:40) argued that households with insufficient means to provide housing for themselves, can be seen as in housing need, and thus financial subsidies have to be provided to ease this need. However, the restrictive eligibility criteria adopted by many financial institutions in the case of building loans for construction or innovation purposes excludes many low income earners or those with irregular work from benefiting from such loans. Such eligibility criteria often favour high and middle income applicants, while low income applicants or those with insecure or fluctuating incomes are seen as unreliable in terms of repaying loans. This was the case in Libya during the late 1980s and 1990s when building loans were restricted to those with regular incomes (see chapter 6). Regarding the impact of wealth and prosperity on choice, Lawrence (1987:117) stated that:

> "Affluence is not merely an indicator that the wealthy own more possessions than the poor; it also implies that the former have a relatively greater degree of control and choice that can reflect and reinforce personal preferences and identity."

2.4.3.2 Insecure Tenure

The secure tenure of a home is considered as a fundamental issue in housing studies, due to its major role in promoting the sense of belonging and wellbeing as well as in encouraging people to invest and improve their housing conditions (Rossi and Weber, 1996, King, 1998, Kellett and Moore, 2003). These benefits of homeownership are clear in the case of an owner-builder who may devote a substantial part of his earnings and savings to building and improving his house, as discussed later in this chapter. Kellett and Moore (2003) also highlighted the importance of housing ownership in providing a level of stability particularly for those on the lowest income levels who through such ownership would be able to send a message to others that they have a stake in society and in the meanwhile could pass something to their children. In describing the importance of housing ownership, Kellett (1995:48) stated that:

> "Certainly for people in many parts of the world the way to realise their 'ideal home' or at least key aspects of it, is through becoming the owner of the property in which they live."

In this respect, King (1998:40) argued that as a type of tenure, owner-occupation is related to choice. This is because owner-occupiers have a degree of choice in their housing consumption. Housing is not simply given to them, but they choose on the basis of their preferences as constrained by income, family ties, employment, and market conditions. Thus, it can be assumed that secure home ownership is an important factor that promotes housing development and encourages residents to improve their housing conditions while insecure tenure in contrast will result in people neglecting to look after their houses and the surrounding environment, leading to the deterioration of the housing environment both physically and socially.

2.4.3.3 Planning and Building Standards Constraints

Housing is seen by many governments in developing countries as part of the welfare state and its network of services intended to meet needs as comprehensively as possible, and to the best possible standards. Specific standards and regulations to control and regulate housing construction and development are enforced mainly by public authorities or other private agencies acting on behalf of government, justified in term of ensuring that new housing or the development of the existing housing stock is based on the quality criteria shown in standards and regulations. However, the standards and regulations usually set by professionals and may not reflect the requirements, aspirations and lifestyles of residents. In many cases there are also unaffordable and are a real constraint facing people in building, extending or improving their housing conditions particularly those among the low-income strata of population. For this reason, Harris (1999) believed that, particularly in rich countries governments usually restrict rather than facilitate the process of housing construction by enforcing building regulations. Some governments in developing countries have revised the standards adopted from western countries in order to make them more affordable and applicable. However, they often remain rigid and unable to give real choices to people in shaping or improving their housing environments based on their resources, needs and aspirations.

2.5 Housing Quality and Residential Satisfaction

Issues of housing quantity and quality have been the main focus of a substantial volume of housing research. Despite this, definitions of housing quality and the meaning and the proper criteria by which it can be measured have remained subject to debate and are

difficult to interpret and understand (Ozsoy et al., 1996, Edwards and Turrent, 2000). In this respect, Turner (1972) argued that housing as a 'product' is more difficult to measure, particularly in relation to the specific physical standards and regulations that are officially set and adopted by public authorities in many countries. For instance, standards concerned with access, habitability, safety and security are seen as the major components of the criteria by which housing quality can be measured in most developing countries. In this respect, habitability means the extent to which an environment supports human life and health, and involves the design of houses to reduce the risk of accidents (Goodchild, 1997).

In other words, from the point view of official authorities, these standards can be seen as synonymous with quality, and adopted as safeguards and monitors of housing quality by public and private institutions concerned with housing development. In most developing countries, for instance, official planning and construction permits and certificates of occupancy issued by public authorities mainly concern physical characteristics. These then become the main tools used to control housing quality (Lawrence, 1995).

It is worth mentioning that the standards used to measure the quality of housing are often set based on the perception of professionals, politicians and economists rather than on the requirements, needs, lifestyle and wellbeing of users. Whereas to Goodchild (1997), the quality of housing has to be considered according to socio-cultural factors based on how people experience the environment around them, how they interact with that environment, and how they judge its suitability in relation to their daily routines and their expectations for the future.

2.5.1 Attributes of Housing Quality

As Goodchild (1997) argued, although different individuals and different groups have different criteria to distinguish between good and bad housing, it is possible to develop common criteria for housing quality. The most important of these might concern flexibility and economy in use, access to other places, privacy, security and appearance.

2.5.1.1 Adaptability and Flexibility in use

Regarding flexibility in use, Goodchild (1997) argued that the internal layout of the house has to be adaptable to accommodate any improvements, alterations and extensions required

to respond to the changing needs, preferences and requirements of occupants. In this respect, the so-called extendable house has many advantages, since it offers the possibility of phased development and payment where people can build and extend based on their needs and financial resources as in the case of the OBH process discussed later in this chapter (Pikusa, 1983, Kardash, 1993). Hamdi (1991:73) stated that:

> "...flexibility embodied a formal recognition that change is an integral part of the performance of building and design agenda. It is a way of making building functionally and symbolically permanent in the context of rapid changes in aspiration life-style, family composition, work habits, and so on."

The importance of the flexibility and adaptability of housing has led many researchers such as Lawrence (1987), Goodchild (1997) and Atlas and Ozsoy (1998) to raise the issue of designs that facilitate high levels of adaptability and flexibility during the occupation of houses. For instance, Pikusa (1983; quoted in Lawrence, 1987:142) stated that:

> "The *inherent adaptability* is built into the initial design, giving the occupant choice through intentional ambiguity, within the fixed physical constraints of a given plan. The plan characteristics make a wide range of interpretations possible and there is a minimum of design features that would inhibit particular choices of use. *Potential adaptability* can be provided for by various design/construction techniques. Historically, the provision of verandahs, undercrofts and roof spaces catered well for the potential adaptability, extendibility and incremental improvement. More recently, non-structural demountable partitions and movable fitting have been also used in housing design to facilitate easy alterations to suit the changing needs of users."

As Lawrence (1987) argued, the lack of choice and personalization experienced in contemporary housing has led many architects to discuss the importance of adaptability and how people can have greater involvement in the design and use of new houses. The importance of adaptability is based on two main socially grounded reasons. The first recognizes the diversity of values and lifestyles of different people at different points in time as well as the fact that people change their values and lifestyles throughout the life. The second recognizes that advances and developments in domestic technology and house appliances have to be accommodated. Such desirable user intervention in housing, as

discussed later, is mainly based on its role in improving the quality of the housing environment and creating a richer and more diverse environment.

2.5.1.2 Economy in Use

Goodchild (1997) argued that 'economy in use' is mainly represented by minimizing the running costs of the house in terms of repair work and day to day use and consumption. He argued that economy in use can be achieved through employing a reputable contractor or builder and good quality materials in the construction of the house rather than adapting a specific construction method.

2.5.1.3 Access to Work and Facilities

One central quality criteria of housing is access to work and facilities. This is mainly influenced by the location of the house and the layout of the neighbourhood. The more residents of a housing scheme are able to gain access to other persons, relevant services and work easily, the more suitable the housing environment considered is (Goodchild, 1997).

2.5.1.4 Privacy

Privacy is seen as another crucial quality attribute of the house as a home. Users should be able to lead their own lives without either interfering with others or being interfered with by them. In this respect, people's ability to avoid problems with neighbours often depends on the type of housing they live in (Altman, 1977, Goodchild, 1997). For instance, high density housing areas may be characterized by flats in walk-up residential buildings where residents have different socio-cultural and demographic backgrounds. Here the ability of residents to maintain high levels of privacy is lower. In contrast, in low density residential areas with detached or semi-detached dwellings people can control and enhance their level of privacy and minimize disputes through, for instance, boundary walls between houses, separate driveways and paths, or front doors that face each other only indirectly.

Privacy is also related to the ability of residents to have some sort of freedom from being overlooked and from noise. Inside the dwelling itself, privacy means freedom from disturbance from either visitors or other household members. The main factor that determines levels of privacy within the home is the rate of occupancy, which is often

determined by household size and the size and the number of habitable and utility rooms in the house.

2.5.1.5 Security

Security in residential areas is another important attribute of the housing quality. Although no specific type of housing environment can be regarded as completely secure and crime-free, problems of security and the prevention of crime particularly in high density housing estates are seen as one of the main concerns of public authorities and residents (Kellett, 1995, Goodchild, 1997). In this respect, the socio-cultural fabric and composition of the residential area and the design of housing and layout of the residential area are seen as the main two determinants of crime rates (Goodchild, 1997, Austin et al., 2002).

2.5.1.6 Appearance and Aesthetic Features

In addition to the aforementioned attributes of housing quality, the appearance and aesthetic features of dwellings and the surrounding environment are seen as another attribute of housing quality. These features are seen as important factors in defining the identity and individual character of a home. In this respect, Bjorklund (1994; quoted in Goodchild, 1997:58) stated that:

> "Views, both outside and within, light and space give character to the home. The home should provide varied experiences not only during the day but throughout the year, providing places with atmosphere and character, be well-lit, exhibit openness and provide seclusion. It is a matter of the orientation of rooms, their inter-relationship, design and lighting, the colour of surfaces and the smell and resonance of materials."

It is clear from the above discussion that housing quality is as much felt and experienced by users, based on their socio-cultural needs and requirements, as it is tested and measured based on officially set standards and regulations.

2.5.2 Residential Satisfaction

From the foregoing discussions, a house should provide its owner or occupier with a sense of fulfilment and develop his self-respect (Murison et al., 1979). Hence, it should be

produced in such a way that can meet these requirements and needs, contribute to quality of life, and achieve the main targets of housing policy. In this respect, Turner (1972:151) stated that:

> "...the vital aspects of housing are not quantifiable at all. The most important 'product' of any human activity is, of course, the satisfaction or frustration of needs."

The concept of residential satisfaction has been employed in many disciplines such as psychology, geography, housing and sociology (Rent, 1978, Glaster and Hesser, 1981a, Bruin and Cook, 1997, Aragones et al., 2002). It has been widely used to understand and assess the relationship between people and different aspects of their residential environment as well as in understanding the household mobility decision process. A good understanding of such relationships, as well as of the main factors that facilitate satisfied or dissatisfied responses is regarded as an important basis for providing environments that satisfy their users' needs and requirements, and can therefore also play a major role in developing successful housing policies (Lu, 1999).

Residential satisfaction is also considered as an important measure in the evaluation of the success or failure of any housing programme. Thus, success of any housing programme should not be based merely on the provision of the required number of housing units, but on the suitability of the resulting residential environment to the needs of residents (Nathan, 1995, Ukoha and Beamish, 1997). In this regard, high reported satisfaction levels are seen as indications of the success of specific policies, programmes or designs (Van Vliet et al., 1985).

Residential satisfaction is defined by many researchers in terms of individual attitudes towards his or her residential environment (Amerigo, 2002). Such attitudinal perspectives, as many researchers argued, have three components of response: affective, cognitive, and behavioural. Weidemann & Anderson (quoted in Altman and Werner (1985:155)) stated that:

> "... People display three general categories of responses to any social object, affective, cognitive, and behavioural. In fact, these three categories also described the potential ways in which an individual can respond to all physical and social-physical objects. Thus, these are the ways that people respond to their home, and

> these are the dimensions available for understanding the evaluation of house as home".

For instance, the affective component of response is used as a synonym of affect. Affect, being the emotional, the positive or negative feeling and an evaluation response of people to the socio-physical environment in which they live (Weidemann and Anderson J. R., 1985, Altman and Werner, 1985). The positive response to the socio-physical environment is represented by the word satisfaction while negative response is represented by the word dissatisfaction. From the perspective which considers residential satisfaction as a cognitive phenomenon, people make comparisons between their actual situation and their expectations and aspirations. People's satisfaction with their residential environment then increases when the gap between their needs and desires is reduced (Canter and Rees K., 1982a, Bardo and Hughey J. B., 1984, Glaster, 1987). Thus, satisfaction can be seen as a fulfilment response which assumes the existence of something to be fulfilled such as needs, desires or aspirations. In this respect, Oliver (1997:13) defined satisfaction as:

> "a judgement that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under or over-fulfilment."

From a behavioural perspective, a mismatch between actual and desired housing creates stress or dissatisfaction with the current residence. As a consequence, people as 'housing adjustment theory' proposes, might respond to residential dissatisfaction by improving their housing environment, moving to another housing environment or by changing their social needs (Rossi, 1955; Glaster, 1987). This point of view was also supported by Lu (1999:267), who stated that:

> "Households with a housing deficit who are hence dissatisfied are likely to consider some form of housing adjustment. They may attempt to make *in situ* adjustments to reduce dissatisfaction by revising their needs and aspirations to reconcile the incongruity, or improving their housing conditions through remodelling. They may also move to another place and bring their housing into conformity with their needs."

The concept of residential satisfaction has also been treated in two distinctive approaches, the "purposive" and the "actual-aspiration gap" (Canter, 1983; Glaster, 1987). Glaster (1987:540) stated that in the purposive approach:

> "People are seen as having certain goals and associated activities directed at the achievement of such goals. The extent to which a given residential environment is perceived as facilitating these goal-directed actions is seen as a statement of their environmental satisfaction. It follows that research must investigate goals, associated activities, and environmental factors".

Many authors have suggested that the 'actual-aspirational' gap approach has been adopted more often than the purposive approach. For instance, Glaster (1987:541) stated that:

> "People perceive salient attributes of their environment and evaluate them based on certain standards of comparison, especially the standard defined by what people believe they may reasonably aspire to. The extent to which there is little gap between perceived actual environment and the aspired to environment provides the measure of satisfaction. The research implications of this approach are that objective features of the environment and personal characteristics that presumably influence perceptions and evaluations must be identified."

2.5.2.1 Residential Satisfaction as a Quality Indicator and Predictor of Behaviour

From a methodological perspective, residential satisfaction can be interpreted as an indicator of the quality of environments for living and as a criterion for user evaluation of the residential environment. In this perspective, satisfaction determines the 'habitability' of a residential environment, which means the level of user satisfaction in living in his dwelling and its surrounding environment. Such evaluation is not seen as static but varies according to time, space, and user characteristics (Glaster and Hesser, 1981a, Onibokun et al., 1989, Amerigo, 2002).

Residential satisfaction can be also seen as a predictor of several behaviours such as residential mobility which is seen as a relevant variable in the individual adjustment process to the level of satisfaction (Newman and Duncan G. J., 1979, Speare, 1974, Glaster, 1987, Altman and Werner, 1985). In this respect, Lu (1999) argued that if people feel dissatisfied with their current housing or neighbourhood, they may consider relocating and actually move to another dwelling. However, the adjustment decisions that might be taken by any household in response to residential dissatisfaction are subject to the constraints posed by the financial resources as well as by available information regarding alternative adaptation opportunities available to the household (Lu, 1999:267).

As Amerigo (2002) argued, a model of residential satisfaction can be built based on the two aforementioned methodological perspectives in which affective (satisfaction), cognitive (perceptions, evaluations, beliefs) and conative (modification of the residential environment, residential mobility) elements are combined together to explain the relationship between individuals and their residential environment (see Figure 2.2). Based on Amerigo's model of residential satisfaction, the objective physical and social attributes of the residential environment become subjective once assessed by the user whose own personal characteristics makes the residential environment more unique and allow him to feel certain degrees of affection or satisfaction towards it. In addition, based on their affective state individuals might engage in certain adaptive behaviours in order to achieve some sort of congruence between their needs and their residential environment. Amerigo (2002) argued that the subjective attributes of the residential environment are mainly dependent on individuals' own socio-demographic and personal characteristics as well as on the comparisons made by individuals between their ideal residential environment and the actual environment. Amerigo (2002:88) stated that:

> "The smaller the gap separating the two environments [ideal and actual], the greater the satisfaction with the actual residential environment will be."

As discussed earlier, satisfaction or dissatisfaction may result from a process by which people attempt to achieve congruence between their needs and goals and what is provided by the social and physical environment (Zimring, 1982). Thus, it can be assumed that residential satisfaction is primarily related to the difference between expectations based on goals and the perceived performance of the residential environment (Campbell et al., 1976, Oliver, 1997).

2.5.2.2 Measuring Residential Satisfaction

Three main dimensions of the residential environment may be considered in measuring residential satisfaction. These are the dwelling, the neighbourhood and neighbours which together comprise the social and physical aspects of the residential environment (Canter and Rees K., 1982b, Amerigo, 2002). It is therefore necessary to find a reliable measurement of residential satisfaction.

The dynamic interaction between the individual and his residential environment makes any assessment of residential satisfaction or any empirical treatment more complicated (Glaster and Hesser, 1981b). At dwelling level, for instance, Carplow (1948) argued that the degree

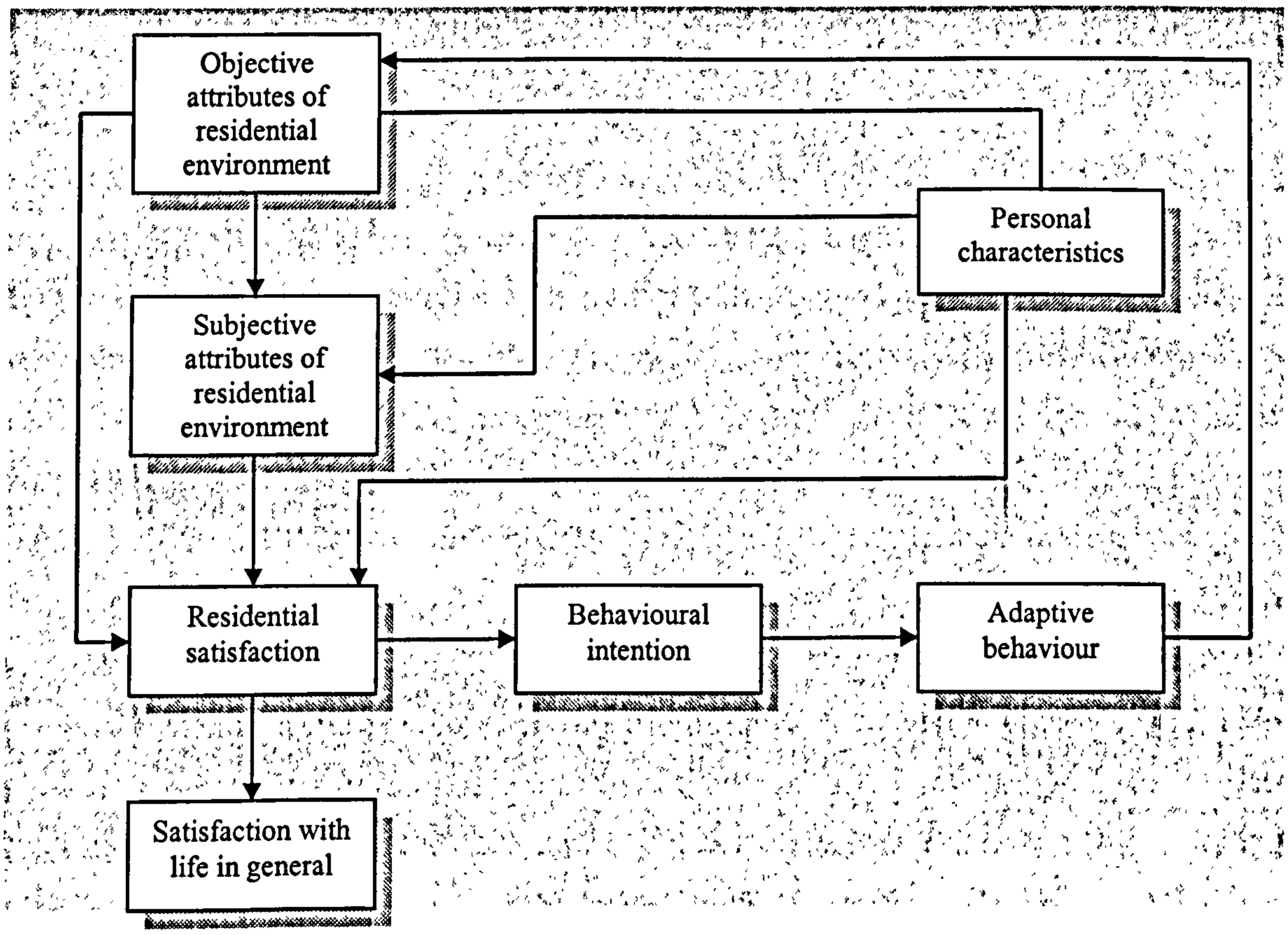
of satisfaction is related to the size, age of dwelling, and its proximity to city centre. He also revealed that owners are more satisfied than renters with their dwellings. The people's attitudes towards their dwellings, as Hartman (1972) argued, might also be influenced by their feelings towards the conditions of their neighbourhoods. However, many scales have been used to measure the degree of satisfaction by means of scales ranging from bipolar to seven point scales or by using a single item that asks subjects directly to state their degree of satisfaction at the home and neighbourhood levels (Amerigo, 2002). For instance, in a bipolar scale respondents are asked to evaluate and rate their living areas as "good" or "bad" places (Hourihan, 1984). Alternatively, seven, five or three point scales have been used by many researchers to measure the degree of resident satisfaction with their dwellings, estates, and surrounding neighbourhoods (Hourihan, 1984, Glaster and Hesser, 1981b, Lansing et al., 1970, Marans and Rodgers, 1975). The five-point scale known as the Likert scale, (very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, and very dissatisfied) has been widely used by many researchers because the degree of satisfaction on this scale can be easily measured. Furthermore, 'ordinal' data measuring people's opinions and satisfaction in such housing surveys can be easily and quickly analysed by using descriptive and inferential statistics.

However, as many authors argue, evaluating and measuring the actual degree of satisfaction of an individual with his/her housing environment merely by asking if he/she is satisfied or not, is impossible without exploring the context in which such a response has been given (Amerigo and Aragones, 1990). As Campbell et al (1976) argued; applying the concept of satisfaction to housing would arise with some problems because individual housing needs and requirements differ from person to person and from time to time. This is because, as Rapoport (1977) argued, such evaluation is influenced by a number of factors such as the respondents' culture, previous experience, level of education, adaptation levels, level of poverty and deprivation, familiarity, and aspiration. Thus, subjective attributes of the residential environment, as Amerigo and Aragones (1990) argued, have to be considered since they determine the degree of residential satisfaction experienced by the individual. However, the quantitative analysis of satisfaction responses is not enough to clarify the situation. Qualitative back-up methods must be adapted because there are many dependent variables related to and involved in such evaluations which are influenced by culture, social identity, and the cognitive dissonance of users (Keul, 1989). Keul suggested that such qualitative back-up can be conducted by means of longer interviews concerning

previous housing histories, social support systems associated with housing, daily routines and leisure periods in and out of the building, and on socio-cultural values with respect to housing. Moreover, using behavioural data obtained from other archival sources, police/crime statistics, for example, is considered as a very important in supporting such evaluation and adding valuable perspectives in this regard.

Finally, measuring residential satisfaction comprehensively is difficult due to the complex and dynamic nature of the relationship between the individual and his environment as well as the multi-dimensional aspect of different components of the residential environment that should be considered in any evaluation process. Thus, there is strong need for using more multi- term scales and indirect items to ensure more reliable results, and using data from other sources seen to provide more support for and to strengthen the outcomes of these studies.

Figure 2 - 2: Model of Residential Satisfaction



Source: Amerigo (2002), p.88

2.6 Housing Delivery Systems in Developing Countries

Provision of adequate shelter to the urban poor has been a major challenge for many governments in developing countries (Pugh, 1991). The main two approaches that governments have adopted to face this challenge are to be the 'Provider' or the 'Enabler'. These approaches differ in the extent and scale of government and dweller involvement in housing provision. They are also different in aim and application.

2.6.1 The Provider Paradigm

The 'provider paradigm' dominated housing provision around the world for some decades, and still does in many countries. Here, the public sector has full responsibility for housing provision and controls the whole housing process in terms of planning, design, finance, construction and allocation. This paradigm has been the core of housing policy adopted by many governments, particularly in the Third World, to control housing provision, aiming to reduce housing deficits and increase the quality of housing especially for low-income households (Hamdi, 1991).

The main justification for governments to adopt the provider paradigm in housing provision is that housing is considered as a welfare matter where all individuals have the right to access housing at certain quality standards that have already been set by the public authorities. In Libya during the early post-revolution era in the 1970s, for instance, the government pledged that adequate housing, like many other basic services such as education and health, would be made available to every Libyan family regardless of ability to pay (Awotona, 1990a, Al-Mighierbi, 2003, Essayed, 1981a). In most socialist countries central government similarly took total responsibility for and control over the provision and allocation of housing (World Bank, 1993). Another justification offered by governments for embarking on the building of mass public housing projects was to fill the housing gaps resulting from increased demand for housing and low supply in the market (Mahmoud, 1993, Hardoy and Satterthwaite, 1989, Macoloo, 1989). Supporters of the provider paradigm such as Bourne (1981) argue that by expanding public housing projects, a wide range of housing needs can be met along with some degree of social mixing, and economies in the provision of public amenities and services can be encouraged and achieved.

Following World War II, government-driven housing strategies and programmes dominated housing policy in most countries across the world, aiming to meet increased demand for housing as well as to improve living standards. For most governments in developing countries, the main aim of housing policies based on the provider paradigm was to provide safe and decent housing for all citizens through subsidizing the building dwellings of high standards (Pugh, 1990). In Nigerian federal and state housing projects for instance, slum clearance and resettlement programmes, the internationally assisted upgrading of public settlements sites and services were undertaken by the government following independence in 1960 to face the housing problem (Ogu and Ogbuozobe, 2001).

The implementation of public housing programs may be influenced by many factors, such as levels of urbanisation and population growth, economic and political agendas, and the ideological priorities of governments (Drakakis-Smith, 1980, Gilbert and Ward, 1985, UNCHS (Habitat), 1996b). Many countries have witnessed rapid population growth particularly in urban areas which has led to remarkable increases in demand for housing. In Libya, for instance, the increased demand for housing resulted from the rapid rural-urban migration following the discovery of oil in the late 1950s. This was seen as one of the motives for the implementation of numerous public-housing projects across the country during the early 1970s (see chapter 5). It has often been argued that politicians in many countries have used expansions in public-housing programmes as a political instrument to gain political and electoral support regardless of the size of resources devoted to these projects and their long-term implications (Drakakis-Smith, 1980, Palmer and Patton, 1988, Hamdi, 1991).

The Failure of the Provider Paradigm

Since the early 1970s, the provider paradigm began to suffer sustained and serious criticism. Many scholars and international agencies saw it as an inadequate and ineffective approach to housing provision which had both quantitively and qualitatively failed to meet the growing housing needs in most countries (Habraken, 1972, Turner, 1976a, Van Huyck, 1987, Mukhija, 2004, Pugh, 1994b).

From a qualitative perspective, the failure of the provider paradigm in meeting housing needs was mainly attributed to its inability to reflect the lifestyles, aspirations and perceptions of end-users who were offered no choice or any sort of involvement in the

process by which publicly provided dwellings were designed and built (Amerigo and Aragones, 1990, Hamdi, 1991, Mukhija, 2004). In addition, various social problems were associated with publicly-provided housing projects, particularly those in the form of multi-storey and high rise blocks such as insecurity, burglary, vandalism, graffiti and lack of management and maintenance. In Libya, the failure of publicly-provided housing projects to provide adequate, sufficient and appropriate shelter for Libyan families was widely noted by many Libyan researchers such as Kezeiri (1984) and Shawesh (1996). For instance, Shawesh (1996:56) stated that:

> "One of the significant problems of public housing design in Libya is that it did not meet the users' socio-cultural needs. This is because the new public housing is similar in many aspects to the European style which ignored the importance of Libya socio-cultural values, such as privacy, security/safety, religious facilities, and prestige."

The problem of the flexibility and adaptability of dwellings built through publicly-provided housing schemes and their failure to satisfy the varying needs of the users was also noticed in Egypt where the mass production of cheaper housing in short periods had always been the main target (Eldemery, 2002). Drakakis-Smith (1980) also noted that in many developing countries publicly-provided housing projects were often located far from sites of employment and in inner cities, which in turn led to severe economic problems for their residents, some of whom were forced to move out.

The failure of publicly-provided housing as based on the provider paradigm was also experienced in many developed countries such as the UK and the United States. In this regard, Cameron and Doling (1994) argued that council housing areas are in general the most deprived and disadvantaged locations in Newcastle and its surrounding areas. Kellett (1987) also noted that problems such as vandalism, theft, graffiti and the destruction of buildings were found in varying degrees in many council estates throughout Britain. As an example, the publicly-provided high rise housing blocks is Killingworth Township in Newcastle upon Tyne in the North East of England were demolished 15 years after construction in 1972, mainly because they were largely rejected by residents for profound problems such as vandalism, burglary, and the obvious destruction of property (Kellett, 1987).

Quantitively, publicly-provided dwellings were always seen as too limited in number and able to serve just a tiny percentage of needy households. This was mainly due to their high cost resulting from the high standards applied to design and construction making them unaffordable to those with limited resources (Mukhija, 2004). Moreover, the huge investment required for public housing became an added cost to the dwellings built; and many governments realized that it was difficult to keep building publicly-provided dwellings on a large scale and on a regular basis at prices affordable to target groups (Hardoy and Satterthaite, 1981, Hamdi, 1991, World Bank, 1993). Thus, researchers such as Mayo and Gross (1987) and Van Huyck (1987) concluded that most public authorities failed to recognize the extent of the financial and administrative capabilities of the public sector to implement the intended public housing projects, as well as the ability of end-users to pay for dwellings which are often expansive (Pugh, 2001).

2.6.2 The Shift towards the Support Paradigm

The apparent qualitative and quantitative failures of the provider paradigm in meeting the housing needs of increased urban populations necessitated a new approach to meet the challenge. This was found thanks to the remarkable results of extensive studies carried out by scholars such as John Turner on self-help housing in squatter settlements in different countries, particularly in developing countries such as those in Latin America, which revealed the capability of residents to build more affordable and adaptable housing. Thus, a new call for adopting a more supportive approach in housing provision began to be raised in the 1970s. Turner (1976b, 1981, 1982, 1990) argued that instead of embarking directly on providing housing, governments should play a more supportive role by giving people more freedom and control over the housing process and facilitating easy access to affordable building resources such as land, materials, credit, standards, basic services and technical assistance so that they could house themselves. Turner believed that by becoming more involved as participants rather than recipients in the housing process, people could satisfy their own housing needs according to their needs and aspirations.

Programmes such as slum upgrading, core housing, and site and services, began to appear in many developing countries as a direct translation of the support approach, with sponsorship from many international agencies such as the World Bank and other governmental organisations institutions and non-governmental (NGOs) (Mukhija, 2004,

UNCHS (Habitat), 1987). The support devoted by the World Bank to these programmes, which aimed to reach low income households who had failed to access the costly publicly provided housing, was mainly based on the willingness and capability of beneficiaries to pay for housing (Mayo and Gross, 1987, UNCHS/ILO, 1995).

The main aims of the support approach were to support and maximize people's involvement and to reduce the direct control of government over the housing process, and to some extent it was sufficient and successful in reaching more low-income households. However, it was still seen as unable to satisfy the housing needs of the great majority of the poor in developing countries (Van Huyck, 1987). This failure was attributed to the unwillingness of some governments to support and fund these programmes since these were regarded as illegal and uncontrolled. Another reason for government reluctance was related to the pressure put governments by private interest groups such as landlords, developers, contractors, and the producers of building materials, whose interests in conflict with those of these programmes (UNCHS (Habitat), 1987).

2.6.3 The Enabling Approach: a Global Strategy for Shelter (GSS)

In response to the apparent failure of the provider approach and the limitations of the support approach in providing housing that could meet the increased demand caused by the teeming urban populations in most developing countries, the city Summit (Habitat II) held in 1996 called for an 'Enabling Approach' in the housing sector in line with the 'Global Strategy for Shelter' (GSS). This enabling approach mainly aimed to have some sort of integration of the roles of all actors involved in housing production such as public agencies, markets and other informal groups and organizations, as well as to improve the functioning of the markets which provide the major building resources of land, credit, labour, materials, and infrastructure (UNCHS/ILO, 1995, Pugh, 1997). In the GSS, governments would concentrate on facilitating easy access to building resources such as land, finance, materials, technical assistance and infrastructure, and would create more realistic regulatory and institutional frameworks to promote people's involvement and participation in the housing process (Hamdi, 1991, UNCHS (Habitat), 1996b, Pugh, 1994a, Pugh, 1994c).

This means that governments had to shift their responsibility in housing production, avoiding the role of provider and taking on the role of facilitator by sharing such responsibility with other private and non-governmental organisations in housing production. Then, the main responsibility of government together with private agencies would focus on investing limited government resources in land supply, promoting housing finance and providing infrastructure, while the provision of housing would be left to the people themselves. Another fundamental requirement for the full and successful implementation of the enabling strategy is to increase public participation, particularly at the local level. Such participation could be achieved through the actual involvement of people in the decision making process and in having greater control over their affairs, and, on the other hand, through the role of public institutions and professionals as innovators and facilitators rather than controllers of housing production (UNCHS/ILO, 1995, Pugh, 1997a). Such public participation is seen as more feasible in the Libyan context since the political system and decision making process in the country is mainly based on practicing the concept of 'direct democracy'. According to this system, all Libyans aged 18 years or more can directly participate in decision making processes regarding all political, economic and social issues at local and national levels in their local Basic People's Congresses (BPCON) (see chapter 4).

Despite the shift towards the enabling strategy, it has been noted that its implementation in many developing countries has been confronted in practice by the inadequate integration and partnership between government institutions and non-governmental actors (UNCHS (Habitat), 1991b, Ogu, 1999). This is attributed to the poor capability of public institutions in performing their roles in this respect. In Libya, for instance, the implementation of the enabling strategy was faced with the incapability of most public institutions in ensuring an adequate supply of housing resources (land, finance, materials and labour) which in turn has meant that many owner-builders and other private investors have been unable to perform their roles properly in housing production, as discussed in the following chapters.

2.7 Owner-Built Housing (OBH): Supporters and Critics

As mentioned in section IV of the Habitat Agenda adopted by the Habitat II Conference held in Istanbul in 1996, people's housing process such as 'Owner-built Housing'[1] (OBH) has been a major contributor in housing provision all over the world, and particularly in developing countries where more than half of the housing stock has been built by owner-occupiers themselves (Row, 1989, Kamara, 1995, UNCHS (Habitat), 1996d). It was also assumed that such a type of housing provision will continue to play a major role in housing provision in the future. According to its advocates, OBH is a process in which the end-users are directly involved and have control over all decisions such as in planning, design, construction and adaptation, and it is seen the dominant way of providing new housing for owner-occupation (Duncan and Rowe, 1992, Duncan and Row, 1993, Capham et al., 1993, Harris and Giles, 2003). It is also recognised as an affordable[2] means for fulfilling housing needs and for socio-cultural satisfaction. Despite the predominance of OBH in most countries across the world, very little is known about state assistance to and support of owner-builders in building their own houses, particularly in developing countries. In this respect, Harris (1999:283) stated that:

> "More commonly in developing nations, owner-builders are ignored. The notion that governments might actually assist the building process is still honoured more in the breach than the observance. It may never be possible to determine exactly where the idea and practice of aided self-help first developed."

The contribution of the aided OBH in housing provision in developed countries during the 20th century was mainly influenced by the size of support and assistance that governments devoted to owner-builders which was itself often influenced by the socio-economic and political character of the state and its relation to civil society (Harris, 1998, Harris, 2003, Ward and Peters, 2007). In this respect, while Britain responded to the devastating effects of the First World War on housing stock by expanding the construction of public housing projects, other countries such as Norway, Germany, Denmark, Sweden, Greece, Italy, Finland, France and Austria witnessed state support for the involvement of hundreds of thousands of families in building their own homes (Harris, 1999). In this section, the

[1] Owner-built Housing (OBH) as defined in chapter (1) is mainly concerned with the housing process where the owner-builder (first occupant) controls the planning and building process of his own home, and acts as general contractor by overseeing the design, financing, and construction of his house.
[2] Affordability, as Aboutorabi and Abdelhalim (2000: 1) argued, can be defined as the ability of households to pay the costs of housing without imposing constraints on living costs.

meaning and degree of user involvement in housing processes such as OBH, and its rationale, justification and practices particularly in developing countries are discussed. In addition, the main concepts used to understand user-controlled housing processes and the main factors contributing to the enhancement of such processes are discussed.

2.7.1 The Rationale for User-Involvement in the Housing Process

Throughout history and before the formulation and centralization of policy, the phenomenon of direct involvement, intervention and participation of lay-people in the production and improvement of their living environment has been common (Harris, 1999a, Shulist and Harris, 2002). Activities in which people build their own homes depending on their own efforts are still carried out in many developing countries (Turner and Fichter, 1972, Turner, 1976a, Ward, 1982, Skinner and Rodell, 1983, Perlman J. E., 1987, Duncan and Row, 1993, Madanipour, 1998, Harris, 1999, Jiea, 2000).

The rationale for user involvement in housing processes such as OBH has been considered by many researchers in the field of housing studies. Such involvement is seen essential in order to produce more affordable and appropriate housing environments that can satisfy the socio-cultural needs of residents (Bhatt and Navarrete, 1991, Sanoff, 2000, Duncan and Row, 1993). In this respect, Wilkinson (1999) believed that the involvement of residents in all decisions concerned with the production of their own houses and their surrounding settings will result in more satisfactory environments which are more adaptable to resident needs. However, the main motives that might encourage people to become self-providers of their own housing are not necessarily concerned with their desire for self-expression, self-fulfilment and autonomy, but to the fact that control over the design and construction of their houses is for many people seen as a more affordable means of home ownership and for getting the desired quality of housing (Duncan and Row, 1993, Turner and Fichter, 1972). In this respect, Duncan and Rowe (1993:1341) stated that:

> "Few households explicitly use housing self-provided [owner-built] as a means to self-development or self-expression. The prime motive for the majority is simply to obtain good quality housing at lower cost."

The affordability and cost advantages of user-involvement in the housing process, is mainly related to the OB's ability to reduce the total costs of housing or amounting to much

the same thing, to obtain larger and higher quality housing for a given expenditure (Duncan and Row, 1993, Turner and Fichter, 1972). The reduction of the total costs of construction, as discussed later in this chapter, mainly results from spreading construction costs based on the accumulation of finance and from the unpaid labour (sweat equity) devoted by the OB in managing and overseeing the construction of his house.

The rationale for user involvement in the housing process includes ability to give a sense of proprietorship[3] to the residents involved, which leads them to look after and improve their housing environment (Towers, 1995, Kowaltowski, 1998, Kowaltowski et al., 2005). Thus, as Sanoff (1990b) argued, user satisfaction is not only based on the degree to which people's needs have been fulfilled but on the extent to which people have influenced all decisions concerned with the fulfilment of these needs (Sanoff, 1990b). The impact of people having no participation or control in the housing process is summarised well by Turner (1976a:6), who stated that:

> "When people have no control over; nor responsibility for key decisions in the housing process, on the other hand, dwelling environments may instead become a barrier to personal fulfilment and a burden on the economy."

This rationale for user involvement in the housing process can be called for the need for empowering and enabling people to be more involved because such involvement will be meaningless without any power to influence the relevant decisions (Cooper and Rodman, 1991). Two significant principles namely have to be considered in this respect, the political and humanistic. Politically, all rights of users in having their own voice regarding all decisions concerning their housing have to be recognized. The aim here is not to empower people to have only a greater say in overall decisions concerned with housing production, but in having actual influence on the decision making process involved in their housing (Beheshti, 1986). The humanistic principle of empowerment, on the other hand, is more aware of the duty that professionals have towards designing buildings that are habitable providing a sense of territoriality and on an appropriate scale, as well as towards

[3] Proprietorship is defined as an unincorporated business that is owned and operated by only one person who has complete liability for all assets, and complete rights to all profits. (Source: http://www.advfn.com/money-words_term_3907_proprietorship.html)

developing neighbourhood and city plans that facilitate a large degree of participation for people in all activities such as housing, open spaces and transportation.

Based on the above discussion, Habraken (1979) argued that it is unjustified for professionals to allow the rich to build for themselves while the poor are left with no option other than access to unaffordable or unacceptable mass housing. He emphasized that in spite of the difference in their economic circumstances, professionals have to recognise that people often have the capability and the willingness to manage their own residential environment and to invest in their housing for better quality lives.

2.7.2 Approaches to User Involvement in the Housing Process

According to its advocates user participation in the housing process is seen as a means of giving residents a feeling of self-importance and control. In this respect, Goodchild (1997:60) stated that:

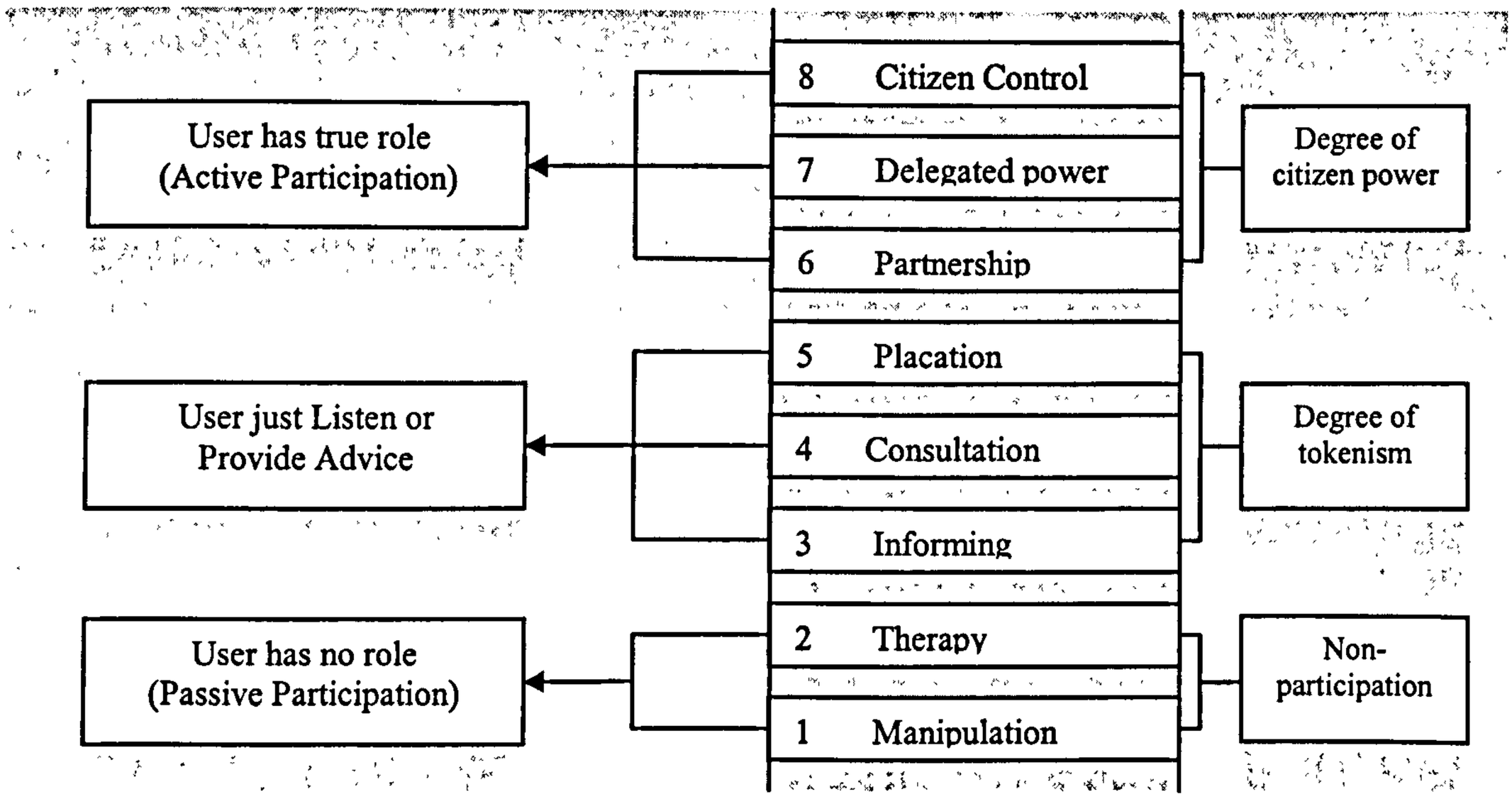
> "Participation, it is said, promotes democracy, personal development and initiative. It increases the accountability of fossilised professions and public services. Participation in housing design is desirable in itself, especially for low income people that possess few other ways of either influencing their environment or influencing the administration of public services."

User participation or involvement has been classified by researchers into different degrees and levels based on the extent to which users have power and influence on decision making processes. For instance, it has been classified into eight steps or three main levels based on what has been called the "ladder of participation" (Arnstein, 1969, Julian et al., 1997, Skinner, 1984, Swan, 1980).

As Figure 2.3 shows, the bottom level consists of two steps (manipulation and therapy) representing a situation in which users have no participation in decision making processes and are only passive recipients. The second level includes the three steps of informing, consultation, and placation and represents a condition in which users either listen or can give some advice to decision makers. Finally the third level also consisted of three steps partnership, delegated power, and citizen control and this represents the real and active level of participation in which users have total control over the process and can directly influence the formulation of policy. In practice, however, many professional-oriented

and/or institutionalised approaches to user involvement in the housing process have been proposed and applied in many developed and developing countries since the 1930s.

Figure 2 - 3: Ladder of People's Participation as Developed by Arnstein (1969)



Source: adapted from Towers (1995:158)

2.7.2.1 Approaches to User Involvement Applied in Developed Countries

These approaches have been applied in developed countries for many purposes, such as achieving a just society or to fight urban blight in inner cities in the USA (Albrecht, 1988, Cockburn and Barakat, 1991). Three main professional-oriented participatory techniques are used in making lay people more involved in the design and production of their built environment. These include communication techniques, involvement in decision-making processes, and 'hands-on' participation (Towers, 1995). Communication techniques were mainly based on distributing or collecting information from users through questionnaires to be used by professionals in developing design proposals. The proposed designs can then be displayed and explained by designers to the public with little or no option for discussion. Involvement in decision making processes was based on allowing residents to be involved in discussion and debate whether in the form of public meeting, small groups or one-to-one meeting between citizens and designers. Finally, hands-on techniques were based on using packages of visual designs and models in order to enable prospective residents collectively to generate alternatives for site layout and housing designs. Other methods were also

applied in this respect such as 'Community Action Planning' [4] (CAP), 'Open Building'[5] and 'Self-help'[6] schemes aiming to make prospective residents more involved in the design and implementation of development programmes.

2.7.2.2 Approaches to User Involvement Applied in Developing Countries

The main approach to user involvement applied in developing countries was the self-help housing approach which began to be recognised from the 1960s onwards. This was mainly as a response to the failure of mass housing schemes in providing appropriate and affordable housing for the targeted population particularly those among the low income strata of society.

The main reasons for scholars such as Charles Abrams (1964) and John Turner (1976b) to advocate supporting self-help initiatives was that people who used traditionally to house themselves could afford to build their own houses if they were supported by the state in getting access to building resources such as land, materials and technical assistance that they could not provide for themselves (Marcussen, 1990, Prakash, 1991, Choguill, 1995, Parnell and Hart, 1999). For this reason, self-help housing schemes were seen as the correct approach for solving the acute urban housing deficits in the growing cities of developing countries (Turner, 1976a, Pugh, 1993a). The widespread "sites-and-services"[7] and "core houses"[8] schemes were seen as genuine interpretation of the idea of self-help

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[4] Sanoff (2000) argued that "Community Action Planning" mainly concerned some sort of coalition between government institutions and departments and non-governmental and community groups. It often takes the form of an event that is usually organised by a multidisciplinary team of specialists and lasts generally between 4 to 5 days. Such planning process often continues by follow-up meeting until the proposed ideas are fully implemented.

[5] The "Open Building" programme was developed in response to the failure of mass housing projects in the 1960s in giving a real choice to users. Based on definition proposed by Gann et al (1999:2), Open Building is *'a set of principles aimed at delivering wider choice to residents through using industrial component parts'*. Since the structural frames are separated from internal elements in the Open Building approach, it will be easier for residents to make, adapt and maintain different layouts with very little disruption to structural and cladding systems.

[6] "Self-help schemes" as Towers (1995) argued were largely dependent on the principles of housing cooperatives and took many forms starting from 'self-build co-operative' which came to an end upon the completion of the house construction and allocation or in the form of 'tenant co-operative' for the purpose of managing existing housing.

[7] "United Nations Centre for Human Settlements UNCHS (Habitat) in 1990 regarded "sites-and-services" schemes as attempts to provide affordable and acceptable housing for the urban poor in developing countries by providing fully serviced plots while leaving the construction of the shelter to the owner/occupant who could then develop his/her house.

[8] The notion of "core-housing" was proposed by Abrams (1964:176) based on assumptions regarding "sites-and-services". He argued that, the ability of householders to build their own houses was limited by the distant location of household from construction site which either forced the household to invest its limited funds or to build a shack on the site of construction or to commute from their locations to contribute their labour in

housing in developing countries (Laquian, 1983, Laquian and Yeh, 1979, Lusugga Kironde, 1991, Mathéy, 1991, Monahan, 1979). In the case of sites-and-services schemes, for instance, prospective residents are allocated plots which are serviced by basic infrastructure and through making use of loans issued from local authorities; the allottee can then pay for the plot, buy materials and pay hired builders (Peattie, 1982). These loans have to be repaid in monthly instalments over a certain period of time normally ranging from 10 to 30 years (Choguill, 1995). Abrams (1964:177) mentioned different kinds of core houses that can be produced in mass and then the contribution of prospective residents can take place from that point forward:

> "the one room core for small families in very poor countries; the two room core to be expanded horizontally for the growing family; the core that can be added to vertically; the row house core, the front and rear of which is expandable; and the core built as part of a compound."

To ensure a full implementation of the core housing schemes as proposed by Abrams (1964), certain principles were set. For instance, the core house should be of an appropriate size to accommodate the typical family from the beginning, and has to be designed in a way that can be extended by the trained household or more likely by local contractors. In addition, it has to be owned by the household with loans being made in instalments for both the original core and the extensions. Moreover, it has to be built on a plot of sufficient size to accommodate expansion and alternative plans. Furthermore, it has to be designed to be comfortable with respect to climatic conditions and built using materials that allow extensions which are supplied and produced locally. Finally, the core house should have access to water and sanitation from the time of occupation.

2.7.2 The Failure of Professional-led Participatory Approaches

Turner (1993) argued that none of the aforementioned participatory housing processes in the developed countries achieved their intended goals, and their application was often misdirected. This argument was supported by Day et al (1998:13), who stated that:

> "The encouragement of community participation has been a proliferation of tools and techniques promising 'success' in bringing it about. These have been

construction. Thus, he proposed that a room should be built on the site where the family could live while they extended the house as resources became available.

> formulated with varying degrees of elaboration, and some are packaged in very attractive and glossy good practice. Yet none of them provide the complete answer."

The failure of these approaches has been attributed to their failure to redistribute power among all participants. In this respect, they were incapable of adequately representing all community members since only self-selected sections of the population were able to express their opinions while less influential people had no authority in these processes (Sanoff, 1990b). Another shortcoming of these approaches was lack of communication and wide gaps between the values and interests of residents and those of professionals, which in turn led to a lack of real participation in the decision making process (Albrecht, 1988, Turner, 1993, Onibokun et al., 1989). The results of the process were often based on what the professionals wanted rather than on participants' needs (Lawrence, 1982). Added to this, the lack coordination among participants made the participation process ineffective in many cases due to bureaucratic constraints that discourage residents from being involved and utilizing their own initiative (Hamdi, 1999).

In developing countries, the adoption of the western-inspired participatory approaches in dissimilar socio-cultural and economic contexts met many problems. For instance, the implementation of self-help housing approaches and especially sites-and-services schemes was unable to satisfy the housing needs of the target population. In this respect, the application of inappropriately high standards for these schemes made them unaffordable to the great majority of potential beneficiaries. As Harris (1999) argued, through enforcing building regulations governments are actually restricting rather than facilitating the process of building construction.

In addition, the actual user was almost always ignored and excluded from the design and planning process in these schemes (Prakash, 1991, Bhatt and Navarrete, 1991). This led many professionals to make faulty assumptions about the socio-economic characteristics of prospective beneficiaries, which in many cases resulted in inappropriate designs and the adoption of unsuitable methods for plot allocation.

Moreover, it was clear that the recovery of cost became a central concern in the design process in these schemes, while the social aspects of design were almost completely neglected. For instance, the eligibility criterion and conditions and guarantees required by

financial institutions made the building loans inaccessible and unaffordable to many poor applicants (Marcussen, 1990). Furthermore, most self-help housing schemes were based on the idea of utilizing the beneficiary's labour or what is known as the 'sweat equity' through training programmes aiming to reduce the total cost of construction. However, in many cases the cost of training prospective residents exceeded what was saved through the labour input of the beneficiary. On the other hand, most of those who were in receipt of building-loans from public financial institutions regarded these loans as grants and felt it unnecessary to pay them back (UNCHS (Habitat), 1991b). Another shortcoming associated with the implementation of self-help schemes in developing countries was corruption among mediators between public agencies and intended beneficiaries who provided goods and services in these schemes. In many cases, these treated their provision of these goods and services to clients as favours, and often hindered any direct dealings between the public organizations and the intended beneficiaries that would affect their roles.

It is clear that the application of the aforementioned participatory housing processes aiming particularly to deal with the housing problems of the poor revealed many shortcomings whether in terms of the efficiency of the process itself or its outcomes. Thus, the conclusion is justified that these participatory housing processes were inadequate for solving this problem (Sivam et al., 2001). In many cases, the involvement of prospective residents in planning and design was insufficient, and was mainly dominated by the interests of professionals and public agencies. Thus, the results were often unsatisfactory and unacceptable to the intended beneficiaries. Accordingly, the need for a more adequate housing process where the involvement of the user would be more effective in a way that would produce more satisfactory residential environments became urgent. In response, the UN Habitat II City Summit held in Istanbul in 1996 called for new strategy in the housing sector capable of improving the living environments of people. The next section discusses the 'user-controlled housing' process as an alternative to the participatory processes.

2.7.3 The User Controlled Housing Process

The main justification for the 'user-controlled housing' process is its ability in facilitating more control for prospective users rather than professionals over the design, production and shaping of residential environments. Thus, it is regarded as a real example of people's

participation and involvement in decision making processes and as a bottom-up process rather than as an end product. Carmon (2002:288) stated that:

> "The word housing in the term 'user-controlled housing' is not a noun but rather a verb ... associated with the process of creating and/or changing one's home, a process that may never end. The word 'control' is related to decision-making regarding the design and production of a new home or to introduction of changes in an existing home."

Carmon believes that user-controlled housing is a process in which not only professionals and developers but also users have control over decisions concerned with the design, construction and renovation of their homes. From this point of view, the user-controlled housing process is not a top-down process or an end-product but rather a bottom-up process in which people control the whole process of building and adapting their own houses in ways that match and fulfil their socio-cultural needs.

2.7.3.1 The Desirability of a User-Controlled Housing Process

Many scholars have proposed the adoption of the 'user-controlled housing process' as an appropriate housing process through which people can satisfy their own housing needs and produce satisfactory and adaptable residential environments. Its underlying principle is mainly related to the quantitative and qualitative benefits that this process can provide for people themselves and for society as whole, which can be summarized in the following points:

– People are the real experts concerning their actual needs and aspirations

As mentioned earlier, concerning people throughout history have built and improved their own residential environment based on their own socio-cultural needs and depending on their own efforts (Lawrence, 1992). Added to this, people have been able to continue practicing building and improving their residential environments without any intervention by professionals (Habraken, 1986:140). Moreover, people should be regarded as the real experts concerning their actual needs, resources, priorities and expectations and through such knowledge and expertise people are able to make an infinite variety of housing possible (Turner, 1996). Furthermore, Beheshti (1986) stressed that people are capable of taking better social and political decisions when principles concerned with citizen

autonomy are followed. Thus, they should have real control over the entire production and adaptation process of their residential environment while professionals should encourage and support them in this respect.

– Both process and end-product motivate individual and social well-being and satisfaction

It is believed that user-controlled housing is the only way through which the satisfaction of the socio-cultural needs of users is ensured and that the achievement of a better quality of life is guaranteed. Turner (1978:1141) stated that:

> "When dwellers control the major decisions and are free to make their own contributions to the design, construction, or management of their housing, both the process and the environment produced stimulate individual and social well-being."

Thus, people's control over the process of designing and building their homes and shaping their surrounding environments should result in producing a compatible environment to their needs and this would enhance their psychological well-being, and improve their sense of self-esteem and community cohesion as well as increasing the sense of belonging and interdependence. This has many potential social advantages for deprived individuals and households (Levy-Leboyer, 1982, Turner and Fichter, 1972, Friedman et al., 2000, Goodchild, 1997).

– An affordable and economic process

By adopting methods in which the end-user has control over all decisions, the costs of constructing dwellings amount to only a fraction of the burden of supplying finished houses by conventional means (Burns, 1983). Added to this, the costs of housing construction are more affordable, particularly to low-income people, due to the incremental nature of the house construction process which allows the owner builder with limited financial resources to spread out the costs of building according to the accumulation of finance. Affordability can also be achieved by reducing the total cost of construction through the unpaid labour or 'sweat equity' provided by owner-builders themselves in undertaking unskilled construction tasks such as arranging house design and obtaining permission, as well as buying, supplying and loading materials or managing construction

work. These contributions reduce the cost of unskilled labour and other management costs (Duncan and Row, 1993, Friedman et al., 2000).

As Duncan and Rowe (1993) argued, the desirability of the user-controlled housing process such as that practiced in 'self-provided housing' is not only concerned with the lower costs of construction; but also in its ability in enhancing security of tenure. Such affordable ownership that such housing processes facilitate would offer the opportunity to increase housing quality by encouraging people to invest more in house construction and to strive to improve their housing conditions incrementally over time in consonance with their evolving social and financial situation using good building materials and producing cheap and high quality housing (Payne, 2001, Turner, 1976a, Duncan and Row, 1993). Accordingly, user-controlled housing is seen as more reliable and efficient economically than conventional and centrally-managed housing in maintaining the ever-changing relationships between residents and their residential environments where massive investments are made by residents in building and improving their own homes and neighbourhoods compared to those made by the state (Turner, 1993). These economic advantages of user-controlled housing processes have become a topic of increasing interest to governments across the world in periods of economic difficulty where affordability problems lead to attempts to shed responsibility for social housing or publicly-provided housing whose production is so expensive (Duncan and Row, 1993).

– The resulting residential environment is more flexible and adaptable

With the user-controlled housing process the resulting housing product is more adaptable to the changing needs of people due to the incremental nature of the process involved based on the changing needs of users (Sanoff, 1990a, Carmon, 2002). Thus, all the user-controlled work and interventions that beneficiaries undertake in improving their housing conditions and renovating their housing environment should result in the residential environment being more adaptable to satisfy their changing housing needs and in increasing the usable life of the houses (Carmon, 2002:290).

– Prevention of neighbourhood decline and deterioration

User-controlled construction and renovation tasks have a real impact on preventing the decline of neighbourhoods. For instance among seven central run-down neighbourhoods in US cities, only one had mean housing values that were much higher than surrounding

areas. This was mainly because it was developed through a self-help programme starting in 1961 which helped families to build their houses (Carmon, 2002:290). At the dwelling level, the lower cost of user-controlled housing processes improve access by low-income households to home ownership and also offer the opportunity to increase the quality of housing incrementally (Duncan and Row, 1993).

2.7.3.2 The Application of User-Controlled Housing Processes

Despite the ongoing debate in most developed countries since the 1990s regarding the importance and rationale of user-controlled housing processes, it is obvious that the great majority of people are still far from having real control over the design and construction of their own houses (Carmon, 2002). The main factor behind the inability of people to control their housing process, as Carmon (2002) argued, is mainly related to rigid institutional and regulatory systems that control the housing sector, particularly in relation to the specialisation and management of the construction workforces in these countries. This system keeps most tasks involved in the design, construction, management and maintenance of housing totally under the control of public institutions and professionals with little control is left to residents.

It is evident that a substantial part of the production and renovation of housing in developing countries is largely controlled and carried out by residents themselves due to their willingness to undertake and control the processes through which they can be housed or improve their housing conditions (Turner, 1993). Such willingness is clearly obvious in the continuous efforts and the substantial allocations that people are happy to devote individually and collectively from their own savings aiming to build their own houses or improve them through alterations, extensions and renovations. Strong social relationships among family members and between families play a notable role in providing support for individuals and families in satisfying their housing needs (Dayaratne, 1992).

In this respect, Turner (1972) noted that people are often less willing to improve their dwellings in subsidized PPH schemes, while the same people will be eager to make extraordinary sacrifices in building and improving their own home. In this respect, Turner (1972:163) stated that:

> "The reluctance of families to pay for, or even to maintain, apartments in subsidized projects is baffling to the observer with conventional views when confronted with the fact that the same families make extraordinary sacrifices in the building of their own homes."

An obvious example of the user-controlled housing process in developing countries is that practiced in informal settlements. The user-controlled housing process is here seen as more capable of satisfying the housing needs of residents than those provided through centrally-controlled housing programmes such as PPH projects or sites-and-services schemes (Bijlani, 1988, Bhatt and Navarrete, 1991, Turner, 1996). It has been estimated that informal settlements in developing countries accommodate between 30 to 70 per cent of their populations. Added to this, it has been estimated that about 64 per cent of housing stock in low-income countries and up to 85 per cent of their newly produced housing is unauthorized (UNCHS (Habitat), 1996b:200).

From an economic perspective, Turner (1976) argued that the dwellers of informal settlements are able to work since many squatter settlements were originally built close to places of economic activities. Moreover, informal settlements are seen as more adaptive and responsive to their residents' socio-cultural needs. In this respect, Hardoy and Satterthwaite (1989:8) stated that the:

> "Rapid growth of illegal settlements in and around cities can be viewed not as the growth of slums but, in a very real sense, as the development of cities which are more appropriate to the local culture, climate and conditions that the plans produced by the governments of these same cities."

Two main reasons underlie the belief that the housing process practiced in informal settlements is more responsive to residents' needs. The first is concerned with its ability to provide flexible access to buildable land to prospective house builders, where the formal system has in contrast failed to ensure an adequate and regular supply of urban land for housing (Fekade, 2000). Such informal land development in informal settlements was recognized by the 'Global Conference on Access to Land and Security of Tenure', held in Delhi in 1996, as an affordable solution for the urban poor to access land. The second reason is related to the incremental nature of the house building process in these settlements which enables people to satisfy their housing needs in stages based on their

financial capacities (Keyes, 1980). Such an incremental housing process in informal settlements is seen as more affordable for the urban poor who are free to use whatever materials and labour they can afford to build their own houses (UNCHS (Habitat), 1991b).

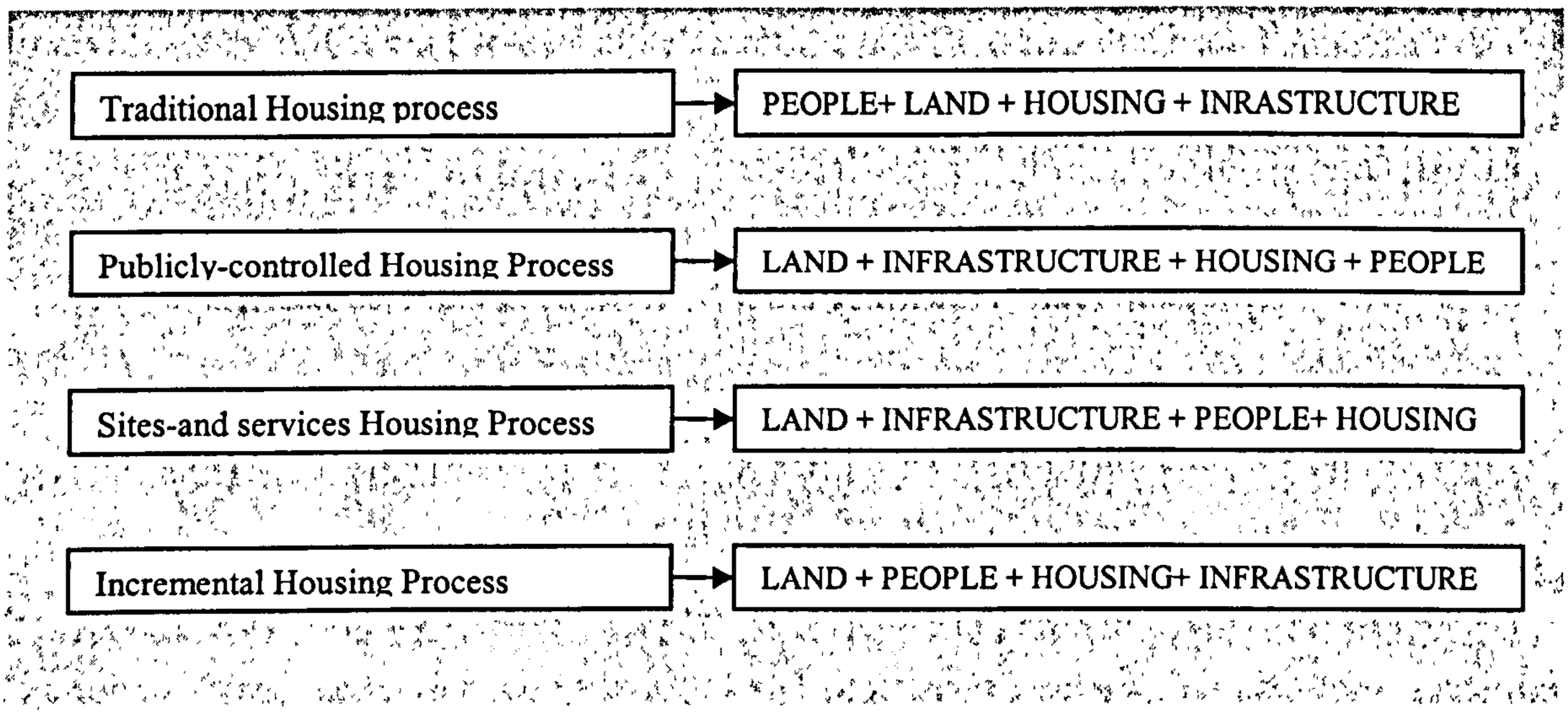
Despite the aforementioned advantages, the lack of proper infrastructure such as sanitation and clean drinking water in these settlements along with unsecured tenure are the main problems associated with their development. Lack of infrastructure leads to many environmental problems whereas unsecured tenure make these settlements subject to evacuation and demolition at any time since they are regarded as illegal by public authorities (UNCHS, 1991). Thus many people may be unwilling to improve their houses in these settlements given their feelings that their stay is doubtful due to the lack of secure tenure. The importance of secure tenure in having more quality housing has been mentioned by many scholars such as Turner (1996) who argued that in addition to the accessibility of land, security of tenure is essential for the development of good quality housing. Nowadays, however, access to informal land has become more difficult across the Third World due to the commercialization of land and growing state controls over the land markets in these countries (Angel and Pornchokchai, 1990, Gilbert, 1992).

2.7.3.3 The Need for a More Responsive User-controlled Housing Process

Bearing in mind the lessons learned from the shortcomings associated with the publicly-controlled housing approach and those associated with sites-and-services schemes as well as the problems of insecure tenure in informal settlements, the call for more responsive user-controlled housing processes began to be made by scholars across the world. In this respect, John Turner indicated in the UNCHS 'Habitat' in 1991 to revert to the traditional housing processes in proposing solutions for housing for those with low income. As Figure 2.4 shows, the housing process suggested by John Turner is mainly based on the traditional housing process of informal settlements where the house construction is undertaken in stages according to the financial capacity of the household, while infrastructure and services are provided and improved incrementally. The suggested approach for this 'incremental housing development' is based on viewing housing as a process rather than a final product and where a real opportunity is given to people to create more responsive, adaptable, and satisfactory residential environments.

An example of 'Incremental housing process' was that practiced in 'Khuda-Ki-Basti incremental housing scheme' adopted by the Hyderabad Development Authority (HDA) in Pakistan in 1984 on the outskirts of the city. This scheme was intended to cater for the lowest income group of that community who were in desperate need of shelter, and was based on the idea that people should settle before the construction of houses and the development of infrastructure. Once settled, they could construct their housing and infrastructure incrementally, as and when they had the required resources. This scheme avoided the restrictive governmental process with its allotment procedures, allocation of loans against land mortgages or land/property ownership provision for speculative purposes replaced by unconventional and innovative approaches. The new procedures included targeting needy households, simplifying bureaucratic procedures, optimising the choice of relocation, providing basic urban services incrementally through community involvement, providing housing credit facilities to every household, creating direct links and relationships in the communities and regularly monitoring the development process.

Figure 2 - 4: Traditional and Modern Housing Processes



The implementation of this incremental housing scheme had many shortcomings such as the lack of choice that households had in selecting the locations and sizes of their plots. In addition, the one year fixed construction period set by the HDA for households to complete the construction of their houses was found to be impractical since it did not consider the financial capacity of beneficiaries. Moreover, the imposition of high standards of development as a means to protect the public health was seen as impossible because it would be unaffordable to low income households who would then prefer to live in illegal

and substandard settlements. As demonstrated by the development of this scheme, households can improve the quality of their housing conditions in the absence of high standards based on the availability of resources. Furthermore, the corruption and misuse of power practiced by many elected community members with regard to loans was considered as another problem associated with the development of this scheme. It was found that many loan beneficiaries used their loans for purposes other than in building their houses.

In the light of these shortcomings in the 'Khuda-Ki-Basti' scheme, a more responsive housing process was urged by the 'United Nations Centre for Human Settlements' UNCHS in 1991. It was suggested that the role of public authorities in this process should concentrate on the process of plot allocation, because intervention in subsequent stages of the housing construction process would make beneficiaries too dependent on their authority. It also would facilitate corruption among elected representatives and other NGOs involved in the housing process who would serve their own and their leaders' interests. Accordingly, it was suggested that beneficiaries should be selected in groups from squatter settlements which would not otherwise be upgraded rather than selecting them as individuals from different areas from all over the city. It seems that such a housing process would follow John Turner's approach based on organising people before their settling in the new area (UNCHS (Habitat), 1991b).

People → Land→ Housing→ Infrastructure

2.7.3.4 Current Practice in User-controlled Housing Process

Various approaches have been introduced and practised in developing countries since the early 1990s with regard to user-controlled housing. The most important of these approaches are explained as follows:

2.7.3.4.1 Housing Process as Home Making rather than House Building

Prakash (1991) argued that the housing process should be seen as 'creating homes' rather than building houses. Thus, people as prospective residents rather than professionals can accomplish the design and management of the construction of their own houses. He based this on the notion of a similarity between 'living organism' and the 'design process' that could

create what he calls 'living architecture'. In this respect, he argued that the essence of a flower is not its form alone, nor in that neither of its parts, nor for that matter in its fragrance or colour, but in the underlying living organism which is at the same time structure and function: product and process.

Based on this argument, Prakash (1991) believes that housing designs that undertaken by people should be capable to cope with the creation of a building as natural system which allows variation and changes to take place harmoniously without affecting the building as a whole. In addition, the construction process can be a dynamic, self-correcting, adaptive and evolving process requiring no monitoring or inspection to maintain it in a healthy condition. Moreover, enabling and allowing people to utilize their resources can lead to more richness and variety in the residential environment. This characterized earlier eras and has been lost in the modern era of industrial expansion. He stressed that this process has to be managed and guided so as to be more creative. He believes that, despite the longer duration of the user-managed construction process; it is able to keep the costs of construction at their lowest possible levels.

2.7.3.4.2 Housing Process as People-controlled Process supported by State

This process is based on the notion of a support-based approach in which, as Dayaratne (1992) argued, the state should contribute and participate in the people's process instead of people being asked to participate in the process of the state. Thus, the notion of participation is different from that mentioned above in so-called participatory approaches where people are allowed to participate in the state's housing process. Instead, here, the state has to support the people's own housing process. This means that the production of housing has to be undertaken by people utilizing their own resources and efforts, while the state plays the role of supporter keeping its intervention at a minimum level and maximizing the people's intervention and control over the housing process.

Dayaratne (1992) argued that state support could be in the form of securing tenure and providing easy access to building resources (such as land, fund, and materials). In this approach, the design process does not proceed according to the architect's agenda, but rather is created and located by people and hired artisans during the process of building and in the act of use. This means that the role of the state is mainly to provide support to people when they need it. Thus, the people are seen as more involved emotionally, socially, and

physically and are enabled to create their own residential environment. The means of construction and types of materials are mainly selected by residents themselves according to their needs and priorities and construction is completely coordinated and managed by the house owner. Despite the aforementioned advantages of this type of housing process, it is clear that the overall planning of new settlements still depends on professionals since the layout of plots and public spaces is entirely left to them (Dayaratne, 1991).

2.7.3.4.3 Housing Process as a Self-selection Process

The process centres on the main principles of informal housing processes of 'autonomous growth' and 'continuous development' (Bhatt and Navarrete, 1991). Accordingly, in this process the user has to be involved at all stages of design at the dwelling and neighbourhood levels. Continuous development means that the construction process is mainly undertaken incrementally as an 'on-going incremental development'. In this respect, the settlement plan is mainly determined in response to residents' needs and requirements. Added to this, the selection of plot location and size is undertaken by households based on their preferences and their ability to pay. Moreover, infrastructure is gradually constructed where designers can steer families in the desired direction. Bhatt and Navarrete (1991) believed that this would overcome the problems of inadequate infrastructure in informal settlements, as well as preventing the neighbourhood development from adopting the artificial order of other housing processes while still able to give such developments a coherent character. Thus, such a housing process is considered more responsive to users' needs as well as being cost-effective because it requires less investment to be made by the formal sector in the development of infrastructure as well as on the design, development and maintenance of residential areas. However, the most important shortcoming associated with the self-selection housing process concerns the financial capability of beneficiaries as a criterion in selecting plots. In other words, those with limited financial resources will be prevented from selecting the desired size of plot that suits their needs.

2.7.4 Criteria for the Success of the House Construction Process

Extensive research has been carried out since the early 1980s on the criteria by which a construction project can be regarded as successful. Many researchers have stressed that a construction project might be considered successful if the building is completed on time, within budget and to specific quality standards and overall client satisfaction (Chan and

Kumaraswamy M., 2002). From the point of view of Pinto and Slevin (1988a) and (1994), project success criteria is influenced by the political, economic, social, legal and environmental factors, thus, it should be defined at the outset of the project. In this respect, strong political influences could have a great impact on project funding and extra funding would ultimately help to speed up both the progress of construction work and the use of good quality materials and components for the project. This in turn could result in producing more successful outcomes. Added to this, for well-managed process, building resources required for house construction such as land, finance, materials and labour as well as the official permits and approvals must be synchronised and monitored to ensure that sufficient quantities of the appropriate quality of these resources arrive at the specified place at the required time (Calvert, 1995).

However, Morris (1997) argues that the evaluation of success criteria changes over time and that some kinds of judgement of the success of a project can only be made at the end of the project, and even sometimes many years after the project has been completed. Assessing project success at the end of the construction process, in terms of the end product is as Morris and Hough (1987), Turner (1999) and Lim and Mohamed (1999) argue, not logical. These authors suggest that more focus has to be put on the process in assessing the success of the project by highlighting the assessments of all stakeholders. By giving attention to the process rather that to the end-product in assessing the success of construction projects, better quality outcomes can be attained.

However, Lim and Mohamed (1999) argued that a distinction has to be made between success criteria and success factors. They view success criteria as sets of principles or standards by which a construction project can be judged successful, while success factors are the set of requirements, circumstances and influences that contribute to the success of the project's outcome. In this respect, Pinto and Slevin (1988a) and (1988b) identify efficiency and effectiveness measures for project success. The efficiency measures are concerned with strong management and internal organisational structures concerning time, budget and specifications. On the other hand, effectiveness measures are concerned with user satisfaction, because delivering a project on time and within budget according to standards and specifications may not satisfy the needs and aspirations of the end-user.

In the case of the OBH construction process, for instance, although the end-user is the owner of the project and acts as the manager of the construction work, other stakeholders such as public authorities and private actors (designers, builders, and material suppliers) are involved in the project. Thus, they have great influence over the process and the outcome. For instance, the quality of house construction is closely related to the quality of the design which often involves the degree to which the features of the final product conform to the client's needs (Yasamis et al., 2002). Quality of design, in this respect, is seen as crucial for project success since inadequate designer-client communication often results in unsuitable designs, which are a major cause of changes made during construction, contributing to delays and increases in construction costs. Thus, by having a full understanding of the needs, aspirations and financial capability of the prospective end-user, the designer can ensure the building of affordable, adaptable and satisfactory dwellings. In this respect, the designer has to think about the house not as a finished product but as an adaptable structure that has to be capable of accommodating the alterations and extensions which may be required to meet the changing needs and aspirations of occupants (Habraken, 1979).

2.7.5 Main Concepts of the OBH Process as a User-Controlled Housing Process

From the aforementioned discussion, the following concepts regarding the OBH process can be extracted:

2.7.5.1 People used to do and can do more for themselves

It has been argued that through human history people have built their own houses as a natural activity in their lives and through such activity they were able to satisfy their needs and have a better quality of life (Turner, 1978, Keyes, 1980, Ward, 1982, Skinner and Rodell, 1983). In addition, through their control over all decisions in the house construction process, people are able to build low-cost housing that suits their financial resources, and they can look after and improve the quality of their housing.

2.7.5.2 Failure of publicly-controlled housing processes

It is obvious that all centrally-controlled housing processes have been incapable of providing the proper solutions for housing problems and have quantitatively and

qualitatively failed to satisfy the variety of needs of populations all over the world, particularly in developing countries (Turner, 1976, 1987 and 1996).

2.7.5.3 Housing is a process, not an end-product

Considering housing as an end-product or commodity leads to the exclusion of viable initiatives for people and precludes the opportunity to satisfy their needs. Instead, housing has to be considered as an on-going process where people are the active actors who should have real control over all decisions concerned with its construction and improvement (Turner, 1996).

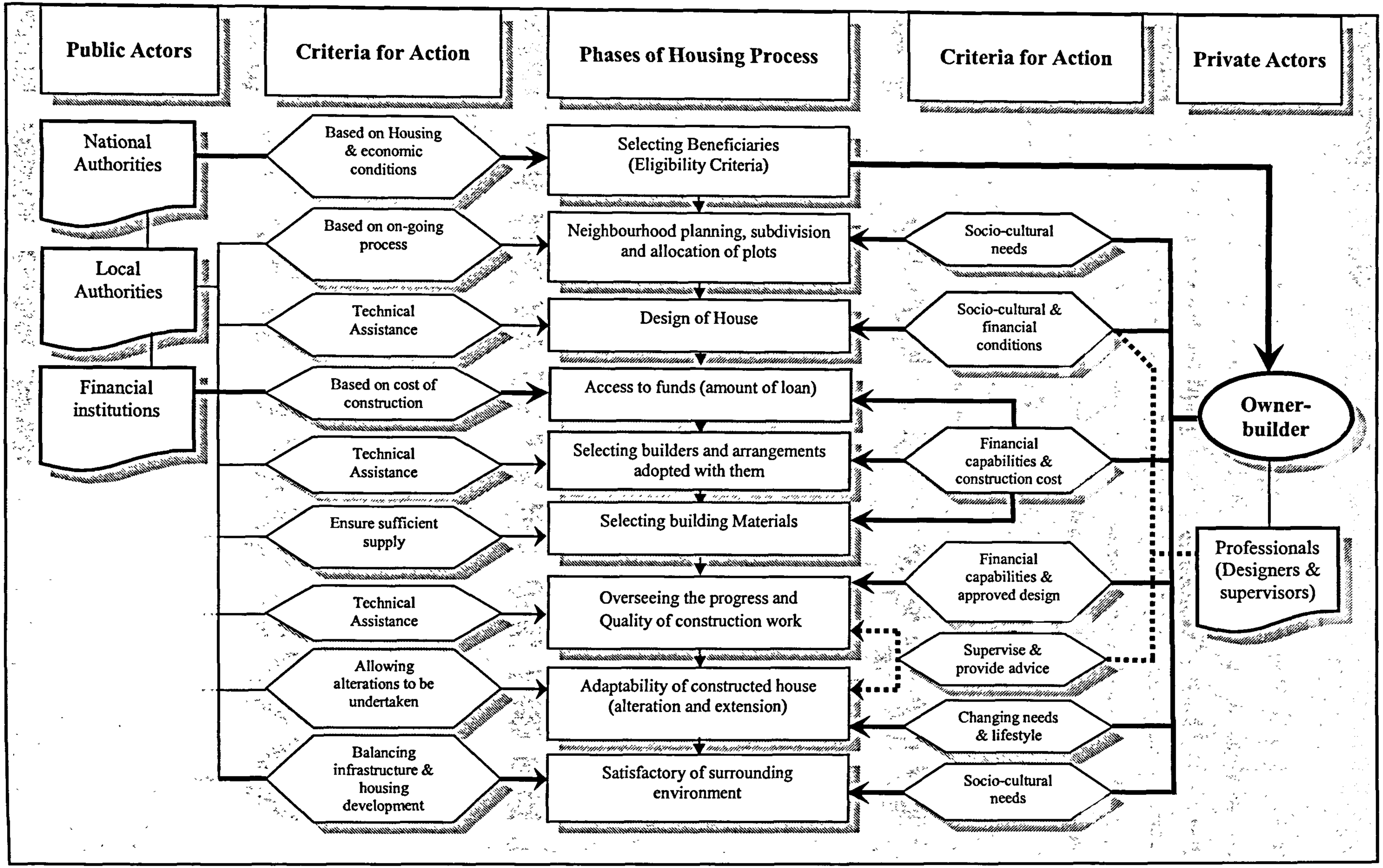
2.7.5.4 The House-building process should be self-managed

The failure of publicly-managed housing processes, as mentioned earlier, is mainly attributed to ignorance about people's ability and willingness to manage and control their housing. The success of self-managed housing processes is due to the ability of owner-builders to keep the costs of housing production at their lowest levels and to promote and enhance the quality of housing. Thus, beneficiaries of OBH process should be identified based on their needs and housing conditions. The planning, subdivision and allocation of plots should be made based on the socio-cultural characteristics of OBs. The design of houses should be totally controlled by OBs and to be made to satisfy their current and future socio-cultural needs and preferences with technical support provided by professionals. Access to sufficient fund from financial institutions should be provided to OBs based on cost of construction (labour and materials) rather than on their income. The construction work has to be totally managed by OBs and carried out incrementally based on financial capabilities of OBs who should be provided with easy access to building information and technical assistance. The resulting residential environment should be adaptable by allowing residents to carry out changes in their homes to satisfy their changing needs and preferences with technical assistance. At neighbourhood level, the provision of basic infrastructure has to be carried incrementally in line with the development of house construction.

2.7.5.5 Successful housing process produces adaptable and satisfactory environment

Enabling the owner-builder as the end-user and the owner of the project to act as the manager of the construction and consolidation work of his own house would produce adaptable and satisfactory residential environment capable of accommodating the changing needs and aspirations of occupants. Other stakeholders such as public authorities and private actors (designers, builders, and material suppliers) involved in this process should provide the owner-builder with easy access to building resources and technical assistance. Figure 2.5 illustrates a conceptual framework for the OBH process and the main roles undertaken by public and private stakeholders involved in the production and adaptation of the resulting OBH environment.

Figure 2 - 5: Conceptual Framework of OBH Process



2.8 Conclusion

In this chapter the concept of housing and its role in the socio-economic development of society as well as meaning of house and home have been discussed. In addition, the meaning of housing as a process and an end-product as well as dimensions of housing needs have been considered. Moreover, the criteria for assessing housing quality and the relevance of residential satisfaction in measuring the success and failure of any housing programme have been explained. The main approaches to housing provision adopted by governments across the developing world and their efficiency in meeting demand for housing were then discussed. Following this, the meaning of and rationale for user involvement in the housing process were introduced. It is clear from the discussion in this chapter that housing processes in which the end-user is more involved and has complete control over the whole of construction are more responsive to people's needs and aspirations compared to centrally controlled and managed housing processes. Thus, based on the conceptual framework developed the role of the state and professionals has to be concentrated on facilitating access to building resources and ensuring secure tenure as well as providing advice and technical assistance upon the request of the owner-builder. Through facilitating easy access to building resources and allowing more control to be exerted by people over the construction process of their own houses, a housing process can act more responsively to people's needs and aspirations and can encourage them to invest and utilize their own resources and efforts to build more satisfactory residential environments and to incrementally improve the quality of their housing. The next chapter discusses and justifies the manner in which the study was approached and carried out.

Chapter Three:

Research Methodology

Chapter Three

Research Methodology

3.1 Introduction

The purpose of this chapter is to discuss and justify the manner in which the study was approached and carried out. In addition, it aims to illustrate the operational framework of data collection, analysis and interpretation. The chapter begins by explaining the criteria by which the research design was selected and the main characteristics of this selected design. Then, it describes the methodological tools used to gather the data required during the fieldwork. Following this, the techniques adopted to analyse the data gathered from different sources are described. Finally, the main limitations of the methodology and obstacles confronting the researcher in conducting this study are explained.

3.2 Developing an Appropriate Research Design

Once the main aim and derived objectives of the study are determined and the research questions are raised, a coherent and systematic research design and methodology appropriate for carrying out the investigation should be established. The function of research methodology, as defined by De Vaus (2001:9) is *"to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible"*. It is believed that the selection of an appropriate research design that can identify accurately the framework, by which the required data can be collected, analysed and interpreted, would enhance the credibility, validity, and the reliability of the study's findings. These are the main criteria for good quality research (Denscombe, 2002). In this regard, the study's findings and results have to be trustworthy and believable to be considered credible, and should be derived from facts and supported by strong evidence to make it valid which in turn provides reliability to the study (Wiersma, 2000).

There are many research designs and methods, from which any interested researcher in the field of social science can select, but the selection of an appropriate research design depends mainly on the nature of the objectives and questions that the study seeks to achieve and answer (Hakim, 1987, David, 2001, Hakim, 2000). In this respect, De Vaus

(2001) argued that, similar to developing a work plan for a building where the type of building, its uses and the needs of the occupants have to be identified by a builder or architect first, in social research the process of designing questions, selecting tools for data collection and methods of sampling should come after a clear identification of what evidence needs to be collected in order to answer the research question, to test a theory, to evaluate a programme or to accurately describe a phenomenon (De Vaus, 2001). In addition, Yin (2003:20) described research design as *"the logical sequence that connects the empirical data to the study's initial research questions and, ul1timately, to its conclusions"*. Thus, it seems obvious that selecting the proper research design is a key factor in carrying out the study since it must coordinate its objectives, reasons, specifications, and the nature of data required within the actual limits of resources available to the researcher. The importance of selecting the proper research design was also mentioned by Hedrick et al (1993:38) who stated that:

> "Selecting a research design is a key decision for research planning, for the design serves as the architectural blueprint of a research project. It ensures that the data collection and analysis activities used to conduct the study are tied adequately to the research questions and that the complete agenda will be addressed".

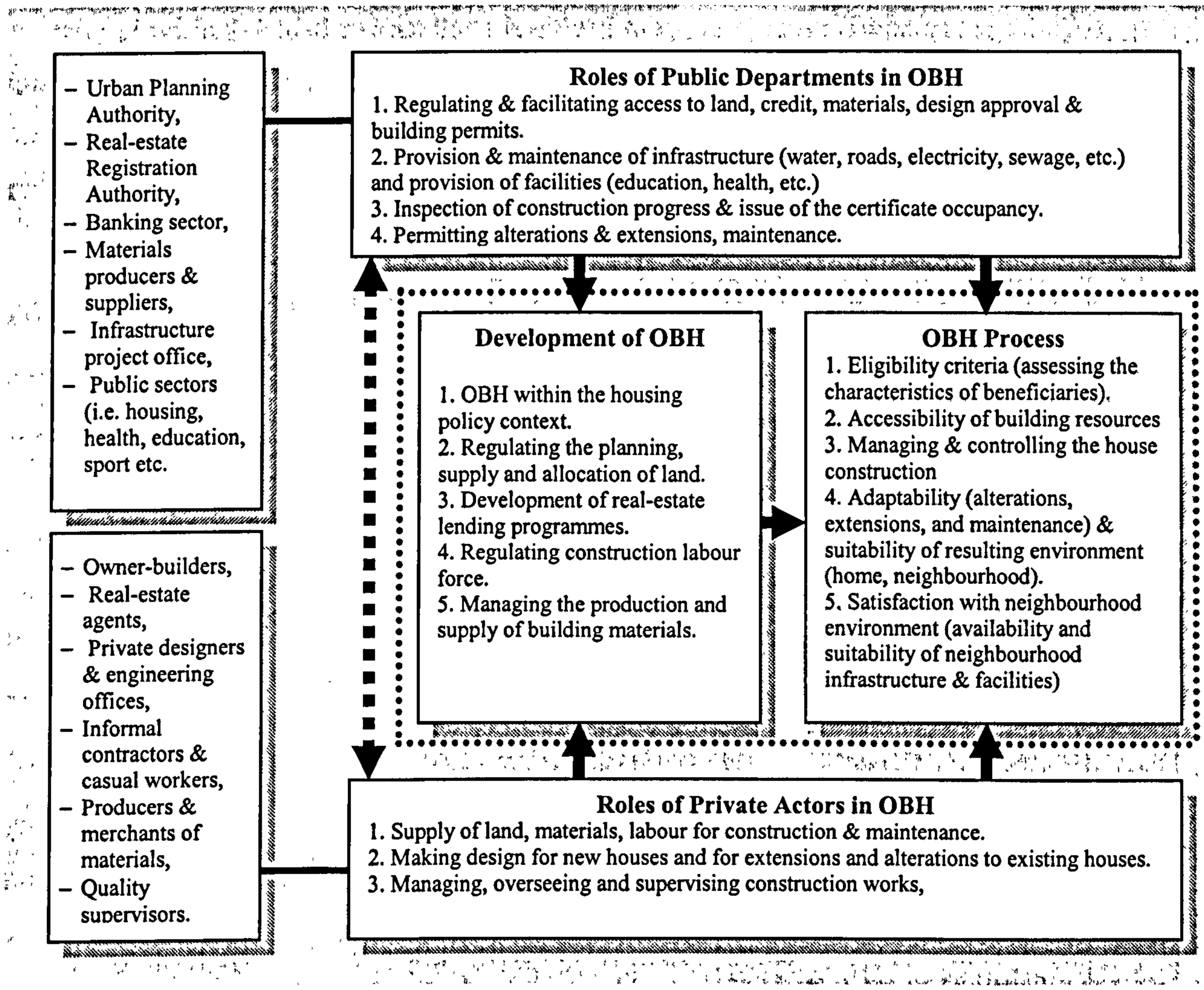
Accordingly, the selection of an appropriate research design for the current study has to consider its purpose, the nature of issues and the type of data required to address these issues at the macro and micro context of the study.

3.2.1 Identifying the Key Aspects of OBH in Libya

As discussed in chapter 2, the characteristics of OBH process can be easily distinguished from those of the PPH process. In this respect, while the beneficiaries (end-users) of the PPH process are seen as passive recipients of the resulting environment where the design and construction of dwellings are entirely carried out by professionals, the beneficiaries of OBH process are seen as having a major role in and control over most decisions concerned with the design, construction and adaptation of their own houses. Despite the advantages of the OBH process, it seems that the development of such process and the ability of OBs to build and adapt their own houses, as discussions made in preceding chapters revealed; is to large extent influenced by the roles played by and the level of integration and cooperation

between all public and private actors and agencies involved in the OBH process. Figure 3.1 highlights the key aspects of the implementation framework of OBH in Libya.

Figure 3 - 1: The Implementation Framework of OBH in Libya.



Thus, having a better understanding of the implementation of OBH in Libya over the past three decades and exploring the extent to which owner-builders have succeeded in building their houses has to consider the macro and micro context within which the OBH has been developed. This means that there is a need to identify key issues, factors, and variables of OBH that need to be investigated at the macro and micro levels.

3.2.1.1 Key Issues of OBH Development: Macro Level

To have a better understanding of the implementation of OBH in Libya, the study at the macro level has to address and investigate the socio-economic and regulatory environment

within which OBH has been developed and regulated over the period covered by the study. This investigation has to consider the socio-economic and political changes in the country over the past three decades and their impact on the formulation and implementation of public housing policies and particularly on the performance and contribution of OBH to housing provision. Added to this, there is a need to explore the development of the main building resources (finance, land, labour and materials) over the period covered by the study and the main regulations affecting the accessibility and availability of these resources.

3.2.1.2 Key Issues of the OBH Process: Micro Level

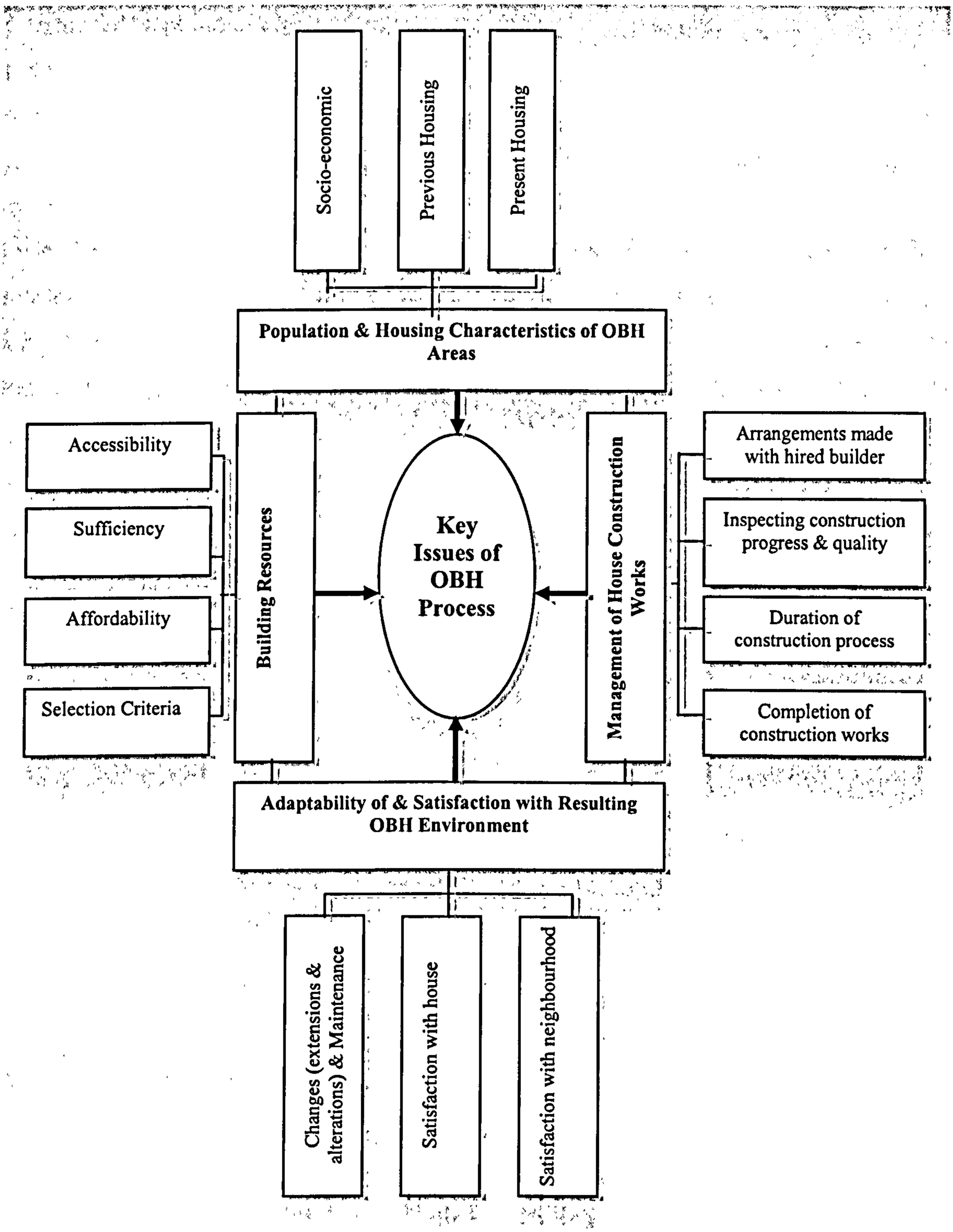
At the micro level, the exploration of the nature of the OBH process and the extent to which OBs over the past three decades have succeeded in building their own houses has to involve examining the accessibility, sufficiency and affordability of building resources (land, design, finance, building materials, and labour) to prospective OBs and the impact of this on the ability of OB in managing the construction of his own house. Moreover, it has to involve the assessment of the socio-physical quality of the resulting OBH environment in relation to the adaptability of constructed dwellings and the degree of satisfaction with constructed dwellings and the surrounding environment.

Thus, at the micro level, as Figure 3.2 illustrates, the investigation has to be guided by the following set of sub-questions:

- What is the regulatory framework for the OBH process?
- What are the socio-economic and housing conditions of the beneficiaries of OBH?
- How accessible are the building resources to OBs; and what are OBs' attitudes towards access to these resources?
- How do OBs manage and control the construction phase of their houses, and what are their attitudes towards the house construction process?
- How do OBs adapt their houses and to what extent are they satisfied with the resulting environment at the home and neighbourhood levels?

In order to answer the aforementioned questions, it is important to identify the main variables and indicators related to the OBH process that need to be investigated, and which have resulted from the problems identified by the study together with the results of the review of the literature.

Figure 3 - 2: Key Issues of OBH to be Investigated at the Micro Level.



6.2.1.2.1 Key Variables and Indicators of the OBH Process to be Investigated

It seems obvious that the aforementioned issues involve complex, multidimensional and interrelated dependent and independent factors and variables (socio-cultural, economic, institutional, regulatory and managerial) which have to be considered in the carrying out of this study. The complex nature of such issues is also due to the involvement of public and private actors in the implementation of OBH in Libya. Thus, factual and attitudinal information has to be gathered from the beneficiaries of OBH (owner-builders) and from other key figures involved in the OBH process (designers, planners, finance lenders, materials suppliers, builders, etc.) concerning the issues to be investigated. This is seen as very important in developing a full understanding of the nature of the OBH process and the key factors influencing its development. Table 3.1 illustrates the main variables and indicators related to the investigation at the micro level.

Table 3 - 1: Variables and Indicators of OBH Process (micro level)

Main Issue	Variables and indicators to be investigated
Socio-economic & Housing Characteristics (Respondent & household)	Respondent's & household socio-economic characteristics
	Previous housing conditions (typology, tenure)
	Present housing conditions (size of dwelling, source of ownership, availability of basic utilities, reasons to move from previous residence)
Main Issue	**Variables and indicators to be investigated**
Access to Building Resources (availability & affordability, sufficiency, criteria of selection)	Motives for building the house
	Access to land (source of plot, waiting duration if it was allocated)
	Design & building permit (criteria for selecting designer, factors affect design, amendments made to design, waiting duration for permit)
	Builder (criteria for selection, type of labour employed)
	Financing construction (estimated & actual costs, sources of finance & main source, building-loan as source of funding (reasons for getting loan, source and amount, waiting duration for loan, repayment status, sufficiency of loan to complete construction), role of personal and family savings in total cost of construction
	Materials (main suppliers of materials, source of materials, criteria for selection, waiting duration for getting main building materials

Main Issue	Variables and indicators to be investigated
Management and Control of House Construction Process	Owner-builder's background in construction
	Type and form of arrangement made with hired builder
	Status of inspection & supervision during construction, factors influencing supervision of construction works, qualification of supervisor
	Disputes with hired builder (type of and reason for disputes)
	Duration of construction process (reasons for any delay experienced before commencing construction or any suspensions of construction works experienced during construction phase.
	Completion of house construction (status of constructed house at moving-in, construction tasks not completed, getting certificate of occupancy, satisfaction with constructed house at moving-in)
	Main problems encountered during construction, overall impression towards construction process, preferences towards house construction
Main Issue	**Variables and indicators to be investigated**
Adaptability of & Satisfaction with the Resulting Environment (Home & Neighbourhood)	Adaptability of constructed house (type and reasons for changes (alterations and extensions) and maintenance)
	Satisfaction with constructed house (type, size, privacy, interior and exterior finishing, size and use of setbacks, location), most disliked and liked features in house, rating the current house compared to previous one, preferred type of housing.
	Satisfaction with surrounding environment (location of neighbourhood facilities, condition of open spaces, safety and security, relations and interaction with neighbours, aesthetics and cleanliness, availability and quality of facilities, road network and public transport), most disliked and liked features in neighbourhood, rating the present area compared to previous one, features preferred to be found in current area, preferred area to live in

3.3 The Need for a Macro-To-Micro Analytical Framework

> "...the development process, as a social process, is best understood by addressing both individual actions and the structures that frame these actions. That understanding this process will not be complete without addressing the social and physical contexts in which it takes place." (Madanipour, 1998: x)

Based on the implementation framework for OBH in Libya and the key issues and variables need to be investigated, it was seen as essential that the analytical framework adopted has to involve a hierarchal sequence in order to cover the aforementioned macro and micro levels of investigation. This decision was largely motivated by the conclusion in chapter 2 that the diversity in academic interpretations of housing process in which the

end user is involved in the planning, design and construction such as that practiced in OBH, necessitated that any analysis of this housing process should embrace an awareness of the context in which it operates. This means that the exploration and assessment of the extent to which OBs have succeeded in building their own houses (micro level) in this study has to be done in conjunction with exploring the socio-economic changes and trends in housing policy during the period covered by the study (macro level). Without such a macro-to-micro analytical approach, it is assumed that the collection, analysis and interpretation of data in this investigation would be hollow and confused.

3.3.1 Selecting a Case Study Approach for the Research Design

Due to the complexity of the issues and variables under investigation in the current study, it was concluded that relying on a single research approach would be insufficient in providing comprehensive results. Added to this, relevant data related to these multi-dimensional issues and diverse types of variables could not be captured using only one source of data. Thus, the use of a research design that combines theoretical and empirical research approaches and multiple methods and techniques of data collection and analysis was seen as essential to deal with the exploratory nature of the investigation at such a level of complexity. In this respect, the theoretical approach is mainly generated from the review and discussion of the relevant concepts and theories concerned with OBH and its key factors and issues. On the other hand, the empirical approach is mainly concerned with exploring the implementation of OBH and the extent to which OBs have succeeded in building their own houses in Libya over the period covered by the study. Such exploration was mainly based on gathering factual and attitudinal information from OBs and other key figures involved in the design and implementation of OBH (such as land suppliers, designers, builders, materials suppliers, etc.). This required the establishment of a coherent and systematic analytical approach that could facilitate and simplify the process of data collection, analysis and interpretation.

Hence, the adoption of a case study approach; was seen as the most appropriate analytical research design that could combine the theoretical and empirical research approaches and translate the key-issues and factors identified theoretically in chapter 2 into a practical framework that can facilitate its investigation empirically. The adoption of a case study design, as Yin (1994) argued is often attributed to the investigator's desire to understand a complex social phenomenon such as that in this study. He believed that a case study

approach is preferred when the researcher has little control over events in the study when its focus is on contemporary phenomena in a real-life context. In this respect, Yin (1994:3) stated that:

> "In brief, the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events such as individual life cycles, organizational and managerial processes, neighbourhood change, international relations, and the maturations of industries."

The case study method has been adopted by many researchers in the field of housing studies such as Turner (1976a), Lawrence (1987), Kellett (1995) and (2000), Tipple and Wills (1991) and Tipple, et al. (1999) and . Thus, it was believed that this approach is a very powerful analytical approach in facilitating and ensuring that the required data relevant to the issues under investigation could be obtained, accurately interpreted and understood within the scope of current research.

3.3.2 Adoption of Multiple Sources of Data Collection and Analysis

One of the key advantages of the case study approach, as mentioned earlier, is related to its ability to deal with complex issues and in combining multiple techniques of data collection and analysis. The use of multiple methods of data collection and analysis is not only attributed to the nature of the study but also to the characteristics of these methods from which the researcher can select in gathering and analysing the relevant information in order to answer the research questions. In this respect, there has been considerable debate among social researchers, such as Ragin (1994), Babbie (1998), Wiersma (2000), Bryman (2001) and Tashakkori and Teddlie (2003), regarding the proper use of the two main methods of data collection (quantitative & qualitative). This debate is mainly centred on the nature of the data required to achieve the objectives of any study and on the level of representation for each method. In this respect, Ragin (1994:26) stated that *"The choice of data collection techniques is in large part shaped by the nature of the research questions. All these techniques can yield enormous amounts of evidence".*

Typically, qualitative data, which can be collected from open-ended, semi-structured interviews and observation, are often influential in exploring and describing individual behaviour, experience and feelings accurately through in-depth investigation within limited

case studies. Added to this, data obtained via qualitative techniques are seen rich in detail since they are able to sustain interaction with people (target group) in their own language and territory (Tashakkori and Teddlie, 2003). Despite these advantages, qualitative techniques have some methodological weaknesses, such as participants' behaviour going unrecorded by the observer (researcher). Added to this, it seems difficult for other researchers to know how interpretations were made by the observer from the field-notes. Moreover, although rich information can be derived from qualitative techniques, in most cases, as Tashakkori and Teddlie (2003) argued, such information does not lend itself to testing using statistical inferences.

On the other hand, quantitative research in which data are often gathered through questionnaires, structured interviews, and numerical checklists can be statistically analysed and presented, and are considered to be outcome oriented. Thus, it is seen as more appropriate if the research deals with large numbers of respondents and implies the application of measurement or a numerical approach (Hammersley, 1992, Black, 1999). Thus, results are seen as more representative of the total population and would maintain a high level of validity. However, quantitative techniques also have their own disadvantages. For instance, analysis techniques such as correlations used in quantitative research are unable to prove causation between variables. Added to this, quantitative studies are often lacking in contextual realism due to the use of extensive statistical analysis. Another disadvantage of quantitative techniques is that concerned with the distrust for the tools used in data collection (i.e. structured interviews, experiments...etc.) which are often unable to capture the phenomenon under investigation (Tashakkori and Teddlie, 2003).

Bearing in mind the aforementioned strengths and weaknesses of quantitative and qualitative data, it seemed clear that relying on only one of them was inappropriate in investigating interrelated issues such as those in the current study. Thus, the use of combined methods of data collection and analysis, the researcher believed, would strengthen the reliability and credibility of the study's findings. This argument is supported by Tashakkori and Teddlie (2003:518), who stated that:

> "A combination of both qualitative and quantitative research strategies enables researchers to have greater faith in their findings and make greater contributions to the field."

The use of a combination of quantitative and qualitative sources of data, as many researchers believe, was also seen as suitable and appropriate for the particular questions raised in the study (Tashakkori and Teddlie, 2003). In the current study, the use of multiple sources of both quantitative and qualitative methods, in data collection and analysis known as triangulation, was intended to achieve the study's purpose and answer its research questions. In this respect, quantitative data was used to highlight and demonstrate the practices, assessments, and preferences of OBs towards the OBH process, whereas qualitative data was integrated with quantitative data to provide in-depth observation and to support and clarify these attitudes and assessments. This would provide reliable and practical results that can be used by all actors involved in the implementation of OBH to promote this mode of housing provision in Libya and make it more responsive to the needs and aspirations of residents.

In terms of implementation, as Creswell (2003) argued, it is up to the researcher to gather both quantitative and qualitative data in phases (sequentially) or at the same time (concurrently) as in this research. The research interests play a major role in determining whether one type of data will be used and emphasised over others in the research and analysis. Added to this, integration of the quantitative and qualitative data can be done during the collection, analysis, and interpretation of data (Creswell, 2003:212). In this study both types of data are integrated in the data collection, analysis and interpretation stages to answer the research questions raised.

It was believed that using a combination of quantitative and qualitative methods of data collection in this study would enhance and enrich current knowledge by filling in the gaps concerned with the implementation of OBH in Libya, which the adoption of a single approach would be unable to do. This conclusion is supported by Tashakkori and Teddlie (2003:524), who stated that:

"... A combination of research approaches will maximize knowledge yield and widen the scope of research contributions by management and organisational researchers."

3.3.3 Selection of the Study Setting

As Wiersma (2000) argued, the selection of specific setting to conduct research has to be done based on the site characteristics that make it appropriate for the research purpose. This study aims to have a better understanding of the implementation of OBH over the past three decades. It also seeks to investigate the impact of trends in housing policy in Libya on the contribution of OBH in housing provision and on the ability of OBs in building and adapting their own houses, and therefore it was essential to carry out the investigation in a city that could reflect these consequences.

3.3.3.1 Selection of the City: Benghazi

Benghazi city is the second largest urban settlement in Libya, and one of the chief seaports on the African coast of the Mediterranean. It was selected as an appropriate setting for the current study that could reflect the development of OBH over the period covered. The selection of Benghazi city was based on the following criteria:

- Benghazi represents a typical Libyan city in terms of socio-economic changes, size of population, urban growth, residential development, and, most importantly, the expansion of OBH activity witnessed over the past three decades (see chapter 7).
- Accessibility to and familiarity with the city and its residential development stemmed from the fact that Benghazi is the author's home town, where he worked as an urban planner and has been involved in many public and private activities concerned with the urban and residential development of the city for more than thirteen years. Thus, the advantage of researcher familiarity with the city was seen as of great benefit since it would provide him with access to the required data and relevant documents from government departments concerned with the study's purpose.
- Finally, although Benghazi is the second largest urban settlement in the country, the city has largely been neglected in the field of research particularly, in relation to urban and housing development. Thus, it was believed that selecting Benghazi as the setting for the current research would help in filling the existing gap of knowledge regarding the city's development.

3.3.3.2 Selection of the OBH Environment

Since Benghazi was selected as an appropriate setting for the current investigation, the question regarding selecting certain OBH neighbourhoods within the city to conduct the micro level of investigation was raised. The selection of OBH neighbourhoods where the sequences of housing policy change (macro level) and its impact on all aspects and variables concerned with the extent to which OBs have succeeded in building and adapting their own houses (micro level) could be examined was based on the following criteria:

- Firstly, the neighbourhoods selected had to be entirely devoted to OBH, where all plots were initially planned for the benefit of potential OBs who were not in possession of habitable house and were aiming to build their own houses for their own use,

- Secondly, the neighbourhoods selected should be adequately capable of reflecting the development of OBH in the city over the period covered by the study (post-revolution years since 1970 onwards). In addition, they should reflect a convincing picture of the accessibility of building resources (land, finance, labour, and materials), management and control of house construction and adaptation, and levels of satisfaction with the resulting environment,

- Thirdly, all documentary and archival data concerned with the development of the selected OBH areas required for conducting the empirical work should be available and accessible. Added to this, the availability of help from one or more of the residents in these neighbourhoods was seen as another criterion for selection since, according to the researcher's belief, it would help him in establishing confidence between him and respondents so as to discover their real views and attitudes towards the issues under investigation.

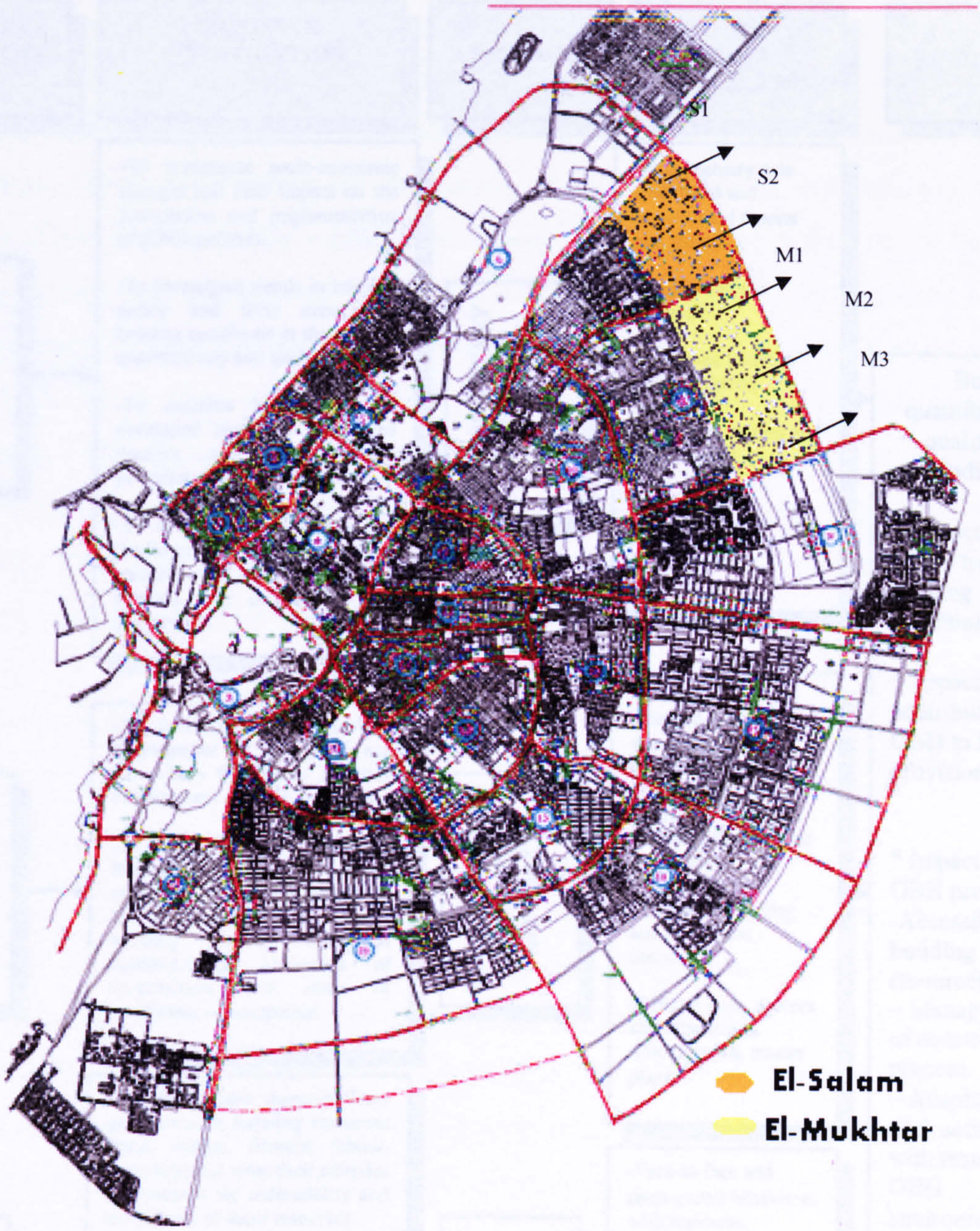
Accordingly, and following an exploratory visit to Benghazi in the early February 2003 involving several contacts with the Urban Planning Authority (UPA) in the city, all residential areas with high incidences of OBH were identified and classified based on physical characteristics (density, housing typology, planning pattern, availability of services and facilities) and historical growth (year of establishment). Based on these criteria, five OBH neighbourhoods in the suburbs of Benghazi were selected in which to conduct the empirical work at the micro level of investigation. Three of these five OBH neighbourhoods are located in the El-Mukhtar area (M1, M2, M3) while the remaining two

are located in the El-Salam area (S1, S2). The two selected neighbourhoods in the El-Salam area are almost completely developed and reflect OBH development during the period 1970-84 having been established in the early 1970s, while the remaining three neighbourhoods in the El-Mukhtar area were still under development and reflect OBH development during the period since1985, having been established in the mid-1980s (see chapter 8). Figure 3.3 illustrates the location of selected neighbourhoods within the city.

In addition to their capacity to reflect the development of OBH in the city over the period covered by the study, these five OBH neighbourhoods were also selected because of the similar characteristics that they shared in terms of housing typology, size of plots and planning patterns. Added to this, the housing plots in these neighbourhoods were initially allocated to needy households who were not in possession of habitable dwellings or buildable land on which to build houses for private use. Thus, it was assumed that residents in these neighbourhoods shared similar socio-economic conditions and they were eligible to acquire housing plots through land allocation programmes, building-loans and subsidized building materials to build their own houses. Moreover, the neighbourhoods selected, as Figure 3.3 illustrates, are geographically adjacent to each other and located in the city's suburbs within the low density residential zone where the same building codes and physical planning standards apply. Nevertheless, in many respects these neighbourhoods have different levels of environmental quality and availability of facilities and services (see chapter 8).

The selection of almost completely developed OBH neighbourhoods in the El-Salam Area and underdeveloped OBH neighbourhoods in the El-Mukhtar Area was not intended as a comparative study; but in order to facilitate a reasonable tracking of the development of OBH in the city over the last three decades. However, respondents' practices, attitudes towards and preferences for all aspects of the house construction process as well as their adaptation and degree of satisfaction with the resulting residential environment could be compared according to their socio-demographic characteristics and the attributes of the physical environment.

Figure 3 - 3: Location of Selected Neighbourhoods within the City

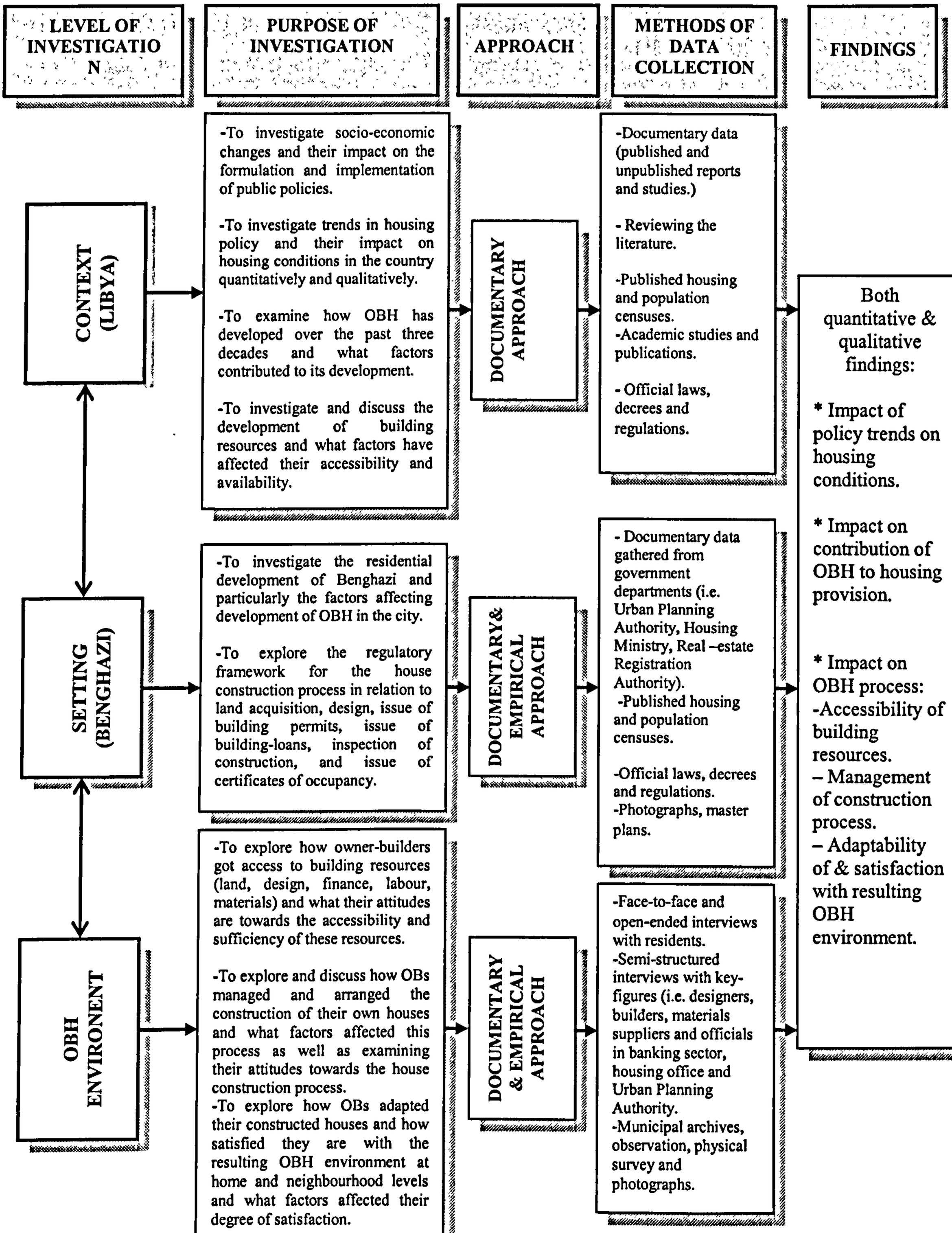


Source: Urban Planning Authority, Benghazi

3.3.4 Hierarchic Sequence of Investigation

As mentioned earlier, the analytical framework adopted to carry out the investigation in this study involved a hierarchic sequence (macro-to-micro level) in order to develop a full and holistic understanding of the main factors influencing the implementation of OBH and the extent to which OBs have succeeded in building their own houses over the past three decades. As Figure 3.4 illustrates, the investigation was carried out at three levels.

Figure 3 - 4: Summary of the research methodology adopted for the study



The first level involved the national level, and the purpose of the investigation was to explore the impact of socio-economic change on the formulation and implementation of public policies, the impact of trends in housing policy on housing conditions and the development of OBH in the country. At the second level, the investigation was concerned with Benghazi city as the setting of the study, aiming to explore the residential development of the city, particularly OBH, and to examine the regulatory framework by which house construction is controlled. The third level of investigation was concerned with the OBH environment in the five selected neighbourhoods aiming to explore and assess the extent to which OBs in these neighbourhoods have succeeded in building and adapting their own houses. This exploration was conducted by investigating how OBs got access to building resources, how they managed the construction process, how they adapted their house after moving in and the extent to which they were satisfied with the resulting OBH environment (at home and neighbourhood level). This approach allowed the researcher to understand the interrelated issues concerned with the implementation of OBH at these levels over the period covered by the study.

3.4 Operational Strategy and Plan of Fieldwork

Before conducting the main fieldwork, certain necessary steps were taken by the researcher to organise and prepare the timetable for the fieldwork, which was carried out between the beginning of February and mid May 2003 in Benghazi. The selection of the spring season (February to May) was seen an appropriate for conducting the fieldwork since the weather during this season is settled and mild compared with other seasons. The preparation of fieldwork involved a number of stages illustrated below:

3.4.1 Getting the Required Permission

Conducting fieldwork to gather a wide range of documentary and empirical data from different sources for the purpose of the study was a difficult task, and required official permission to facilitate easy contact with the data sources. To get this permission, the following steps were taken by the researcher:

- Before his departure to conduct the fieldwork, the researcher obtained a letter of support from his supervisor showing the purpose of the study and specifying the nature of data required. In this letter, the academic supervisor asked all people concerned to give the

required assistance to the researcher in order that he could complete his work within the limited time decided.

- On arrival in Libya, the researcher contacted officials in all the relevant authorities (such as Urban Planning Authority, Commercial Banks, Real-estate Investment and Saving Bank, Real-estate Registration Authority) to obtain permission to contact different departments in these authorities seeking information and materials relevant to the study's purpose.

- Local authorities in the selected OBH neighbourhoods were contacted in order to get their permission to conduct the empirical work which involved questionnaires and open ended interviews with residents, physical survey's, observation and photographic surveys. In this respect, the researcher benefited from the help of friends and relatives who live in the selected OBH neighbourhoods, contacting in relevant people in these neighbourhoods.
- The researcher contacted the Urban Planning Authority (UPA) in Benghazi in order to obtain detailed maps of the OBH neighbourhoods selected. This was essential in order to facilitate the sampling process and later in conducting the interviews and the physical survey. Some of these contacts were actually made prior to the researcher's arrival in Libya through email and telephone communication.

3.4.2 Translation of the Questionnaire

The main version of the questionnaire was prepared in English at Newcastle University. Given the fact that this questionnaire would be administered in Benghazi city where Arabic is the native language it needed to be translated into Arabic. The translation was made with the help of officially authorized translators in Benghazi. The translation was checked by staff members and professionals in Garyounis University in Benghazi to ensure that all of the terminology used in the English version was translated in a way that could be easily understood by respondents. In addition, copies of the questionnaire were prepared using good quality materials.

3.4.3 Testing the Validity of the Questionnaire

Before the main survey was conducted a pilot investigation was undertaken to test the validity of the questionnaire. This pilot investigation was carried out in order to make sure that this technique was appropriate for obtaining the required data from the target group in the OB neighbourhoods selected. In this regard, Wiersma (2000:172) stated that: *"A pilot run of the items provides the opportunity to identify confusing and ambiguous language and to obtain information about possible patterns of results"*. Thus, the researcher assumed that the pilot study could provide a better test of the instruments of data collection and in turn to improve the methodological approach adopted for the study. Added to this, the results the pilot study would provide the investigator with sufficient information and deeper understanding of any further variables that should be examined.

The questionnaire was designed four months before conducting the main fieldwork, and was reviewed and discussed with the researcher's academic supervisor at the University of Newcastle upon Tyne. Afterwards, several copies of the questionnaires were distributed to the researcher's Libyan friends in Newcastle upon Tyne and other UK cities in November and December 2002, to get their views about its structure and contents, targeting those who had experience or were involved in the implementation of OBH as OBs, designers, planners or even policy-makers. The questionnaire structure and contents were discussed with them and their comments on the design, contents, structure and language used in the questionnaire were of great help in making the questionnaire more efficient and practical. In addition, during the first two weeks of February 2003, a total of twenty questionnaires were distributed randomly to a sample of twenty households in the neighbourhoods selected in order to test the validity of the questionnaire. Out of this total, only eight questionnaires (40%) were collected fully answered while the remaining (60%) were not fully completed. The initial analysis made of the collected questionnaires revealed that certain areas of the questionnaire would affect the reliability of the data required, which led the researcher to modify and amend the questionnaire format on the following basis:

- **Adopting Face to Face Interviews:** the pilot study revealed that adopting self-administrated questionnaires was inappropriate since the majority of the twenty pilot questionnaires were returned incomplete. As a result, face-to-face interview were thought more convenient in order to ensure that respondents could understand clearly all of the

questions and that more reliable and sufficient data could be collected.

- **Structure of Questionnaire and Order of Questions**: based on comments made by some respondents on the structure and order of questions in the initial design of the questionnaire, it was decided that the structure of questionnaire should follow a 'generic to specific' format, and should be structured in parts concerned with the different areas of the investigation. Thus, it was decided that the amended questionnaire should start with general questions concerning socio-economic background, and then move to questions concerned with previous and current housing conditions, followed by questions concerned with the accessibility of building resources, and management of the construction process, finishing with questions concerned with adaptation and overall satisfaction with resulting the OBH environment. This order was seen as helping the respondent to feel less confused and more comfortable in order to link and organise his ideas and to give clear, sensible, and linked answers and comments. For instance, in the section on the house construction process, the order of questions was amended to follow the sequence of construction starting from the access to land, then going through the different stages of construction process until completion. Added to this, these amendments made in the structure and sequence of the questionnaire was quite helpful for the researcher later in the analysis of the data.

- **Clarity and Feasibility of Questions**: the pilot study's results revealed that some questions were too vague and difficult to understand and answer by the respondents, for instance, questions comprising technical words and phrases that were unfamiliar to respondents. In addition, questions asking for exact percentages related to contribution of building-loans or OBs' savings to the total cost of house construction were difficult for many respondents to answer, particularly those with low levels of education. Thus, questions asking respondents to state percentages were avoided and some other questions were amended to make them easier for respondents to understand and answer.

- **Adding New Questions**: based on comments made by some professionals and residents on the questionnaire's structure and contents, the researcher decided to add some questions to the main questionnaire which were concerned with some important aspects of the OBH process which needed to be covered.

3.4.4 Sampling the Target Group

As "*a set of elements selected in some way from a populatio*n", the sample's main purpose is to save time and effort as well as to get reliable and unbiased estimates of the total population's status in terms of whatever is being researched (Sapsford and Jupp, 1996). In this study, sampling was concerned with people (beneficiaries of OBH and key-figures involved in the implementation of OBH) who had to be selected from larger populations in conducting the investigation. However, different techniques can be adopted to select a sample that can be considered representative of the entire population. The technique adopted for sampling and the size of the sample selected are often influenced by the structure (one group or sub-groups) and characteristics of the target population (socio-economic, demographic) from which a representative sample has to be selected. Added to this, such a procedure is also influenced by the type of data to be collected and analysed (quantitative, qualitative or mixed data) and by the resources available to the researcher (time and finance).

3.4.4.1 Sampling Techniques

Regarding the process by which the sample can be determined, two methods were identified for this purpose; 'probability sampling', and 'non-probability sampling'. The main difference between these two methods is that while the former uses simple or stratified random sampling, the latter does not and is sometimes called purposive sampling (Nachmias and Nachmias, 1992, Sapsford and Jupp, 1996). In this respect, many researchers in the field of social science prefer random sampling because it is thought to have more advantages overall than other forms of sampling such as in accuracy and precisely in representing the target population. This point of view was supported by Nachmias (1992:174) who wrote that *"In the simplest case, each of the units has the same probability of being included in the sample"*.

3.4.4.1.1 Sampling Techniques and Sample Size for Quantitative Data

A face-to-face questionnaire was the main instrument used to gather quantitative data from respondents in the five OBH neighbourhoods selected. Based on the fact that the targeted respondents are distributed in five subgroups (five OBH neighbourhoods) which should be adequately represented, the use of simple random sampling was seen as inappropriate since

it would need to be large enough to remove the risk of inadequate representation of these subgroups. This problem was avoided by adopting stratified random sampling which would ensure the representation of all subgroups (the five OBH neighbourhoods) in the total sample. This decision was also supported by Nachmias (1992:179) who stated that *"Stratified sampling is used to ensure that the different groups of the population are adequately represented in the sample so that the level of accuracy in estimating parameters is increased. The underlying idea in stratified sampling is that available information on the population is used to divide it into groups such that the elements within each group are more alike"*. In practice, as Bryman (2001) argued, the selection of a stratified random sample can be achieved by selecting a separate simple random sample from each of these subgroups (stratum) of the target population (the five OBH neighbourhoods).

However, owing to the fact that the last population census in the country was conducted in 1995, the researcher decided to rely on the number of occupied dwellings (which represent the number of households) in the selected OBH neighbourhoods. Such a decision was also supported by the fact the unit of analysis in the research was the dwelling itself (how it was built and adapted) and its surrounding environment (neighbourhood). For this purpose, the five selected OBH neighbourhoods in the two case study areas were visited and surveyed by the researcher in order to determine the number of occupied dwellings. After confirming the exact number of occupied dwellings in the neighbourhoods a minimum proportion (5%) of dwellings in each neighbourhood was calculated as the sample size.

However, since statistical theory suggests that maximising sample size will increase the precision of the results, the researcher accordingly decided to increase the sample sizes in the selected areas in order to increase the level of accuracy. As a result, the sample size was increased to 10% of the total occupied dwellings in each OBH neighbourhood. Therefore, a total sample size of 200 households (dwellings) was chosen for interviews and surveys in the five neighbourhoods selected. Table 6.2 illustrates the total sample size interviewed using questionnaires as well as its distribution in each OBH neighbourhood selected.

Table 3 - 2: The Distribution of Total Sample Size selected for Quantitative Data

Neighbourhood	No. of occupied dwellings	Sample Size at 5%	Sample size at 10%
Neighbourhood S1	509	25.45	51
Neighbourhood S2	494	24.7	49
Total (El-Salam Area)	1003	50	100
Neighbourhood M1	390	19.5	39
Neighbourhood M2	290	14.5	30
Neighbourhood M3	310	15.5	31
Total (El-Mukhtar Area)	990	50	100
Total	**1993**	**100**	**200**

3.4.4.1.2 Sampling Techniques and Sample Size for Qualitative Data

In this study, different types of qualitative data relevant to the study's purpose were derived from open-ended and semi-structured interviews, the collection of archival data (government reports, academic studies, maps and architectural plans), and physical surveys including house measurement, observation, and photographic surveys. Open-ended interviews were conducted with some OBs in the selected OBH neighbourhoods and with key-figures involved in the implementation of OBH (i.e. builders, architects, materials suppliers and officials in the banking sector, UPA and housing sector).

Selecting a Sample of Owner-builders for Open-ended Interviews

The purpose of conducting interviews with OBs was mainly concerned with gathering more in-depth information about the construction and adaptation of their houses. Such in-depth data were believed to be of great benefit to complement, highlight and clarify the quantitative data gathered from face-to-face questionnaires and to enrich the analysis and discussion of the study's findings. The technique adopted to select a sample of interviewees from the OBs in the selected OB neighbourhoods was based on purposive representative sampling strategy. The adoption of this strategy, which as Bryman (2001) argues is not based on random probability selection techniques, was due to its capability to reflect the development of OBH in the city over the period covered by the study and to represent existing differences in the socio-demographic, economic and housing conditions of OBs in selected neighbourhoods. Thus, sample had to include OBs with different socio-demographic and economic characteristic and housing conditions who built their own

houses in the 1970s, 1980s and 1990s. Added to this, the sample should be chosen from all OBH neighbourhoods selected to conduct the empirical study so that it could reflect the targeted population accurately. In terms of sample size, although the author planned to conduct as many interviews as possible with OBs in the neighbourhoods selected within the limited time available to him, it was believed that each interview should end once no further information could be collected. This decision was supported by Bryman (2001) who argued that qualitative sampling often depends on whether an issue of investigation has already amply covered and enough data collected.

Selecting a Sample of Key-figures for Semi-structured Interviews

As the preceding chapters have revealed, the implementation of OBH in Libya is largely influenced by key figures (such as builders, architects, materials suppliers, building-loan lenders, policy makers). Thus, the author decided to conduct in-depth interviews with key figures in Benghazi city who are well informed about the subject of the study context in order to gain a better understanding of all issues under investigation. In terms of the sampling technique adopted for key figures, the same purposive sampling strategy used for interviews with OBs in the selected OBH neighbourhoods was adopted, which to large extent relied on the researcher knowledge of the target groups as well as the purpose of the study and the main issues under investigation. Despite the reliance on the purposeful sampling strategy in selecting key figures for in-depth interview, in some cases (such as with builders and architects) the snowball sampling technique was used which, as Nachmias & Nachmias (1992) argued, allows the establishment of contact with more expert informants. So the key figures interviewed were asked to recommend other experts or key figures to be interviewed. In terms of sample size, although the author did not set a specific number of interviews to be conducted, the decision was made to conduct as many interviews as possible until the data gathered began to repeat itself (saturation of information).

3.4.5 Selection of Research Assistants

It was realized that the scale of empirical work necessary involved many tasks, such as questionnaires, in-depth interviews and physical surveys, which could not all be undertaken by the researcher himself within the limited time available for the fieldwork. Therefore, research assistants were seen as necessary to accomplish the empirical work

particularly that related to conducting face-to-face questionnaires. However, it was believed that the assistants selected, in addition to being willing to help the researcher in conducting the empirical work, should have appropriate backgrounds in terms of the research context and issues under investigation. Therefore, two friends were selected who are urban planners with 8 years professional experience and a background in conducting surveys. One of these research assistants lived in one of the selected OBH neighbourhoods and had good relationships with many residents in the other neighbourhoods. This was seen as of great benefit to the empirical work, since it would provide easy access to these neighbourhoods. However, the researcher believed that it was also important that the research assistants needed proper training in conducting questionnaires survey in order to ensure that they would be capable of asking questions and recording answers correctly. For this purpose, several meetings were held between the researcher and the two research assistants prior to commencing the main fieldwork to explain the study's purpose, issues, and variables and to train them in how to carry out the fieldwork properly. The researcher also then regularly discussed and checked every piece of work done by the assistants in order to ensure the validity and reliability of the empirical data gathered.

3.4.6 Interview Time Schedule

Once all of the requirements for the main fieldwork were met in terms of materials and permissions, the time schedule of the fieldwork was decided. Interviews with household heads using the questionnaires were set to take place during the afternoon from 16:00 to 21:00 pm. The main reason for this time was that most respondents would be at homes during this period. Morning hours were avoided due to socio-cultural concerns when only housewives at home and most household heads are at work. Afternoon hours were also used to conduct semi-structured interviews with designers whether at their homes or at their private engineering offices because during morning hours most of them are involved in governmental work. On the other hand, the interviews with key figures in the UPA, banking sector, officials in publicly-owned materials suppliers and housing office (HO) in Benghazi were conducted during the morning because all of them were available at work. Observation and physical surveys were mainly conducted in the afternoon although some were conducted also in the morning hours. This timetable was very practicable and convenient to the researcher and all respondents targeted in the fieldwork.

3.5 Data Collection Methods

The adoption of the case study approach for the research design in this study allowed the use of multiple techniques of data collection. In this respect, both documentary and empirical techniques of data collection were employed. The main characteristics of these techniques are explained below:

3.5.1 Documentary Data

Documentary data concerned with the study's purpose were seen as of great benefit in supporting and clarifying data gathered from empirical work. As Creswell (1994) argued, the use of documentary data could be helpful in offering more insights and in-depth information about issues under investigation, and could enhance the process of interpretation of the study's findings. In this study, all available published and unpublished documents concerned with socio-economic changes, the development of housing sector and particularly the development of OBH at the macro (Libya) and micro (Benghazi) levels were gathered. At the macro level, for instance, information regarding housing development in Libya and the development of real-estate lending programmes were obtained from the General Housing Corporation (GHC). Population census and housing statistics were obtained from the National Corporation for Information and Documentation (NCID). Moreover, information regarding financial allocations to the housing sector in Libya was obtained from the banking sector, the General Planning Council (GPC) and Secretariat of Planning (SOP).

Regarding the micro level, documentary data concerned with the physical and demographic growth and master plans of Benghazi, and detailed plans of the five selected OBH neighbourhoods were obtained from the Urban Planning Authority (UPA) and from the National Library in Benghazi. Added to this, statistics regarding the number of building-loans issued through the banking sector in Benghazi city over the last three decades were obtained from commercial banks and the Real-estate Investment & Savings Bank (REISB) branch in Benghazi. Information concerned with number of building permits issued in Benghazi city and these criteria for issuance were obtained from the Urban Planning Authority (UPA) in Benghazi. Furthermore, statistics regarding the number of firms and individuals working in the construction sector in Benghazi were obtained from the National Corporation for Labour Force (NCLF) and Association of

Construction Labour (ASCL) in Benghazi. It is also noteworthy that the researcher benefited from many materials gathered from the People's Committee of Housing and Utilities (PCHU) in Benghazi which is concerned with the allocation of publicly-owned land.

The documentary information gathered was used in chapters four, five, six and seven and in the interpretation and discussion of the study's findings. The use of documentary data in the interpretation and discussion of the findings strengthens the arguments made in the study and allowed the researcher to check the reliability and validity of data gathered from the empirical work. Gathering the relevant documentary data from the aforementioned sources, however, was not an easy task. This was mainly due to the extensive need to exploit personal and social relationships to get in touch with those concerned who could provide the data. Without the help of many relatives and friends, the researcher's mission in gathering these documentary data would have been impossible.

3.5.2 Empirical Data: Combining Quantitative and Qualitative Information

As discussed earlier, both quantitative and qualitative data were gathered and combined in the interpretation and discussion of results in this study in order to strength the reliability and credibility of its findings. In this respect, quantitative data were mainly gathered through face-to-face questionnaires while qualitative data were gathered through open-ended and semi-structured interviews as well as from observations and physical surveys.

3.5.2.1 Questionnaire

Data gathered using questionnaires is considered quick and effective, and can ensure that large amounts of data are gathered. In the current study, a structured face-to-face questionnaire was used to interview residents in the selected OBH neighbourhoods in Benghazi city. The decision to adopt of face-to-face interviews was based on the outcome of the pilot study conducted prior to the main fieldwork which revealed a low response rate for self-administered questionnaires (see section 3.4.3). Thus, it was assumed that the utilization of face-to-face questionnaires would result in higher response rate since it would ensure that all questions in the questionnaire would be answered by respondents. Added to this, more communication between the interviewee and interviewer would allow questions to be clarified and answers to be fully understood by the interviewer.

3.5.2.1.1 The Person to be Interviewed in the Household

The topics covered in the questionnaires and open-ended interviews to be carried out with OBs concern decisions taken in relation to access to building requirements, construction and adaptation of houses, and payments of costs, and therefore the question of who should be interviewed was raised. As a result, household heads were targeted for interview because in Libya they usually have the responsibility for household expenditure and taking decisions about house construction and adaptation.

Generally speaking, interviews with householders using questionnaires took place at their own houses. In these interviews, other family members (wives, sons, and daughters) were welcome to attend and participate in the discussion. In many case their attendance was of great benefit since they helped the informant (householder) to remember factual information as well as in highlighting their attitudes and giving valuable comments regarding their satisfaction with the house and the surrounded environment. An average of one hour and a half was spent with each respondent to complete the questionnaire. However, some interviews lasted up to two hours, when some snacks and refreshments were offered to the interviewer. Another reason for conducting longer interviews was the willingness of respondent to add comments and explanations regarding their experience with house construction and the quality of life.

3.6.2.1.2 Design and Structure of the Questionnaire

In terms of structure, it was preferred that the questionnaire should start with general questions and moving to more specific ones because, as Zeisel (1984) argued, the interviewer can influence the respondent's answers by the order of questions. Also Zeisel suggested that questions have to be grouped (categorized) into similar topics because this grouping would reduce the possibility of any fatigue that might be felt by the informant. Added to this, having a well designed questionnaire written in simple language with straightforward and easily answered questions would ensure higher rates (Oppenheim, 1992). In the present study, the questionnaire conducted with 200 householders in the five selected OBH neighbourhoods in Benghazi, was structured to follow a general-to-specific sequence and was designed based on criteria of the simplicity, clarity and comprehensiveness of questions and the attractiveness of the format (see Appendix 1). The main components of the questionnaire were as follows:

Part 1: Socio-demographic and Housing Characteristics of the Household

The introductory part of the questionnaire mainly focused on eliciting factual information about the socio-demographic characteristics and housing conditions of the household. It was believed that gathering such information was essential in getting reliable and valid results, since it would help in clarifying any differences found in responses among respondents regarding their practices, attitudes, and preferences concerning house construction, the adaptability of and their satisfaction with the resulting OBH environment. This point of view is supported by Goodchild (1997:69), who wrote that:

> "If the survey is to achieve reliable and valid results, the questionnaire should cover background material relating to the social and economic characteristics of the resident and his or her household, including their previous housing experience.

This part consisted of two sections. The first concerned information related to the socio-demographic and economic characteristics of the household. The second section was concerned with information about the previous and present housing conditions of the household. Information about previous housing conditions was seen an important indicator in identifying the eligibility of the OB in getting access to OBH, while that concerned with present housing was seen as important in assessing the quality of and satisfaction with the OBH environment.

Part 2: The House Construction Process

The second part mainly focused on exploring the OB's practice, attitudes and preferences concerning the house construction process. The first section is involved factual and attitudinal information about how OBs got access to building resources (land, design and building permits, finance, building materials and labour). It comprised questions exploring sources, criteria for selection, length of waiting time, and the sufficiency of resources in building the house. The second section concerned information about the OB's practice, attitudes and preferences in the management of the construction work of his own house. Thus, questions concerned with exploring how OBs managed and controlled the progress and quality of construction works of their own houses and what factors influenced such arrangements were included. Further questions concerned the total duration of house construction and the reasons behind any delays and suspensions experienced. Finally, overall impressions of the OBs about the construction process as well as preferred methods of house acquisition based on their experience in building their own houses were

investigated. Answering the questions in this part of the questionnaire consumed a significant properties of the total time spent with the OBs interviewed.

Part 3: Adaptability of and Satisfaction with the Resulting OBH Environment

This final part of the questionnaire consisted of two sections concerned with eliciting factual and attitudinal information about adaptability of and satisfaction with the resulting OBH environment at both home and neighbourhood levels. The first section was concerned with exploring how respondents adapted their own houses and included questions related to the type, timing and reasons for any changes (such as alterations and extensions) and maintenance conducted in their houses. Added to this, it included questions concerned with the respondent's degree of satisfaction with changes made in the house. The second section was concerned with exploring the respondent's overall satisfaction with the resulting OBH environment (home and neighbourhood). At the home level, the respondent's degree of satisfaction with the type, size, design, location, and privacy of his dwelling as well as the most liked and disliked features of the constructed house and how well it is compared with previous dwelling were examined. At the neighbourhood level, the respondent's degree of satisfaction with the availability and quality of neighbourhood facilities, the condition of open spaces, and relationships with neighbours was examined. In addition, the respondent's degree of satisfaction with the road network and public transport as well as the aesthetic features of the neighbourhood was discovered. Finally, questions concerned with the most liked and disliked neighbourhood features and how well the current area of residence compared with previous ones were included, along with the most preferred features found in the present neighbourhood.

3.5.2.2 Face-to-Face in-depth Interviews

It was believed that conducting in-depth interviews with owner-builders and other key figures involved in the implementation of the OBH in the research setting would be a powerful instrument in capturing rich, varied and detailed information from informants with minimum bias. This was mainly due to the capacity of an informal style of questioning in enabling informants to speak freely and express themselves in their own words regardless of predetermined topics of discussion. Added to this, it was believed that of this informal approach could respond to new issues and variables arising during the

course of the interview, which would be of great benefit in clarifying and supporting the quantitative data gathered by the use of questionnaires.

3.5.2.2.1 Interviews with OBs in Selected Neighbourhoods

The main purpose of these interviews (Appendix 2) was to allow OBs in selected OBH neighbourhoods to speak freely about their previous and present housing conditions, their experiences and attitudes concerned with issues related to the construction and adaptation of their own houses, as well as their own struggles and sacrifices devoted to making their dreams in building their own houses come true. Moreover, it was felt to be important to listen to how OBs regarded and perceived the quality of the OBH environment in their areas.

As mentioned earlier, the selection of OBs for open-ended interviews was based on purposive representative sampling technique. Based on this technique, it was decided that the sample should be chosen from the five selected OBH neighbourhoods and should include OBs with different socio-demographic, economic characteristics and housing conditions who built their own houses in the 1970s, 1980s and 1990s. In this respect, although twenty five householders (OBs) were selected for open-ended interview (5 from each selected OBH neighbourhood), only twelve interviews were conducted (7 interviews in El-Salam Area and 5 interviews in El-Mukhtar Area). The decision to not conduct further interviews was mainly because no new information was anticipated. It was clear that the OBs who were interviewed were enthusiastic in talking explicitly and giving detailed factual and attitudinal information concerned with their experiences in building and adapting their own houses. The detailed and rich information from these open-ended interviews was used in clarifying many responses collected from the questionnaires. Although an average of two hours was spent in each interview, some interviews took about three hours. The willingness of household members to participate in discussions contributed to the longer time that some interviews took.

3.5.2.2.2 Interviews with Key Figures

The decision to interview key figures involved in the design and implementation of OBH (such as designers, planners, builders, materials suppliers, and loan lenders) was mainly based on the need to develop a comprehensive understanding of the main factors

influencing the development of OBH and the extent to which the OBH process is adaptable and responsive to the changing housing needs of Libyan families. As mentioned earlier, purposive and snowball sampling were adopted in selecting expert key figures to be interviewed. The decision was made to conduct as many interviews as possible until data gathered began to repeat itself. As shown in Table 6.3, a total of 13 interviews were conducted with key figures (3 designers, 1 urban planner from the UPA, 1 official from the Land and Real-estate Properties Office (LREPO), 2 managers from the banking sector, 4 master-builders, and 2 officials in publicly-owned materials suppliers). Each interview was conducted after an arrangement was made in advance with the interviewee. Interviews with officials in the UPA, LREP and publicly-owned materials suppliers, managers in the banking sector took place at their offices during work hours, whereas interviews with master-builders took place at their construction sites in the selected OBH neighbourhoods. On the other hand, interviews with designers took place at their offices during work hours or in some cases at their homes based on their preference.

It is worth mentioning that interviews with officials in the UPA (Appendix 3) in Benghazi mainly concentrated on policy issues related to OBH. Their views regarding the regulatory aspects of the house construction process in terms of approving house design plans, and issuing and renewing building permits, applying building regulations were elicited. Moreover, their comments on unauthorised changes made by OBs in their own houses were recorded and used in the analysis of data collected from the field survey. Interviews with officials in LREPO (Appendix 4) focused on the supply and allocation of land particularly in exploring the main factors influencing the availability and accessibility of publicly-owned land. Interviews with designers (Appendix 5) focused on discovering the criteria and main factors influencing the client's selection of the house design. In addition, designers' opinions and attitudes regarding quality issues in house construction, particularly those related to the supervision of construction and the selection and utilization of building materials, were collected. Data from interviews with designers were used in the analysis of various issues in combination with data gathered from questionnaires, documentary data, physical survey and observation. Interviews with master-builders (Appendix 6) focused on the form and type of arrangements made with the OBs to carry out construction work and disputes experienced during the house construction process. Finally, interviews with officials in the banking sector (Appendix 7) mainly centred on the accessibility and sufficiency of building loans in covering the costs of house construction.

Their views, opinions, and suggestions concerned with the mechanisms and efficiency of building loans were recorded. Finally, interviews with officials in publicly-owned materials supply channels (Appendix 8) mainly focused on exploring the mechanism through which building materials are supplied through these channels to OBs as well as eliciting their attitudes and opinions towards the efficiency of this mechanism in controlling the supply of these materials to needy OBs.

Table 3 - 3: Key-figures interviewed during the fieldwork

Status of Key figure	No.	Place of work
Senior Urban Planner	1	One of Urban Planning Authority branches in Benghazi
Senior official from LREPO	1	People's Committee of Housing and Utilities in Benghazi
Senior managers in Banking Sector	2	Commercial banks (Al-Wahda Bank and El-Tijari Bank) in Benghazi
Senior officials in Publicly-owned Materials Suppliers	2	Local Marketing Company and Cement Plant in Benghazi
Designers and construction projects consultants	3	One architect works as university staff member and private designer and consultant. Two civil engineers who in addition of being government- employees, work as private designers and consultants.
Master-builders	4	Informal non-Libyan contractors interviewed in construction sites in case study OBH neighbourhoods.

In general, one to two hours was spent in interviews with key figures. This was influenced to large extent by the free time that was available to the informant for the interview, particularly those held senior positions in government departments. However, some interviews involved repeated visits, particularly with officials in the banking sector, UPA, and PCHU in Benghazi, due to their limited time available for interview. Designers and master-builders were found to be more helpful in giving clear and rich information based on their experience of issues related to the study's purpose than those holding senior official positions in governments departments. This might be attributed to the sensitivity of the issues under investigation that involved questions of policy and the government's role in the OBH process.

3.5.2.3 Site Observation and Physical Survey

In this study, observation and physical survey's were used to obtain more accurate information about the development of OBH and the extent to which OBs have succeeded in building their own houses over the period covered by the study. These methods were used to observe the actual conditions of the OBH environment as well as the various social activities of residents in the selected OBH neighbourhoods. Thus, they were seen as quite important in enhancing the reliability of study's findings by cross-checking data gathered via other methods of data collection (Bulmer, 1982, Capham et al., 1993). The importance of observation in developing a full understanding of the complexities of the issues under investigation was mentioned by Patton (1990:25) who stated that:

> "To understand fully the complexities of many situations, direct participation in and observation of the phenomenon of interest may be the best research method."

This part of the fieldwork was carried out concurrently with conducting the questionnaire survey. The frequent visits of the researcher to the selected OBH neighbourhoods at different times over the period of fieldwork in February to May 2003 enabled him to observe and monitor the condition of the OBH environment in these neighbourhoods using written checklists, sketches, dwelling measurements, and photographic surveys. At the neighbourhood level, the focus was on observing the availability, condition, and use of public amenities and facilities. At the dwelling level, observation of the exterior and interior of houses mainly focused on recording and describing the status of the completion of house construction as well as the type and condition of extensions and alterations undertaken by residents in their own houses. In this respect, dwelling measurements were made in order to trace and illustrate any sort of changes made to the original design of the house. This was carried out after getting the permission of the owner of the house concerned. These measurements were made for about 16 houses in the selected OBH neighbourhoods and were then reproduced using Auto-Cad architectural software to present them in a way that can be easily compared to the original design of the house. It is noteworthy that observation was not only concerned with the OBH environment in the selected neighbourhoods but also targeted the main pick up points for construction workers as well as the suppliers of building materials in Benghazi in order to give a clear picture of other actors involved in the OBH process. The resulting information from observation and

physical surveys was used to clarify the study's results gathered using other sources of data.

3.6 Data Analysis Strategy

The data collected included large numbers of written pages, tables, checklists, photographs and plans from which the researcher has to extract the significant findings. Thus, it was believed that the task of analysis would be much easier as soon as the main themes, issues, and variables of the investigation had been specified and defined clearly.

3.6.1 Analysis of Quantitative Data

The process of analyzing the quantitative data gathered from the questionnaire survey was conducted using the statistical computer software called the Statistical Package of Social Sciences (SPSS). Other quantitative data gathered from sources such as official statistical reports and censuses were analysed and presented using Excel software. The process of analysing the quantitative data began early in the fieldwork. The researcher entered the data gathered from completed questionnaires after coding into a computer provided by one of his friends who was qualified as a statistician. The coding process aimed to reduce the data into a manageable size, helping the researcher to store and sort it carefully for analysis (Black, 1999). SPSS was found to be very functional in terms of speed, accuracy and accessibility. After the completion of the fieldwork, coded data was analysed using SPSS as simple analytic measures in form of descriptive statistics such as percentages, frequencies, medians, means and cross-tabulation were used to move from the conceptual to the empirical levels describing links and relationships between variables. The use of simple quantitative analysis rather than sophisticated and complicated analytical methods such as multivariate analysis was seen as more appropriate for this study since it was integrated, combined and complemented with the analysis of qualitative data gathered from other sources. In this regard, both dependent and independent variables were determined and the relationships between these two kinds of variables were explored and described in relation to the research questions raised. The exploration of relationships between variables was mainly concerned with the accessibility and sufficiency of building resources, management of the house construction process, and adaptability of and satisfaction with the resulting OBH environment.

3.6.2 Analysis of Qualitative Data

The analysis of qualitative data gathered from archival documents, interviews and observations and physical surveys began by reading through the gathered data and categorising and indexing the information based on subjects and issues. The categorisation of data, as Dey (1993:83) argued, is quite helpful in preparing the ground for analysis by creating a sense of the overall shape of data collected. Added to this, it helped the researcher in assessing the extent to which the data gathered addressed the purpose, issues and questions that the study sought to achieve, investigate and answer (Mason, 2002). The qualitative data gathered in this study was accordingly categorised based on the main sets of investigations mentioned earlier in this chapter. The next step was to match the information with the study's aims, objectives and research questions using content analysis. Then results were interpreted in order to identify the main factors influencing the development of OBH and the extent to which OBs in Benghazi have succeeded in building their own houses over the period covered by the study.

For instance, the analysis of open-ended interviews with OBs and key figures began by transcribing the replies of interviewees and then these transcriptions were analysed by categorising its contents into certain paragraphs and phrases under different headings relevant to the issues under inquiry. Finally, the findings resulting from the reduced and categorized information from the transcriptions were displayed and presented in different forms such as quotations, charts, figures, diagrams and tables. The qualitative data gathered from observations, physical surveys and open-ended interviews with OBs and key figures involved in the implementation of OBH was then integrated and combined with the quantitative results in order to achieve the study's objectives and answer the research questions. This kind of triangulation helped the researcher to develop deeper insights into and a better interpretation of the study's findings and to minimize the risk of bias and mistakes that the use of a single source of information might result in.

3.7 Research Limitations and Obstacles

It was obvious from the beginning that dealing with such a complex subject would face certain limitations and obstacles in terms of getting access to reliable and sufficient data relevant to the study's purpose capable of answering the research questions and achieving

the study's aims and objectives. These limitations and obstacles can be summarised in the following points:

1. The absence of any previous research concerned with the implementation of OBH in Libya, which put a further burden on the researcher in searching for and collecting the required data.

2. The collection of documentary data concerning the study's context and particularly those related to trends in the availability of building resources (land, funds, materials and labour) over the period covered by the study was quite difficult due to the unavailability of reliable, comprehensive and up-to date information and statistics from the different government authorities and departments concerned.

3. The reluctance of many key figures working in government departments concerned with OBH (such as loan lenders, planners, land suppliers and policy makers) to provide the researcher with relevant and up to date information and statistics or to express their views. This was thought to be due to their belief that such data and views might harm their own positions if it was revealed.

4. The conducting of face-to-face interviews with residents in selected OBH neighbourhoods was time-consuming, since it required more time than had been expected even though research assistants helped in conducting them.

3.8 Conclusion

In this chapter, the methodological framework within which the study was approached and carried out has been explained. Based on the exploratory nature of investigation in this study, which was focused on exploring and understanding how OBH in Libya has been implemented over the past three decades and the extent to which is the OBH process adaptable and responsive to the changing housing needs of Libyan families, a case study approach was adopted involving a macro-to-micro sequence of investigation. The adoption of the case study as a methodological and analytical approach was helpful since it provided a holistic view and in-depth investigation of all factors that have affected the implementation of OBH in Libya and the ability of OBs to build their own houses over the period covered by the study. Added to this, the flexible and integrated framework of

investigation offered by the adoption of the case study approach facilitated a combination of quantitative and qualitative methods to be used in data collection and analysis. This combination (triangulation) enabled the researcher to cross-check the data gathered from different sources in order to increase the validity and credibility of the study findings.

Regarding the quantitative data, face-to face-questionnaires were conducted with beneficiaries of OBH in the selected neighbourhoods in Benghazi, aiming to gain information regarding their socio-demographic and housing characteristics as well as how they built and adapted their own houses and on the extent to which they were satisfied with the resulting OBH environment. In terms of qualitative data, open-ended interviews with OBs and key figures involved in the implementation of OBH in addition to the use of observation and physical surveys were employed using photographing and the measurements of dwellings. However, prior to carrying out the main fieldwork in February to May 2003, a pilot study was conducted in the selected OBH neighbourhoods in Benghazi aiming to test the validity of the questionnaire. Accordingly, some amendments were made to the format and structure of the questionnaire and a face-to-face approach was adopted in response to the results of the pilot study. After the completion of the fieldwork, the data gathered were analysed to achieve the study's purpose in exploring the main factors influencing the implementation of OBH and the extent to which OBs have succeeded in building their own houses.

Chapter Four:

Socio-economic & Political Change in Libya

Chapter Four

Socio-economic & Political Change in Libya

"To understand more about our current housing situation, it is necessary to understand the political and economic context in which housing development has taken place. Without doing this, there is a danger of blaming those directly responsible for housing development for all today's housing problems." (Golland and Gillen, 2004:45)

4.1 Introduction

As an Arabic and African country, Libya has undergone tremendous socio-economic and political changes during the 20th century, when it was transformed from one of the poorest countries in the world during the first half of the century to a very wealthy and urbanised state in the second half (Ghanem, 1985). As with as many other sectors housing has been influenced by these changes, and thus it seems necessary to discuss the latter before investigating the development of the housing sector in chapter five. Hence, this chapter describes the broad context of the present study, discussing the political and socio-economic changes that the country has undergone during the post-revolution era. The discussion in this chapter, which is organized into five sections, relies mainly on a review of broad selection of published and unpublished literature gathered from many sources. The first section introduces the chapter's purpose and structure. The second section gives a brief background of the country, including its history, geographical setting and climatic and environmental characteristics. The third section discusses the socio-economic changes and their impact on the formulation and implementation of public policies, especially in the housing sector, during the post-revolution era along with a brief discussion of economic conditions during the pre-revolution era. The fourth section illustrates the political and administrative changes and their impact on the formulation and implementation of public policies in the country during the same period. Finally, the fifth section discusses aspects of urbanisation and population growth and their impact on the physical development of many cities across the country.

4.2 Country Profile

In this section, the historical background as well as the geographical setting and the main aspects of the country's climate and environment are discussed briefly.

4.2.1 Historical Background

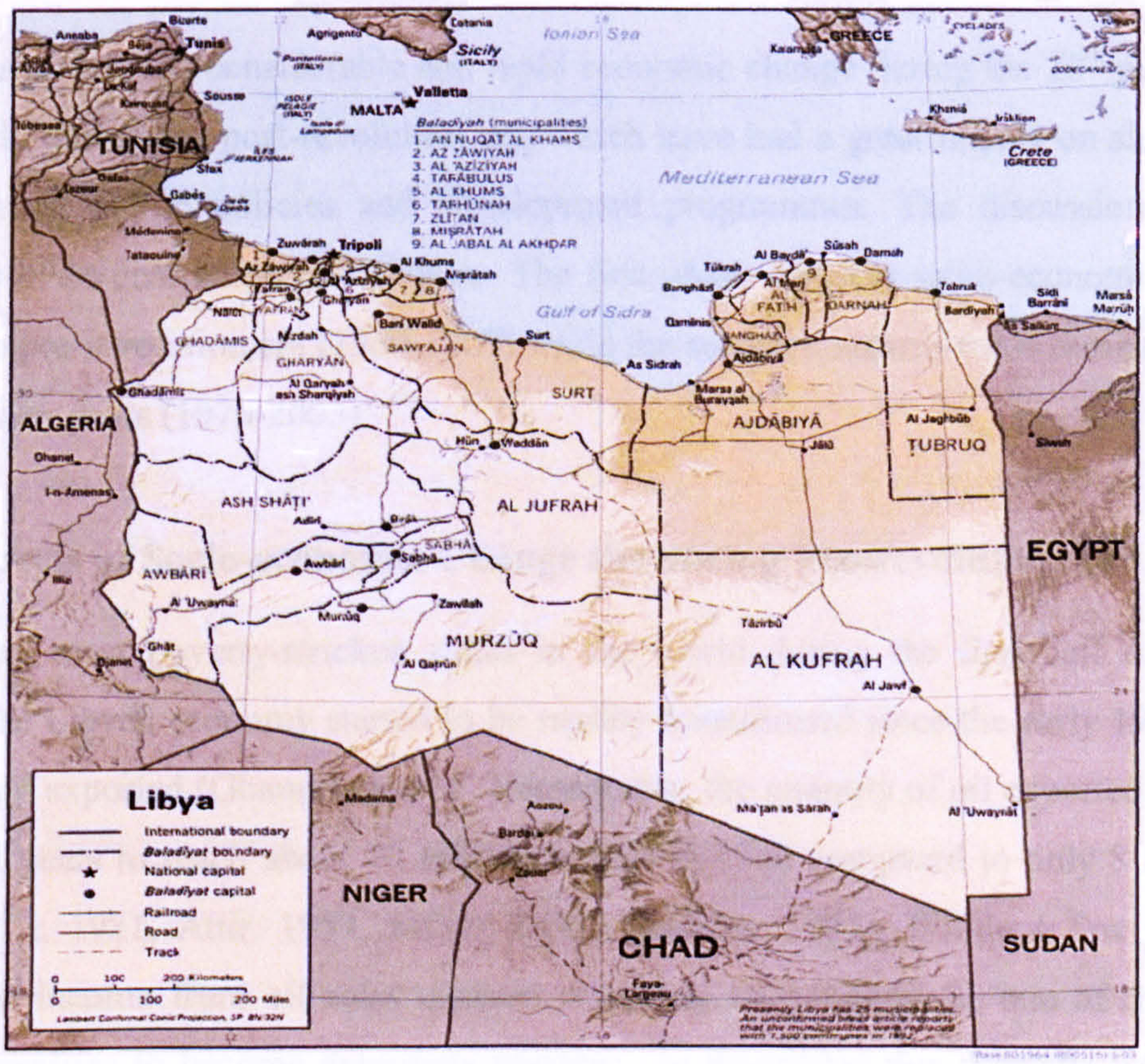
For about 3000 years, Libya has been known by its present name (since 1000 BC). For most of its history, the country has been subjected to varying degrees of foreign control due to its strategic position. The Phoenicians, Carthaginians, Greeks, Romans, Vandals, and Byzantines all ruled the country during different periods of its history. In the seventh century (644 AD), most Libyans adopted the Islamic religion and the Arabic language and culture when the country was conquered by Arab Muslims. In the mid-16th century, the country became part of the *Ottoman Empire*, which ruled the country for about four centuries (1551-1911). In 1911, Libya was invaded by the Italians, who occupied the country for about three decades (1911-1942) during which time it consisted of three provinces: Cyrenaica, Tripolitania and Fezzan. During World War II, the country came under British and French Administration in 1943. In December 1951, Libya declared its independence and was proclaimed a constitutional and hereditary monarchy as The Kingdom of Libya. In September 1969, the Libyan Revolution overthrew the monarchy and proclaimed the country as the Libyan Arab Republic. The aims of social justice and liberation of the national economy from foreign domination were top priorities in the revolutionary government's agenda. On the 2nd of March 1977, a new political system was introduced in the country by which Libya became *Jamahiriya* (the state of the masses). As a result, the name of the country was changed to the *Socialist People's Libyan Arab Jamahiriya*.

4.2.2 Geographical Setting

Libya lies between latitudes 18 54 and 33 10 N and between longitudes 9 58 and 25 E. It is situated in North Africa and has a Mediterranean coastline of 1900 kilometres. With an area of 1,775,500 square kilometres that extends over a vast territory from the central Mediterranean coast of North Africa to the highlands of North Central Africa, Libya is the fourth largest country in Africa and fifteenth the largest in the world. As Figure 4.1 illustrates, Libya is bounded to the North by the Mediterranean Sea, in the East by Egypt

and a small corner of Sudan; to the south it borders on Niger, Chad and Sudan; in parts of the South and West it touches Algeria and in the Northwest Tunisia. This strategic position has made her as important link between Africa and Europe.

Figure 4 - 1: Geographical Setting of Libya



Source: http://www.theodora.com/maps/new8/libya_large.jpg

4.2.3 Climate & Environmental Conditions

The two most prominent natural features of the country are the Mediterranean coast and the Sahara Desert. The Libyan coast plain is characterised by fertile lands and density of population while the desert have scattered oases and a less dense population. The geographical position of the country gives this vast territory a particular climatic character. The Mediterranean coastline has warm summers and mild winters. The weather is cooler in the highlands while in the desert interior the climate includes very hot summers and extreme diurnal temperature ranges. In general, the temperate rises when we move southwards into the mountainous regions. Rainfall is scanty, and the dry climate results in a year-round 98% visibility. Less than 2% of the national territory receives enough rainfall for settled agriculture, the heaviest precipitation occurring in the eastern part of the country

the (Al-Jabal Al-Akhdar zone of Cyrenaica), where annual rainfall of 400 to 600 millimetres average is recorded. All other areas of the country receive less than 400 millimetres, in the Sahara being 50 millimetres or less.

4.3 Socio-Economic Changes in Libya

Libya has undergone considerable and rapid economic change during the 20th century and particularly during the post-revolution era, which have had a great impact on shaping and implementing public policies and development programmes. The discussion of these changes will be centred on two phases. The first phase involves socio-economic changes during the pre-revolution era (1960-1969) while the second concerns those during the post-revolutionary years (1970-2003).

4.3.1 Aspects of Socio-economic Change the during Pre-revolution Era

Among the most poverty-stricken states in the world during the first half of the 20th century, the Libyan economy started to be rapidly transformed since the early 1960s when oil was first exported (Ghanem, 1981). Remarkably, the quantity of oil exported increased in just six years to reach about 70 million barrels in 1966 compared to only 8 million in 1962 (Allan, 1981, Attir, 1983, Fisher, 1986, Ghanem, 1985). Within a few years, the subsequent income from oil sales enabled what had been known as one of the world's poorest countries to become extremely wealthy. In describing this dramatic trend in the Libyan economy, El Fathaly (1977:16) wrote:

> "The bleak picture of the first period changed rapidly and drastically with the oil discoveries in 1959. The outstanding characteristics of Libyan economy within this period are the transformation of the country from stagnant to rapidly growing and control by the predominance of the oil sector. Within eight years of the first shipment, Libya became the world's fourth largest exporter of crude oil, a rate of growth unknown anywhere in the industry's history."

Gradually, signs of improvement began to be noticed in the Libyan economy due to the accumulated oil revenues. In just a few years, the oil exports accelerated to reach about 98 % of total country's exports representing about 42% of the total Gross National Product (GNP) in 1963 (Al-Zenie, 2002:1). The notable improvement in economic conditions in the early 1960s encouraged thousands of Libyans who fled the country during the *Italian*

Occupation to return to their homeland (Attir, 1983). Added to this, the availability of jobs in most cities encouraged many Libyan people to leave the rural areas in a massive rural-urban migration towards the urban centres particularly Benghazi and Tripoli as will be discussed later in this chapter. The accumulation of oil wealth had enabled the monarchy regime to launch the first two five-year Development Plans in the country.

4.3.1.1 The Socio-economic Development Plan (1963-1968)

This plan was launched in 1963 aiming to improve living standards particularly among the low income segment of the population. It also aimed to ensure more public investment in housing, education, health and communication in order to consolidate economic growth in the country. Although an expenditure of about LD169.1 million was anticipated in this plan, the actual expenditures was much more than this figure, amounting to about LD298.2 million (Allan, 1981:80). The housing sector was not specified separately in this plan, but the availability of oil revenues facilitated actual expenditure of about 9.9 % of the total budget allocated on housing projects (Awotona, 1990a:64).

4.3.1.2 The Socio-economic Development Plan (1968-1972)

This plan was introduced by the monarchy regime for the period (1968-1972), but was not implemented due to the 1st of September Revolution in 1969 which ended seventeen years (1952-1969) of rule by the monarchy. However, the economic conditions during the period 1960-1969 were characterised by poverty and backwardness across the country's regions even though oil revenues had begun to accumulate during this period. This was mainly due to the lack of proper planning and management that many sectors of the economy suffered from during the 1960s.

4.3.2 Aspects of Socio-economic Change during the Post-revolution Era

The scene of poverty, backwardness, ill-health and illiteracy that was visible in every Libyan village, town and city during the 1960s was the main motive for the 1st of September Revolution in 1969. Since its first day, the Revolution declared its great objectives and pledged itself to remedy the backwardness in the country by adopting public policies based on social justice and an equitable distribution of wealth. This intention was

quite apparent in the contents of *"The First Statement of the Revolutionary Command Council"*, which included:

> "...No oppressed, deceived or wronged, no master and no slave but free brothers in a society over which, God willing, shall flutter the banner of brotherhood and equality" (Al-Qathafi, 1969).

To achieve the aforementioned objectives, some essential and urgent steps were taken by the government towards liberating the Libyan land and economy from all forms of foreign control. In this respect, the government succeeded in liberating the country from the control of Italian Settlers and all foreign military bases and installations of the US and Britain in 1970 (Fergiani, 1976:111). In the economic sector, the banking and oil sectors were liberated from the control of foreign companies. In this respect, El Fathaly (1977:20) wrote:

> "The new regime concentrated its efforts on redirecting and controlling the national economy. The Libyan government nationalised the country's banking, insurance, and petroleum marketing companies; there was expansion of participation in and control of industry and commerce by Libyans and Libyan-owned firms."

By undertaking these steps, the 1st of September Revolution showed how eager it was to redistribute the country's wealth among its citizens and playing the central role in the development of the economy (El Fathaly, 1977). In this respect, a major proportion of oil revenues were utilized to finance extensive social welfare programmes (i.e. on housing, health and education) across the country's regions (Attiegah, 1972, Mattingly and Lloyd, 1989). The government also aimed to create alternative source of national income rather than depending on oil revenues through devoting huge investments to agriculture and industry (El Fathaly, 1977:37). During this period, the progressive programme of social policies pursued by the government included free health care and education as well as subsidized food and housing, resulting in improving the living standards among the vast majority of Libyan people during the 1970s. It was obvious that the early years of Revolution were characterized by public sector control over various aspects of development in the country. Such control was seen as essential by the government in order to provide sufficient goods and services required by the local market. It is noteworthy that a strategy of comprehensive planning was adopted by the government to achieve its intended objectives in socio-economic development by establishing the

Secretariat of Planning (Ministry) in 1970. This ministry was responsible for preparing and co-ordinating all socio-economic programmes of development, and launched many socio-economic development plans since 1969 which are explained as follows.

4.3.2.1 The Socio-economic Development Plan (1973-1975)

This development plan was launched just three years after the Revolution in order to overcome the serious socio-economic conditions in the country. It aimed mainly to maintain social justice in terms of offering free education and health services to every Libyan citizen. In the housing sector, it aimed to provide a decent home to every Libyan family, particularly those who could not afford to accommodate themselves in the low-income segment of population. In terms of urban planning and spatial development, this plan aimed to achieve balance in the rate of spatial development between all areas, considering the highest degrees of urban growth particularly in big centres of Benghazi and Tripoli by developing suitable socio-economic policies able to exploit the resources available in all regions. In economic terms, the budgetary allocations in this plan amounted to about LD2585.9 million; which was significantly more than in the 1963-1968 Plan. Benghazi and Tripoli had the lion's share in the actual expenditure of the development budget 1973-1975 of 13.6 and 29.1 per cent respectively (Awotona, 1990b:90). Remarkably, the budgetary allocation during the period 1971-1972 was more than five times than that in 1966 (El Fathaly, 1977:20).

In the housing sector, budgetary allocations amounted to about LD 722 million (15 per cent of the total plan's allocations) for the construction of 90,000 dwelling units. In addition, building-loans for private housing activity, and particularly OBH, during the period of this Development Plan amounted to LD 300 million (Secretariat of Information, 1981:60). These tremendous allocations led in turn to a remarkable rate of house construction, and about 76,000 housing units were built by the end of the first plan, representing about 84 per cent of the total target. Of this total, about 40,000 dwellings were built by individuals mainly in the form of OBH, and the rest (36,000 dwellings) were built by the public sector in the form of PPH (Allan, 1981, Al-Zenie, 2002). Clearly, the figures for the 1973-1975 plans demonstrated a big difference in priorities and willingness related with socio-economic development between the revolutionary government and the prior monarchy. In this regard, Allan (1981:187) stated that:

> "The revolutionary regime was committed to spending at a higher rate on development than had the monarchy and to creating viable productive sectors in agriculture and industry."

4.3.2.2 The Socio-economic Development Plan (1976-1980)

This plan aimed mainly to reduce the dominance of the oil sector in the national economy and to create greater diversity in the production sector. It also intended to improve the living conditions of Libyans by providing every Libyan family with a decent home, proper health care, and education services. For this purpose, a total of LD 9,215 million was allocated by the government to implement this plan. Regarding the housing sector, the share of public sector funding for housing production in this plan was clear reaching about 83 per cent of total expenditure on housing construction (Al-Zenie, 2002:16). As a result, the shortage in housing units was reduced significantly from 99,000 dwellings in 1975 to only 49,000 dwellings in 1980 (Secretariat of Information, 1981:60). By the late 1970s, it was obvious that the Libyan economy was totally controlled by the public sector when the private sector was nationalized following the application of the principles of socialism in 1978.

4.3.2.3 The Socio-economic Development Plan (1981-1985)

The government's efforts towards improving the performance of the Libyan economy promptly continued during the 1980s when it introduced the Development Plan (1981-1985). Certain social and economic objectives were intended to be achieved within the limited five years of the plan. Economically, this plan aimed to increase the rate of growth in the agricultural and industrial sectors as well as to reduce the country dependence on oil by financing various proposed projects and programmes for socio-economic development. In social terms, it aimed to raise the living standards of Libyan citizens, particularly in relation to housing, health, and educational services. Added to this, the plan aimed to intensify the development of human resources in order to encourage and boost the involvement of Libyans in the transformation process which in turn would lead to limiting the dependency on foreign labour. Most importantly, this plan aimed to ensure more balance in the physical and spatial development in the country by adopting a policy that could enhance the development of technology and science (Al-Zenie, 2002:17). For this purpose, a total of LD 185,000 million was planned to be devoted to this plan. However,

the actual expenditure on this plan was only LD 107,000 due to the decline in crude oil prices in the early 1980s. Of the total, about 19 per cent was spent on industry, 16.1 per cent was spent on the agricultural sector, and 10 per cent was spent on housing. Despite 146,200 dwellings being targeted to be built in this plan, the actual achievement did not exceed 23,734 dwellings representing only 16 per cent of the target. This was mainly due to the decline in the number of building-loans issued through the Real-estate Investment and Saving Bank (REISB) as well as the lack of performance of national construction firms (Al-Zenie, 2002:21).

By the end of the Development Plan (1981-1985), it was obvious that the global oil crisis during the early 1980s, which led to sharp decline in oil prices, had begun to affect the Libyan economy's performance in the following years. As with many OPEC[1] members, Libyan oil production was reduced to only 1.017 million barrels in 1982 compared to about 2 million barrels in 1979 (Ghanem, 1985). This resulted in a notable decrease in oil revenues, of only US$ 8,500 million in 1990 compared to about US$ 15,331 million in 1981 (Africa Today, 1991).

The notable decline in oil revenues by the mid-1980s meant that the socio-economic development in Libya faced tremendous financial obstacles. This was noticed in the decline in budgetary allocations for development in the following years. As a result, many development projects under construction across the country were suspended and others were delayed. Although the state continued to control the main sectors of the economy during this period, a new law was introduced in order to allow private enterprises in 1988 as one step towards economic liberalization in the country. The dependency on oil has made the Libyan economy vulnerable to changes in world oil prices which fell sharply in the mid-1980s. Thus, aiming to deal with this economic situation, the Libyan government initiated a process of economic liberalisation in 1988 by opening the door to private enterprises.

4.3.2.4 Government Development Programmes (1986-2003)

During the period (1986-2003), certain attempts were made by the government in order to continue the development programmes. These can be explained in the following points:

[1] OPEC is 'Organization of Petroleum Exporting Countries' in which Libya has a full membership.

1. In 1986, a proposal for a new Development Plan for the period 1986-1990 was set, with total budgetary allocations estimated at LD10900 million aiming to control spending on the different sectors and to encourage the private sector and domestic labour force to be more involved in the economic activity. Unfortunately, as Al-Zenie (2002) mentioned, this proposed development plan was not approved due to the lack of funds caused by the sharp decline in oil prices as well as by the instability related to public policies during the second half of the 1980s.

2. Another Development Plan was proposed for the period 1991-1995 with total budgetary allocations estimated at LD12800 million. Its aims were quite similar to those mentioned in the 1986-1990 plans. However, the implementation of this plan was also constrained by the lack of financial resources. Added to this, the imposition of United Nations Sanctions[2] on Libya in 1992 led to the economic conditions in the country worsening. In this respect, although the country was still able to export oil during the era of United Nations Sanctions, it was obvious that the cost of its imports rose substantially owing to the extra costs of transaction and transportation. This resulted in inflation to reaching up to 50 per cent in the mid 1990s (Al-Zenie, 2002).

3. Another attempt was made by the government during the 1990s to overcome the problems facing the implementation of socio-economic programmes by introducing a three-year Development Programme (1994-1996). This programme aimed mainly to resume the implementation of suspended projects in different sectors of economy (such as housing, health, education, and communications). In addition, it aimed to encourage the private sector to invest in the industrial sector and to encourage the banking sector to provide more loans to promote the industrial, housing, and agricultural activity. Despite these aims, it was obvious that no significant progress was made in socio-economic development in the country, due to the same aforementioned obstacles that faced the previous plans (Al-Zenie, 2002:23).

[2] I 1992 and according to UN Security Council's resolution no. 478 of 1992, economic sanctions were imposed on Libya that lasted for about ten years and lifted in 2003 following the UN Resolution no.150 of 2003.

It can be concluded that, although many achievements were made during the post revolution era mainly in relation to wealth distribution among Libyan nationals, many obstacles were encountered in the implementation of socio-economic development plans particularly in the late 1980s and 1990s. Among these problems were the predominance of the oil sector as the main source of funds required for development during this period and the inability to develop alternative sources of funds. In addition, the aim of diversity in exports was not achieved during this period, when oil exports and products still took the lion's share of total exports. Moreover, the participation of the private sector in the finance and implementation many development plans was not significant during this period.

4.4 Political & Administrative Change in Libya

The political system and administrative divisions in Libya have undergone tremendous changes. The country was characterized by various degrees of instability in administrative systems during the last century, particularly during the post-revolution era. This has to a large extent influenced the formulation and implementation of many public policies during this period, particularly in the housing sector. Hence, the discussion regarding this type of change is divided into two sections. The first section briefly discusses the political changes during the pre-revolutionary years (1911-1969), while the second highlights the main features of such change during the post-revolution era of 1969- onwards, and its impact on all aspects of development.

4.4.1 Aspects of Political Change during the Pre-revolution Era

During this period, problems of instability in the political and administrative environment in the country were quite obvious. Having been ruled by Italian settlers (1911-1941) and then the British Administration (1942-1950), Libyan politics and administration were dominated by underlying tribal factionalism during the monarchy regime of 1952-1969 (Chackerian, 1977:113). During the seventeen years of the monarchy, the lack of people's involvement, corruption, favouritism, and fiscal dishonesty characterized the political scene in the country (El Fathaly et al., 1977). For instance, the problem of ministerial instability and bureaucracy during this period were quite apparent. In this regard, El Fathaly (1977:26) stated that:

> "In total, during this period of seventeen years, there were eleven cabinets ... The ministers rarely had time to familiarize themselves with the issues of their departments. They were always under the threat of being dismissed or switched. Most of them were there to get for themselves everything they could in shortest period possible."

4.4.2 Aspects of Political Change during the Post-revolution Era

Since its early days, the 1st of September Revolution had the aim of achieving rapid reform in the socio-economic and political system of the country as a top priority. The government's efforts towards achieving this aim began when it introduced a temporary new constitution on the 11th of December 1969. In addition, after freeing the country from the control of foreign military bases in 1970, a new closed bureaucratic administrative system was introduced. This system was based on purging tribal leaders from all local and provincial government administrations and replacing them with better educated people who were seen capable of implementing a rational long-range planning and policies in the country. In this respect, El Fathaly (1977:42) wrote that:

> "Since traditional leadership lacked the orientation, background, attitudes, values, or interest which would make them able or willing to implement revolutionary changes and policies, these leaders where stripped of their power and replaced by younger, better educated people who shared the values and commitments of the revolutionary leadership."

This was seen as step forward in modernizing the administrative system in the country; and at the same time was considered as a step backward, since it affected the implementation of many programmes that required some sort of extensive popular support, by reducing the level of interpersonal competence in these programmes (Chackerian, 1977:113). Thus, it was obvious that both the legislative and executive authorities during the period 1969-1972 remained in the control of the 'Revolutionary Council Command' (RCC). Over these three years, the RCC practiced legislative authority completely by itself on behalf of the people and at the same time practiced executive authority through nominating the Council of Ministers and also took the role of supervisor and overseer for the implementation of all public policies in the country. However, the government quickly realized that its bureaucratic approach had failed in administrating the different sectors of

economy properly. The inability of modernized leaders to mobilize the mass public was seen the main reason for this failure (Ben-Ismaeil, 2003:4).

4.4.2.1 The Popular Revolution in 1973

In response, a notable step was taken by the government when the 'Popular Revolution' was announced on the 15th April 1973, in order to purge the political system from all problems of bureaucracy through providing the people with a real opportunity to freely select administrative committees in order to speed up development projects. As Fergiani (1976:112) argued, this was the first time the masses were able to practice direct democracy and to seize authority. To some extent this succeeded in increasing the people's participation in the political system through decentralizing the administration of most government sectors.

4.4.2.2 The Establishment of the Authority of the People in 1977

In 1977, a new political system was introduced in Libya when the country became the 'Jamahiriya' (state of the masses) instead of a 'Republic' following the declaration of the 'Establishment of the Authority of the People' on the 2nd of March 1977. Consequently, the name of the country was changed from 'The Libyan Arab Republic' to 'The Socialist People's Libyan Arab Jamahiriya'. This new political system was based on the application of the concept of 'Direct Democracy' (People's Authority) introduced in the first part of the Green Book[3] written by Al-Qathafi in 1976.

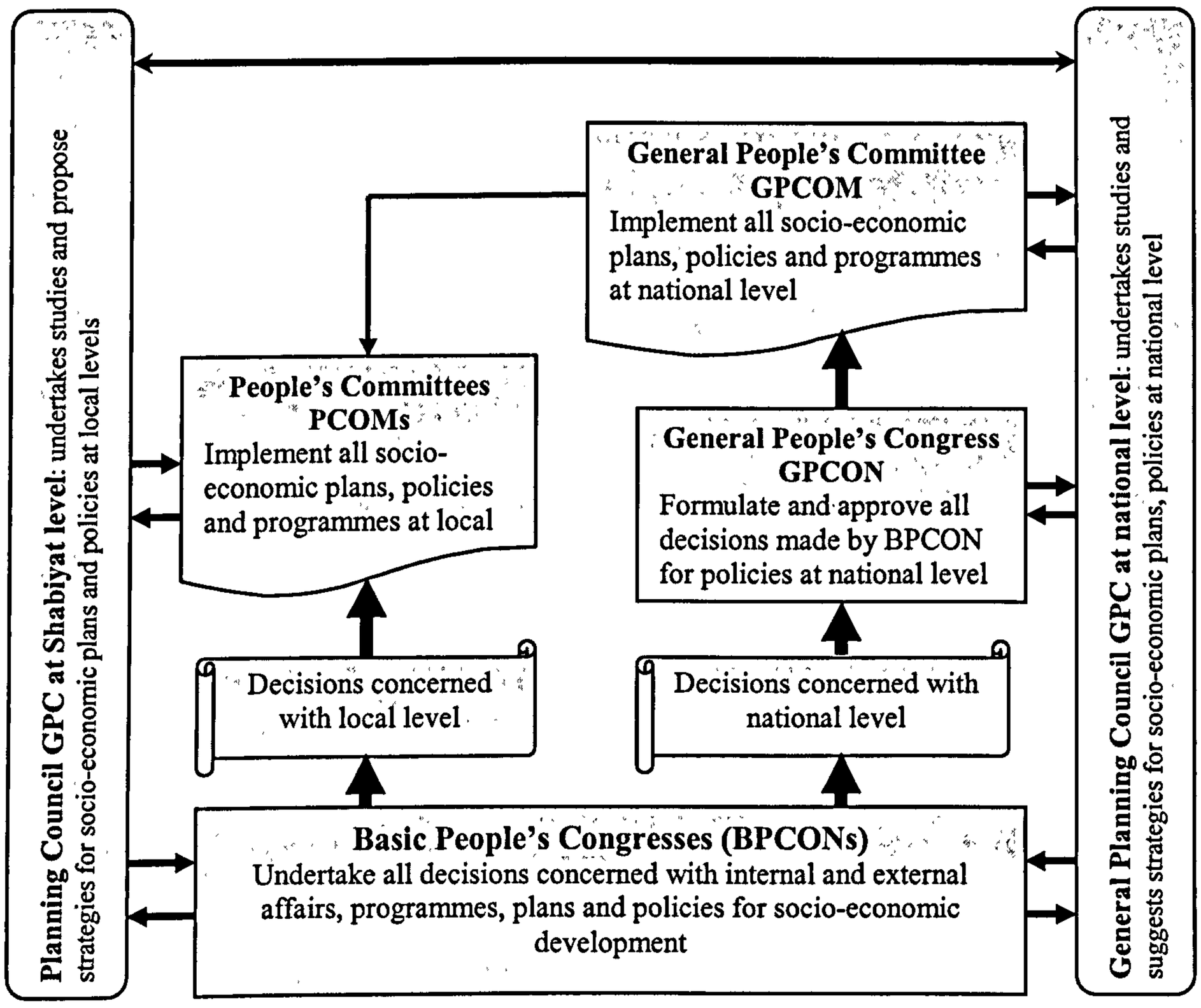
Based on this system, the country is completely run by the 'Basic People's Congresses' (BPCONs) as the legislative authority and the 'People's Committees' (PCOMs) as executive authority. Both BPCONs and PCOMs should exist at local levels in every Libyan city, town and village, and every Libyan citizen of the age of 18 or above has the right to be a member in the BPCON in his area of residence. In these BPCONs, all laws, regulations and decisions concerned with both the internal and external policy affairs of the country have to be discussed and approved by the people. Decisions concerned with national policies, plans and programs have to be formulated in the 'General People's Congress' (GPCON).

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1 *The Green Book*, written by *Al-Qathafi*'s in the mid-1970s, includes ideas regarding solutions for political (Part One), economic (Part Two) and social (Part Three) problems that the world suffers from.

The execution of decisions made by the BPCONs can be implemented at two levels. At the first level, all decisions concerned with national socio-economic policies and programmes have to be implemented, supervised and managed by the GPCOM (Council of Ministries) through People's Committees (PCOMs) of different sectors (housing, health, education, security...etc.). At local level, decisions undertaken by BPCONs concerned with development programmes at Shabiyat (municipality) and BPCON level are implemented, managed and supervised by local PCOMs of different sectors.

Figure 4 - 2: the Political System in Libya based on the application of the Authority of People



Source: Author

In the early 1990s and aiming to help both the legislative and executive authorities in undertaking and implementing wise decisions and plans for socio-economic development, new authority for planning and consultation was introduced and known as 'General Planning Council' (GPC). The GPC is responsible for undertaking planning studies for all socio-economic programmes and plans and acts as consultancy agency offering expert advice for both legislative and executive authorities. Branches for GPC were established at

the level of Shabiyat (municipalities) to undertake studies at local levels. Figure 4.2 illustrates the structure of political system in Libya based on the application of the Authority of the People.

4.4.2.3 Administrative Instability & its Impact on Policy Implementation

Although the political system adopted in the country from 1977 onwards is seen as one of the most decentralized systems in the region, it was obvious that there was instability and rapid change in the administrative divisions of the country. For instance, the number of Baladiyat (municipalities), which was the basic administrative division adopted in the country during the period 1977-1990, was decreased from 46 Baladiyat in 1977 to 25, 13 and 7 Baladiyat in 1980, 1986 and 1990 respectively. At the end of the year 1992 the system of Baladiyat was abolished and the administrative division of the country was based on the BPCONs which reached about 1500 in 1992 before being reduced to 370 BPCONs in 1993. This administrative division lasted for only two years, when the country was re-divided again into 13 administrative units called 'Manateeq'[4] (provinces) in 1995. However, another new administrative division was introduced in 1998 by re-dividing the country into 27 Shaabiyah[5] (administrative areas) including about 351 BPCONs. By the year 2003, the number of Shaabiyah had increased to 32 and the number of BPCONs reached 450 (Al-Mighierbi, 2003:5-6).

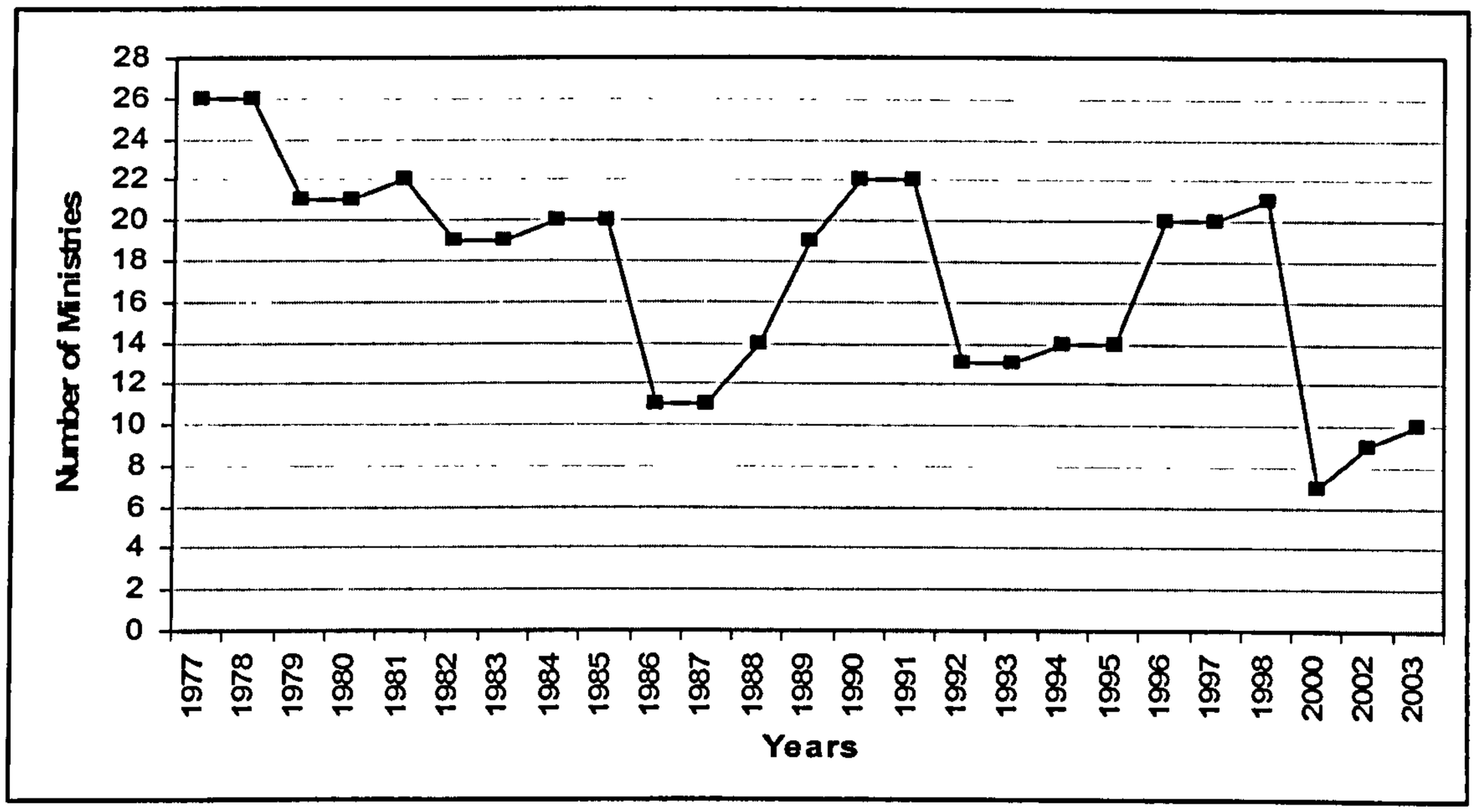
The problem of instability and rapid change in the country was not only concerned with the administrative division, but also with the number of PCOMs (Ministries). As Figure 4.3 illustrates, the number of PCOMs that the GPCOM (Council of Ministries) consisted of has undergone great flux during the period 1977-2003 due to the frequent merging and splitting that these ministries have witnessed. It was obvious that the implementation of many public policies concerned with socio-economic development in the country has to large extent been negatively affected by the instability and rapid change in the administration of the country during this period. Al-Mighierbi (2003:15) argued in this respect that the abolition, merging or splitting processes that many PCOMs witnessed during the period 1977-2003 represented an attempt by the government to improve the performance of these ministries, but interrupted the implementation of many projects and

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[4] 'Manateeq' is an administrative division made on a geographical basis.
[5] 'Shaabiyah' is an administrative division whose name that means 'popular', reflects people's authority and control over their affairs.

programmes that they were intended to carry out. The housing sector was among those that were severely affected by this instability, as will be discussed in chapter five.

Figure 4 - 3: The number of GPCOMs (Ministries) during the period 1977-2003



Source: adapted from Al-Mighierbi, 2003

4.5 Urbanization & Population Growth in Libya

As with many other countries in the Arab World and among developing countries, Libya has experienced high rates of urbanisation since the discovery of oil in the late 1950s. Now it is considered to be one of the most highly urbanized countries in the world. Such high rates of urbanisation were mainly influenced, as Kharoufi (1996), Madanipour (1998), El Ghonomy (1998), Al-Hathloul and Mughal (2004) argued, by the socio-economic and technological development experienced in these countries since the 1950s. The urban population in the Arab world, for instance, accounted for about the half of the total population in 1996, and the phenomenon of urbanisation has brought about an extraordinary expansion of its major cities during the second half of the 20th century (Kharoufi, 1996:1).

In the Libyan context, the funds gained from oil production since the early 1960s, as mentioned earlier, has facilitated the implementation of many ambitious socio-economic development plans, particularly during the post-revolution era. As a consequence, the great

majority of Libyan cities and towns have undergone dramatic reconstruction. New living patterns quickly started to appear in these cities (Ehtiyoish, 1994, Kezeiri, 1982).

However, the discussion regarding aspects of urbanization and population growth in this section focus on the second half of the 20th century, since this period witnessed the most notable socio-economic development in the country. In addition, three notable events had a great impact on the rate of urbanization as well as on population growth and its distribution across the country's regions. The first event was the end of colonial occupation and the country's independence in 1951, the second was the discovery of oil at the end of the 1950s, and the third was the 1st of September Revolution in 1969. Together with the physical environment of the country, these events have had a great impact on the patterns of population growth and its distribution, which themselves resulted from natural increases and the massive rural-urban migration, as will be discussed later.

4.5.1 Aspects of Urbanization and Population Growth, 1951 to the Present

As mentioned earlier, the tremendous socio-economic change that the country witnessed during the second half of the 20th century rapidly transformed the country from being very poor and largely dependent on foreign aid and where the great majority of its population was nomadic or semi-nomadic, to becoming a very wealthy and urbanized country (Kezeiri, 1994). The discovery of oil and the economic prosperity associated with its production during the 1960s and 70s led to vast economic and socio-cultural changes in Libya occurring at as extremely rapid pace. Many rural dwellers migrated towards urban centres in the hope of improving their living conditions by benefiting from better chances of employment and higher wages offered there. Such rural-urban migration in turn produced a major housing crisis in urban areas. Within less than a decade, many overcrowded shanty towns with thousands of rural immigrants, who had failed to achieve their dreams in urban centres, started to appear around urban centres, particularly Benghazi and Tripoli. Such massive rural-urban migration led to further deterioration to the already poor level of services in the urban centres. In this regard, El Fathaly (1977:15) wrote that:

> "This one-way movement has led to the deterioration of the already deficient agriculture sector and has aggravated the conditions of housing, transportation, and other services which were already behind in meeting the needs of the original city dwellers in both cities.

Gradually, a new era of modernization began to appear in the majority of Libyan cities and villages, through the use of an advanced construction systems and modern building materials in the huge development projects implemented by the government during the 1960s and 1970s. In this respect, concrete, steel, glass, aluminium, and other modern building materials were used in the construction of many high rise buildings, prefabricated buildings, hotels, bridges, schools and colleges, hospitals, shopping centres, public buildings and modern low rise dwellings. This led to notable change in the urban landscape and the traditional lifestyle in most Libyan cities and villages. El-Hammali (1982:298) conducted research concerned with aspects of the impact of modernisation in Libya and wrote:

> "The modernisation induced by increases in oil revenues has resulted in mass migration which, in turn, has affected industry, communications and transportation, mass education, and occupational status of the population."

In short, the large socio-economic development projects that the Libyan government implemented in the country during the 1960s and 1970s; led to rapid urban population growth in most Libyan cities, particularly Tripoli and Benghazi (Al-Hattab, 1994). In addition, tremendous physical expansion was also noticed in many small towns whose functions, population levels and morphologies witnessed profound changes during the post-oil era (Kezeiri, 1984:378). In this regard, new housing projects, administrative complexes, schools, hospitals, industrial estates, shopping centres, and road networks were built in these cities to overcome the serious conditions.

As mentioned earlier, the rapid urban population growth was mainly caused by the massive internal rural-urban migration, the return of many Libyans from neighbouring countries, and the influx of foreigners who were seeking work in the country during the post-oil discovery years (Kezeiri, 1984). Trends in population growth during this period are discussed next.

4.5.1.1 Trends in Population Growth during the Second Half of 20th Century

Five population censuses were carried out during the second half of the 20th century, in 1954, 1964, 1973, 1984, and 1995 respectively. As these population censuses show, the country's population increased from 1,088,873 inhabitants in 1954 to 4,799,065 inhabitants

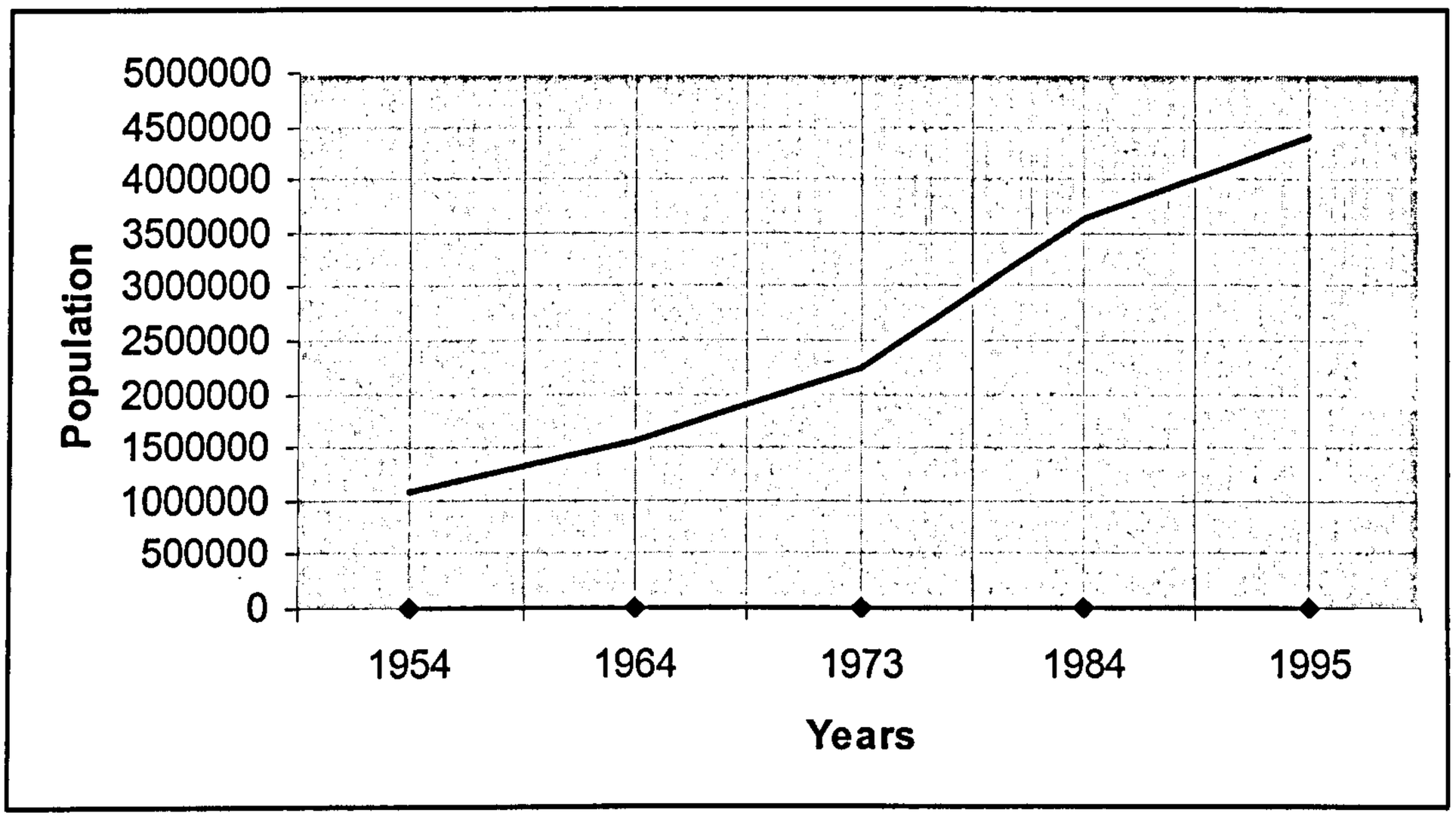
in 1995 with an annual growth rate of 3.6, 4.1, 4.4, and 2.5 per cent for the periods 1954-1964, 1965-1973, 1974-1984, and 1985-1995 respectively. As can be seen from Figure 4.4, the country's population grew fourfold during the period (1954-1995). Such a notable increase in the total population during the second half of the 20th century can be attributed to the following factors:

1. The high rate of the natural increase of population due to the considerable improvements in living conditions for Libyans during the 1960s and 1970s. For instance, while the rate of fertility increased from 41.4 % (in every thousand new born) in 1970 to 46 % (in every thousand new born) in 1984, the rate of mortality, in contrast, declined from 7.6 % (in every thousand new born) in 1970 to 7% and 3.1% (in every thousand new born) in 1984 and 1995 respectively (National Corporation for Information and Documentation, 1999).

2. The massive rural-urban migration following the oil-discovery in the late 1950s towards the urban centres and particularly to Benghazi and Tripoli led to a notable population increase in these centres. For instance, the population of Benghazi, Tripoli and Ejdabiya grew at average annual rates of 6.5, 5.6 and 10 per cent respectively during the period (1953-1963) (Doxiadis Associates, 1964a).

3. The massive return of Libyans who had left the country during the Italian occupation to the homeland. In this sense, it has been estimated that 51,000 Libyan migrants have returned home during the period 1954-1963 (Mohammed, 1994:13). In addition, according to the results of the 1984 census, the number of Libyans who were born outside the country was 57,144 inhabitants.

Figure 4 - 4: Trends in Population Growth during the Period 1954-1995



Source: adapted by the author based on 1954, 1964, 1973, 1984, and 1995 censuses

4.5.1.1.1 Trends in Libyan Population Growth

As Table 4.1 illustrates, the Libyan population increased from 1,041,599 inhabitants in 1954 to 3,231,059 inhabitants in 1984. The annual growth rates during these three decades were 3.7, 3.4, and 4.1 per cent for the periods 1954-1964, 1964-1973, and 1973-1984 respectively. In addition, the period 1984-1995 witnessed a further growth in Libyan population to 4,389,739 inhabitants in 1995, with an annual growth rate of 2.8 per cent during this period. During these four decades, the percentage of Libyan nationals in the total population was quite high, at 95.7, 96.9, 91.2, 88.7, and 91.4 in the years 1954, 1964, 1973, 1984, and 1995 respectively.

It is noteworthy that, compared to other oil-based Arabic states, Libya is characterized by a high percentage of locals in the total population of the country. For instance, in 1981 about 86.4 per cent of the total population in Libya were Libyans, while in Kuwait less than the half of the total population in the same year were Kuwaitis (Mohammed, 1994:19).

Table 4 - 1: Trend in Libyan population Growth during the period (1954-1995)

Census	Total Population				Rate of Total Population Increase							
					(54-64)		(65-73)		(74-84)		(85-95)	
	Libyans		Non-Libyans									
	No.	%	No.	%	%	Annual Growth Rate	%	Annual Growth Rate	%	Annual Growth Rate	%	Annual Growth Rate
1954	1041599	95.7	47274	4.3	43.7	3.6	43.8	4.1	61.9	4.4	31.7	2.5
1964	1515501	96.9	48868	3.1								
1973	2052372	91.2	19686	8.8								
1984	3231059	88.7	41151	11.3								
1995	4389739	91.4	40932	8.6								

Source: adapted by the author from 1954, 1964, 1973, 1984, and 1995 censuses

4.5.1.1.2 Trends in Non-Libyan Population Growth

Certain political and economic factors have influenced the growth of the non-Libyan population in the country during the second half of the 20th century. Among these factors are the departure of many Italian settlers after World War II, the discovery of oil in the late 1950s, and the signing of many agreements between Libya and neighbouring Arab states such as Egypt and Tunisia in the early 1970s. As the results of the four population censuses show, the following can be noted:

1. The annual growth rate of the non-Libyan population during the period 1954-1964 was quite low (about 0.33 per cent) which can be attributed to the following reasons:
    - The massive departure of many Italian settlers during the post-World War II years.
    - The poor economic conditions in the country during the 1950s and early 1960s.

2. During the period 1964-1973, a slight increase was noticed in the size of the non-Libyan population which accounted for about 196,865 inhabitants in 1973 with an annual growth rate of 15.5 per cent during the same period. Such an increase can be attributed to the notable improvements in socio-economic conditions following the implementation of the socio-economic programmes in the country after the discovery of oil, which led to an increase in demand for the non-Libyan labour force particularly in the construction sector during the late 1960s and 1970s.

3. The increased demand for foreign labour force during the period 1973-1984 resulted from the intensive development projects implemented during the 1970s. This led the size of the non-Libyan population to increase four folds reaching about 411,517 inhabitants in 1984 with an annual growth rate of 6.7 per cent.

It is noteworthy that the country's economy, which was and still is largely dependent on oil revenues, has played a major role in the growth of the non-Libyan population during this period. As Figure 4.5 illustrates, the following facts can be noted:

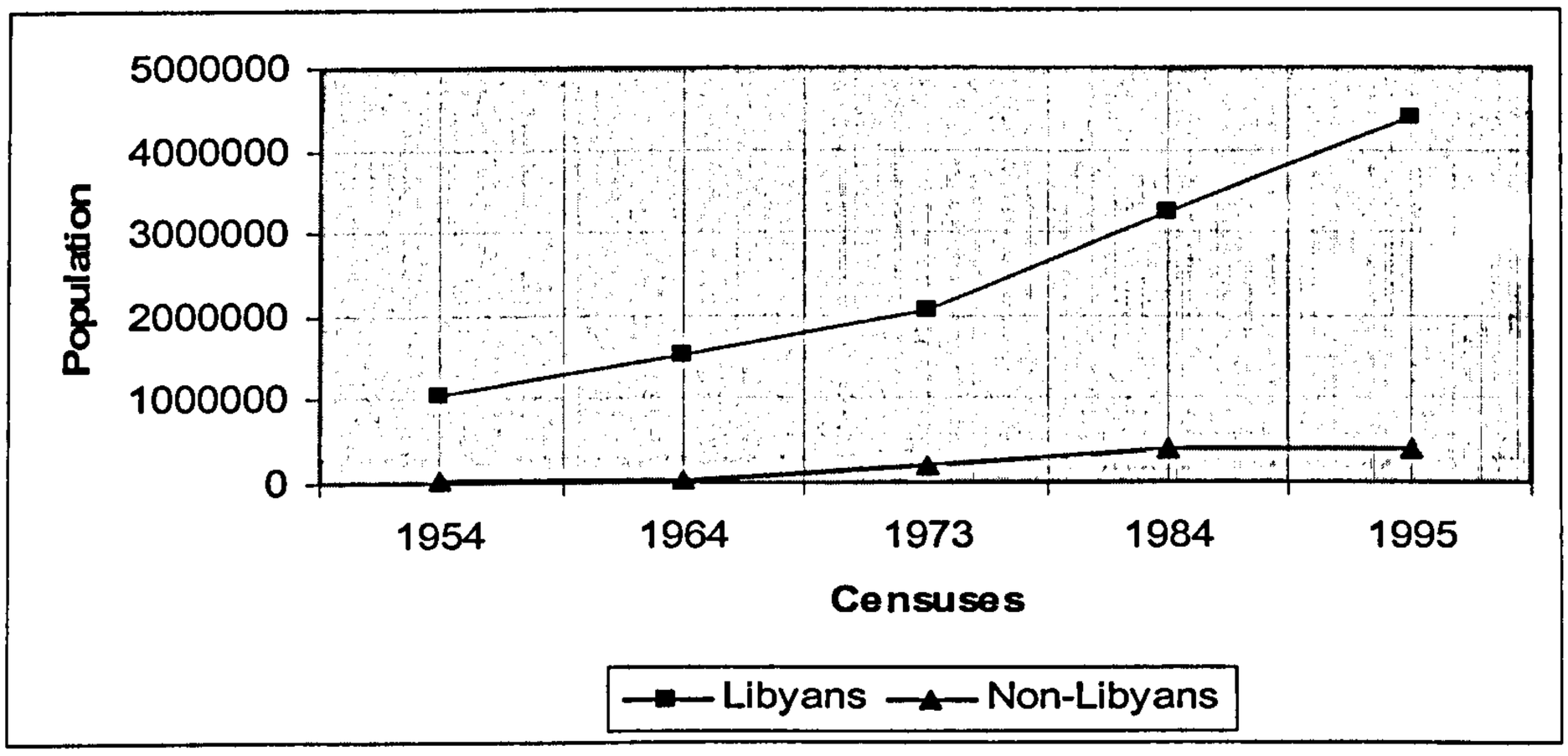
1. The size of the non-Libyan population increased rapidly during the 1970s. Between the years 1973 and 1979 it doubled reaching 428,000 inhabitants in 1979 compared to 196,865 in 1973. This notable increase was mainly caused by the remarkable increase in oil prices during the first half of the 1970s which led to an increase of LD 11,318 million in the oil and gas revenues from total domestic production in 1973. This figure has increased to LD 45,578 million in 1979.

2. The notable decline in oil revenues in the late 1970s and early 1980s, which led the government to reduce its expenditure on different sectors of economy, put some restrictions on the non-Libyan labour force, leading to a decline in the annual growth rate of the non-Libyan population during the same period.

3. Finally, the period 1984-1995 witnessed fluctuations in the numbers of non-Libyan residents. In this respect, the strategy of open borders that the Libyan government adopted in the late 1980s has encouraged many Arab migrants from neighbouring countries such as Egypt and Tunisia to enter the country and work in many economic sectors, particularly in agriculture and construction. Consequently, the size of the non-Libyan population increased to 866,000 inhabitants by 1992, with

an annual growth rate of 9.7 per cent. In addition, the UN sanctions imposed on the country during the early 1990s led to a remarkable departure among the non-Libyan population due to the scarcity of work opportunities and the decline in wages. As a result, the numbers of non-Libyans decreased to 409,326 inhabitants in 1995.

Figure 4- 5: Libyan and non-Libyan Population Growth during the Period 1954-1995



Source: adapted by the author from 1954, 1964, 1973, 1984, and 1995 censuses

4.5.1.2 Urban Population Growth during the Second Half of the 20th Century

Despite the different criteria that Libyan researchers have adopted in calculating the size of the urban population in Libya, rapid urban population increase was evident in the second half of the 20th century (Kezeiri, 1986:35). The increase accompanied the expansion of many cities and towns during this period. The 1954 census conducted with the help of the United Nations two years after the country's independence in December 1951, only classified Benghazi; Tripoli; Elmarj; Derna; Ejdabiya; and Tobruq cities as urban centres in the country. In addition, the 1964 census determined Benghazi; Tripoli; Derna; Tobruq; Ejdabiya; and Sirt cities as the only six urban centres in the country. Moreover, the Ministry of Planning and Development in 1966 considered every settlement with 2000 inhabitants or more as urban regardless of its function. As a result, many rural areas that had 2000 inhabitants were considered to be urban settlements according to this definition (Kezeiri, 1984).

However, both 1954 and 1964 censuses showed that urban population growth was about 42.7 per cent during the period 1954-1964, which is quite similar to the growth of the total population during the same period (of about 43.6 per cent). However, the average annual growth rates were 16.5 per cent and 12.9 per cent for the periods 1954-1964 and 1964-1973 respectively. Furthermore, in the three population censuses carried out during the post-revolution era in 1973, 1984, and 1995, any human settlement located out of the limits of the approved master plan of any city or town within the administrative division of any Baladiyah[6] or Sub-Baladyiah[7] was considered 'rural' irrespective of its population size and their activities. Based on this criterion, in the1995 census; out of 667 Mahallas[8]; 383 were considered urban and 284 Mahallas were considered rural.

Table 4 - 2: Urban Population Growth during the Period 1954-1995

Year	Population of Libya		
	Total Size	Urban (%)	Rural (%)
1954	1,088,873	42.7	57.3
1964	1,564,369	45.7	54.3
1973	2,149,237	59.8	40.2
1984	3,642,576	75.4	24.6
1995	4,799,065	85.7	14.3

Source: adapted from 1954, 1964, 1973, 1984 and 1995 population censuses.

However, considerable increases were noticed during the post-revolutionary years in the size of the urban population in the country. As can be seen from Table 4.2, the proportion of the urban population in the total population increased from 59.8 per cent (1,344,327 inhabitants) in 1973 to 75.4 per cent (2,746,648 inhabitants) in 1984. In addition, in the last census of 1995, the urban population had doubled compared to 1984 and increased three folds compared to the number in 1973, reaching about 4,114,242 inhabitants (about 85.7 per cent of the total population). On the other hand, a sharp decline was noted in the size of the rural population during the post-revolutionary years. It declined from 40.2% of the total population in the country in 1973 to 24.6% in 1984 and 14.3% in 1995.

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[6] 'Baladiyah' is a term that was used to refer to an administrative area that officially has a complete control over its administrative and internal affairs (Municipality). At the end of 1992, this term was replaced by 'Shabiyah' (see section (3.4.2), the political and administrative division change).

[7] 'Sub-Baladiyah' is a term that was used to refer to sub-division within the limits of particular administrative area 'Baladiyah'.

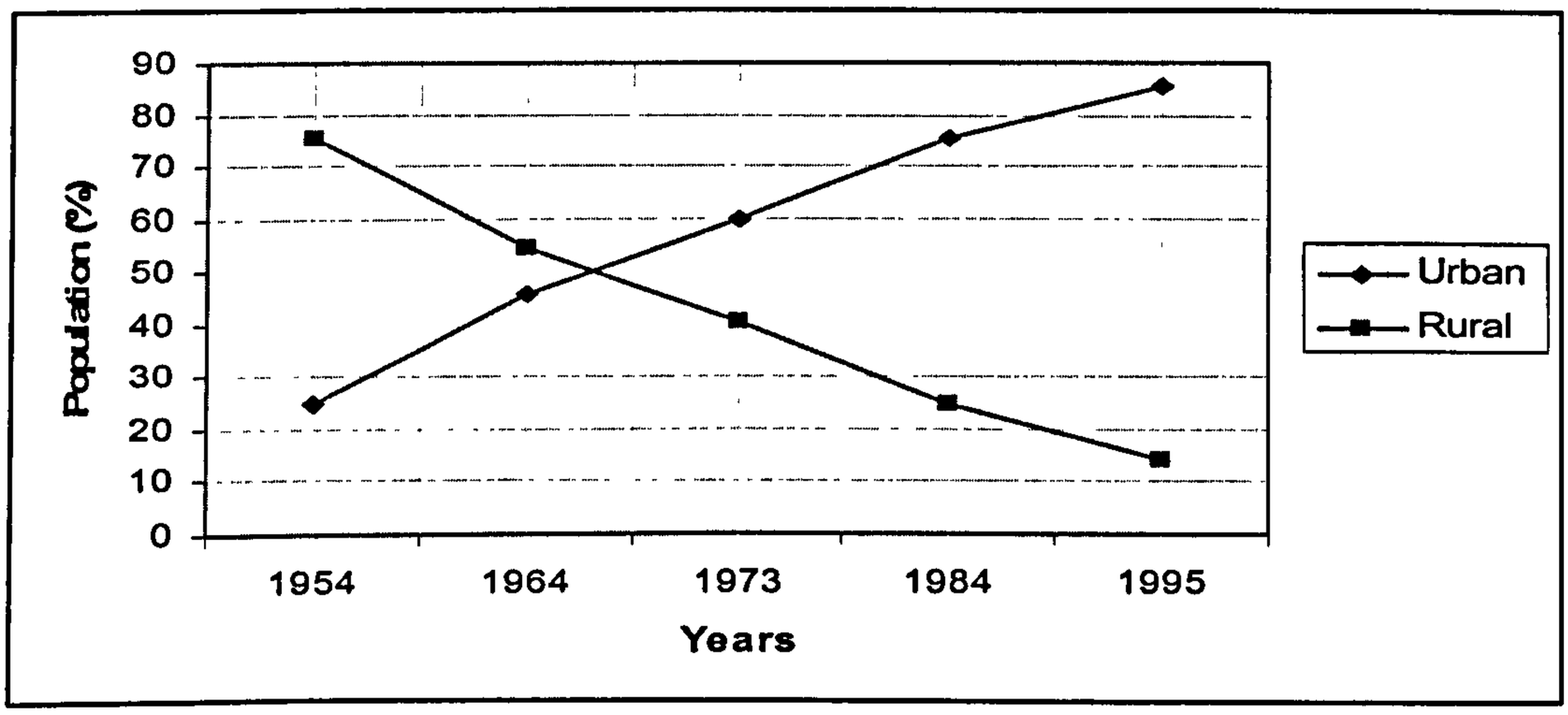
[8] 'Mahallah' is the smallest administrative unit in the administrative provision of the country.

The tremendous increase in the size of the urban population and the sharp decline in the rural population during the post-revolution era shows in Figure 4.6 can be attributed to the following factors:

1. The massive rural-urban migration during the 1960s and 1970s, particularly after the discovery of oil in the late 1950s when many Libyans left their rural areas and moved towards the main cities encouraged by the high concentration of economic and administrative activities there (Awotona, 1990b:88). In this respect, the 1964 census showed that 200,170 inhabitants had migrated from rural areas. As Alawar (1982) estimated, about 11,600 inhabitants migrated to urban areas every year during the period (1954-1964).

2. The intensive investment devoted by the government towards improving the country's socio-economic infrastructure (health, education, housing, and transport and road networks), together with the scarcity of local labour, caused the government to rely on foreign workers, particularly from nearby Arab countries, to undertake these development projects.

Figure 4 - 6: Trend in Urban and Rural Population Growth during the Period 1954-1995



Source: adapted by the author from 1954, 1964, 1973, 1984, and 1995 censuses

It is obvious from the above discussion that Libya has experienced high rates of urbanization, and its urban population amounted to 85.7 per cent of the total population in 1995. Such high rates of urbanization and urban population growth have put more pressure on all sectors of development, and particularly on the housing sector in most urban centres.

4.6 Conclusion

This chapter has sought to examine the main aspects of socio-economic and political change that the country has undergone during the 20th century and particularly during the post-oil discovery era. The high rates of urbanization and population growth have also been examined in the light of the impact of the discovery of oil on the expansion of cities and the provision of public services since the late 1950s. It is obvious that the wealth gained from the exploitation of oil since the early 1960s has transformed the country from being one of the poorest states in the world during the first half of the 20th century to one of the wealthiest during the second half. However, the socio-economic development in the country during the 1970s was to a large extent influenced by oil revenues which facilitated the implementation of enormous socio-economic development programmes. Added to this, and particularly following the application of socialist principles in the late 1970s, the performance of Libyan economy was influenced by the total control of the state over economic activity. During the 1980s and 1990s, the country's economy was seriously hampered by the sharp decline in oil prices in the early 1980s as well as the UN sanctions imposed in the early 1990s. Shortages of funds and the limited contribution of the private sector during the 1980s and 1990s have delayed the implementation of many intended socio-economic development programmes. In the housing sector, the implementation of many housing programmes was delayed and others under construction were suspended (see chapter 5).

In terms of political change, the formulation and implementation of many public policies during the late 1970s and 1980s were largely influenced by instability in the structure and size of legislative and executive authorities as well as the administrative divisions of the country during this period. In terms of urbanization and population growth, many Libyan cities have expanded and their morphological and demographic features have changed dramatically during the post-oil discovery era due to the creation of new urban environments by foreign consultants and companies who have undertaken the planning and the execution of development plans. The concentration of employment opportunities and better living standards in big cities has led to a notable increase in the urban population during the post-revolution era. Added to this, the size of the non-Libyan population has also been influenced by the economic and political conditions in the country. For instance, while the number of non-Libyans increased dramatically during the 1970s due to the intensive development projects and the adoption by the Libyan government of the open-

borders policy with neighbouring countries, the second half of the 1980s witnessed a notable decline in the size of the non-Libyan population due to the departure of many foreign workers following the sharp decline in oil prices in the early 1980s. The following chapter discusses the development of housing policies and conditions in the country, with a particular focus on OBH, and the main factors influencing its contribution to the housing supply during the post-revolution era.

Chapter Five:

Housing Development in Libya

Chapter Five

Housing Development in Libya

5.1 Introduction

The previous chapter has discussed socio-economic and political changes and their impact on the formulation and implementation of many public policies in Libya, particularly during the post-oil discovery era. The purpose of this chapter is to discuss the development of the housing sector during the second half of the 20th century, and again particularly during the post-revolution era (1969-present). The discussion centres on examining the main features of the housing policies that have been adopted by the Libyan government to house its citizens, and the quantitative and qualitative aspects of housing conditions from the 1950s onwards are investigated. Moreover, the development and contribution of OBH to housing supply both before and after revolution is discussed. The discussion of the development of the housing sector in Libya in this chapter relies mainly on a review of published and unpublished literature gathered by the researcher from many sources, such as the General People's Committee (GPCOM), General Planning Council (GPC), General Housing Corporation (GHC) and the National Corporation for Information and Documentation (NCID).

5.2 Housing during the Pre-Revolution Era

As mentioned in the previous chapter, the year of its independence of 1951 Libya was one of the poorest countries in the world and the majority of its citizens lived below the poverty line and lacked many basic services such as adequate housing, education and health. The main features of housing policy and conditions during the pre-revolutionary years are discussed below.

5.2.1 The Lack of an Integrated Housing Policy

During the 1950s and early 1960s, housing activity in the country was not based on a clear housing policy and the government's inadequate role in the housing sector left the

responsibility for providing housing needs as a heavy burden on individuals themselves (Essayed, 1981b). This inadequacy was highlighted by Awotona (1990a:56), who stated that:

> "Although the housing conditions were difficult, the Government did not intervene in the housing sector. It did not create any institutional or legislative machinery to facilitate new housing provision."

In order to ameliorate the serious housing conditions across the country, the government realized that there was an urgent need for an integrated housing policy. For this purpose the Act (5) of 1963 was concerned with facilitating a new phase of planning and the government was able to launch the first ever National Housing Policy. This policy was based on the results of the first extensive study undertaken by the 'Doxiadis Associates-Consultants' in 1963 regarding the housing conditions and problems in the country. The policy aimed to achieve the following objectives:

- Improving the housing conditions of the Libyan people through getting rid of all substandard dwellings within ten years,
- Providing sufficient community facilities in residential areas and reducing the average occupancy density rate from 1.37 families per dwelling to 1.1 families per dwelling,
- Integrating all housing policies and programmes with national development policies, and
- Encouraging the private sector to participate in housing activity in order to tackle the serious housing problems within urban and rural areas (Doxiadis Associates, 1964b).

Despite what the government aimed to achieve in the housing sector, it was obvious that most of its activities during this period were fragmented due to the improper management, and lack of manpower and building materials. In this sense, Essayed (1981b:158) wrote that:

> "Apart from the different sections in the various Ministries, the Ministry of Housing with its several departments has been involved in housing activities. Their activities have lacked integration, co-ordination and the effective administrative and legal backing which could make the housing system work."

5.2.2 The Huge Gap between Demand and Supply

The insufficient role that the government played in the housing sector during this period left housing production to a large extent to individual initiatives (Essayed, 1981a; Awotona, 1990a; NCID, 1999). In describing the serious housing conditions in the country during the early post-independence years, Awotona (1990a:56) wrote that:

> "Amongst the most serious of the housing problems were the following: quantitative housing deficit; a substantial stock of substandard dwellings; lack of proper maintenance of the existing stock which were in reasonably good condition; lack and inadequate distribution of community buildings and facilities; the proliferation of slums; unplanned development of cities, towns and villages; high cost of urban land; severe shortage of technical and skilled labour for the construction industry; shortage of private capital; shortage and high cost of building materials; the high rate of population growth; massive urban-ward migration; and the special housing needs of nomads."

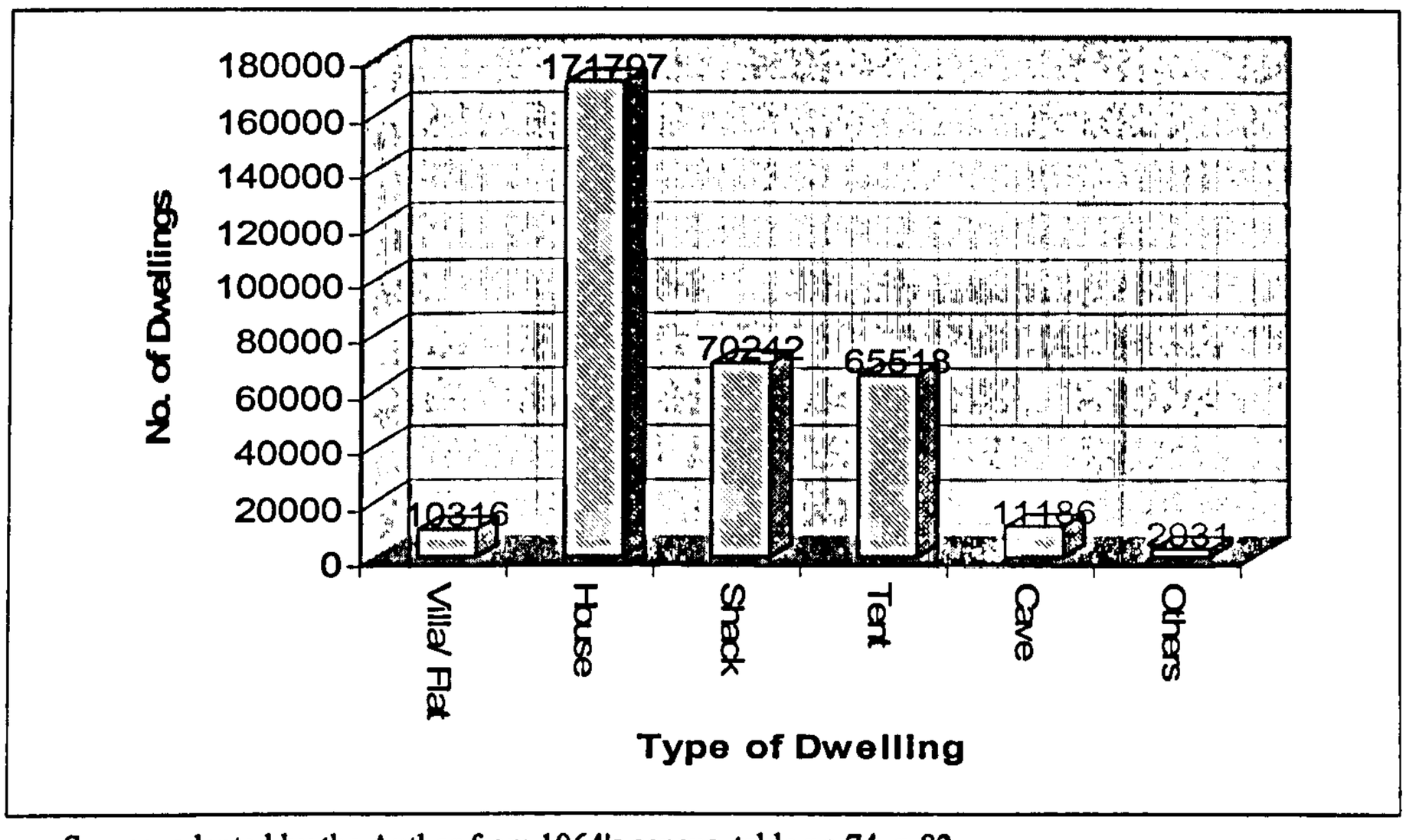
The results of the 1954' census revealed that the number of families outnumbered the number of available homes by more than twofold (National Corporation for Information and Documentation, 1999, Al-Mighierbi, 2003). Such an acute shortage in dwelling units had led to the phenomenon of overcrowding, whereby dwelling units could be shared, on average, by up to 9 families or up to 8.6 families in 1954 and 1964 respectively (NCID, 1999:91). The problem of overcrowding had become worse in most Libyan cities, particularly Benghazi and Tripoli due to the mass movements of people from rural areas in search of jobs and better living standards following the discovery of oil in the late 1950s. Therefore, about 80,030 dwellings were estimated to be needed urgently in the early 1950s in order to narrow down the gap between supply and demand in housing and to decrease such high rates of occupancy to about 1.1 families per house (Al-Megierhi, 2000).

5.2.3 Housing Typology

Another evidence of the miserable housing conditions in the country during this period was the widespread phenomenon of overcrowded shanty towns, particularly around the big cities such as Benghazi and Tripoli. The results of the 1964 census, for instance, show that out of a total of 33, 1990 dwellings in the country; proportion that were shacks, tents and

caves was significant at 44.3 per cent. Figure 5.1 illustrates the distribution of families according to housing type in 1964.

Figure 5 - 1: Distribution of Families According to Housing Type in 1964



Source: adapted by the Author from 1964's census, table no.74, p.82

5.2.4 Structural Conditions of the Housing Stock

In 1964, the housing stock in the country was classified into five categories based on its structural conditions. 44 per cent of dwelling units were classified as in good condition, 14.8 per cent were in need of major improvements, 18.5 per cent were dilapidated and needed to be replaced, and 22.7 per cent consisted mainly of tents and shacks (Doxiadis Associates, 1964a:20). This means that about 56 per cent of the housing stock in 1963 was regarded as substandard and unsuitable for habitation, including all dwellings that needed to be replaced or improved as well as shacks and tents.

5.2.5 Availability of Basic Utilities

Significant proportions of the housing stock during the pre-revolutionary years were not serviced by utilities such as drinking water, electricity and sewage disposal. For instance, only about 66 per cent of dwellings in cities, 49 per cent of dwellings in towns and 7 per cent in villages in 1964 were supplied by piped water. Similarly, 75 per cent of dwellings in cities, 65 per cent in towns, 16 per cent in villages and 9 per cent in farms in 1964 were supplied by electricity (Doxiadis Associates, 1964b:267). Finally about 33 per cent of the

dwellings in cities, 5 per cent in towns and 1 per cent in villages were serviced by the public sewage disposal system while the others were serviced by various methods such as septic tanks and open pits.

5.2.6 Housing as Individual Responsibility: The Role of OBH

It was clear that, the government's contribution to housing construction during this period did not exceed 10 per cent of what was built, whether in the form of publicly-provided housing (PPH) or through supporting OBH activity by providing real estate loans to owner-builders (NCID, 1999:91). Such a poor contribution of the state rendered housing an individual responsibility, and the building of houses in most rural areas was entirely left to be undertaken by owners themselves, while in urban areas such activity was mainly carried out by contractors hired by owners (Awotona, 1990a, Essayed, 1981b).

5.2.6.1 The High Cost of Construction as a Barrier to OBH Activity

As mentioned earlier, the acute shortage of building materials and domestic technical manpower for construction hampered housing construction activity during this period. Regarding OBH, the high cost of construction was beyond the financial ability of many Libyan families who were interested in building their own homes (Al-Megierhi, 2000). The high cost of construction, which amounted, as Awotona (1990a:56) argued, about LD300 per room in low-cost dwellings and about LD600-800 per room in luxury dwellings (apartments or villas) was mainly due to the following factors:

1. **The low income of the majority of Libyan families (affordability)**

The aforementioned costs of construction were seen as very high compared to the limited income of the majority of Libyan families. About 64 per cent of the Libyan families living in urban areas in 1964 were classified as low-income, with an average annual income of LD360. In addition, about 30 per cent of the total Libyan families were classified among the middle-income groups with an average annual income less than LD1080, and the remaining 6 per cent of families were classified as high income with an average annual income of LD1080, or above. In general, the national per capita income at this time was about LD100 (Al-Megierhi, 2000). Furthermore, the low levels of income for the majority of Libyan families during this period were accompanied by notable increases in living expenses. For instance, in Tripoli city living expenses increased by LD100, 108.3,

129.1, 137.4, and LD 139.9 in the years 1964, 1965, 1966, 1967 and 1968 respectively (Central Bank of Libya, 1971:69).

2. Scarcity and high cost of building materials

The shortage in locally produced building materials as well as the high cost of imported materials contributed to the high cost of construction during this period. The local building materials industry was quite limited and accounted for only 20 per cent of all building materials used in construction (Stroller, 1962, Al-Megierhi, 2000). To overcome this problem, the 1960s witnessed a remarkable increase in the amount of building materials imported such as cement, glass ceramic tiles, electric installations, timber, and sanitary fittings. Although the country's imports of building materials increased three fold between 1954 and 1958, and the size of imports from cement alone increased five times between 1956 and 1963, the high prices remained unaffordable to most low and middle income people (Al-Duieb, 2003, Al-Mighierbi, 2003, Al-Megierhi, 2000).

3. High land prices

The expanding demand for land and a relatively inelastic supply was one of the main problems during this period. Speculation by limited landowner in urban areas, who were the only land suppliers there, led to increases in urban land prices. The second report published by the Doxiadis Associates-Consultants in 1964 revealed that the prices of one square metre in the central area of Benghazi ranged from LD25 to LD50, LD6 in the Al-Berka Area in the same city and from LD3 to LD8 in the suburbs of the city. These prices were considered very high compared with those during post-revolutionary years, as will be discussed later (Al-Megierhi, 2000).

4. The shortage of credit from the banking sector

Although the majority of Libyans were classified among the low-income strata of the population, the contribution of real-estate lending institutions in funding private housing activity, and particularly that undertaken by low-income OBs, was very limited. The share of loans credited for construction purposes by Commercial Banks (CBs) did not exceed 1.5 per cent of the total loans issued by these banks in 1962. On the other hand, the total value of loans made available to construction firms through the CBs amounted to about LD1, 817,000 at the end of 1962 compared with LD395,000 at the end of 1958 (National Bank of Libya, 1963).

However, although the size of real-estate lending for private housing through CBs increased to 8.9 per cent in 1963, only 3 per cent of the total real-estate lending made by the National Bank of Libya was directed to mortgages for buildings (Awotona, 1990a:58). Such inadequate contributions by the lending institutions in promoting housing activity during this period led the financing of OBH activity to be mainly dependent on family savings or loans from relatives and friends (Stroller, 1962, Essayed, 1981b, Al-Megierhi, 2000).

It can be concluded from the above discussion that the housing situation in Libya during the pre-revolution era was characterized by an acute shortage of decent housing. The role of government in tackling and alleviating these serious housing conditions was very limited and the responsibility of housing production activity was largely left to people's own initiatives. In addition, the escalating prices of land and materials as well as the acute shortage in skilled construction manpower made building private dwellings unaffordable for low income families.

5.3 The Housing Boom during the Post-Revolution Era

Libya entered its post-revolution era with an acute housing shortage of more than 185,000 homes, including 12,000 substandard housing units that needed to be replaced (NCID, 1999:91; GPC, 2002a:7). Thus, the challenge of improving the serious housing conditions became a priority on the government agenda for development during the post-revolutionary years. The main dimensions of housing policy adopted during this period are discussed below.

5.3.1 Housing Policy Dimensions

Providing every Libyan family with a decent and suitable house was the main principle of all housing policies adopted during the post-revolution era. The socio-economic and political changes that the country underwent during this period played a major role in shaping and implementing these policies (NCID, 1999:89; GPC, 2002a:4). The discussion regarding the housing policies adopted and the scale and characteristics of housing activity during the post-revolution era can be divided into two distinctive stages during which the state played different roles in the housing sector.

5.3.1.1 Housing for All (1970-1984): the Welfare State Era

Based on a direct state intervention strategy, the government pledged that adequate housing, like other basic needs such as education and health services, would be available to every Libyan family regardless of income or ability to pay for housing (Essayed, 1981b, Awotona, 1990a, Al-Megierhi, 2000, Al-Hietey, 2003, Attiegah, 1972, Mahmoud, 1993). To implement the aforementioned housing policy objective, the government decided to play the role of 'Provider' and 'Active Enabler' in the housing sector to ensure sufficient housing provision in the country during this period. To manage and promote housing activity, the government began by creating a suitable regulatory, technical and institutional framework for the housing sector. The year 1970 witnessed the establishment of the 'Ministry of Housing' as well as the 'General Housing Corporation' (GHC) as the main institutional bodies responsible for the implementation of large public housing projects. In addition, many other institutions such as the 'Social Security Fund (SCF), the 'National Authority for Endowment' (NAE), the 'Libyan Insurance Company' (LIC), the 'National Investment and Real-estate Council' (NIREC), and the 'Islamic-Call Society (ICS) were also established and encouraged to become actively involved in housing investment and production.

5.3.1.1.1 Housing as Mechanism for Wealth Distribution & Social Equity

Making housing affordable to all Libyan families, particularly those among the low-income strata of the population was one of the main pivots of housing policy during the 1970s. This was to be achieved through giving priority to publicly-provided housing (PPH) programmes, in order to narrow down the huge gap between demand and supply in the housing sector. In addition, private housing activity was supported through expanding real-estate lending programmes for investment (INVH) and Owner-built Housing (OBH) where housing cooperatives played a considerable role. This was not only seen as a direct response to the crippling housing shortage, but also as a remarkable effort made by the government to use housing as a key mechanism for redistributing the national oil wealth among the various segments of the Libyan population. This was to be achieved through establishing family and housing allowances as well as subsidizing housing production activity carried out by public and private initiatives (NCID, 1999:95).

Subsidizing Publicly-provided Housing (PPH) Programmes

During the early 1970s certain regulations and legislations enabled many low income families to benefit from ten thousands of PPH dwellings provided free or with considerably subsidized rents and purchase prices. The first regulation in this respect was the 'Tenancy Regulation of the Publicly-owned Buildings of 1970', which exempted all families whose financial resources were dependent on government aid and whose monthly income did not exceed LD30 from paying rent for their houses that were acquired through PPH programmes. In addition, according to this regulation government employees had to pay rent for their publicly-provided houses equivalent to their housing allowance. And for those who did not receive a monthly housing allowance, the monthly rent was determined to be 5 to 10 per cent of their monthly incomes (NCID, 1999:95).

As a consequence of applying the ownership principle in the housing sector in the late 1970s, families whose annual income was less than LD500 were exempted from paying 90 per cent of the purchase price of PPH dwellings. Later on, however, families whose annual income was less than LD600 were fully exempted from paying the prices for PPH dwellings (NCID, 1999:95). These exemptions were based on the ascending order based on a family's annual income. Thus, families with annual incomes between LD600-1800 could be exempted from paying 40 to 90 per cent of the purchase prices of state-provided homes, whereas families with annual incomes exceeding LD1800 could be offered 30 per cent discounts in this respect (NCID, 1999).

Supporting Private Housing Activity

The government's efforts during the early post-revolutionary years were not totally directed towards expanding PPH projects. Substantial support was also devoted to private housing activity and subsidized building materials, loans with easy terms and cheap serviced housing plots were provided to individual OBs, members of housing cooperatives and private developers (Essayed, 1981b, Awotona, 1990a, General People's Committee, 2000b). This support devoted to private housing activity was discussed by Essayed (1981b:161) who stated that:

> "Within the framework of the stated housing policy, private investment, private/individual and cooperative housing were promoted parallel with public

> activity. The aim of this policy was to use the population's own resources on a larger scale in accelerating housing development."

5.3.1.1.2 Home-Ownership as Key Principle in Housing Policy

Although the aim of providing all Libyan families with the opportunity to own a decent home in a satisfactory environment was the main core of housing policy during the 1970s, a new principle of housing ownership was introduced in the late 1970s. The Act number (4) of 1978 ruled that every house in the country should be owned by its occupiers and that no one had the right to own an additional dwelling for the purpose of renting. This new principle of ownership, which became the basis of all public housing policies adopted in the following years, was based on the application of *Part II of the Green Book*[1] written by Al-Qathafi in the mid-1970s, which considered the house as a basic need for every individual that should be owned by its occupier. In Part II of the Green Book, Al-Qathafi states that:

> "The house is a basic need of both the individual and the family. Therefore it should not be owned by others. There is no freedom for a man who lives in another's house, whether he pays rent or not... In the socialist society no one, including the society itself, is allowed to have control over man's need." (p.53)

According to this Act every Libyan family had the right to own only one home or a plot of land suitable for construction (El-Khawas, 1986, National Corporation for Information and Documentation, 1999). In this regard, in Part II of the Green Book, Al-Qathafi states that:

> "No one has the right to build a house, additional to his own and that of his heirs, for the purpose of renting it, because the house represents another person's need, and building it for the purpose of rent is an attempt to have control over the need of the man and *'In Need Freedom is Latent'*." (pp. 53-54)

It is clear that this act eventually materialized the concept of ownership and brought the principle of tenancy in the housing sector to an end. However, some exceptions were made for certain groups, such as foreign employees working in different sectors of the economy,

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[1] In the 2nd part of the *Green Book*, Al-Qathafi launches his ideas for solving the economic problem in a 'Socialism' that based on liberating all human basic needs from the control of others (individuals or government).

widows whose only source of income was rent and families with at least one son over eighteen years of age (El-Khawas, 1986).

5.3.1.2 Housing Policy (1985-present): A Shift of Approach

As mentioned in the last chapter, the global drop in oil prices during the early 1980s led to a notable shrinkage in financial resources of the country. The shortage of funds encouraged the state to adopt a new strategy that would be capable of achieving its target in providing adequate housing for all. Accordingly, radical change occurred in housing policy in the mid-1980s when the state decided to diminish its role as 'Provider' and to play the role of "Enabler" through adopting indirect intervention strategy in the housing sector. However, the housing needs of the low income families were still to be met by the government through PPH projects (General Planning Council, 2002a:7). Such a radical change housing policy was accompanied by the abolition in 1985 of the 'Secretariat of Housing' (SOH) (Ministry of Housing) and its agencies concerned with housing activity. For many observers, this shift in the role of the state in housing policies in Libya influenced the performance of the housing sector after 1985 as discussed later in this chapter (General Planning Council, 2002a:5).

5.3.1.2.1 Key Principles of Enabling Strategy

The enabling strategy that was based on indirect state intervention in the housing sector was formulated according to the following principles:

- Encouraging real-estate lending institutions to promote OBH activity by providing loans with easy terms to all individuals interested in building their own homes,
- Encouraging public agencies to invest in housing,
- Encouraging the private sector (individuals and real-estate investment companies) to invest in housing by utilizing personal savings and other resources in housing investment,
- Ensuring the satisfaction of housing needs for low-income families through PPH projects (General Planning Council, 2002a).

To put this enabling strategy in action, the establishment of the appropriate institutional and regulatory framework for the housing sector was seen as the first step. Hence, the General People's Committee of Housing and Utilities (GPCHU) (Ministry of Housing)

was re-established in 1993 and followed by re-establishing the General Housing Corporation (GHC) in 1993 as the institutional body designated to be responsible for planning, designing and managing public housing programmes. Added to this and aiming to open the door to all individuals, public agencies and other private financial and construction firms to invest in housing, the *Act (9) of 1991,* concerned with economic and investment activities, was issued. As a result, short and long term housing programmes were launched in order to tackle the housing deficit as well as to meet future needs. Tables 5.1 and 5.2 illustrate the components of these two housing programmes.

Table 5 - 1: Short Term Housing Programme (1996-2000)

Programme Components	
Type of housing	Number of dwelling units
Investment housing projects	41000
Uncompleted housing projects	12000
Loans for OBH through REISB	7000
Total	60000

Source: Report on Housing Programs, GHC, 2000, p.3

Table 5 - 2: Long Term Housing Programme (2001-2015)

Long-term plan (2000-2015)	Target number of dwelling units	Annual rate of construction (dwelling units)	Funds required (LD million)
First plan (2001-2005)	214200	42840	6424
Second plan (2006-2010)	117190	23438	3768
Third plan (2011-2015)	134598	26920	4345
Total	465988	31066	16368

Source: The Five-year Housing Plan, GPCOM, 2000, table (14), p.33

5.3.2 Housing Conditions during the Post-Revolution Era

As mentioned earlier, the provision of adequate housing for all Libyan nationals has been the focus of housing policy during the post-revolution era (Essayed, 1981a). The desperate situation in the housing sector at the advent of the 1st of September Revolution in 1969 has required instant and direct intervention by the state. Thus, in the three Development Plans

(1973-1975), (1976-1980) and (1981-1985), the housing sector had the lion's share of budgetary allocations aiming to reduce the acute housing shortage across the country (NCID, 1999). The main features of housing conditions during the post-revolution era can be explained as follows:

5.3.2.1 The State's Support for Housing Activity (1970-1984)

To tackle the inherited housing deficit and through adopting a direct state intervention strategy; a target of 320,000 dwelling units was intended to be achieved during the period 1970-1980 (General People's Committee, 2000a:3). For this purpose, all government efforts during the early post-revolution era were directed towards supporting the following programmes:

- Publicly-provided housing projects (PPH) to house low income families,
- Rural housing projects to house families in rural areas,
- Employees' housing projects to house workers in the public sector, and
- Private housing projects; either carried out for owner-occupation by individual owner-builders (OBH) or for investment purposes by private developers.

To secure the full achievement of the aforementioned housing programmes, the government realized the importance of giving priority to the following issues:

1. Expanding land allocation and real-estate lending programmes; and
2. Depending on foreign construction manpower to overcome shortages in the domestic construction workforce.

5.3.2.1.1 Rate of Housing Construction

The substantial funds that were allocated to the housing sector during the early post-revolutionary years resulted in remarkable accomplishments in the housing sector. For instance, during the period of the first Development Plan (1973-1975) about 84 per cent (76,000 dwellings) of the total target of 90,000 dwellings were built. Of this total, about 40,000 dwellings (52.6%) were built by individuals and the remaining 36,000 dwellings (47.4%) were built by the public sector (Allan, 1981, Al-Zenie, 2002).

The government's efforts in the housing sector continued during the second half of 1970s when it launched the second Development Plan (1976-1980), which targeted the

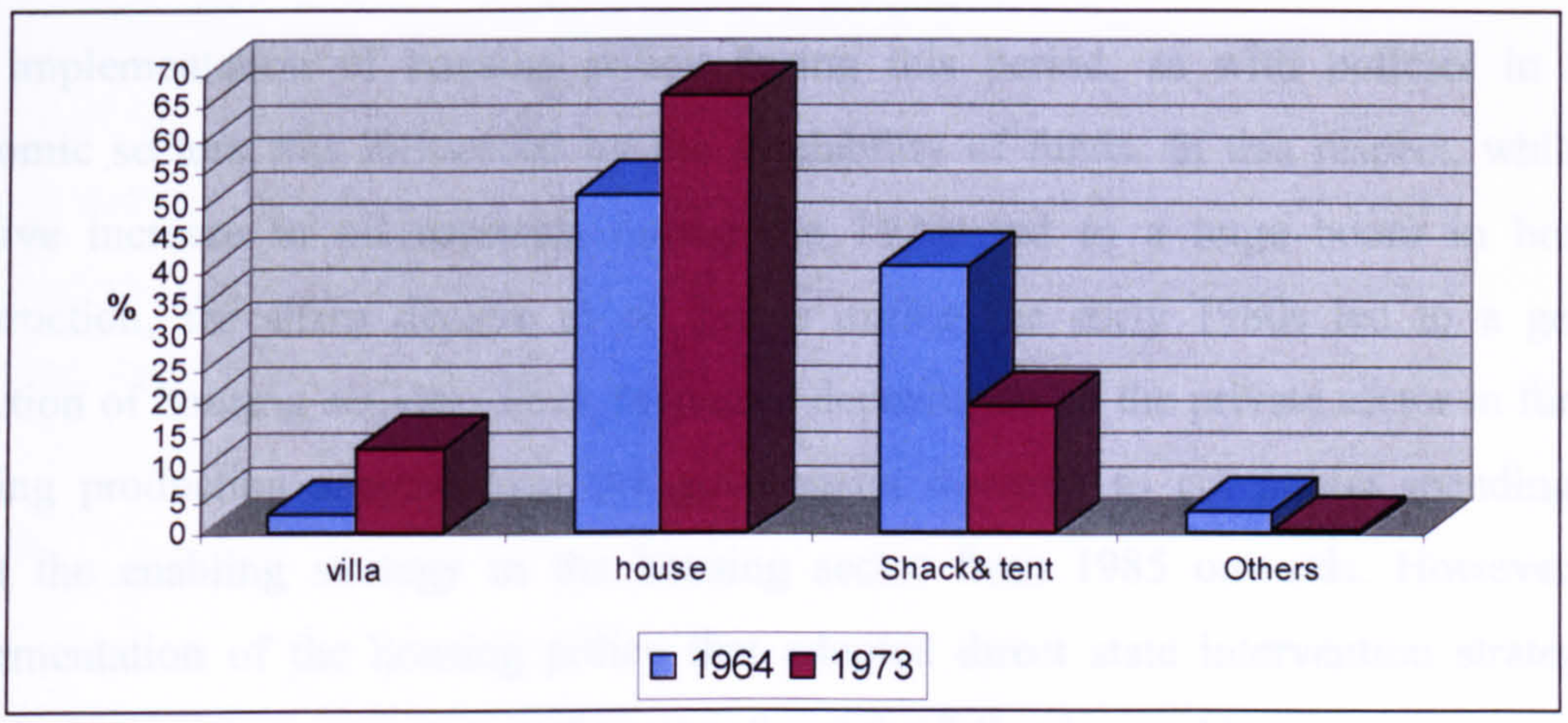
construction of 150,000 dwellings. The shortage of dwellings was reduced markedly from 99,000 dwellings in 1975 to only 49,000 dwellings by 1980 (Secretariat of Information, 1981:60). At the end of the 1970s, it was obvious that these intensive efforts had succeeded in getting rid of shanty towns in the country and the last such shack was burned in 1976 (Fergiani, 1976). This achievement was in itself considered a massive success, unparalleled in other countries within such a short period of time (NCID, 1999). However, despite a construction rate of 6.7 houses per thousand inhabitants during the period 1970-80, the rapid population growth during this period still led to a housing shortage estimated at 140,000 dwellings. This was quite obvious when only 393,000 dwellings were available to 530,000 families at the end of 1980 (NCID, 1999; General People's Committee, 2000a).

During the first half of the 1980s, although the Socio-economic Development Plan (1981-1985) targeted the construction of 146,000 dwellings through PPH projects and OBH activity, only 80,000 dwellings were built during the years of this plan (General People's Committee, 2000a). The main reasons behind the low performance of the housing sector was the sharp decline in the number of real-estate loans issued through the banking sector and particularly through the 'Real-estate Investment and Savings Bank' (REISB), and the shortcomings of the national construction industry (Al-Zenie, 2002:21).

5.3.2.1.2 Housing Typology

The intensive efforts made by the government during the early 1970s in terms of building new dwellings and getting rid of shanty towns across the country led to notable improvements in the quality of the housing stock (El-Fortea, 1989). As the results of the 1973 census show, the share of households who were living in villas and flats amounted to about 13.2 per cent. This figure was seen as quite high compared with those in 1954 and 1964 which did not exceed 2.7 and 3.1 per cent respectively. As Figure 5.2 illustrates, a notable increase was also achieved in the share of households living in villas (detached or semi-detached) and terraced houses in 1973 compared to 1964. Such increases in the number of villas and houses in 1973 were accompanied by a remarkable decline in the number of shacks and tents compared to 1964.

Figure 5 - 2: Development in Housing Typology during the period (1964-1973)

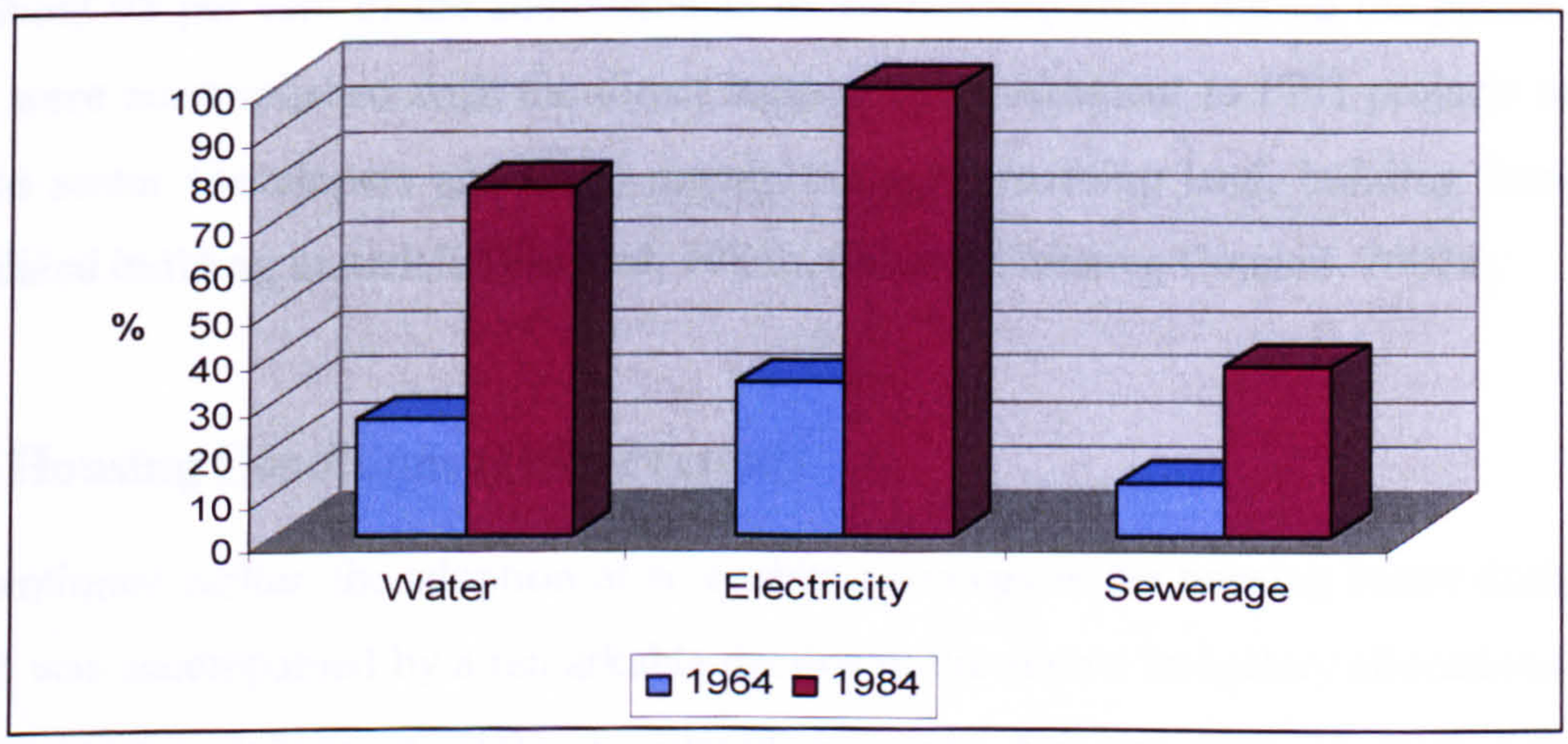


Source: adapted from the results of 1964, 1973 censuses

5.3.2.1.3 Availability of Public Utilities

Notable improvements in the housing sector during this period were not only noticed in terms of increases in the numbers of dwellings, but also in the level at which these dwellings were serviced by public utilities such as water, electricity and sewage disposal. The results of the 1984 census show that about 77 per cent of residential buildings was serviced by the public water network, compared to 25 per cent in 1964. In addition, about 98.6 and 36.7 per cent respectively of residential buildings was serviced by public electricity and sewage networks. Compared to the results of the 1964 census, as Figure 5.3 illustrates, these figures were much better, since only 33 and 11 per cent of total dwellings respectively were then serviced by the public electricity and sewage networks.

Figure 5 - 3: Availability of Public Utilities in 1964 and 1984



Source: adapted from the results of 1964 and 1984 censuses.

5.3.3 Problems Facing Housing Policy (1970-1984)

The implementation of housing policy during this period, as with policies in other economic sectors was influenced by the availability of funds. In this respect, while the massive increase in oil revenues during the 1970s led to a huge boom in housing construction, the sharp decline in oil prices during the early 1980s led to a general reduction of housing activity. Thus, increased dependence on the private sector in funding housing production accompanied the government decision to cut public spending and adopt the enabling strategy in the housing sector from 1985 onwards. However, the implementation of the housing policy that adopted direct state intervention strategy to provide for housing needs during this stage faced the following problems:

1. The entire dependence on the public sector for funding housing activity,
2- The lack of proper maintenance in a significant proportion of PPH projects put more financial burden on the government budget which could otherwise have been used to implement new housing projects,
3- The misuse of many regulations concerned with exempting low-income earners from repaying instalments of real-estate loans issued to them, due to them giving incorrect information regarding income. This led to more financial pressure on the government budget (General Planning Council, 2002a).

It can be concluded that low income families were the main beneficiaries of housing projects implemented during the 1970s. Added to this, most of what was achieved in the housing sector during the early years of the revolution was a result of the effective provider and active enabler roles played by the government. This was clearly reflected in the fact that about 95 per cent of the achievements in the housing sector during the period 1970-1975 were accomplished with the direct support of government to PPH projects and the private sector (developers and OBs) mainly through providing land, building loans, and subsidized building materials (Essayed, 1981b, General Planning Council, 2002a).

5.3.4 Housing Conditions (1985-Present)

As mentioned earlier, the adoption of an enabling strategy in the housing sector during this period was accompanied by a remarkable decline in the state's budgetary allocations to the housing sector, which in 1992 accounted for only 5.5 per cent of total budgetary

allocations compared to 16.5 per cent in 1972 (Shamia and Kaieba, 1996). Thus, one of the main features that characterized housing activity during this period was the expansion in the role of the private sector and the reduction in the role of the public sector in funding housing activity. About 60 per cent of dwellings built during this period were undertaken by the private sector while only 40 per cent were built by the public sector, mainly through resuming the implementation of delayed contracts or previously suspended PPH projects under construction (General People's Committee, 2000a, General Planning Council, 2002a).

5.3.4.1 Rate of Housing Construction

The notable decline in budgetary allocations to the housing sector together with shortage of building materials and domestic construction manpower led to a tremendous decline in the rate of housing construction during this period. A construction rate of only 3.8 dwellings per thousand inhabitants was achieved during the period 1981-1988 compared to 6.7 dwellings per thousand during the 1970s. Added to this, of 146,000 of dwellings that were targeted to be built during the period 1981-1988, only 98,000 were built (General People's Committee, 2000a:4). The tremendous decline which occurred in the scale of building construction during the 1980s is reflected in the fact that about 38.1 per cent of buildings in 1995 were built during the period 1970-1979 whereas only 29.8 per cent were built during the period 1980-1989. This decline was a result of the limited and ineffective role of provider and enabler played by the state in the housing sector following the global crisis in oil prices in the mid-1980s. Table 5.3 illustrates the distribution of buildings in 1995 according to date of construction.

Table 5 - 3: Number of Buildings According to Date of Construction (1950-1995)

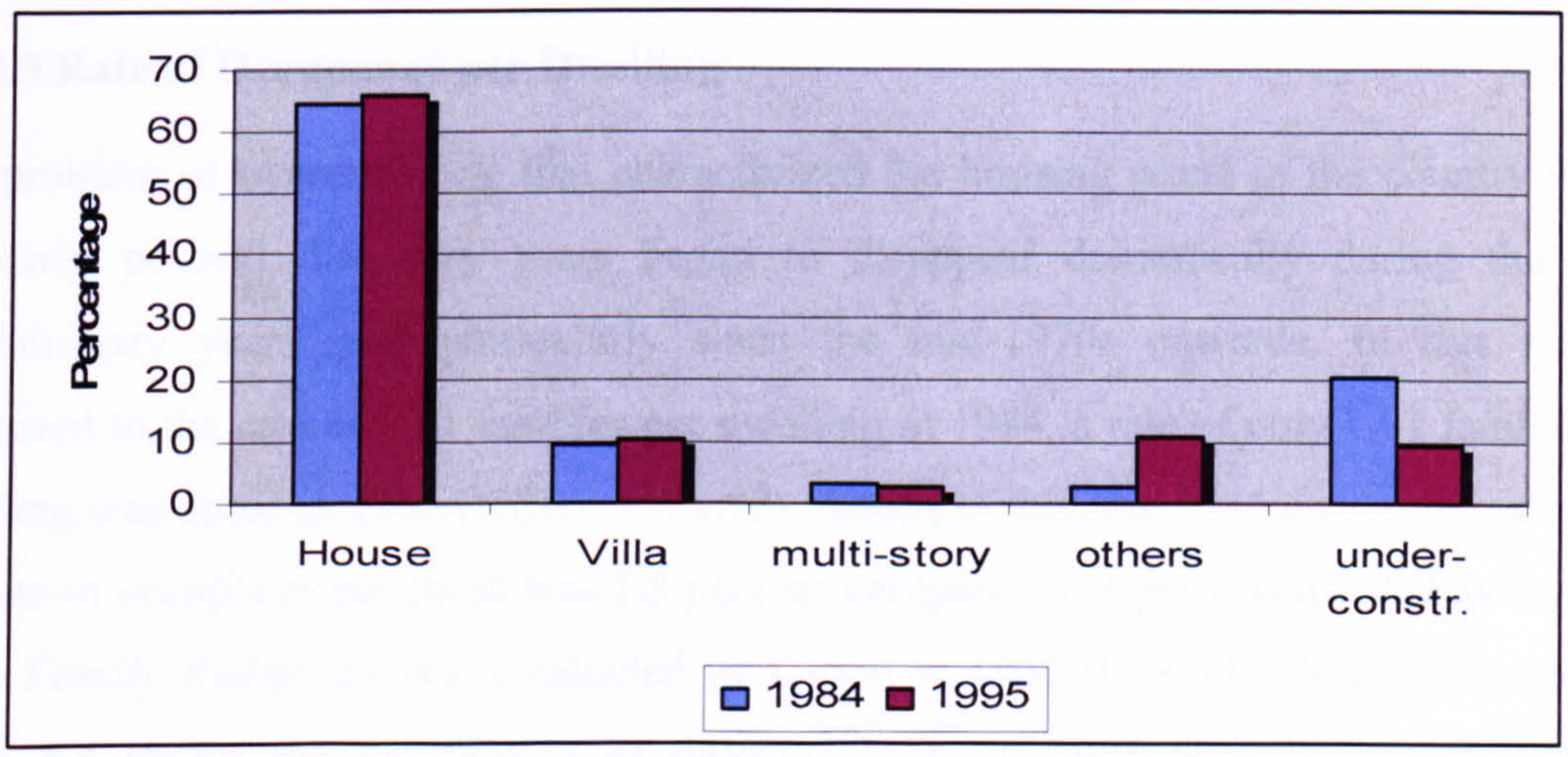
Date of construction	Number of buildings	% of total
Before 1950	17,638	3.0
1950-1959	11,774	2.0
1960-1969	91,721	15.6
1970-1979	224,724	38.1
1980-1989	175,461	29.8
1990 -1995	68,109	11.5
Total no. of buildings	589,427	100.0

Source: The final results of 1995 census of buildings, NCID, Tripoli, table no. (3), p.18

5.3.4.2 Housing Typology

In terms of housing typology, the 1995 census shows that the number of villas (detached and semi-detached) in the housing stock comprised 74,270 compared to 49,940 in 1984. This means that the number of villas increased by about 24,330 with a rate of increase of about 48.7 per cent during the period 1984-1995. In this respect, it has been noted that the Libyans had begun significantly to prefer living in villas instead of flats (in multi-blocks) or terraced houses (National Corporation of Information and Documentation, 1998b). The proportion of villas represented about 10.3 per cent of total buildings in 1995 compared to only 9.3 per cent in 1984. Figure 5.4 shows a comparison in terms of housing typology between the 1984 and 1995 censuses.

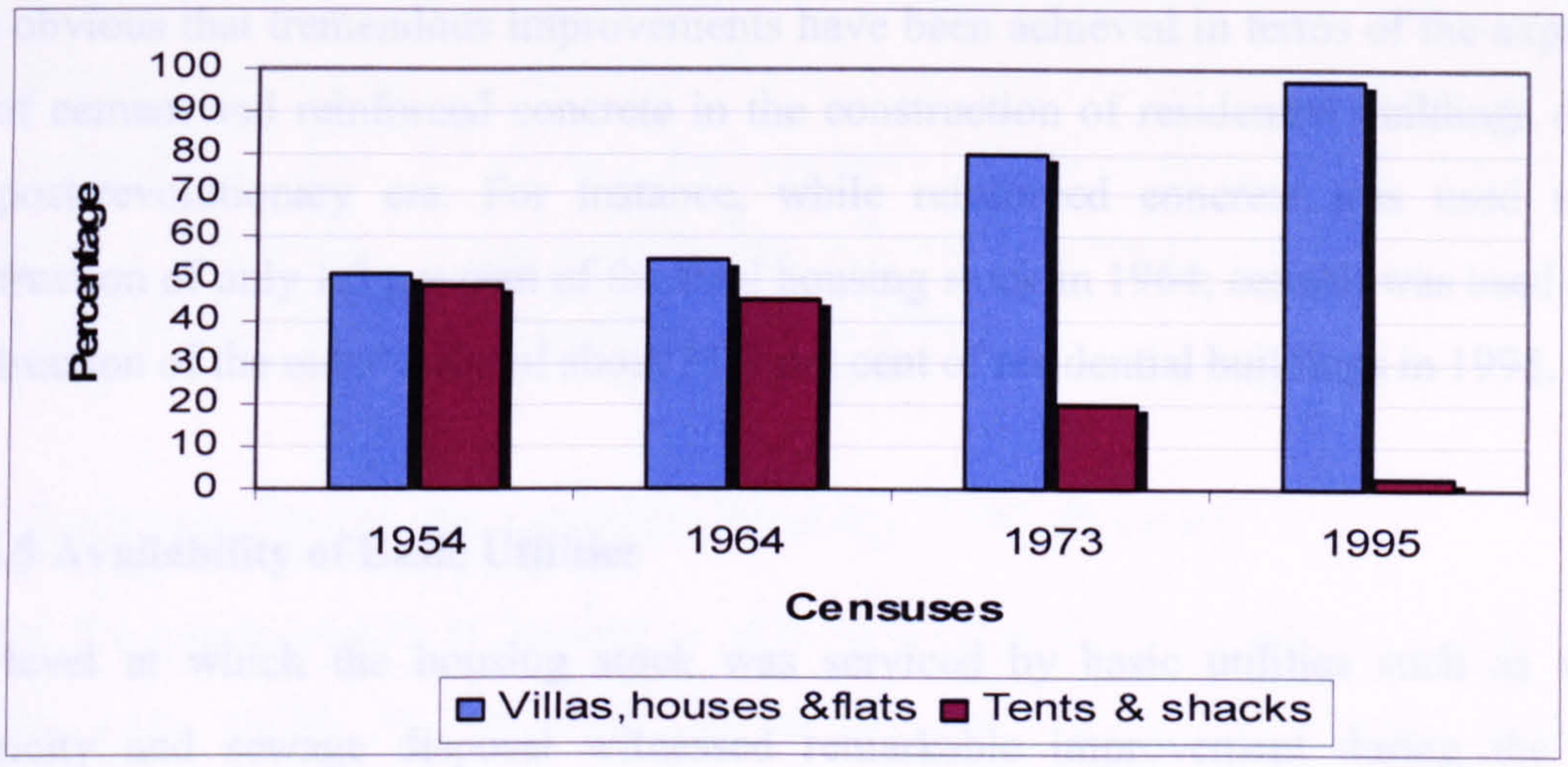
Figure 5 - 4: Housing Typology in Libya (1984-1995)



Source: adapted from the results of 1984 and 1995 censuses

It can be concluded that remarkable improvements were achieved in housing typology in Libya during this period, since the proportion of standard dwellings consisting of villas, flats and houses in the housing stock increased from 51.3 per cent in 1954 to 97.4 per cent in 1995. On the other hand, the number of substandard dwellings such as tents, shacks and caves decreased from 48.7 per cent in 1954 to 2.8 per cent in 1995. Figure 5.5 shows the development of housing typology during the period (1954-1995).

Figure 5 - 5: Development in Housing Typology during the period (1954-1995)



Source: adapted by the author from the results of 1954, 1964, 1973, and 1995 censuses

5.3.4.3 Rate of Occupancy per Dwelling

The problem of overcrowding that characterized the housing scene in the country during the early post-oil discovery years began to disappear dramatically during the post-revolutionary years, and particularly since the mid-1970s onwards. In this respect, compared to the rate of 1.14 families per dwelling in 1984, a rate of only 1.01 families per dwelling was noted in 1995 (NCID, 1999:92). Added to this, the 1995 census revealed that the rate of occupancy per room was 1.8 persons compared to 4 persons in 1962 as revealed by '*A Family Budget Survey*' conducted in Tripoli in 1962 (Doxiadis Associates, 1964a). Table 5.4 shows the distribution of dwelling units in 1995 according to the rate of occupancy.

Table 5 - 4: Number of Persons per Dwelling according to the 1995 census

No. of Persons	No. of dwelling units	% of total
One person	36984	5.2
Two persons	48165	6.8
Three persons	51923	7.3
Four persons	64017	9.0
(5-6) persons	130453	18.3
(7-9) persons	172460	24.2
10 persons or more	157669	22.1
Not shown	50166	7.1
Total number of Dwellings	711837	100.0

Source: the final results of the 1995'census, table no. (10), p. 27

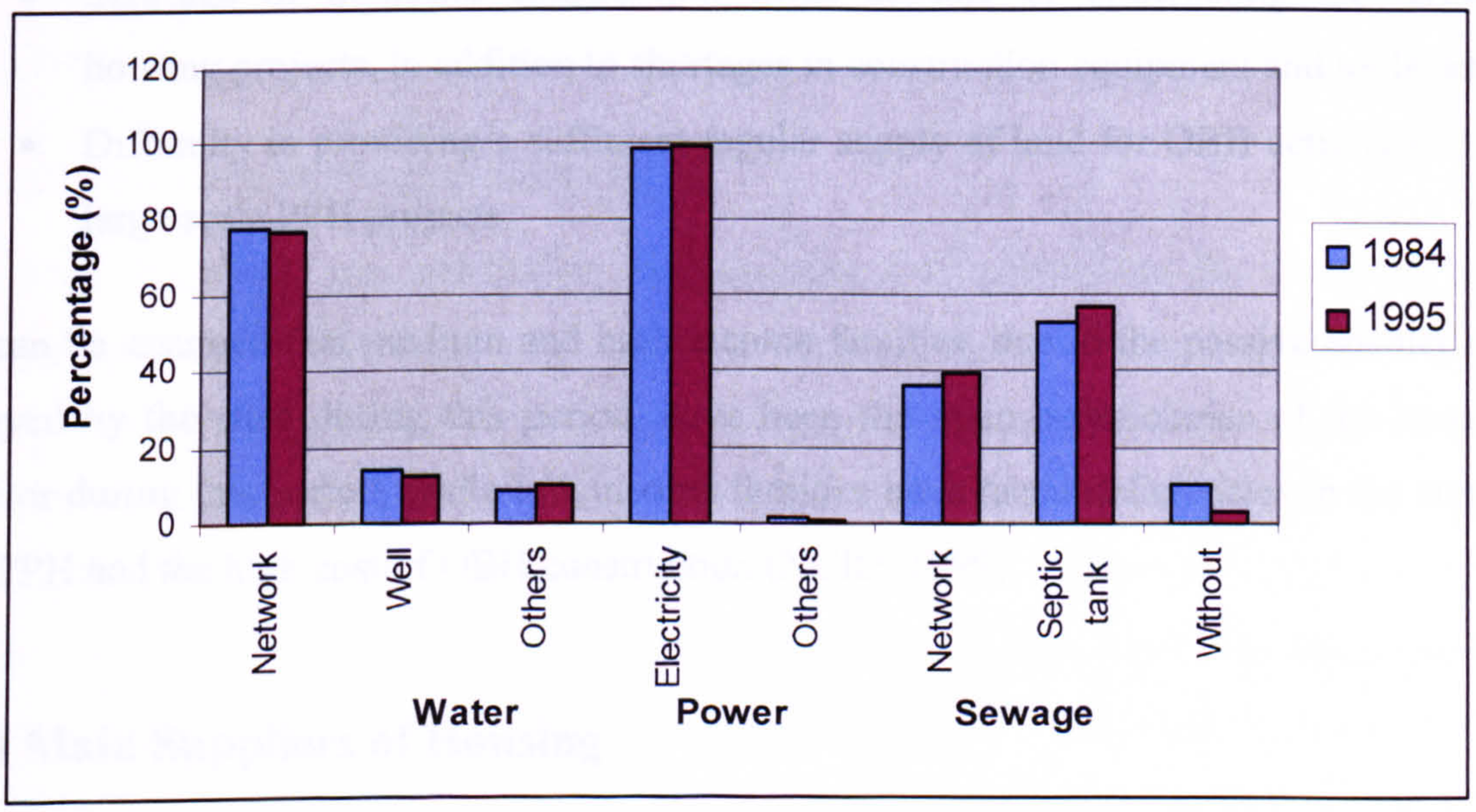
5.3.4.4 Building Materials used in Construction

It is obvious that tremendous improvements have been achieved in terms of the expanded use of cement and reinforced concrete in the construction of residential buildings during the post-revolutionary era. For instance, while reinforced concrete was used in the construction of only 1.5 per cent of the total housing stock in 1964; cement was used in the construction of the outer walls of about 31.2 per cent of residential buildings in 1995.

5.3.4.5 Availability of Basic Utilities

The level at which the housing stock was serviced by basic utilities such as water, electricity and sewage disposal witnessed remarkable improvement during the post-revolution era. The 1995 census shows that about 76.6 per cent of residential buildings were supplied by piped water and about 99.1 per cent by electricity. Meanwhile, about 39.6 per cent of dwellings in cities were connected to the sewage disposal system. Figure 5.6 compares how residential buildings were serviced by basic utilities in 1984 and 1995.

Figure 5 - 6: The Extent to which the Housing Stock was serviced by Basic Utilities in 1984 and 1995



Source: adapted by the author from the final results of 1995 census of buildings, NCID, Tripoli, table (6), p.22

These figures clearly illustrate the extent of improvements in the housing stock in terms of the availability of basic services during the post-revolutionary years. For instance, while 99.1 per cent of residential buildings were serviced by electricity in 1995, only 75 and 65

per cent of dwellings in cities and towns respectively were in 1964. In addition, while the final results of the 1995 census show that 39.6 per cent of dwelling units were serviced by the public sewage disposal system, only 33 and 5 per cent in cities and towns respectively were connected in 1964. It is obvious that, the share of total dwellings in the housing stock connected to the public sewage network was still small, however, since it did not exceed 40 per cent of total dwellings in housing stock in 1995.

5.3.5 Problems Facing the Enabling Strategy (1985-Present)

Despite the improvements in housing conditions resulted from the 'provider' and 'active enabler' role played by the state during the early post-revolutionary years, the implementation of the enabling strategy since the mid-1980s onwards has faced the following obstacles:

- Shortage of budgetary allocations devoted to PPH projects,
- Suspension of cooperative housing activity due to lack of financial resources,
- Acute shortage of building materials, particularly cement and steel, which led to sharp increases in their prices in the local market,
- Shortage of domestic construction firms capable of undertaking the targeted housing projects, in addition to shortages in construction equipment and tools, and
- Difficulty in providing a sufficient regular supply of land for OBH activity and for large scale PPH projects.

It can be assumed that medium and high income families, due to the passive enabler role played by the state during this period, have been the main beneficiaries of the housing sector during this period, while low income families have faced deficiencies in the supply of PPH and the high cost of OBH construction (NCID, 1999).

5.4 Main Suppliers of Housing

As mentioned earlier, the remarkable accomplishments achieved in the housing sector during the early post-revolutionary years were largely owing to the huge government financial support. About 70.2 per cent of dwellings built during the period 1970-1988 were funded from the state's budgetary allocations, whether directly in the form of PPH projects or indirectly by providing loans with easy terms to private developers and OBs;

while 29.8 per cent were funded by the private sector (Gdourah, 1994:7). The remarkable levels of financial support given by the state to private housing during the 1970s were highlighted by Essayed (1981:161) who stated that:

> "Within the framework of the stated Housing Policy, private; individual and cooperative housing were promoted parallel with public activity. The aim of this policy was to use the population's own resources on a larger scale in accelerating housing development."

In terms of housing suppliers, privately built dwellings represented about 62.4 per cent of the total (110,212) dwellings built during the period 1969-1975, while publicly built dwellings comprised 37.6 per cent of this total. Added to this, the private sector achieved 188 per cent of the target in the first Development Plan (1973-1975), while the public sector succeeded in building only 43.6 per cent of its target in the same plan (United Nations, 1977:28).

5.4.1 Trends in Housing Supply during the Post-Revolution Era

Housing production trends in the country during the post-revolution era can be explained as follows:

5.4.1.1 Publicly-provided Housing (PPH)

Although the GHC was responsible for managing and undertaking the enormous PPH programmes during the post revolutionary era, the contribution of these programmes to the housing supply has fluctuated tremendously during this period. For instance, the share of PPH programmes of the housing supply declined from 32.3 per cent during the period 1970-1980 to 20.4 and 13.2 per cent respectively during the periods 1981-1992 and 1993-1996. However, a slight increase in the PPH activity during the period 1993-96 meant that it contributed about 16 per cent of total dwellings built. This slight increase can be attributed to the resumption of many suspended publicly-housing projects in the early 1990s (NCID, 1999).

5.4.1.2 Investment Housing (INVH)

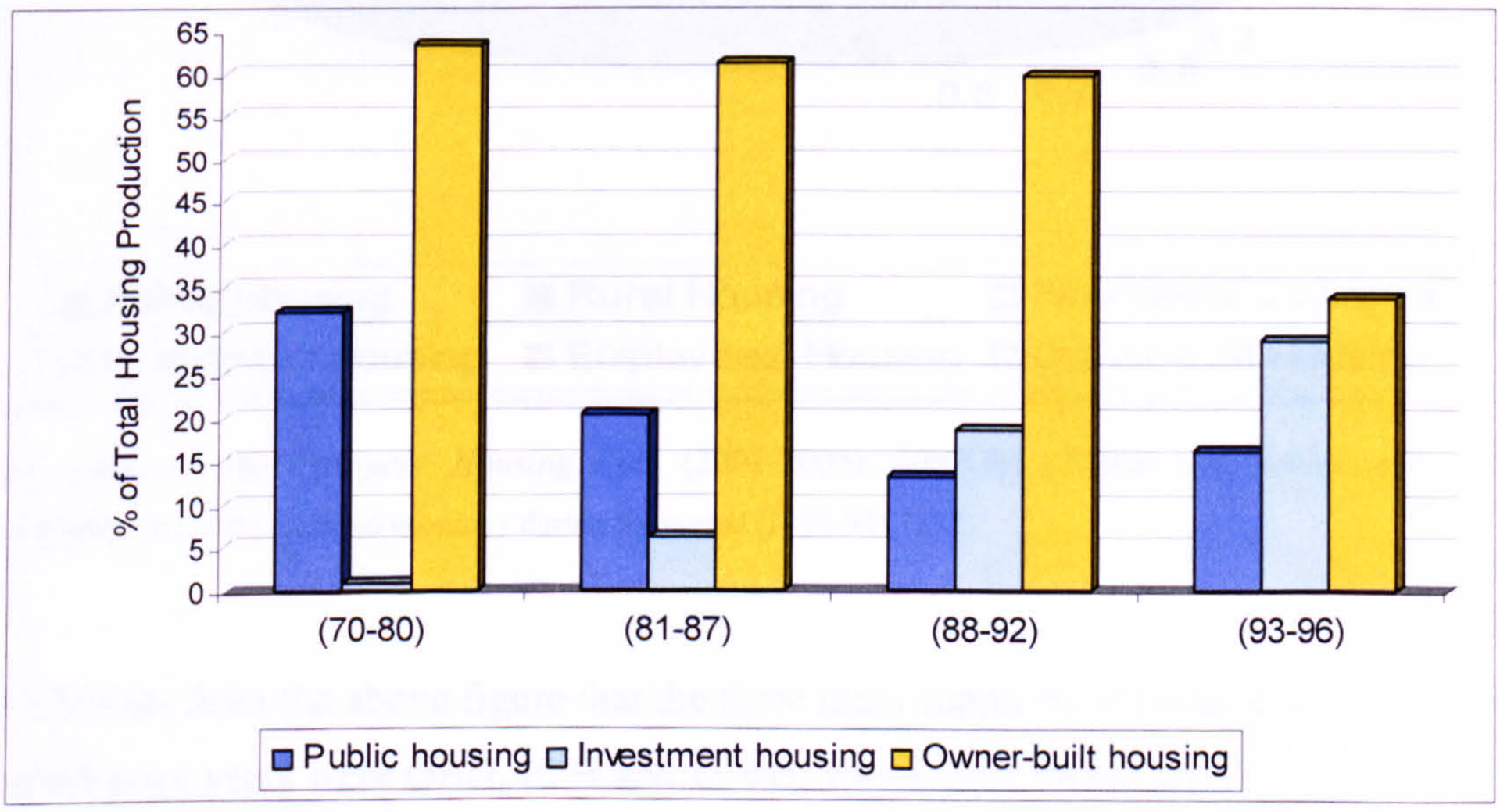
Although its contribution did not exceed 0.9 per cent and 6.2 per cent respectively of total dwellings built during the periods 1970-80 and 1981-87, the contribution of INVH

increased to 29 per cent of total dwelling units built during the period 1993-96. This increase in the early 1990s can be attributed to the implementation of many investment housing programmes following the issue of Act (9) of 1991 which opened the door for the private sector to invest in housing construction (NCID, 1999).

5.4.1.3 Owner-built Housing (OBH)

Despite the predominance of OBH in the housing supply during the post revolution era, a slight decline was noticed in its activity during the 1980s. Its contribution to the housing supply decreased from 63.6 per cent during the period 1970-80 to 61.2 and 59.7 per cent respectively during the periods 1981-87 and 1988-92. However, a further notable decline was noted in OBH during the period 1993-96 when it represented only 33.7 per cent of what was built during this period. This can be attributed to the decline in the scale of real-estate lending for OBH through the banking sector as well as the high cost of construction. Figure 5.7 illustrates the trends in OBH, PPH and INVH activity during the period 1970-1996.

Figure 5 - 7: Main Suppliers of Housing during the Period (1970-1996)

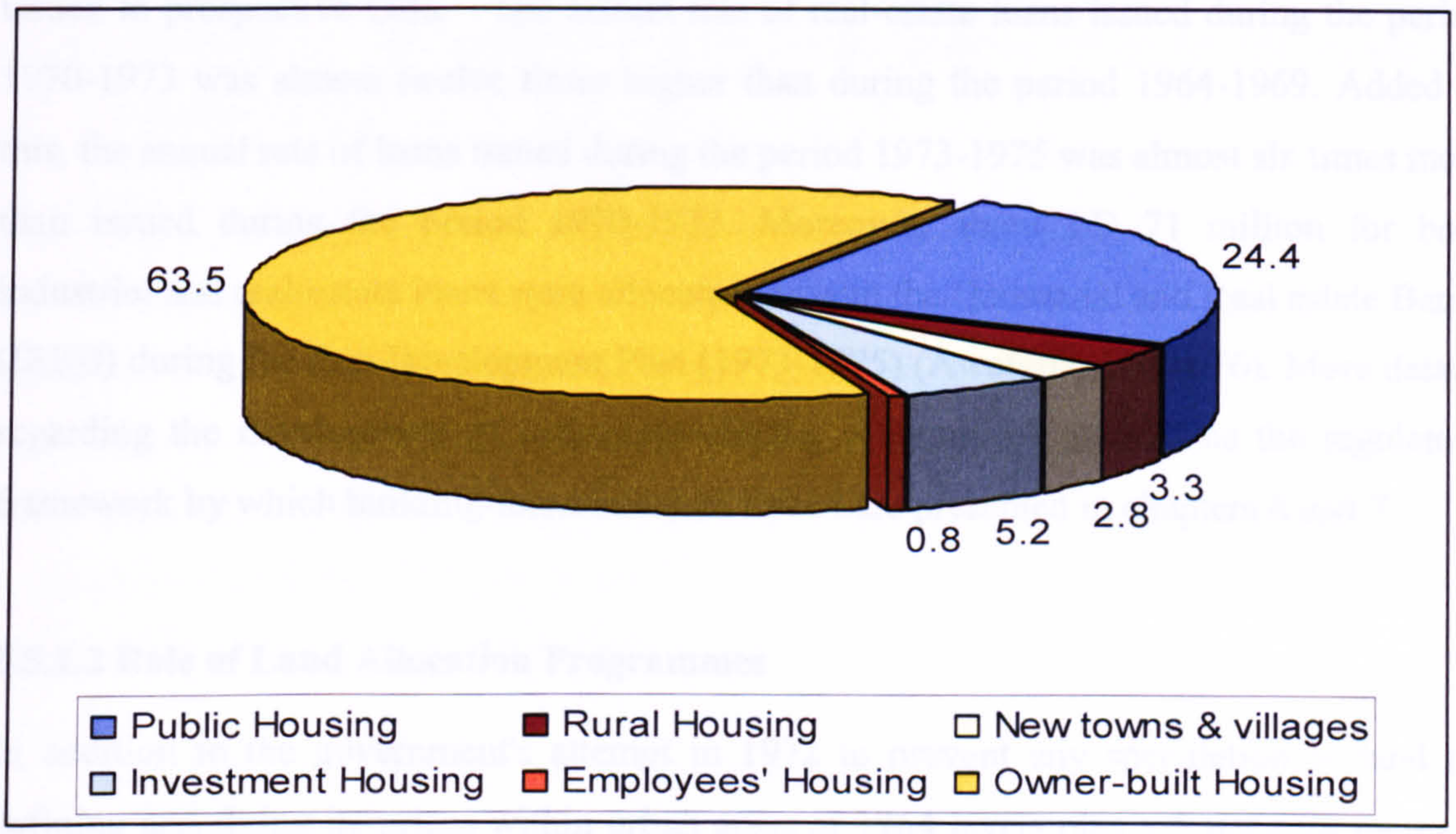


Source: based on the *Five-year Housing Plan* (2001-2005), GPCOM (2000a), table (8), p.14

5.5 Owner-built Housing (OBH) as the Main Supplier of Housing

From the above discussion, it is obvious that OBH has represented a substantial percentage of housing production in the country during the post-revolution era, particularly during the 1970s and 1980s. 63.5 per cent of dwelling units built during the period 1970-1992 was carried out by owner builders (OBs), while other housing programmes contributed only 36.5 per cent of what was built during the same period. Figure 5.8 demonstrates the contribution of OBH activity compared to other programmes in housing production during the period 1970-1992.

Figure 5 - 8: Predominance of OBH in the Housing Supply during the Period 1970-1992



Source: based on the *Five-year Housing Plan* (2001-2005), GPCOM (2000a) and various reports on the accomplishments of the national economy during the period (1970-92), *SOP*.

It is obvious from the above figure that the three main suppliers of housing during the post-revolutionary years were OBH, PPH and INVH, which contributed with 63.5, 24.4 and 5.2 per cent respectively of what was built during the period 1970-1992.

5.5.1 Factors Contributing to the Expansion of OBH (1970-84)

The key means that the government used to promote OBH activity during the post-revolutionary years can be explained as follows:

- Providing serviced housing plots to OBs at subsidized prices that did not exceed the cost of subdivision.
- Issuing low or interest free building loans to Libyan families interested in building their own houses through the REISB and CBs as well as housing cooperatives.
- Providing subsidized building materials (for example, cement and steel) to OBs whether directly through public materials distributors or indirectly through housing cooperatives.

5.5.1.1 Role of Real Estate Lending Programmes

The early post-revolution era witnessed a remarkable increase in the number of loans issued to prospective OBs. The annual rate of real-estate loans issued during the period 1970-1973 was almost twelve times higher than during the period 1964-1969. Added to this, the annual rate of loans issued during the period 1973-1975 was almost six times more than issued during the period 1970-1973. Moreover, about LD 71 million for both industrial and real-estate loans were allocated through the 'Industrial and Real estate Bank' (IREB) during the first Development Plan (1973-1975) (Awotona, 1990a:76). More details regarding the development of real-estate lending programmes as well as the regulatory framework by which building-loans could be issued are presented in chapters 6 and 7.

5.5.1.2 Role of Land Allocation Programmes

In addition to the government's attempt in 1972 to prevent any speculation in land by defining and fixing its prices within urban areas at 1964 levels plus a 5 per cent increase per year thereafter, certain regulations were issued by the Council of Ministries in 1974 in order to manage the sale of publicly-owned land within urban areas. These regulations included all priority conditions that should be considered in allocating publicly-owned land as well as the methods of payment. More details regarding the availability of housing land as well as the regulatory framework by which it could be allocated are presented in chapters 6 and 7.

5.5.1.3 Role of Housing Cooperatives

In contrast to their limited activity during the pre-revolution era, following the issue of Act (42) of 1956, housing cooperatives as non-profit organizations were strongly encouraged

during the early post-revolutionary years. After their activity was reorganized following the issue of the Act (30) of 1973, the number of housing cooperatives increased dramatically from two cooperatives, one in Benghazi in 1960 and one in Tripoli in 1961, to about 150 cooperatives in 1979 (Essayed, 1981b:177). The GHC had been given the responsibility for supervising and overseeing the performance of housing cooperatives, each of which was obliged to register with the GHC and to undertake the following activities:

- Providing its members with land, building materials and any technical assistance to build their own homes,
- Helping their members to obtain loans from the banking sector to build their own houses, and
- Encouraging their members to save for the purpose of investment in housing construction.

Based on the purpose of facilitating access to real-estate loans to their members, about 36,500 loans with a total value of LD580 million were issued to members of these cooperatives to build their own houses during the period 1974-1984 (General Housing Corporation, 2000). However, the activity of these cooperatives was suspended with abolishment of the GHC in 1984 and then it resumed and was reorganised in 1993 with the re-establishment of the GHC when more cooperatives were initiated. Table 5.5 illustrates the numbers of new and reorganized cooperatives at the end of 1998.

Table 5 - 5: Number of Housing Cooperatives in Libya in 1998

Housing cooperatives	Number
Reorganized existed cooperatives	205
New cooperatives	327
Cooperatives under establishment	52
Total	584

Source: 'The Real-estate Lending: Development & Constraints since 1969', GHC, 2000, p.14

5.5.2 Main Problems Facing OBH Activity (1985-Present)

In contrast to its notable expansion during the 1970s and early 1980s, the OBH activity during the second half of the 1980s and in the 1990s faced many problems that can be summarized as follows:

5.5.2.1 Shortage in Land for Housing

This problem was mainly noticed in the heavily populated urban areas where the supply of housing land lagged well behind demand in a way that led to sharp increases in land prices. Thus, it became common practice for land prices and construction costs to be comparable in the suburbs of major cities such as Tripoli and Benghazi. Factors causing the high land prices include the waves of inflation that have hit the country in the aftermath of decreases in oil prices in the late 1980s and the economic sanctions imposed by the UN in the 1990s, as well as the deterioration in the value of the local currency[2] (National Corporation for Information and Documentation, 1999). Added to this, contradictory provisions in many acts and regulations concerned with agricultural land and urban planning regulations delayed the approval of many land subdivisions for residential purposes and prevented many municipalities from benefiting from urban land protected by this legislation. Further discussion regarding the main factors influencing the supply of residential land is presented in chapters 6 and 7.

5.5.2.2 Decline in Real-estate Lending Programmes

Compared to its expansion during the 1970s, the contribution of real-estate lending programmes to housing production during the 1980s and early 1990s was dramatically reduced, and it funded just 16.4 per cent of total dwellings built during the period 1984-1995. In contrast, personal and family savings contributed to the construction of about 33 per cent of dwellings built during the same period (General People's Committee, 2000a).

5.5.2.3 Increase in Construction Costs Compared to Family Income

Due to the decline in state expenditure on housing during the 1980s and 90s, most Libyan families were forced to depend on their own limited resources to house themselves. In this respect, average spending on housing represented about 25 to 35 per cent of the annual family net income in 1996 compared to only 16 per cent in 1992 according to the *National Survey of Household Expenditure* carried out in that year. Furthermore, a study presented in the 'UN-HABITAT II Conference' in Istanbul in 1996 revealed that, the average cost of housing in terms of average family income had increased 7.3 fold since1992. This is considered to be a very high rate reflecting the high cost of housing compared to the

[2] In 1973, one US$ was equivalent to LD 0.296 (Libyan Dinar) while in 1999 it was equivalent to LD 0.463 (Central Bank of Libya, 2000), table (17), pp. 37-39.

purchasing power of Libyan citizens, given that internationally rates ranged between 0.9 in 1992 and 5.0 fold in 1996 (NCID, 1999:97). The study revealed that the net cost of construction, apart from the cost of land and capital interest in the case of loans, had become absolutely unaffordable to around 40 per cent of families in Libya. Such high construction costs can be mainly attributed to the following reasons:

- Government restrictions imposed on imported goods, which in turn led to the emergence of black markets and sharp increases in the prices of many imported building materials, given that these materials are in high demand (NCID, 1999:97),
- The sharp decline in the value of the Libyan currency during the 1990s, in addition to the inadequate capacity of domestic construction manpower, which led to increases in the costs of foreign construction labour.

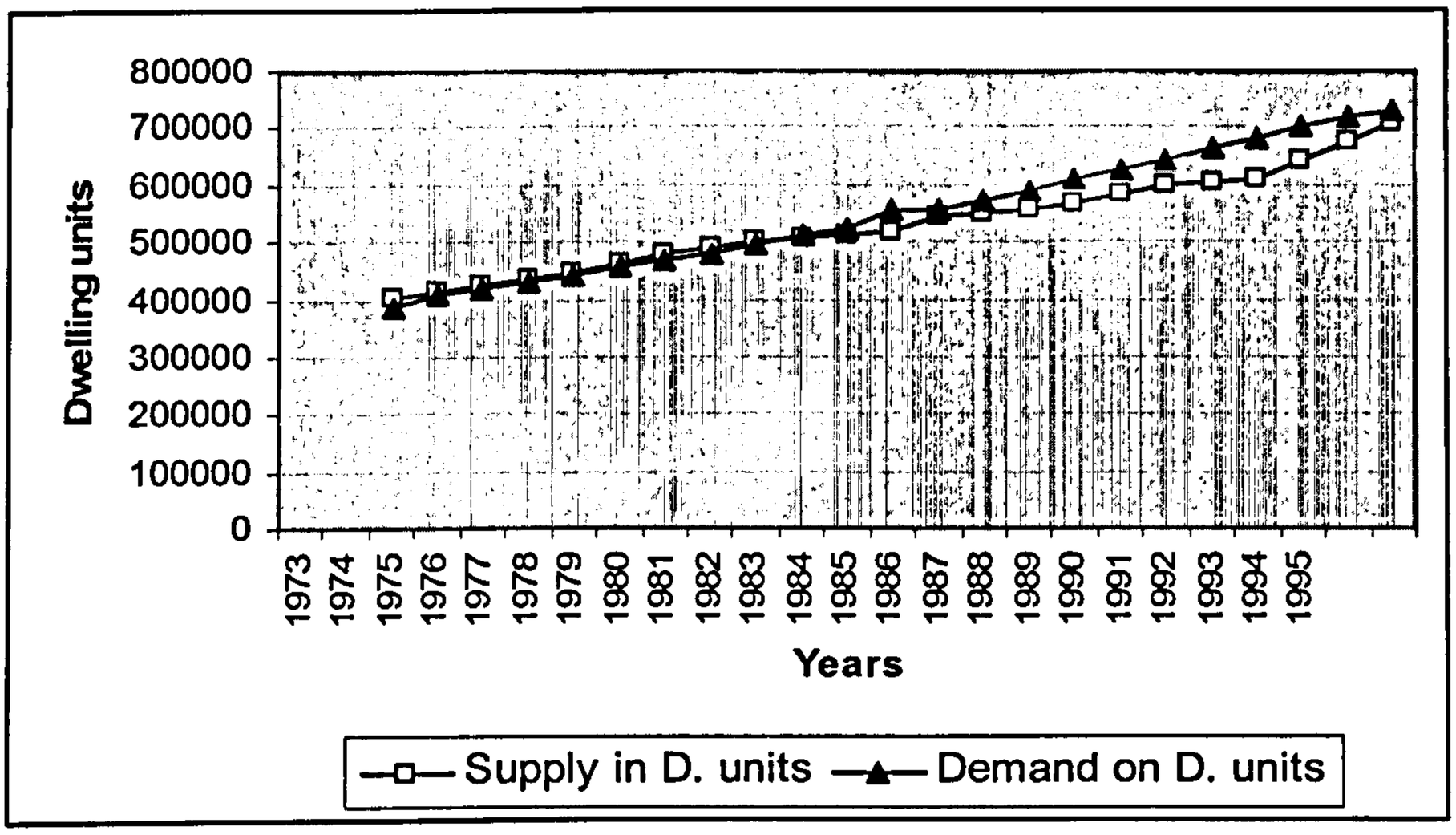
As a result, most low and middle income families have postponed or given up the idea of building their own homes, while those who have already commenced the construction of their own homes have experienced delays and frequent suspensions. These may extend for several years due to the high cost of materials and labour. Moreover the sharp increases in building costs, coupled with uneconomic designs of houses, have contributed to the phenomenon of many OBH dwellings being left unfinished indicating a discontinuation of investment due to families running out of funds (NCID, 1999).

5.6 The Housing Deficit and Future Housing Plans

As mentioned earlier, the rate of housing construction during the post revolution era has been influenced by socio-economic changes and trends in the role of government in the housing sector. While the 1970s witnessed a surplus in the number of dwellings built by both the private and public sectors, in contrast 1980s and 1990s witnessed a remarkable shortage. For instance, while the annual growth rate in the housing supply amounted to 2.7 per cent during the period 1973-1981, the average annual growth rate in demand was 2.5 per cent during the same period (Shamia and Kaieba, 1996). In contrast, the period 1982-1995 witnessed a serious shortage in housing units as the annual growth rate of the housing supply amounted to 1.9 per cent, while demand averaged 2.9 per cent during the same period. In this respect, it has been predicted by a study conducted by the Secretariat of Planning (SOP) in 1997 that if the pace of annual supply and demand remained the same; it would be more likely that the housing deficit will reach a critical stage by the year 2003.

In other words, this in turn would lead the housing deficit to increase at a faster annual rate, and then it would be very difficult to cope with unless new dwellings were built at higher rates than the rate of increase in the number of families (NCID, 1999:93). Figure 5.9 illustrates the trend in housing supply and demand during the period 1973-1995.

Figure 5 - 9: Trend in Housing Supply and Demand during the Period (1973-1995)



Source: based on Housing Censuses of 1973, 1984 and 1995.

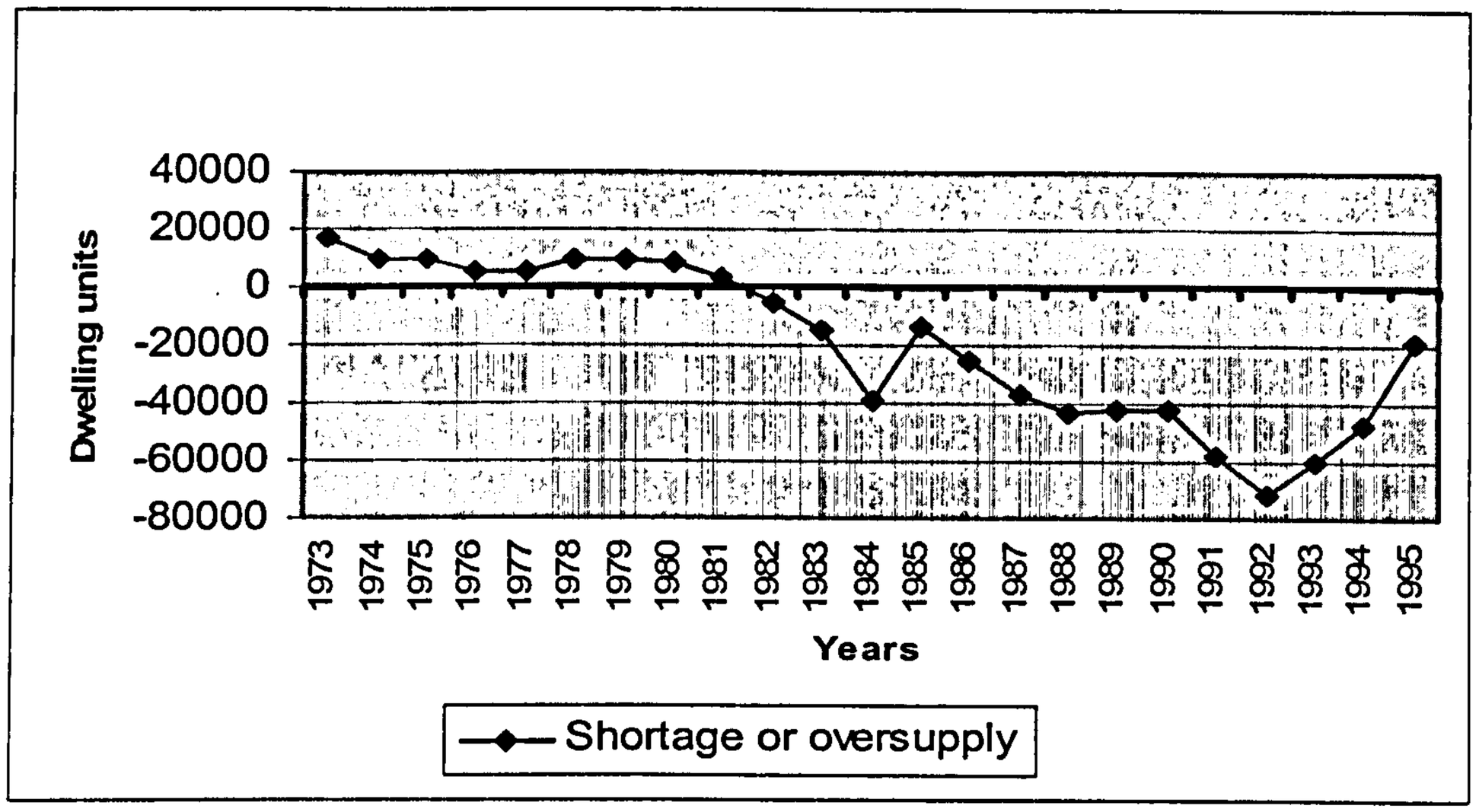
5.6.1 Factors Causing Housing Shortages during the Period (1982-95)

It is evident that the serious shortages of housing, particularly in big cities such as Benghazi and Tripoli during the period 1982-1995 were caused by the following factors:

- The rapid urban population growth, which represented about 85.4 per cent of the total population according to the 1995 census,
- The reduction in the scale of housing construction due to the shrinkage in budgetary allocations to the housing sector following the drop in oil prices in the 1980s,
- The notable reduction in private sector investment in housing construction, particularly after the principle of tenancy in the housing sector was ended when the Act number (4) of 1978 was issued,
- The sharp decline in the number of real-estate loans issued through the banking sector and other financial institutions, and

- The high cost of house construction resulting from the high price of building materials and land particularly within urban areas (Shamia and Kaieba, 1996, National Corporation for Information and Documentation, 1999). Figure 5.10 demonstrates the oversupply and shortages of dwelling units during the period1973-1995.

Figure 5 - 10: Surplus and Shortage in Dwelling Units during the Period 1973-1995



Source: based on reports of economic sector accomplishments, different issues, SOP

5.6.2 The Social Impact of the Housing Deficit

At the end of the 1980s and in the early 1990s, the social impact of shortages in dwellings became clearer in Libyan society as a consequence of the failure of many new families to satisfy their housing needs, having entered the housing market for the first time. Moreover the high prices of ready-built houses prevented many young people from marrying. Eventually, the age at marriage has dramatically increased, weddings have been delayed and overall marriage rates have been declined. The results of the 1995 population census showed that first marriages took place at an average age of 31.3 years for males and 28.22 years for females. These ages were higher than those shown in the 1984 census, which indicated that the average age of marriage was 27.55 and 23.2 years for males and females respectively.

The results of the 1995 census clearly underlined the effect of the high cost of housing in relation to marriage age. Early marriages by those whose ages range between 20 to 24 years have become increasingly rare, representing only 2.2 per cent for males and 17.78 per cent for females. Meanwhile, marriages for the age group 25-29 years represent only 19 per cent among males and 50 per cent among females (NCID, 1999:97). On the other hand, the results of the 1995 census pointed towards new increases in average household size (at around 6.7 persons on average), which means that many recently married couples were forced to reside in the parents home due to the difficulties faced in getting an affordable independent home. This phenomena of family overcrowding and the lack of independence for young couples have led to complex problems, some of which were revealed by a survey on *The Position of Libyan Woman in the Family and the Society* carried out for the *Human Development Report* published in 1999. This survey indicated that 50 per cent of divorce cases encountered in the selected samples were due to disputes arising between members of the new family and the extended family living in the same house as a result of overcrowding in homes (NCID, 1999:97).

5.6.3 Predicted Demand for Housing and Future Housing Needs

Since the First Conference of Housing in Libya took place in 1989, all studies in the housing field have concentrated on estimating the deficit in housing units as well as determining future housing needs. Based on the outcomes of these studies, the General People's Committee of Housing and Utilities (GPCHU) has been able to estimate the housing deficit and launch short and long-term housing plans to tackle current and future housing needs.

5.6.3.1 Accumulated Deficit in Housing Units at the End of the Year 2000

Based on a housing deficit estimated at 73,387 dwelling units in 1995, and on an annual population growth of 2.86 per cent in 1995, the accumulated housing deficit at the end of 2000 was estimated at 142,000 housing units (General People Committee, 2000a). Table 5.6 shows the details of the accumulated deficit in housing units in 2000.

Table 5 - 6: Housing Deficit in Libya at the end of 2000

Type of Housing Deficit	Number of dwellings required
Accumulated deficit in 1995	73,387
Dwellings required to meet the demand resulted from population growth during the period (1995-2000)	50,400
Dwellings required to meet deficit caused by deterioration in the housing stock	46,563
Dwellings required to meet the demand caused by household mobility	1650
Total Housing Deficit	***172,000**

Source: the Five-year Housing Plan (2001-2005), GPCOM, 2000, table13, p.29

* Of this total, 30000 dwellings were built during the period (1998-2000).

5.6.4 Meeting Housing Needs up to the Year 2015

Based on the housing conditions during the period 1995-2000, housing needs up to the year 2015 were estimated at 465,988 dwellings (General People's Committee, 2000a). Of this total, 30.4% represent the accumulated housing deficit in 2000, 49.4% represent housing units required to cater for population growth during 2001-2015, and 20.2% represent dwellings required to replace of substandard dwellings in the housing stock.

5.6.4.1 Long-Term Housing Plan (2001-2015)

To meet the estimated housing needs up to the year 2015, the GHC has set a long term plan for the period 2001-2015 in order to build 465,988 dwellings. This long-term plan aims to adopt housing programmes whose, financing and execution depend largely on private sector initiatives rather than on the state, except for low income families whose housing needs remain the full responsibility of the government (General People's Committee, 2000a). The implementation of this long-term plan, as Table 5.7 illustrates, is divided into three five-year plans as follows:

- The five-year plan (2001-2005).
- The five-year plan (2006-2010).
- The five-year plan (2011- 2015).

Table 5 - 7: Long-term Housing Plan for the Period (2001-2015)

Long-term housing plan (2001-2015)	Targeted number of Dwelling units	Annual rate of construction Dwelling units	Required funds (In million LD)
First plan (2001-2005)	214200	42840	6424
Second plan (2006- 2010)	117190	23438	3768
Third plan (2011-2015)	134598	26920	4345
Total	**465988**	**31066**	**16368**

Source: the Five-year Housing Plan (2001-2005), GPCOM, 2000, table (14), p.31

5.6.4.2 Contribution of OBH to the Long-term Housing Plan

As mentioned earlier, the long-term housing plan 2001-2015 aims to encourage the private sector (OBs and investors) to play a major role in housing provision. About 44.9% (76,200 dwellings) of the target in the first short term plan (2001-2005) were targeted to be built through OBH activity. Of this total, 31.3 % (47,000 dwellings) were intended to be funded through the real-estate lending programmes and 13.6% (29200 dwellings) built by OBs depending on their own resources (General People's Committee, 2000a).

However, certain building requirements were seen as essential in order to enable the OBH to achieve the target in the long-term plans:

- Providing a sufficient and regular supply of housing land,
- Providing affordable building materials, particularly cement and steel, and
- Encouraging real-estate lending institutions to supply regular and sufficient building-loans to all prospective OBs particularly those among the low and middle income segments of society.

In this regard, the banking sector was encouraged to provide loans with easy terms to OBs, which were to cover 70 to 80 per cent of the total costs of house construction (General People's Committee, 2000a). Table 5.7 illustrates the contribution of different finance channels in funding the target of the first short term plan (2001-2005).

Table 5 - 8: Contribution of Finance Channels in the Short-tem Housing Plan 2001-2005

Source of fund	No. of dwellings targeted	Investment required (million LD)	% of contribution
Banking sector lending for OBH	47,000	1408.5	31.3
Banking sector lending for investment companies	103,000	3091.5	38.7
Public agencies	15,000	450	7
Private sector (investment companies)	10,000	300	4.7
Self-financed (OBs)	29,200	876	13.6
Government's budget for PPH	10,000	300	4.7
Total	**214,200**	**6426**	**100**

Source: adapted by the author from the Five-year housing plan, GPCOM, 2000, table (16), p.38

5.7 Conclusion

This chapter has discussed the development of the housing sector in Libya during the pre and post-revolutionary eras. It is clear that the housing policies adopted as well as the scale of accomplishments in the housing sector were largely affected by the socio-economic changes that the country has undergone during this period. In this respect, the lack of integrated housing policy in addition to the lack of domestic capacity in construction manpower and building materials were the main reasons behind the poor performance of the housing sector during the pre-revolutionary years. In contrast, the early post-revolutionary era witnessed tremendous accomplishments in terms of the number of dwellings built by the public and private sectors. This was mainly due to the wise utilization of oil revenues as well as the adoption of housing policy in which the government played the role of 'provider' and 'active enabler' during the 1970s. During this period, huge budgetary allocations were devoted to the housing sector in the three Development Plans. The remarkable expansion of the real-estate lending and land allocation programmes during the early 1970s enabled many Libyan families build their own homes. Thus, OBH dominated housing provision and became the main supplier of housing needs during this period.

However, the notable shrinkage in financial resources in the mid-1980s caused housing policy to undergo radical change, and the government shifted its role in housing sector to being an enabler instead of a provider. The passive enabler role played by the government

during the late 1980s and 90s led the housing deficit to accelerate. In terms of OBH, the high cost of building materials, shortage of land and the reluctance of the banking sector to provide regular and sufficient building loans made house construction a difficult task for many OBs, particularly for low-income earners. The next chapter discusses the development of the main building resources (finance, land, materials, and construction labour) and the main factors that have affected their accessibility and availability over the period covered by the study.

Chapter Six:

Development Resources for Housing

Chapter Six

Development Resources for Housing

6.1 Introduction

Having discussed the development of housing policies and conditions, and the contribution of OBH to housing supply during the pre and post-revolution era in chapter 5, this chapter discusses the availability of finance, land, labour and building materials as the main building resources in housing activity during the post revolution era. This discussion will be based on the review of different published and unpublished reports, studies, acts and regulations, in order to gain deeper insights and to explore the main factors contributing to the availability and accessibility of the aforementioned building resources that affected housing development in the country, and particularly OBH, over the past three decades.

6.2 Channels of Housing Finance

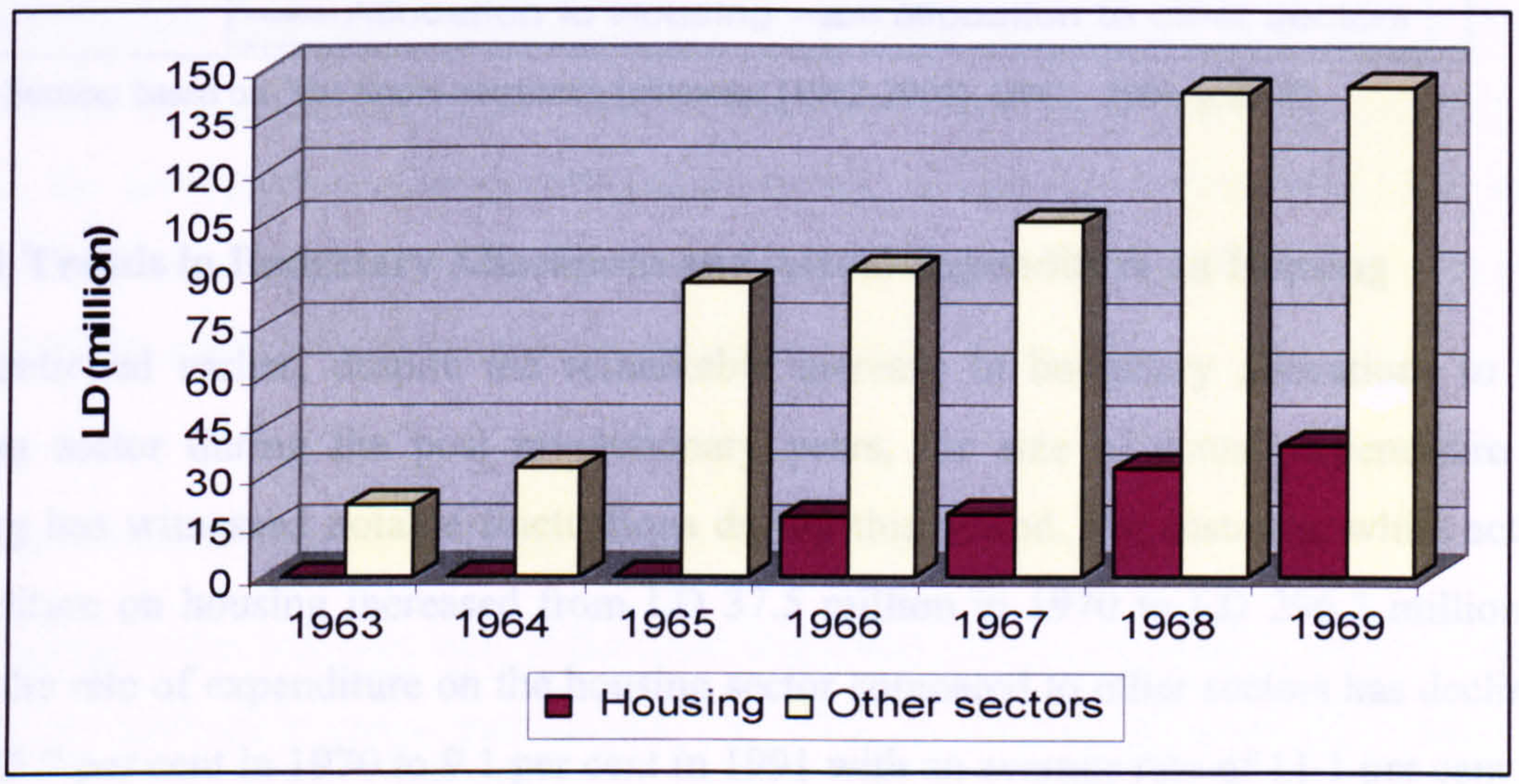
Houses are very expensive items to produce and housing activity in any society is strongly influenced by the capacity and capability of the funding system to meet housing needs. For many low and middle income families, as discussed in chapter 2, spending on housing in terms of building or buying a satisfactory home represents one of the most ever expensive investments made in their whole lives. The first part of this chapter discusses the main aspects of housing finance in the country during the post-revolutionary years as well as highlighting the contribution of each source of finance to housing activity during this period, with more emphasis on private housing finance. It begins by introducing the different institutions and sources that have funded housing activity during the past three decades.

6.2.1 The Government Budget (Development Budget)

The development budget has been one of the most important funding channels during the post-revolutionary years and contributed 35 per cent (LD 2380 million) of the total investment in housing sector during the period 1970-1996. Most of these investments were directed to fund PPH projects and to support real-estate lending programmes for OBH

(General People's Committee, 2000a). During the 1950s and early 1960s, in contrast, the contribution of the development budget in funding housing production was very limited, and it funded only 10 per cent of total dwellings built during 1951-1968. Added to this, most of these limited budgetary allocations before the mid-1960s were directed to funding the construction of dwellings for government employees or to accommodate victims of the 1963 earthquake in El-Marj city. Figure 6.1 illustrates the development in budgetary allocations to the housing sector during the period 1963-1969.

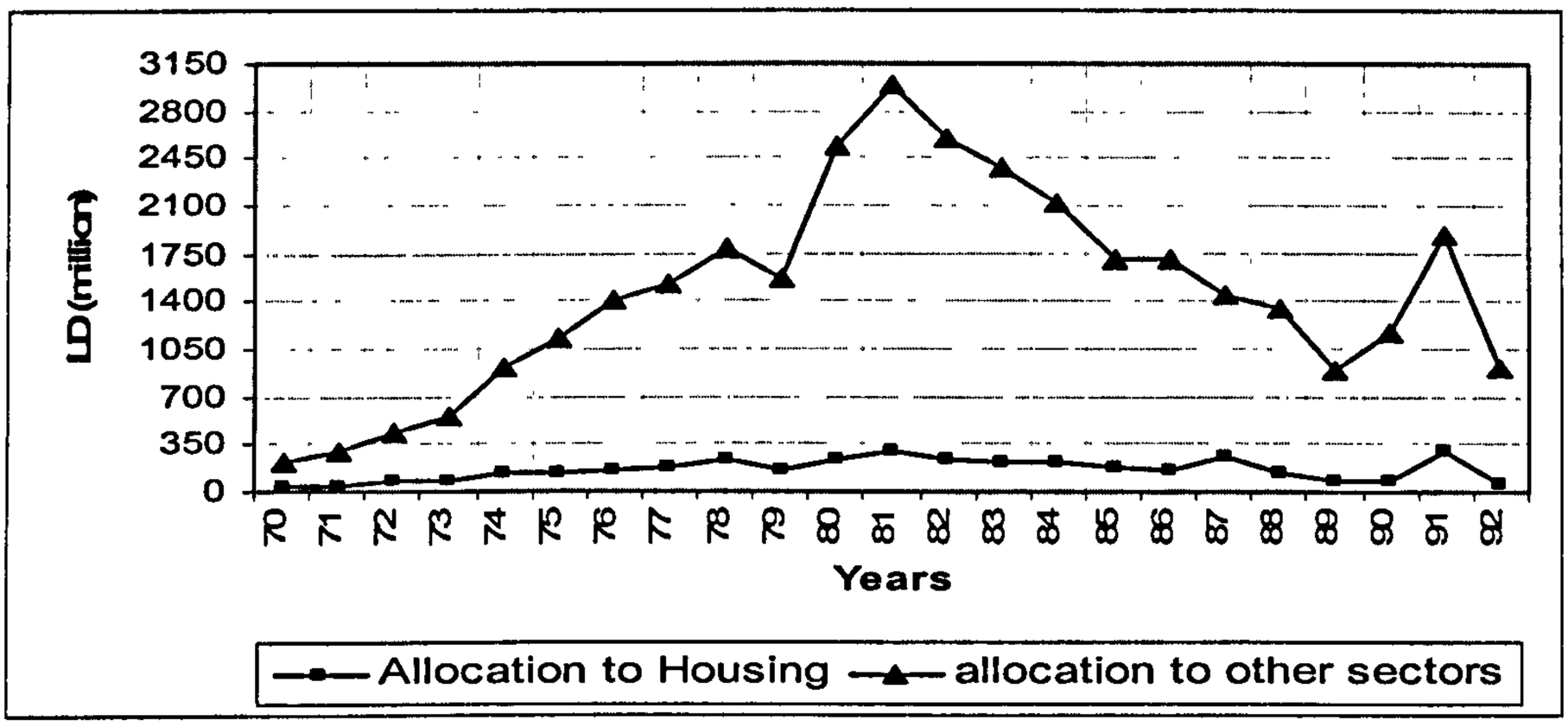
Figure 6 - 1: Development in Budgetary Allocations (1963-1969)



Source: based on 'The Socio-economic Indicators (1962-2000), GPC, 2001, p.24

During the welfare state era (1970-1984), the government's budgetary allocations increased from LD32.8 million in 1970 to LD288.2 million in 1981. Added to this, the housing sector took the largest share of budgetary allocations, ranking in first place among other sectors during the First Development Plan (1972-1975) and in third and fourth places respectively during the Second Development Plan (1976-1980) and Third Development Plan (1980-1985). However, during the late 1980s and in the 1990s, budgetary allocations declined dramatically amounting to only LD85 million in 1995. As discussed in chapter 4 and 5, this was mainly due to the sharp decline in oil prices in the mid-1980s. Figure 6.2 illustrates the budgetary allocations to the housing sector compared with total allocations to other sectors during the period 1970-1992.

Figure 6 - 2: Development in Budgetary Allocations (1970-1992)

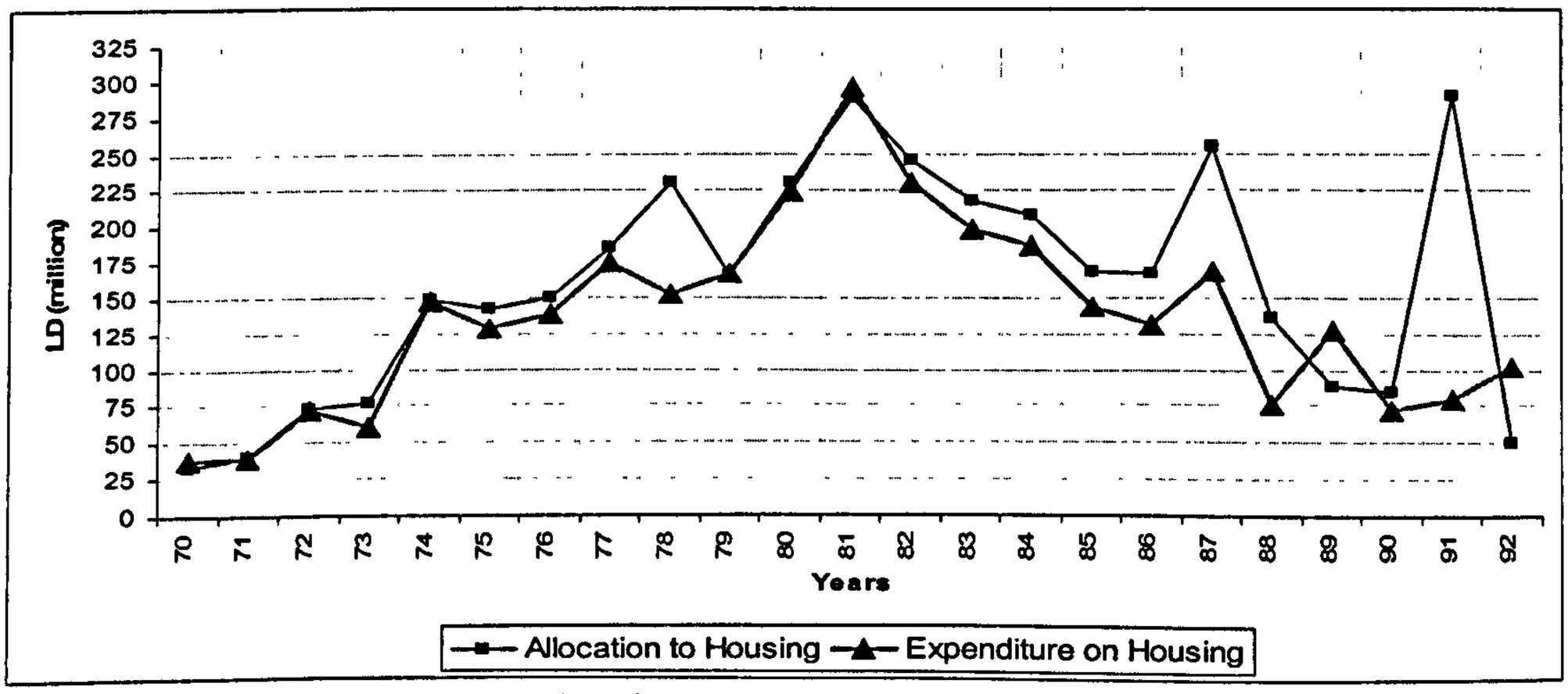


Source: based on The Socio-economic Indicators (1962-2000), GPC, 2001, p.22-23

6.2.1.1 Trends in Budgetary Allocations and Actual Expenditure on Housing

As mentioned earlier, despite the remarkable increase in budgetary allocations to the housing sector during the post revolutionary years, the size of actual expenditure on housing has witnessed notable fluctuations during this period. For instance, while actual expenditure on housing increased from LD 37.5 million in 1970 to LD 296.3 million in 1981, the rate of expenditure on the housing sector compared to other sectors has declined from 25.7 per cent in 1970 to 9.1 per cent in 1991 with an average rate of 11.1 per cent for the whole period (Shamia and Kaieba, 1996). Figure 6.3 shows the actual expenditure on housing compared to the size of housing allocations during the period 1970-1992.

Figure 6 - 3: Allocations and Actual Expenditure on Housing (1970-1992)



Source: based on 'Population Growth and its Impact on Housing Market in the Libyan Economy', Shamia and Kaieba, 1996.

6.2.1.2 Channels through which Housing Budgetary Allocations were Directed

During the post-revolution era, certain public agencies were used as channels to implement the state's housing projects funded entirely from the Development Budget. The most important public agency was the General Housing Corporation (GHC) which undertook several PPH projects across the country during the 1970s and 80s. Despite the fact that these PPH projects were targeted to accommodate low income families, many middle income families benefited from these projects as discussed in chapter 5. The other public agency was the REISB, which was dependent on the Development Budget allocations for about 80 per cent of its activity in real estate lending (Al-Barghathy, 1995). In addition, the Development Budget allocations funded many housing projects in rural areas through the Ministry of Agriculture in the form of completely new rural settlement projects. In general, the Development Budget allocations to the housing sector succeeded in funding about 39.5 per cent of all dwellings built during the period 1973-1984 compared with 26.4 per cent of the total dwelling units built during the period 1964-1973.

6.2.2 Specialized Financial Institutions in the Banking Sector

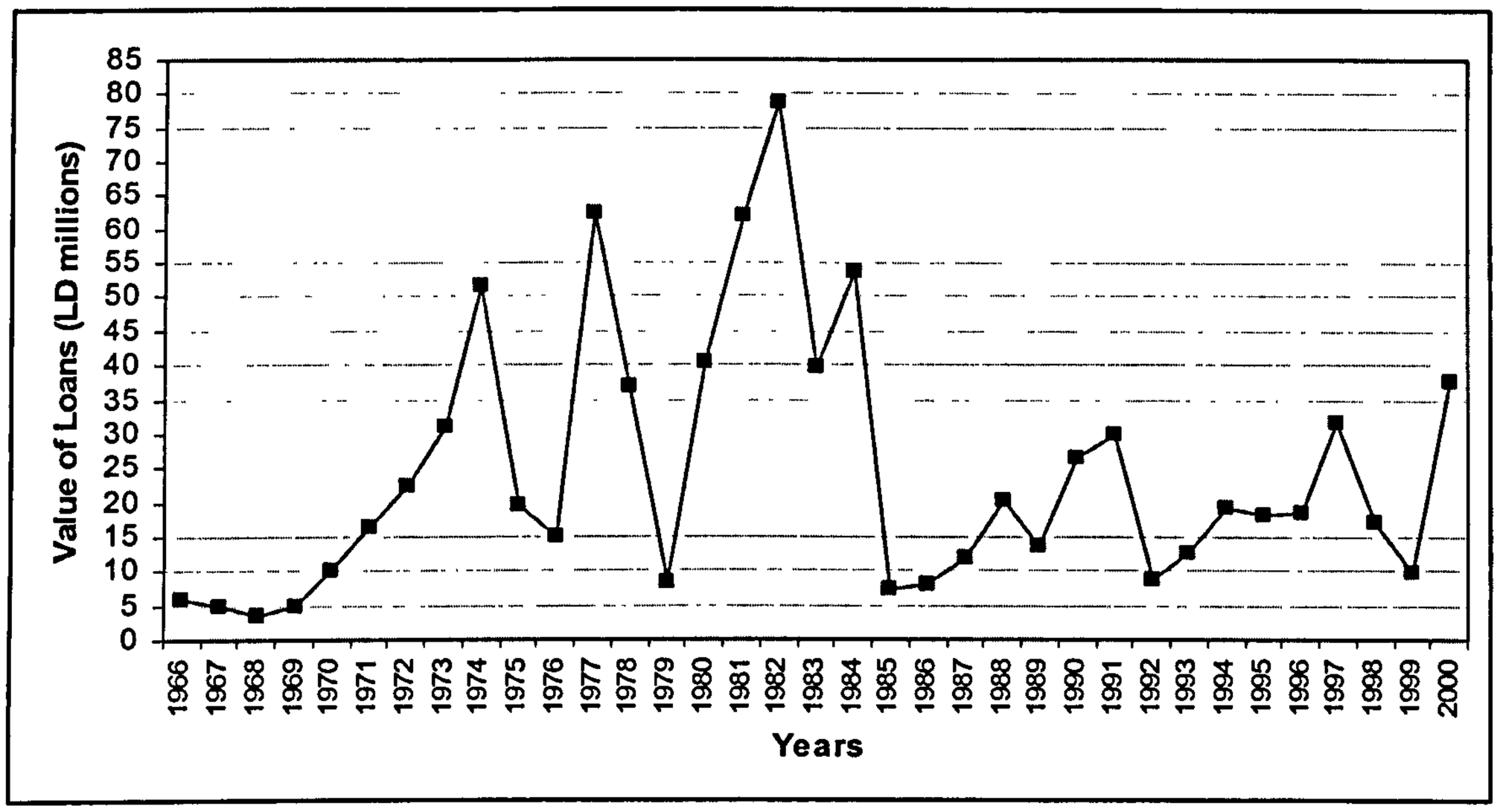
The banking sector has been one of the most important sources of housing finance during the post-revolutionary years, particularly for OBH. It contributed about 22.6 per cent (LD1764 million) of the total funds spent on housing during 1973-1984. Of this total, the commercial banks (CBs) contributed 79.3 per cent (LD1400 million) while the REISB contributed 20.7 per cent (LD364 million). Despite its large dependence on support from Development Budget allocations in its lending programmes[1], the REISB has been one of the most effective means of expanding OBH activity during the post-revolutionary years (General People's Committee, 2000a).

This was mainly due to the easy terms of interest-free loans issued as well as in the criteria adopted by the bank in determining the amount of loans, which did not consider the OB applicant's ability to pay off the loan (Al-Barghathy, 1995). In addition to its contribution to real estate lending activity, the REISB has implemented many housing projects across

[1] It is noteworthy that the activity by which the REISB depends on its own funds in expanding real-estate lending programmes was very limited and does not exceed 10 per cent of the size of its real estate lending (General People's Committee, 2000a).

the country for investment purposes (General People's Committee, 2000a). Figure 6-4 illustrates the value of loans issued through the REISB during the period 1966-2000.

Figure 6 - 4: Development of Real-estate Loans through the REISB (1966-2000)



Source: Based on 'Fiscal and Banking Statistics (1966-2000)', CBL, 2000, table (20), p.45

The commercial banks' real-estate lending activity was mainly directed towards issuing loans with easy terms to OBs who held the title to a plot of land and were interested in building their own homes. Added to this, many building loans were provided to private developers investing in housing until the mid-1970s, when such real-estate lending activity was stopped. Its limited contribution never exceeded 10 per cent of all dwellings built during the 1970s (Al-Barghathy, 1995). The role of specialized financial institutions in real-estate lending activity has witnessed significant increases since the CBs were nationalized in 1973. It succeeded in funding about 29.5 per cent of total dwellings built during the period 1973-1984 compared to only 3.9 per cent during the period 1964-1973 (Urban Planning Authority, 1993). Table 6.1 illustrates the value of loans issued through CBs for construction purposes during the period 1966-1979.

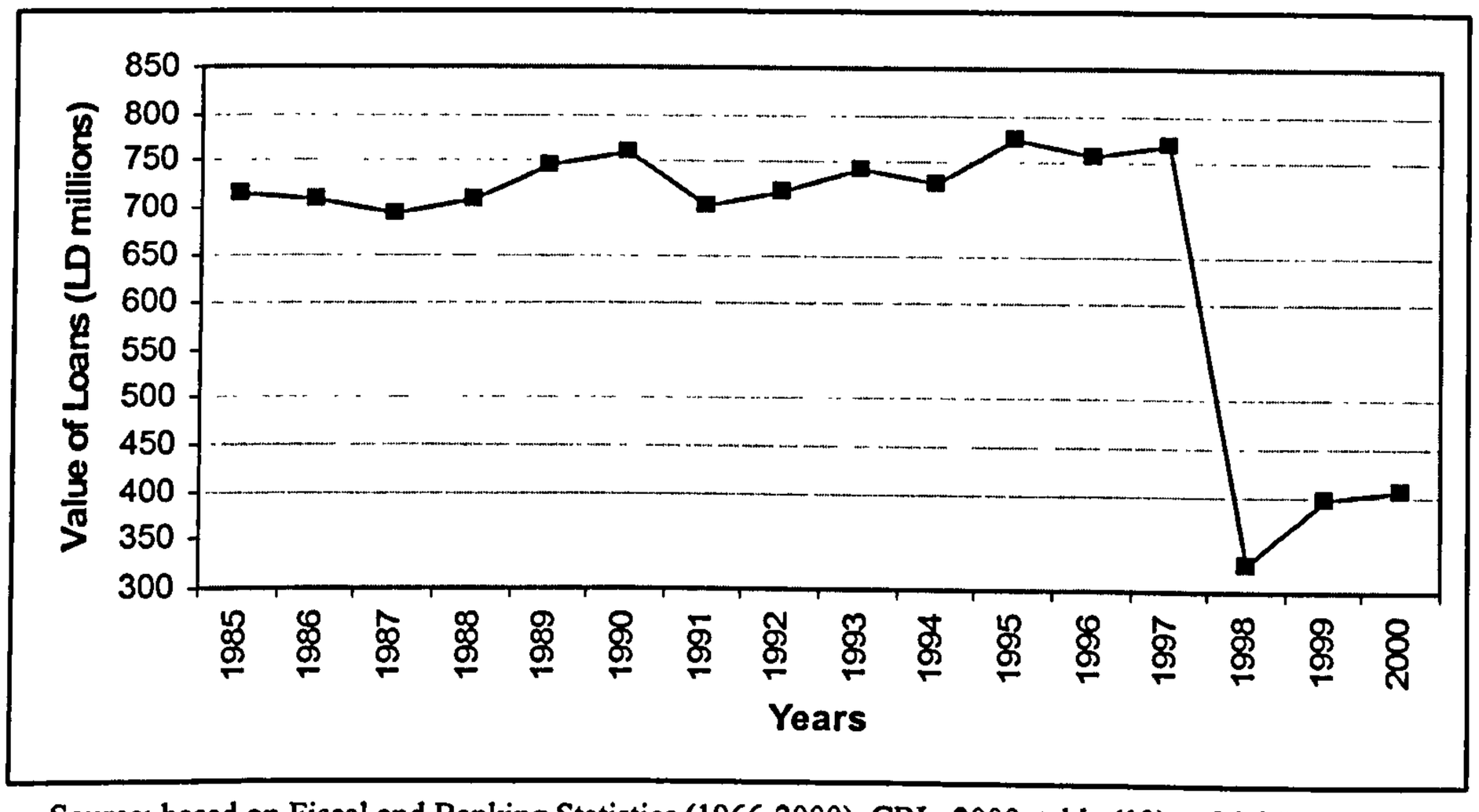
Table 6 - 1: Development of Real-estate Loans through CBs (1966-1979)

Year	Loans for construction (LD million)	Loans for all sectors (LD million)	% of construction loans to total of loans
1966	8.9	47.5	18.7
1967	10.8	54.2	19.9
1968	13.1	73.9	17.7
1969	15.6	92.9	16.8
1970	16.7	96.1	17.4
1971	18.8	107.5	17.5
1972	23.9	148.0	16.1
1973	55.2	241.0	22.9
1974	124.7	448.5	27.8
1975	167.8	641.9	26.14
1976	194.7	734.5	26.5
1977	114.9	891.4	13
1978	184.8	925.9	20
1979	191.0	1040.5	18.4

Source: based on Fiscal and Banking Statistics (1966-2000), CBL, 2000, table (12), p.32

However, the contribution of real-estate lending programmes through CBs in funding the housing construction during the second half of 1980s, as Figure 6-5 shows, remained constant before it began steadily to fluctuate in the 1990s.

Figure 6 - 5: Development of Real-estate Loans through CBs (1985-2000)



Source: based on Fiscal and Banking Statistics (1966-2000), CBL, 2000, table (13), p.34-36

6.2.3 Unspecialized Financial Institutions

Many institutions such as the Social Security Fund (SSF), Real Estate Investment Company (REIC), National Investment and Real Estate Council (NIREC), Libya Insurance Company (LIC) and the Islamic-Call Society (ICS) have undertaken many housing projects for investment purposes targeting mainly those who are able to pay whether for renting or owner-occupation purposes. Despite the large reliance on their financial assets or on loans from the CBs, the contribution of these institutions to housing activity was quite limited and did not exceed 1.2 per cent of houses built during the 1970s and 1980s (Barioun, 1995).

6.2.4 Self Finance and Personal Savings

This source of funding is mainly concerned with owner-built housing activity. The available data show that about 70 per cent of dwelling units built during the period 1964-1973 were constructed by OBs funded mainly from their own and the household's savings, due to the poor contribution of real-estate lending during the 1960s. However, with the remarkable expansion in real estate lending programmes during the 1970s, the ratio of self-financing in funding housing activity declined to about 30 per cent during the period 1973-1984. During the second half of the 1980s and in the 1990s, self-financing started to regain its position as a major source of funding for OBH activity. This was mainly attributed to the notable decline in real-estate lending activity which contributed in funding only about 33 per cent of houses built during the period 1984-1995 (General People's Committee, 2000a).

It can be concluded that the share of private funding in housing activity did not exceed 29.8 per cent of houses built during the period 1970-1988. This was mainly due, as mentioned earlier; to the large dependence on public financial allocations either directly from the government's development budget or from real-estate lending programmes through the banking sector for OBH (Gdourah, 1994). Table 6.2 shows the contribution of the different sources of finance to housing activity during the period 1964-1984.

Table 6 - 2: Contribution of Different Sources of Finance to Housing (1964-1984)

Source of Finance	Dwelling units built			
	(1964-1973)		(1974-1984)	
	No.	%	No.	%
Development budget allocations *	43.600	26.4	111.300	39.5
Specialized financial institutions**	6.400	3.9	83200	29.5
Unspecialized financial institutions	-	-	3500	1.2
Self-financed (savings)	115000	69.7	84000	29.8
Total	**165000**	**100**	**282000**	**100**

Source: UN program for Planning and Training, Urban Planning Authority, Tripoli, 1993.

* Development budget allocations include funds allocated to PPH projects implemented by the GHC as well as about 80 per cent of the REISB's lending activity.

** The specialized financial institutions comprise the activity of CBs as well as about 20 per cent of the REISB's activity

6.3 Real-Estate Lending Programmes for Housing Construction

As demonstrated in the Habitat Agenda adopted in the 1996 Conference of Habitat, providing low-interest loans to low-income households was viewed as a significant tool for achieving the provision of adequate shelter. Thus, lack of finance might delay the rapid completion of houses and become a fundamental restriction to the expansion of owner-built housing (Duncan and Row, 1993, Tipple, 1998, Pugh, 1992).

In Libya, real-estate lending programmes have been one of the most important sources in funding housing activity during the post-revolutionary years. Their key aim has always been supporting and expanding OBH activity through issuing low-interest and interest-free loans to low and middle income OBs in order to assist them in building their own homes. It has been used as a once-in-lifetime offer available to national prospective owner-builders who do not own private habitable dwellings and acquire buildable plots. Evidence of its contribution to expanding private housing activity is the remarkable number of loans issued to OBs through the banking sector since the early 1970s. For instance, through CBs alone about 120,000 loans worth LD1934 million were issued during the period 1969-98 of which the great majority were issued to individual OBs (General Housing Corporation, 2000). Many institutions have been involved in real-estate lending activities such as the CBs, the REISB, and Housing Cooperatives whose contribution in the early 1970s made

a great difference in boosting real-estate loan activities. However, real estate lending activity has undergone tremendous changes throughout the past three decades in terms of the number of loans issued, their amount as well as the interest rates applied to these loans. This section discusses the development of the real estate lending system during the post-revolutionary years.

6.3.1 Beneficiaries of Real estate Lending Programmes

Real-estate lending programmes during the post revolution era can be classified into the following categories based on their beneficiaries:

1- Direct Real-estate Lending for Individual OBs within Urban Areas

This type of real estate loan was mainly directed for the benefit of individual OBs interested in building their own homes in urban areas. The CBs and the REISB have been the main providers of this type of loan. For instance, CBs issued about 79876 loans with a total value of LD1247 million during the period 1970-98 (General Housing Corporation, 2000).

2- Real-estate Lending for Private Developers (Urban Development Loans)

This type of real-estate loan was mainly directed for the benefit of private developers investing in housing in accordance with the *Urban Development Act (116) of 1972.* According to this Act, which was abolished in 1976, private developers in possession of land classified for residential purposes within the approved subdivisions of cities and towns were issued loans with easy terms to build multi-storey residential buildings for investment purposes. During the period 1972-1976, a total of 4,175 loans with a total value of LD97.5 million were issued through the CBs to private developers (General Housing Corporation, 2000).

3- Real-estate Lending for Housing Cooperatives

As mentioned in chapter 5, housing cooperatives played a major role in promoting OBH activity during the 1970s and early 1980s. About 36,500 loans with a total value of LD580 million were issued to members of these cooperatives during the period 1974-1984 (General Housing Corporation, 2000). However, with the abolition of the Ministry of Housing and its agencies in 1984, the activity of these cooperatives was suspended until

1994 when their activity was reorganized with the re-establishment of the GHC (see chapter 5).

4- Real-estate Lending for Shack Dwellers

This type of real-estate lending was one of the most significant programmes undertaken by the government in the early 1970s, aiming to help dwellers of the shanty towns which were wide spread on the fringes of most Libyan towns and cities during the pre-revolutionary years. Loans issued to shanty dwellers to build their own houses varied from LD5500 up to LD8000. However, it is worth mentioning that only 1288 loans at a total value of LD7.9 million were issued by the CBs, of which LD4.9 million was repaid, LD2.5 million over due and LD0.5 million not yet due for repayment (General Housing Corporation, 2000).

5- Real-estate Lending for Rural Housing

This type targeted individuals interested in building their own homes in rural areas and was one of the most important real estate lending programmes implemented in Libya during the early post-revolutionary years with respect to its beneficiaries.

6.3.2 Development of Real-estate Lending Programmes

Having discussed the different types of real-estate lending programmes and beneficiaries, it seems important to discuss the various phases of development that the real estate lending programmes have gone through over the past three decades. In this discussion, the focus will be on the sizes of loans and interest rates imposed.

1- The First Phase [1970-84]

Real-estate loans issued during this phase mainly targeted those who were among the low-income segments. During this phase, the size of loans was increased from LD5000 with an interest rate of 4 per cent in 1971 to LD8000 in 1972 which was to be repaid in 15 year, extended to 20 years in 1973. In 1977, these loans were rendered interest-free, and a banking commission of LD1.5 imposed on monthly instalments, given that every instalment should not exceed 20 per cent of the borrower's monthly income. By the mid-1980s, the size of loans was increased to about LD27000 (General Housing Corporation, 2000, General People's Committee, 2000b).

2- The Second Phase [1985-90]

During this phase the maximum size of real-estate loans was increased to LD30000, remaining interest-free but with a banking commission of 5 per cent of the total loan. This banking commission had to be paid in advance once an application was accepted by the lender. The size of loan during this phase was determined based on the applicant's net monthly income, and construction costs were estimated by an authorized engineering office[2].

3- The Third Phase (1991-94)

During this phase the maximum of loan was reduced to LD15000 based on the Decree (599) of 1991 issued by the GPCOM. Every beneficiary had to pay a banking commission of 5 per cent of the total amount of the loan in advance with the first repayment on the loan. In 1995, however, this banking commission was replaced by a compound interest rate of 2 per cent.

4- The Fourth Phase (1995-1999)

This phase witnessed the issue of the Decree (187) of 1995 by the GPCOM involving a total LD20000 supplementary loan issued to beneficiaries who had already been in receipt of the LD15000 loan, to help them in completing the construction of their unfinished houses. This supplementary loan had to be issued in two equal parts. The value of first part worth LD10000 with 4 per cent compound interest amounting to a total of LD5011 to be repaid at LD17 monthly. This meant that the total monthly instalment was LD113 for the original loan of LD15000, the supplementary loan of LD10000 and the interest on both loans. The second part involved LD10000 at a compound rate of interest of 7 per cent, amounting in total to LD8759 to be repaid at a monthly rate of LD29.2. This was added to the instalments for the original loan and the first supplementary loan, which would make a total monthly instalment of LD175.5 (General Housing Corporation, 2000).

It is obvious that only high income individuals with monthly incomes in excess of LD880 could make use of the supplementary loans given the criteria of 20 per cent of the borrower's net income. However, given that not many people were capable of earning that sum, some opted for the joint-loan repayment method. This method allows two family members to be liable for the repayment of the loan.

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[2] It was required that the applicant must provide a detailed report prepared by an authorized engineering office showing the estimated costs of the construction of his house (see chapter 7).

5- The Fifth Phase (2000-present)

During this phase, laws such as Decree (30) of 2000, Decree (275) of 2000 and Decree (115) of 2001 were issued by the GPCOM to expand real-estate lending activity. These decrees were concerned with increasing the maximum limit of loans to LD30000 at an interest rate of 3 per cent as well as reorganising the eligibility criteria for issuing loans, which has been delegated to the Shabiyat (provinces). Based on the new eligibility criteria, the Shabiyat receive applications for loans and refer successful applications to appropriate banks to issue the loans. These decrees also involved the allocation of a sum of LD100 million from the general budget of the state for real-estate lending programmes.

6.3.3 The Main Difficulties Facing Real-estate Lending Programmes

Having discussed the development of the real estate lending programmes over the past three decades, the following difficulties have been encountered in achieving their targets for promoting OBH activity:

1. **The Reduction in the Scale of Real-estate Lending**

   The shrinkage in the state's budgetary allocations for real-estate lending programmes following the sharp drop in oil prices during the early 1980s together with the irregular repayment of loans issued has resulted in a notable reduction in the scale of real estate lending during the 1980s and 1990s compared to its remarkable expansion during the 1970s (General Housing Corporation, 2000) Figure 6.6 illustrates the trend in the scale of real estate lending during the period 1971-1994.

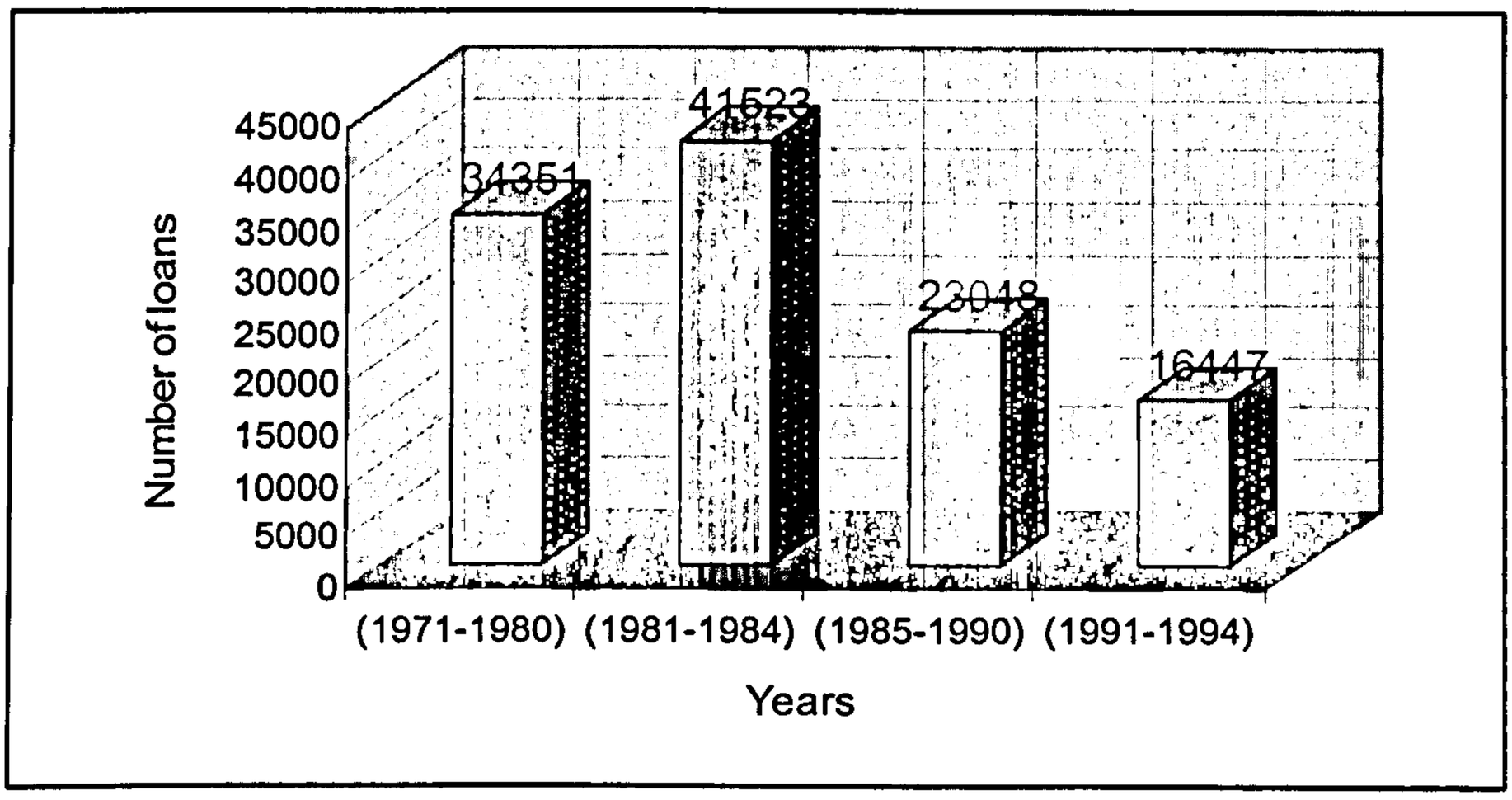
2. **Decline in the Sizes of Loans Compared to Construction Costs**

   Given the fact that construction costs were less than LD100 per square metre during the 1970s and early 80s, the sizes of loans ranging between LD5,000 and LD27,000 during this period were quite sufficient to build single family dwellings whether terraced, semi-detached or detached, for many middle and low income beneficiaries.

   In contrast, although the sizes of loans was increased to LD30,000 with banking commissions of LD1,500 during the second half of the 1980s, this was not enough to cover the notable increase in the cost of construction which jumped to LD180 per

square metre during the same period. Added to this, the cost of construction increased again to LD350 per square metre during the late1980s and in the 90s while the sizes of loans declined to only LD 15,000 with an interest rate of 2 per cent in 1991. Such insufficient loans compared to the high cost of construction made the building of single family dwellings unaffordable for many low and middle income OBs (General Housing Corporation, 2000).

Figure 6 - 6: Trend in the Size of Real-estate lending through REISB (1971-1994)



Source: based on Real-estate Lending: Development and Constraints since 1969, GHC, 2000

Despite government actions to narrow the gap between the sizes of loans and the cost of construction through issuing supplementary loans (LD 20,000) to those who had already been in receipt of the LD 15,000 loan, the high interest rates imposed on these loans, which could reach 50 per cent of the value of the loan made the monthly instalments for the supplementary loan unaffordable to many low and middle income applicants.

However, in an attempt to make the real estate lending programmes more responsive to the increased cost of construction and more accessible to low-income strata of the population, the GPCOM issued its Decree number (20) of 2005. This targets the expansion of lending activity for real-estate as well as other economic purposes (i.e. industry, agriculture) in the country through devoting a sum of LD3,000 million from the country's budget in a banking trust (deposit) at the REISB, Development Bank and Agricultural Bank. An agreement should be made between the General People's Committee of the Treasury (Ministry) and

the bank concerned regarding this banking trust by which the bank has to offer loans at a commission of 2 per cent. Half of commission is returned to the General People's Committee of the Treasury and the other half is kept by the bank. According to this decree, the loan's size may increase to a maximum of LD40000 in order to meet increased construction costs. In addition, the process of selecting those eligible for loans will be delegated to the banks instead of the provincial administrations in order to reduce waiting time and eliminate unnecessary bureaucratic procedures (Albayan, 2005a, Libya-alyoum, 2005b).

It can be concluded that, the real estate lending programmes during the 1970s were one of the key factors contributing to the expansion of OBH. However, the tremendous changes in the sizes of loans and interest rates imposed on them during the 1980s and 90s has discouraged many low and middle income OBs from being able to benefit from these loans in building their own homes. As a result, construction in many OBH areas has suffered long periods of delay and suspensions, as will become clear from the analysis of data from the fieldwork in this study conducted in Benghazi during the period February-May 2003. This fieldwork targeted OBs who built their own homes during the last three decades (1970-2000) of whom the great majority have been in receipt of real estate loans.

6.4 Land Supply for Housing Development

As mentioned in chapter 4, the improvement in the economic conditions in Libya since the early 1960s has led to the rapid growth of medium and large cities such as Benghazi and Tripoli. This growth has been a direct consequence of the increase in urban populations resulting from natural increases as well as the vast rural-urban migration in the aftermath of oil discovery in the late 1950s. Hence, the need for more housing to accommodate the increased population, particularly in urban areas, has been a priority on the government agenda.

Bearing in mind that one of the main problems facing housing development in urban areas is the lack of planning capable of coping with high demand for land for all development purposes, and particularly for residential purposes, therefore, land supply has become a main concern of the state at the national, regional and the local levels. The next section discusses the main factors influencing the availability of land for housing development.

6.4.1 Regulations Influencing the Availability of Land

90 per cent of Libyan land is desert, and land suitable for all aspects of development comprises only 10 per cent of the country's area, as indicated by the National Physical Perspective Plan (NPPP) for the period 1981-2000. Therefore, more pressure is put on urban land, particularly for residential purposes in big cities such as Benghazi and Tripoli. Thus, the government has issued various regulations since the late 1960s aiming to ensure an adequate and regular supply of land for residential purposes. These regulations have strongly influenced the availability and price of land for housing, particularly in urban areas, and can be classified into the following categories:

6.4.1.1 Acts Concerned with Land Supply (Planning and Subdivision)

The first important act in this respect was Act (5) of 1969 concerned with the mechanisms of the preparation of master plans and subdivisions of land within villages, towns and cities. This Act also set conditions for subdividing the urban land for residential development into two or more plots, for any purposes such as selling, building a whole dwelling or the extension of existing building. Added to this, it incorporated the legal procedures to be undertaken by prospective OBs for obtaining land, acquiring building permits, and paying the required fees, as well as the mechanisms of title deed registration. However, although Act (5) of 1969 is still seen as the basic legislative document that controls the use of land, it has been argued that this Act provides too narrow an outline for the control of development. Elshukri (2000) argued that this is because the Act does not reflect and respond to more recent changes related to land ownership, particularly the parts concerned with restrictions imposed on the subdivision of privately-owned land or those related to limiting house building to only one dwelling for owner-occupation, as will be discussed later in this chapter.

The other two important pieces of legislation that affected land supply were Act (33) of 1970 and Act (4) of 1973 concerned with the protection of agricultural land from unauthorized construction activities that would damage the limited amount of fertile agricultural land in the country. However, building on agricultural land by individuals and public agencies has become common practice, which has caused economic losses not only from the misuse of agricultural land but also from the resulting waste and environmental pollution produced by industrial activities established on this land (Elshukri, 2000).

The implications of the aforementioned two Acts for land supply in many towns and cities are quite obvious. For instance, many private and public investors were prevented from benefiting from land that is incorporated into the approved physical plans of cities and towns for purposes other than agriculture (such as residential, commercial, education or services development) if it has the potential to be used agriculturally. This has led in many cases to cheating in order to gradually use these lands for purposes other than those prescribed by the approved physical plans. In addition, the enforcement of the above mentioned Acts has affected the supply of residential land and led to an increase in its prices within urban areas. Meanwhile, the value of agricultural land on the fringes of many cities has risen since its owners have the option to subdivide the land illegally into small plots, selling it directly to potential OBs or to speculators and private developers (Elshukri, 2000).

It can be concluded that these Acts have neither protected these lands for the sole use of agriculture as originally set nor eased the execution of the approved physical plans where these lands exist. Instead, the approval of many physical plans for city expansion or for new towns and villages that would provide more land for residential development has been delayed for long periods by the enforcement of the Acts. Thus, Elshukri (2000) stressed that it is necessary to create a system of agricultural land classification, which would not only indicate the types and classes of the areas to be protected from non-agricultural development, but also the poorest land to which urbanization should be steered.

However, and as an attempt to eliminate the problems caused by the enforcement of the aforementioned Acts, some exceptions were made in the Act (15) of 1992 for using agricultural land for other purposes if it is classified in the approved plan for other uses (i.e. residential, public facilities, and services). In this respect, it was stressed in this act that legal permission must be obtained from the General People's Committee of Agriculture (Ministry of Agriculture) for chopping down or replanting any trees within these areas. In addition, it has been stressed that any unauthorized building established on agricultural land should be demolished using legal procedures. Furthermore, no building contradicting provisions of this act should be registered with the Real estate Registration Office (RERO).

It was then hoped that the Decree (4045) of 1995 issued by the GPCOM concerning the infilling of all vacant land within cities, and the introduction of the Third Generation of

Physical Plans for the period 2000-2025 that regulates the preparation of master plans for 300 cities and 600 towns and villages with a total land area of about 200,000 hectares, would lead to more land becoming available for housing development (Urban Planning Authority, 2003).

6.4.1.2 Acts Concerned with Land Prices in Urban Areas

The availability of land at reasonable and affordable prices for all different members of the population, who wish to build homes for their own use, is a key determinant in expanding housing activity. Despite the scarcity of data on land prices, it is clear that the shortage of buildable land constitutes a major problem and has led to sharp increases in its prices in most urban areas. In some cities, for example, the price of land has exceeded the costs of construction materials and labour, which would mean in theory that it might take a family a life-time to cover the expenses for the land and the house, built on it (NCID, 1999).

Regarding privately-owned land, and aiming to encourage good land management and prevent any sort of speculation in urban land prices, the government issued Act (116) of 1972. Known as the Urban Evolution and Development Act, this act fixed all land prices on the basis of 1964 prices plus 5 per cent per year thereafter. Based on this act, all privately owned land not built on for a certain period of time should be confiscated and transferred to public ownership. Thus, all private-land owners were obligated to invest in their own land through obtaining low-interest real estate loans from the banking sector for subdividing the land and constructing residential buildings for investment purposes (Essayed, 1981). This Act was in effect for only a short period due to the nationalization of all real-estate activities in the late 1970. However, it made more land available for public and private use. In addition, it contributed to the expansion of OBH in the 1970s by making more residential land in urban areas accessible to OBs at reasonable prices.

Despite the contribution of Act (116) of 1972 in promoting housing activity during the early 1970s through regulating land prices within the approved plans of cities based on their estimated prices in 1964, land prices during the 1980s and 90s unfortunately increased rapidly, particularly in big cities such as Benghazi and Tripoli. For example, in the city centre of Benghazi, although the land was supposed to be sold at maximum price of LD 5 to 30 per m^2 in 1998 (based on the 5 per cent per year added to its 1964 price), the price instead shot up to LD150 per m^2 or more due to the speculation of land owners and

brokers. As a result, land prices became almost equal to the cost of house construction in the suburbs of these cities (NCID, 1999). This was because many municipalities were unable to deliver any new subdivisions to meet the increased number of applicants for housing plots due to the contradictions mentioned above between regulations concerned with land management and supply (NCID, 1999).

For allocating publicly-owned land to OBs, the plot eligibility criteria of priority, selling price, and method of payment were highlighted in a set of regulations issued by the government in 1974. As mentioned in chapter 5, if the plot did cost more than LD500; the buyer had to pay the total cost in one payment; otherwise a small down payment could be made followed by monthly instalment for not more than three years. However, more discussions regarding the eligibility criteria and required documents for allocating publicly-owned land are made in chapter 7.

6.4.1.3 Acts Concerned with Land Ownership

As mentioned in the previous chapter, home ownership has been the main principle of all housing policies adopted during the post-revolution era. In this respect and aiming to have some sort of equity regarding land acquisition among Libyans and to prevent any sort of monopoly of land, particularly in urban areas, as well as to allow the proper and full utilization of land for different socio-economic development purposes, the Act (116) of 1972 imposed a yearly tax of 2.5 per cent on all privately-owned land left vacant. However, any privately-owned land not exceeding 1600 m^2 was exempted from this tax.

In the late 1970s and by issuing the Act (4) of 1978, the use and control of land as a basic resource was considered as matter for society as whole and any arrangement of land management should be made for the sole benefit of the whole community rather than for the benefit of individuals making money out of it (Elshukri, 2000:208). The new principles of ownership introduced in the Act (4) of 1978 meant that all individuals were allowed to own only one plot in order to build their own homes and any excess land had to be transferred to public ownership. In addition, Act (7) of 1986 made it possible for the state to confiscate land not built on. One impact of Act (4) of 1978 was that many municipalities were able to reallocate the confiscated excess privately-owned land and provide more land for others seeking to build their own houses. However, the exact outcome of the enforcement of this act has yet to be measured.

The government's attempts to achieve some sort of equity in land allocation and to prevent speculation on urban land continued in the 1980s and 1990s. The government issued Act number (2) of 1986 concerned with taxation on real-estate properties. According to this act, a yearly tax was imposed on every house built on a residential plot of a size exceeding 500 m². In addition, no permit could be issued for the construction of a house on housing plots of more than 500 m². Further important legalisation concerning ownership was Act (11) of 1992, in which, according to the Article (8), nobody who is in possession of a house or housing plot allocated by the government had the right to sell or transfer the ownership until 10 years after allocation. However, some exemptions were allowed such as in the cases where owners moved permanently to other cities. Despite the aim of preventing speculation on urban land, the misuse of the exemption conditions in this Act led to an increase in land prices, particularly in big cities such as Benghazi and Tripoli.

Despite the government's aim in achieving more equity and transparency in land allocation, it was obvious that various problems existed in the allocation of publicly-owned land. In this respect, Elshukri (2000) argued that the management of publicly-owned land is characterised by market behaviour that favours those who can pay more as well as the elite and the more politically or socially influential. In his study regarding land management in Tripoli in 2000, Elshukri found that 98 per cent of respondents thought that it was not easy to obtain publicly-owned land for residential use (Elshukri, 2000).

Having briefly discussed legislation concerned with land management, it is important to indicate that the problems cannot be sorted out by the mere drafting of legislations. Instead, the role of legislation should be an integral part of a comprehensive housing policy where a series of provisions and measures are implemented at all levels and in all areas of concern.

6.5 Availability of Construction Labour

As mentioned in chapter 5, housing construction during the pre-revolution era was largely hampered by the acute shortage of technical skills for design, construction and supervision which caused long delays in the implementation of many housing projects (Essayed, 1981a, Awotona, 1990a). In this respect, in the two big cities Benghazi and Tripoli respectively there were only 112 and 146 registered construction firms in 1963 (Doxiadis Associates, 1964a). Added to this, the Ministry of Housing and the Ministry of Public

Works were regarded as understaffed at the end of 1968. The former had only 12 architects and 10 engineers and the later had 20 architects and 19 engineers. In addition to the absence of any training programmes during this period for middle-level supervisors and assistants (i.e. in geometrics, draughtsmen, and building inspectors), it was noted that Libyans tended to avoid taking part in any vocational training concerned with the construction trades (United Nations Mission for Housing in Libya, 1969).

In order to overcome the acute shortage in local construction manpower, numerous steps were taken by the Libyan government in the early 1970. The government decided to depend entirely on foreign experts in the planning, design, supervision and execution of the urgent development projects during the early 1970s. Meanwhile, the government began to reorganize the construction sector as well as the system of contracting aiming to meet the increased demand for construction labour. The next section briefly discusses the size and composition of the workforce in all sectors.

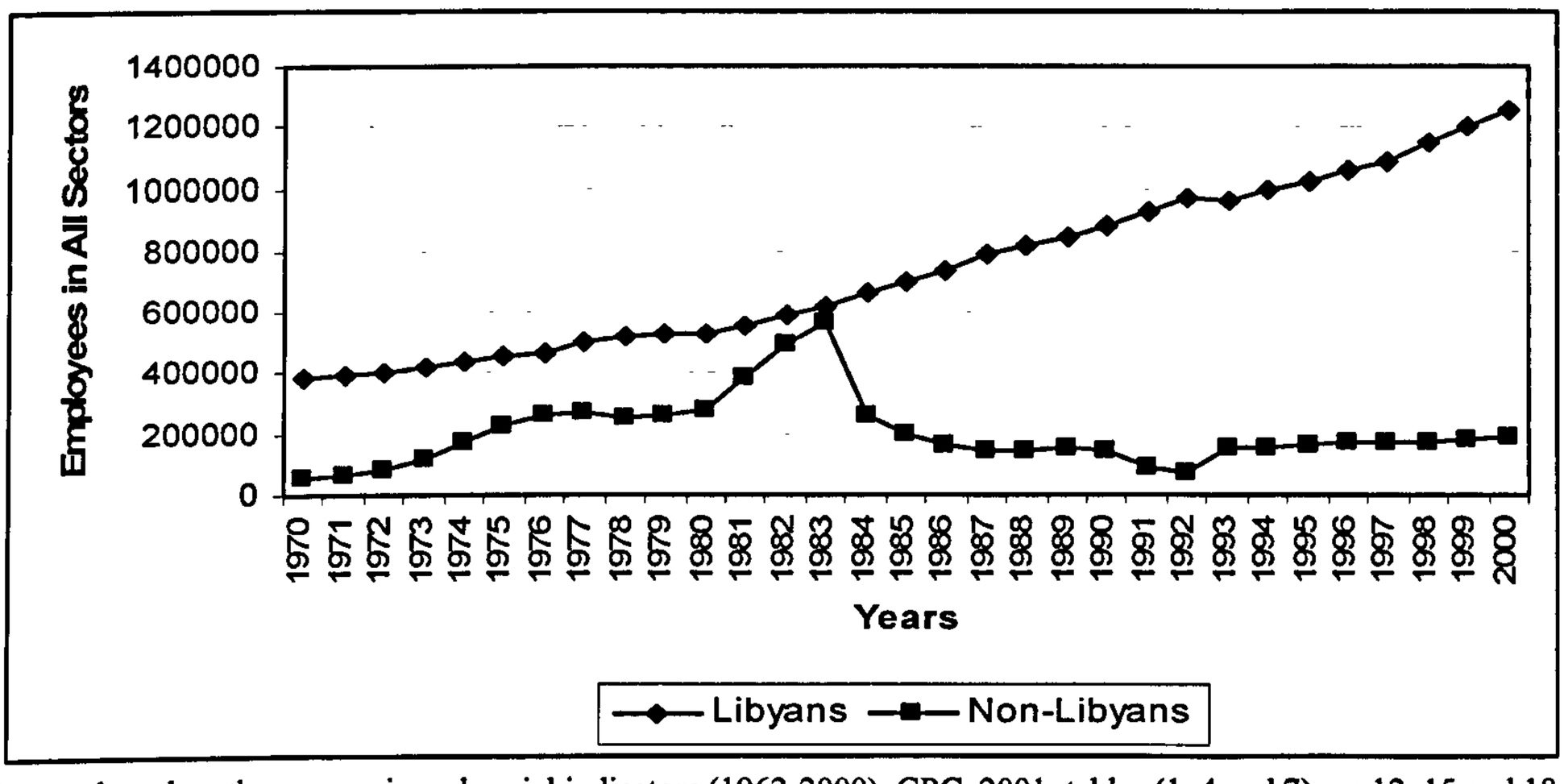
6.5.1 Size and Composition of Workforce in All Sectors of the Economy

The size and composition of the workforce in all sectors of the economy was profoundly affected by the tremendous political and economic changes that the country experienced during the pre and post-revolution eras. The size of the Libyan workforce during the post-revolution era also increased from only 383,500 employees in 1970 to 1,257,100 employees in 2000 (General Planning Council, 2001).

Similarly, the non-Libyan workforce during the post-revolution era has witnessed dramatic increases from only 50,000 employees in 1970 to 561,100 in 1983 (General Planning Council, 2001). Such an increase can be attributed to the increased demand for non-Libyan labour to undertake the intensive development projects implemented during the early post-revolutionary years, particularly in infrastructure and the industrial and housing sectors. Thus, many skilled and non-skilled Arabic workers, as mentioned in chapter 4, were able to enter the country following the signing of agreements between Libya and neighbouring Arab states such as Egypt, Sudan and Tunisia easing entry requirements. It has been revealed that about 85.7% of non-Libyan employees in 1974 were from the Arab world, while the remaining 14.3% were mainly from European countries (Secretariat of Planning, 1978:90).

By the mid-1980, a notable decline began to be noticed in the size of the non-Libyan workforce, which dropped to only 76,100 in 1992 (General Planning Council, 2001). This decline can be attributed, as mentioned in chapter 3, to the restrictions that the Libyan government imposed on employing non-Libyan labour following the global drop in oil prices in the mid-1980s. Added to this, the UN Sanctions imposed on the country during the early 1990s led to the suspension of many development projects as well as a reduction in the value of the Libyan currency which in turn led many non-Libyan workers involved in construction to leave the country (see chapter 4). In the late 1990s, however, the number of non-Libyan workers began to increase again, particularly after the suspension of the UN Sanctions in the late 1990s. Numbers reached 187, 900 in 2000 (General Planning Council, 2001). Figure 6.7 illustrates the trends in the size of the Libyan and non-Libyan workforce in all sectors during the period 1962-2000.

Figure 6 - 7: Trends in the Size of the Workforce (1962-2000)



Source: based on the economic and social indicators (1962-2000), GPC, 2001; tables (1, 4 and 7), pp.12, 15 and 18

6.5.2 Size and Characteristics of the Construction Workforce

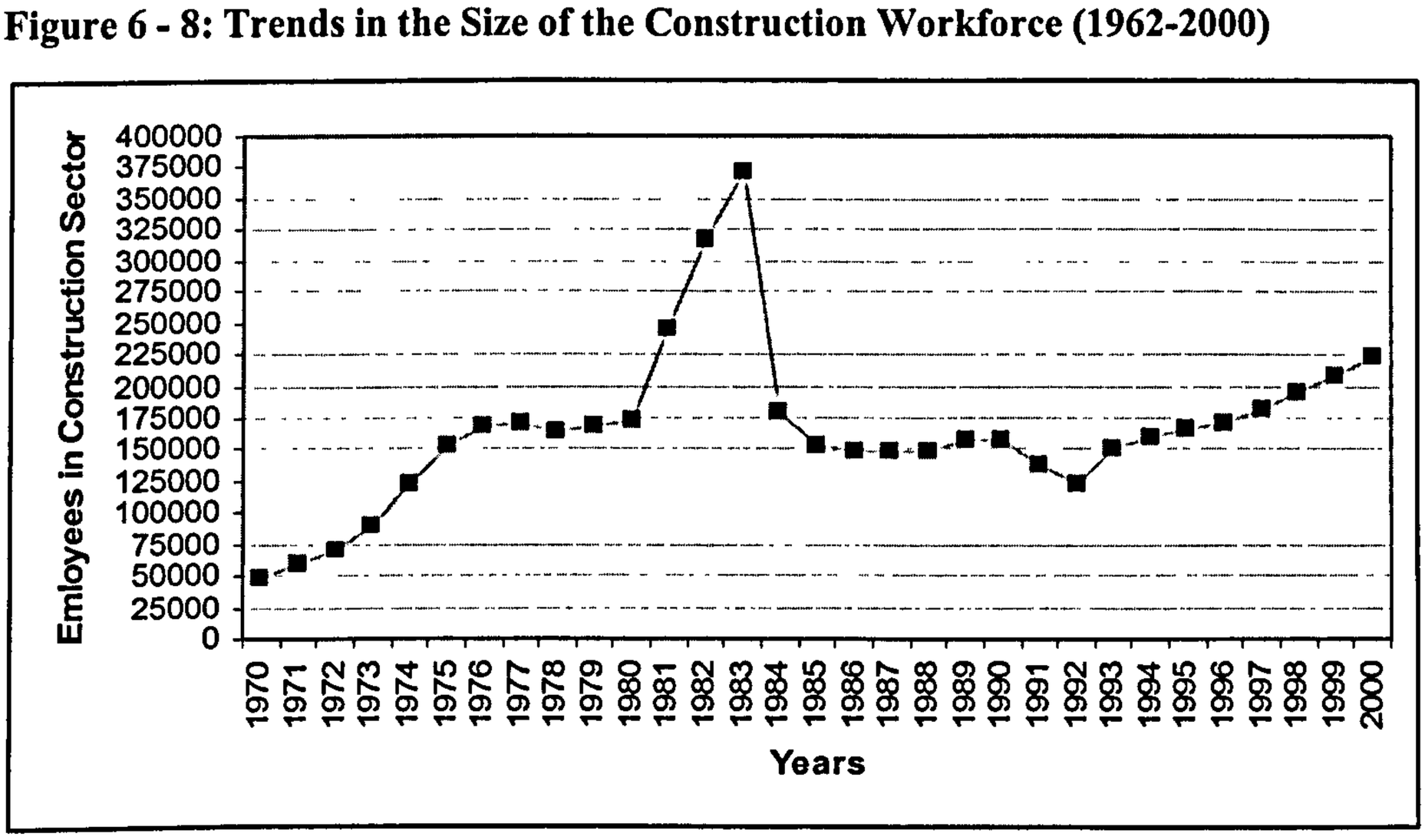
It is obvious that the size of workforce employed by the construction sector has dramatically increased since 1970. This is mainly due to the enormous construction projects that the government began to undertake in all sectors. Although the size of the Libyan workforce in the construction sector during the post-revolution era has been higher than in any other economic sector, it was mainly concentrated in administrative and office jobs rather than in on-site construction works. The aim of the Development Plan (1981-

1985) was to limit the reliance on foreign construction manpower by encouraging Libyans to be more involved in the execution of construction projects. However it was obvious that Libyans were still reluctant to undertake on-site construction work (Al-Zenie, 2002).

The post-revolution era has witnessed dramatic increases in the size of construction workforce, particularly during the economic boom period of 1970-1983. The number of employees in the construction sector increased from 49,000 employees in 1970 to 371, 000 in 1983 (General Planning Council, 2001).

As can be seen from Figure 6.8, many fluctuations occurred in the size of the construction workforce during the period 1984-2000, for example dropping form 371,000 employees in 1983 to only 179,000 in 1984. Such fluctuations can be attributed to the same aforementioned economic factors that led to the suspension of many socio-economic development projects in the country following the drop in oil prices in the mid 1980s as well as the impact of the UN sanctions imposed on Libya in the early 1990s which lasted for a decade.

Figure 6 - 8: Trends in the Size of the Construction Workforce (1962-2000)



Source: based on socio-economic indicators (1962-2000), GPC, tables (1), (4) and (7), pp.12, 15 and 18

6.5.2.1 Role of Non-Libyan Manpower in the Construction Sector

Although most official statistics concerned with the size of the construction workforce do not clearly illustrate its composition during the period 1970-2000, it is apparent that foreign employees represented the lion's share of the total workforce employed in

construction during the 1970s and early 1980s. The large dependency on foreign construction labour has also been experienced in other countries whose economy is oil-based such as Saudi Arabia and Kuwait attempting to cope with the remarkable expansion in construction activities and to compensate for shortages in domestic construction workforces (Al-Saati, 1989).

The severe cutbacks in the number of foreign workers in the mid-1980s damaged the construction sector more than any other sector. Between mid-1983 and mid-1984, the number of construction workers dropped from 371,000 to 197,000, mainly because of the departure of foreign workers following the drop in oil prices in early 1980s. Nonetheless, the construction sector remained the biggest national employer during 1984. However, the most recent workforce census carried out in 2001 showed that out of a total of 296,000 employees working in the construction sector, foreign employees represented about 59.5 per cent. Table 6.3 illustrates the number of foreign employees in the construction sector according to their level of experience and length of residence in the country in 2001.

Table 6 - 3: Foreign Construction Labour based on Experience and Length of Residence

	Number of Non-Libyan employees in construction sector	
Years	According to their experience	According to their length of residence
Less than one year	615	1950
One year	2042	4620
Two years	1528	3372
Three years	1328	2250
Four years	1076	1249
Five-nine years	3841	2302
Ten years or more	6000	1880
Not specified	1192	1
Total	**17624**	**17624**

Source: based on final Results of Workforce Census, NCID, 2001, table 22
Statistical Book, NCID (1998c), Tripoli.

6.5.2.2 Negative Impacts of the Reliance on Foreign Workforce

Foreign workers obviously formed the main labour force employed in the construction sector during the post-revolution era in order to overcome the shortages in the domestic workforce (Kezeiri, 1984:381). However, it has been evident that certain negative impacts

have stemmed from the reliance on foreign workers affecting the Libyan economy and the physical environment in the country.

Economically, huge sums of money paid to foreign workers left the country, leading to a notable decline in the capital available for investment in the housing sector. In this regard, a study conducted by the Central Bank of Libya (CBL) in 1984 concluded that more than LD800 million was transferred abroad by foreign employees, half of which was paid to non-Libyan workers in the construction sector. This gives a brief idea of the huge sums of money that could have been devoted to investment in the housing sector, for the welfare of the people, if the construction projects were staffed by Libyans. In terms of the contracting system, it was noted that the arrangements that the government had with foreign companies in carrying out construction projects did not make a significant contribution to the development of the local construction sector or to the transfer of advanced technology in a balanced way that would help preserve and improve domestic architecture. Environmentally, it was obvious, as mentioned in chapter 4 and 5, that foreign consultants disregarded the local and traditional styles in many Libyan cities, instead adopting foreign building regulations and standards in the planning, design, supervision and construction of government projects (Attir, 1983, Kezeiri, 1984).

6.5.3 Organizing and Promoting the Domestic Construction Sector

In aiming to promote the domestic construction sector, the government had since the early 1970s decided to establish small and medium-sized as well as major national construction firms capable of undertaking the execution of big contracts, which had been almost completely limited to foreign companies in the past. As a result, eight national construction firms were established in the early 1970s in the two big cities of Benghazi and Tripoli including the National Industrial Contracting Company, the General Corporation for Construction and Maintenance of Roads, and the General Corporation for Civil Works. In addition, many vocational training centres were established across the country in order to prepare skilled domestic workers capable of embarking on different construction projects (Essayed, 1981).

In order to reorganize the sector, all 2000 small construction firms in 1975 were obliged by the state to merge and form larger joint-venture firms capable of carrying out larger construction projects. However, in 1979 and following the application of the principles of

socialism introduced in the Green Book, all privately-owned firms working in construction were nationalised and reorganized in the form of national construction firms. By the mid 1980s it was obvious that the construction sector consisted of a very limited number of national firms distributed among the municipalities, in addition to a few small cooperatives which later grew in number. Aiming to overcome the weakness of the domestic construction sector, in the 1990s the state encouraged all individuals to enter the construction sector by establishing Shared Investment Firms specialized in construction work. It can be concluded that, despite the government's efforts in encouraging Libyans to be involved in construction projects, the contribution of domestic construction firms in the construction sector has remained limited compared to foreign companies. However, a notable expansion in the size of construction projects has begun to be noticed across the country regions during the late 1990s and particularly following the lift of economic sanctions imposed by the Security Council of the United Nations the early 1990s (Albayan, 2004).

6.6 Availability of Building Materials

The inadequate access to affordable building materials, which in addition to the cost of land account for a sizeable proportion of total construction costs, is seen as one of the principal constraints on the ability of the poor in developing countries to provide housing for themselves (Gough, 1996). As mentioned in chapter 5, the scarcity and high prices of building materials during the pre-revolution era was a key factor contributing to the high cost of house construction. The shortages in locally-produced materials made imported building materials the only alternative, accounting for about 80 per cent of all building materials used in construction during the mid-1950s (Stroller, 1962, Al-Megierhi, 2000). In contrast, the state's efforts during the 1970s to overcome the shortages in building materials, as mentioned in chapter 5, contributed to the expansion of private and public housing activity and to a notable improvement in the quality of the housing stock in the country during this period (Essayed, 1981, General Planning Council, 2002a). In this respect, a number of factories were established for the production of cement, limestone, tiles, bricks, paints, and plumbing appliances to meet the increased demand for building materials. Added to this, many subsidized building materials were provided to OBs whether directly through the designated public and private supply channels or through housing cooperatives distributed across the country.

In contrast to its expansion during the 1970s, the production of some building materials was suspended in the late 1980s and early 90s due to the shortages in raw materials, particularly those imported from abroad. This situation led the state to depend more on imported building materials to overcome local shortages. Despite this, the quantity of imported materials dropped by 70% during the period 1986-88. The shortage of materials, whether imported or locally-produced and particularly cement and steel, during this period meant that their prices increased dramatically in the local market (General People's Committee, 2000a).

The shortages and high prices of materials particularly following the government's restrictions imposed on imported goods during this period led to the emergence of black markets and further increases in prices of these materials. This led many low and middle income OBs in the late 1980s or 1990s, as mentioned in chapter 5, to postpone or give up the idea of building their own homes while those who already commenced the construction process of their own houses experienced long delays and frequent suspensions in the construction process often extending to several years. This was mainly due to the high cost of materials and labour, and is examined in the fieldwork conducted in Benghazi during the period February-May, 2003.

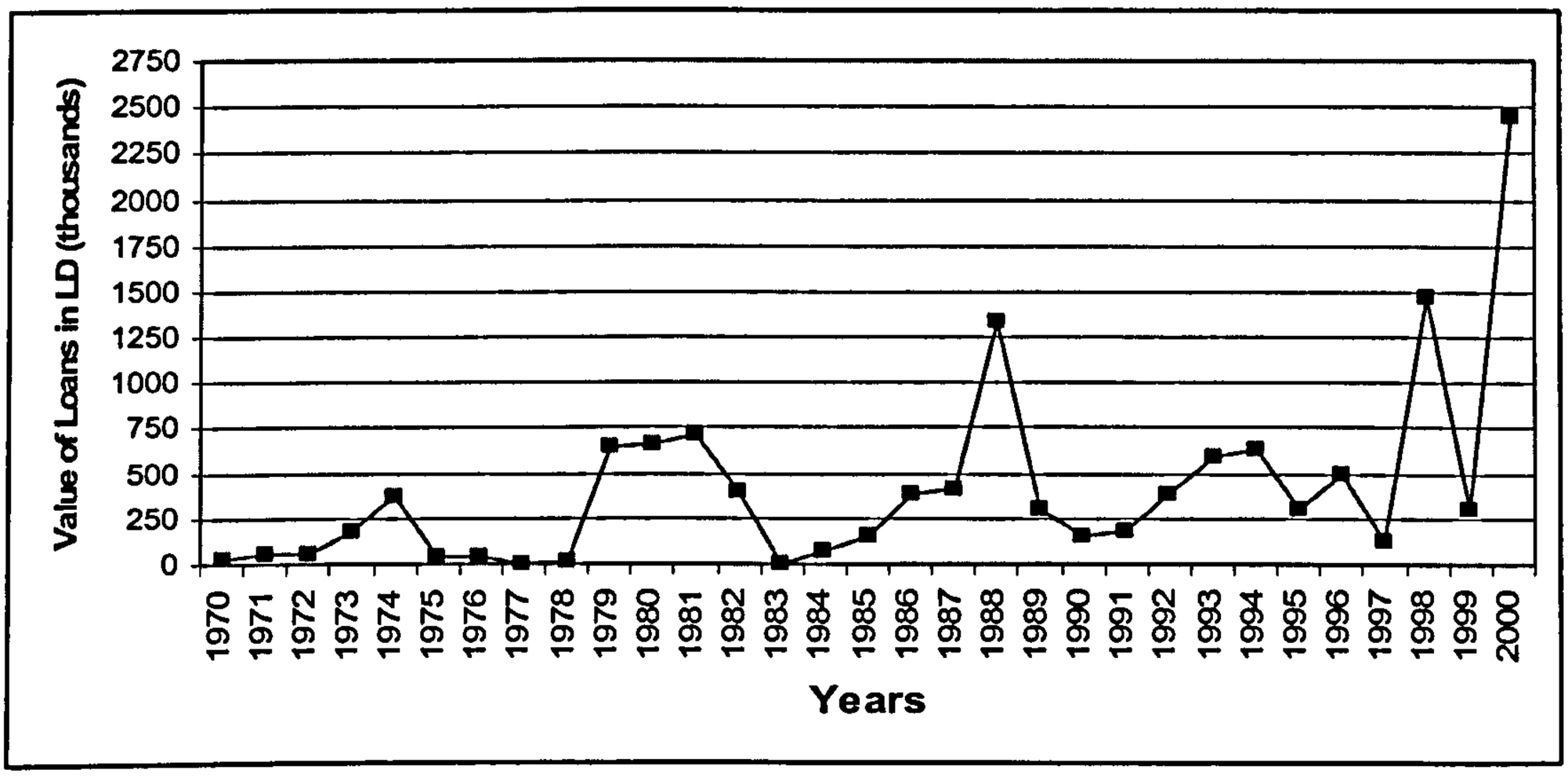
As discussed in chapter 5, providing affordable building materials, particularly cement and steel is seen essential to enable the OBH to achieve the target in the long-term plans for 2000-2015. Thus, the General People's Committee of Housing and Utilities (GPCHU) and the General People's Committee of Industry (GPCIND) recommended certain programmes in order to increase the local production of many building materials hitherto being imported. In addition, it was still seen as important to import certain materials whose local production was insufficient such as marble, paint, sanitary appliances, and wall tiles and flagstone as well as hand tools to meet the local demand and to achieve the targets of the plan.

6.6.1 Role of the Banking Sector in Promoting Production of Materials

Aiming to expand the local production of building materials, both public and private producers were facilitated easy access to credit through the banking sector. In this respect, the Industrial Department in the Real-estate and Industrial Bank, later replaced by the Development Bank, issued many loans after 1966 onwards for the purpose of the

production of building materials. Figure 6-9 illustrates the scale of lending for the building materials and other industries during the period 1970-2000. Added to this, the General People's Committee, aiming to reduce the cost of building materials and to boost the national economy, decided in the mid-2005 to cut taxes on some of construction materials particularly Portland cement, flagstones, ceramics, paints, nails, pipes, electrical wires and water heaters. The new move will help in bringing down the cost of cement which was ranging in the early 2005 between LD12 to 13.25 per ton (Albayan, 2005b).

Figure 6 - 9: Trends in Lending Programmes for Building Materials Industry (1970-2000)



Source: Fiscal and Banking Statistics (1966-2000), CBL, 2000, table 21, p.47-48

6.7 Conclusion

This chapter has discussed the contribution of different finance channels and land allocation programmes in the development of the housing sector in Libya during the post-revolutionary era. The availability of construction workers and building materials has also been discussed. Certain regulations have influenced the accessibility and availability of these resources. For instance, the reluctance of the banking sector to provide sufficient number of building loans as well as reductions in the sizes of loans issued compared to the increased cost of construction have made the building of private dwellings for owner occupation difficult for many OBs, particularly those among the lower-income strata of the population. Added to this, contradictions between many regulations concerned with the planning and subdivision of land has negatively influenced its supply and prices during this period. Moreover, the large dependence on unskilled foreign labour in the design and

construction of housing, in addition to the reluctance of Libyans to be involved in on-site construction work has led to many economic and environmental problems, such as those related to the increased cost of labour and to the quality of dwellings constructed. The next chapter discusses the development of OBH in Benghazi as the selected setting of the study and highlights the regulatory framework for OBH process.

Chapter Seven:

Owner-built Housing in Benghazi

Chapter Seven

Owner-built Housing in Benghazi

7.1 Introduction

The focus of this chapter is on OBH in Benghazi city, which has been selected as the setting of this study. After introducing the purpose and structure of the chapter in the first section, the second section gives a brief introduction to the city. The third section discusses how the physical and demographic structure of the city has evolved, particularly during the post-oil era. The fourth section discusses the housing and residential development in the city as well as the housing conditions and typology. The fifth section discusses the main suppliers of housing in Benghazi with more focus on OBH and the main factors contributing to its development during the post revolution era. Finally, the sixth section highlights the regulatory framework of the house construction process in terms of land acquisition, design and building permit procedures, mechanism of inspection, and the control of house construction, and the criteria for issuing certificates of occupancy.

7.2 City Profile

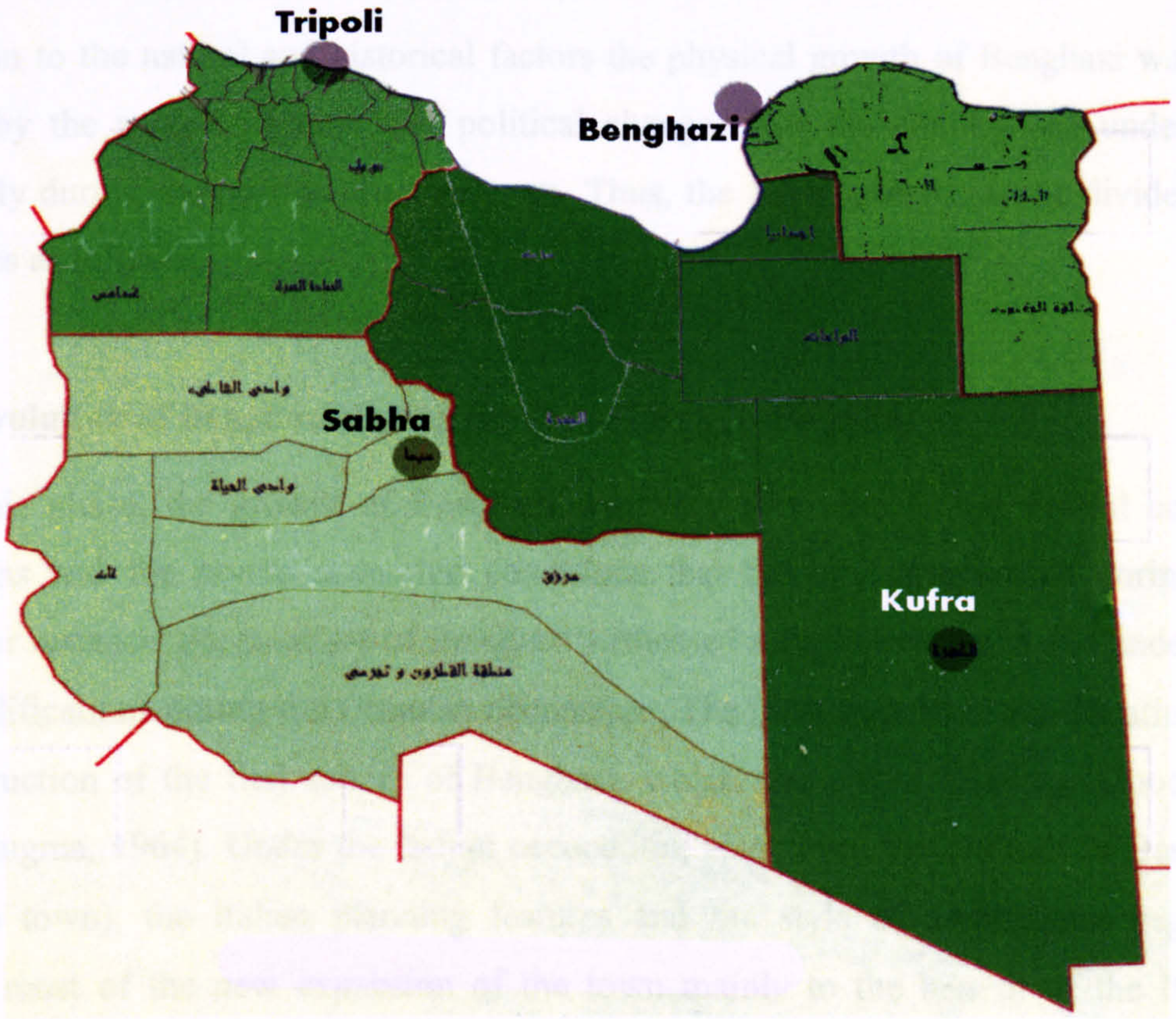
The origin of Benghazi as the second largest urban settlement in Libya dates back more than two thousand years. It was founded in the 6th century B.C. by Greek settlers of Cyrenaica and known by the name Eusperides. In the second half of the 3rd century B.C., the city was transferred to a new site called Berenice where the present Benghazi subsequently evolved (Goodchild, 1962). During the Arab conquest (643-1552), the name Berenice was replaced by the name Marsa (harbour) Benghazi. The name Benghazi was used for the first time in 1579 (Goodchild, 1962, Bulugma, 1964). Benghazi was selected as the chief administrative centre under the Ottoman occupation of the country (1711-1911) and its function was strengthened when it became a chief military centre during the Italian occupation (1911-1940). During the British Administration (1942-1951), the military function of Benghazi remained until the country gained its independence in 1951. However, Benghazi began to gain more administrative and economic importance after the discovery of oil in the late 1950s, which made the city more attractive to rural migrants

who left their own villages seeking well-paid jobs and better living standards (General Popular Committee, 1989a).

7.2.1 Geographical Features of the City

From a geographical perspective, Benghazi is one of the chief seaports on the African coast of the Mediterranean Sea and extends about 4 kilometres along this coast. Its geographical coordinates are 32 degrees N and 20 degrees E. In addition to being the second largest city in the country, Benghazi is also the capital of the Benghazi Region and it is the seat of the Benghazi Baladiyat (municipality) as well as currently the seat of the Benghazi Shabiyat (administrative province). Figure 7.1 illustrates the geographical position of Benghazi in the country.

Figure 7 - 1: Geographical Position of Benghazi in the Country



Source, Urban Planning Authority (UPA), Benghazi, 2003

7.2.2 Natural Features of Benghazi

Being located on the southern Mediterranean's coast, Benghazi has a typical Mediterranean climate seen as favourable for work and living. However, for a few weeks during the summer, the southern Qibli[1] winds are considered a most harmful climatic feature. The morphology of the city is characterized by a semi-arid large triangular flat plain with the presence of some Sabkhas[2]. This led to the growth of the city to be confined to a narrow strip of land between the sea and the Sabkhas.

7.3 Growth of Benghazi

As the second largest city in Libya, Benghazi has undergone dramatic demographic and physical growth during the twentieth century. The main features of the physical and demographic growth of the city are discussed in this section.

7.3.1 Physical Growth of Benghazi

In addition to the natural and historical factors the physical growth of Benghazi was also affected by the socio-economic and political changes that the country has undergone, particularly during the post-oil discovery era. Thus, the city's growth can be divided into two phases as follows:

7.3.1.1 Evolution of Benghazi during the Pre-oil Era (1450-1959)

During this phase, the growth of Benghazi was very slow due to the several colonial occupations and the severe economic conditions that the city experienced during this period. For instance, the structure of Benghazi witnessed a slight expansion and underwent some modifications during the Ottoman occupation. The most important modification was the construction of the first suburb of Benghazi, which was called El-Birka (Goodchild, 1962, Bulugma, 1964). Under the Italian occupation, apart from the old part of Benghazi (the Arab town), the Italian planning features and the style of architecture began to dominate most of the new expansion of the town mainly to the benefit of the Italians settlers (Bulugma, 1964, Goodchild, 1962).

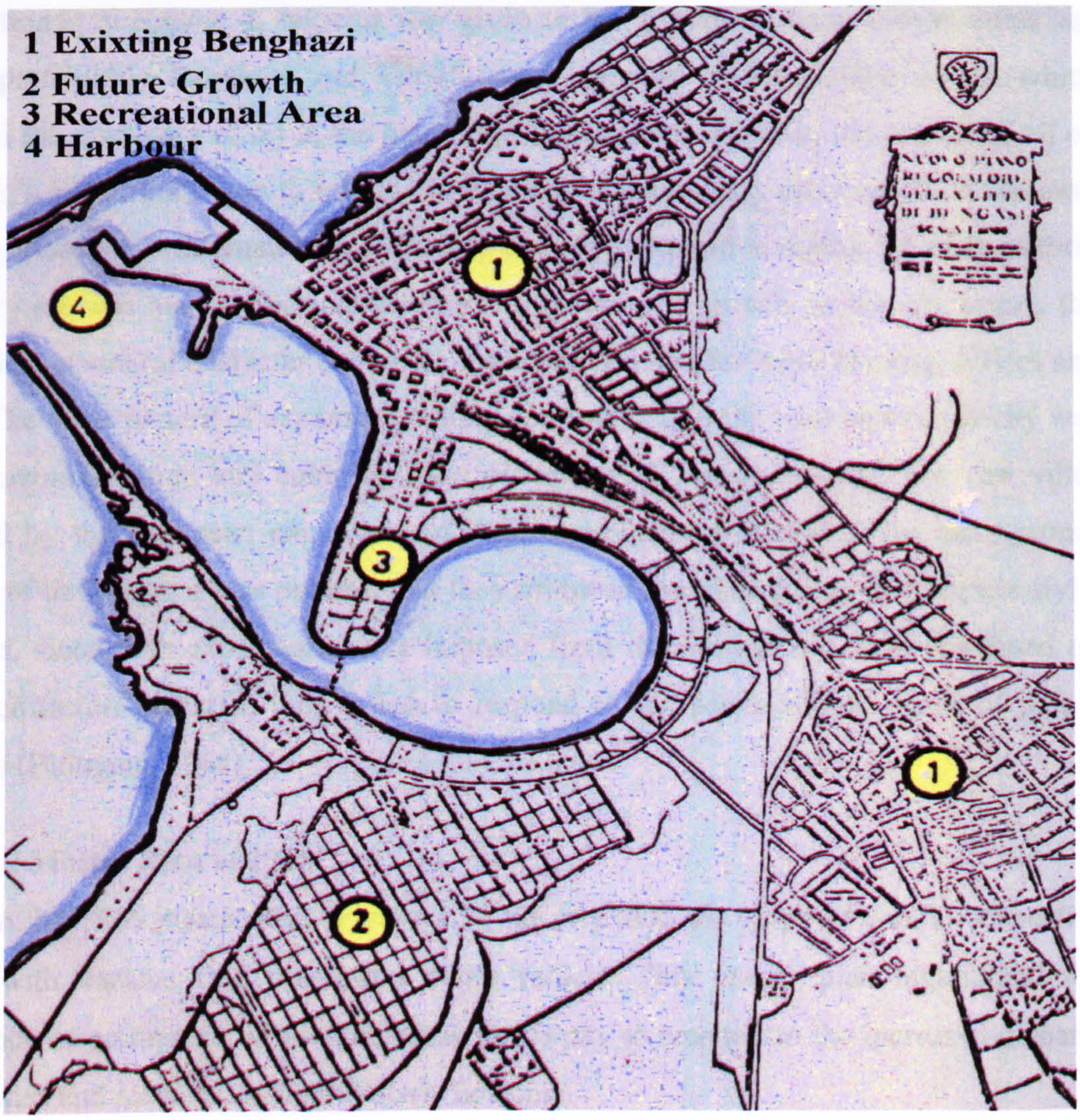
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[1] Qibli is a hot desert wind that hits most of northern Libya during the early months of the summer season [April and May] and which carries huge quantities of sand from the desert and causes rises in temperature.
[2] Sabkhas are wetland marshes.

The 1930 Italian Master Plan of Benghazi

As mentioned in chapter 4, four Italian master plans adopting European planning ideas were introduced for Tripoli, Benghazi, Misurata and Derna. These are considered as the origin of town planning in Libya (Kezeiri, 1984:76). Benghazi's Italian master plan of 1930 was mainly intended to encourage development on higher ground for residential, industrial and military purposes, instead of reclaiming the Sabkhas which had been the most important feature of the city's morphology. By the late 1930s it was obvious from the two maps that were produced of the city in 1922 and 1938 that Benghazi mainly consisted of two large distinct quarters; the old Arab quarter and the modern European quarter built by the Italians. Figure 7.2 shows the Benghazi master plan made by the Italians in 1930.

Figure 7 - 2: Benghazi Master Plan of 1930



Source: Urban Planning Authority (UPA), Benghazi, 2003

It was evident that Benghazi's development during the Italian occupation began to witness a new phase of growth. In this respect, Bulugma (1964:95) stated that:

> "The Italian stage undoubtedly was the most important phase of the city's evolution. During the thirty years which cover this stage Benghazi was almost completely changed in size, in layout and in architectural style."

Although Benghazi began to enjoy some administrative functions when it was named as alternative capital during the early years following the country's independence in 1951, the city's urban regeneration was largely hampered by the serious economic problems that the country was suffering from at that time (see chapter 4).

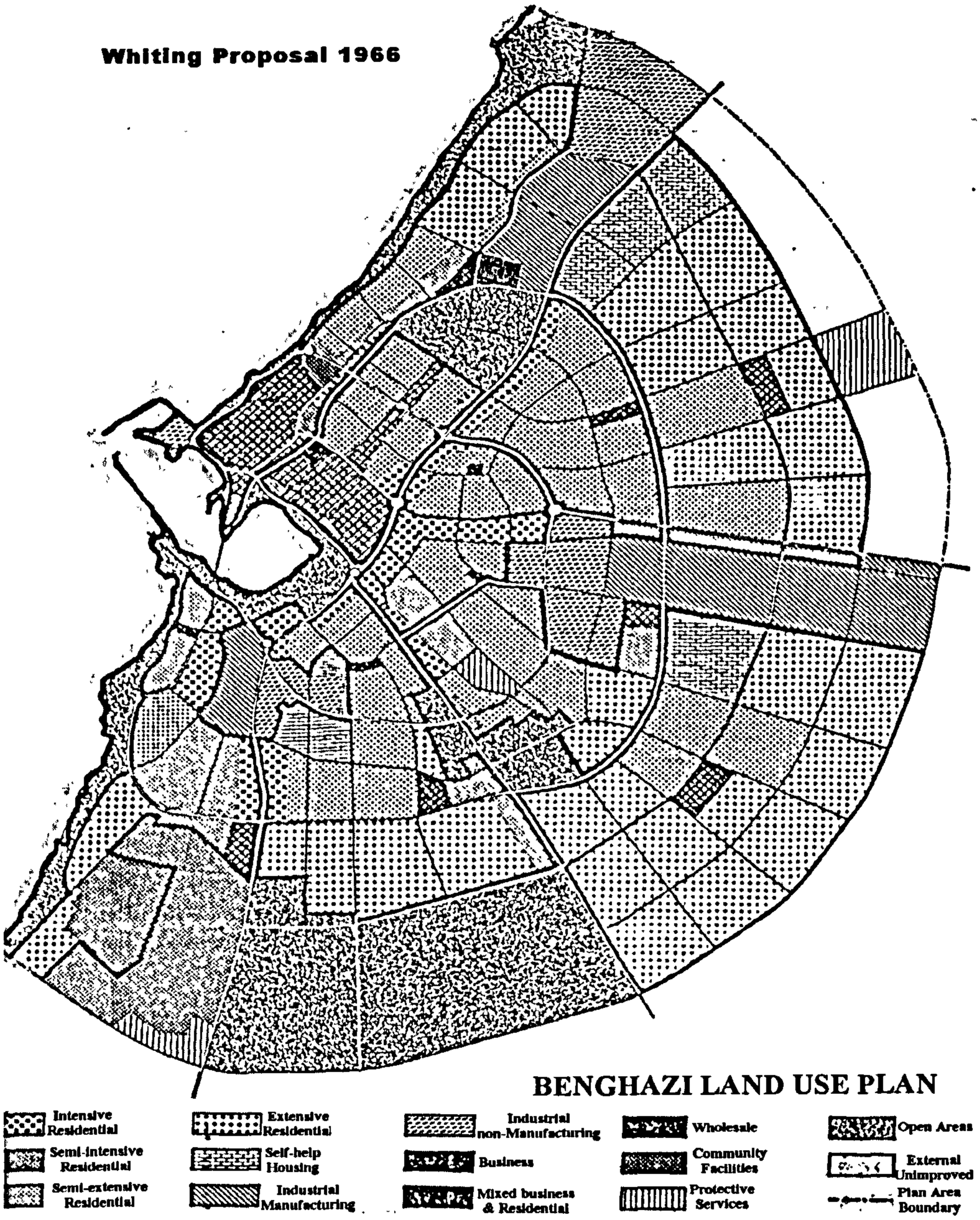
7.3.1.2 Evolution of Benghazi during the Post-oil Discovery Era

As mentioned in chapter 4, impetus was given to the growth of many Libyan cities and towns, particularly Benghazi and Tripoli, as a response to the sudden wealth which followed the discovery of oil in the late 1950s. Since the mid-1960s, the impact of oil on Benghazi's expansion began to become more obvious than in any other city in the country (Whiting Associates International, 1966:61). The city's expansion during the early post-oil discovery era was mainly characterized by two patterns of growth. In the city centre, the growth had a vertical character due to the increased demand for more housing, offices and shops. The other pattern of expansion mainly concentrated in the west part of the city was of a horizontal nature and comprised the offices of oil companies and low rise villas occupied by the European employees of these companies. In terms of the architectural features of buildings, it was obvious that they followed the same Italian architecture style. However, since both expansions were imposed from the outside and were not based on local architecture patterns, they failed to respond to the socio-cultural needs of native residents (Bulugma, 1964).

Benghazi Master Plan of 1966

Based on the 1966 master plan (Figure 7.3), the city took the shape of a radio-concentric pattern with various ring roads and major radials. This master plan highlighted the importance of getting rid of all slum areas in the city to respond to the increased demand for facilities and services, and particularly housing.

Figure 7 - 3: Benghazi Master Plan of 1966



Source: Benghazi Master Plan, Whiting Associates International, Final Report, 1966

As can be seen from Table7.1, the residential areas cover more than half (52.1 per cent) of the developed land in the city in 1966. In the late 1960s, it was obvious that the city's expansion had escaped from the earlier uncontrolled growth in terms of land use and road networks and had proceeded according to the 1966 master plan.

Table 7 - 1: Land use Distribution in Benghazi according to 1966 master plan

Land use	Area (hectares)	% of total
Residential Areas	569.70	52.1
Commercial Areas	5.50	0.5
Public Buildings	50.50	4.6
Transport & Communication	94.60	8.7
Industrial Areas	74.70	6.9
Social Services	223.70	20.4
Green areas & Cemeteries	53.60	4.9
Recreational Areas	20.90	1.9
Total developed land	**1.092.70**	**100**

Source: Whiting Associates International, Benghazi master plan, 1966, p.6

During the post-revolution era (1969-present) and benefiting from the implementation of the enormous socio-economic development plans, Benghazi has witnessed remarkable growth. This is mainly reflected in the major expansion of the built-up area in the city (Kezeiri, 1986, Awotona, 1990b). In this respect, the size of Benghazi in 1980 was about four times its size in 1966 and its developed area had expanded to about 3745.4 hectares in 1982 compared to only 1092.70 hectares in 1966. Table 7.2 illustrates land use distribution in Benghazi in 1978.

Table 7 - 2: Land use Distribution in Benghazi in 1978

Land use	Area (hectares)	% of total land
Residential areas	2298.5	62.0
Commerce & Business	35.6	1.0
Social services	562.2	14.2
Public Buildings	16.4	0.4
Green & Recreation areas	115.1	3.1
Public Utilities	29.4	0.8
Transport & Communication	41.6	1.1
Road network	277.9	7.5
Industry	368.7	9.9
Total developed land	3745.4	100
Total undeveloped land	378.7	
Grand total	**4124.1**	

Source: Doxiadis Associates, Benghazi master plan of 1989, table 5, p.21

Benghazi Master Plan (1989-2000)

In 1989, the approved master plan of the Benghazi Agglomeration prepared by the Doxiadis Associates suggested that the developed land in the city would cover 16,000 hectares, which was seen as enough to accommodate about 800,000 inhabitants at a gross residential density of 100 persons per hectare. According to this master plan (Figure 7.4), the city was divided into 21 residential districts surrounded by arterial roads and divided by collectors. Table 7.3 illustrates the land use distribution in the Benghazi Agglomeration according to the master plan of 1989.

Table 7 - 3: Land use distribution according to 1989 master plan of Benghazi

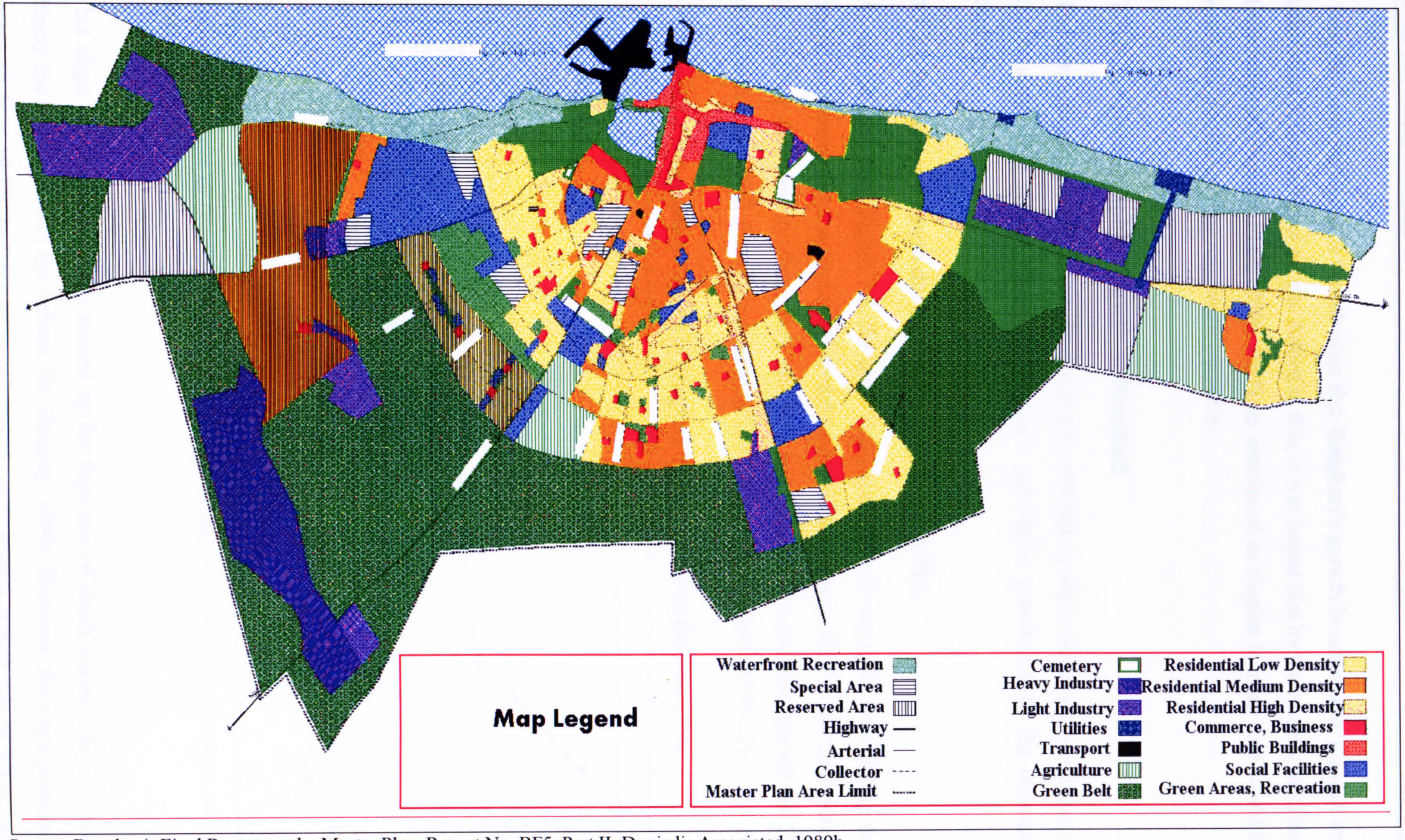
Land use	**Area in (hectares)**	**% of total land**
Residential areas	7,895	49.5
Commerce & Business	329	1.3
Social services & Public Buildings	1,005	6.3
Recreation & Sports	2,853	17.9
Transport & Communication	1,724	10.8
Industrial	2,144	13.4
Total developed land	**15,950**	**100**
Special areas, agricultural, isolation green built an reserved areas for beyond 2000	**8071**	
Total	**24021**	

Source: Doxiadis Associates, Benghazi master plan up to 2000, 1989, table 26, p.155

The capacity in the Benghazi master plan of 1989 exceeded the population forecasts for the Benghazi Agglomeration for the year 2000 (of about 750,000 inhabitants) and the plan was assumed capable of meeting the city's need for developed land, particularly for residential purposes beyond the target year. However, the following problems were encountered in the implementation of this master plan:

- The shortage of detailed plans for many districts in the city caused a shortage in land particularly for residential purposes, and led to the appearance of unauthorized residential developments on the outskirts of the city,
- The high rate of illegal land use and the increase in residential density beyond that set in the master plan put more pressure on the consumption of public facilities and utilities in the city (Abdalla, 1994, Urban Planning Authority (UPA), 2003a).

Figure 7 - 4: Benghazi Mater Plan of 1989



Source: Benghazi: Final Report on the Master Plan, Report No. BF5, Part II, Doxiadis Associated, 1989b

Despite these problems, it was obvious that Benghazi's growth became more planned and controlled during the post oil era. Added to this, it was hoped that by introducing the Third Generation of Physical Plans (2000-2025), as mentioned in chapter 6, more land would be available, particularly for residential purposes.

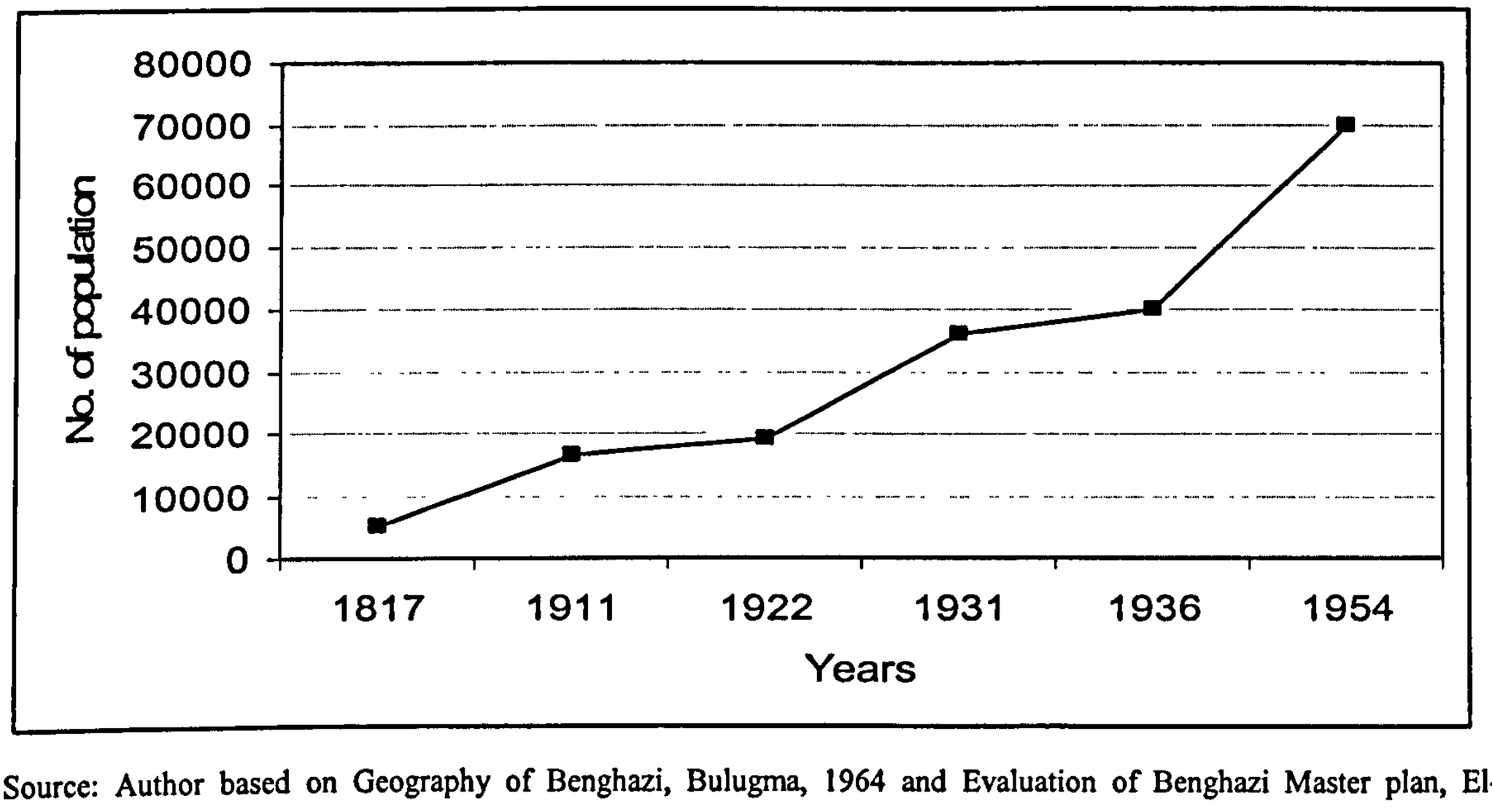
7.3.2 The Demographic Growth of Benghazi

The demographic growth of Benghazi was also affected by socio-economic conditions in the country. This section discusses the city's population growth during the twentieth century.

7.3.2.1 Population Growth during the Pre-oil Discovery Era

As can be seen from Figure 7.5, the city's population growth was quite slow during this period, increasing from an estimated five thousand inhabitants in 1817 to about 16,500 in 1911. Over these ninety four years, the city had an annual population growth of 124 inhabitants and overall annual growth rate of 2.4 per cent (El-Sharkasi, 1990:67).

Figure 7 - 5: Population Growth in Benghazi during the Pre-oil Discovery Era.



Source: Author based on Geography of Benghazi, Bulugma, 1964 and Evaluation of Benghazi Master plan, El-Sharkasi, 1990.

This slight increase was mainly caused by the high rate of death among Libyan natives during the war years with the Italians (El-Sharkasi, 1990). However, the city's population increased from 19,110 in 1922 to 36,212 in 1931 at as annual growth rate of 9.9 per cent

due to the increase in the number of Italian settlers during the 1920s. The great devastation that World War II inflicted on most Libyan cities led, as mentioned in chapter 4, to the departure of many Italian families as well as the immigration of huge numbers of Libyans who left their destroyed cities and fled to neighbouring countries or rural areas seeking more secure shelter. This was clearly reflected in the fact that, the city's population increased by no more than 3,788 inhabitants during the period 1931-1936. Following World War II and due to the stability of the country during the British Administration and early independence years, the city population increased substantially from 40,000 inhabitants in 1936 to 69,718 inhabitants in 1954 (Bulugma, 1964, El-Sharkasi, 1990).

7.3.2.2 Population Growth during the Post-oil Discovery Era

As mentioned in chapter 4, Libya has witnessed dramatic urban population growth during the post-oil era. In Benghazi city, as Table 7.4 shows, the population increased from 137,295 inhabitants in 1964 to 266,196 in 1973. In addition to having a natural growth rate of 4.4 per cent during the period 1974-1976, the crude birth rates in Benghazi were the highest in the whole country during 1974 and 1976 (Awotona, 1990b:88). The natural population growth together with rapid migration into the city from other towns and cities led to dramatic population growth in the city during the 1970s. This was obvious from the results of 1984 census, which show that the city's population in 1984 had roughly doubled since 1973 (Awotona, 1990b).

Table 7 - 4: Population Growth in Benghazi during the Post-oil Discovery Era

Year	Population Growth		
	Benghazi city	Benghazi Agglomeration	Rate of growth (%)
1964	137295	153530	3.8
1973	266196	286943	3.3
1978	353720	394000	3.2
1984	399158	N/A	N/A
1995	642000	666690	3.3
2000	743500	750000	3.2
2020	1085000	1230000	3.2

Source: (1) Preliminary Report on 30,000 Housing Plot, UPA, Benghazi, 2003, p.6

(2) Population censuses of the years 1954, 1964, 1973, 1984 and 1995.

(3) Statistical Books of 1998 and 2001, NCID.

7.3.2.2.1 Household Size in Benghazi

Bearing in mind the relationship between household[3] size and housing demand, the household size in the whole city and among its different districts has witnessed dramatic changes during the post-revolutionary years. As Table 7.5 illustrates, compared to an average of 6.3 persons per household in 1973, the average household size had dropped to 5.6 persons per household in 1978. Such a notable decline was due to the desire among young couples to separate from their extended and perhaps overcrowded families and to create their own young families (Doxiadis Associates, 1989a:14). This desire became more obvious following the remarkable boom in housing construction during the 1970s, which made more dwellings available to newly formed families as will be discussed later in this chapter. In contrast, during the 1980s and 1990s, the average household size witnessed a notable increase, reading 6.3 and 6.1 persons per household in 1984 and 1988 respectively before increasing to 6.9 persons per household in 1995. Such increases can be attributed, as mentioned in chapter 4, to the failure of many recently married couples to acquire an independent home, and thus they had no option but to stay at their parents' home during the 1980s and 1990s.

Table 7 - 5: Development of Household Size in Benghazi

Year	No. of households	Average size of household
1973	36038	6.3
1978*	63400	5.6
1984	61972	6.3
1988	69141	6.1
1995	86224	6.9

Source: (1) the Preliminary Results of Population Census, SOP, Benghazi, 1988.

(2) Population Censuses of 1973, 1984, 1995

(3) * Estimated by Doxiadis Associates, 1989, p.13

In addition to changes in household size during the post-revolutionary years, it has been clear that there are differences in household size between the different districts of Benghazi. The 1984 census showed that household size among the different districts of Benghazi varied between 3.9 to 10.9 persons per household. Differences in household size

[3] A household is defined as a socio-economic unit consisting of one or more members whether having social relationships or not and living in one house in which they contribute in funding the cost of living expenses such as shelter, food, child rearing up and investment (NCID, 1998:18; Doxiadis Associates, 1989a, Part I, p.13).

among city districts were mainly related to the distribution of housing types. For instance, in city districts characterized by small household size, the predominant housing types are flats or terraced houses. In contrast, detached dwellings are the principal housing type in the city districts characterized by large household sizes.

7.4 Housing Development in Benghazi

As mentioned in chapter (4) and (5), housing development in Libya has been strongly influenced by socio-economic changes and the role that the Libyan government has played in the housing sector, particularly during the post-oil discovery era. Accordingly, the discussion of housing development in Benghazi is subdivided into the following two phases:

7.4.1 Housing Scene during the Pre-Revolution Era

The problem of instability together with severe shortages of funds in the country and the inadequate role played by the government in the housing sector, as mentioned in chapter 4 made it impossible for any sort of residential development to be carried out for reconstructing what had been damaged during World War II. Thus, the fulfilment of housing needs during the 1960s, as mentioned in chapter 5, was entirely left as a heavy burden on individuals themselves. In this respect, the high costs of construction and land left low-income families with no choice except to live in shanty towns. Overcrowded shanty towns dominated the housing scene in the city during the 1960s. Thus, the 1966 master plan of Benghazi suggested that government expenditure on housing sector should be directed towards implementing mass public housing projects and enabling Libyan families to build their own houses through providing land and subsidized building materials and free technical assistance and supervision.

7.4.1.1 Housing Conditions and Typology

In addition to the overcrowded shanty towns, the housing scene in Benghazi during the 1960s was characterized by a notable contrast and dissimilarity between the housing conditions in the European or modern parts and the Arab and other parts of city. In this respect, while the housing scene in the modern districts was characterized by luxury apartments and villas occupied by wealthy natives and the European employees of oil

companies, the Arab quarters, in contrast, were characterized by substandard housing units of the local Arab architectural courtyard pattern with no modern infrastructure of any kind. Added to this, the proportion of shacks and tents in the 331,990 housing units in Benghazi in 1964 was quite significant. About 3.1 per cent of dwelling units were villas, and 51.7, 21.2, 19.7 and 3.4 per cent respectively were houses, shacks, and tents and caves (Bulugma, 1964, Whiting Associates International, 1966).

7.4.2 Housing Development during the Post-revolution Era

The housing projects that the government undertook during the early 1970s led to a notable expansion in residential buildings in the city. The residential area covered about 62.0 per cent of the total developed land of Benghazi in 1978 (Doxiadis Associates, 1978). Most of the neighbourhoods in the older parts of the city were formed in the grid-iron pattern and sometimes took an irregular form caused by the irregular shapes of plots. In contrast, most of the residential areas built according to the 1966 and 1989 master plans, such as in El-Salam, El-Anssar and Garyounis, have mainly taken the form of clustered neighbourhoods where more space was provided for public facilities (Doxiadis Associates, 1989a).

Despite the planning problems in the old districts and the lack of social facilities and infrastructure, the 1978 survey showed that old districts of the city had a strong communal character due to low-rise houses laid out along streets utilized mostly by pedestrians and integrating other uses that enriched the urban environment. In contrast, although the new modern residential districts particularly on the periphery of the city were better organized in terms of facilities on the other hand they also lacked any distinction. The great majority of houses were built by single initiatives in form of OBH which disrupted the character of the urban area. In addition, high exterior masonry walls surrounding the great majority of houses in these districts made the street facades generally very uniform (Doxiadis Associates, 1989a:77).

In terms of housing density, it was clear that the low and medium density dominated 98.3 per cent of the total residential land in the city in 1988, covering about 3,212 hectares of the total area of 10,035 hectares. The low density areas are mainly found on the outskirts of the city adjoining the green belt where most houses are villa type of detached dwelling or semi-detached dwellings of one to two floors mainly built by OBs. In 1990 it was obvious that the low density residential areas dominated the city's residential development,

covering about 378 hectares of the city's developed land and mainly dominated by villas (Barakat et al., 1990:29). The highest residential density was mainly clustered around the central business district (CBD) where the major commercial and administrative areas were located. In these areas, most residential buildings were of three to four storeys or in the form of high rise blocks of flats (such as the 1015 Housing Project in the El-Salmani area[4].

7.4.2.1 Housing Availability and Habitability

During the post revolutionary years, the enormous housing projects that were undertaken by the government, as mentioned in chapter 5, resulted in remarkable improvements in housing conditions in the country. In Benghazi, thousands of modern dwellings built in the form of OBH or PPH projects began to replace the shanty towns that dominated the housing scene in the city during the 1960s. As a result, a notable reduction in the number of substandard dwelling units was achieved in the city during the early 1970s, accounting for no more than 15 per cent of the total housing stock in Benghazi in 1973 (Awotona, 1990a:69).

7.4.2.1.1 Rate of Housing Construction

As Table 7.6 shows, about 79 per cent of existing buildings in Benghazi were built during the post-revolution years. Of this total, about 52 per cent were built during the 1970s, while the 1980s witnessed the construction of no more than 16 per cent. The number of dwellings in Benghazi increased by about ten thousand between 1973 (53,631) and 1978 (63,400) (Fergiani, 1976:4, El-Sharkasi, 1990). In contrast, the 1980s witnessed a very low rate of increase. The number of housing units increased from 63,400 in 1978 to no more than 65,435 in 1988. The sharp decline in the rate of housing construction in the city during the 1980s can be attributed, as mentioned in chapter 4 and 5, to the drop in budgetary allocations to the housing sector and to the high cost of construction experienced in the country.

During the 1990s, the number of housing units in Benghazi increased to 101,694 housing units in 1995 compared to 65,435 in 1988. Such a notable increase can be attributed, as mentioned in chapter 5, to the resumption of many suspended PPH projects. In addition,

[4] The 1015 housing project was built on marsh land (Sabkhas). The project consisted of 1015 flats built in high rise buildings varying in height from four to eleven storeys.

the resumption of real-estate lending programmes through banking sector encouraged many OBs to commence or recommence the construction of their own houses. It is noteworthy that in 1995 there were about 3,742 buildings in Benghazi under construction and about 2,630 vacant plots (NCID, 1998b: 44).

Table 7 - 6: Distribution of Buildings in Benghazi According to its Date of Construction

Date of construction	Number of residential buildings	% of total
Before 1950	2177	3.37
1950-1959	1977	3.06
1960-1969	9330	14.43
1970-1979	33946	52.49
1980-1989	10357	16.01
1990-1995	6122	9.47
Unknown	762	1.18
Total no. of buildings	64671	100.0

Source: The final results of 1995 census of buildings, NCID (1998b), Tripoli, table no. (2), p.46

7.4.2.1.2 Housing Typology

Due to the extensive clearance operations in the shanty towns during the early 1970s, the housing stock in the city began to witness a remarkable modernization. In this regard, the 63,400 housing units that the housing stock in Benghazi consisted of in 1978 were classified in terms of typology into four major categories: namely villas, apartments in multi-storey buildings, courtyard houses, and terraced houses (Doxiadis Associates, 1989a). The general characteristics of these four main types of housing in Benghazi can be described as follows:

1. **Villa:** this type of housing has formed the largest part of the residential development in the city during the post-revolution era. It is often privately built and consists of a one- or two- storey detached building surrounded by setbacks with a high masonry wall and developed on a plot of some 500-600 sq. meters on average and with plot coverage of about 60 per cent. Villas located along main roads in low-rise residential density areas may include non-residential uses (such as shops and workshops) built in the setbacks of the building. Plate 7.1 illustrates a typical villa in Al-anssar suburb of Benghazi.

Plate 7 - 1: Typical Villa in Al-anssar Suburb of Benghazi



Source: Fieldwork, Benghazi (February - May), 2003

2. **Howesh [Terraced House]**: this type of housing is mainly privately-built in medium density residential areas and consists of two to five storey buildings developed on plot sizes ranging between 150-300 sq. meters. Terraced houses located along main roads often include on the ground floor other uses such as shops, workshops or private car parking.

3. **Apartment in Multi-story Building**: of the two types of multi-story buildings the first is mainly privately-built and quite common in medium and high density residential areas of Benghazi. The typical apartment house consists of two to four storeys. The ground floor often comprises non-residential uses such as shops, offices or workshops, particularly for buildings located along the main roads. The second type is often part of four to twelve storey buildings which were publicly built in the form of mass PPH projects. The ground floors of these buildings may include different uses such as shops, offices or car parking for the residents, particularly in high towers.

4. **Bait-arabi [courtyard]:** this type is often one family house consisting of a one storey dwelling and composed of more than one room opening onto a private courtyard which may be located in the centre or at the front or back of the house. This type of housing is quite common in the older residential parts of the city. Due to the urban renewal that many districts in Benghazi have undergone during the post-revolution era, this type of housing became very rare and exists mainly in the old core of the city or in the El-Sabri and in El-Birka areas.

Plate 7 - 2: Multi-storey Residential Buildings in Benghazi



Source: Fieldwork, Benghazi (Feb. - May), 2003

In the mid-1990s and as revealed by the results of the 1995 census, a notable increase was achieved in the number of villas (detached and semi-attached) and terraced houses in Benghazi. As Figure 7.6 illustrates, they represented 17 and 48 per cent of the total dwellings in the city compared to 15.7 and 37.5 per cent respectively in 1988. This can be attributed to the expansion in OBH activity during the early 1990s, particularly in the El-Mukhtar, El-Anssar and Garyounis areas. On the other hand, the number of apartments in multi-storey buildings witnessed a dramatic decrease during the period 1988-1995 representing 33 per cent of total dwellings in 1995 compared to 46.8 per cent in 1995.

Figure 7 - 6: Development in housing typology in Benghazi during the period 1988-1995



Source: Author based on the Preliminary Results of Buildings and Houses Census for the Year 1988 in Benghazi, SOP, 1988, Benghazi p.14 and Final Results of Buildings and Houses Census for the Year 1995, NCID, 1998b, Tripoli, p.16 and p.45.

As mentioned in chapter 5, this was mainly due to the preference among Libyans for living in villas instead of apartments in multi-storey buildings. Another explanation for the decrease in the number of apartments by 1995 is the notable decline in the size of PPH projects during the 1980s and early 1990s, which were often in the form of apartments in multi-storey buildings.

7.4.2.1.3 Rate of Occupancy per Dwelling

As mentioned in chapter 5, the problem of overcrowding in housing was one of the main features characterized the housing scene across the country during the pre-revolution era. With the remarkable expansion in house construction during the post-revolution era, this problem began to disappear, particularly in the big cities such as Benghazi and Tripoli. In Benghazi, based on an average size of 6.57 persons per household and an average 3.68 rooms per dwelling, the rate of occupancy per room was about 1.78 persons in 1995 (NCID, 1998b:62). This figure is seen as quite reasonable compared to the 4 persons per room in the early 1960s. Table 7.7 shows the number of persons per dwelling in Benghazi as revealed by the 1995 census.

Table 7 - 7: Number of Persons per Dwelling in Benghazi based on the 1995 Census

No. of Persons per dwelling unit	No. of dwelling units	% of total D. units
One person	2193	2.15
Two persons	7000	6.88
Three persons	8531	8.38
Four persons	12443	12.23
Five persons	11175	10.98
Six persons	12188	11.98
Seven persons	15612	15.35
Eight persons	13953	13.72
Nine persons	2313	2.27
Ten persons or more	12277	12.07
Not shown	4009	3.94
Total number of housing units	101694	100.0
Total number of population	667819	
Average no. of persons per dwelling	6.57	

Source: based on The Final Results of Buildings and Houses Census for the Year 1995, table (18), p. 62

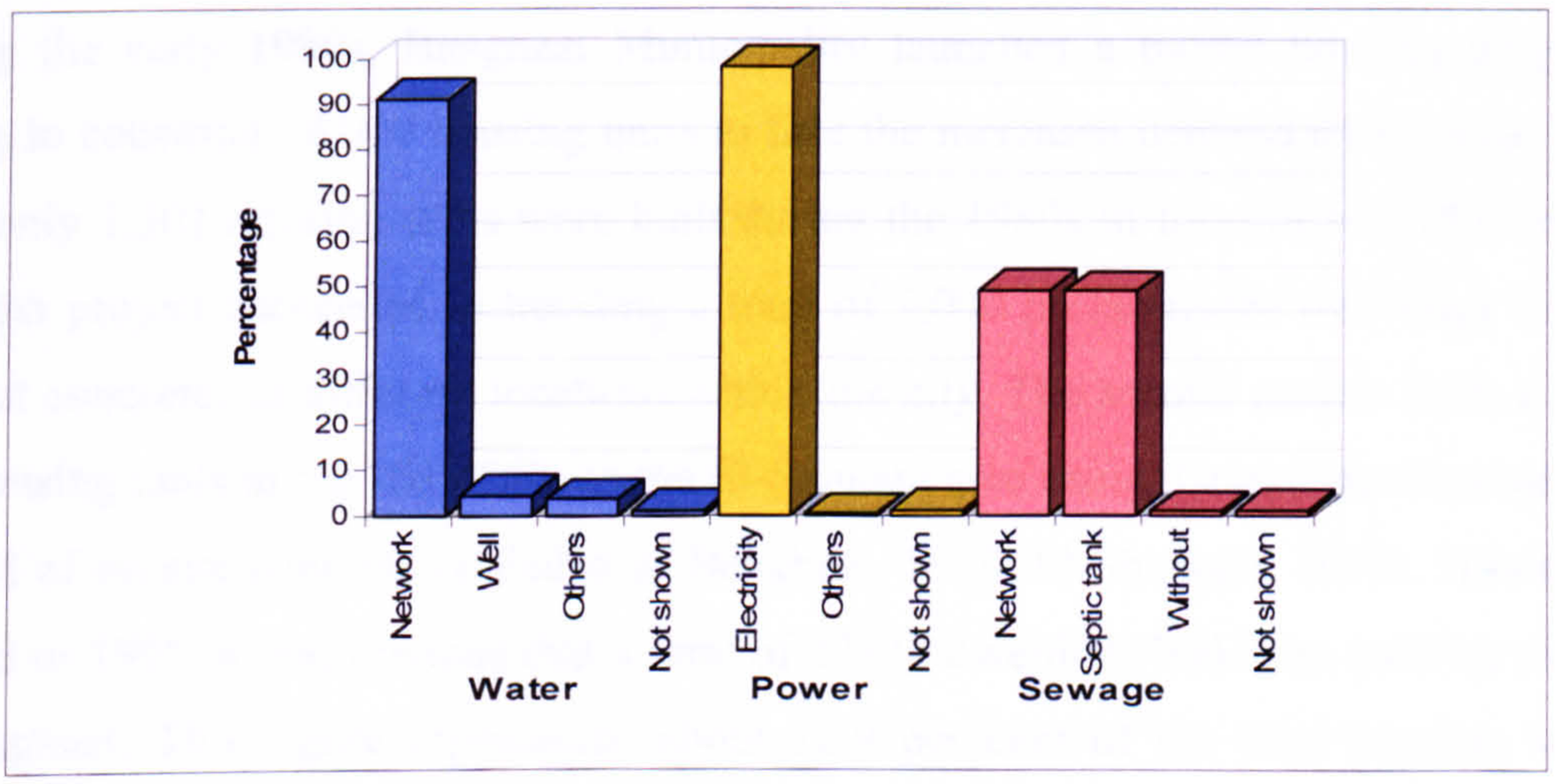
7.4.2.1.4 Structural Conditions of the Housing Stock

In 1978, the housing stock (63,400 dwellings) in Benghazi was classified into three categories in terms of structural condition. The great majority (76 per cent) were regarded as in good condition, 13 per cent were in fair condition, and the remaining 11 per cent were in bad condition (Doxiadis Associates, 1989a:25). It is apparent that the number of dwellings that were regarded as in bad condition was remarkably reduced during the post-revolution era since they represented no more than 11 per cent in 1988 compared to 56 per cent of total dwellings in Benghazi in 1964.

7.4.2.1.5 Availability of Public Utilities

In Benghazi city, the results of the 1995 census show that, about 91.01 per cent of the housing stock was serviced by the public water network, 98.46 per cent by the public electricity network and about 49.09 per cent was serviced by the public sewerage network. Figure 7.8 shows the level to which the housing stock in Benghazi was serviced by public utilities in 1995.

Figure 7 - 7: Availability of Public Utilities in Benghazi in 1995



Source: Author based on the final results of 1995 census, p.49, 50 and 51

7.5 Main Suppliers of Housing in Benghazi

The roles of provider and active enabler that the government played in the housing sector during the Welfare State Era (1969-1984), as mentioned in chapter 5, were mainly directed towards solving the acute housing shortage through providing the Libyan poor with subsidized mass PPH projects or expanding private housing activity through facilitating easy access to building loans and land to OBs and private developers.

7.5.1 Publicly-provided Housing (PPH)

As mentioned in chapter 5, aiming to tackle the serious housing shortage in the country, the government established the General Housing Corporation (GHC) in the year 1970 as the main institutional body responsible for the implementation of all PPH projects. In Benghazi, the GHC succeeded in building a total of 9,731 dwellings during the period 1969-1975 which represented about 17.4 per cent of the total publicly-provided dwellings built in the whole country during that period (Badi, 1982:82). At the end of 1981, more than 22,899 publicly-provided dwellings had been built in the city with an annual rate of increase of 2,082 dwellings during the period 1970-1981 (General People's Committee of Housing, 1982:39).

During the early 1980s, Benghazi Municipality launched a public housing programme aiming to construct 18,000 housing units to face the increased demand on housing. Of this total, only 1,302 housing units were built during the 1980s in form of two PPH projects. The first project succeeded in building a total of 7,000 prefabricated dwellings (made of pre-cast concrete) in different locations within the city. The second project built a total of 602 housing units in the late 1980s in the El-Salmani area using the traditional construction method of on-site concrete (Baladya of Benghazi, 1985, El-Sharkasi, 1990). However, by the end of 1995, it was obvious that a total of 27341 dwellings had been built by the GHC in Benghazi. This figure represented about 26.9 per cent of the total housing stock in Benghazi in 1995 (NCID, 1998b).

7.5.2 Owner-built Housing (OBH) in Benghazi

The predominance of OBH in the housing supply in the city was largely influenced by the trends in housing policy in the country during the post-revolution era.

7.5.2.1 OBH during the Welfare State Era (1969-1984)

OBH dominated the housing supply in the city during the period of 1969-1976 representing about 72.5 per cent of the 25,502 dwellings built in Benghazi. This was mainly attributed, as Table 7.8 illustrates, to the remarkable expansion in real estate lending programmes through the banking sector (Abdalla, 1989).

Table 7 - 8: Contribution of GHC and Banking Sector in Housing Construction in Benghazi (1969-1976)

Institution	Number of residential buildings built*	Total cost (LD)
Publicly-provided housing (PPH)		
General Housing Corporation	7010	135,500 000
Privately-built housing (OBH)		
Industrial & Real Estate Bank	12051	50,340, 026
El-Wahda Bank	2221	24,582, 461
El-Omah Bank	1758	11,709, 733
El-Jamhouria Bank	1210	11,342, 190
El-Sahara Bank	799	6,242, 000
El-Tijari Bank	453	4,066, 107
Total	**25502**	**243,782, 517**

Source: *Al-Fateh: The Road of Prosperity*, People's Congress of Benghazi, 1976: p.58.

Note: * A residential building may comprise more than one housing unit since the building loans issued to private developers were mainly for the construction of multi-storey buildings.

7.5.2.2 OBH during the Period 1984-present

During the 1980s and early 1990s, OBH remained the predominant mode of housing supply in Benghazi representing 55.5 and 44.55 per cent respectively of total housing stock in 1988 and 1995. In contrast and as can be seen from Table 7.9, the number of dwellings built through PPH projects represented no more than 38.9 and 26.88 per cent respectively of the housing stock in 1988 and 1995. Although the share of OBH declined from 55.5 per cent in 1988 of the total housing supply in Benghazi to 44.55 per cent in 1995, the actual number of owner-built dwellings increased from 36,341 to 45,272 dwellings.

Table 7 - 9: Number of Dwellings in Benghazi According to the Method of Acquisition in 1988 and 1995

Method of Acquisition	Number of Dwellings in Benghazi			
	1988		1995	
	No.	%	No.	%
Privately-Built (Savings and loans)	36341	55.5	45272	44.55
(Inherited)	908	1.38	5178	5.09
Privately-rented	-	-	8012	7.88
Publicly-provided (mass housing)	25477	38.9	27341	26.88
Publicly re-allocated (Act No. (4))	-	-	4242	4.17
(Act No. 88)	-	-	449	0.4
Investment (social security)	657	1.1	1201	1.18
Others	2043	3.12	9999	9.83
Total	65435	100	101694	100

Source: based on the Preliminary Results of the Buildings Census of 1988, SOP, Benghazi, p.14 and Final Results of the 1995 Buildings Census, NCID, Tripoli, p.67

7.5.2.3 Role of the Banking Sector in the Expansion of OBH

As mentioned in chapters 5 and 6, the banking sector played a key role in expanding private housing activity during the post-revolution era.

7.5.2.3.1 Role of Commercial Banks

As can be seen from Table 7.10, the five CBs in Benghazi issued a total of 6,374 building loans during the period 1970-1976 with a total value of about LD57, 87822 million.

During the 1980s and 1990s, the role of commercial banks in supporting the OBH activity continued. For instance, a total of 10,347 loans were issued through the five commercial banks in Benghazi. Of this total, 8243 loans were issued to individual OBs while 2104 loans were issued to members of housing cooperatives.

Table 7 - 10: Size of Real Estate Lending through CBs in Benghazi (1970-1976)

Bank	Building Loans issued through Commercial Banks					
	Individual OB		Private developers		Members of housing cooperatives	
	No.	Cost (LD)	No.	Cost (LD)	No.	Cost (LD)
El-Tijari	420	3107870	25	864000	8	94237
El-Wahda	1875	15621222	226	7912060	120	1049179
El-Sahara	793	6107000	6	135000	-	-
El-Jamhouria	992	7657733	51	2145186	167	1539271
Al-Omah	1646	10894434	25	15830	20	735700
Total	**5726**	**43,388,259**	**333**	**11,072,076**	**315**	**3,418,387**

Source: *Al-Fateh: The Road of Prosperity*, People's Congress of Benghazi, 1976: pp. 55-56

As Table 7.11 illustrates, the number of loans issued to individual OBs through these commercial banks declined from the mid-1980s onwards. For instance, the number of loans issued to OBs accounted no more than 2,100 loans during the period 1985-2003 compared to 6,143 issued during the period 1970-1984. This decline can be attributed, as mentioned in chapters 4 and 5, to shortage of funds that caused many commercial banks to be unable to expand their real-estate lending activity during the 1980s and 1990s.

Table 7 - 11: Real-estate Loans Issued by Type through CBs in Benghazi (1971-2003)

Bank	Number of Real-estate loans issued						
	OBH (70-84)	OBH (85-03)	OBH Housing cooperatives	Purchase of dwellings	Supplementary Building-loans	Private Developers	Shack Dwellers
El-Wahda*	1517	720	883	142	177	-	17
El-Jamhouria*	1126	465	729	158	157	-	-
El-Tijari*	482	335	73	33	132	256	-
El-Sahara*	823	299	53	57	61	6	-
El-Omah*	2195	281	366	83	72	20	25
Total	6143	2100	2104	473	599	282	42

Source: Fieldwork, February-May 2003 (* Main branches in Benghazi)

7.5.2.3.2 Role of Industrial & Real-estate Bank (IREB) (1965-1980)

The contribution of real-estate lending programmes through this bank in supporting OBH was quite remarkable during the 1970s. As Table 7.12 illustrates, a total of 11,505 loans were issued to OBs through the IREB during the period 1970-80 compared with only 1,742 loans issued during the period 1966-69.

Table 7 - 12: Real-estate Loans Issued by Type through IREB in Benghazi (1966-1980)

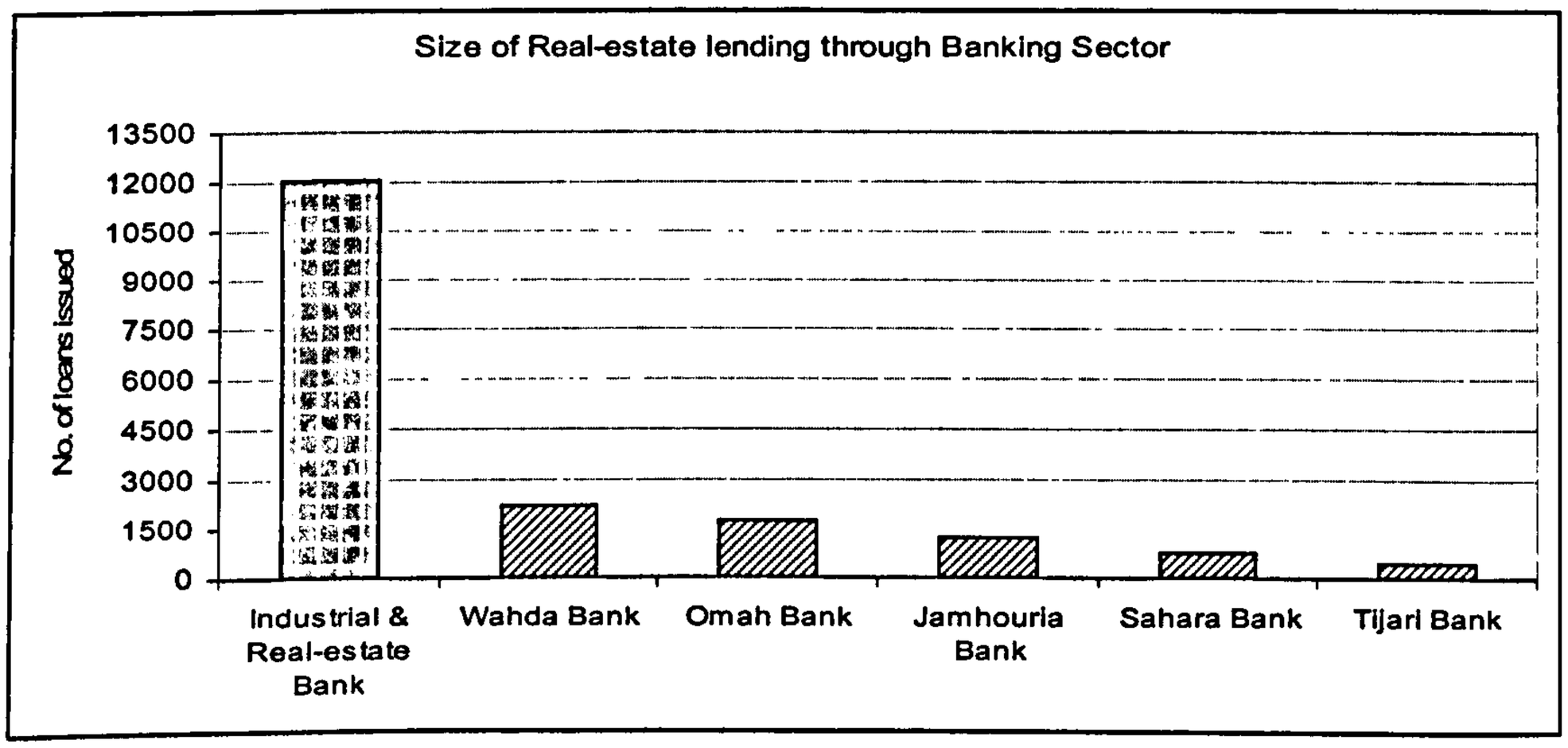
Period	Real-estate loans issued							
	OBs		Shack dwellers		Rural housing		Total	
	No.	Cost (LD)	No.	Cost (LD)	No.	Cost (LD)	No.	Cost (LD)
(66-69)	1742	6,820,395	-	-	-	-	1742	6,820, 395
(70-80)*	11505	56,843,763	1949	7,091,405	6	42,800	13460	63,977,968

Source: based on *Al-Fateh: The Road of Prosperity*, People's Congress of Benghazi, 1976: p.58.

* The Influence of Housing Finance on Residential Development in Benghazi City, Abdalla, 1989, table 15, p.102

It is clear that the contribution of the IREB to real estate lending activity during the 1970s was far larger than the contribution of the five CBs in Benghazi, contributing about 65 per cent of building loans issued during the period 1970-1976. As Figure 7.8 illustrates, compared to a total of 12,051 loans issued through the IREB, the five CBs in Benghazi issued only 6,441 building loans during the period 1970-1976 with a total value of about LD57.9425 million.

Figure 7 - 8: Loans Issued through the IREB and the Five CBs in Benghazi (1970-1976)



Source: based on Al-Fateh: The Road of Prosperity, People's Congress of Benghazi, 1976, pp.55-58.

7.5.2.3.3 Role of Real-estate Investment and Saving Bank (REISB) (1981- 2003)

Despite its chief aim in increasing real-estate construction activity, the participation of the REISB during the 1980s was quite limited, since it issued only 396 loans to OBs during 1981-88. This represented about only 3.4 per cent of those issued during the 1970s (11,505 loans). As mentioned in chapter 6, real-estate lending activity began to accelerate after the year 2000 as a result of Decrees 30/2000, 275/2000 and 115/2001 issued by the GPCOM. In Benghazi, the REISB was able to issue a total of 779 loans with a total cost of LD 20,807,295 during the period 2000-2003.

7.6 Regulatory Framework for the OBH Process

There is no doubt that building a home is quite a stressful process which requires many types of official approval and goes through many interrelated phases (land acquisition, planning, design, permission, securing funds, selection of builder, supplying building materials, and managing and overseeing the construction works) which involve many actors (designers, the UPA, builders, materials suppliers, inspectors, etc.). This section outlines the regulatory framework and the main phases that the typical construction process of owner-built dwellings has to go through in Benghazi.

7.6.1 Land Acquisition

In order to build a private dwelling, the potential OB has to be in possession of a buildable plot located within an approved residential subdivision. Such plots can be acquired through purchase directly from the original owner or through application to public-land allocation programmes. During the 1970 and 1980s, land applications used to be submitted directly to the Land and Real-estate Properties Office (LREPO) in the municipality or to any housing cooperative in which the applicant had membership.

In 1993, the right to allocate publicly-owned land was given to local People's Committees in all Libyan cities and towns in accordance with Decree (304/1993) issued by the GPCOM. Accordingly, all Libyans were asked to apply to the People's Committee where they lived. However, those who had already applied for a plot to the LREP in the municipality during the 1970s and 1980s were asked to withdraw their applications from

the municipality and apply again to their local People's Committee. This Decree remained in force till the year 1999 when the right of land allocation was given to the PCOM in the Shabiyat (provinces) in accordance with Decree 19/1999. Specific bodies called Committees of Allocating Real-estate Properties were established in each Shabiyat and were concerned with the allocation of land and other real estate properties located within its administrative boundaries.

7.6.1.1 Eligibility Criteria for Land Allocation

The following eligibility criteria controlled access to publicly-owned land through the municipality:

- The applicant must be a Libyan national aged not less than eighteen years old, and
- Nor the applicant neither his/her spouse nor any of his/her underage dependants are in possession of buildable land or a habitable dwelling.

A full written application form should be submitted by the applicant to the relevant department attached with valid and original documents in compliance with the aforementioned requirements. In turn, a receipt showing the date of application and registration in the waiting list should be issued to the applicant.

7.6.1.2 Priorities in Land Allocation

A residential plot is often allocated according to the priority of the applicant in the waiting list. However, the aforementioned decrees 304/1993 and 19/1999 give special priority to the following applicants:

1. Individuals whose own properties (land or buildings) are affected by the construction of public projects (such as roads, bridges, public buildings),
2. University graduates with distinctions,
3. Families of martyrs and war prisoners,
4. Families of military veterans.

Although there is no precise data regarding the number of residential plots that have been allocated through the aforementioned bodies in Benghazi over the past three decades, it is clear that land applicants during the 1970s used to wait for short period compared to those during the 1980s and 1990s, as shown in chapter 9. Such longer waiting times during the 1980s and 90s can be attributed, as explained in section 7.5.3.1, to the shortage of subdivided residential land in the city, which is clearly reflected in the remarkable number of land applications, standing at 10779 in 2003 (Urban Planning Authority, 2003a).

7.6.2 House Design

After acquiring a plot and the Title-deed Certificate of the land from the Real-estate Registration Office (RERO), the prospective OB has then to design his house. For this purpose, he has to contact one of the authorized private Engineering Offices[5] to prepare the architectural design which has to comply with the terms of the zoning standards and building regulations[6] apply in the area in which the plot is located. After selecting the appropriate design, a set of drawings for the house (site plan, floor plan and elevations) has to be made and approved by the engineering office hired.

7.6.3 Getting Building Permit

Based on Article (49) of Act (5) of 1969 concerned with urban planning in Libya, a formal Building Permit should be obtained from the relevant UPA prior to building, extension or alterations works. For this purpose, the OB has to fill in specific application forms and submit then to the Department of Building Permits in the local UPA office attached with the following documents:

1. An original and two copies of a recent proof of land ownership (title-deed certificate) issued by the Real estate Registration Office (RERO),
2. An original and two copies of the Certified Plot Plan issued by the UPA which has to illustrate the exact position of the plot, its specified use according to the detailed

[5] In 2003 there were about 178 authorized engineering offices registered with the Association of Engineering Professions in Benghazi.

[6] Building regulations are legal documents which regulate any type of construction work aiming to protect the health and safety of users. It is concerned with sanitary, electrical, ventilation, building materials, plumbing and other building tasks.

area plan, its dimensions, the height allowed, setbacks distance to property lines and boundaries , and

3. Three complete sets of blueprint dimensioned house design drawings comprising site plan, floor plan, plumbing, cross-section and elevation drawings. These drawings should be prepared, signed, sealed and dated by an authorized engineering office.

The Department of Building Permits in the local UPA has to review the application with all attached documents before deciding whether a permit can be issued or if any amendments have to be made to the submitted house design plan. The application review process also involves visiting the site to make sure that the plot is buildable and its actual dimensions are correct according to the certified plot plan. In most cases, the building permit can be obtained within two to four weeks from the date of submitting the application complete with all required documents if there are no amendments or revisions required. Based on Article (51) of Act (5) of 1969, the house construction has to be undertaken in accordance with the approved design drawings and the conditions mentioned in the building permit and no amendments can be made on these drawings prior to the formal permission from the UPA concerned.

7.6.4 Acquiring Sufficient Funds

As mentioned in chapter 2, affordability is seen as one of the most important attributes of the OBH process. Affordability is mainly achieved through the incremental nature of the OBH process which allows the construction costs to be spread out according to the accumulation of finances over a period of time. After getting the building permit, the OB has to ensure sufficient funds for commencement of construction work. The amount of funds required to cover construction work is often dependent on the size of house, type of finishes preferred and cost of materials and labour used. In Libya, the finance for OBH can be obtained from personal and family savings, and building-loans from the banking sector. As mentioned in chapter 5, although the real-estate lending programmes have played a major role in promoting OBH activity, they have undergone tremendous changes which have affected the number and amount of loans issued during the post-revolutionary era.

7.6.4.1 Eligibility Criteria for Building Loan

To qualify for a building loan, the prospective OB has to comply with the following eligibility criteria:

1. The applicant must be a Libyan national,
2. The applicant's age must be at least 21 for males and 30 for unmarried females and not more than 60 years for both sexes,
3. The applicant must be in possession of a buildable plot,
4. The applicant must be in possession of valid building permit,
5. Neither the applicant nor his/her spouse or any of his underage dependants are in possession of a habitable dwelling in any township,
6. The applicant must have a regular monthly wage of not less than LD150. In the case of self-employed applicants, he has to present a valid a social security certificate[7].
7. The applicant must undertake regular repayment of the issued loan according to the terms of the contract.
8. The applicant must obtain the consent of his employer to become guarantor for him to get the loan. In addition, he has to acknowledge that the bank (lender) has the right to withhold his wages if he fails to repay the loan.
9. Both the loan's beneficiary (OB) and the guarantor (employer) must acknowledge the right of the bank to enforce all relevant legislation in case of their failure to meet deadlines regarding the repayment of building-loans issued.

7.6.4.2 Documents Required for Building Loan Applications

1. A recent proof of land ownership (title-deed certificate) issued by the Real estate Registration Office (RERO).
2. A recent certified plot plan issued by the UPA.
3. Copies of house design drawings approved by the UPA.
4. A valid building permit.
5. A recent certificate of income from current employer.
6. A recent certificate regarding marital status.
7. A recent certificate regarding current housing status.

[7] The social security certificate is a document shows that the applicant is registered with and involved in the social security system and regularly pays the required sums.

8. A certificate showing that the applicant has not been in receipt of a building loan from any bank in the past.
9. An updated technical and financial report issued by an authorized engineering office regarding the estimated costs of construction.

The repayment period of the loan is mainly dependent on the size of loan issued, but in most cases the duration of repayment extends to 30 years for those whose monthly wage does not exceed LD150 and 25 years for those with a monthly wage of LD 160 or more. The loan has to be repaid in monthly instalments, and the first instalment is often due 18 months after the date of receiving the first payment of the loan or otherwise immediately after finishing the building if this is accomplished before 18 months. To ensure the repayment of the loan, the land deed for the building will be held by the bank until the last repayment of the loan is made.

7.6.5 Hiring a Builder

The OB might hire *a Muqawel* (master builder) on a turn-key basis. Here the hired master builder undertakes the entire construction process including supplying the building materials. The master builder might be hired based on arrangement where he undertakes the main construction work (foundations, framing and roofing) without supplying materials. In some cases, the OB might hire different tradesmen on a piecemeal basis to undertake the construction work (for example for walling, plastering, or plumbing). The key factors that affect the selection of the builder, as explained in the following chapters, are the OB's background in construction, the availability and sufficiency of funds and the availability and reputation of builders in the market.

7.6.6 Supplying Building Materials

During the 1970s most OBs were provided with subsidized building materials directly from the publicly-owned supply channels concerned or through housing cooperative of which the OB was a member. During the 1980s and 1990s due to the shortage of many building materials in the market, most OBs tended to buy materials from the private market at higher prices or wait a rather longer time to get subsidized materials, particularly cement and steal, from designated publicly-owned supply channels. To get subsidized materials from publicly-owned supply channels, the OB has to produce a valid building permit and

approved report made by an authorized engineering office showing the quantity and type of materials required. The waiting time to get materials is often dependent on the availability of these materials and the number of other OBs already on the waiting list.

7.6.7 Inspection of Construction Works

As mentioned in Article (50) of Act (5) of 1969, before commencing the construction works the OB has to contact the UPA concerned in order to fix and mark the plot boundaries and dimensions on site in accordance with approved site plan. The second inspection should be made after the excavation work for the foundations is complete and before the outside perimeter is backfilled, in order to make sure that the house will be built according to the approved architectural floor plans. If the OB faces any problem concerning the soil or topography of the land, he has to contact the authority concerned before taking any action. Regular inspections should be requested by the OB from the UPA concerned before the works of framing, roofing and the digging of the septic tank.

When the house is being constructed using a building-loan, five regular visits have to be made by the bank's engineer (inspector) to facilitate the payment of the loan based on the progress of the construction works. For instance, if the loan was issued through one of CBs, the five inspections have to be made on the following basis:

1. The First Inspection has to be mad before the payment of the first 20% of the total loan in order to make sure that the OB has spent a sum equivalent to the difference between the estimated costs of construction and the amount of loan, if applicable.

2. The Second Inspection has to take place before the issue of the second loan payment (30% of the total loan) following the completion of 30% of the building works in accordance with the approved house plan.

3. The Third Inspection has to take place before the issue of the third loan payment (25% of the total loan) to make sure that the OB has accomplished 50% of the building works in accordance with the approved house plan.

4. The Fourth Inspection has to be mad before the payment of the fourth loan payment (20% of the total loan) to make sure that the OB has completed 75% of the building works in accordance with the approved house plan.

5. The fifth Inspection has to take place before the issue of the last loan payment (5% of the total loan) to make sure that the house is completely built in accordance with the approved house plan.

7.6.8 Issuing the Certificate of Occupancy

Once the construction works are completed, a certificate of occupancy has to be obtained from the UPA concerned prior to occupying the house. This certificate will only be issued after the UPA inspectors have verified that the work complies with the approved plans and applicable regulations and all fees owed to the UPA are paid. In the case of extension or alteration works, a new or amended certificate of occupancy is necessary. The house owner has to contact the local UPA branch to arrange for inspectors to visit the house to perform the necessary inspections. In general, any new building cannot be legally occupied until a certificate of occupancy has been issued.

7.7 Conclusion

This chapter has discussed the housing development, particularly OBH and the regulatory framework of the typical house construction process in Benghazi which was selected as the setting of the study. The chapter began by giving a brief background to the city and its physical and demographic growth. Then, housing development in the city was discussed with more focus on the housing conditions and typology during the post-revolution era. After that, the main suppliers of housing in the city were discussed, focusing on the role of OBH in housing production in the city and the main factors contributing to its development during the post-revolution era. Finally, the regulatory framework of the OBH construction process was discussed.

It was clear that, the OBH process is a formal process since the house has to be built on a privately-owned housing plot within the approved subdivisions of the city (allocated by the municipality or purchased from original owners) after obtaining the required approval of designs and building permit from the concerned UPA. Added to this, the owner-built dwelling can not be occupied or officially registered with the Real-estate Registration Office (RERO) before obtaining the required certificate of occupancy. The next chapter as the first part of the analysis of data gathered from the empirical work and discusses the housing and population characteristics of the OBH case study areas in Benghazi.

Chapter Eight:

Housing and Population Characteristics of Case Study Areas

Chapter Eight

Housing and Population Characteristics of Case-study Areas

8.1 Introduction

This chapter presents the first part of the analysis of data collected during the fieldwork carried out in Benghazi between February-May 2003. It attempts to achieve the study's objective of examining the socio-economic and housing characteristics of those benefiting from access to OBH in the selected neighbourhoods of the El-Salam and El-Mukhtar areas in Benghazi. The following section gives the overall background to the selected OBH neighbourhoods in terms of their housing and planning characteristics. The third section discusses the socio-economic conditions of the respondents and households in the selected OBH neighbourhoods. The fourth section discusses the previous housing conditions of respondents in terms of housing tenure and typology in order to identify if they were eligible for access to OBH. The fifth section discusses their housing conditions at the time of the fieldwork in relation to type of tenure, dwelling size and the rate of occupancy per dwelling. Finally section six discusses the extent to which houses were serviced by public amenities such as water, sewage, electricity and telephone systems.

8.2 Characteristics of Case Study Areas

The methodology chapter showed that, the selected OBH neighbourhoods should reflect the development of OBH over the period covered by the study (post-revolution era). In addition, it should reflect the diversity in characteristics within the population. As mentioned in chapter (3), the selected OBH neighbourhoods in El-Salam area represent the development of OBH during the period (1970-1984) while those selected in El-Mukhtar area represent the development of OBH during the period (1985-present).

8.2.1 Characteristics of Selected Neighbourhoods in the El-Salam Area

The El-Salam area is considered as one of these areas in Benghazi that witnessed substantial OBH development during the 1970s to tackle the housing shortage that the country was suffering from at that time.

8.2.1.1 Location within the city

As can be seen from Figure 8.1, the two selected neighbourhoods (S1 & S2) are located in the suburbs of Benghazi between the Fourth Ring Road and Fifth Ring Road towards the north east of the city. According to the approved master plan of Benghazi, both neighbourhoods are located within the low density residential zone. Neighbourhood S1 accommodates about 509 owner-built houses, and is located between the Fourth Ring Road (west), Fifth Ring Road (east), Al-Aurdon Street (north) and Lebnan Street (south). Neighbourhood S2, which is adjacent to Neighbourhood (S1) to the north, is located between the Fourth Ring Road (west), Fifth Ring Road (east), Al-Aurdon Street (south) and Al-Aruba Road (north). This neighbourhood accommodates about 494 owner-built houses.

Figure 8 - 1: Location of Selected Neighbourhoods in El-Salam Area

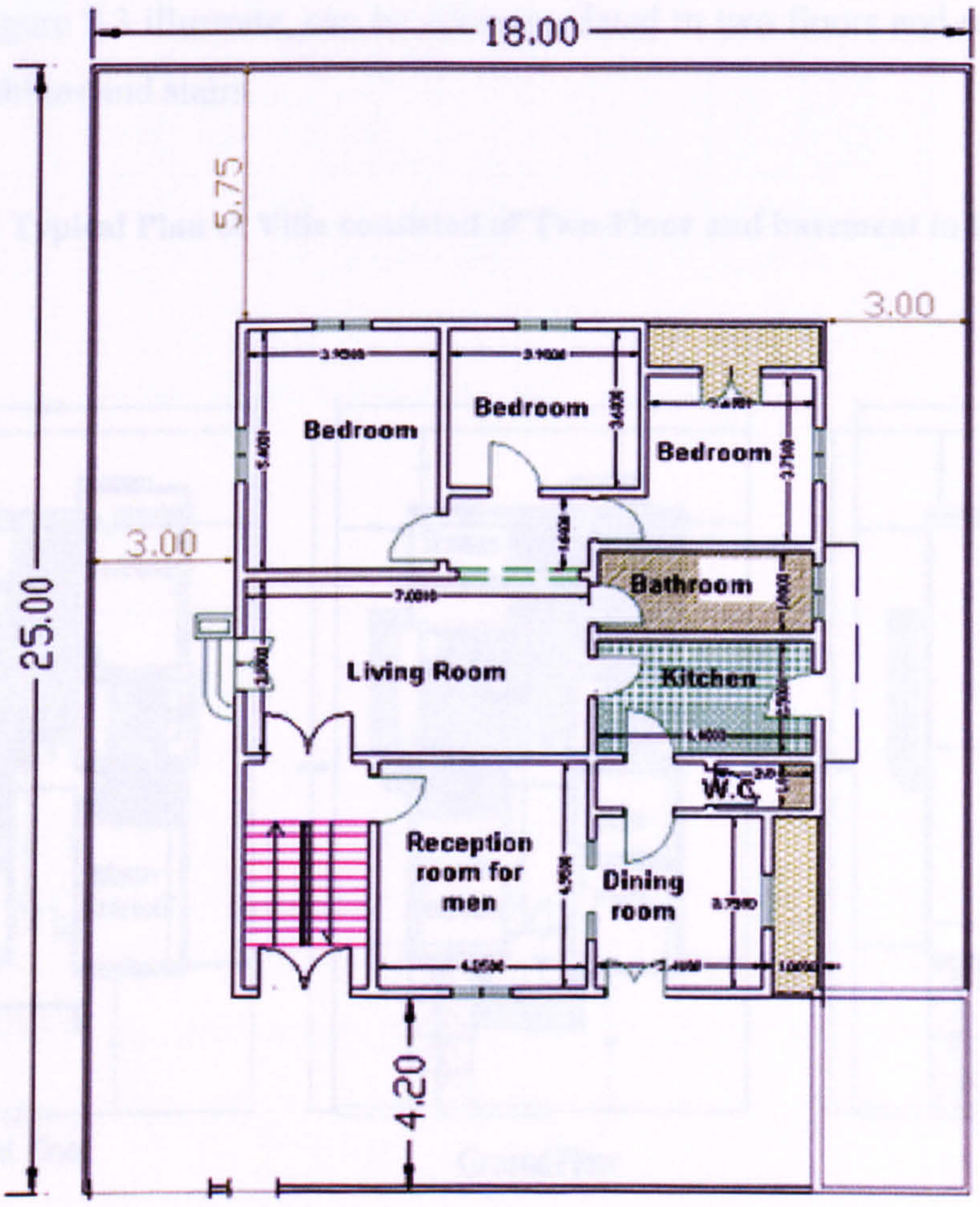


Source: Fieldwork, Benghazi (Feb-May) 2003

8.2.1.2 Housing Typology

The 1003 owner-built houses in these neighbourhoods are in the form of detached dwellings (villa) and mainly consist of one or two storeys. The great majority of these houses were built on plots allocated by the Benghazi Municipality to potential OBs in the mid-1970s. The plot sizes on which these houses are built ranged between 450 to 500m². Most of the plots have a width of 18 to 20m and a depth of 25m. In terms of layout, most houses, as can be seen from Figure 8.2, are open to outside since they are surrounded by setbacks as withdrawal distances from all the plot's boundaries in accordance with the specified planning regulations for low density residential areas. In addition, all rooms inside the houses have windows to the outside, and are linked by corridors and lobbies.

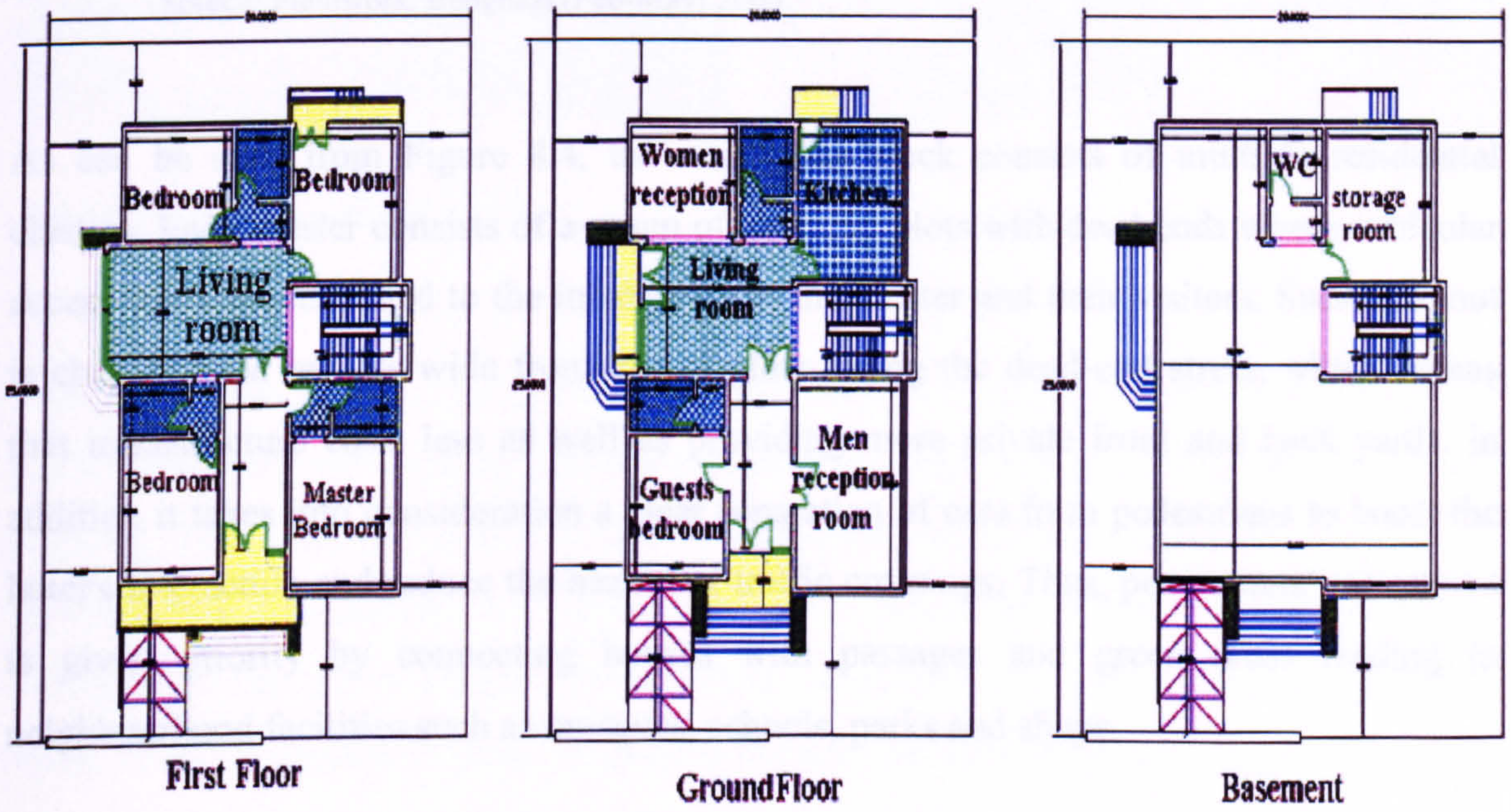
Figure 8 - 2: Typical Plan of One Floor Villa in El-Salam Area



Source: Fieldwork, Benghazi (Feb-May) 2003

Interior design could take any form and was arranged according to the owner-builder's requirements, consisting mainly from three zones. The first zone is usually located close to the main entrance of the dwelling and is dedicated to male guests mainly consisting of the main reception room "Saloon" and a separate bathroom for the use of guests. This zone might include a dining room located close by or open to the reception room. The second zone is the family's day-hours zone located in the middle of the house. This zone consists mainly of a spacious living room 'Salaah' linked to the kitchen. In some cases, the 'Salaah' might be used for receiving female guests, if there is no specific room 'Daar-maqaad' for this purpose. Thus, it might be accessed from another entrance open to the side of the house for privacy reasons. However, the 'Salaah' is often separated from the guest zone by a corridor. The third zone is the family sleeping zone, consisting of the parents' bedroom, two or more bedrooms for other family members and one or more bathrooms. This zone is usually separated by a corridor from the second zone for privacy reasons. These three zones, as Figure 8.3 illustrate, can be accommodated in two floors and might be linked by corridors, lobbies and stairs.

Figure 8 - 3: Typical Plan of Villa consisted of Two-Floor and basement in El-Salam Area

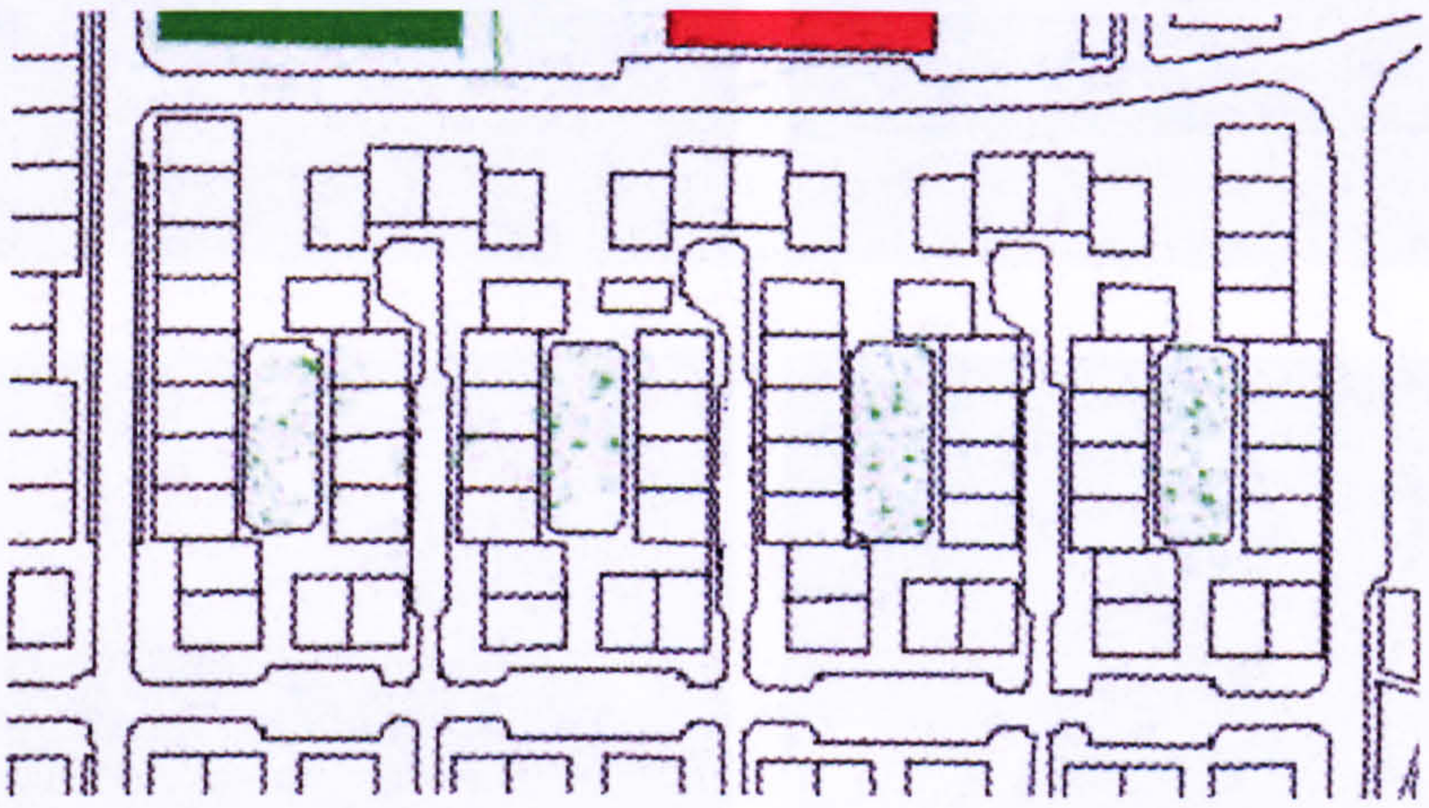


Source: Fieldwork, Benghazi (Feb-May) 2003

8.2.1.3 Neighbourhoods Patterns

As mentioned earlier, the typical housing typology in neighbourhoods located within the low density residential zones of the city is the villa type of detached dwelling which is in most cases individually designed and constructed. The dwelling is often located in the middle of the plot due to the imposition of setback planning regulations. The layout of the two selected OBH neighbourhoods is mainly divided into several smaller residential blocks.

Figure 8 - 4: Layout of Residential Block in El-Salam Area



Source: Fieldwork, Benghazi (Feb-May) 2003

As can be seen from Figure 8.4, the residential block consists of multiple residential clusters. Each cluster consists of a group of about 16 plots with dead ends where vehicular access has been restricted to the inhabitants of the cluster and their visitors. Such a layout is characterized by less wide frontages of plots facing the dead-end street, which means that infrastructure costs less as well as providing more private front and back yards. In addition it takes into consideration a clear separation of cars from pedestrians to boost the latter's interaction and reduce the hazard of traffic crossings. Thus, pedestrians' movement is given priority by connecting houses with passages and green areas leading to neighbourhood facilities such as mosques, schools, parks and shops.

8.2.1.4 Availability of Facilities and Infrastructure

From the field-survey, it was found that the two selected OBH neighbourhoods comprise two mosques, one supermarket, four schools, one vegetable market, a football field and

a petrol station which were all publicly-provided. In addition, some private shops, medical practices, schools and a few car mechanic workshops were distributed in the two neighbourhoods. Plate 8.1 shows some of the facilities in the El-Salam area.

Plate 8 - 1: Some Public Facilities in El-Salam Area (A- Super Market, B- Mosque, C- School, D- Medical practice)



Source: Fieldwork, (Feb-May) 2003

Regarding infrastructure, it was found that both neighbourhoods were fully serviced by the public electricity and drinking water networks. Although, each house had direct access to drinking water, but the supply was very restricted, particularly during the summer as revealed later in section 8.5.8.1. In contrast, it was found that neither neighbourhood was connected to the city sewerage network. Thus, all of the houses are dependent on private septic tanks for sewage disposal. Regarding the road network, although most main roads in both neighbourhoods were paved with proper street lighting, the great majority of sub-collector and feeder roads were still not paved. The extent to which public facilities and utilities in both neighbourhoods were adequate and satisfactory is discussed in more detail in chapter 11.

8.2.2 Characteristics of Selected Neighbourhoods in El-Mukhtar Area

As mentioned earlier, the residential development in the three selected neighbourhoods in the El-Mukhtar area began in the mid-1980s.The general housing and planning characteristics of these neighbourhoods are discussed in this section.

Figure 8 - 5: Location of Selected Neighbourhoods in El-Mukhtar Area



8.2.2.1 Location within the city

The three selected neighbourhoods (M1, M2 & M3) are located in the suburbs of Benghazi within the low density residential zone. They are adjacent to the El-Salam area from the south and lie between the Fourth Ring Road and Fifth Ring Road towards the north east of the city.

As Figure 8.5 shows, Neighbourhood M1 is located between the Fourth Ring Road (west), Fifth Ring Road (east), Lebnan Street (north) and Falasteen Street (south). This neighbourhood accommodates about 476 plots. Of this total, about 390 plots comprised occupied owner-built houses while the remaining plots were still vacant or accommodating dwellings under construction.

Neighbourhood M2, which is adjacent to Neighbourhood M1 from the north, and is, located between the Fourth Ring Road (west), Fifth Ring Road (east), Souria Street (south) and Falasteen Street (north). This neighbourhood accommodates about 484 plots. Of this total, 112 plots are not buildable because they are reserved for existing farms, 290 accommodated occupied owner-built houses and the remaining 82 plots were either vacant or accommodated houses under-construction.

Neighbourhood M3 is located between the Fourth Ring Road (west), Fifth Ring Road (east), El-Eraq Street (south) and Souria Street (north). This neighbourhood accommodates about 550 plots. Of this total, 14 plots are un-buildable due to their location inside farms, 41 plots were buildable and still vacant, 185 plots accommodated houses under-construction and 310 accommodated occupied owner-built houses. Plate 8.2 illustrates farms existed in subdivided residential land in selected neighbourhoods in El-Mukhtar Area.

Plate 8 - 2: Existing Farms Comprising Residential Plots in El-Mukhtar Area



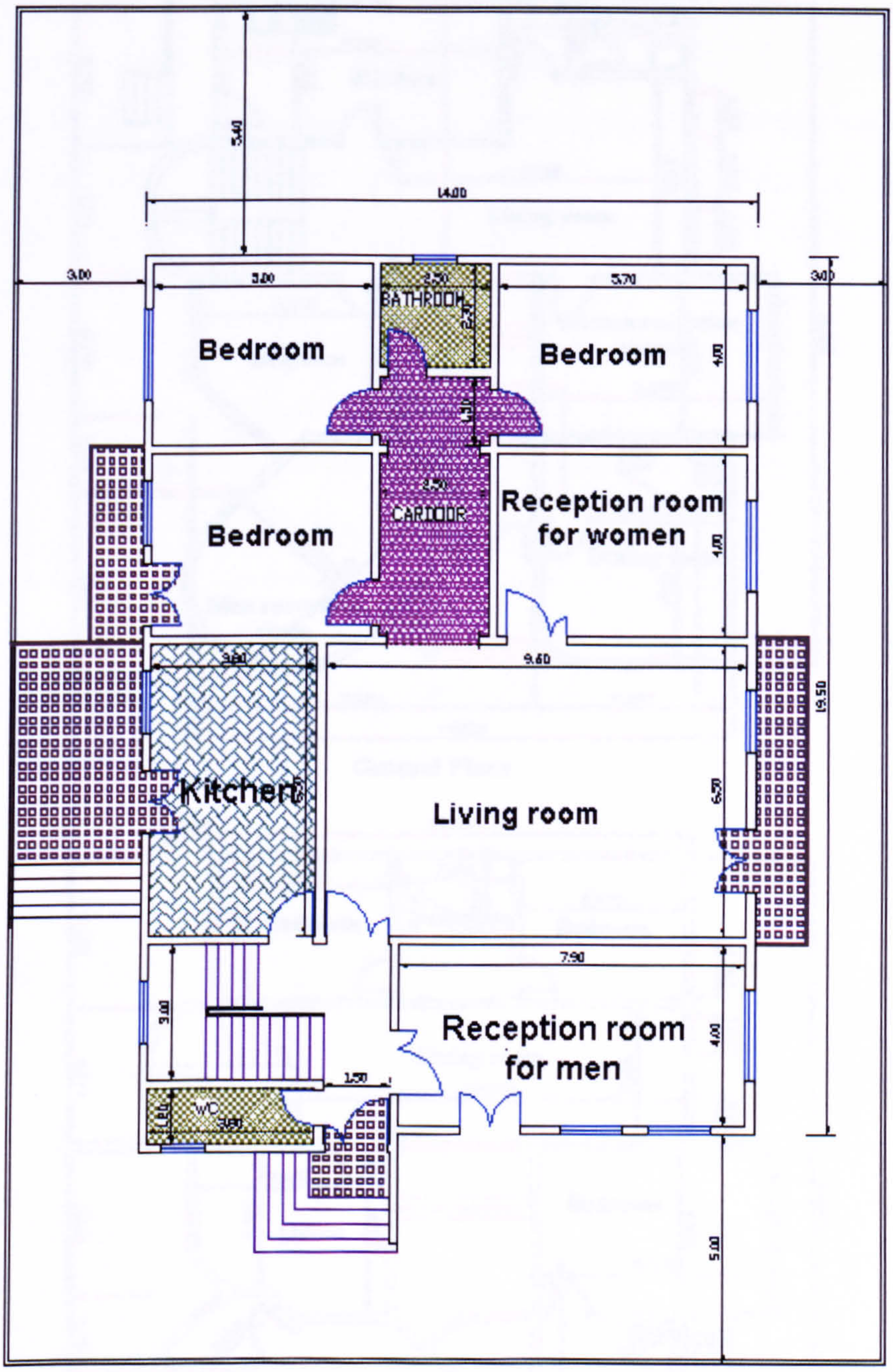
Source: Fieldwork, Benghazi (Feb-May) 2003

8.2.2.2 Housing Typology and Design

As mentioned in chapter 3, the three selected neighbourhoods in the El-Mukhtar area were still underdeveloped and many residential plots which were allocated to potential OBs in the mid 1980s were still vacant or accommodating houses under construction. The development of OBH neighbourhoods in the El-Mukhtar area was in its early stages in the 1980s and only 0.7% of the total housing stock in this area in 1988 took the form of detached dwellings (El-Sharkasi, 1990:107). However, the 990 already occupied owner-built houses in the three OBH neighbourhoods were quite similar to those in the El-Salam area in terms of typology and design. They were mainly detached dwellings consisting of one to two storeys. The housing plots on which these houses were built were allocated by Benghazi Municipality to potential owner-builders in the mid-1980s mainly according to the applicant's priority. The plot sizes on which these houses were built ranged between 600 to 750m² and the most had a width of 20 to 25m and a depth of 30m.

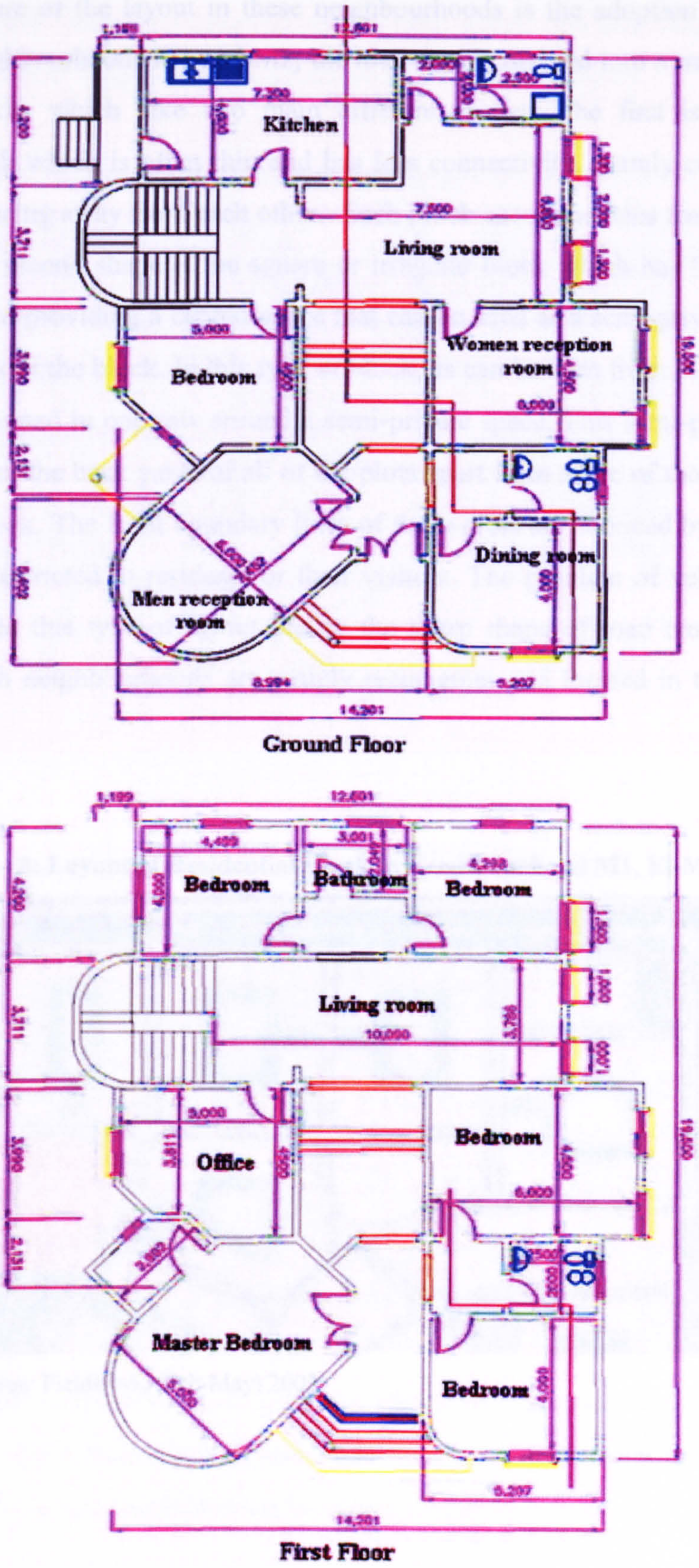
The same planning regulations for the layout of low density residential areas applied in these neighbourhoods. Thus, the houses are often surrounded by setbacks from all of the plot's boundaries and the rooms have windows to the outside. In addition, the interior designs were often arranged according to the owner-builder's requirements, accommodated the same three main zones found in the El-Salam area. These three zones, as Figures 8.6 and 8.7 illustrate, can be accommodated in one or two floors and might be linked by corridors, lobbies and stairs.

Figure 8 - 6: Typical Plan of One Floor Villa in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

Figure 8 - 7: Typical Plan of Two-Floor Villa in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

8.2.2.3 Neighbourhood Pattern

The main feature of the layout in these neighbourhoods is the adoption of the grid-iron pattern. In Neighbourhoods M1 and M2, the total area is divided into a number of smaller residential blocks which take two main different shapes. The first is the curvilinear residential block which is often thin and has less connectivity, mainly consisting of two rows of plots facing away from each other. Each block accommodates from 10 to 20 plots per block. The second shape is the square or irregular block which has fewer streets and has the option of providing a central space that can be used as a semi-private inner garden for the residents of the block. In this type of block, as can be seen from Figure 8.8, the 12-20 plots are grouped in one row around a semi-private space. This semi-private space can be accessed from the back yards of all of the plots apart from some of those located at the edges of the block. The front boundary lines of these plots are serviced by collector roads which are not restricted to residents or their visitors. The problem of vehicular access is quite apparent in this type of layout due to the sharp shape of road cross-sections. The facilities in both neighbourhoods are mainly rectangular and located in the centre of the neighbourhood.

Figure 8 - 8: Layout of Residential Block in Neighbourhood M1, El-Mukhtar Area



Source: Fieldwork, (Feb-May) 2003

In Neighbourhood M3, the rectangular block system is adopted and each block consists of 8 to 28 plots. In this block, as can be seen from Figure 8.9, two rows of plots have adjoining the back yards and open on to collector roads. The community facilities are distributed in a linear zone located in the centre of the neighbourhood.

Figure 8 - 9: Layout of Residential Block in Neighbourhood M3, El-Mukhtar Area

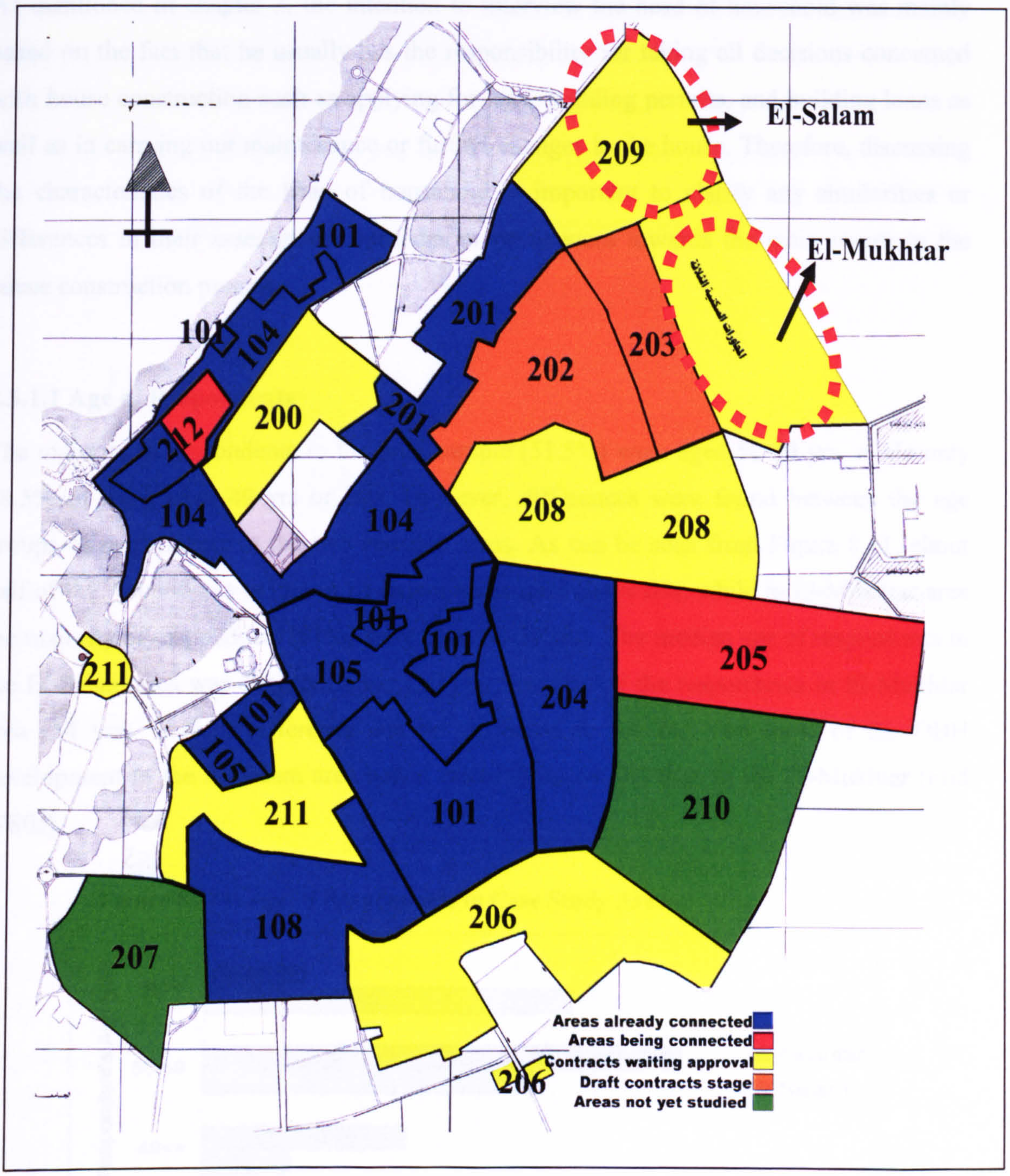


Source: Fieldwork, (Feb-May) 2003

8.2.2.4 Availability of Facilities and Infrastructure

From observation, it was obvious that many facilities and services were still not available or inadequate. Apart from the main paved roads, for instance, the whole internal road networks in the three neighbourhoods were still undeveloped. None of the unpaved streets were properly accessible, particularly in the winter and lacked lighting and drainage services. Although the houses already occupied in the three neighbourhoods were linked to the water and electricity public networks, shortages of water and power cuts were frequently experienced by many dwellers. All of the houses were dependent on septic tanks because the area was not linked yet to the city sewage network which, as Figure 8.10 illustrates, is largely deteriorated and served only 40% of the city. In terms of the availability of public facilities, it was apparent from the field survey conducted between February to May 2003 that most basic facilities such as schools, shops, mosques and other social facilities were not available or under construction.

Figure 8 - 10: Condition of Sewage Network in Benghazi, May 2003



Source: Projects Office, Benghazi Municipality, Fieldwork, (Feb-May) 2003

8.3 Characteristics of Target Group

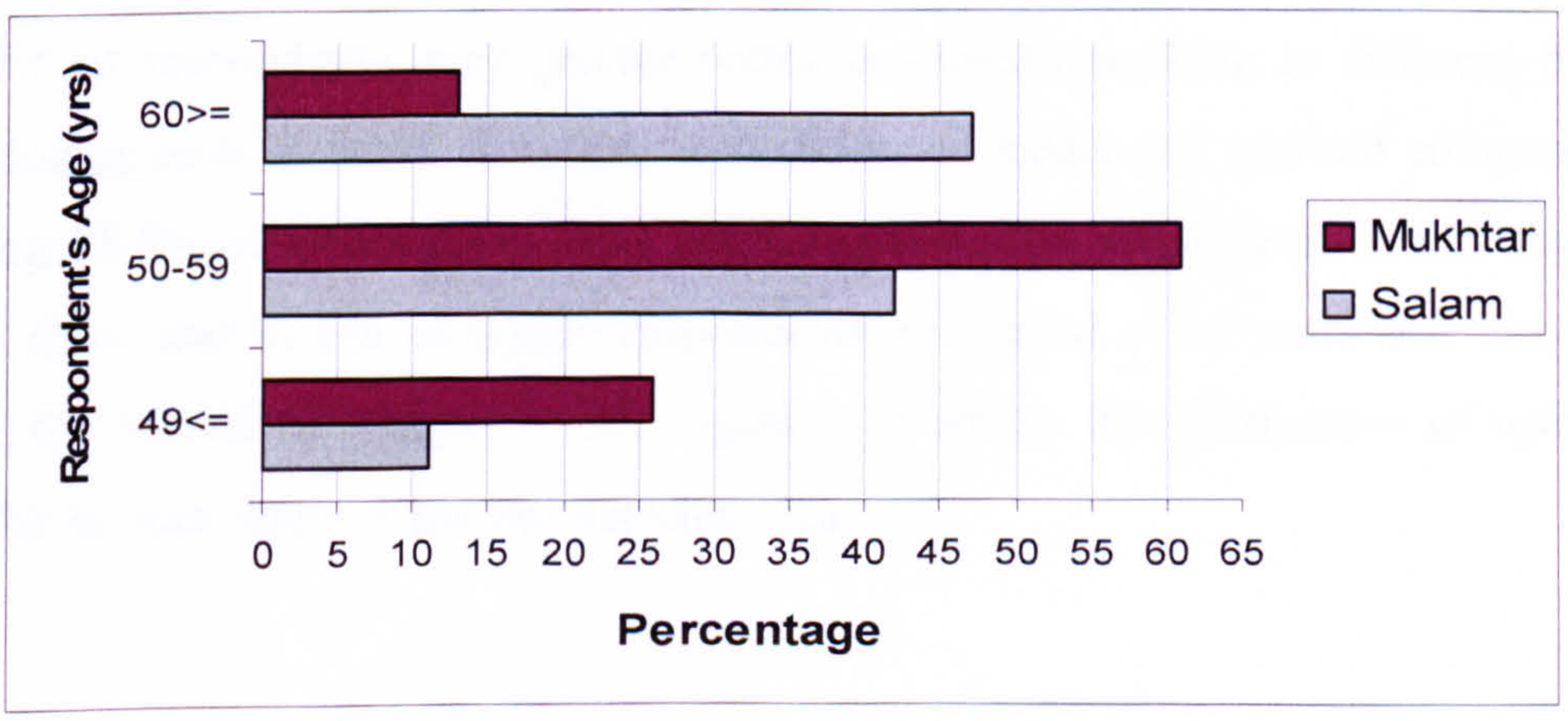
8.3.1 Respondent Profile

As mentioned in chapter 3, the intention to interview the head of household was mainly based on the fact that he usually has the responsibility for taking all decisions concerned with house construction such as applying for land, building permits, and building loans as well as in carrying out maintenance or further changes in the house. Therefore, discussing the characteristics of the head of household is important to clarify any similarities or differences in their assessments, attitudes or preferences towards the main issues in the house construction process.

8.3.1.1 Age of Respondents

The majority of respondents in the total sample (51.5%) were aged 50-59 yrs, while only 18.5% of were aged 49 yrs or less. However, differences were found between the age groups of respondents in the two selected areas. As can be seen from Figure 8.11, about half of the respondents (47%) in El-Salam were aged above 60s, while in El-Mukhtar area the majority of respondents (61%) were aged 50-59 yrs. The median age of respondents in the El-Salam area was slightly higher (58 yrs) than that of the respondents in El-Mukhtar area (54 yrs). Such a difference can be attributed to the fact that most of the OBH development in the El-Salam area began earlier (mid 1970s) than in the El-Mukhtar (mid 1980s).

Figure 8 - 11: Age of Respondents in Case Study Areas

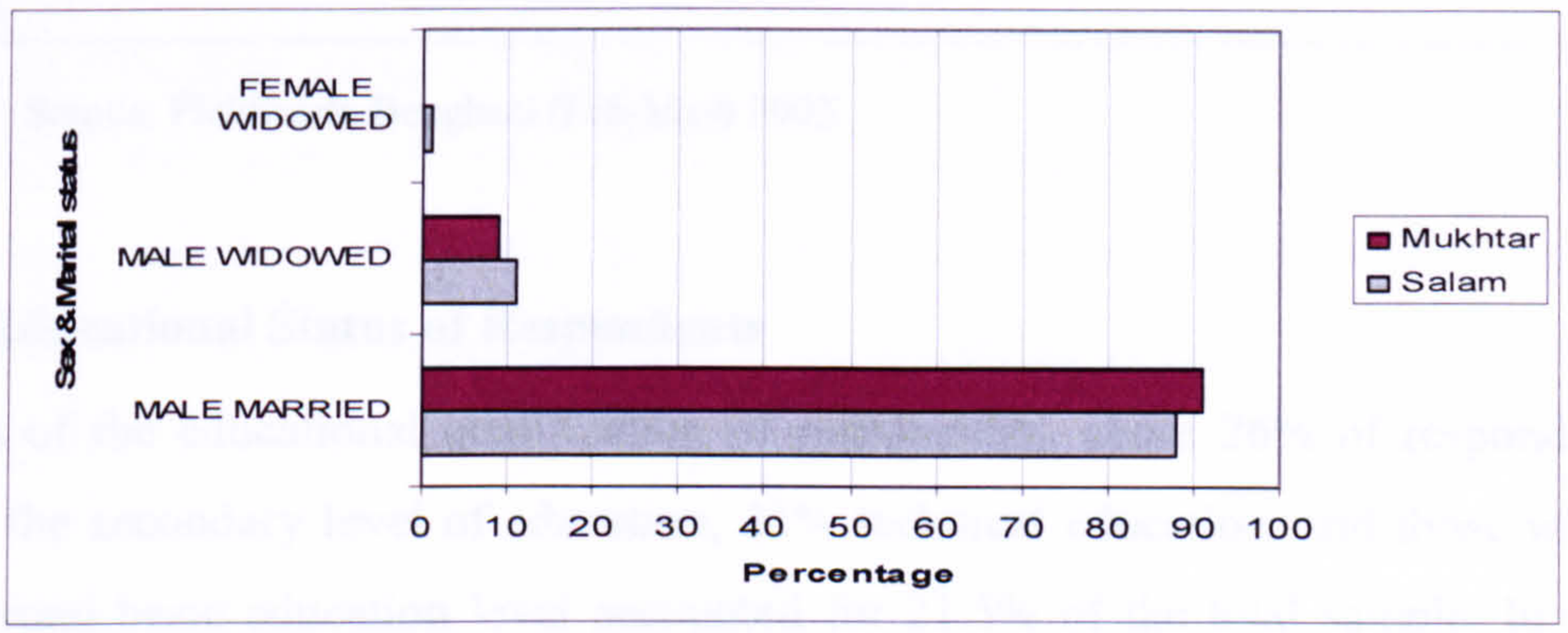


Source: Fieldwork, Benghazi (Feb-May) 2003

8.3.1.2 Sex and Marital Status of Respondents

The overwhelming majority (89.5%) of respondents in the total sample were married men while 10% were widowers and only 0.5% widows. In comparison, as can be seen from Figure 8.12, the proportion of respondents who were married men in the El-Salam area was slightly lower (88%) compared to in the El-Mukhtar area (91%). In contrast, while widowers represented 11% in the El-Mukhtar area; this figure was slightly less in the El-Salam area since at less than does not exceed 9% of respondents in the area.

Figure 8 - 12: Sex and Marital Status of Respondents in Case Study Areas

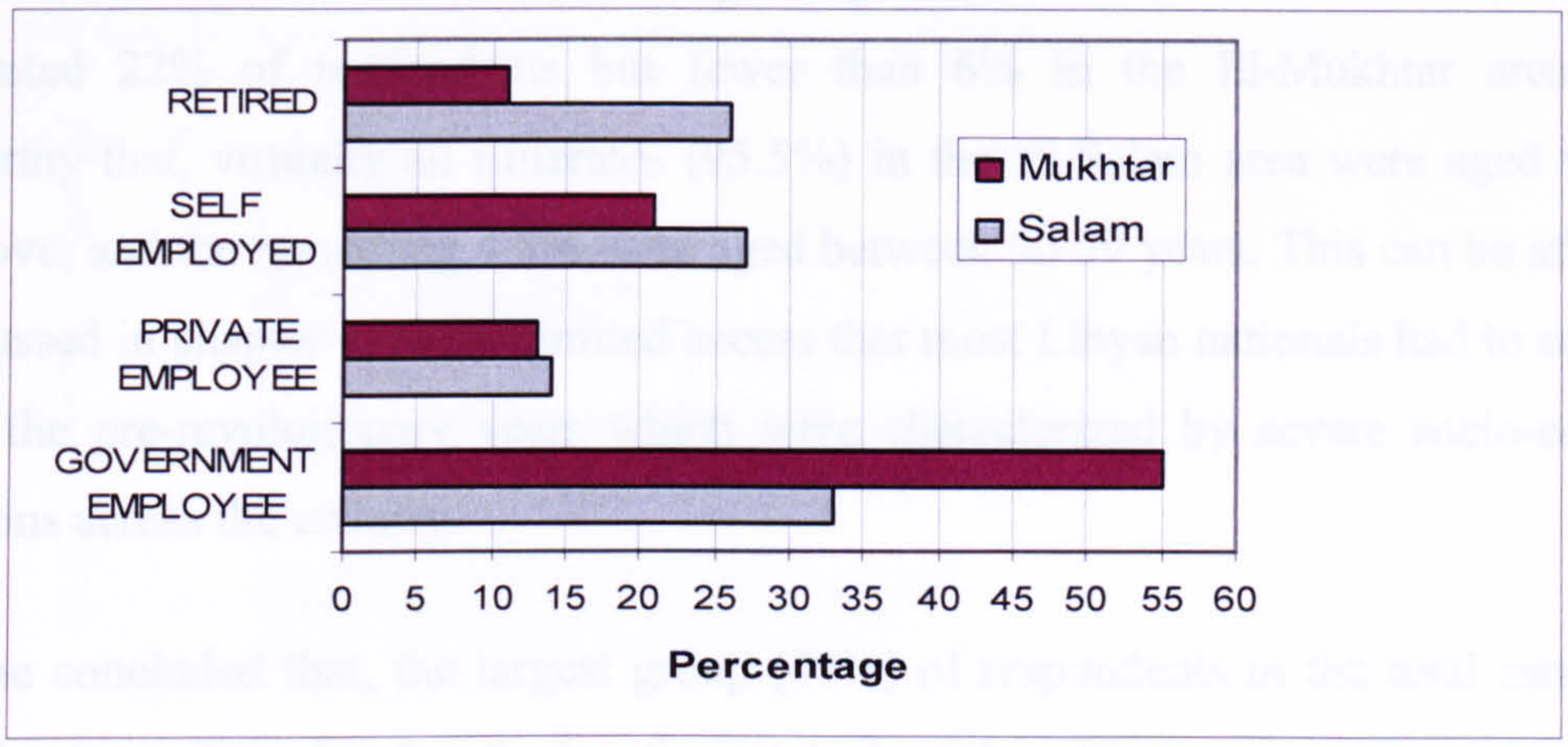


Source: Fieldwork, Benghazi (Feb-May) 2003

8.3.1.3 Occupation of Respondents

It is found that about 44% of respondents in both of the selected areas were government-employees working in different public sector fields such as education, health, public security, industry, public utilities and housing. In addition, about 24% of respondents were self-employed, working as traders and taxi and lorry drivers, and some were craftsmen. Only 13.5 of respondents were private sector employees working in different privately-owned bodies such as small factories, workshops, or media and tourism companies. The remaining 18.5% of respondents were retired government employees. In this regard, the findings show that 91.9% of retired respondents were aged of 60 years and above, while 8.1% of the retired were aged 50-59. Figure 8.13 shows the distribution of occupations among the householders in the two selected areas.

Figure 8 - 13: Occupation of Respondent in Case study Areas

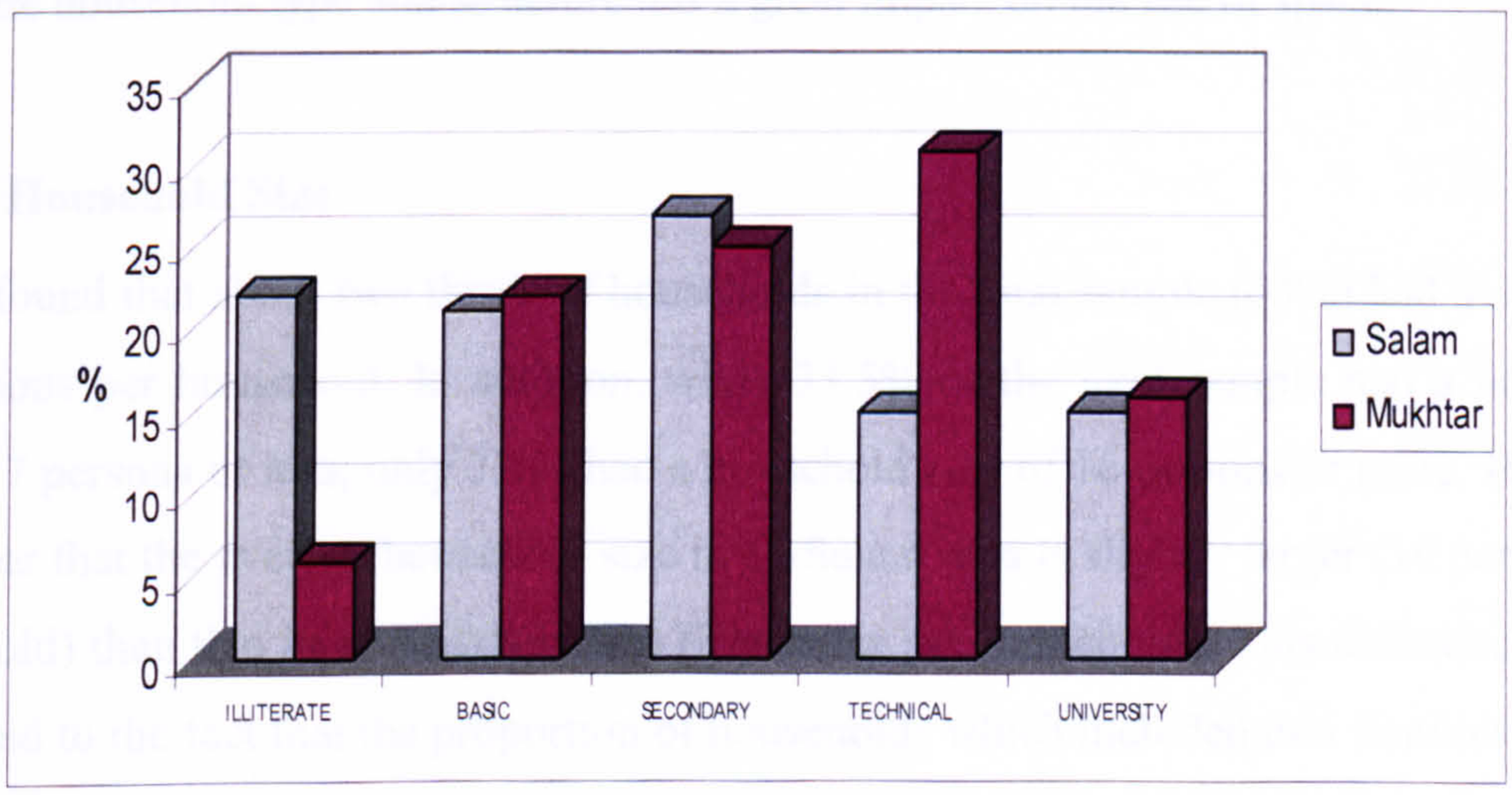


Source: Fieldwork, Benghazi (Feb-May) 2003

8.3.1.4 Educational Status of Respondents

In terms of the educational qualification of respondents, about 26% of respondents had attained the secondary level of education, 23% technical education, and those who never went beyond basic education level accounted for 21.5% of the total sample. In addition, although 15.5% of respondents had university degrees, those who were illiterate and had no education represented 14% of respondents.

Figure 8 - 14: Educational level of Respondents in Case Study Areas



Source: Fieldwork, Benghazi (Feb-May) 2003

As can be seen from Figure 8.14, significant differences were found between respondents in the El-Salam and El-Mukhtar areas regarding educational level. In El-Salam illiterates represented 22% of respondents but fewer than 6% in the El-Mukhtar area. It is noteworthy that, virtually all illiterates (95.5%) in the El-Salam area were aged 60 years and above, and the remaining 4.5% were aged between 50-59 years. This can be attributed, as discussed in chapter 4, to the limited access that most Libyan nationals had to education during the pre-revolutionary years which were characterized by severe socio-economic conditions across the country.

It can be concluded that, the largest group (49%) of respondents in the total sample had attained intermediate levels of education at technical institutions or secondary schools. Meanwhile, the share of respondents who had attained technical education was considerably higher in the El-Mukhtar area (31%) compared to the El-Salam area (15%). This can be attributed to expansion in the technical education in the country since the mid 1980s onwards.

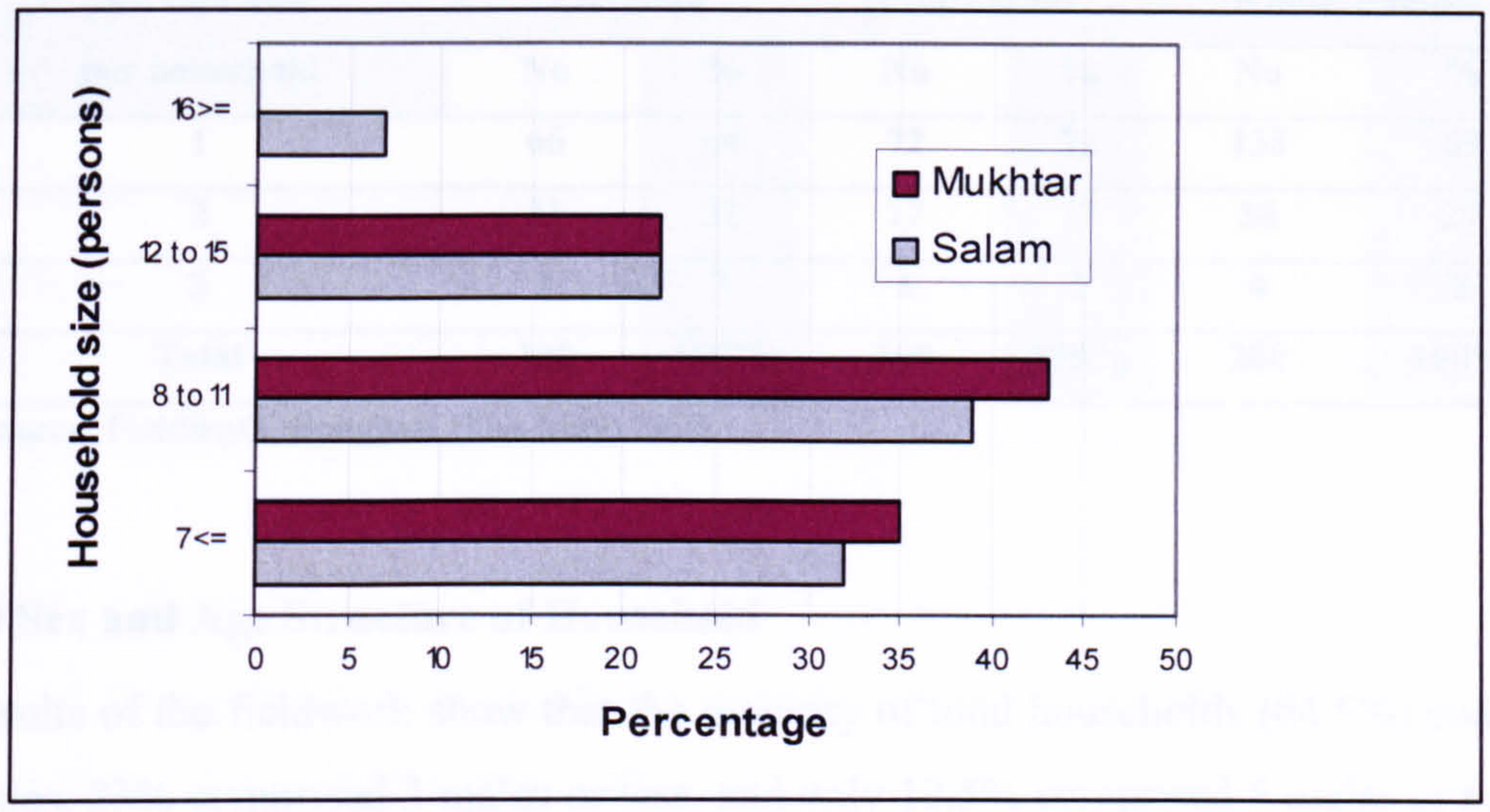
8.3.2 Characteristics of Households

Household characteristics such as size, type and structure are considered as an important variable in housing design both for indoor and outdoor space (Lawrence, 1987). On the one hand, the household size determines the size of space needed for members. On the other hand, the household type and structure has a great impact on the use of space.

8.3.2.1 Household Size

It was found that about two thirds of households in the total sample (63%) had a size of 8-15 persons per household. In addition, while 33.5% of the total sample had a household size of 7 persons or less; only 3.5% had a household size of 16 persons or more. However, it is clear that the average household size in El-Salam area is slightly larger (10 persons per household) than that in El-Mukhtar area (8 persons per household). This difference can be attributed to the fact that the proportion of households which included two families or more in the El-Salam area was larger (34 households) than in the El-Mukhtar area (28 households). Figure 8.15 illustrates household sizes in the two case study areas.

Figure 8 - 15: Household Size in Case Study Areas



Source: Fieldwork, Benghazi (Feb-May) 2003

8.3.2.2 Type of Household

Although the nuclear family constituted about 69% of the total sample, the extended family still represents about (31%). Of the households comprising extended families, 29.0% consisted of two families and 2% consisted of three families. The prevalence of extended families among the sample can be attributed, as discussed in chapter 5, to the fact that many newly married sons were forced to live at their parents' houses until they could afford to move into independent dwellings.

However, the share of households which included extended family in the El-Salam area was slightly larger (34%) than in the El-Mukhtar area (28%). This difference can be attributed to the fact that the number of households which included 4 or more adults aged 19-40 was much larger in the El-Salam area (35%) than in the El-Mukhtar area (23%). The ages 19-40 yrs are most common for marriage for both genders in Libya. In addition, the mean number of families per household in the El-Salam area was slightly larger (1.37%) than in the El-Mukhtar area (1.29%) families per household. Table 8.1 illustrates the number of families per household in the two selected areas and in the total sample.

Table 8 - 1: Number of Families per Household in Case Study Areas

No. Families per household	El-Salam		El-Mukhtar		Whole Sample	
	No	%	No	%	No	%
1	66	66	72	72	138	69
2	31	31	27	27	58	29
3	3	3	1	1	4	2
Total	100	100%	100	100%	200	100%

Source: Fieldwork, Benghazi (Feb-May) 2003

8.3.2.3 Sex and Age Structure of Household

The results of the fieldwork show that the majority of total households (64.5%) comprised 4-7 males, 23% comprised 3 males or less, and only 12.5% comprised 8 males or more. In contrast, about 55% of households included 4-7 females, 35.5% included 3 females or less while only 9.5% included 8 females or more. Table 8.2 shows the distribution of males and females per household in the two selected areas and in the total sample.

Regarding the age structure of households, the results of the fieldwork show that 81.5% of households had 1-3 children aged 5 years or less, 9.5% had 4 to 5 children at this age and 9% had no children aged 5 years or less. In addition, about 69.5% of households comprised 1-3 children aged 6-18, 28.5% had 4-5 children at this age while 2% had 6-7 children at this age. Generally speaking, proportion of households having 3 or less children aged 5 years or less is much larger than with the same number of children aged 6-18 years.

Table 8 - 2: Sex Structure of Household in Case Study Areas

Members per household	El-Salam		El-Mukhtar		Total Sample	
	Males	Females	Males	Females	Males	Females
3 or less	16	33	30	38	46	71
4 to 7	68	55	61	55	129	110
8 or more	16	12	9	7	25	19
Total	100	100	100	100	200	200

Source: Fieldwork, Benghazi (Feb-May) 2003

However, a significant difference was found between the two case study areas in terms of number of children per household. While households in the El-Mukhtar area all had children aged 5 years or less, in the El-Salam area only 82% of households had children aged 5 or less. In contrast, the number of households who had 1 or 2 children aged 6-18 in the El-Salam area was much larger (71%) than in the El-Mukhtar area (39%). This difference can be attributed to the fact that most couples in household in the El-Mukhtar were more recently married compared to those in the El-Salam area. Therefore, they were likely to have fewer children aged 6-18 years and more children aged 5 years or less.

Moreover, as Table 8.3 illustrates, the share of households comprising 1-3 adults aged 19-40 years in El-Salam area was slightly lower (65%) than in the EI-Mukhtar area (77%). On the other hand, 35% of households in the El-Salam area comprised more than 4 adults aged 19-40 while this percentage was lower in the El-Mukhtar area (23%).

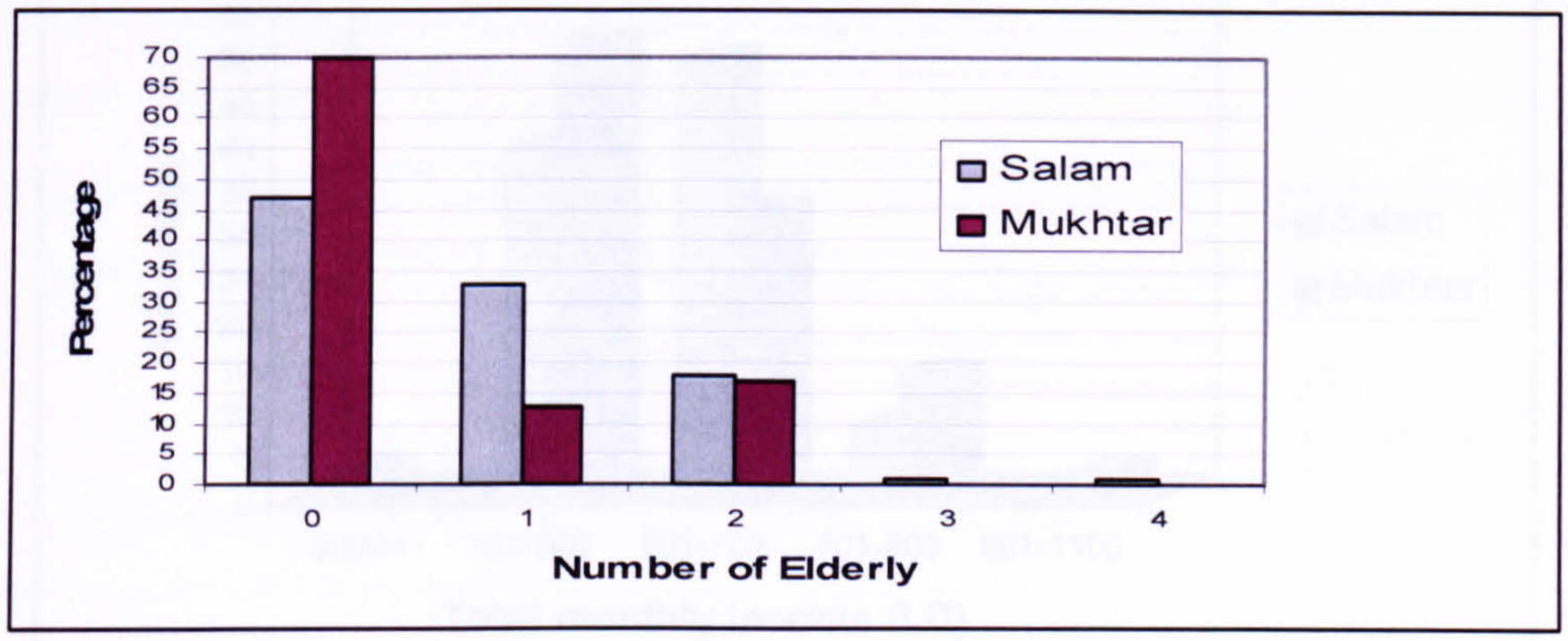
Table 8 - 3: Age Structure of Households in Case Study Areas

No. of Adults Per household	El-Salam Area (Freq.)		El-Mukhtar Area (Freq.)		Total Sample (Freq.)	
	(19-40)yrs	(41-59)yrs	(19-40)yrs	(41-59)yrs	(19-40)yrs	(41-59)yrs
1	11	57	10	57	21	114
2	31	36	35	38	66	74
3	23	7	32	5	55	12
4	29	0	23	0	52	0
5	6	0	0	0	6	0
Total	**100**	**100**	**100**	**100**	**200**	**200**

Source: Fieldwork, Benghazi (Feb-May) 2003

In addition, the number of households which comprised elderly people aged 60+ yrs was much higher in the El-Salam area (53%) than in the El-Mukhtar area (30%). Figure 8.16 illustrates the distribution of elderly people aged 60 or over in the total sample and the two selected areas.

Figure 8 - 16: Distribution of Elderly People in Case Study Areas



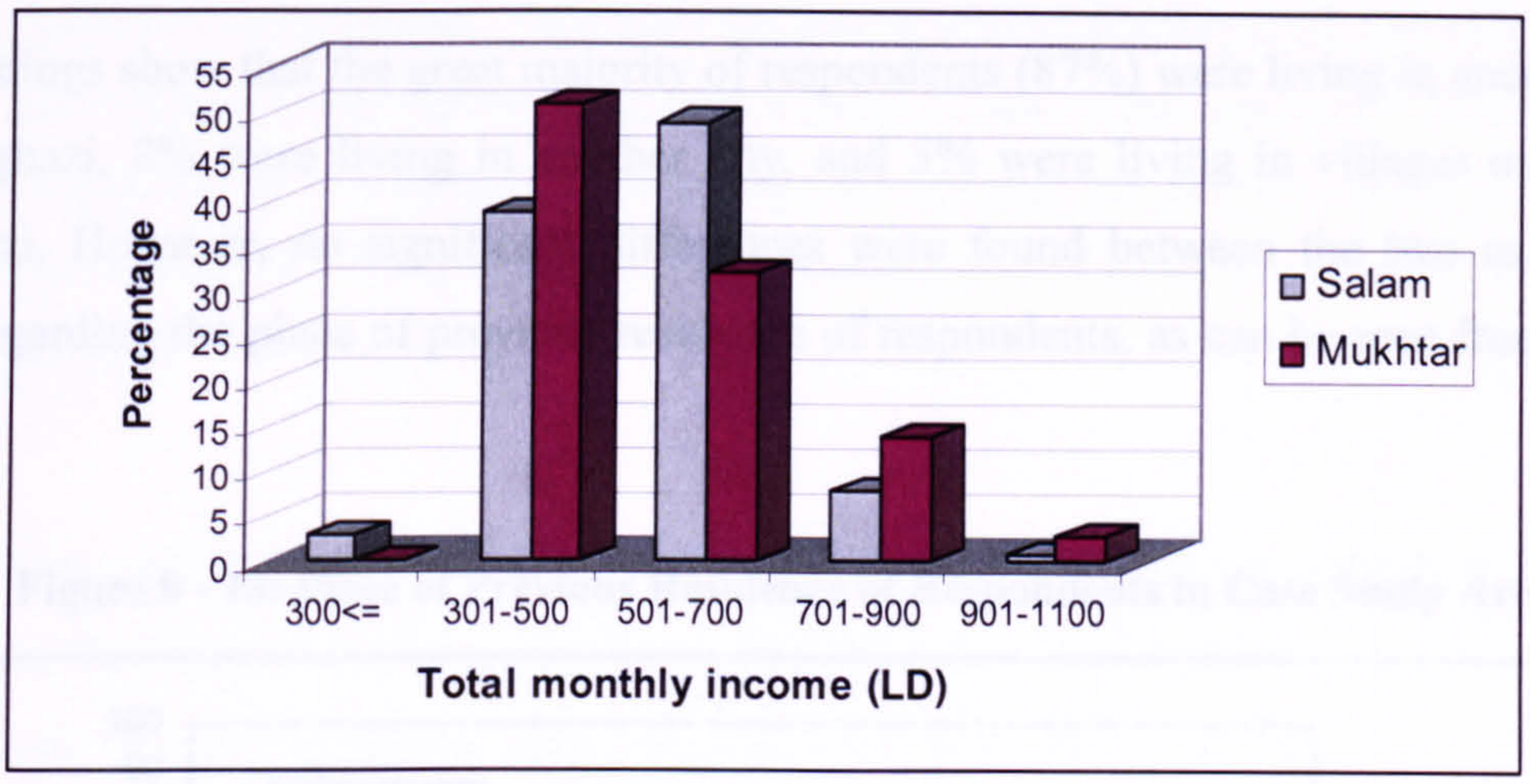
Source: Fieldwork, Benghazi (Feb-May) 2003

8.3.2.4 Monthly Household Incomes

The amount of monthly household income is one of the most important indicators in analysing economic status and the ability to spend on different household needs, and particularly on housing. Chapter 9 discusses the role of family savings in the total costs of house construction. However, the amount of income is mainly affected by the number of persons in the household who work and their type of occupation. In this respect, the results of the fieldwork show that more than half of the households in the total sample (55.5%) comprise two persons who go to work, 35% comprise one, 9% comprise three, and 0.5% of the total sample comprise four persons going to work.

In responses to the questionnaire, respondents stated the total monthly income of their households. The results show that income distribution among the households was varied. The largest proportion of households (85%) had total monthly incomes ranging between LD301 to 700 per month, 2% had total incomes ranging between LD701 to 1100 per month, while only 1.5% had total monthly income of LD300 or less. However, differences were found in the distribution of total monthly income between the two selected areas. Those who had total monthly income of LD300 or less in the El-Salam area represented about 3% of households, whereas in El-Mukhtar area no household was found receiving LD300 or less per month. In addition, while the share of households with monthly incomes ranging between LD301 to 500 represented 51% in the El-Mukhtar area, in the El-Salam area this was about 39%. Figure 8.17 shows the distribution of total monthly incomes in the two case study areas.

Figure 8 - 17: Total Monthly Income of Households in Case Study Areas



Source: Fieldwork, Benghazi (Feb-May) 2003

Despite these differences, the median monthly income of households in the El-Salam area was higher (LD550) than that for households in the El-Mukhtar area (LD500). This difference can be attributed to the fact that the number of households comprising more than one person going to work in the El-Salam area was slightly larger (66%) than in the El-Mukhtar area (64%). In addition, the proportion of households with the highest education level (university degree or above) in the El-Salam area was larger (63%) than in the El-Mukhtar area (46%). Generally speaking, having a higher education level affects occupation and income.

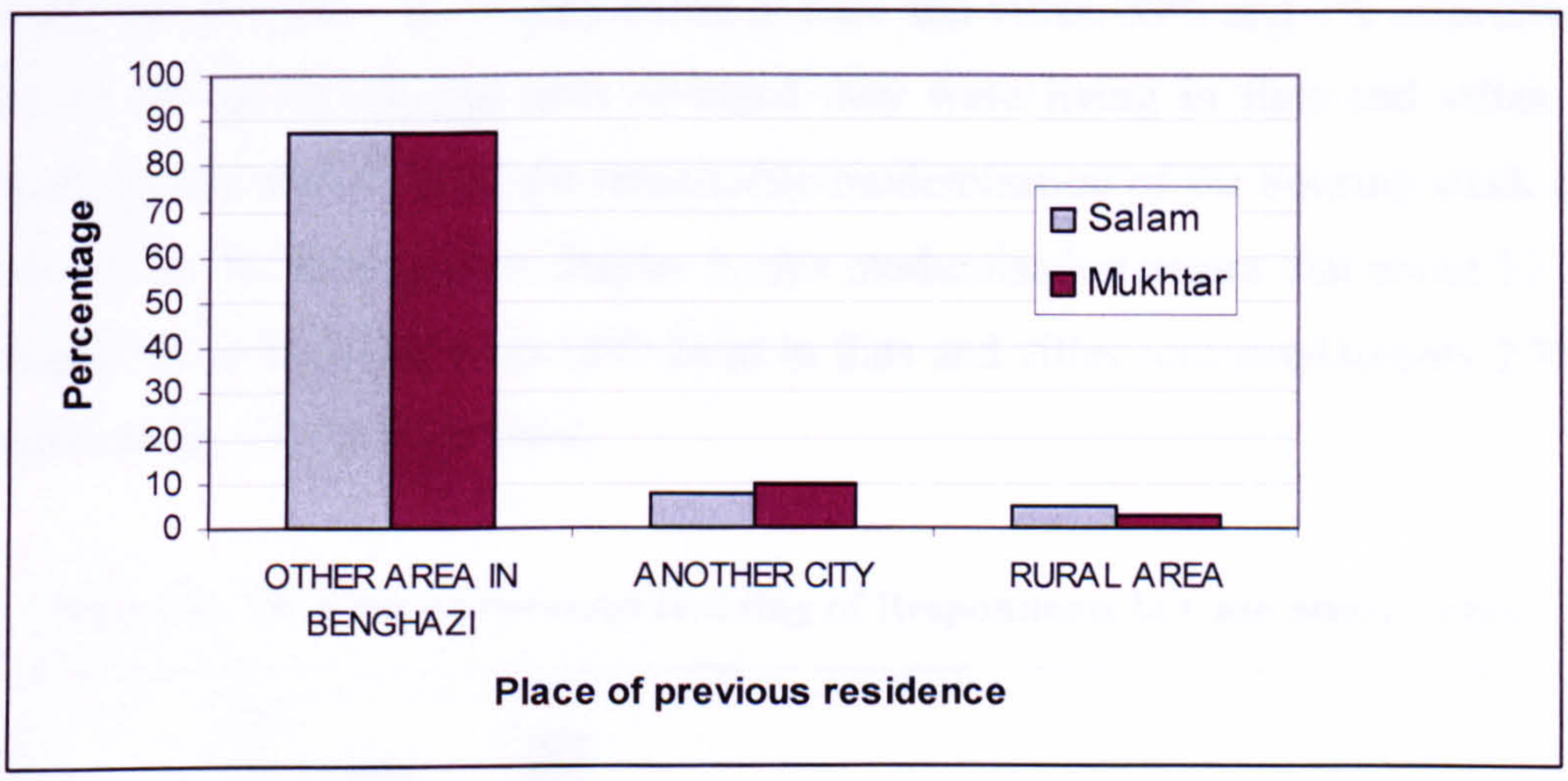
8.4 Previous Housing Conditions

In this section, the previous housing conditions of households in the selected OBH neighbourhoods in the two case study areas are discussed, focusing on the location of previous residence, tenure status and type of previous housing as well as the most important motives that respondents had for moving from their previous houses. The importance of this discussion stems from the fact that the eligibility criteria for accessing OBH is mainly based on the housing condition of applicants at the time of application. In this respect, and as mentioned in chapter 7, the applicant for a housing plot or building loan should provide evidence showing that neither he nor his spouse nor any of his underage dependants are in possession of buildable land or habitable dwellings.

8.4.1 Place of Previous Residence

The findings show that the great majority of respondents (87%) were living in another area in Benghazi, 8% were living in another city, and 5% were living in villages outside of Benghazi. However, no significant differences were found between the two case study areas regarding the place of previous residence of respondents, as can be seen from Figure 8.18.

Figure 8 - 18: Place of Previous Residence of Respondents in Case Study Areas



Source: Fieldwork, Benghazi (Feb-May) 2003

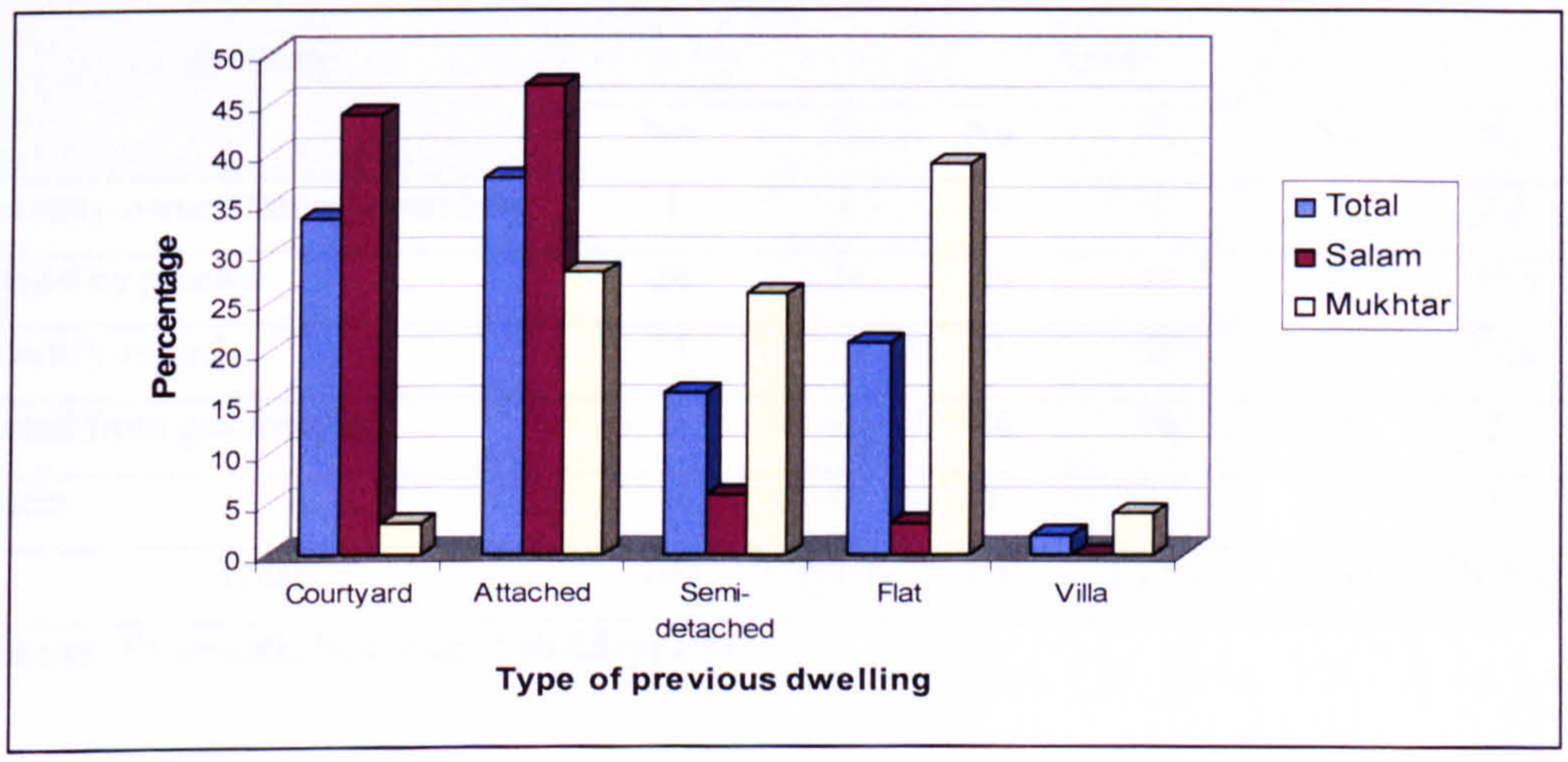
8.4.2 Type of Previous Dwelling and Status of Tenure

It was found that about 33.5% of respondents in the total sample were previously living in courtyard houses, while 37.5%, 16%, 21% and 2.0% respectively were living in terraced houses, semi-detached houses, flats and villas. However, significant differences were found between respondents in the two selected areas in this respect. As can be seen from Figure 8.19, the share of respondents in the El-Salam area who were previously living in courtyard houses is far larger (44%) than in the El-Mukhtar area (3%). The larger percentage of respondents previously living in courtyard houses in the El-Salam area can be attributed, as mentioned in chapter 5, to the predominance of courtyard houses in the housing typology of the 1960s, comprising about 51.7% of the total housing stock in the country in 1964. In this respect, one respondent from El-Mukhtar area who had been living in a courtyard house described the housing conditions there:

"I used to live in *bait arabi* [courtyard house] consisting of 3 bedrooms, a bathroom and a kitchen. The house was almost derelict and very cold especially in the winter when the house became like a fridge. Thus, I used to spend a substantial proportion of my limited monthly wage on carrying out essential maintenance works prior to every winter as well as on heating, given the fact that at that time my children were very young."

In contrast, while 3.0% and 0% respectively of respondents in the El-Salam area mentioned that they were previously living in flats and villas, 39% and 4% respectively of respondents in the El-Mukhtar area revealed they were living in flats and villas. Such differences can be attributed to the remarkable modernisation of the housing stock during the early 1970s. As discussed in chapter 5, this modernisation meant that about 13.2% of total households in the country in 1973 lived in flats and villas compared to only 2.7% and 3.1% respectively in 1954 and 1964.

Figure 8 - 19: Type of Previous Housing of Respondents in Case Study Areas



Source: Fieldwork, Benghazi (Feb-May) 2003

Regarding tenure status, it was found that about 2.5% of respondents had been living in dwellings owned by them through purchase while 36.5% were living in dwellings owned by their parents. In terms of tenancy, about 37.5% of total respondents stated that they were living in privately rented dwellings while 23% were living as tenants in publicly-owned dwellings. And of the remaining respondents, one mentioned that he was living temporarily with a relative. However, significant differences can be noticed between respondents in the two selected areas regarding the tenure status of their previous dwelling.

While 1% and 24% respectively of respondents in the El-Salam area mentioned that they were living in dwellings owned by them or by their parents, these proportions rose to 4% and 49% of respondents in the El-Mukhtar area. The smaller proportions of respondents living in their own or parental dwellings in the El-Salam area can be attributed, as mentioned in chapter 5, to the serious housing conditions that the country was suffering from during the pre-revolution era.

As can be seen from Table 8.4, while 75% of respondents in the El-Salam area mentioned that they privately rented their previous dwellings, none stated that he was a tenant in a dwelling owned by the government. This is mainly due, as discussed in chapter 4, to the limited role of government in housing provision during the pre-revolution era. Thus, it can be said that, the great majority of Libyans with low-incomes, had no option in accommodating their families except renting a small house or a room in a shared house from a private landlord.

Table 8 - 4: Tenure Status of Previous Dwellings in Case Study Areas

Tenure status of previous dwelling	El-Salam Area		El-Mukhtar Area		Total	
	No.	%	No.	%	No.	%
Privately-owned through purchase	1	1	4	4	5	2.5
Owned by parents	24	24	49	49	73	36.5
Privately-rented	75	75	0	0	75	37.5
Rented from government	0	0	46	46	46	23
Others	0	0	1	1	1	0.5
Total	100	100%	100	100%	200	100%

Source: Fieldwork, Benghazi (Feb-May) 2003

8.4.2.1 Living in Residences Shared with Other Families

It is found that about 60% of respondents (120 cases) in the total sample previously lived in dwellings shared with other families while 40% (80 cases) were living in dwellings completely occupied by their own families. In comparison, the share of respondents in the El-Salam area who shared their previous dwellings with other families was larger (66%) than in the El-Mukhtar area (54%).

Type of Previous Dwelling and Sharing Residence with Others

As can be seen from Table 8.5, about 72.3%, 70.7% and 78.1% respectively of respondents who were living in courtyard, terraced, and semi-detached dwellings were sharing their previous dwellings with others. In contrast, only 9.5% of respondents who were living in flats mentioned that they shared their previous dwellings with others. The small proportion of shared flats can be attributed to the limited space in these dwellings which were incapable of accommodating more than one family.

Table 8 - 5: Type of Previous Dwelling & Sharing Residence with Others

Type of dwelling	Sharing previous dwelling (%)								
	El-Salam			El-Mukhtar			Whole sample		
	Yes	No	Total	Yes	No	Total	Yes	No	Total
Courtyard	72.7	27.3	100	33.3	72.3	100	72.3	27.7	100
Terraced	66	43	100	78.6	21.4	100	70.7	29.3	100
Semi-detached	33.3	66.7	100	88.5	11.5	100	78.1	21.9	100
Flat	33.3	66.7	100	7.7	92.3	100	9.5	90.5	100
Detached (villa)	-	-	-	100	0	100	100	0	100

Source: Fieldwork, Benghazi (Feb-May) 2003

Sharing Previous Residence and Type of Tenure

Of the total sample, 120 respondents (60% of the total sample) were sharing their previous dwellings. 70 respondents (58.3%) were living in dwellings owned by their parents. In contrast, 42 respondents (35.3%) and 6 respondents (5.0%) respectively were living in privately-rented and publicly-rented dwellings. Of the remaining two respondents (1.6%), one was living in a privately-owned dwelling through purchase and the other was living temporarily in a relative's house. However, considerable differences were found among respondents in the two selected areas in this respect. For instance, while no respondent in the El-Mukhtar had previously lived in a privately-rented shared dwelling, about 63.6% of respondents in the El-Salam area who had lived in shared dwellings mentioned that those dwellings were privately-rented. This high proportion in El-Salam area can be attributed to the fact that this type of tenure was predominant in the1960s and early 70s. As discussed in chapter 5, however, this type of tenure was abolished in 1978, when the principle of tenancy in the housing sector was brought to an end.

Sharing a dwelling with other families was described by many respondents as representing unsatisfactory and inadequate housing conditions. For example, one respondent in El-Salam area said that:

> "Actually it was a difficult situation (in the early 70s) where I, my wife and our two children used to live in one room in *howesh* [terraced-house] shared with two other families. All three families lived in the *howesh* as tenants sharing one kitchen and bathroom. It was really a very hard time for us".

Another respondent from the El-Mukhtar area had been living with his wife in his own parents' house during the early stage of his marriage and who moved later to a flat said that:

> "When I got married I lived in one room with my mother and four brothers in a three-bedroom *howesh*. It was a very difficult time for me. My privacy was restricted since all the household members were sharing one bathroom. A year and a half on, I moved to *shagah* [apartment] rented from Ministry of Housing. Despite its small size, I felt free and independent in it. My three sons were born in that *shagah* and we lived there for almost 15 years before I moved to this villa which I built."

8.4.3 Respondents' Motives for Moving from Previous Residence

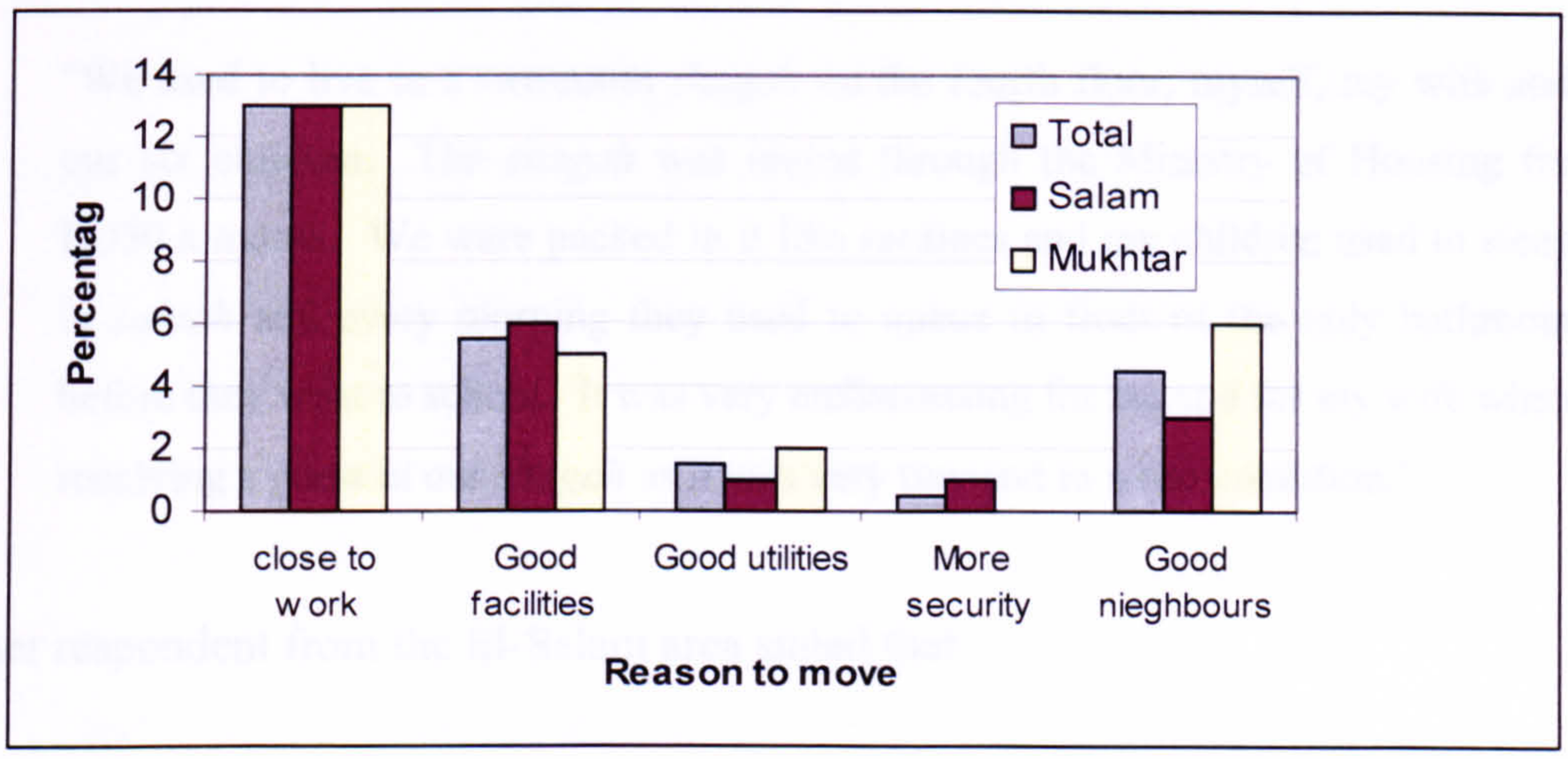
Motives for moving from previous residence were classified into two categories. The first category is related to problems of previous place of residence (for example, to the workplace, the need for better facilities and services, or for more security or to have good neighbours). The second category is related to problems concerned with the condition of the previous housing (for example, the need for a bigger house, or for more privacy).

8.4.3.1 Motives related to the Place of Previous Residence

As discussed in chapter 2, the location of a dwelling is seen as an important factor in the household decisions related to mobility. In the case study areas, while the need to be close to workplaces was mentioned as the main reason for moving by all respondents who had lived outside of Benghazi, the need for good facilities was mentioned as the main reason for moving by about 5.7% of respondents who were living in another area in Benghazi, and by 12.5% of those who were living in rural areas. Moreover, the fieldwork results show

that reasons such as looking for more security or more utilities were not significant for respondents, since they were mentioned only by 0.5% and 1.5% of respondents in the total sample respectively. Figure 8.20 show the main reasons for moving from the previous place of residence in the two case study areas.

Figure 8 - 20: Motives for Moving from Previous Place of Residence



Source: Fieldwork, Benghazi (Feb-May) 2003

8.4.3.2 Motives Related to the Condition of the Previous Housing

In addition to its role in the eligibility criteria for access to OBH, the fieldwork results demonstrate that previous housing conditions had an impact on respondents' decisions to move from their previous dwellings. The need for more privacy and bigger houses were found to be the two main motives for moving from the previous dwelling.

Privacy as a Motive for Moving

Although about 49% of respondents mentioned that privacy was the main motive for moving from their previous dwellings, a notable relationship was found between occupation rates of previous dwellings and privacy as a motive for moving. About 42% and 49.1% respectively of respondents in El-Salam and El-Mukhtar areas had been living in dwellings shared with others mentioned that privacy was a motive for their moving. In addition, a clear relationship was noticed between the type of previous dwelling and privacy as a motive for moving. About 61.9% of respondents who had been living in flats mentioned that privacy was a motive for their moving.

Looking For a Bigger House as a Motive for Moving

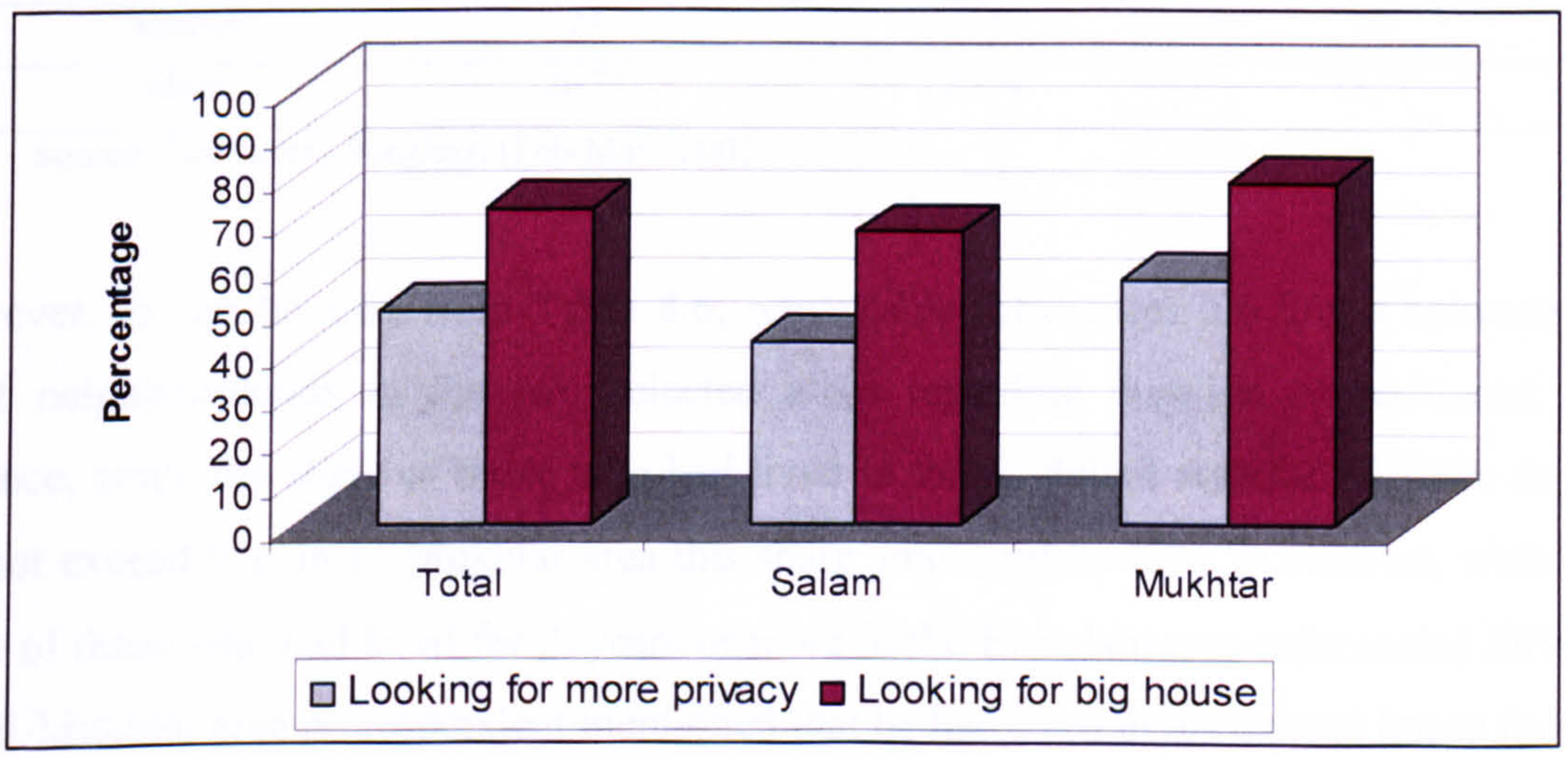
As can be seen from Figure 8.21, about 66.7% and 71.8% respectively of respondents in the El-Salam and El-Mukhtar areas who had been living in flats mentioned that the need for a bigger house was the motive for their moving from their previous dwellings. In describing the small size of his previous dwelling, a respondent from the El-Mukhtar area said that:

> "We used to live in a two-room *shagah* on the fourth floor; myself, my wife and our six children. The *shagah* was rented through the Ministry of Housing for LD30 a month. We were packed in it like sardines and my children used to sleep in *salaah* and every morning they used to queue in front of the only bathroom before they went to school. It was very embarrassing for me and for my wife when receiving a guest in our *shagah* as it was very tiny and in a bad condition."

Another respondent from the El-Salam area stated that:

> "I lived as a tenant in *bait arabi*. It comprised only two rooms and the rest of the building was used by the owner, who was a warehouse merchant, for storing his goods. I used to pay LD40 for the two rooms where I lived with my five children and that was a huge sum at that time (early 1970s) compared to my salary which was about LD 120 a month."

Figure 8 - 21: Motives for Moving related to the Condition of the Previous Dwelling



Source: Fieldwork, Benghazi (Feb-May) 2003

8.5 Present Housing Conditions

After discussing the previous housing conditions of respondents, this section focuses on their current housing conditions. It discusses the duration of residence in current dwelling, the type of tenure, the size of habitable and inhabitable (utility) space and the rate of occupancy per dwelling. Added to this, the extent to which the current dwelling is serviced by public utilities is also examined.

8.5.1 Length of Residence in Current House

It was found that about 29% of the total sample had lived in their current residence for 10 years or less, 42% for 20 years, and 29% for 21 years or more. The maximum period of residence was 27 years while the minimum was 4 years, and the median of duration of residence in the current house was 16 years.

Table 8 - 6: Length of Residence in Current Residence

Years	Length of Residence					
	El-Salam		El-Mukhtar		Total Sample	
	No.	%	No.	%	No.	%
10 or less	9	9	48	48	57	28.5
11 to 20	33	33	52	52	85	42.5
21 or more	58	58	0	0	58	29
Total	100	100%	100	100%	200	100%
Minimum duration	5		4		4	
Maximum duration	27		17		27	
Median	24		13		16	
Mean	20.74		20.74		15.77	

Source: Fieldwork, Benghazi (Feb-May) 2003

However, as can be seen from Table 8.6, remarkable differences are found between the OBH neighbourhoods in the two selected areas regarding duration of residence. For instance, while the share of those who had lived in the El-Salam area for 10 years or less did not exceed 9%, in El-Mukhtar area this share amounted to 48%. In contrast, while the share of those who had lived for 21years or more in the El-Salam area represented 58%, in the El-Mukhtar area no respondent mentioned that he had lived in his current house for that long. In addition, it was found that the median duration of residence in the El-Salam area was longer (24 years) than in the El-Mukhtar area (13 years). These differences reflect the

fact that the residential development in OBH neighbourhoods in the El-Salam area began earlier (mid 1970s) than that in the El-Mukhtar area (mid 1980s).

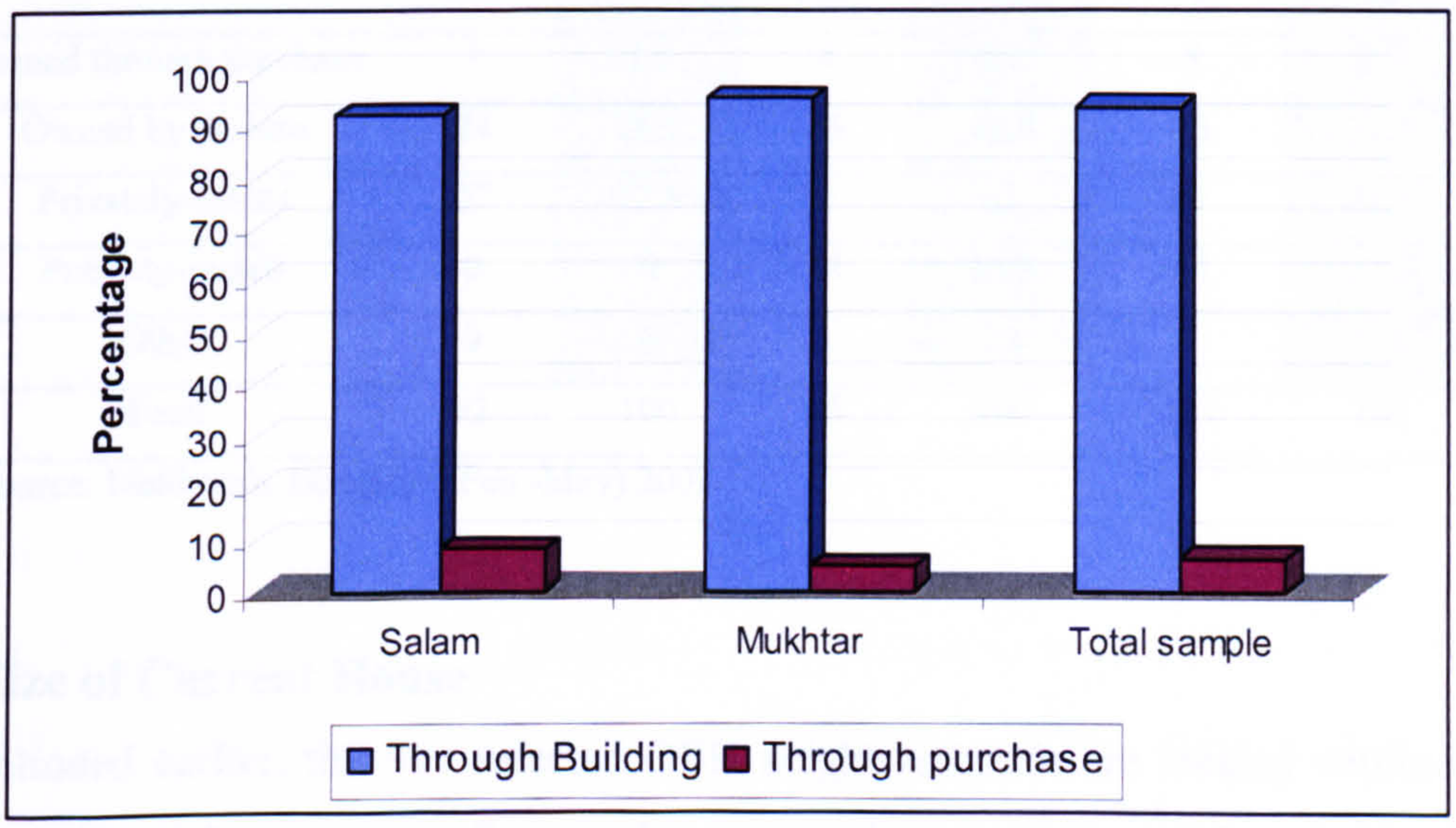
8.5.2 Tenure Status of the Current House

As mentioned in the methodology chapter, the selection of these OBH neighbourhoods was mainly based on the fact that all housing plots were allocated for OBH. Thus, it was assumed that all respondents had to be owner-builders of their current houses. This assumption was proved true by the results. However, one purpose of this study is to assesses the accessibility of OBH, and so it was necessary to examine the source of ownership in order to identify those who became owners of their current houses by building or by other means.

8.5.2.1 Source of Ownership: Who is the Owner-builder?

Although all respondents were owner-occupiers for their current houses, only 93.5% became owners through building while 6.5% became owners through purchase. As Figure 8.22 illustrates, the share of OBs in El-Salam area was slightly under 92%, compared to 95% in the El-Mukhtar area.

Figure 8 - 22: Source of Ownership of the Current House



Source: Fieldwork, Benghazi (Feb-May) 2003

It can be concluded that the great majority of the surveyed houses in the five OBH neighbourhoods were still occupied by their OBs, since only 8% and 5% respectively in the El-Salam and El-Mukhtar areas were owned by their current occupiers through purchase.

8.5.2.2 Owner-builders and Tenure in Previous House

As discussed in chapter 7, one of the eligibility criteria to get access to land is neither the applicant nor any member of his family should be in possession of buildable housing plots or habitable dwellings. As Table 8.7 illustrates, only 2.7% of a total of 187 OBs were owners of their previous dwellings through purchase. In contrast, 37.5% of total OBs were living in dwellings owned by their parents, 35.8% were living in privately-rented dwellings and 23.5% were living in publicly-rented dwellings. However, although 46.3% of OBs in the El-Mukhtar area had been living in publicly-rented dwellings, none were in the El-Salam area. This can be attributed, as discussed in chapter 5, to the limited contribution of PPH programmes to housing provision in the country during the pre-revolution era, compared to its remarkable expansion during the 1970s.

Table 8 - 7: Type of Tenure in Owner-builders' Previous Dwelling

Tenure of previous dwelling	Owner-builders					
	El-Salam area		El-Mukhtar area		Total sample	
	No.	%	No.	%	No.	%
Owned through purchase	1	1.1	4	4.2	5	2.7
Owned by parents	24	26.1	46	48.4	70	37.5
Privately-rented	67	72.8	0	0	67	35.8
Publicly-rented	0	0	44	46.3	44	23.5
Other	0	0	1	1.1	1	0.5
Total	92	100	95	100	187	100

Source: Fieldwork, Benghazi (Feb.-May) 2003

8.5.3 Size of Current House

As mentioned earlier, the five selected OBH neighbourhoods are located within the low density residential areas according to the approved master plan of Benghazi, where in houses that are in the form of detached dwellings have to conform to all building regulations applicable to these areas. As mentioned earlier, the size of housing plots in the

selected neighbourhoods ranged between 450 to 750 m² with the median at 550 m². These sizes of plots were seen as quite sufficient by many OBs to accommodate spacious houses. In this respect, an OB from the El-Mukhtar area who built his own house on a 600 m² plot said that:

> "Although the plot was hardly accessible due to the bad condition of the roads, but its size was bigger than I expected, since it was sufficient to accommodate a spacious villa that could satisfy the needs of my big family."

8.5.3.1 Number of Housing Units per Building

As can be seen from Table 8.8, the majority of houses in both the El-Salam and El-Mukhtar case study areas comprised one housing unit. Despite the similarity between the two selected areas regarding the distribution of number of housing units per building, some differences were found between them regarding the distribution of floors per house. For instance, the share of houses consisting of one floor in the El-Salam area was larger (62%) than in the El-Mukhtar area (51%). In contrast, while the share of houses consisting of two floors represented 34% of the total in the El-Salam area; this share was larger in the El-Mukhtar area at 45% of the total houses

Table 8 - 8: Number of Housing Units per House

No. of housing units per house	El-Salam		El-Mukhtar		Total Sample	
	No.	%	No.	%	No.	%
One housing unit	72	72	71	71	143	71.5
Two housing units	24	24	24	24	48	24
Three housing units	4	4	5	5	9	4.5
Total	100	100	100	100	200	100

Source: Fieldwork, Benghazi (Feb-May) 2003

8.5.3.2 Size of Habitable Space

The size of habitable space and its adequacy in accommodating the household needs is seen as an important indicator in assessing the quality of dwellings. Although all surveyed houses in the sample comprised main habitable rooms such as bedrooms, living rooms and reception rooms; the number of these per house, as Table 8.9 illustrates, varied in the two selected areas.

Table 8 - 9: Number of Habitable Rooms per House

OBH Neighbourhoods	Number of habitable rooms per house					
	Bedrooms		Reception rooms		Living rooms	
	Mean	Median	Mean	Median	Mean	Median
El-Salam Area	4.35	4	1.87	2	1.34	1
El-Mukhtar Area	4.64	4	1.77	2	1.34	1
Total Sample	4.49	4	1.82	2	1.34	1

Source: Fieldwork, Benghazi (Feb-May) 2003

8.5.3.3 Size of Utility Space

The average number of utility rooms such as bathrooms; kitchens; storages; and garages, as Table 8.10 shows, varied among the surveyed houses in the OBH neighbourhoods in the two selected areas.

Table 8 - 10: Number of Utility Rooms per House

OBH Neighbourhoods	Number of inhabitable rooms per house							
	Bathrooms		Kitchens		Storages		Garages	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
El-Salam Area	3.03	3	1.38	1	0.72	1	1.12	1
El-Mukhtar Area	3.34	3.5	1.38	1	0.69	1	1.38	1
Total Sample	3.18	3	1.38	1	0.70	1	1.25	1

Source: Fieldwork, Benghazi (Feb-May) 2003

8.5.4 Rate of Occupancy

As mentioned in chapter 5, the overcrowding of dwellings was one of the main problems experienced in the country during the pre-revolution era. In this section, the rate of occupancy per housing unit, per bedroom and per bathroom is discussed in order to assess the extent to which owner-built houses are able to accommodate their occupants' needs.

8.5.4.1 Families per Housing Unit

As Table 8.11 illustrates, although an average of 1 and 1.03 families per housing unit respectively were found in the total sample and the El-Salam area; this figure was less than one family per housing unit (0.96) in the El-Mukhtar area. This means that the rate of

occupancy in the El-Salam area was similar to that revealed by the 1995 census, which showed that a rate of 1.01 families per housing unit had been achieved in the country. However, the slightly smaller average number of families per housing unit in the El-Mukhtar area can be attributed to the smaller size of households (families per household) and the relatively larger size of houses (housing units per building) in the El-Mukhtar area compared to those in total sample and in the El-Salam area.

8.5.4.2 Persons per Bedroom

Table 8.11 indicates that, the rate of occupancy per bedroom in the El-Salam area is slightly higher (2.29 persons) than in the El-Mukhtar area (1.9 persons). Added to this, the rate of occupancy in El-Salam area is also higher than that revealed by the 1995 census (1.8 persons per bedroom). This can be attributed to the differences found in the sizes of household and the number of bedrooms per house between the two selected areas. In this respect, while the average household size in El-Salam area was larger (10 persons) than in the El-Mukhtar area (8.84 persons), the average number of bedrooms in the El-Salam area was lower (4.35) than in the El-Mukhtar area (4.64) bedroom per house.

8.5.4.3 Persons per Bathroom

The average number of persons per bathroom, as can be seen from Table 8.11, was much lower in the El-Mukhtar area (2.64) than in the El-Salam area (3.30). This can also be attributed to the larger average number of bathrooms and smaller average sizes of households in the El-Mukhtar area compared to those in the El-Salam area.

Table 8 - 11: Rate of Occupancy per Building

Rate of occupancy	El-Salam	El-Mukhtar	Total sample
Family per housing unit	1.03	0.96	1.33
Person per bedroom	2.29	1.96	2.09
Person per bathroom	3.30	2.64	2.96

Source: Fieldwork, Benghazi (Feb-May) 2003

8.5.5 Sub-letting Parts of the House

In response to a question in the questionnaire asking respondents to state whether they rented out any parts of their houses, 41 respondents (20.5%) mentioned that they rented out some parts of their houses. No one mentioned that any residential part of their houses was rented out, all 41 (27 in the El-Salam area and 14 in the El-Mukhtar area) rented out shop, workshop or wholesale goods storage space in their buildings. For example, an owner-builder from the El-Mukhtar area who was renting out shop space in his house said:

> "Actually my eight-member family occupies the entire house except for two shops attached to the house for rent. Believe me, had it not been for rent from these two shops I wouldn't have been able to complete the construction of the first floor. I used to finish a part of the building every year and now this rent will be a great help to me in the marriage of my son which has been delayed for more than three years."

8.5.6 Connection to Public Utility Networks

As mentioned in chapter 5, notable improvements were achieved during the post-revolution era in the level to which the housing stock was serviced by public utilities. Despite this improvement, it was noticed that the development of infrastructure in most OBH schemes is often not corresponding with the residential development undertaken by owner-builders. In this section, the extent to which respondents' houses were serviced with public utilities is examined.

8.5.6.1 Connection to the Water Supply Network

Although all respondents said that their houses were connected to the public drinking water network, but the insufficiencies in the water supply and particularly in the summer season were common in both selected areas. The increased demand and limited supply of water during the summer is a real problem that many respondents mentioned.. In this regard, a respondent in the El-Salam area said:

> "The shortage of drinking water is a real problem that we are still facing especially in the summertime. It is common that we suffer from shortages in water supplies for most of the day or for more than two whole days per week. We used to wait until late in the night in the hope that we might get a little water in the network. If

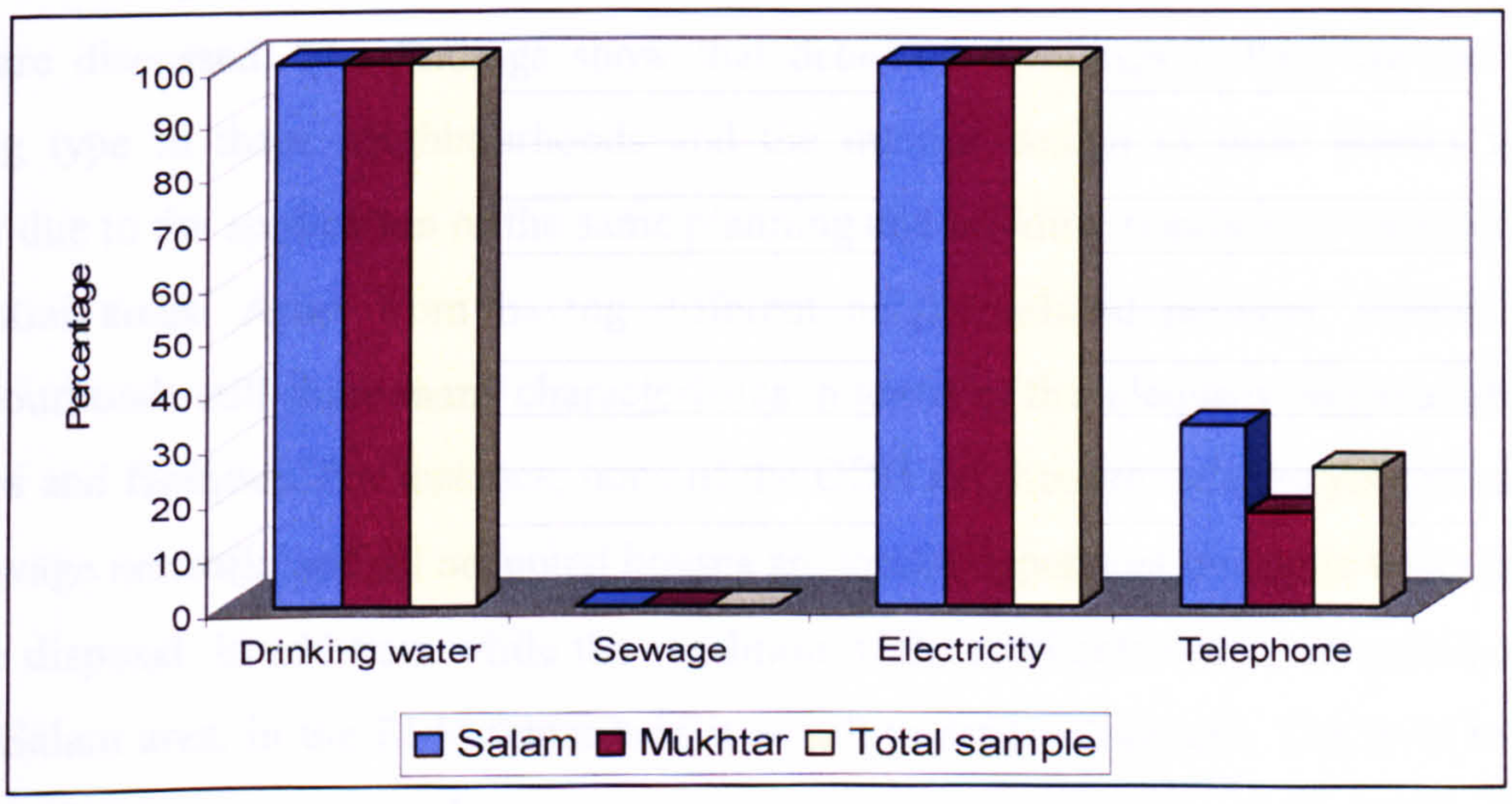
> until late in the night in the hope that we might get a little water in the network. If that happened, then we immediately started using our electric water-pump to collect some water for the next day. Otherwise, we had no option except using our cars to bring water from elsewhere."

8.5.6.2 Connection to the Sewage Network

It was revealed that none of the selected OB neighbourhoods were connected to the public sewage network. Houses already occupied were totally dependent on septic tanks for their sewage disposal. In the El-Salam area, the problem is worse than in the El-Mukhtar area due to the overuse of septic tanks for more than twenty years in most houses. Thus, it is common to see floods of sewage in streets in the area. This problem was raised by most respondents in both areas. One respondent in the El-Salam area said that:

> "The scene of sewage lakes is familiar in many streets in our area, particularly in the winter when sewage mixed with rainwater surrounds our houses. In summer, in addition to the bad smell, these lakes allow the breeding of mosquitoes and other insects. The problem is getting worse because many people tend to neglect to drain their full septic tanks since they have to spend more than one third of their monthly salary to hire cars for this purpose. It is a serious problem that should be sorted out urgently due to its dangerous affect on hygiene and public health in our area."

Figure 8 - 23: Connection to Public Utility Networks



Source: Fieldwork, Benghazi (Feb-May) 2003

8.5.6.3 Connection to the Electricity Network

As mentioned in chapter 5, about 99.1 per cent of the housing stock in 1995 was serviced by the public electricity system compared to only 33.0% in 1964. This notable improvement was supported by the results of fieldwork, since all respondents mentioned that their houses were supplied with electrical power from the city's network. However, some shortages in electricity are still experienced by many residents in both areas due to the overloads that the network faces particularly in the summertime, or due to cables being cut which is experienced especially in the El-Mukhtar area.

8.5.6.4 Connection to the Telephone Network

The fieldwork results show that only a quarter of houses in the total sample are serviced by the public telephone network. However, as Figure 8.23 illustrates, the distribution of houses serviced by public telephone network in the El-Salam area is larger (33%) than in the El-Mukhtar area (17%). It can be concluded that the level to which houses are serviced by public utilities is inadequate, except in the case of electricity. This situation had a considerable effect on the degree of satisfaction that most respondents mentioned regarding the neighbourhood's quality, as will be discussed in chapter 11.

8.6 Conclusion

In this chapter, the physical characteristics of the selected OB neighbourhoods as well as the socio-demographic and housing characteristics of the respondents in the two selected areas are discussed. The findings show that detached dwellings (villas) are the typical housing type in these neighbourhoods and the interior design of most houses is quite similar due to the application of the same planning and building regulations for low density residential areas. Apart from having different neighbourhood patterns, selected OBH neighbourhoods still share many characteristics in terms of the adequacy and availability of services and facilities. For instance, none of the OBH neighbourhoods are yet linked to the city sewage network, and all occupied houses are totally dependent on septic tanks for their sewage disposal. In addition, while the condition of the road network is not satisfactory in the El-Salam area, in the El-Mukhtar area it is still underdevelopment. The level to which the occupied houses surveyed are serviced with the public telephone network is also not satisfactory since no more than a quarter are connected to this service.

With regard to the socio-demographic characteristics of the target group, the findings show that the great majority of respondents were married men aged 50 years or more. Most of respondents were still in employment (44% as government-employees and 24% self-employed), and about half of them had attained intermediate education level (secondary or technical). Those who were retired or illiterate were aged 60 or over and were mainly found in the El-Salam area. In terms of households, the findings show that about one-third of households were extended families who were mainly found in they El-Salam area. In terms of the age and sex composition of households, the number of males was slightly higher than that of females. Added to this, although all households including children aged 18 years or less; the share with children aged 19 years or more was slightly higher in El-Salam area than in the El-Mukhtar area. The findings show that the total monthly household income was mainly dependent on the number of workers in the household. For instance, in the surveyed households in the El-Salam area, which comprised more workers than in the El-Mukhtar area, the median of total monthly income of households was LD550 compared to LD500 in the El-Mukhtar area.

In terms of housing conditions, the findings show that all respondents were owner-occupiers in their current dwellings, mainly through building (93%). The great majority of them had previously lived in another area in Benghazi and in dwellings mainly shared with other families. In addition, most OBs aged 50 years or more (84.5%) had a length of residence of 11 years or more in their current dwelling. 2.5% were owner-occupiers for their previous dwellings, 58.5% were tenants, and 37% were living in dwellings owned by their own parents.

The findings show that all the buildings consisting of one to two floors had an average of 1.33 housing units per house. In addition, all houses comprised main habitable and utility rooms such as bedrooms, living rooms, bathrooms, and kitchens. In terms of the rate of occupancy, the findings show that there were 1.33 families per housing unit, 2.09 persons per bedroom and 2.96 persons per bathroom.

In terms of infrastructure conditions, the findings show that many basic elements of infrastructures were largely undeveloped, particularly in the El-Mukhtar area. For instance, most respondents mentioned that their houses were not linked to the public sewage network. In addition, the inadequacy of telephone connections and drinking water supplies

as well as the poor conditions of the roads were other features of the infrastructure in these areas. The next chapter discusses the owner-builders' assessments, attitudes and preferences concerning how they got access to building resources (land, funding, materials and labour).

Chapter Nine:

Practices, Assessments and Attitudes Concerning Access to Building Resources

Chapter Nine

Practices, Assessments and Attitudes Concerning Access to Building Resources

9.1 Introduction

Having examined the housing and population characteristics of the case study OBH neighbourhoods in the previous chapter, this chapter explores how OBs got access to building resources (land, building permit, funding, materials and labour) and investigates their attitudes towards the accessibility and sufficiency of these resources. To achieve this aim, the chapter is divided into four sections. After highlighting the purpose and structure of the chapter in the first section, the second section explores the main motives among OBs for building their own homes. This is followed by a discussion of the accessibility and sufficiency of building resources in the third section. Finally, a conclusion of the findings of the chapter is given in the fourth section.

9.2 Motives for OBH: Why Building Not Buying?

As discussed in chapter 2, the choice made by particular households to house themselves is on the one hand guided by their needs and preferences and on the other hand is restricted by income and the alternatives offered in the housing market (Dieleman and Mulder, 2002:35). In this respect, the relevance of OBH as an effective mode of housing provision is mainly based on some of its attributes and benefits, such as affordability, secure ownership, and the satisfaction and flexibility in production and consumption that the privately-built dwelling provides for its owners. This section discusses the main motives that encouraged OBs in the selected OB neighbourhoods in Benghazi to fulfil their housing needs by building their own houses instead of buying or renting house.

9.2.1 The Lack of Affordable Alternatives as a Motive for Building

The findings of the fieldwork revealed that the great majority (91.4%) of OBs decided to build their own houses because they could not afford to buy ready-built houses on the

market. However, this motive was more apparent among OBs in the El-Salam area, being mentioned by 95.7% of them compared to only 87.4% of OBs in the El-Mukhtar area. One OB in the El-Salam area who built his house in the mid-1970s said that:

> "Given the bad financial conditions that I was in at that time, it was impossible for me to buy a ready-built house to accommodate my family. Apart from my limited monthly salary which did not exceed LD100 in the early 1970s, I had no savings or other assets that might help me to buy any ready-built house in any condition."

The lack of affordable ready-built houses was also mentioned by an OB from the El-Mukhtar area who built his house in the late 1980s. He stated that:

> "My limited financial capabilities had been the main reason behind my decision to go for building my own house instead of buying a ready-built house from market. As a matter of fact, building my own house incrementally was more affordable than buying an a ready built-house whose price in the market would exceed LD 50,000 for a small one-storey house with no more than 300 m² in size. However, I was not able to afford even 25% of this huge sum in the mid 1980s."

Another OB from the El-Mukhtar area who was previously living in a publicly-owned apartment said that:

> "The difficult housing conditions I had been living in with my family were the main incentive for my decision to build my own home. I decided to build a house because buying a ready-built house was almost impossible for me given my limited financial resources compared to the high prices of houses at that time (the late 1980s). Therefore, building a house remained the only option for me to satisfy my family's housing needs."

9.2.2 The Desire to Design and Build a Dream House

The share of those who were motivated by the desire to design and build a dream house did not exceed 8.6% of total OBs, but this motivation was mentioned by more in the El-Mukhtar area (12.6%) than in the El-Salam area (4.3%). In this respect, an OB from the El-Mukhtar area who was previously living in a two-bedroom flat with his seven-member family said:

> "I always dreamt of living in big house with many rooms. A house of my own that I could design and build in the way I wanted. A house that would accommodate the whole family and I could live-in comfortably for the rest of my life."

The desire to design and build a dream house was one that many Libyan families began to have during the 1980s and 1990s. This was also mentioned by one of the designers interviewed. In this respect, the Libyan architect El-Mennefiy[1] said that:

> "The Libya family's desire to build dream house has begun to be noticed since the mid-1980s particularly among dwellers of multi-story residential buildings. Based on my experience, this was due to two main reasons. The first is concerned with the unsuitability of these dwellings in terms of space, physical quality and privacy. And the other reason is related to the Libyan family's perception concerning OBH as the most affordable means of satisfying its current and future housing needs, particularly for low and middle-income families."

It can be concluded that the affordability of house construction was the main motive that OBs had for building their own houses instead of buying a ready-built house on the market. This affordability, as discussed later in this chapter, mainly resulted from the incremental nature of the house construction process, which enabled the OB with limited finances to spread the total costs of construction over a rather longer period of time.

9.3 Access to Building Resources

As discussed in chapter 2, one of the major constraints that might face any potential OB in building his own house as desired and planned is related to the difficulty that he might face in getting access to sufficient building resources. Such a difficulty was seen as responsible for temporarily discouraging OBs as well as for delaying construction or at worst for halting progress altogether.

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[1] In addition of being a well-known architect, El-Mennefiy was also staff member at the School of Architecture and Urban Planning, University of Garyounis and University of Afriqya, Benghazi. He has about 27 yrs experience in the field of teaching, design and construction during which he has made a lot of designs for many private and public buildings and worked as consultant for many clients and as a contractor for many construction projects. The interview was conducted on 27/04/2003 at the interviewee's home.

9.3.1 Acquisition of Land

The accessibility and availability of buildable land in Libya, as discussed in chapter 6, has largely been influenced by set of regulations and legislations issued by the government during the past three decades. In this section, the way OBs got access to land and their attitudes towards its accessibility is discussed.

9.3.1.1 Source of land

Of the total of 187 OBs in the whole sample, 82.4% had been allocated plots through Benghazi municipality and 2.1% through their housing cooperative, while the remaining 15.5% of OBs bought their plots from the original owners. However, while 4.3% of OBs in the El-Salam area mentioned that they had been allocated plots from their housing cooperatives, none of those in the El-Mukhtar area stated that he had access to a housing plot through this source. This can be attributed, as discussed in chapter 5, to the notable role that housing cooperatives played in expanding OBH activity in the early 1970s compared to the 1980s and 1990s, during which the activity of housing cooperatives was suspended following the abolition of the GHC in 1984. In this respect, an OB in the El-Salam area who got his plot from housing cooperative said:

> "In the early seventies, I became a member of *jameia-eskaania* [housing cooperatives] in Benghazi aiming to get housing plot and building-loan to build my house. In less than three years of membership, I was notified that I had been allocated a plot. I couldn't describe my joy at the news and I realised that my long suffering was coming to an end by having my own independent *bait.*"

9.3.1.1.1 Land Bought from Original Allottee

Although all plots in the selected OB neighbourhoods were supposed to be allocated to eligible applicants willing to build their own houses, the share of OBs who bought their plots from original allottees accounted for 15.5% of the total OBs. Surprisingly, some of the plot buyers were also applicants who, after a long wait for a plot from the municipality, decided to buy a plot in these neighbourhoods instead. For instance, an OB in the El-Mukhtar area who bought the plot on which his own house was built said that:

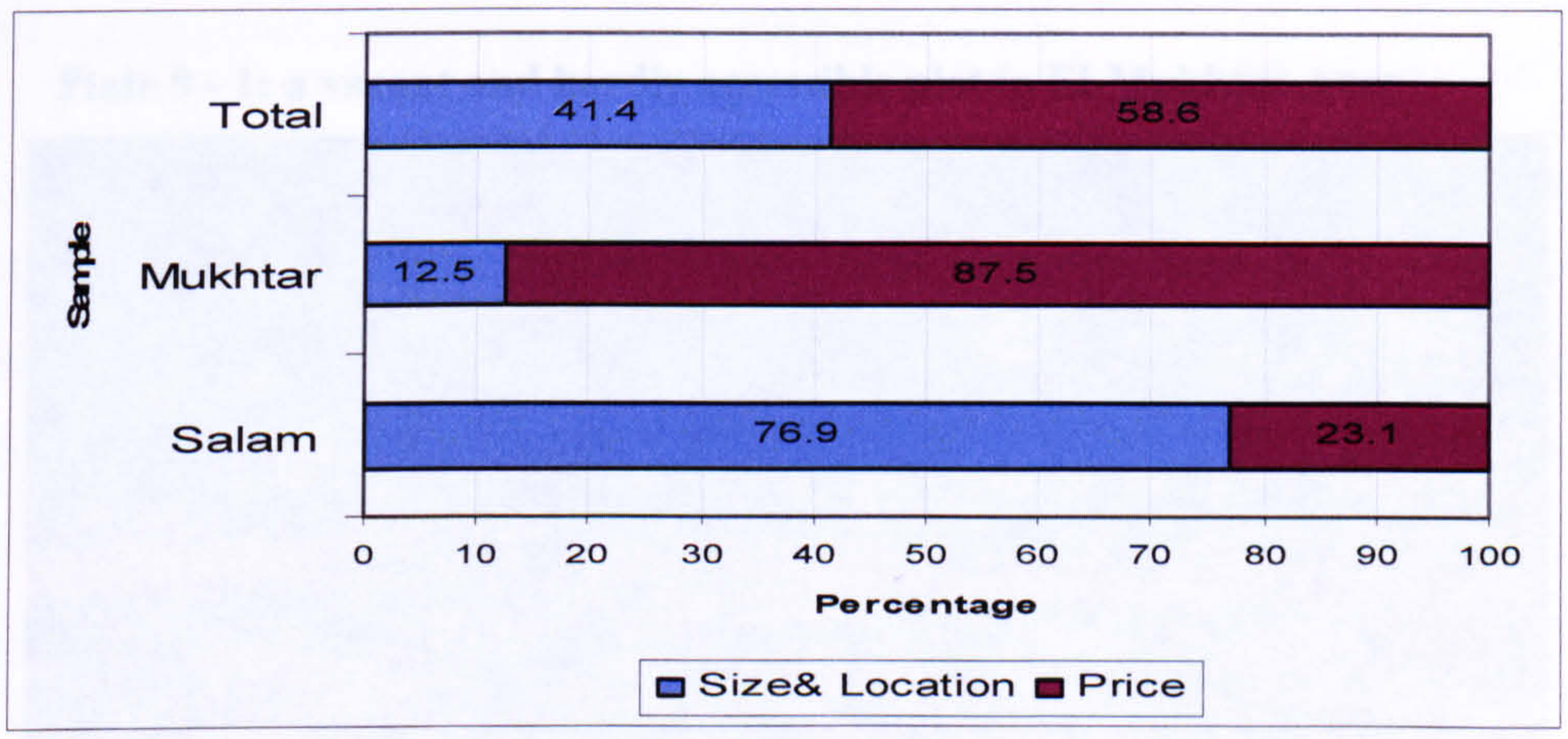
> "I bought a plot from the original allottee after I lost all hope in getting it from the *baladiya* [municipality]. I waited for more than ten years in the hope that I would

> be offered a plot by the state, but in vain. My hopes had faded away when I met people who had been waiting for twenty years to get a plot to build their own home and were still waiting."

Criteria for and the Cost of Land Purchased

As Figure 9.1 illustrates, 58.6% of those who bought their plots mentioned that the price was their main criterion for purchase while 41.4% mentioned the size and location of the plot as criteria for purchase. However, while 76.9% of those who purchased their plots in the El-Salam area mentioned that their criterion of purchase was the size and location of plot, almost all of plot buyers in the El-Mukhtar area mentioned that their criterion was the price of the plot.

Figure 9 - 1: Criteria of Plot Purchase



Source: Fieldwork, Benghazi (Feb.-May), 2003

The high percentage of OBs who bought land based on its cheap price in the El-Mukhtar area can be attributed to the poor condition of infrastructure in the area. This assumption is supported by the reply of an OB from the El-Mukhtar area who bought his plot:

> "In the whole city, El-Mukhtar area is undesirable as a residence to many people. This is mainly due to the lack of many services if not all, such as paved roads, sewage and drainage systems, schools and clinics. This made the price of the plot in this area relatively low compared to other places in Benghazi."

When the same OB was asked from whom the plot was purchased, he replied that:

> "I have bought a plot that was hardly accessible, from a person who has been allocated it by *baladiya*. The man was not interested in this neighbourhood as he told me that he was looking for a better area and was not ready to waste his money in building *bait-alomoor* [life-time house] in a place that is not worth living in. In his view the place is isolated and unsafe and lacks basic services."

The cheap price of plots in El-Mukhtar area is reflected in the fact that about 68.8% of those who bought their plots in El-Mukhtar area paid a total price for the plot ranging between LD 12,000 to 15,000. These prices are cheaper than those in the El-Salam area where the price of a plot bought ranged between LD 18,000 to 24000. Plate 9.1 illustrates a vacant and hardly accessible plot in El-Mukhtar area.

Plate 9 - 1: a vacant and hardly accessible plot in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May), 2003

9.3.1.1.2 Land Allocated by the Municipality or through a Housing Cooperative

As mentioned above, the great majority of OBs in the selected OB neighbourhoods had acquired their plots through land allocations programmes. However, the length of waiting time and the criteria by which these plots were allocated differed among the sample.

Eligibility and Criteria by which Land was Allocated

To qualify for a plot through the land allocation programmes, as discussed in chapter 7, the applicant has to provide evidence that neither he nor his/her spouse or anyone among his/her underage dependants are in possession of buildable land or a habitable dwelling. Of the total of 158 OBs who acquired their plots through land allocation programmes, the study findings revealed only 3.2% (5 cases) of OBs were the owners of their previous residence. This means that the great majority (96.8%) of the beneficiaries of land allocation programmes were eligible to acquire plots through these programmes since they were not the real owners of their previous houses.

In terms of criterion for allocation, the priority of applicants on waiting lists was the criterion for about 89.6% of OBs who got their plot from the municipality or a housing cooperative. The remaining 10.4% got their plots based on their applications made for specified vacant unallocated plots in these neighbourhoods.

It is worth mentioning that the share of OBs who got their plots based on their applications made for specified unallocated plots in the El-Mukhtar area was larger (15.2%) than in the El-Salam area (5.3%). Such a high percentage in the El-Mukhtar area can be attributed to the fact that some plots in the three OB neighbourhoods were left unallocated by the municipality or were rejected by their initial allottees. This was mainly due to physical problems in these plots which made them inaccessible or undesirable to many allottees (see section 8.2.2.1).

The Length of Waiting Time for Plots

The findings show that the waiting period for plots to be allocated during the 1970s was much shorter than that experienced by OBs during the 1980s or 1990s. For instance, while the majority (89.3%) of allottees in the El-Salam area had to wait 4 years or less, about half (55.7%) of those in the El-Mukhtar area had to wait not less than 13 years to get their plots. This difference can be attributed, on the one hand, to the remarkable expansion in land allocation programmes in the early 1970s. On the other hand, delays in the approval of many residential subdivisions, as mentioned in chapter 6, led to a decline in the number of plots ready for allocation in the 1980s, which in turn led many land applicants to wait a rather long time for a plot to be allocated.

9.3.1.1.3 Attitudes towards Land Allocation

The findings show that all allottees (79) in the El-Salam area believed that they had easy access to land, while the great majority (66 allottees) 83.5% in the El-Mukhtar area stated that access to land was quite difficult and took longer than expected. This can be attributed to the shorter time (4 years or less) that many allottees in the El-Salam area waited to get their plots compared to the rather longer time in the El-Mukhtar area (9 to 15 years).

Regarding the longer waiting time experienced by many allottees in the El-Mukhtar area, one OB said:

> "It never came to my mind that I would have to wait for more than ten years to obtain a plot on which my family's house could be built. During this period, I used to visit the *baladiya* every week where they kept telling me every time that there were no plots for allocation. I remember that people like me who used to visit the *baladiya* regularly at that time were in their tens if not in their hundreds, crowded into the Land and Real-estate Properties Office. I used to meet the same people who dreamt like me of obtaining a plot to build their own houses."

When the same OB was asked why he did not buy a plot instead of waiting for such a long time, he answered that:

> "It was cost-prohibitive and I couldn't afford it. My monthly salary was needed to cover the daily needs of my family as I was the only one in a job. Hence, it was almost impossible for me to buy a plot, which might cost me ten times the cost of the same plot allocated by *baladiya*."

Another OB in the El-Mukhtar area said that:

> "It took me nine years of waiting to get the plot. This was a short time compared to other applicants who had to wait for more than 15 years. Thus, I consider myself as one of those lucky applicants who were allocated plots probably because of the very difficult housing conditions that I was in at that time, which had an effect on speeding up my application."

The issue of long waiting time that many OBs experienced for a plot to be allocated to them, particularly during the 1980s was raised during an interview conducted with a senior official in the Land and Real-estate Properties Office (LREPO) in Benghazi. He mentioned

two important factors in relation to this issue. The first is related to the increased number of applicants compared to the limited number of plots available for allocation, while the second factor is concerned with the instability in land allocation programmes which led many land applicants to lose their priority in the waiting list.

Surprisingly, asked about the increased number of applicants compared to the limited number of plots, the official in the LREPO replied that:

> "Although we have more than 10 thousand applications for land, but I still believe that many applicants, particularly those with small families, are not in urgent need to build houses whether because they are living at their parents' home or in cheap *eskann-shabiey* [publicly-rented dwellings]. Believe me, it has become a fashion nowadays, every Libyan citizen wants to get a plot and build a house. Where can we get a plot for everyone from? It is impossible"

When he was asked, why they did not apply the priority criteria mentioned in the regulations concerned with the allocation of publicly-owned land, he replied that:

> "First, they [the state] should have stability in land allocation programmes. As you know, the right of allocation has been given to different public institutions over the past twenty years which made many applicants to lose their priority. In addition, the state should speed up the approval of new residential subdivisions to meet the increased demand for land. However, relying totally on land allocation to solve the housing problem is an impractical solution; the state and private sector should build houses at affordable terms. From my point of view, this is the only way to solve the problem."

It can be concluded that access to land through land allocation programmes during the early 1970s, as mentioned by all allottees in the El-Salam area, was quite easy. In contrast, most of the allottees in El-Mukhtar area had to wait longer before a plot could be allocated to them. In addition, the low price of land was the main criterion for purchase for those who bought their plots in the selected OB neighbourhoods. Such low prices can be attributed to the poor condition of infrastructure in these neighbourhoods.

9.3.2 Designing the House

As discussed in chapter 7, before commencing the construction works, the prospective OB has to obtain approval for house plans and a formal building permit in accordance with the planning and building regulations. This section discusses the way in which the house was designed and the required approval and permits obtained.

9.3.2.1 Who Designed the House?

Of the total 187 OBs, 80.7% mentioned that the design was prepared by an architect, 3.7% stated that a surveyor made the design and 15.5% copied a ready-made design. However, the share of OBs who copied a ready made design was larger in the El-Mukhtar area accounting for 20% of total OBs in the area compared to only 10.9% of OBs in the El-Salam area.

The phenomenon of copying a ready-made design was introduced by the researcher during interviews conducted with some OBs and designers, in order to find out more about the motives behind it. One OB in the El-Mukhtar area who adopted a similar design used for one of his own relatives' houses said that:

> "During my frequent visits to his two-floor villa, I and my wife had always been impressed by the interior design, the size and distribution of the rooms and the *tashteeb* [finishing] of the house. Hence, I asked him to provide me with a copy of the plan so that I would be able to ask the designer to prepare a similar design."

When the same OB was asked if he adopted the same design copied without any changes, he answered:

> "Yes, it was almost the same; the only difference was that I confined myself to the ground floor only. This was mainly due to my limited financial capabilities which made me unable to build the two floors at that time."

Regarding the phenomenon of conformity in design, the Libyan architect El-Mennefiy said that:

> "It is doubtless true that the Libyan family is always looking to satisfy its own housing needs by using an appropriate design that considers its social and economic conditions. But at the same time, copying all or some parts of an already made design does exist and unfortunately this phenomenon is on the increase since

the mid-80s. I remember that some of my clients asked me to prepare design based on what they had seen in already-built houses. In other cases, I had clients who asked me to design some elements in the house, such as the kitchen or internal stairs, of their houses similar to those in their relatives' or friends' houses. I would guess that the phenomenon of copying ready-made design has become a common practice and is rampant, mainly influenced by women's desires and wishes."

9.3.2.2 Duration and Cost of Design

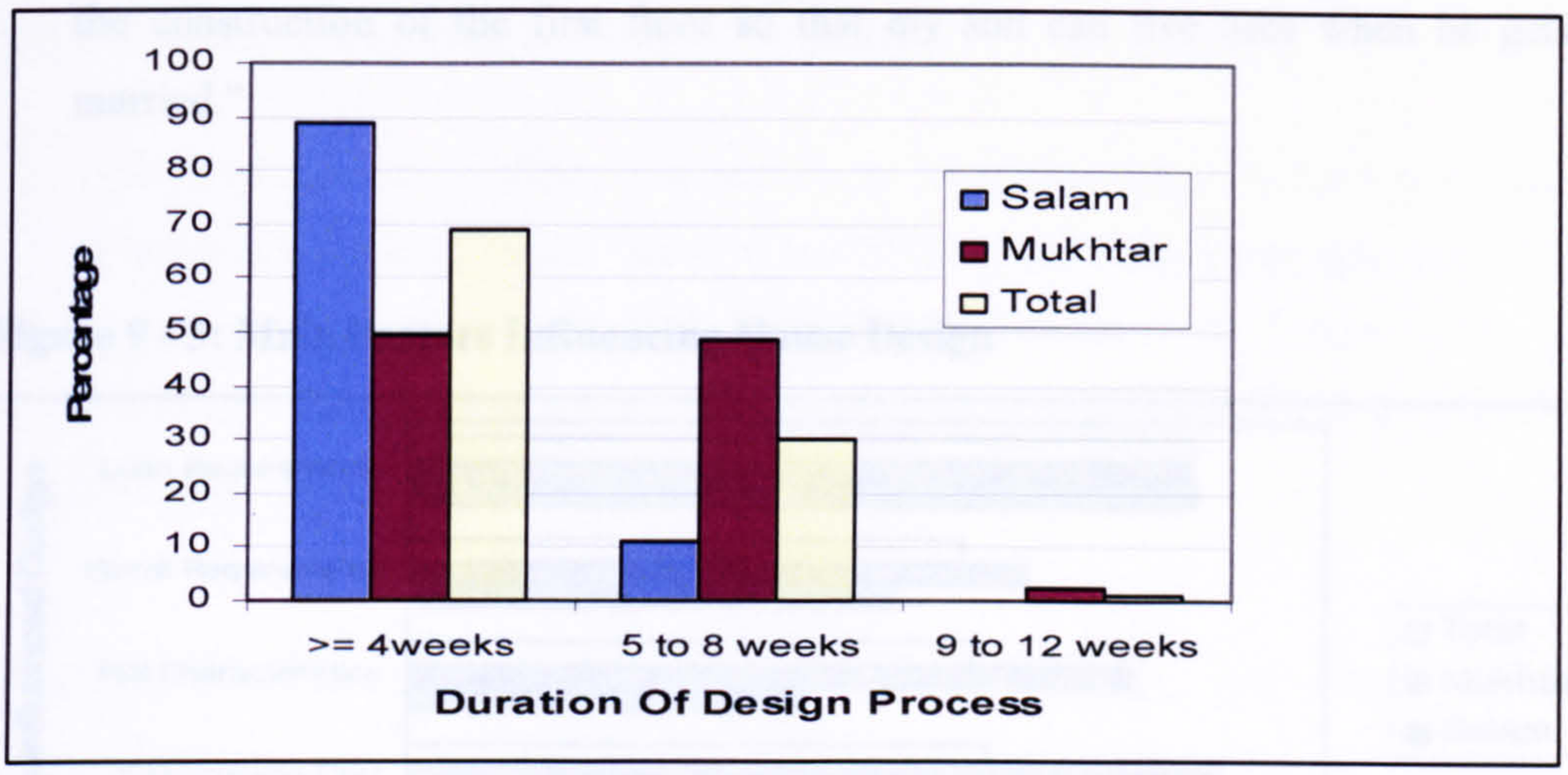
As discussed in chapter 2, better client-designer communication plays a major role in producing a more satisfactory design that suits the client's needs. The study's findings show that 69% of OBs spent four weeks or less in designing their houses, 29.9% spent between 5 to 8 weeks and only 1.1% spent between nine to twelve weeks. As Figure 9.2 illustrates, the share of OBs who spent less than 4 weeks in the El-Salam area (89.1%) was larger than that in the El-Mukhtar area (49.5%). This can be attributed to the fact that most of the OBs in El-Salam area who built their own houses during the 1970s were only interested in the size of the house and the number of rooms; thus, they used to spend less time in design. For instance, an OB in El-Salam area who designed his house in less than 4 weeks was asked whether he discussed the design with the hired architect. He said that:

> "In fact that never happened because one of the designs that as presented to me, was exactly suited to my choice "three bedrooms, kitchen, two bathrooms, a *salaah* and *saloon"*. That was exactly what I wanted, and in just three days the whole set of design drawings were prepared and handed to me."

Regarding the importance of designer-client communication and the ability of the Libyan architect to provide the proper design economically and socially, the Libyan architect El-Mennefiy said that:

> "Through good communication with the client, the architect is capable of understanding the family's needs and can make a design that responds to these needs based on the social and economic conditions of the family. Moreover, the architect should be aware of the specifications of building materials so that he can give the right advice to his clients in buying good quality building materials as well as in using these materials properly in a way that would keep the cost to a minimum without offending the building regulations."

Figure 9 - 2: Duration of the Design Process



Source: Fieldwork, Benghazi (Feb.-May), 2003

For the whole sample the total cost of designs ranged between LD100 to 300. However, while the great majority of OBs (84.8%) in the El-Salam area spent between LD101 to 200 on design, in the El-Mukhtar area this was doubled about (53.7%) at between LD201 to 300.

9.3.2.3 Main Factors Influencing Design

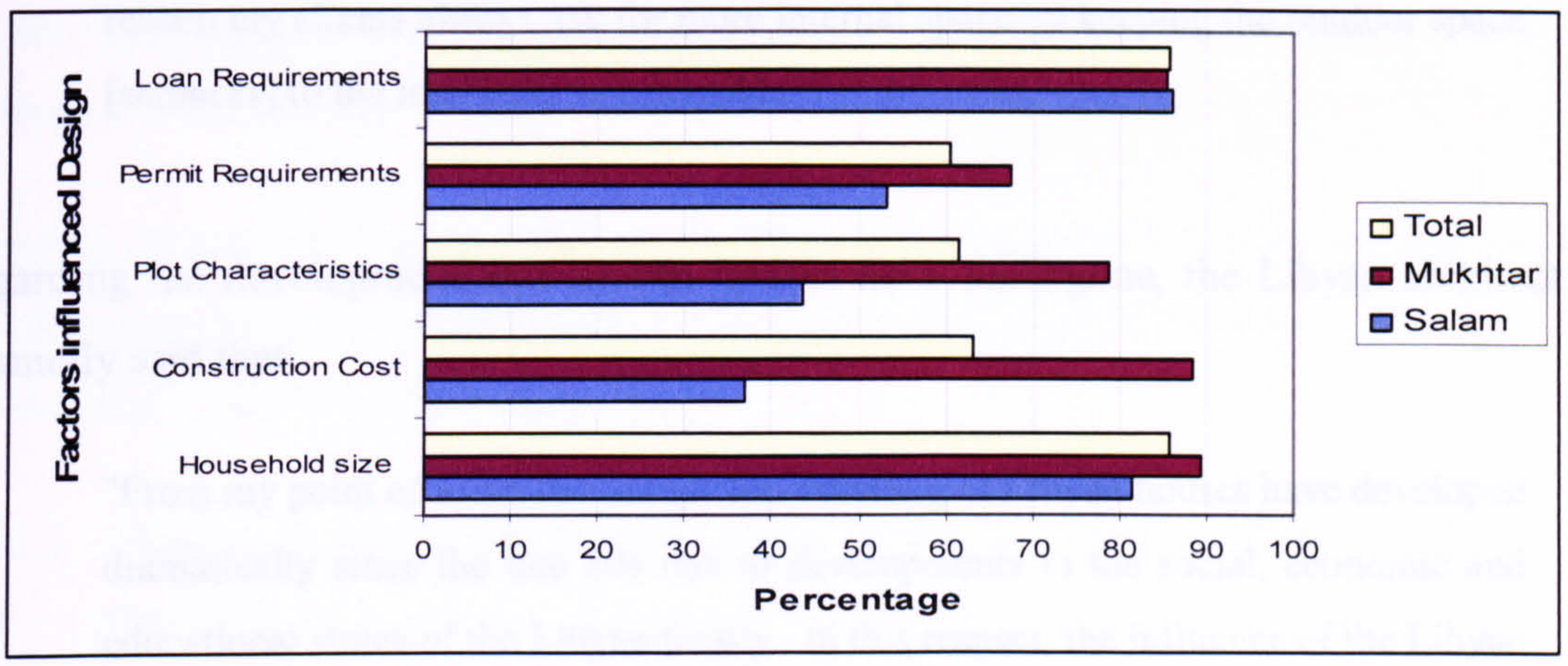
The two most important factors that influenced house design were household size and the requirements of the loan received. These factors were mentioned by 85.6 of the OBs. As Figure 9.3 shows, although household size was mentioned by 81.5% and 89.5% respectively of OBs in the El-Salam and El-Mukhtar areas, the cost of construction was also mentioned by most OBs in the El-Mukhtar area (88.4%), compared to only (37%) in the El-Salam area. This can be attributed, as mentioned in chapter 6, to the low cost of construction and the adequacy of the loans issued during the 1970s compared with those during the 1980s and 1990s.

Regarding the influence of household size on the design of the house, an OB in El-Mukhtar area said that:

> "Benefiting from a 700 m^2 plot size, I decided to build a big house confined to the ground floor only comprising many rooms in order to accommodate my family needs which consisted of six members at that time, as well as to satisfy any future needs resulting from natural expansion in household size. That decision was really

wise, as my family is now made up of eleven members. Now I am trying to finish the construction of the first floor so that my son can live here when he gets married."

Figure 9 - 3: Main Factors Influencing House Design



Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.2.4 Most Important Feature Considered in the Design

Despite the fact that the great majority (93.6%) of OBs were looking for spacious houses, the share of OBs who prioritised high quality finishes in the El-Mukhtar area was notably larger (9.5%) than in the El-Salam area (3.3%). Surprisingly, no OBs mentioned outdoor space as the feature of design considered most important. This result was also supported by interviews conducted with some OBs in both areas. For instance, an OB from the El-Salam area who previously lived in a privately-rented flat in the early 1970s said when asked about the main feature that he was looking for in the design of his current house that:

"Big house that was what I fancied, containing many bedrooms, and spacious *saloon* that could accommodate our guests and family celebrations, because I was fed up of living in small dwellings."

The above finding was also supported by the points of view of some designers interviewed by the researcher. For instance, El-Shaafiy[2] said that:

> "The Libyan family is often concerned about the internal space of the house, such as bedrooms, *saloon*, *salaah* and kitchen which should always be spacious. By contrast the outdoor space is always of less significance to the family. For this reason my clients always ask for more internal space by keeping the outdoor space [setbacks] to the minimum size possible."

Regarding the development that Libyan houses have undergone, the Libyan architect El-Mennefiy said that:

> "From my point of view, the design and finishing of Libyan houses have developed dramatically since the late 80s due to developments in the social, economic and educational status of the Libyan family. In this respect, the influence of the Libyan woman (wife or daughter) has become more obvious on the design and *tashteeb* of the house. This influence is clearly reflected in the common desire that many clients express in having specified reception room for ladies or in having bedrooms which are independent and completely separate from other interior spaces. In addition, the selection of the type and colour of building materials used in the *tashteeb* of bathrooms and kitchen is largely influenced by the choices and preferences of Libyan women. Despite that, the financial capabilities of the family play a major role in the level and quality of finishing; thus the *tashteeb* works of the house could experience long delays until the OB becomes capable of buying expensive finishing building materials based on his own family's wishes and aspirations."

9.3.3 Getting a Building Permit

It was obvious that all dwellings surveyed were legally built, since all OBs (187) received a building permit prior to commencing the construction of their houses. However, the time

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[2] A. A. El-Shaafiy is a civil engineer with work experience of about 25 years in the field of design and construction. During this period, he was involved in many private and public construction projects as designer, contractor and consultant. In the public sector, he worked for the Ministry of Finance and Planning. In the private sector, he worked in one of the well-known engineering offices in Benghazi called *'El-Madienah'*. He was interviewed on 23/04/2003 at his home in Benghazi.

spent and problems faced in getting the building permit varied among OBs as is discussed in this section.

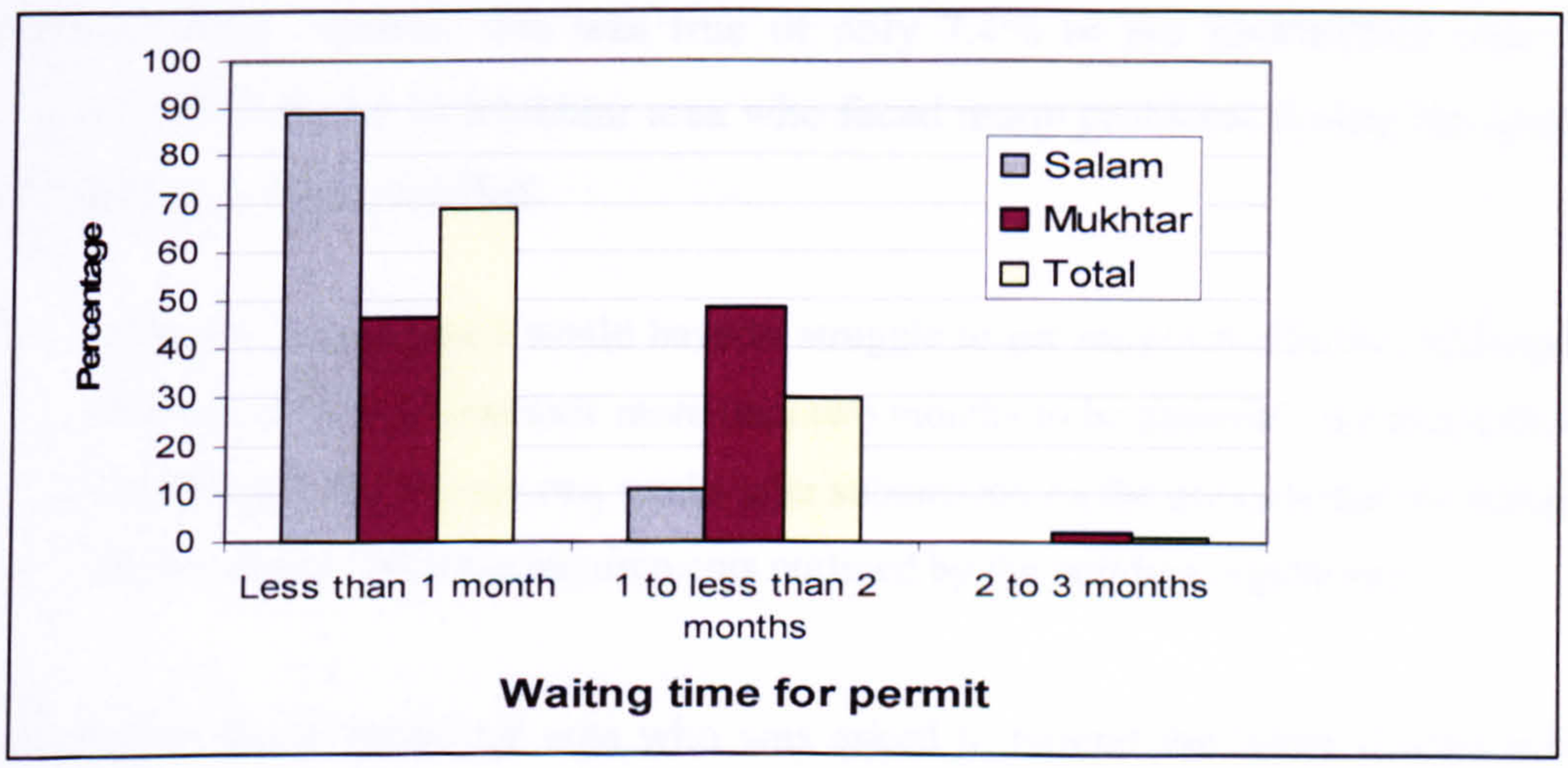
9.3.3.1 Length of Waiting for Building Permit

The findings show that, about two thirds (69%) of OBs waited for less than one month to get the building permits, 29.9% waited between 1 and 2 months and only 1.1% waited between 2 and 3 months.

However, it was obvious that OBs in the El-Salam area spent less time waiting for their building permits to be issued compared to OBs in the El-Mukhtar area. One of the OBs interviewed in the El-Mukhtar area said:

> "Actually I wouldn't have been able to obtain the *roughsat-elbeena* [building permit] in such a short time without the assistance of some of my friends. Many complicated documents were required which often took a long time to obtain. But friends helped me to receive the permit within only two weeks from submission; otherwise I would have had to wait for a month or more to obtain it."

Figure 9 - 4: Length of Waiting for Building Permit

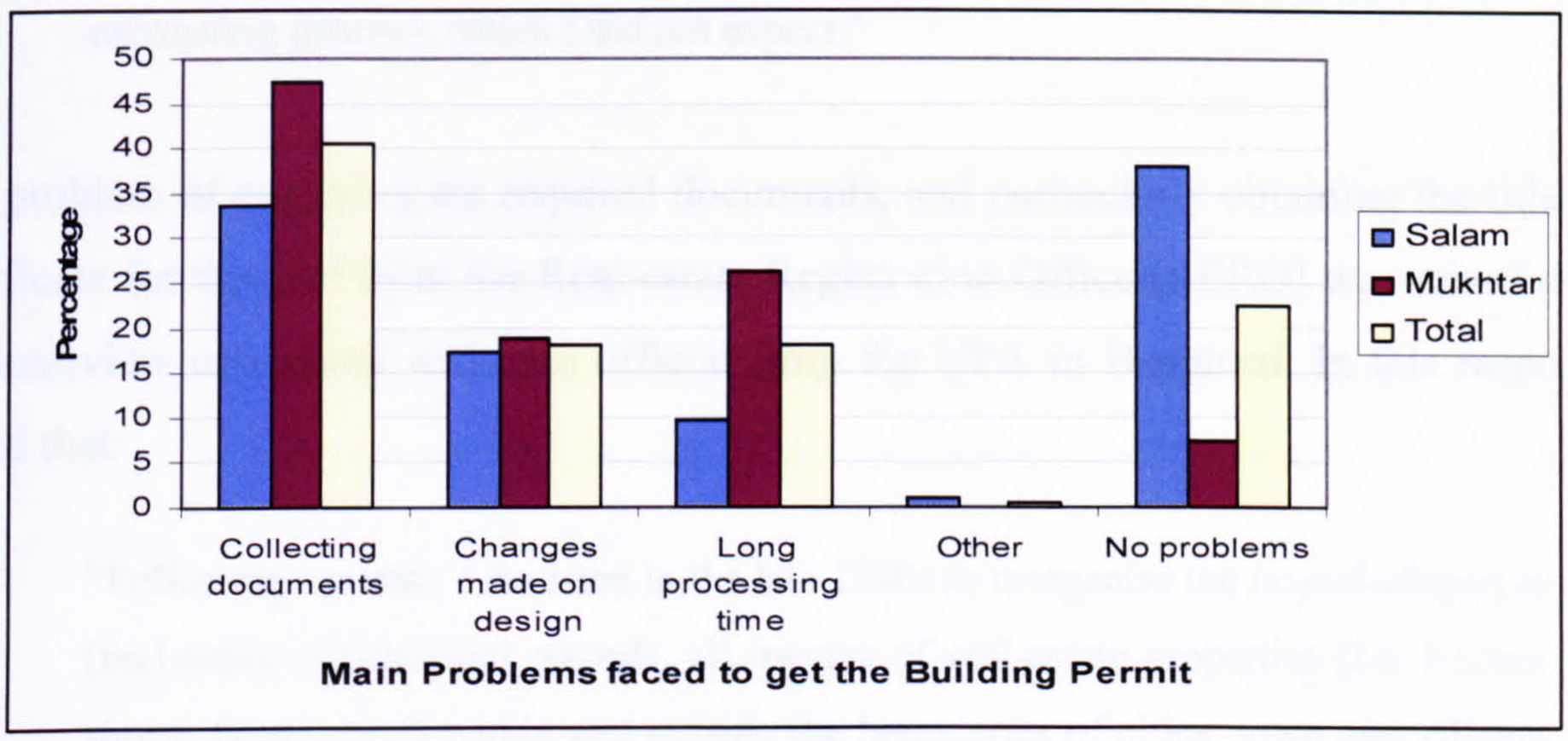


Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.3.2 Main Problems faced in Obtaining the Building Permit

The findings show that the main problems that OBs faced during their applications for building permits were related to waiting for the application to be processed, the difficulty in collecting the required documents or changes made to the design of their houses.

Figure 9 - 5: Main Problems Faced during Application for Permits



Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure 9.5 illustrates, OBs in the El-Mukhtar area faced more problems in getting their building permits compared with those in the El-Salam area, particularly in relation to the difficulty in gathering documents and the waiting time for applications to be processed. For instance, the difficulty of collecting the required documents was the main problem faced by 47.4% of OBs in the El-Mukhtar area compared to only 33.7% in the El-Salam area. In contrast, while 38% of OBs in the El-Salam area stated that they did not face any problem in obtaining their permits, this was true of only 7.4% in the El-Mukhtar area. In this respect, an OB from the El-Mukhtar area who faced many problems during the application for his building permit said that:

> "I did not expect that I would have to struggle to get *roughsat-elbeena*. Although the required documents took more than two months to be gathered, my application was returned back to me two weeks after submission on the grounds that the design did not comply with the requirements outlined by the building regulations."

Another OB in the El-Mukhtar area who was asked to amend the house design submitted and apply again, said that:

> "After three weeks following the submission of my application, I was asked to make some amendments to the design, which took about two weeks to be made by the designer. Then, I had to wait for two weeks before *roughsat-elbeena* was issued on the grounds of the limited capacity of the building permits department in

> dealing with the large number of applications. It was a really long, complicated and exhausting process, which I did not expect."

The problem of gathering the required documents, and particularly obtaining the title deed certificate for the plot from the Real-estate Registration Office (RERO) was raised during the interview conducted with one official from the UPA in Benghazi. In this respect, he stated that:

> "Following the state's decision in the late 1980s to reorganise the *tasjeel-alaqaryee* [real-estate registration] records, all owners of real-estate properties (i.e. houses, shops, farms, land) within and outside the boundaries of cities, town and villages were obliged to re-register their properties with the Real-estate Registration Office. The process of re-registration is very complicated and often takes two months or more before a title deed certificate can be issued. Thus, many applications for *roughsat-elbeena* were delayed due to the failure of applicants in submitting a recent and original *shahadat-melkia* [title-deed certificate] for his plot."

It can be concluded from the above discussions that, obtaining building permits, particularly in the El-Mukhtar area who have commenced the construction of their houses during the 1990s, was a difficult task for many OBs due to the rather waiting long time caused by the bureaucratic procedures in obtaining the required documents or in checking and approving the submitted house design.

9.3.4 Selecting the Builder

Selecting the right builder is a key success factor in building a satisfactory dwelling (Kashiwagi and Byfield, 2002, Yasamis et al., 2002). As discussed in chapter 6, the reliance on foreign labour in the construction sector in Libya was quite obvious during the post-revolution era. This section discusses the type of labour that OBs hired to build their houses as well as the form of agreement and arrangements made with builders hired.

9.3.4.1 Types of Labour Employed in House Construction

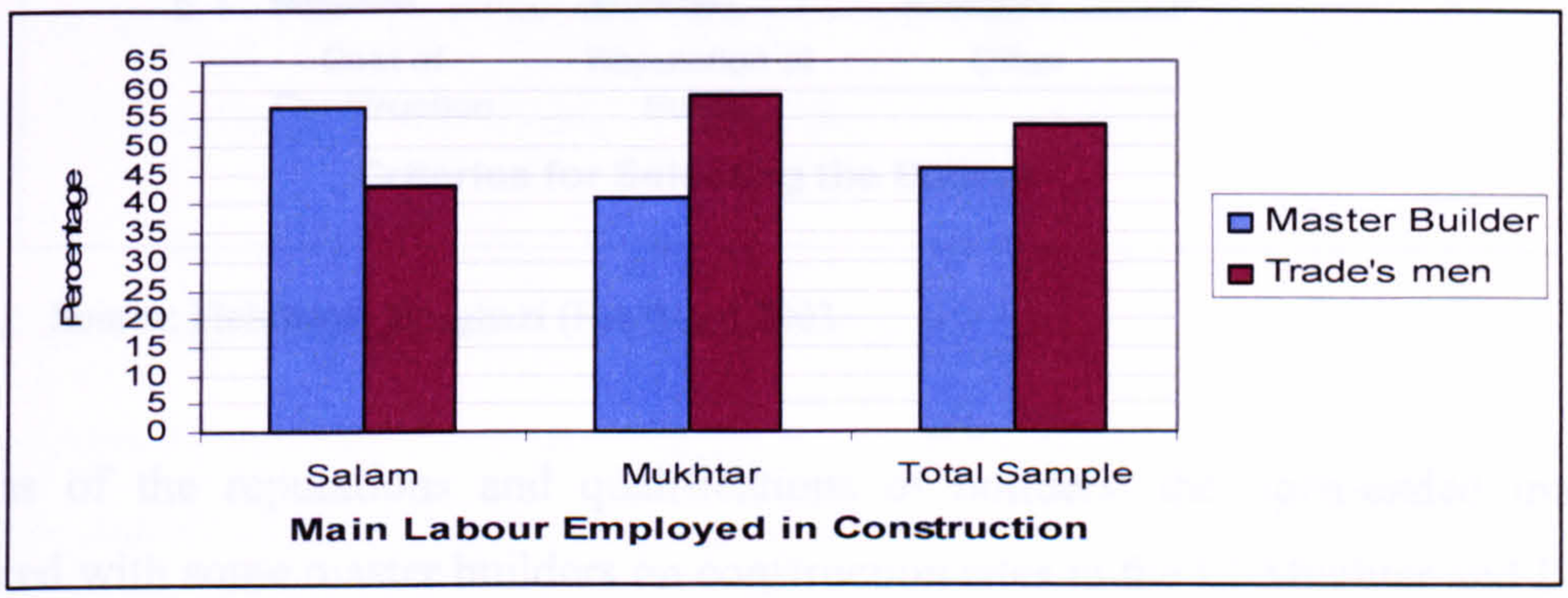
The findings show that all OBs (187) employed *Muqawel* (master builder) in the construction of their houses; but only 67 OBs (35.8%) also employed tradesmen. However,

the share of OBs who employed tradesmen in the El-Salam area was much smaller (22.8%) than in the El-Mukhtar area (48.4%).

Main Type of Labour Employed

As Figure 9.6 shows, the master builder was the main labour employed by 57% of the OBs who employed more than one type of labour in the El-Salam area; while tradesmen were the main type of labour employed by of the 46 OBs (59%) who employed more than one type of labour in the El-Mukhtar area.

Figure 9 - 6: Main Type of Labour Employed in House Construction



Source: Fieldwork, Benghazi (Feb-May) 2003

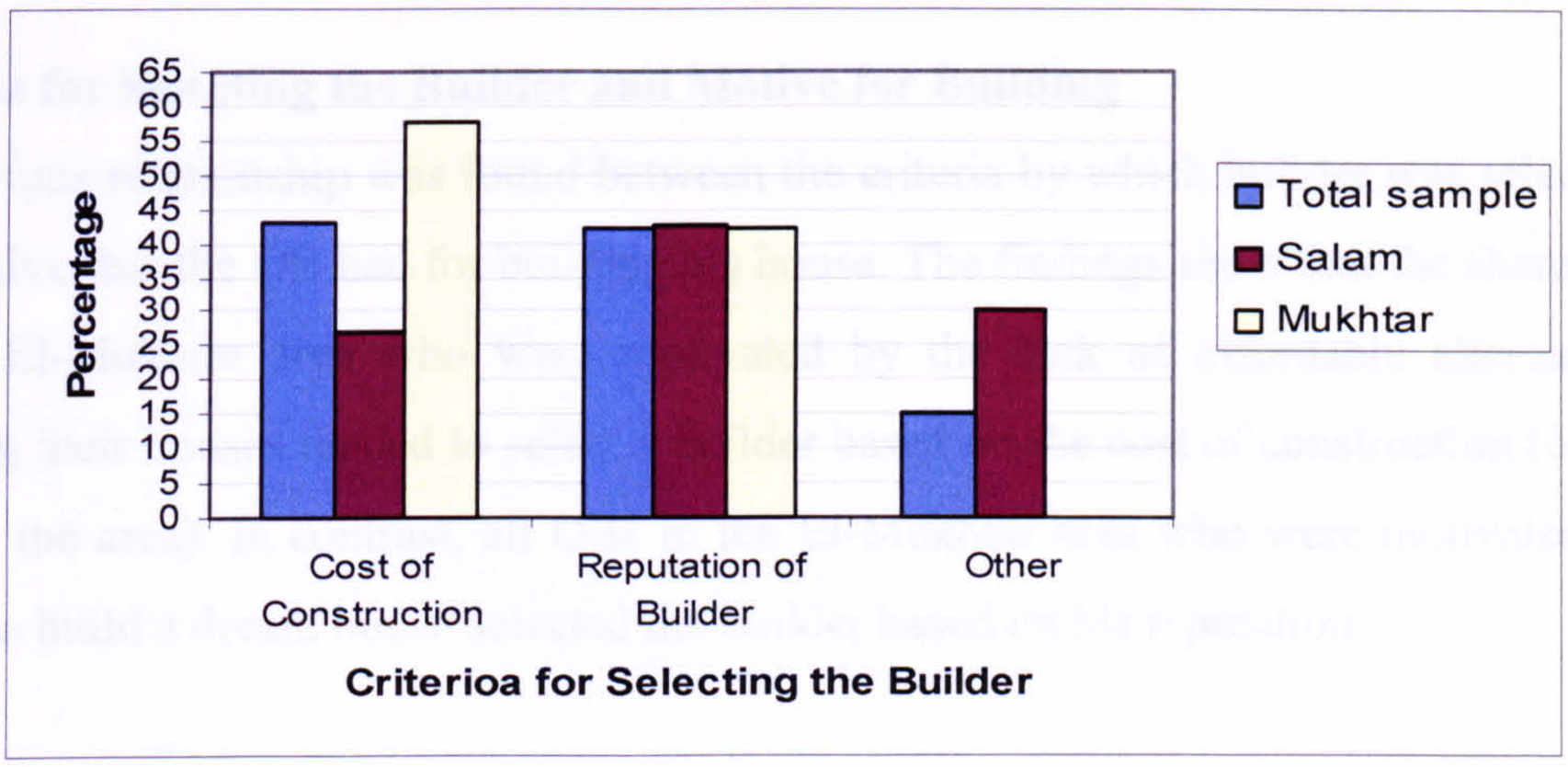
9.3.4.2 Criteria for Selecting the Builder

As Figure 9.7 shows, a good reputation was the main criterion for selecting a builder among 42.4% of OBs in the El-Salam area; while the cost of construction was the main criterion for about 57.9% of OBs in the El-Mukhtar area. The selection of the builder based on the cost of construction by most OBs in the El-Mukhtar area can be attributed, as mentioned in chapters 5 and 6, to the high cost of construction labour and materials during the second half of the 1980s and in the1990s. As discussed in chapter 5 and 6, the high cost of construction (LD350 per sq. m.) together with reductions in loan sizes in the early 1990s made the construction of owner-built dwellings unaffordable to many low and middle income OBs. In this respect, an OB in the El-Mukhtar area who employed more than one type of labour in building his house said that:

> "... I did not hire a *muqawel* [master-builder] to carry out the whole construction work because I knew that this would increase the total costs of construction. Thus, I hired *muqawel* to do the concrete skeleton work only and then I hired different

ommal [workers] on an individual basis to carry out the other construction work such as plastering, plumbing, floor-tiling, etc."

Figure 9 - 7: Criteria for Selecting the Builder



Source: Fieldwork, Benghazi (Feb-May) 2003

In terms of the reputations and qualifications of builders, the open-ended interviews conducted with some master builders on construction sites in the El-Mukhtar and El-Salam areas showed that none of them had any formal educational or vocational training in the field of construction. In this respect, a non-Libyan master builder[3] who had been engaged in the construction of many owner-built houses in Benghazi since the early 1970s said regarding his experience that:

> "I learned the business at the construction site. I started as an ordinary worker with my father who had also started as *najaar-musalah* [concrete carpenter], and gradually gained experience in construction. Then nine years on, I became capable of working independently. Now I am capable of doing all kinds of concrete works."

When the same master builder was asked how confident he felt in his work given the fact he did not graduate from any vocational institute, he answered:

[3] Ali M. is a 55 yr old Syrian master builder with 40 yrs of work experience in building homes and extensions. He moved to Libya in the early 1970s with his family and began as an ordinary worker under the supervision of his father before he became able to work independently in the late 1970s. The interview with him was conducted while was involved in building some shops at one building site in the El-Mukhtar area on 29/04/2003.

> "I have great confidence in myself because I gained my experience from my father who had long experience in the field of construction. So I would never feel inferior to those who have graduated in construction from formal vocational institutes."

Criteria for Selecting the Builder and Motive for Building

An obvious relationship was found between the criteria by which builder was selected and the motive that the OB had for building his house. The findings show that the share of OBs in the El-Mukhtar area who were motivated by the lack of affordable alternatives in building their houses tended to select a builder based on the cost of construction (66.3% of OBs in the area). In contrast, all OBs in the El-Mukhtar area who were motivated by the desire to build a dream house selected the builder based on his reputation.

9.3.5 Financing House Construction: Access to Funds

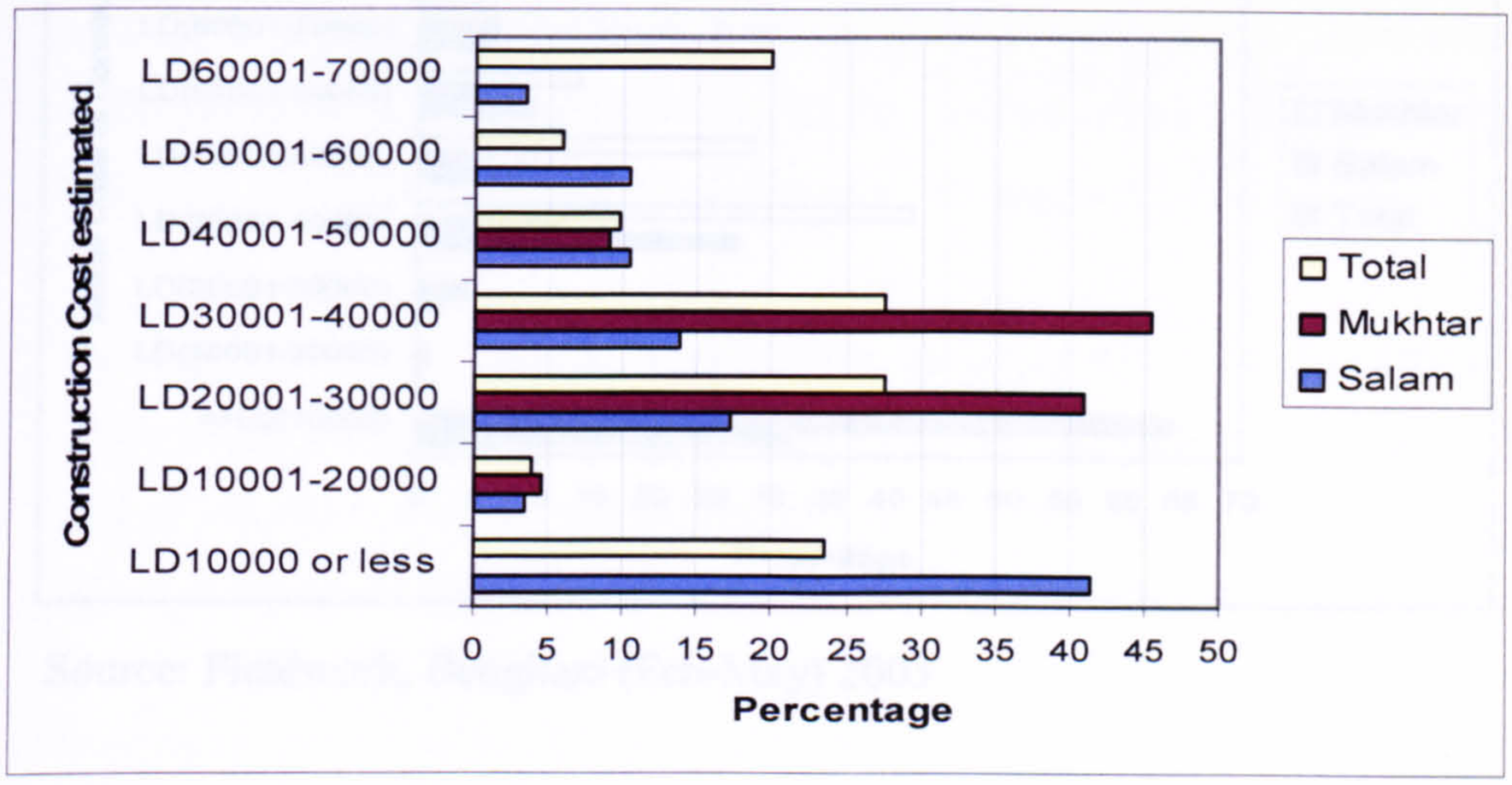
As discussed in chapter 2, OBH is seen by many advocates as a cheaper and more affordable means to satisfy the housing needs of many low and middle income households. The affordability of the OBH process mainly results from the opportunity that beneficiaries of this process would have in spreading the total costs of house construction over a period of time as funds allow. However, access to adequate finance is seen as crucial to undertake and accomplish house construction work properly. In this section, the role of different sources of finance that OBs in Benghazi used in the construction of their own houses is discussed.

9.3.5.1 Estimates of Construction Costs

One of the main stages in the pre-contract procedure in the house construction process is making an estimate of the cost of house construction based on the design and the cost of labour and materials in the market (Thompson, 1990). However, only 27.3% of the 187 OBs surveyed made estimates of construction costs prior to commencing the construction phase, while 72.7% did not make any estimates. The findings show that the mean estimated cost of construction made across the total sample was LD 29,392; the minimum estimated cost being LD7000 and the maximum LD70000. However, as Figure 9.8 shows, the estimated cost of construction calculated by OBs in the El-Salam area was much lower

than those made by the OBs in the El-Mukhtar area. For instance, 41.4% of OBs who estimated the costs of construction in the El-Salam area made estimates of LD 10,000 or less, no estimates in the El-Mukhtar area were this low. This can be attributed, as discussed in chapters 5 and 6, to the low cost of construction during the 1970s compared to the 1980s and 90s.

Figure 9 - 8: Estimated costs of Construction



Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.5.1.1 Availability of Estimated Costs Made Prior to Commencing Construction

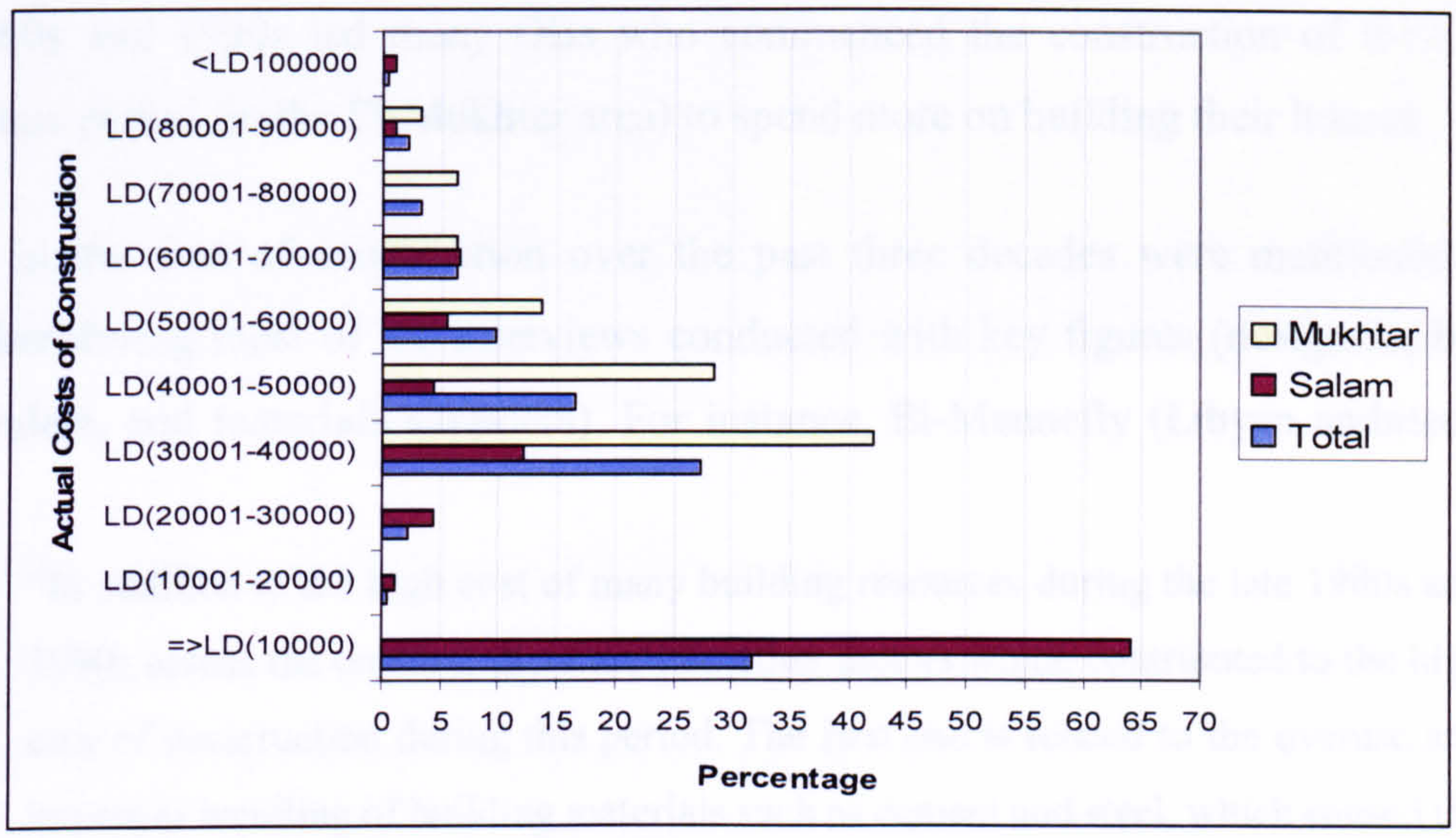
Of the 51 OBs who estimated construction costs, only 9.8% mentioned that the value of estimated cost was available prior to commencing the construction phase while 90.2% stated that the value of estimated cost was not available at that time. However, the share of OBs who mentioned the value of estimates was available in the El-Salam area was much smaller (6.9%) than in the El-Mukhtar area (13.6%).

9.3.5.2 Actual Costs of Construction

The findings show that the mean actual cost of construction was LD 36,246. The minimum cost of LD7000 was spent by about 16.6% of OBs surveyed and the maximum of LD 140,000 was spent by only one OB (0.5%). However, it was obvious that the mean actual construction costs spent by OBs in the El-Salam area was much lower (LD 22,701) than spent by OBs in the El-Mukhtar area (LD 49,368). It is also clear from Figure 9.9 that, while 64.1% of OBs in the El-Salam area had a total cost of construction between LD

7,000 to 8,000, in contrast 69.5% of OBs in El-Mukhtar area spent between LD 35,000 to 50,000 on building their own houses.

Figure 9 - 9: Actual Total Costs of Construction



Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.5.2.1 Difference between Actual and Estimated Cost of Construction

The findings show that the mean difference between actual and estimated costs across the 51 OBs was LD11,117. The minimum difference was LD 2,000 and the maximum was LD7,000. However, the mean difference between actual cost and estimated costs of construction in the El-Salam area was much lower (LD8,171) than in the El-Mukhtar area (LD15,000). In addition, while no OB in the El-Mukhtar area had actual cost lower than those estimated, about 37.9% of OBs in the El-Salam area did. For example, an OB from El-Mukhtar area whose house construction actual costs were higher than estimated said that:

> "Certainly the total actual cost was far more than had been estimated. That was because some of the construction works such as the electrical; plumbing and finishing work cost more than was initially expected."

The notable difference between actual cost spent by OBs during the 1970s (in the El-Salam area) and those who commenced the construction of their houses in the late 1980s and in the 90s (El-Mukhtar area) can be attributed to trends in construction costs during the past three decades. On the one hand, the low cost of construction during the 1970s (LD100 or

less per m^2); resulting from the accessibility, sufficiency and affordability of loans, subsidized materials and labour, which enabled many low and middle income OBs to build their own houses (in the El-Salam area). On the other hand, the high cost of construction (LD350 m^2) together with a notable decline in the size of building loans issued during the late 1980s and 1990s led many OBs who commenced the construction of their houses during this period (in the El-Mukhtar area) to spend more on building their houses.

Trends in the cost of construction over the past three decades were mentioned by the researcher during most of the interviews conducted with key figures (designers, builders, loan lenders, and materials suppliers). For instance, El-Mennefiy (Libyan architect), said that:

> "In addition to the high cost of many building resources during the late 1980s and 1990s across the country, there are two other factors which contributed to the high cost of construction during this period. The first one is related to the overuse and improper handling of building materials such as cement and steel, which caused the cost to increase by 10% in some cases. The second factor contributing to the increase in total construction costs is related to major alterations works carried out by some OBs in the house during the construction phase such as the demolition of foundations or columns walls, or redoing plumbing, electrical or floor-tiling work"

When he was asked about the causes of alterations made during the construction phase, El-Mennefiy replied:

> "Based on my experience, there are two reasons for these alterations. The first is technical, caused by hiring unqualified builders and the lack of *eshraff* [supervision] during construction. The other reason is socially related to the desire of the OB to amend the interior design of the house or change the type of building materials used in *tashteeb* responding to his own and his family's aspirations."

Observation also revealed the overuse of building materials mentioned by designers interviewed particularly concrete in construction of some houses in El-Mukhtar area (Plate 9.2). It is clear that the high cost of construction experienced during the late 1980s and 90 was not only caused by increases in the prices of materials and labour witnessed during this period, but also by improper management and supervision, as discussed in chapter 10.

Plate 9 - 2: Overuse of Concrete in House Construction in El-Mukhtar Area

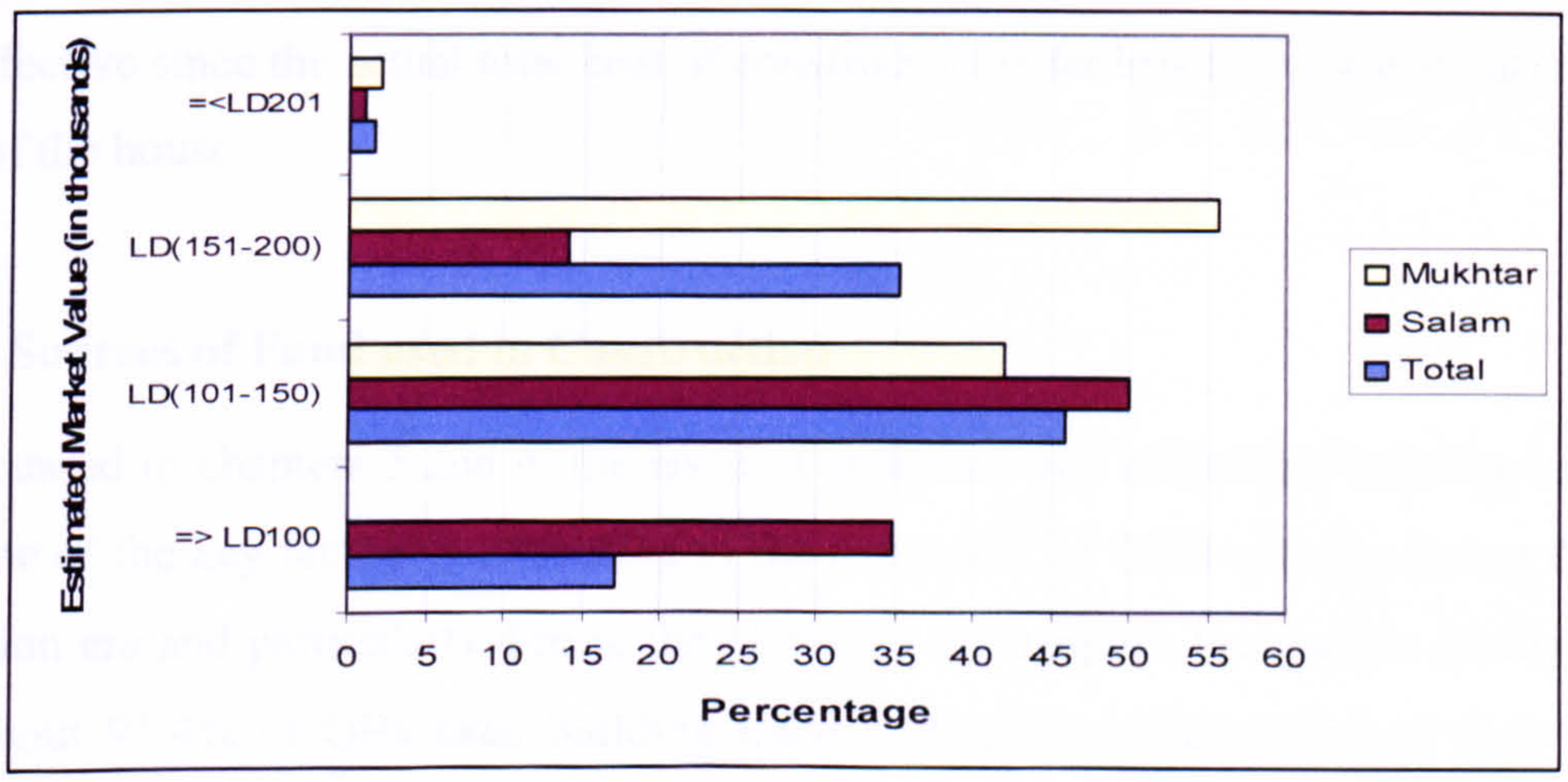


Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.5.3 Estimated Market Value of Houses Constructed

OBs were asked to estimate the market value of their houses in order to compare this with the actual cost of construction. The mean estimated market value of houses across the total sample was LD144,278 with a minimum value of LD90,000 and a maximum value of LD210,000. However, in the El-Salam area, the mean estimated market value was notably lower (LD 125,108) than in the El-Mukhtar area (LD162,842).

Figure 9 - 10: Estimated Market Value of Owner-built Houses



Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure 9.10 shows, 57.9% of OBs in the El-Mukhtar area estimated the market value of their houses at more than LD 150,000 but only 15.2% in the El-Salam area had high estimated market values. In addition, while no OBs in the El-Mukhtar area estimated the market value at LD 100,000 or less, about 34.8% of those in the El-Salam area had such an

estimated market value. The high estimated market values of houses in the El-Mukhtar area compared to those in the El-Salam area can be attributed to the fact that most owner-built houses in the El-Mukhtar area are newly-built (in the late 1980s and 90s) compared to the great majority of older houses in the El-Salam area (built in the1970s).

Difference between Estimated Market Value and Actual Cost of Construction

OBH is considered more affordable compared with other forms of housing since the cost of construction can be reduced through the reduction that the OB can achieve in labour and management costs (Friedman et al., 2000). The study findings show that none of the OBs mentioned an estimated market value for his house that was lower than the actual total costs of construction spent. The mean difference between the estimated market value and the actual construction costs for the whole sample was LD108,029; the minimum difference being LD55,000 and the maximum was LD182500. However, it is obvious that the estimated market values of houses in the El-Mukhtar area exceed the construction actual costs compared by far more than in the El-Salam area. More than half (57.6%) of the OBs in the El-Salam area had an estimated market value for their houses that exceeded what they actually spent on construction by LD55-100,000; while about 69.5% of OBs in the El-Mukhtar area had an excess of estimated market value over what they spent of LD75–120,000. Thus, it can be assumed that the construction of owner-built dwelling is cost-effective since the actual total cost of construction is far less than the estimated market value of the house.

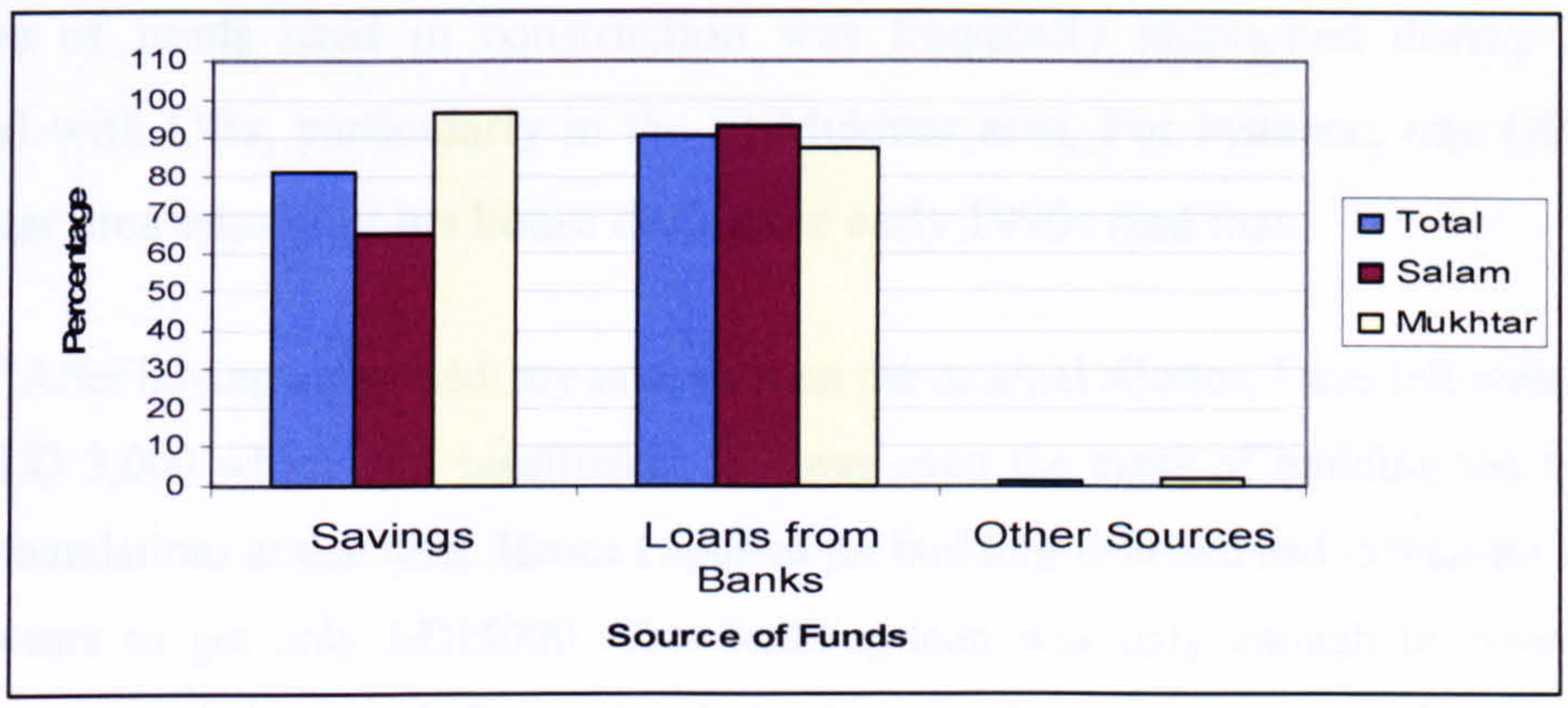
9.3.5.4 Sources of Fund used in Construction

As discussed in chapters 5 and 6, the issue of sufficient and affordable building-loans has been one of the key factors contributing to the expansion of OBH activity during the post-revolution era and particularly during the 1970s. In this respect, the study's findings show that about 91.4% of OBs used building loans to fund the construction of their houses, 81.3% utilized their own personal and family savings, and 1.1% depended on other sources (such as selling inherited assets such as real-estate properties, farms, or cars).

As Figure 9.11 illustrates, the proportions of OBs who used building loans was quite similar in selected OBH neighbourhoods in both areas. However, the utilization of personal and family savings by OBs in the El-Mukhtar area was far more common (96.8%)

than in the El-Salam area (65.2%). The extensive use of personal and family savings by OBs in the El-Mukhtar area can be attributed, as discussed in chapter 6, to the notable reduction in the sizes of loans as well as the increase in construction costs experienced during the late 1980s and 1990s.

Figure 9 - 11: Sources of Funds used in Construction

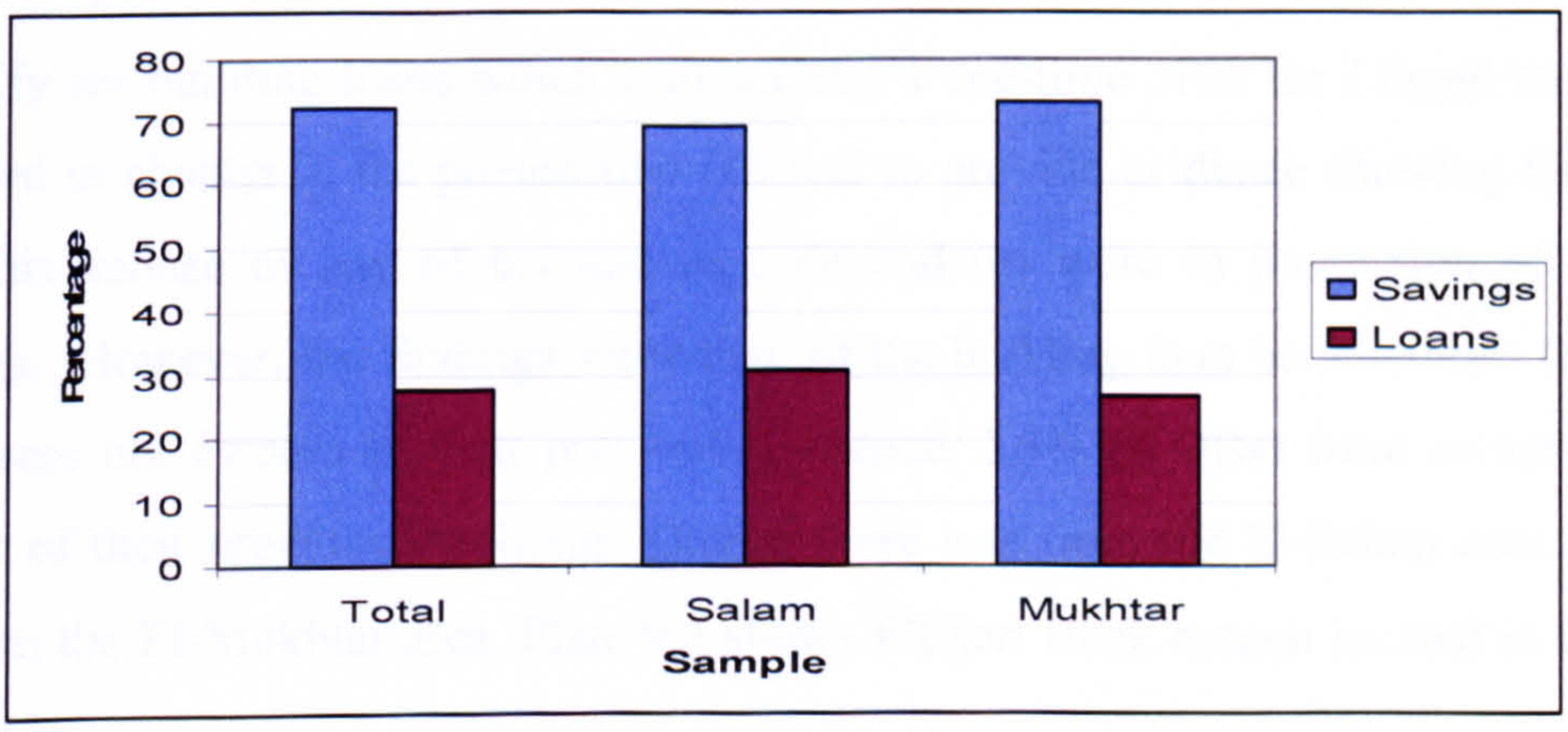


Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.5.5 Main Sources of Fund used in House Construction

About 57.8% (108 OBs) of the total sample relied on more than one source of funding in the construction of their houses. The great majority of these (75.9%: 82 OBs) were from the El-Mukhtar area and the remaining 24.1% (26 OBs) were from the El-Salam area.

Figure 9 - 12: Main Source of Funding used in Construction



Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure 9.12 illustrates, personal and family savings were the main source of funding used in construction by the majority (72.2%) of OBs who utilized more than one source,

while building loans were the main source of funding used by the remaining (27.8%) of OBs. In this respect, the total of 78 OBs whose savings were the main source of funding had built their houses during the 1980s and 1990s. As discussed in chapter 5, the reduction in the sizes of building loans issued during this period meant that personal and family savings were the main sources of funding to cover the increased costs of construction.

The issue of funds used in construction was frequently mentioned during interviews conducted with OBs, particularly in the El-Mukhtar area. For instance, one OB from the El-Mukhtar area who built his house during the early 1990s said that:

> "After buying a plot with my savings from the original allottee, I was left with only LD 3,000 which was insufficient to cover even the costs of building the house foundations at that time. Hence I applied for building-loa*n* and had to wait for three years to get only LD15000. This building-loan was only enough to cover the concrete skeleton and electrical and plumbing works; thus, my personal and family savings and assets became the only sources of fund for the remaining work on my house. I remember that all available assets that my family members had (cars, gold) and even my older son's *shagah* that he was preparing for his marriage were sold and used to cover the cost of the *tashteeb* work. Believe me, about 70% of the total cost of construction was covered by my personal and family savings and assets given the small size of the building-loan issued and the high cost of construction at that time."

9.3.5.5 Building loans as Sources of Funds

To qualify for building loans which were strictly a one-time offer for Libyan nationals as mentioned in chapter 7, the prospective OB had to provide evidence showing that neither he nor his spouse or any of his underage dependants were in possession of habitable dwellings. However, the findings show that, of the building loan beneficiaries (169 OBs) 97.7% were not owners of their previous residence, 2.3% (4 OBs) were owners through purchase of their previous dwellings. One of these was from the El-Salam area and three were from the El-Mukhtar area. Plate 9.2 shows Eltejari Bank branch located in the centre of Benghazi.

Plate 9 - 3: Eltejari Bank in the Centre of Benghazi

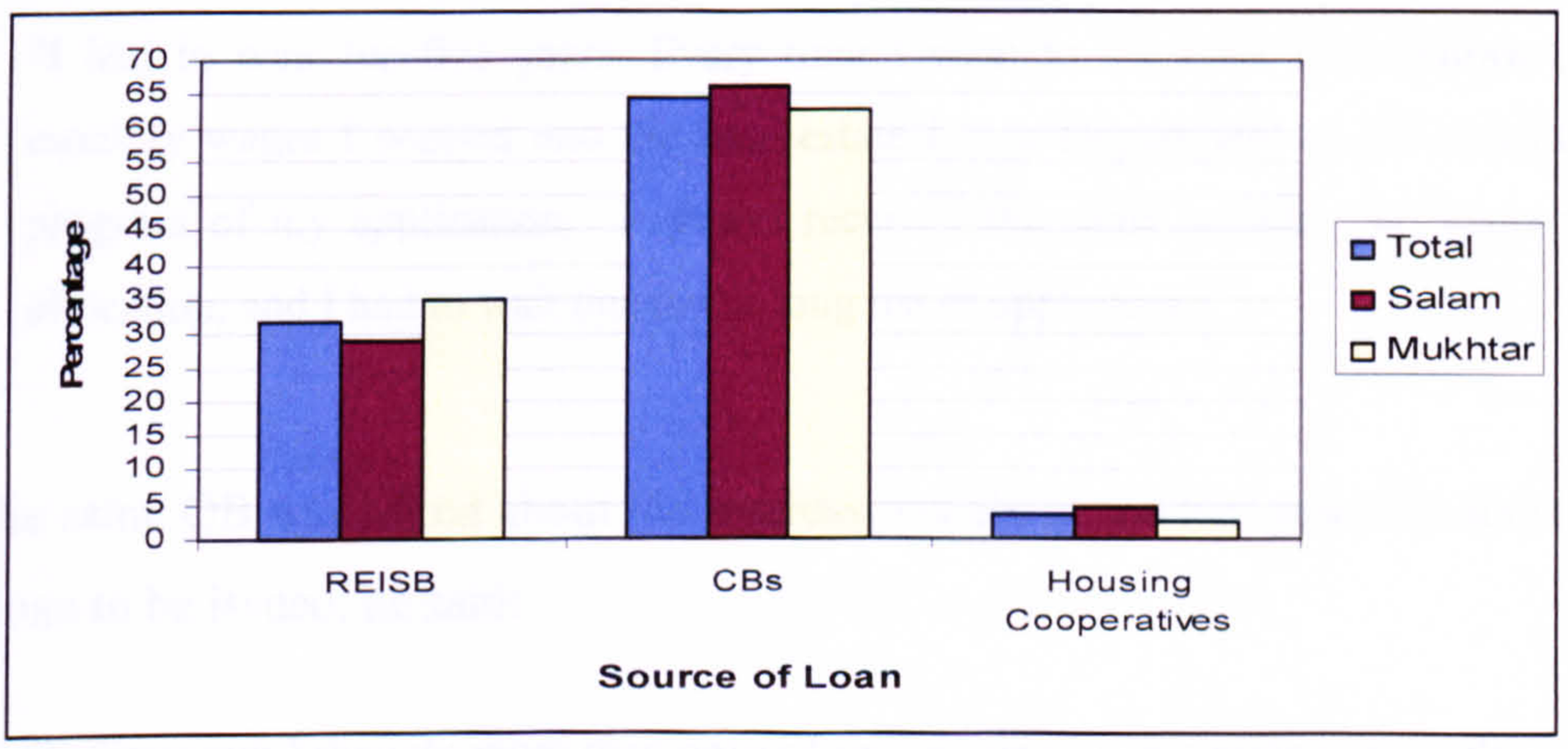


Source: Fieldwork, Benghazi (Feb-May), 2003

9.3.5.5.1 Source of Building Loans

Of the total loan beneficiaries (169 OBs), 32% received their loans directly from the REISB, 64.4% received their loans directly from CBs and only 3.6% received their loans through housing cooperatives of which they were member. As can be seen from Figure 9.13, there are no significant differences between the two selected areas regarding the sources of loans.

Figure 9 - 13: Main Source of Fund used in Construction

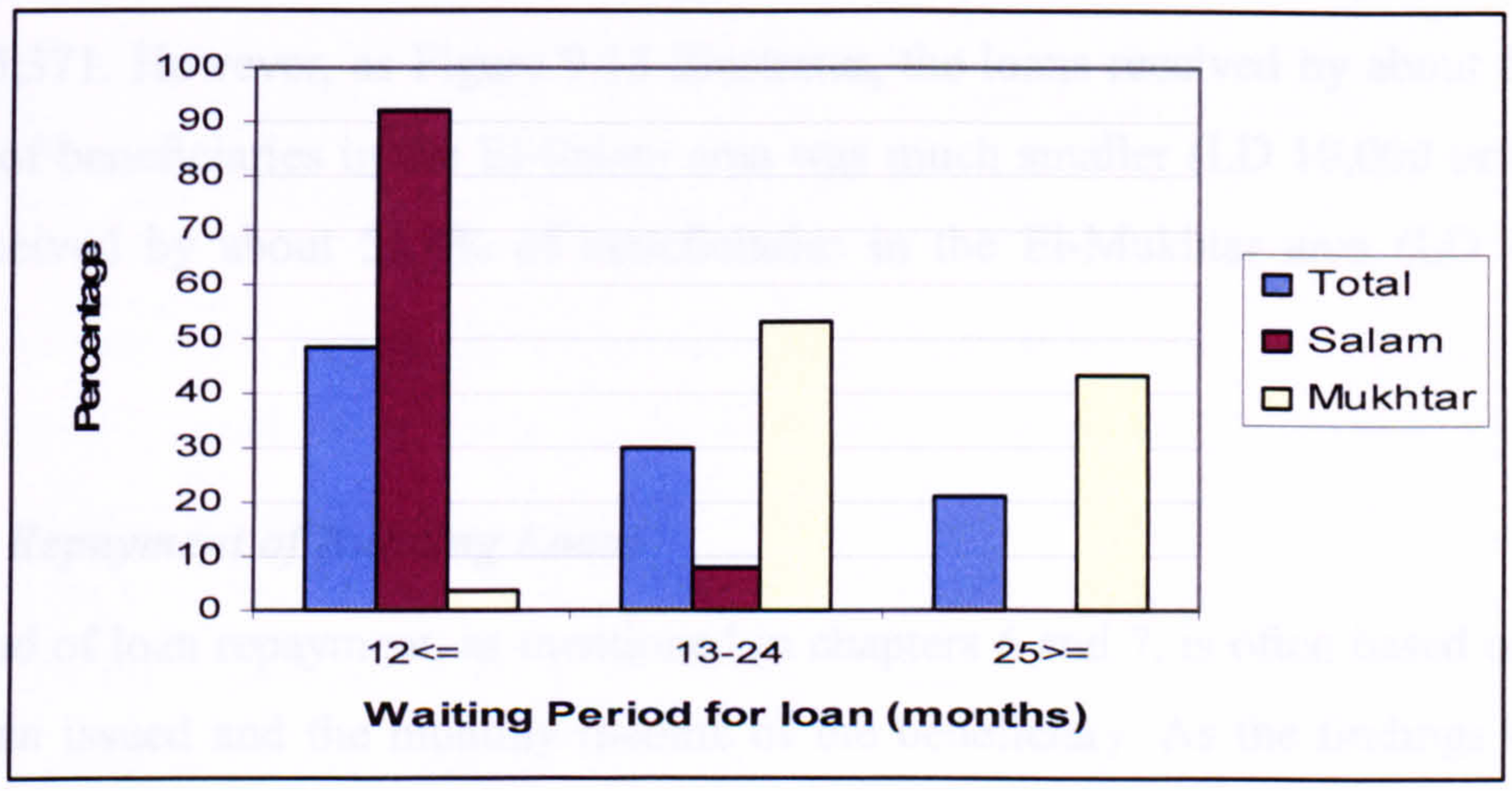


Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.5.5.2 Waiting Times for Loans

Of loan beneficiaries (169 OBs), 48.5% waited for 12 months or less to get their loan, 30.2% waited for 13 to 24 months and 21.3% waited for 25 months or more. As Figure 9.14 illustrates, the waiting times for the great majority (91.1%) of loan beneficiaries in the El-Salam area were much lower (12 months or less) than those spent for the great majority (96.4%) of beneficiaries in the El-Mukhtar area (13 months or more).

Figure 9 - 14: Waiting Time for Loan to be Issued



Source: Fieldwork, Benghazi (Feb-May) 2003

The much longer time spent waiting for loans among beneficiaries in the El-Mukhtar area can be attributed, as discussed in chapter 6, to the notable reduction in the scale of the real estate lending programmes during the 1980s and 90s. For example, an OB from the El-Mukhtar area who was asked about the waiting period for the loan said that:

> "I had to wait for five years. Every time I went to the bank to withdraw my monthly wages I popped into the Real-estate Loans Department to ask about the progress of my application. I always received the same answer: "no loans for allocation, and I had to wait due to the long list of applicants."

When the same OB was asked about his impressions about the five years he spent waiting for the loan to be issued, he said:

> "Believe me; I thought more than once of selling the plot and giving up on the idea of building the house that would accommodate my family's needs and aspirations because I thought that it was impossible to make this dream come true. I remember

how my wife and children had always opposed the idea of selling the plot. They kept telling me that I should not make them lose hope of having a big house and that I had to be patient to get the building-loan."

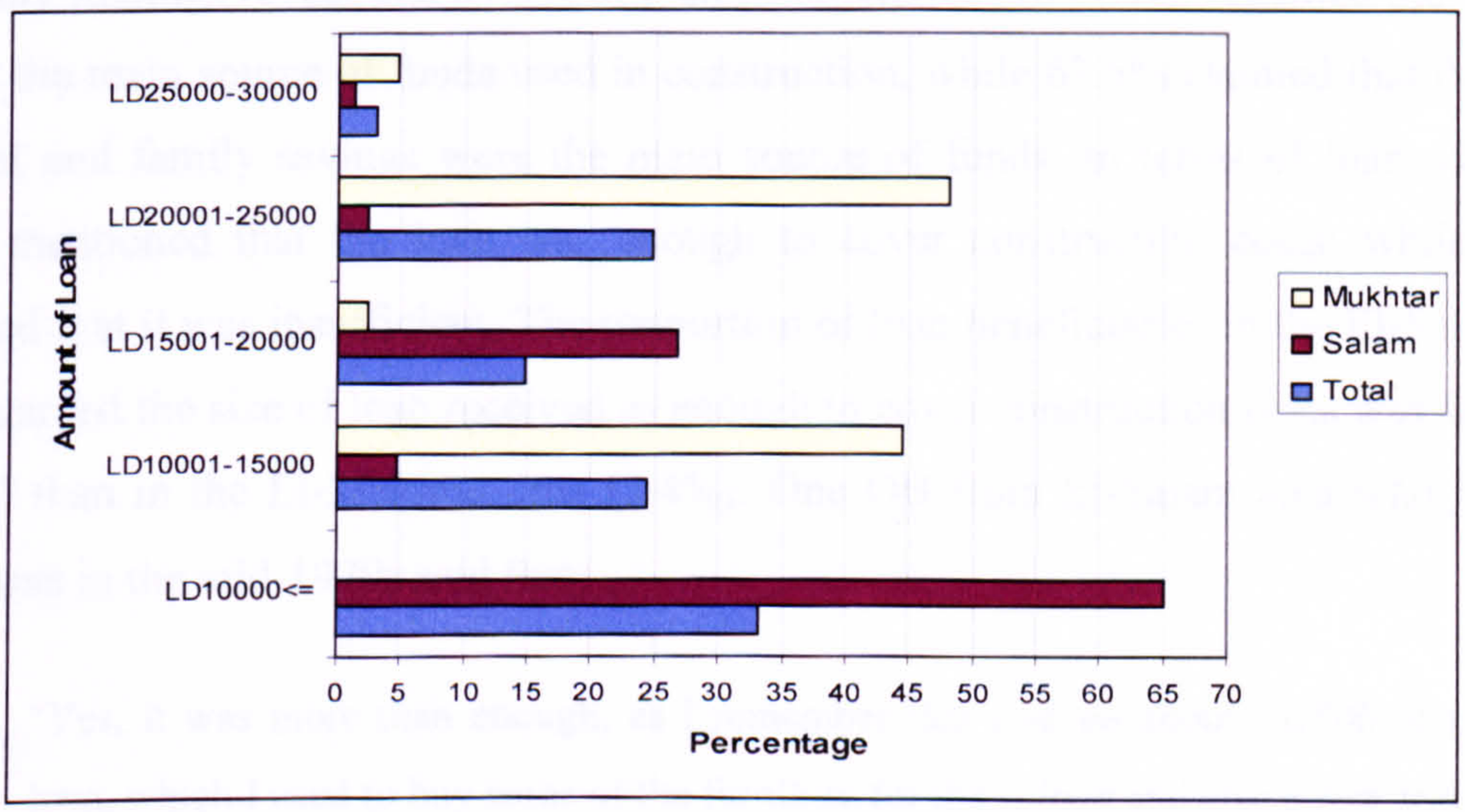
9.3.5.5.3 Amount of Building Loans Received

As discussed in chapter 6, the size of building loans has undergone tremendous change during the past three decades. This change is clarified by the findings of this study, which show that the amount of loans issued ranged between LD 7,000 to LD 30,000 with a mean of LD 15,371. However, as Figure 9.15 illustrates, the loans received by about two thirds (65.1%) of beneficiaries in the El-Salam area was much smaller (LD 10,000 or less) than those received by about 55.4% of beneficiaries in the El-Mukhtar area (LD 15,000 to 30,000).

9.3.5.5.4 Repayment of Building Loans

The period of loan repayment, as mentioned in chapters 6 and 7, is often based on the size of the loan issued and the monthly income of the beneficiary. As the findings show, the median loan repayment period across the total sample was 20 years; with a minimum period of 15 years and a maximum of 25 years. However, while the repayment period for beneficiaries in the El-Salam area ranged between 15 and 20 years, for those in the El-Mukhtar area it ranged between 20 and 25 years.

Figure 9 - 15: Amount of Loans Received by OBs



Source: Fieldwork, Benghazi (Feb-May) 2003

Status of Repayment

Of the loan beneficiaries who were still repaying their loans (92 OBs), 73.9% mentioned that they were repaying regularly, while 26.1% mentioned that they pay irregularly. When those making irregular repayment (24 OBs) were asked about the reasons for their irregular repayment, the great majority (83.3%) mentioned the need to spend more money on other necessities, while 16.7% mentioned the size of instalments compared to their monthly wages. In this respect, it is worth mentioning that about 92% of loan beneficiaries who were repaying irregularly were self-employed and not receiving regular monthly wages.

The problem of irregular repayment of loans was also mentioned by a senior official in one of the largest CBs in Benghazi. In this respect, he said that:

> "Nowadays I believe that there are some beneficiaries who are incapable of repaying regularly due to the high cost of living compared to their limited incomes and large household sizes. However, some beneficiaries are adamant about paying in the belief that the loan is public money and delaying repayments won't make any difference. That would be absurd and would offend an agreement which is legally binding. In the meantime, we know that legal proceedings in courthouse are very complicated and time consuming, and for this reason we always prefer to sort things out peacefully through dialogue; which might work for some clients but not for all of them."

9.3.5.6 Adequacy of Building Loans for the Completion of Construction

The study findings reveal that 37.5% of loan beneficiaries (169 OBs) regarded the building loan as the main source of funds used in construction, while 62.5% claimed that their own personal and family savings were the main source of funds. In terms of loan adequacy, 36.7% mentioned that the loan was enough to cover construction costs; while 63.3% answered that it was insufficient. The proportion of loan beneficiaries in the El-Salam area who regarded the size of loan received as enough to cover construction costs was far larger (69.8%) than in the El-Mukhtar area (2.4%). One OB from El-Salam area who built his own house in the mid-1970s said that:

> "Yes, it was more than enough, as I remember that I saved about LD500 of the loan, which I used to buy some of the furniture for the *saloon* and also a new fridge for my new house."

In contrast, the inadequacy of loans for the great majority of OBs in the El-Mukhtar area was frequently mentioned. For instance, an OB who was a recipient of a loan of LD 15,000 and built his house in the early 1990s said that:

> "It only covered the costs of the concrete skeleton. It is difficult for me to describe it as building-loan; I would rather say it was *saddaqa* [charitable money] but no more than that. However, I had to go for it as I had no other alternative at that time due to my urgent need for money."

The above contrast regarding the adequacy of loans between OBs who commenced the construction of their houses in the 1970s and those in the late 1980s and 90s is also highlighted by the point of view of a senior official in the Department of Real estate Loans and Credits in one of the largest CBs in Benghazi, who said that:

> "During the early 70s, the average building-loan size was sufficient to cover the construction costs of single-family detached dwellings with a building area of 280 to 300 sq. m. The main reason for this was the availability of many subsidized building materials at very reasonable prices and cheap labour given the strong position of the Libyan currency with respect to foreign currencies, which was equivalent to more than three American Dollars. Nowadays, despite the increase of loans to around LD 30,000, the great majority of owner-builders are unable to depend entirely on the loan in covering even 50% of construction costs due to the sharp increases in the price of labour and building materials on the *souq-alsawda* [black market]."

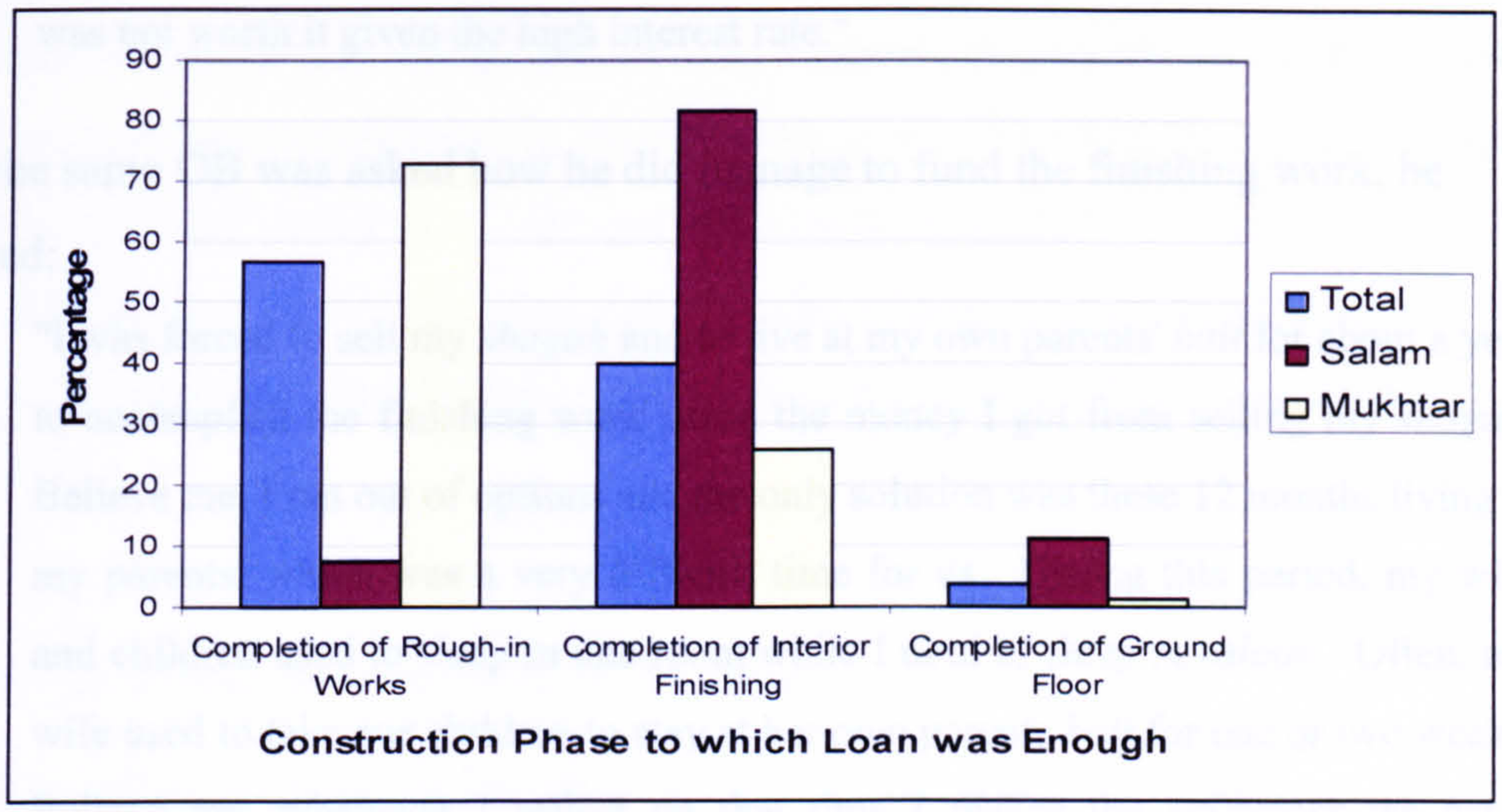
9.3.5.6.1 Construction Phase for which Building Loan was Sufficient

Of the total 107 loan beneficiaries who claimed that the loan was insufficient in covering the total construction costs, 56.5% stated that the loan was only enough to accomplish the rough-in works on the house (concrete skeleton, plumbing, and electrical works), 39.8% mentioned that it was enough to accomplish the interior finishing and 3.7%, whose houses consisted of two floors, claimed that the loan was enough to accomplish the ground floors of their houses.

As Figure 9.16 shows, 81.5% of loan beneficiaries in the El-Salam area claimed that the loan was enough to accomplish the interior finish of their houses, whereas in the El-Mukhtar area 72.8% of loan beneficiaries claimed that it was only enough to complete the

rough-in works (i.e. concrete skeleton, plumbing, and electrical). This can be attributed, as discussed in chapters 4 and 5, to the low cost of construction during the 1970s compared to in the late 1980s and 1990s.

Figure 9 - 16: Construction Phase for which Loan was Enough



Source: Fieldwork, Benghazi (Feb-May) 2003

9.3.5.6.2 Getting Supplementary Building Loans

Although supplementary loans were made available in 1995[4] to OBs who had been in receipt of LD15,000 loans, only six beneficiaries (5.6%) of the total (107) who claimed that the loan was not enough did get supplementary loans. Five of those who got supplementary loans were from the El-Mukhtar area and only one was from the El-Salam area. However, the small number of supplementary loan beneficiaries can be attributed, as discussed in chapter 5, to the fact that these supplementary loans were only affordable to high income applicants whose monthly wages had to be no less than LD565; otherwise repayment by this method would not be affordable.

Exploring the role of supplementary loans in the completion of construction work, an OB from the El-Mukhtar area who built his house during the early 1990s and benefited from a supplementary loan, said that:

[4] As discussed in chapter 6, the GPCOM issued the Decree (187) of 1995 involving supplementary loan of total LD20,000 available to those who were already in receipt of LD15,000 loans, aiming to help them in the completion of their unfinished houses.

> "Both my savings and the LD 15,000 loan received were insufficient for covering the cost of only the concrete skeleton and the electrical and plumbing work. Thus, I had to suspend construction work for about two years after which I applied for a supplementary loan. That loan was only sufficient to do the floor-tiling, kitchen and bathrooms finishes. Actually I regretted accepting that supplementary loan as it was not worth it given the high interest rate."

When the same OB was asked how he did manage to fund the finishing work, he answered:

> "I was forced to sell my *shagah* and to live at my own parents' *bait* for about a year to accomplish the finishing work using the money I got from selling my *shagah*. Believe me, I ran out of options and the only solution was these 12 months living at my parents, which was a very difficult time for us. During this period, my wife and children used to sleep in one room while I used to sleep in *saloon*. Often, my wife used to take our children to stay at her own parents *bait* for one or two weeks. Believe me, whenever I reflect on that time I realise the sufferings we came through with my wife and children before we built our home."

9.3.5.7 Role of Savings in Total Construction Costs

It seems obvious from the above discussion that building loans were not enough to complete the entire house construction work for most of the OBs who built their houses during the late 1980s and 1990s (in the El-Mukhtar area). Thus, many OBs had to use their own personal and family savings and to sell family assets (such as jewellery, cars, or other personal properties) to fund the construction work. Of the 124 OBs who used their own savings for construction the mean amount of savings used was about LD32,225; with a minimum of LD2,000 and a maximum of LD90,000.

Table 9 - 1: Role of Savings in Total Cost of Construction

Sample	Owner-builder Participation in total costs of Construction				
	No. of OBs	%	Mean (LD)	Max. (LD)	Min. (LD)
El-Salam	32	34.8	8909	80000*	2000
El-Mukhtar	92	96.8	25403	90000	11000
Total	124	66.3	16915	90000	2000

Source: Fieldwork, 2003

* In the El-Salam area, the most savings used in total cost of construction were mentioned by OBs who built their own houses during the late 1980s and 90s.

As Table 9.1 illustrates, about two-thirds (65.2%) of loan beneficiaries in the El-Salam area did not use their savings in the construction of their houses. Surprisingly, of this total, 46.6% were able to save between LD500 to 1,000 of their received loans after the completion of construction work. This can be attributed to the generosity of loans issued during the 1970s in covering the low construction costs resulting from the availability of subsidized materials and cheap labour (see chapters 5 and 6). In contrast, about half (49.4%) of the loan beneficiaries in the El-Mukhtar area who built their own houses during the late 1980s and 1990s used between LD20,000 to 30,000 of their own personal and family savings to complete the construction work of their houses. In addition, 32.5% spent between LD 11,000 to 20,000, and 18.1% spent between LD30,000 to 54,000 from their own savings.

9.3.5.8 Lender Impressions towards Building Loans

The issue of the adequacy of building loans in covering construction costs was raised by the researcher during an interview with officials in banking sector. For instance, a senior official in the Department of the Real-estate Loans and Credits in one of the largest CBs in Benghazi said that:

> "It is essential that the amount of the building-loan should cope with any increase in the costs of building materials and *ommal* in the market. It does not make sense that you offer a building building-loan of LD30,000 (equivalent to $US23000 nowadays) to be spent on expensive building materials and *ommal* compared to a building-loan of LD7,000 (equivalent to $US 21,000 in the mid-1970s) given the low costs of construction costs at that time. The sharp decline in the value of the Libyan currency had direct negative effects on the adequacy of the sizes of *b*uilding-loan issued to cover the sharp increases in the cost of building materials. Moreover, failure to control the supply of subsidized building materials through the designated channels posed another challenge, leading to the emergence of the *souq-alsawda* preventing vulnerable people from benefiting from the subsidized prices by paying more than double these prices to get them. Thus, the state has a duty to monitor and control the prices of building materials by making them available for serious OBs at the time they need them."

It can be concluded that the sizes of loans issued for most OBs in the El-Mukhtar area who built their houses during the late 1980s or afterwards were insufficient to cover construction costs giving the high cost of labour and building materials at that time.

9.3.6 Access to Building Materials

The access to affordable building materials is a key factor in housing construction since it constitutes a significant part of the total construction cost of a house (45-65%) (Ganesan, 1983). In this section, the accessibility of building materials to OBs and their attitudes towards the availability and sufficiency of these materials is discussed.

9.3.6.1 Main Suppliers of Building Materials

The study's findings reveal that 72.2% of OBs were responsible for supplying materials during the construction of their houses, while 27.8% claimed that the hired builder was responsible for supplying them. However, the proportion of OBs who were responsible for supplying materials in the El-Mukhtar area was much larger (97.9%) than in the El-Salam area (45.7%). Such a remarkable difference can be attributed to the type of arrangement[5] that OBs made with their hired builders (see chapter 10).

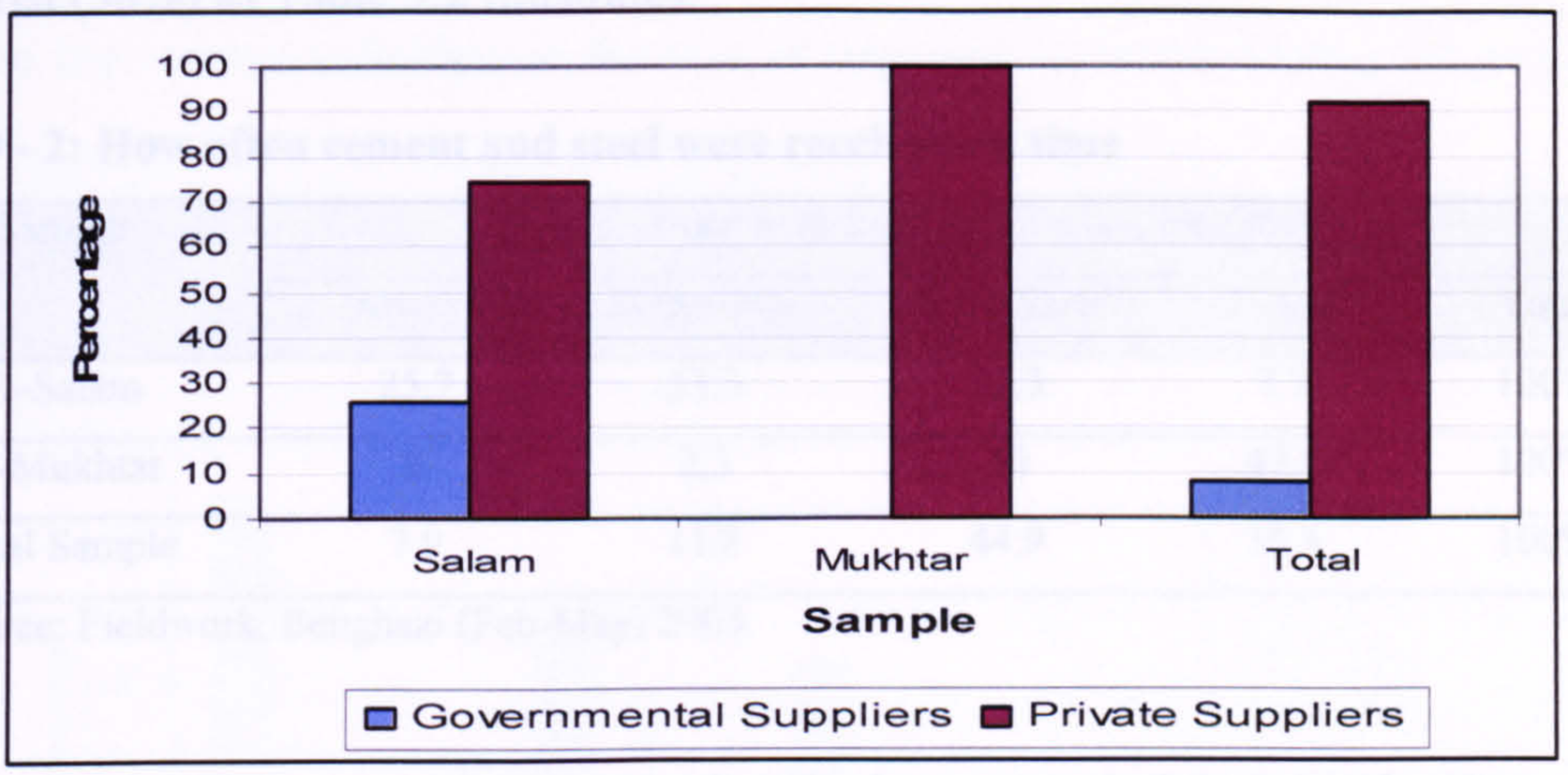
9.3.6.2. Main Source of Building Materials

As mentioned above, 135 OBs (72.2%) were responsible for supplying materials during the construction of their houses. Of this total, only eight OBs (5.9%) were entirely dependent on private suppliers to get building materials for their houses. The great majority (92.7%) of OBs who get materials from both public and private sources mentioned private suppliers as the main source of materials. However, the share of OBs who regarded private suppliers as the main source of materials in the El-Mukhtar area was much larger (100%) than in the El-Salam area (74.3%) as Figure 9.17 illustrates. This difference can be attributed to the expanded role of government in providing materials to OBs through publicly-owned

[5] In the case of a turn-key arrangement, the hired master-builder is often responsible for supplying materials (in the El-Salam area). In contrast, the responsibility of OBs in supplying materials was mainly found in cases where arrangements other than turn-key ones were adopted with the hired builder (in the El-Mukhtar area).

supply channels or housing cooperatives during the 1970s. The limited role played by the state in the housing sector during the late 1980s and 1990s made private suppliers the main source of materials for OBs who commenced the construction of their houses during this period. Plate 9.4, illustrates some privately-owned building materials shops in Benghazi.

Figure 9 - 17: Main Source of Building Materials



Source: Fieldwork, Benghazi (Feb-May) 2003

Plate 9 - 4: Privately-owned shops selling different building materials in Benghazi









Source: Fieldwork, Benghazi (Feb-May), 2003

9.3.6.3 The Prompt Supply of Cement and Steel

In response to being asked how often they used to get cement and steel from public suppliers at the time they needed it, the majority (80.3%) of OBs claimed that they very rarely or never got materials on time. However, the share of OBs who rarely or never got these materials on time in the El-Mukhtar area was much larger (97.7%) than in the El-Salam area (38%) as Table 9.2 illustrates.

Table 9 - 2: How often cement and steel were received on time

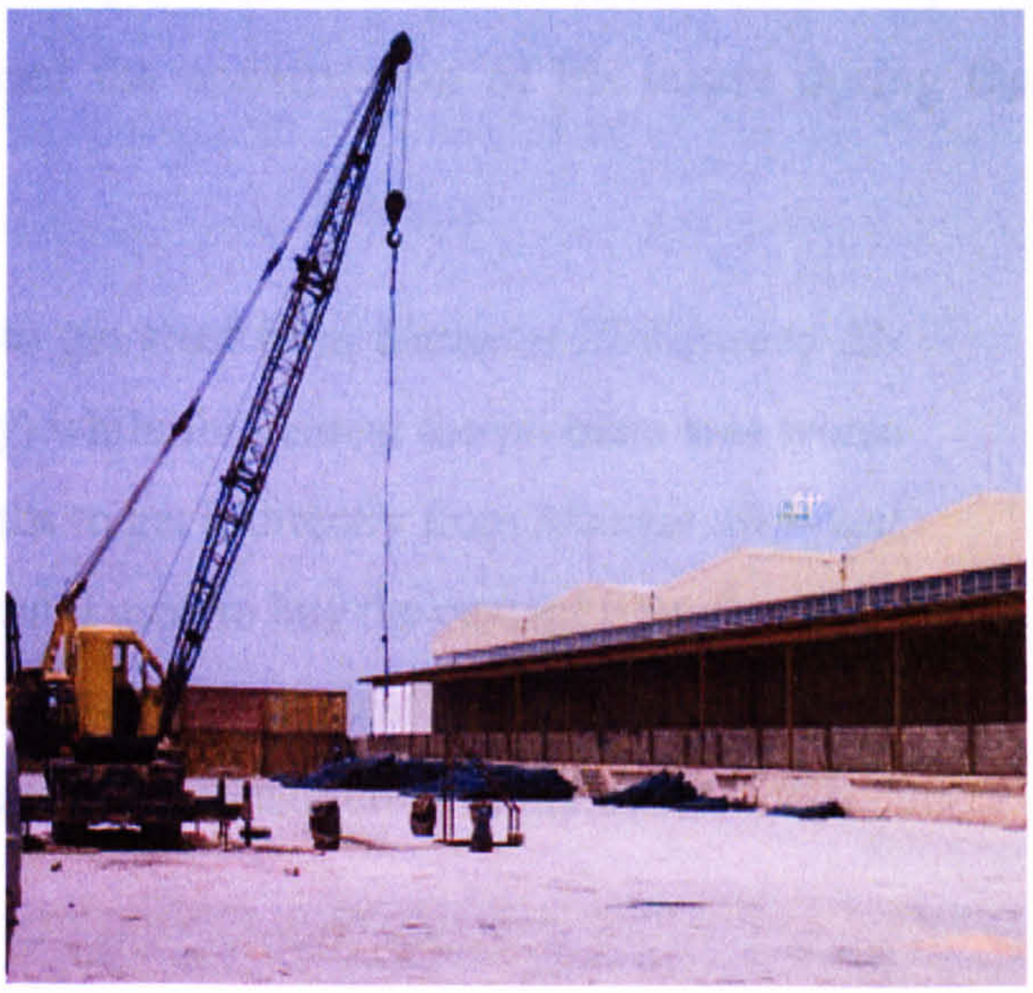
Sample	Cement & Steel received on time (%)				
	Always	Sometimes	Very Rare	Never	Total
El-Salam	25.7	33.3	33.3	7.7	100%
El-Mukhtar	0	2.3	50	47.7	100%
Total Sample	7.9	11.8	44.9	35.4	100%

Source: Fieldwork, Benghazi (Feb-May) 2003

Accordingly, the OBs were asked to mention the longest period that they had to wait to get cement and steel from publicly-owned supply channels. The findings show that about 37% of those OBs who were responsible for supplying materials, the longest period waiting to get cement and steel was 2 to 3 months, for 30.4% the longest waiting period was 4 to 5 months and for 28.9% it was one month or less. Plate 9.5 illustrates public suppliers of cement and steel in Benghazi.

Plate 9 - 5: Cement Plant (left) and Steel Store of Domestic Marketing Company (right) in Benghazi

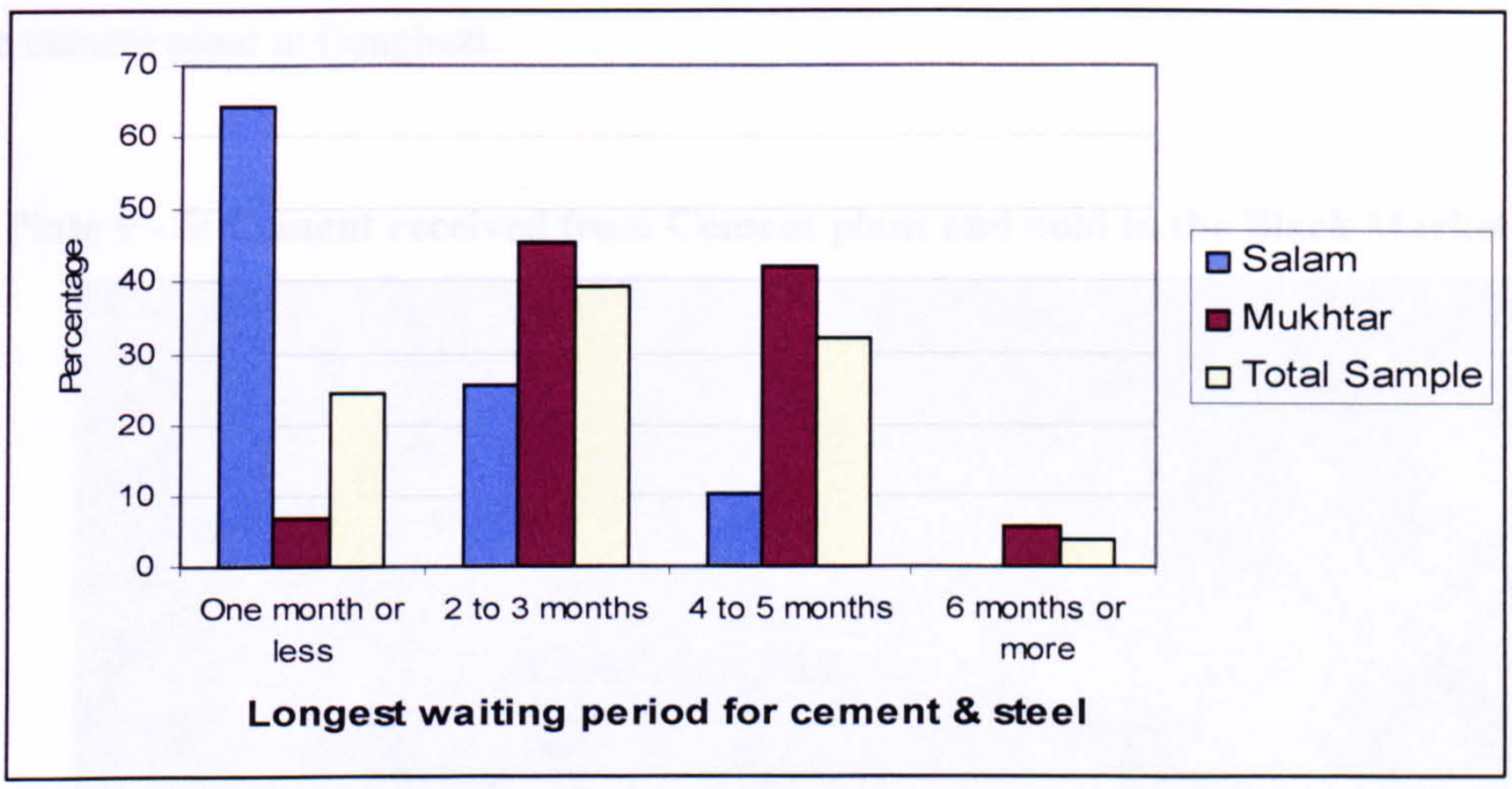




Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure 9.18 illustrates, the share of OBs in the El-Salam area who had the longest waiting period of one month or less was much larger (64.1%) than in the El-Mukhtar area (6.8%). In contrast, while 87.5% of OBs in the El-Mukhtar area had a longest waiting period of 2 to 5 months, only 35.9% in the El-Salam area had to wait for so long. The longer waiting periods in the El-Mukhtar area can be attributed, as discussed in chapter 6, to the notable decline in the local production of some building materials in the country as well as to the notable reduction in the size of imported materials during the period 1986-1988.

Figure 9 - 18: Waiting Times for Cement and Steel



Source: Fieldwork, Benghazi (Feb-May) 2003

The problem of waiting to get materials was frequently mentioned in most of the open-ended interviews conducted with OBs, particularly in the El-Mukhtar area. In this respect, an OB from El-Mukhtar area who commenced the construction of his house during the early 1990s said that:

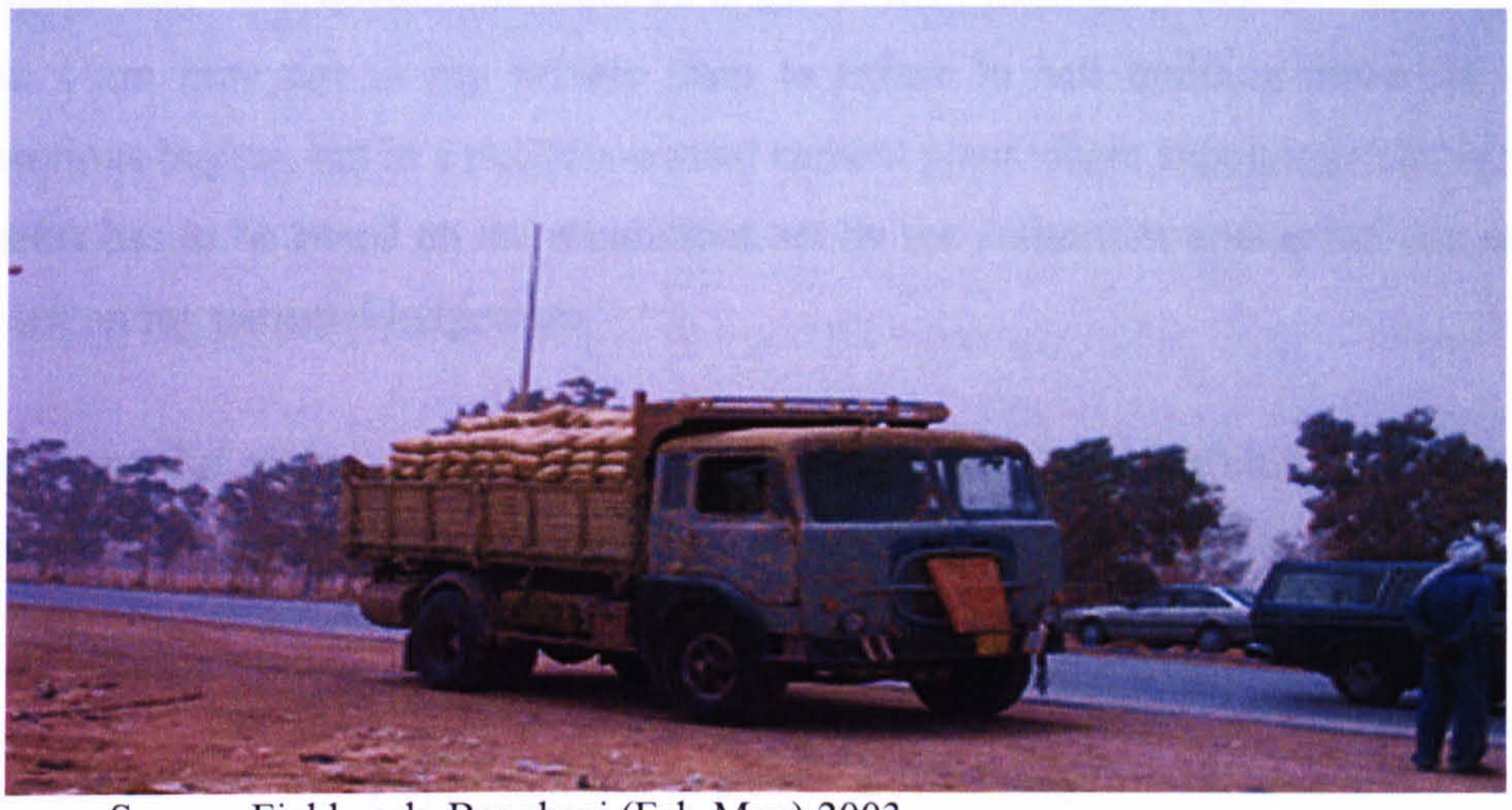
> "In most cases I used to wait a month to get steel from *Sharekat El-Tasweeq El-Mahally* (Domestic Marketing Company) while for cement the problem was worse since I had to wait for two to three months to get it directly from *Massna Alesmant* (Cement Plant). But in case of urgent need, I used to buy the cement from the *souq-alsawda* at a price that might amount to double the original price. Believe me, this was a nightmare that I commonly had during the construction of my house."

Surprisingly, when the same OB was asked what he used to do with cement received from the cement plant after buying what he needed from the black market, he replied:

> "To be honest, I used to sell it on the black market to get some of what I had already paid for cement from the *souq-alsawda*. And in other cases, I used to sell the receipt showing my priority in the waiting list for cement at a slightly higher price to another OB."

Observations made during frequent visits to cement plant in Benghazi show many deals of selling cement received from plant in the black market. Plate 9.6 illustrates quantity of cement loaded on a truck and ready to be sold in the black market in a location not too far from the cement plant in Benghazi.

Plate 9 - 6: Cement received from Cement plant and Sold in the Black Market



Source: Fieldwork, Benghazi (Feb-May) 2003

The issue of long delays in the El-Mukhtar area in the late 1980s and 90s in getting cement and steel from publicly-owned supply channels was also raised by the researcher during interviews conducted with officials at the cement plant and local marketing company in Benghazi. A senior official from the cement plant said that:

> "In addition to the reduction in the amount of cement produced locally during the 1990s, I still believe that the problem of long waiting periods was also caused by the fact that many cement applicants were not serious OBs in urgent need of cement to build their own houses."

When asked what he meant by 'not serious OB', he replied that:

> "Based on my daily observations, it was obvious that many of the applicants were individuals commonly seen queuing in the front of marketing department of the cement plant and able to get cement several times. They were not serious OBs because cement is not the type of material that is needed so frequently each month. They are just traders who you can see encouraging other applicants to sell their receipts for cement at prices more slightly than what they actually paid in order to resell them again in the *souq-alsawda* to needy OBs at double the prices."

When he was asked why he did not prevent them from getting cement from the plant if he felt that they were not serious OBs, he answered that:

> "It was extremely difficult to do that since they were always able to submit the original and valid documents required to get cement from the plant. Do not forget that I am here not in my private shop to refuse to sell building materials to unserious buyers, but in a publicly-owned cement plant where supplying cement to clients has to be based on the regulations set by the authorities concerned and not based on my personal judgement."

This answer from the senior official at the cement plant led the researcher to ask him how non serious applicants are able to submit the valid and original documents required to get cement from the plant. In response, he answered that:

> "To get cement, every applicant has to submit a valid *roughsat-elbeena* and recent report issued by an authorized *maktaab-handasiy* [engineering office] showing the quantity of cement required for the house under construction. I know for certain that it is not difficult for many unserious OBs who receive cement many times at quantities enough to build their own houses to get these documents. For instance, a replacement for a *roughsat-elbeena* claimed lost that has on it many stamps showing the number of times and quantities of cement received can easily be obtained from the *baladiya* (municipality). This *roughsat-elbeena* together with quantity reports that can easily be issued by any authorized *maktaab-handasiy* upon the payment of fees can then be submitted to marketing department to get cement. "

The misuse of building permit by some people was raised by the researcher during an interview conducted with one of the officials from the UPA in Benghazi. In response, he said that:

> "It is not a secret to expose here regarding the increased number of applications made during the 1990s for *roughsat-elbeena* to be issued as replacements for ones that had been claimed lost or damaged. In such cases, we ask the applicant to provide a recent Property Lose Report issued by a police station located within the area of his residence. Accordingly, based on a site visit, one of our surveyors has to write a report regarding the condition of the house for which a replacement *roughsat-elbeena* is requested. If the surveyor's report shows that the house is not completely constructed, a replacement *roughsat-elbeena* can be issued."

When the same official from the UPA in Benghazi was asked about the number of times a replacement building permit was allowed to be issued, as well as the recording system adopted to control the issue of these permits, he replied that:

> "Actually, there is no limit to the number of replacements because we are not in a position to prevent any applicant from getting *roughsat-elbeena* if he is able to provide the required documents. In relation to your question regarding the recording system for building permits, we have two yearly written archives one for the first-time issue permits and the other one for replacement ones."

It can be concluded that affordable building materials were accessible and available to most OBs who commenced the construction of their houses during the 1970s (in the El-Salam area). In contrast, those who commenced the construction of their houses during the late 1980s or 90s (in the El-Mukhtar area) faced problems in getting access to affordable building materials, particularly cement and steel, since they had to wait rather longer to get what they needed from the public suppliers concerned or alternatively to buy these materials from the black market at higher prices.

9.4 Conclusion

In this chapter the motivations of OBs for building their own houses as well the accessibility and sufficiency of building resources have been explored. It is clear that the affordability of the house construction process was the main motive OBs had in building

their own houses. It was also clearly demonstrated that building resources were accessible, affordable and sufficient for OBs who commenced the construction of their houses during the 1970s. In contrast, long waiting periods for resources (land, building permits, loans, and materials) as well the inadequacy of loans in covering the increased costs of construction were experienced by the majority of OBs during the late 1980s and 90s. The accessibility of land through municipalities or housing cooperatives during the 1970s was obvious from the short time that many OBs had to wait to get their plots (4 years or less). In contrast, many of those who commenced the construction of their houses during the 1980s and 90s had to wait a rather longer time (13 years or more).

In terms of house design, although professionals were employed for this purpose, various factors influenced the design. For those who built their own houses during 1970s, household size was the main factor, while for those who commenced the house construction during the late 1980s and 90s, financial issues, such as high construction costs and restrictive building loan requirements were the main factors influenced design. Thus, OBs with low incomes during the late 1980s and 1990s had to design their houses according to the building loan requirements rather than their socio-cultural needs. Building permits were received much earlier by those who built their houses during the 1970s compared to those during the 1980s and 90s. This was due to the lengthy process of acquiring the required documents experienced by those in the 1980s and 90s such as the 'Title Deed Certificate'[6] for plots. In addition, amendments that they were asked to make to the submitted house designs so as to conform to the relevant building regulations. This tended to happen when the designer was trying to satisfy his client's needs, wishes and desires rather than sticking to the letter of the building regulations.

The complex eligibility criteria and insufficient amount of loan were the main reasons for the difficulty that many OBs faced during the late 1980s and 90s compared to its accessibility and sufficiency during the 1970s. The insufficiency of loan was due to the fact that it was calculated based on monthly total net income rather than on costs of construction. This made personal and family savings the main sources of funds for house construction during this period. In terms of construction labour, non-Libyan informal master builders and informal individual artisans and craftsmen with no formal vocational

[6] This certificate confirms that the specified plot is owned by the named person and he is authorised to build on it according to the approved building codes specified for the area where the plot is located.

training in construction were the main type of labour employed by OBs in house construction. During the 1970s, the good reputation of builder was the main criterion of selection; while labour cost was the principal criterion during the 80s and 90s due to high construction costs experienced during this period. Regarding building materials, OBs during the 1970s and early 1980s enjoyed accessibility to affordable and sufficient materials, while expensive locally produced and imported materials were one of the main problems facing OBs during the late 1980s and 90s. The next chapter explores how OBs managed the construction of their own houses and examine their attitudes and preferences concerning the house construction process.

Chapter Ten:

Practices, Assessments and Attitudes Concerning Managing House Construction Process

Chapter Ten

Practices, Assessments and Attitudes Concerning Managing the House Construction Process

10.1 Introduction

The previous chapter has discussed how OBs got access to building resources and to what extent these resources were accessible and sufficient in building their own houses. The primary aim of this chapter is to explore how OBs managed the construction of their houses. It also discusses the status of the constructed houses when moving in, and explores the overall impressions of the OBs towards the construction tasks as well as the method they would prefer if they were given another chance to select a family house based on their experience in building their own houses.

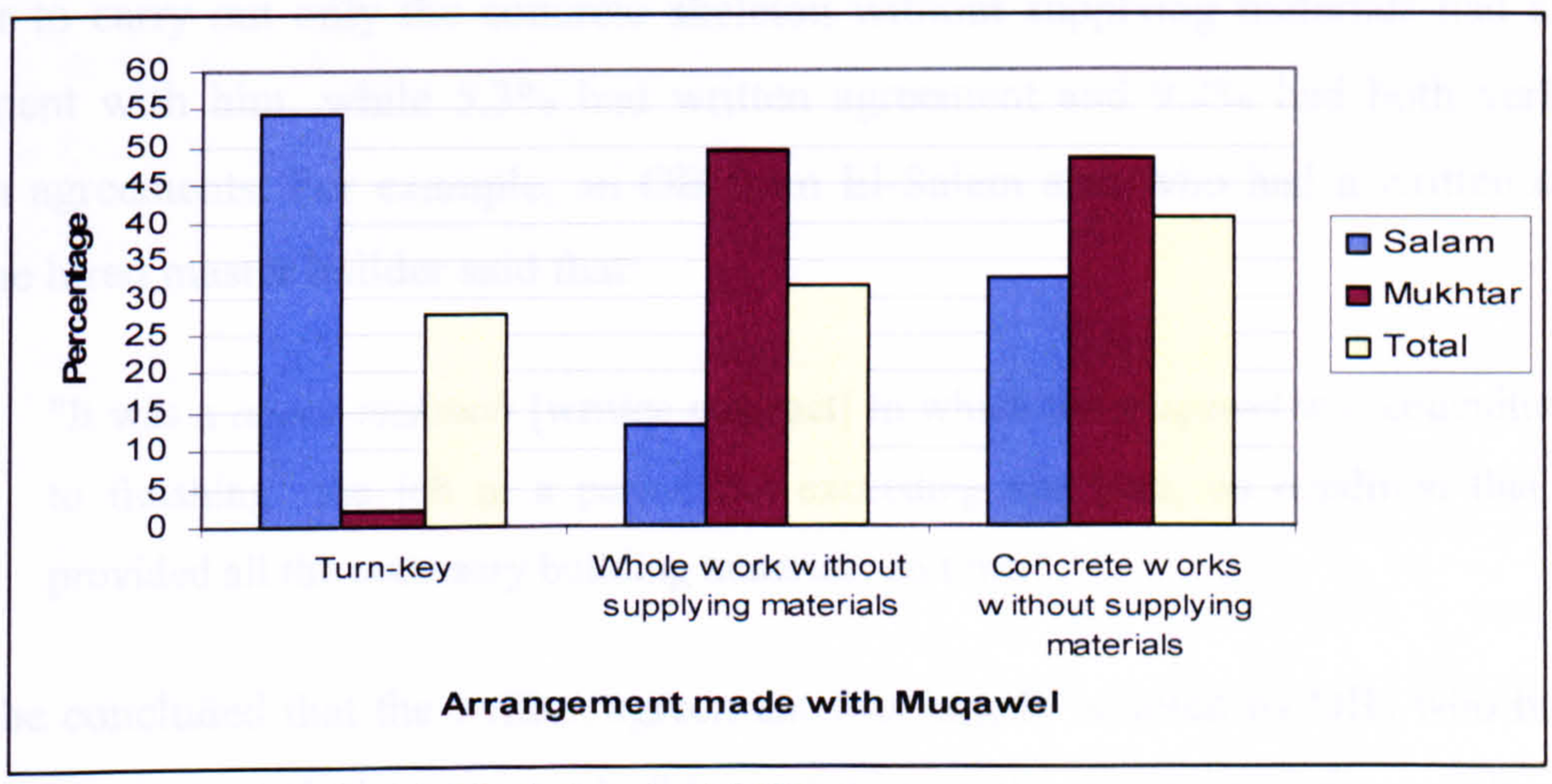
10.2 Owner-builder's Background in Construction

As mentioned in chapter 2, the OB is seen as 'an expert' in handling the construction process of his own house, particularly through his ability to adjust his priorities to his needs, and spend time in place of money. Additionally, he is seen as capable of providing, managing and utilizing resources and labour in ways that other builders or developers often seem unable to do (Turner and Fichter, 1972:11). Nevertheless, managing and overseeing construction work requires time and knowledge to ensure the achievement of the intended quality, cost and schedule of construction (Groak, 1992). Thus, an OB with some experience in or knowledge of construction would be more able to manage and control the construction of his own house. However, the findings show that across the total sample none of the OBs or any of their family members had any construction experience prior to commencing the construction phase.

10.3 Type of Arrangement and Form of Agreement Made With Hired Builder

As mentioned in the previous chapter, all of the OBs employed master builders in building their houses. Of this total, 27.8% had a turn-key arrangement (undertaking entire construction works and supplying materials), 31.6% arranged for the builder to carry out the entire construction work without supplying materials and 40.6% hired him to carry out only the concrete skeleton work for the house. However, the share of OBs who had a turn-key arrangement with the master builder in El-Salam area, as Figure 10.1 shows, was much larger (54.3%) than in the El-Mukhtar area (2.1%). In contrast, the share of OBs who arranged with the master-builder to carry out the entire construction work but without supplying materials was larger in the El-Mukhtar area (49.5%) than in the El-Salam area (13%). In addition, while 48.4% of OBs in the El-Mukhtar area arranged for the master builder to build only the concrete skeleton of the house, 32.6% in the El-Salam area had such as arrangement.

Figure 10 - 1: Arrangement made with hired master builder



Source: Fieldwork (Feb-May), Benghazi 2003

It is clear that 135 OBs (72.2%) were involved in the construction of their own houses by providing, managing and utilizing resources and labour, since they did not adopt a turn-key arrangement with the hired builder.

In terms of the form of agreement made with the builder, Table 10-1 shows that 27.8% had a written agreement with him, 54% had a verbal agreement and 18.2% had both verbal and written agreements with the master builder.

Table 10 - 1: Form of Agreement made with Master Builder

Sample	Form of Agreement made with Master Builder							
	Written		Verbal		Both Verbal &Written		Total	
	No.	%	No.	%	No.	%	No.	%
El-Salam	52	56.5	29	31.5	11	12	92	100
El-Mukhtar	0	0	72	75.8	23	24.2	97	100
Whole Sample	52	27.8	101	54	34	18.2	187	100

Source: Fieldwork, Benghazi (Feb-May) 2003

However, the findings show that the form of agreement was to a large extent influenced by the type of arrangement adopted to carry out the construction work. For instance, while none of the OBs who adopted a turn-key arrangement with the master builder had only a verbal agreement with him, 76.9% had a written agreement and 23.1% had both written and verbal agreements. In contrast, about 86% of OBs who arranged with the master builder to carry out only the concrete skeleton without supplying materials had a verbal agreement with him, while 5.3% had written agreement and 9.2% had both verbal and written agreements. For example, an OB from El-Salam area who had a written contract with the hired master builder said that:

> "It was a *aqeed-maktoob* [written contract] in which the *muqawel* was committed to finishing the job in a period not exceeding one year, on condition that I provided all the necessary building materials on time."

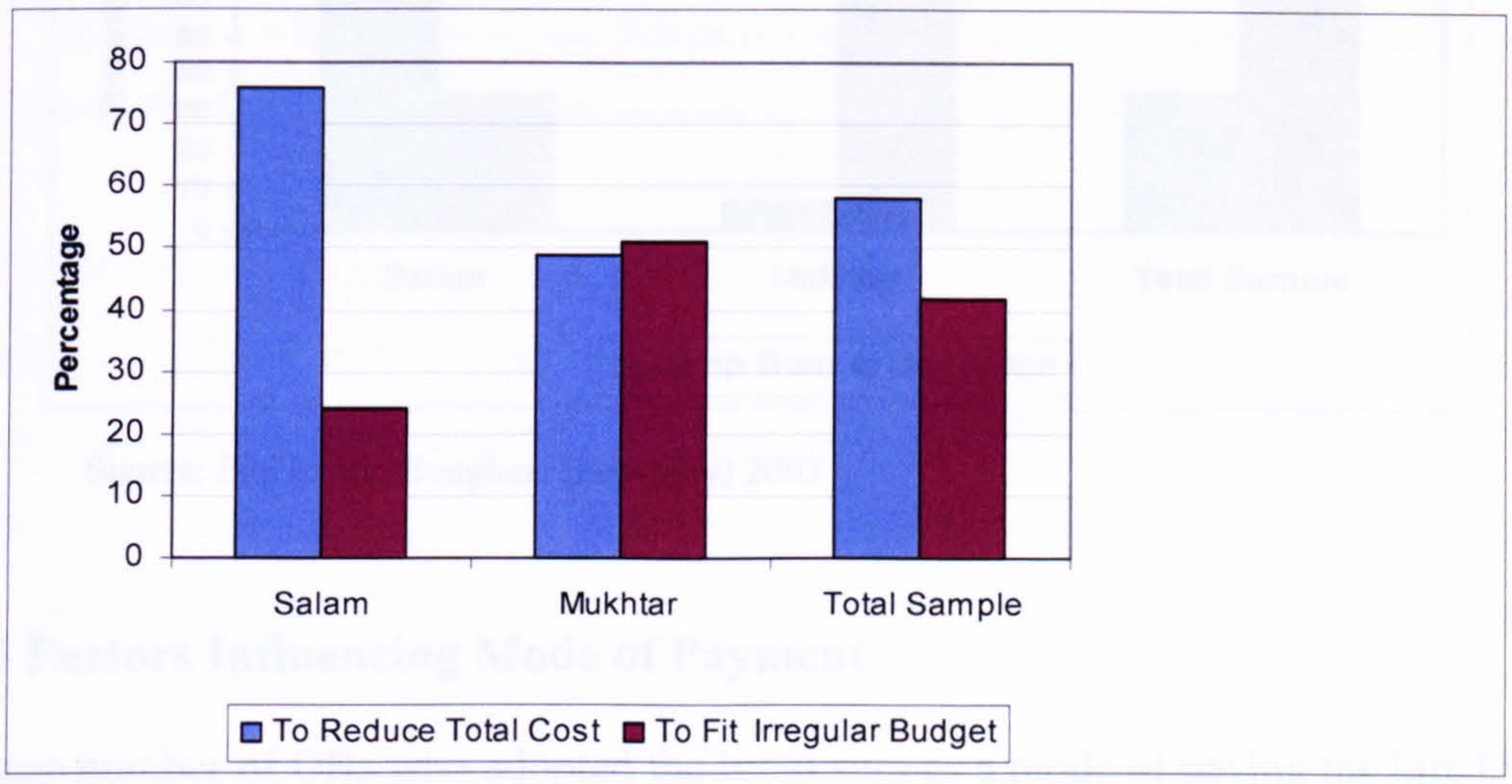
It can be concluded that the written agreement was largely adopted by OBs who had turn-key arrangements with their master builders while verbal agreements were mainly adopted by those who had other arrangements with hired builders such as carrying out the entire construction work or carrying out the concrete work only.

10.3.1 Reasons for not contracting out the whole construction work

The 135 OBs who did not adopt a turn-key arrangement were asked to state the reasons for not contracting out the whole construction work. In response, about 58% mentioned that

they were aiming to reduce the total cost of construction, while 42% aimed to fit their spending to irregular budgets.

Figure 10 - 2: Reason for not contracting out the whole construction works



Source: Fieldwork, Benghazi (Feb-May) 2003

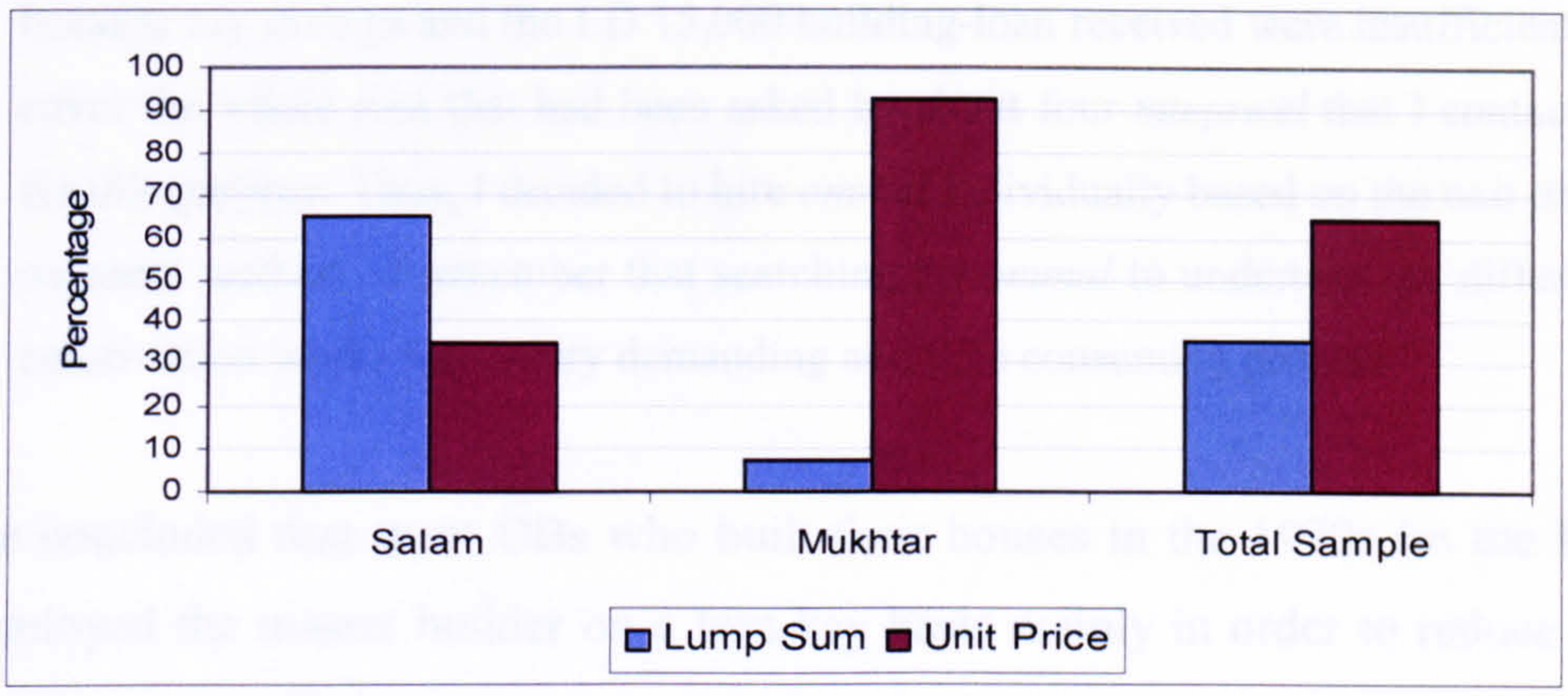
As Figure 10.2 shows, about two thirds (76%) of OBs who did not adopt a turn-key arrangement in the El-Salam area were aiming to reduce the total cost of construction, whereas in the El-Mukhtar area about half (51%) of them aimed to fit their spending to irregular budgets. For example, when was asked about the reason for not adopting a turn-key arrangement, an OB in the El-Mukhtar area answered that:

> "At the beginning I was intending to adopt *tasleem-moftah* [turn-key] arrangement but the huge sum that the *muqawel* asked made me change my mind. The calculations that I made with the help of one of my friends of the construction costs showed that hiring *ommal* on an individual basis was far less costly. Hence, I arranged with the *muqawel* to do the concrete works only and to hire *ommal* for the rest of the work on an individual basis to reduce the total cost."

10.3.2 Mode of Payment used with Hired Builder

Of the total of 187 OBs; 35.8% paid the hired builder with a lump-sum while 64.2% adopted a unit price as mode of payment. As Figure 10.3 shows, while the great majority (92.6%) of OBs in the El-Mukhtar area adopted the unit price as a mode of payment with the hired builder, about two thirds of OBs in the El-Salam area (65.2%) adopted the lump-sum.

Figure 10 - 3: Mode of Payment Adopted with Hired Builder



Source: Fieldwork, Benghazi (Feb-May) 2003

10.3.3 Factors Influencing Mode of Payment

The large number of OBs who adopted the lump sum as a mode of paying the hired builder all had turn-key arrangements with him. In contrast, the unit price was the main mode of payment adopted by OBs who had other arrangements with hired builders, such as carrying out the concrete work (97.4%) or carrying out the whole construction work without supplying materials (78%). Thus, the lump-sum was the main mode of payment used by OBs in the El-Salam area, since it was used by 100% of those adopted the turn-key arrangement and 66.7% of those who arranged for the hired builder to carry out the whole construction work. For example, an OB from the El-Salam area who had a written contract with the hired master builder and paid him in a lump-sum said that:

> "We agreed on a whole sum to be paid in three stages according to the progress of construction works. The first sum had to be paid after the building of foundations, the second after establishing the concrete skeleton and the third after the *tashteeb* work [finishing] was completed. That arrangement was comfortable for me as it was in tune with the payments of the building-loan."

In contrast, the unit price was the main mode of payment adopted by OBs in the El-Mukhtar area since it was used by 89.4% of those who arranged for the hired builder to carry out the whole construction work and by 100% of those who arranged for the hired builder to construct only the concrete skeleton of the house. For instance, one OB from the El-Mukhtar area who did not adopt a turn-key arrangement aiming to fit his spending to his budget and cut costs said regarding the mode of payment that:

> "In building my house, it was difficult for me to hire one builder to do all the work because my savings and the LD 15,000 building-loan received were insufficient to cover the whole sum that had been asked by about four *muqawel* that I contacted for this purpose. Thus, I decided to hire *ommal* individually based on the unit price payment method. I remember that searching for *ommal* to undertake the different construction works was a very demanding and time consuming process."

It can be concluded that most OBs who built their houses in the 1970s (in the El-Salam area) employed the master builder on a turn-key basis mainly in order to reduce the total costs of construction. They had mainly written or both written and verbal agreements with him and used lump-sum payments. In contrast, most OBs who built their houses in the late 1980s and 1990s (in the El-Mukhtar area) employed the master builder based on arrangements in which he had to undertake the entire construction works or just the concrete skeleton of the house, mainly in order to fit their irregular budgets. They largely adopted verbal agreements where the payment was mainly on a unit price basis.

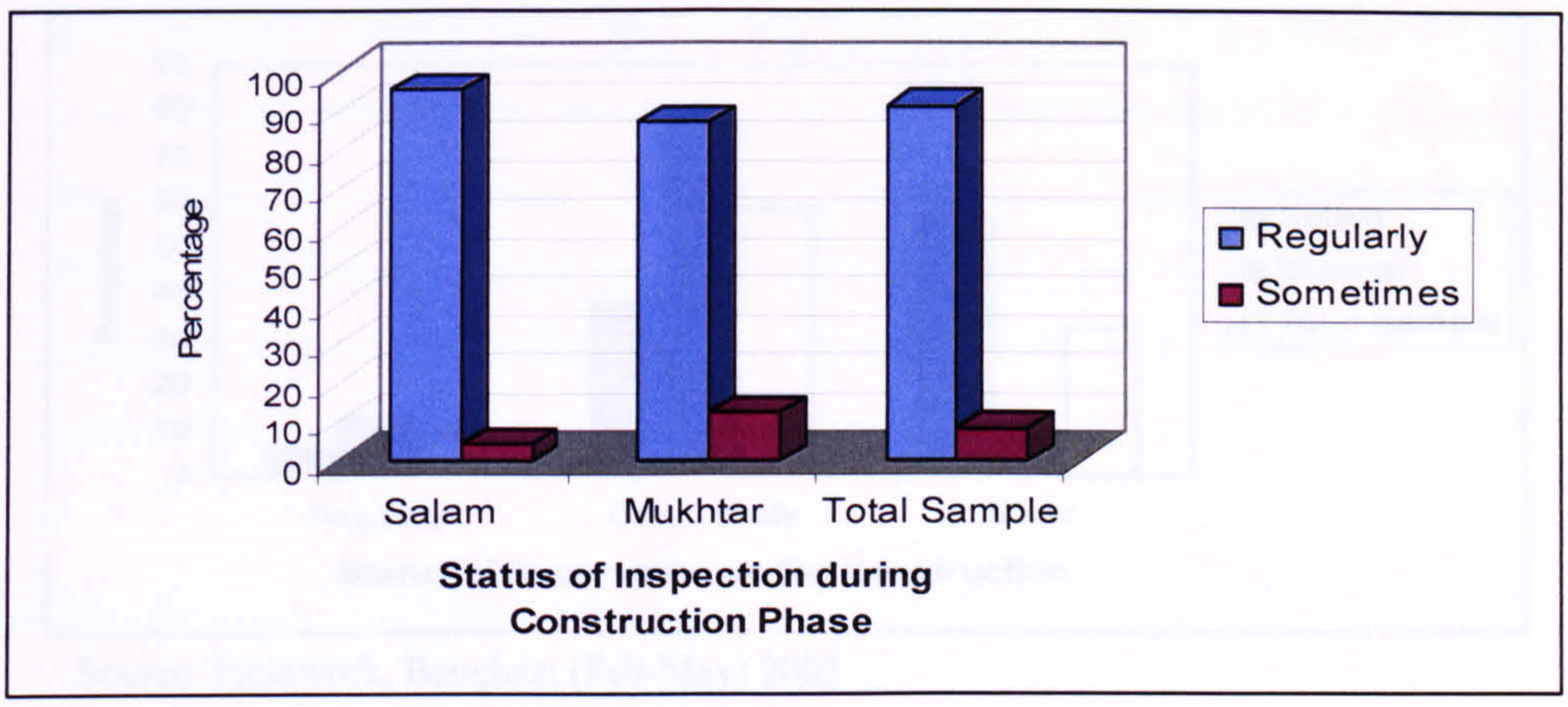
10.4 Inspection and Supervision during Construction

One of the key attributes of the OBH process, as discussed in chapter 2, is the ability of the OB to oversee the progress and quality of construction work. In this section, the main factors influencing the inspection and supervision of construction work is discussed.

10.4.1 Inspecting the Progress of Construction Work

As discussed in chapter 7, certain inspections have to be made by the UPA during the construction phase as well as by the lender of the building loan if the OB has one. In the case of inspections to be made by the UPA, the OB has to contact the UPA at specified times prior and during construction as well as after the completion of the construction work to allow inspections to take place. In terms of inspections to be undertaken by the lender of the loan, five regular visits have to be made by the bank's engineer in order to facilitate the issue of the loan payments based on the progress of the construction work (see chapter 7).

Figure 10 - 4: Status of Inspection during Construction Phase



Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure 10.4 shows, 91.4% of OBs mentioned that their houses had been inspected regularly during the construction phase; 8.6% mentioned that their houses had been occasionally inspected. However, the share of OBs whose houses were regularly inspected in the El-Salam area was slightly larger (95.7%) than in the El-Mukhtar area (87.4%).

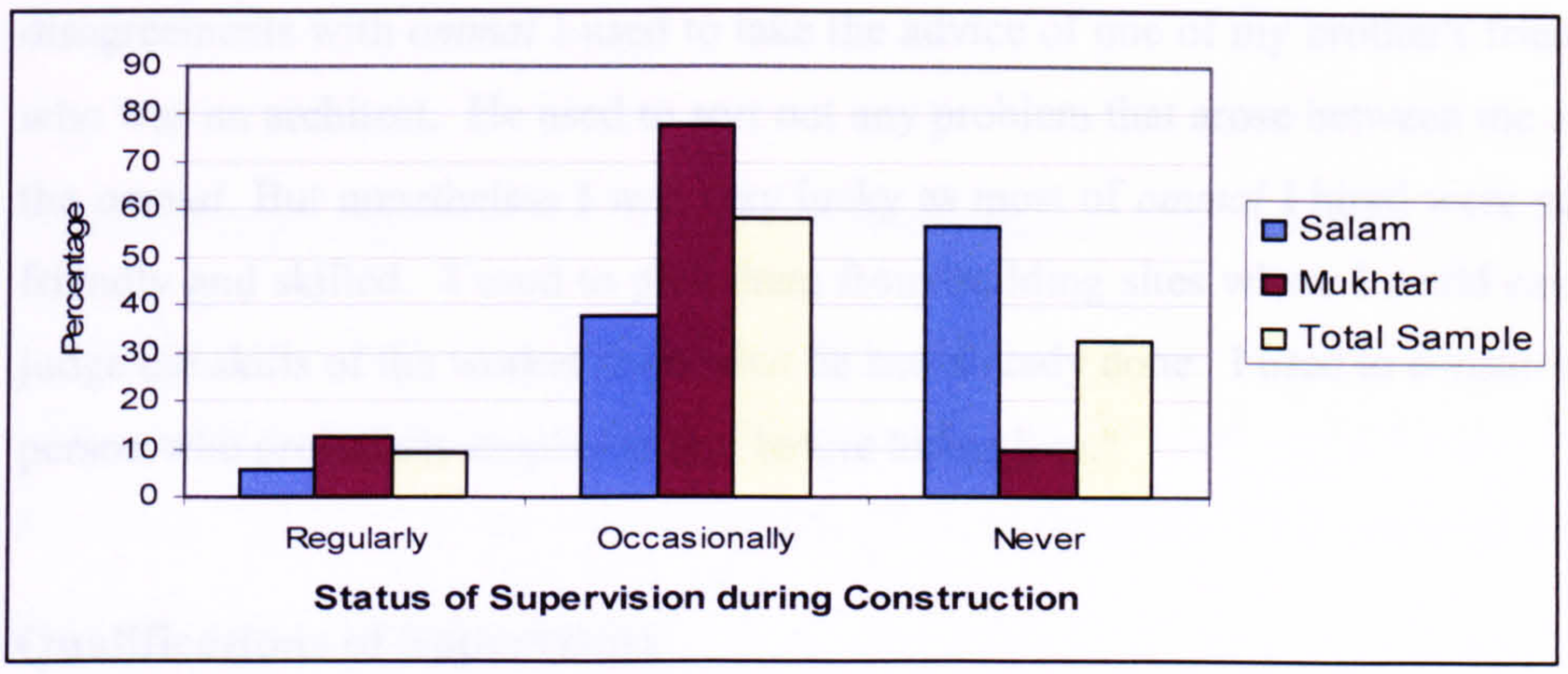
10.4.1.1 Factors Influencing the Status of Inspection

The findings show that 98.2% of OBs whose houses had been regularly inspected were recipients of building loans, while 81.3% of those whose houses had irregular inspections did not make a use of building loans in funding the construction work. The regular inspection for beneficiaries of building loans can be attributed, as discussed in chapter 7, to the fact that inspections undertaken by loan lenders were essential and obligatory for the payment of loans to be continued.

10.4.2 Supervising the Quality of Construction Work

In contrast to the great majority of OBs whose houses were inspected regularly, only a small percentage (9.1%) had regular supervision of construction work. In addition, 58.3% mentioned that they occasionally hired a supervisor while about one third (32.6%) mentioned that the construction was never supervised. As can be seen from Figure 10.5, the share of OBs whose house construction had regular or occasional supervision was much larger in the El-Mukhtar area (90.5%) than in the El-Salam area (43.5%).

Figure 10 - 5: Status of Supervision during Construction Phase



Source: Fieldwork, Benghazi (Feb-May) 2003

10.4.2.1 Factors Influencing Status of Supervision

Despite the small percentage of OBs whose houses were regularly supervised during construction, the findings show that the status of supervision was to a large extent influenced by the type of arrangement adopted with the hired builder. 67.2% of OBs whose house construction was never supervised had turn-key arrangements with hired builders while 70.6% of OBs who had regular supervision and 60.6% of those who had occasional supervision had not adopted a turn-key arrangements. These figures clarify the larger proportion of houses whose construction had never been supervised in the El-Salam area, due to the adoption of turn-key arrangements, compared to in the El-Mukhtar area. This means that the more likely turn-key arrangements are to be adopted with hired builders; the less likely supervision will be undertaken during construction, and vice-versa. For example, an OB from the El-Salam area who built his house in the mid 1970s and did not hire a supervisor to oversee the construction work said that:

> "In fact I did not hire *mushreef-benna* [construction supervisor] to oversee the construction work as the idea of *eshraff* was not common at that time, and most people used to build their own houses without hiring *mushreef-benna*. The whole process was the responsibility of the *muqawel* who was in charge of the building process as well as supervising the *ommal*."

In contrast, an OB from the El-Mukhtar area who occasionally used to invite an architect to supervise the construction work said that:

"I used to mange the construction work on my own, and in cases of disputes or disagreements with *ommal* I used to take the advice of one of my brother's friends who was an architect. He used to sort out any problem that arose between me and the *ommal*. But nonetheless I was very lucky as most of *ommal* I hired were very friendly and skilled. I used to pick them from building sites where I could easily judge the skills of the worker from what he had already done. I used to consult the person who previously employed him before hiring him."

10.4.2.2 Qualifications of Supervisors

Of the OBs whose house construction had been supervised, 29.4% hired an architect for construction supervision, 44.4% hired a civil engineer, 23% hired a surveyor and only 3.2% hired a builder to supervise the construction works.

Table 10 - 2: Qualifications of Construction Supervisors

Sample	Qualification of Supervisor							
	Architect		Civil Engineer		Surveyor		Builder	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
El-Salam	9	22.5	19	47.5	11	27.5	1	2.5
El-Mukhtar	28	32.6	37	43	18	20.9	3	3.5
Total Sample	37	29.4	56	44.4	29	23	4	3.2

Source: Fieldwork, Benghazi (Feb-May) 2003

As can be seen from Table 10.2, the great majority of OBs in the sample who employed a supervisor hired a qualified supervisor (architect, civil engineer or surveyor) while a small percentage hired informal builders with no formal vocational training in construction to supervise the construction work. It is worth mentioning here that, although the hired supervisors were professionals in relation to construction tasks such as architects, civil engineer and surveyors, as revealed by in-depth interviews conducted with some designers, most had no qualifications or background in project management or supervision in addition to their primary profession. In this respect, one of the designers interviewed said that:

"I do not hold a degree in project management and supervision, but I feel confident in myself based on my knowledge and long experience in design and construction to undertake consultancy and *eshraff* duties. I do not think it is necessary to hold a degree in project management to oversee small construction projects such as

building single-family dwellings, once reasonable experience in construction is acquired."

10.4.2.3 Form of Agreement and Mode of Payment made with Hired Supervisors

The great majority of OBs (82.5%) with hired supervisors had verbal agreements with them, 14.3% had both verbal and written agreements and 3.2% had written agreements. As can be seen from Table 10.3, the verbal agreement was the main form adopted by OBs in both selected areas in hiring supervisors.

Table 10 - 3: Form of Agreement made with Supervisor

Sample	Form of Agreement made with Supervisor							
	Written		Verbal		Both		Total	
	No.	%	No.	%	No.	%	No.	%
El-Salam	2	5	36	90	2	5	40	100
El-Mukhtar	2	2.3	68	79.1	16	18.6	86	100
Total Sample	4	3.2	104	82.5	18	14.3	126	100

Source: Fieldwork, Benghazi (Feb-May) 2003

In terms of mode of payment, Table 10.4 illustrates that although 57.1% of OBs adopted a fixed fee per visit for the hired supervisor, in general the mode of payment was to a large extent influenced by the status of the supervision. For instance, the fixed fee per visit was adopted by 70.6% of OBs whose houses were supervised regularly. In contrast, of the OBs whose house construction was supervised occasionally; 55% adopted fixed amounts of money per visit while 44% adopted other modes of payment.

Table 10 - 4: Mode of Payment made with Supervisor

Sample	Mode of Payment made with Supervisor							
	Lump-sum		Fixed amount per visit		Unfixed amount of money		Total	
	No.	%	No.	%	No.	%	No.	%
El-Salam	2	5	21	52.5	17	42.5	40	100
El-Mukhtar	0	0	51	59.3	35	40.7	86	100
Total Sample	2	1.6	72	57.1	52	41.3	126	100

Source: Fieldwork, Benghazi (Feb-May) 2003

Another factor influencing the mode of payment adopted with hired supervisors was the prior relationship with the supervisor. The great majority (78.1%) of OBs whose house construction was supervised by a friend did not used fixed fees or paid nothing visits. This was mainly due to the willingness of the supervisor to help a friend in building his house. This is common practice and custom in a society which puts friendship and social relations ahead of personal financial benefits. In this respect, a designer who undertook supervision duties said in an interview:

> "In most *eshraff* work undertaken occasionally based on a request from one of my friends or relatives I rarely ask for payment, which in most cases ranges between LD20 to 50 per visit. This is due to the social customs that we still have in our society with regard to giving assistance to relatives or friends in need. To be honest, this often happens when occasional and irregular visits are made to construction sites".

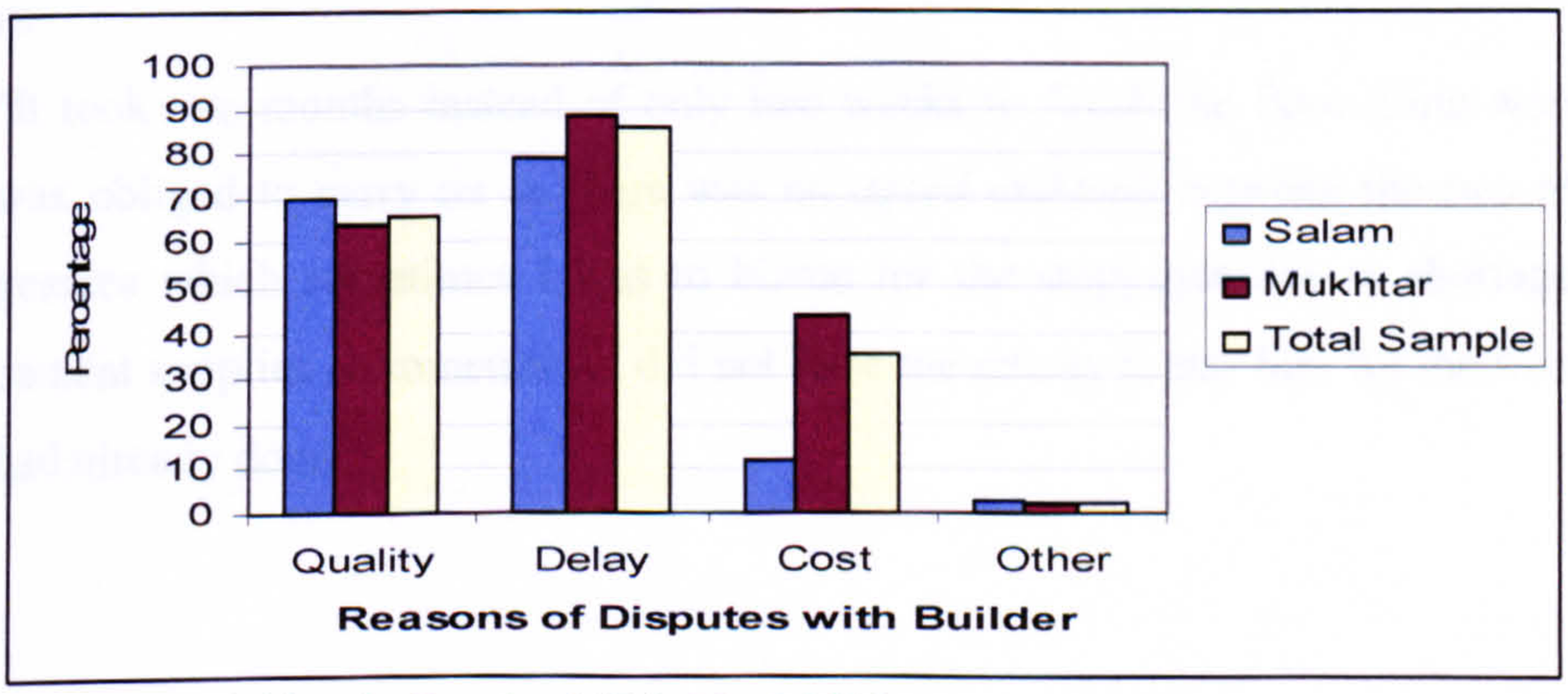
10.5 Disputes Occurring With Hired Builders

Of the total of 187 OBs, about two thirds (64.2%) mentioned that they had disputes with their hired builders. However, the share of OBs who had such disputes with hired builders in the El-Mukhtar area was much larger (91.6%) than in the El-Salam area (35.9%).

10.5.1 Reasons for Disputes with Hired Builders

Owner-builders who had disputes with hired builders were asked about the reasons for these disputes. 85.8% mentioned delays in work as the reason, 65.8% mentioned the quality of work and 35% mentioned disagreements over the cost of construction work.

Figure 10 - 6: Reasons for Disputes with hired builder



Source: Fieldwork, Benghazi (Feb-May) 2003

However, as Figure 10.6 illustrates, the share of OBs who mentioned delays and the cost of work being reasons for disputes in the El-Mukhtar area was much larger (88.5% and 43.7% respectively) than in the El-Salam area (78.8% and 12.1% respectively). In this respect, an OB from the El-Mukhtar area who had disputes with hired builders during the construction of his house said that:

> "Yes, it was the *kahrabaiee* [electrician]. After three weeks of work I discovered that he was incompetent when he made the internal connections incorrectly although he told me that he was capable of doing the work. As a result of his work I lost almost LD500-worth of electrical materials. Thus, I reported this to the police but unfortunately my case was rejected on the grounds that there was no *aqeed-maktoob* between me and the man. Then I consulted one of the electrical engineers to solve the problem, who managed to prepare a map that cost me about LD150. To be honest, it was my mistake to hire a worker based on price and not on his skills."

In some cases, disputes are caused by the irregular attendance of hired builders to construction sites and delays in undertaking the work. In this respect, an OB from the El-Mukhtar area said that:

> "When I decided to do the flooring work I looked for a worker who was not engaged in another job. After a week of searching I made an agreement with a worker to do the work in two weeks at an agreed price. But unfortunately he did not regularly turn up. Every time I looked for him on the construction site he was not there. Finally, I discovered that he was engaged in two other jobs at the same time and when I asked him why he was doing that he justified his actions by saying that he could not afford to turn down any chance of work."

The irregular attendance of the hired worker caused more delay, as the OB stated that:

> "It took two months instead of only two weeks to finish the floor-tiling work. I was obliged to carry on as there was no *aqeed-maktoob* between the two of us, besides which sometimes I was to blame for the stoppages due to shortages in cement supplies or sometimes I did not have the money to pay him for the work he had already done."

When the same OB was asked why he did not hire another worker to do the flooring, he answered that:

> "It was very difficult as usually no worker would agree to take over a job already started by another worker. Moreover, I hired the first worker at a very reasonable price that most workers would reject at that time."

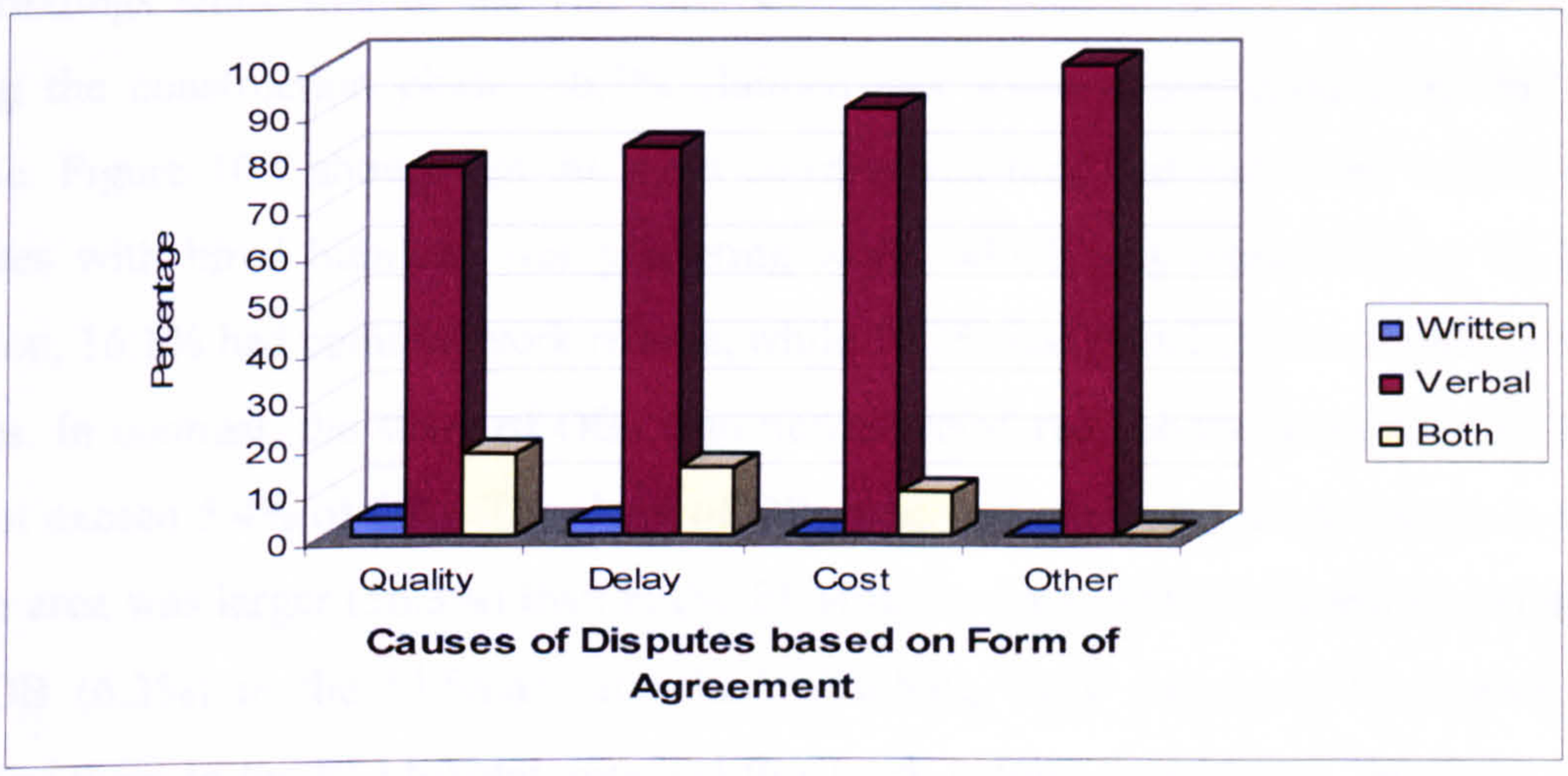
Dispute with hired builders arguing over the quality, time or the cost of construction were also experienced by OBs in Kuwait in recent years. As Koushki et al (2005) argued, these disputes of whom many cases were reported directly to the court were mainly caused by hiring unqualified workers to undertake the construction work.

10.5.1.1 Impact of Form of Agreement on Disputes occurred

As Figure 10.7 shows, a high percentage of disputes with hired builder were reported by those who had verbal agreements with them, while those who had written agreements had fewer disputes. For example, an OB from El-Salam area who had a written contract with the hired master builder was asked if any dispute occurred with him. He said that:

> "No, it never happened. The *aqeed-maktoob* always determined the relationship between the two of us. He committed himself to do the job, and I committed myself to pay him on time."

Figure 10 - 7: Impact of Form of Agreement made with Hired Builder on Disputes

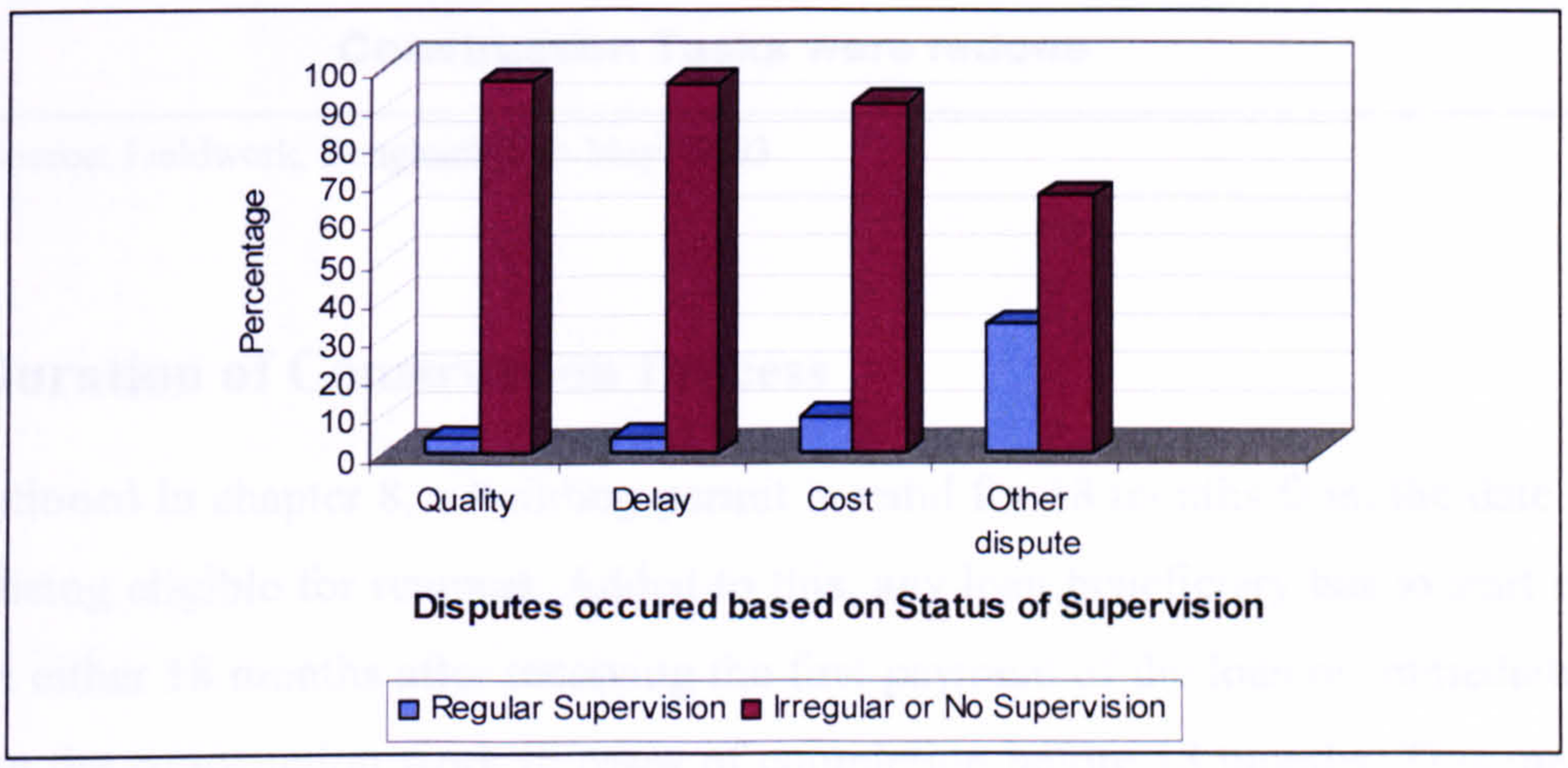


Source: Fieldwork, Benghazi (Feb-May) 2003

10.5.1.2 Role of Status of Supervision in Disputes Occurring

As Figure 10.8 illustrates, for most (95.8%) of OBs who experienced disputes with builders their work had never or only occasionally been supervised. Given that none of the OBs had a background in construction, it can be concluded that OBs who hired a professional on a regular basis to oversee the construction of their own houses were able to control and manage the construction phase with fewer disputes occurring with hired builders.

Figure 10 - 8: Impact of Supervision during Construction Phase on Disputes

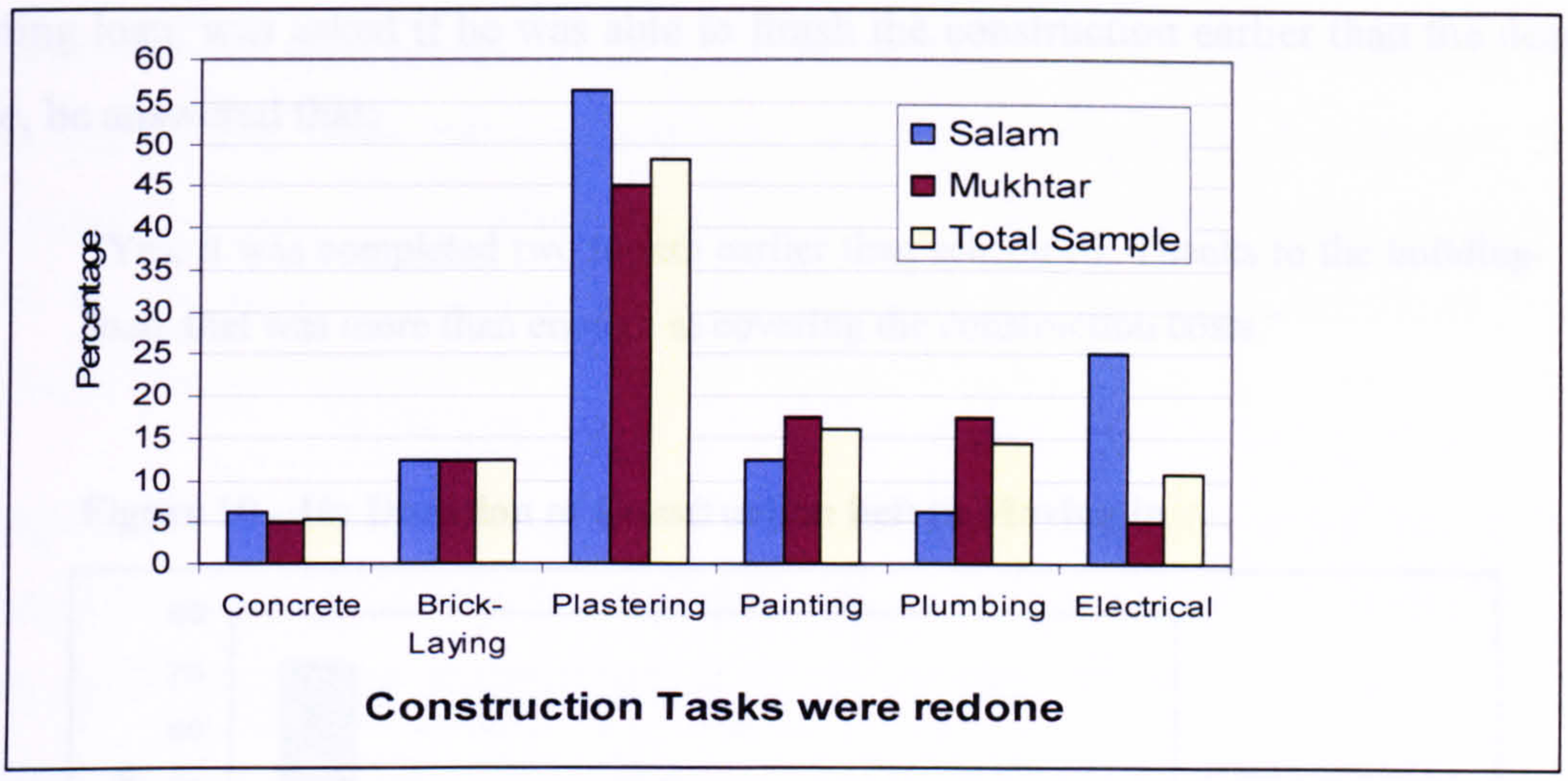


Source: Fieldwork, Benghazi (Feb-May) 2003

10.5.2 Construction Work Redone Due to Disputes

The findings show that of the 120 OBs who experienced disputes with hired builders during the construction phase, 46.7% claimed that some construction tasks had to be redone. Figure 10.9 shows that the main construction task that had to be redone due to disputes with hired builders, was plastering work, which was mentioned by 48.2%. In addition, 16.1% had painting work redone, while 14.3% had plumbing work redone in their houses. In contrast, the share of OBs who needed reinforced concrete work to be redone did not exceed 5.4% of OBs. The share of OBs who had plastering work redone in the El-Salam area was larger (56.3%) than in the El-Mukhtar area (45%). In contrast, while only one OB (6.3%) in the El-Salam area had plumbing work redone in his house, about 17.5%of them in the El-Mukhtar area had this work redone. In addition, the share of OBs who had electrical work redone in the El-Salam area was much larger (25%) than in the El-Mukhtar area (5%). It is noteworthy that none of the OBs who had their construction work supervised regularly mentioned that any work needed to be redone.

Figure 10 - 9: Construction Work Redone Due to Disputes



Source: Fieldwork, Benghazi (Feb-May) 2003

10.6 Duration of Construction Process

As mentioned in chapter 8, a building permit is valid for 18 months from the date of issue before being eligible for renewal. Added to this, any loan beneficiary has to start repaying the loan either 18 months after receiving the first payment of the loan or immediately after finishing the construction work in cases of completion before 18 months. This means that the anticipated duration of house construction is 18 months. This section explores the duration of the construction process as well as any delays and suspensions that this process encountered.

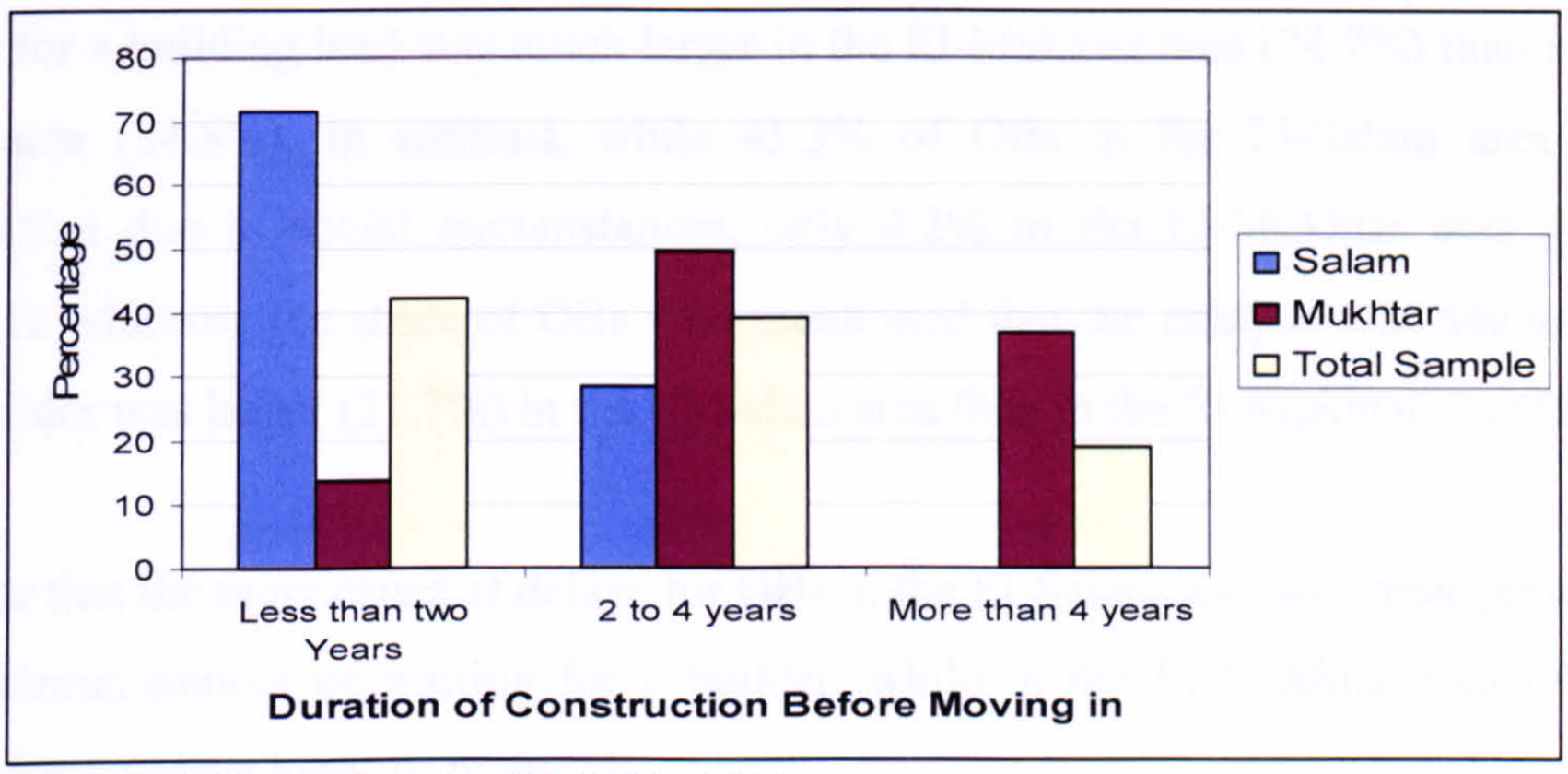
The findings show that only 42.2% of OBs were able to finish constructions within a period of 1 to 2 years, 39% of OBs finished constructions between 3 to 4 years and 18.7% between 5 to 7 years. These figures mean that about 58% of the total OBs were unable to move into their houses until more than 3 years after commencing the construction works. However, it is obvious that OBs in the El-Salam area were able to finish construction earlier than those in the El-Mukhtar area.

As can be seen from Figure 10.10, about two-thirds (71.7%) of OBs in the El-Salam areas spent between 1 to 2 years building their houses before moving in, while only 13.7% in the El-Mukhtar area could move in so soon. In contrast, while 36.8% of OBs in the El-Mukhtar area had construction durations of 5 to 7 years, none in the El-Salam area spent this much time on building his own house. In this respect, when an OB from the El-Salam

area, who had a turn-key arrangement with a hired master-builder and was a recipient of building loan, was asked if he was able to finish the construction earlier than the deadline made, he answered that:

> "Yes, it was completed two month earlier than scheduled. Thanks to the building-loan, that was more than enough in covering the construction costs."

Figure 10 - 10: Duration of Construction before Moving in



Source: Fieldwork, Benghazi (Feb-May) 2003

10.6.1 Delays before Commencing Construction Work

As discussed in chapter 2, one criterion by which any construction project can be considered successful is completion on time (Chan and Kumaraswamy, 2002). To explore any delays experienced prior to commencing construction work, all OBs in the sample were asked to specify the time between getting the building permit and commencing construction work as well as the reasons for any delay. In response, 42.2% of OBs mentioned that the delay was less than 6 months, for 27.8% it was between 6 to 12 months, for 25.1% between 13 to 24 months and for only 4.8% was there 25 months or more between getting the permit and commencing the construction work. However, it is clear that, the majority (76.1%) of OBs in the El-Salam area waited for less than 6 months to commence construction work, while 90.5% of OBs in the El-Mukhtar area waited for a period of 6 months or more before starting the construction.

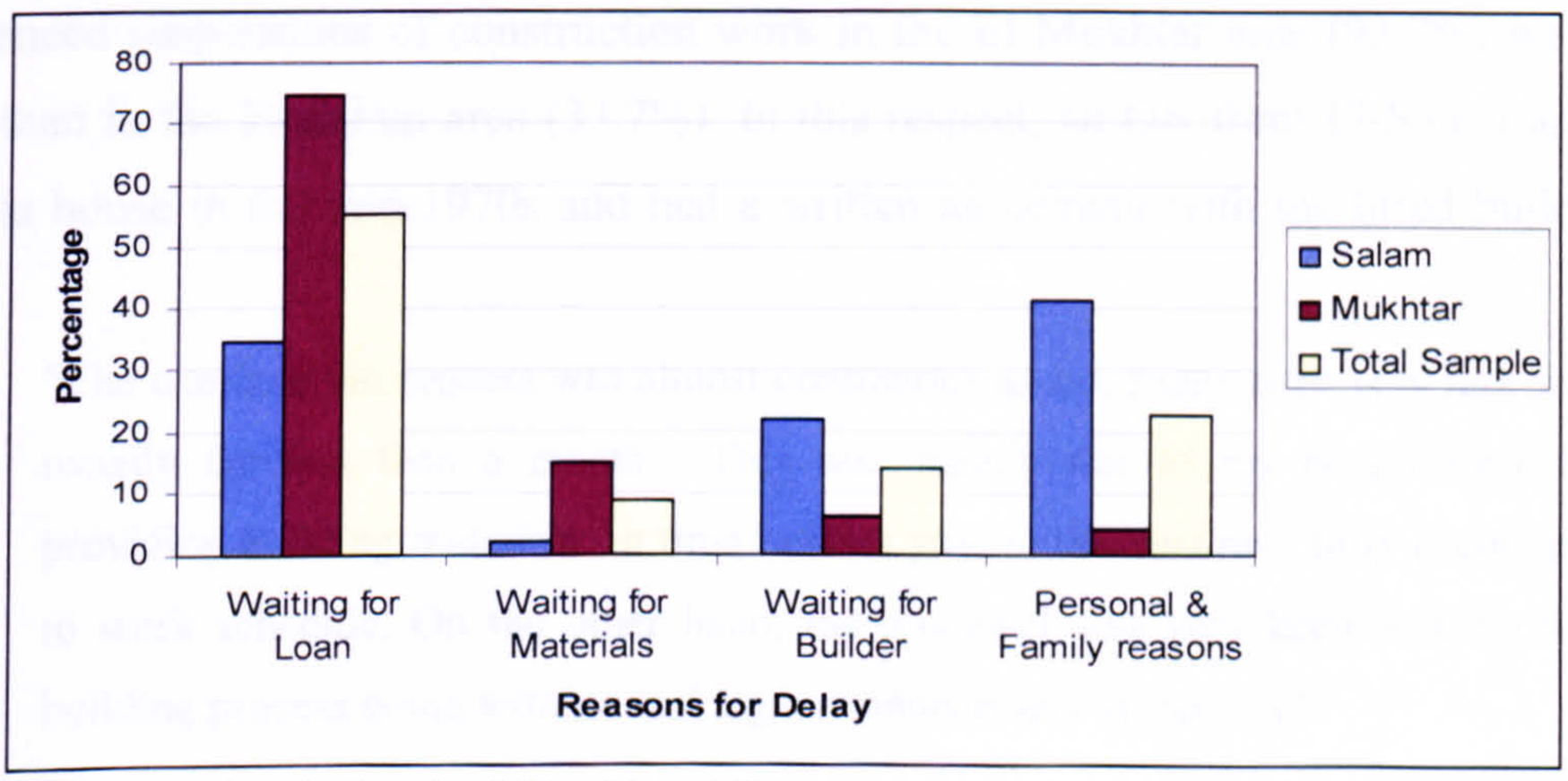
10.6.1.1 Reasons for the Delay

No owner-builder commenced construction immediately after getting a building permit. Thus, respondents were asked to state the reasons for the delay. In response, 55.1% mentioned that they were waiting for building loans, 8.6% were waiting for materials, 13.9% were waiting for a builder and 22.2% claimed that the reason concerned personal and family circumstances.

As Figure 10.11 illustrates, the share of OBs who claimed that the delay was caused by waiting for a building loan was much larger in the El-Mukhtar area (74.7%) than in the El-Salam area (34.8%). In contrast, while 41.3% of OBs in the El-Salam area delayed construction due to social circumstances, only 4.2% in the El-Mukhtar area gave this reason. In addition, the share of OBs who mentioned that the delayed was due to waiting for a builder was larger (21.7%) in the El-Salam area than in the El-Mukhtar area (6.3%).

It is clear that the main cause of delays for OBs in the El-Salam area was their personal and family circumstances or waiting for a builder, while in the El-Mukhtar area OBs were waiting for building loans or materials.

Figure 10 - 11: Reasons for Delay in Commencing Construction Works



Source: Fieldwork, Benghazi (Feb-May) 2003

To clarify the impact of capital shortages on delaying construction that were more encountered by OBs who commenced the house construction in the late 1980s and 1990s, an OB from El-Mukhtar area who was asked if he did commenced the construction phase immediately after getting the building permit, said that:

> "It was impossible to do that due to a shortage of money. I applied for building-loan from the Al-Wahda Bank and I had to wait for about three years to get it."

When the same OB was asked if he commenced the construction works when the loan was issued to him, he answered:

> "No, because the approval of the building-loan was given on condition that I had to spend a sum of LD 8,000 on construction, which was the difference between the estimated costs of construction and the amount of building-loan issued."

Regarding delays caused by waiting for materials, which is more experienced by OBs in the El-Mukhtar area, can be attributed, as discussed in chapter 9, to the problem faced by OBs who commenced the construction of their houses during the late 1980s or 90s in getting affordable building materials, particularly cement and steel since they often had to wait longer to get them from the public suppliers concerned.

10.6.2 Suspension of Construction Works during Building Phase

The findings show that about two-thirds (64.2%) of OBs had to suspend construction work while 35.8% continued the work without any suspensions. However, the share of OBs who experienced suspensions of construction work in the El-Mukhtar area (93.7%) was much larger than in the El-Salam area (33.7%). In this respect, an OB from El-Salam area who built his house in the mid-1970s and had a written agreement with the hired builder said that:

> "The construction process was almost continuous as stoppages were very rare and usually for less than a month. This was mainly due to my commitment to providing building materials on time besides paying the *muqawel* fully according to work schedule. On the other hand, the muqawel was very keen to keep the building process going without making any unnecessary stoppages."

Observation made during the fieldwork show that, the construction of many villas in El-Mukhtar area are suspended for several months mainly for financial difficulties as will be discussed in section 10.6.2.3. Plate 10.1 illustrates a house in Neighbourhood M1 in El-Mukhtar area whose construction being suspended for almost two years.

Plate 10 - 1: Construction work being suspended for a house in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

10.6.2.1 Frequency of Suspension

About 71.7% of OBs who suspended construction work had between 1 to 3 instances of suspension, 26.7% had between 4 to 6 and only 1.7% had 7 or more suspensions. As Table 10.5 illustrates, the numbers of suspension mentioned by OBs in the El-Mukhtar area are higher than in the El-Salam area. While 31.5% of 89 OBs who experienced suspensions of work in the El-Mukhtar area had between 4 to 6 suspensions, only 12.9% of the 31 OBs who experienced suspensions in the El-Salam area had this many of suspensions. In contrast, while 87.1% in the El-Salam area had between 1 to 3 suspensions, 66.3% in El-Mukhtar area had this many.

Table 10 - 5: Frequency of Suspensions

Sample	Times of Suspension (%)			
	1 to 3	4 to 6	7 or more	Total
El-Salam	87.1	12.9	0	100%
El-Mukhtar	66.3	31.5	2.2	100%
Total Sample	71.7	26.6	1.7	100%

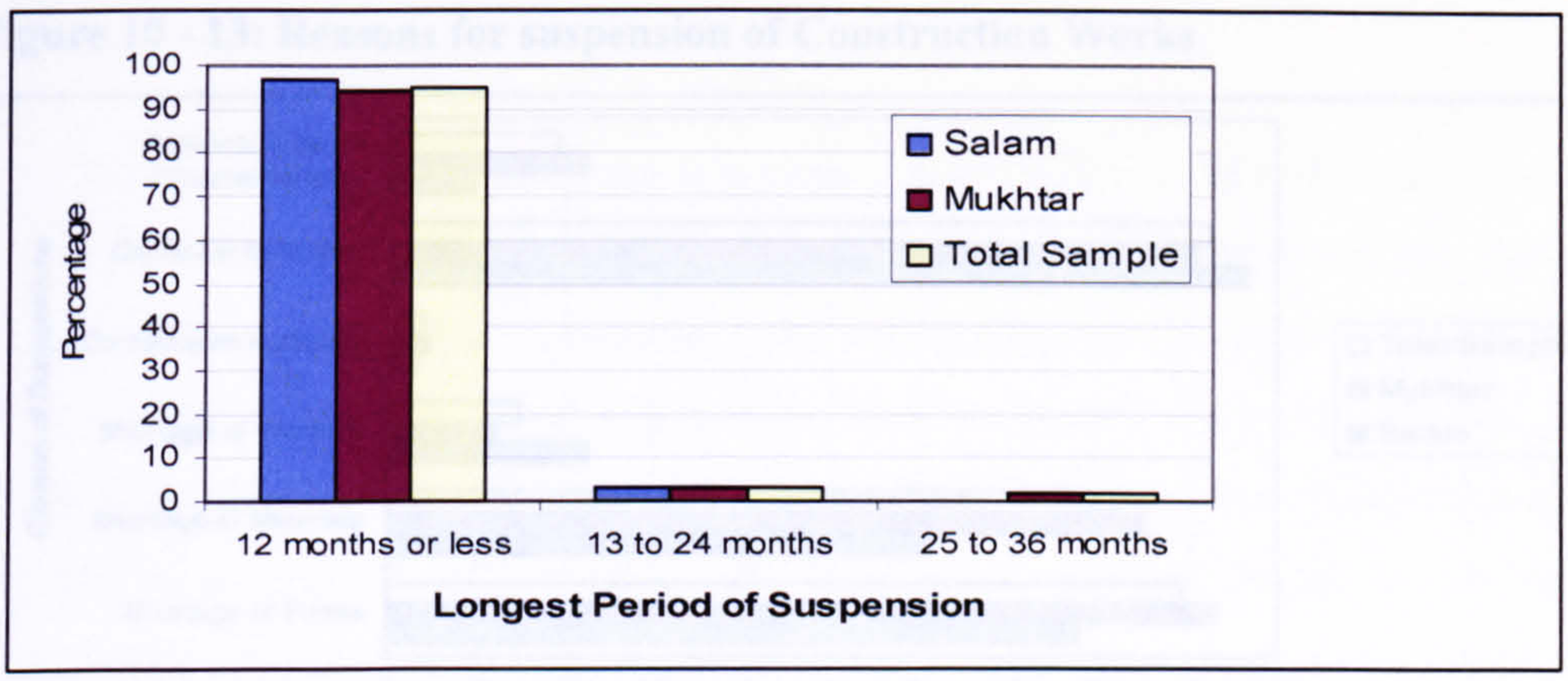
Source: Fieldwork, Benghazi (Feb-May) 2003

10.6.2.2 Longest Period of Suspension

The findings show that for the great majority (95%) of the 120 OBs who had suspensions in construction work, 12 months or less was the longest duration of suspension, 3.3% had

between 13 to 24 months and only 1.7% had between 25 to 36 months as the longest duration of suspension experienced.

Figure 10 - 12: Longest Period of Suspension



Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure 10.12 illustrates, OBs in the El-Mukhtar area experienced slightly longer periods of suspension compared with those in the El-Salam area. For instance, while 96.8% in the El-Salam area had the longest suspension of 12 months or less, 94.4% in the El-Mukhtar area had this period. In contrast, while none in the El-Salam area had suspensions of more than 24 months, 2.2% in the El-Mukhtar area had suspensions lasting between 25 to 36 months.

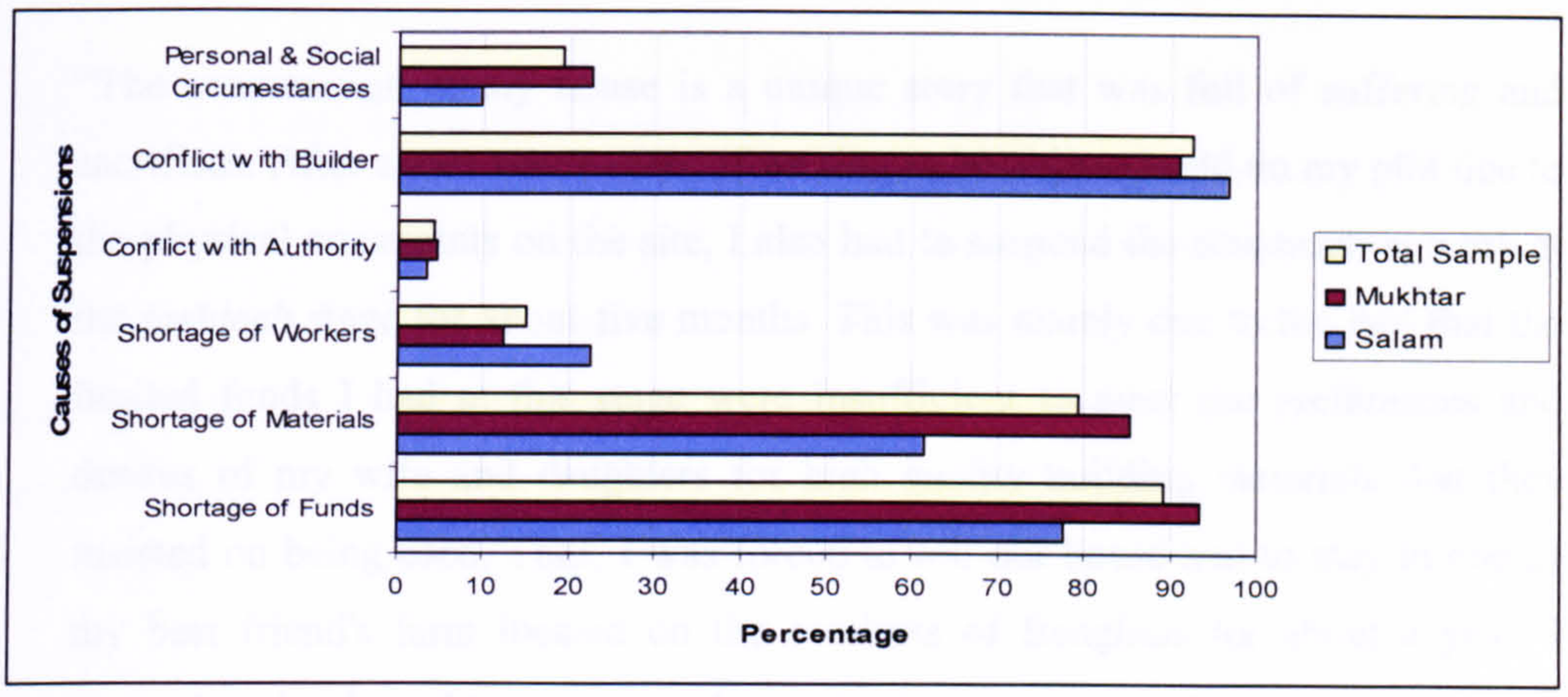
10.6.2.3 Factors causing Suspension of Construction Work

The 120 OBs (64.2%) who experienced suspension in the construction work of their houses were asked to mention the causes of these suspensions. In response, the great majority 92.5%; 89.2% and 79.2% respectively mentioned that they occurred due to disputes with builders, financial difficulties, and shortages of materials. Meanwhile, 19.2%; 15%; and 4.2% respectively mentioned that the construction suspensions occurred due to personal circumstances, shortages of workers and conflicts with the concerned authorities.

As can be seen from Figure 10.13, that financial difficulties and shortages of materials were more often mentioned as causes of suspension by OBs in the El-Mukhtar area most of whom commenced the construction of their houses during the late 1980s and 90s. This can be attributed, as discussed in chapters 5 and 6, to the inadequacy of building loans issued

during this period to cover the high costs of construction materials and labour which in turn meant that personal and family savings were the main sources of funds for construction.

Figure 10 - 13: Reasons for suspension of Construction Works



Source: Fieldwork, Benghazi (Feb-May) 2003

For example, one OB from the El-Mukhtar area who commenced the construction of his house in the early 1990s and experienced frequent and long suspensions of construction work said that:

> "It took me more than seven years to build this house due to the frequent stoppages experienced. I remember that one of those stoppages extended for about six months. The reasons behind these stoppages were mainly related to the lack of money to buy the highly expensive building materials at that time. In addition, due to the illness of my son, I had to be away for about four months during which the whole construction works were suspended as there was no one capable of following up and supervising the work."

It is worth mentioning that suspensions of construction work, and particularly ones related to the interior and exterior finishing of the house, are not only caused by shortage of funds but in some cases by the wishes and preferences of family members in terms of high quality and expensive materials. In this respect, one of the designers interviewed said that:

> "In *tashteeb* [finishing], the selection of the type and colour of *tashteeb* materials used for the interior of the house, such as in bathroom and kitchen, is largely influenced by the choices and preferences of Libyan women. Thus, the *tashteeb* works of the house could undergo long delays till the OB became capable of

buying expensive *tashteeb* materials responding to his family's wishes and aspirations."

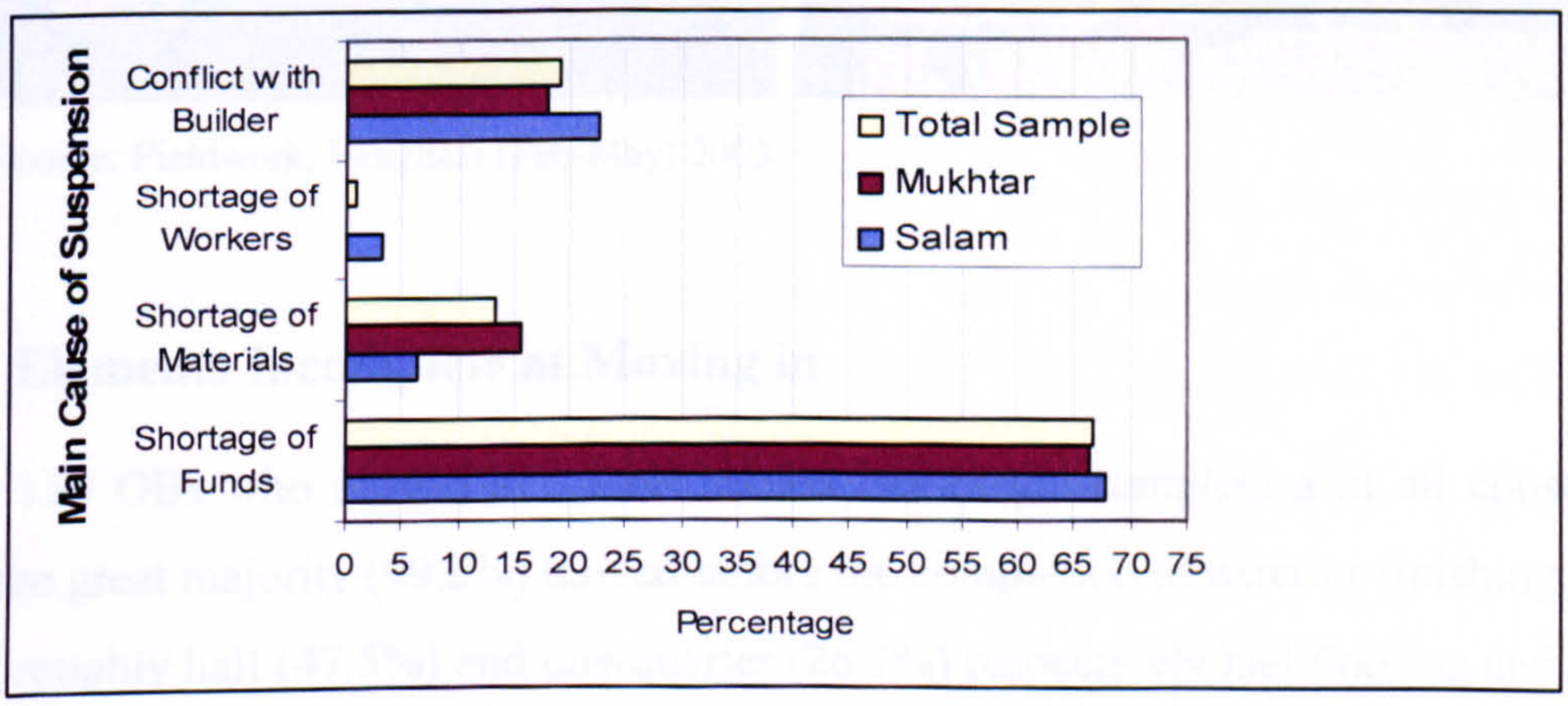
This point of view regarding the influence of women on finishing the house was supported by an OB in the El-Mukhtar area, who said that:

"The construction of my house is a unique story that was full of suffering and sacrifices. After about seven years of waiting to be able to build on my plot due to the physical constraints on the site, I also had to suspend the construction work at the *tashteeb* stage for about five months. This was mainly due to the fact that the limited funds I had at this stage were insufficient to meet the preferences and desires of my wife and daughters for high quality building materials that they insisted on being used. Thus, I was forced to sell our house and to stay in one of my best friend's farm located on the outskirts of Benghazi for about a year. I remember that I used to commute about 40 kilometres every day to get samples of *tashteeb* materials from the market in order to get my wife's and daughters' opinions before buying them. Believe me; the *tashteeb* materials used in every corner of this house were selected based on the choices of my wife and daughters."

10.6.2.4 Most Important Reasons for Suspending Construction Work

When the 120 OBs who experienced suspensions of construction work were asked to mention the most important reason for suspension, 66.7% claimed that shortages of funds were the main reason, while 13.3% cited shortages of materials, 0.8% shortages of workers and 19.2% mentioned disputes with builder as the main reason for suspension.

Figure 10 - 14: Main Reason for Suspension of Construction Work



Source: Fieldwork, Benghazi (Feb-May) 2003

As can be seen from Figure 10.14, the distribution of the main reasons for suspension was almost the same among OBs in the two selected areas. However, the share of those who cited shortages of materials as the main reason for suspension in the El-Mukhtar area was larger (15.7%) than in the El-Salam area (6.5%).

10.7 Status of Constructed House At Moving In

The findings show that only 35.8% of OBs moved into their houses after they were completely finished inside and outside, while 64.2% moved into their houses before the completion of all construction work. However, the proportion of OBs who moved into their houses after they were completely finished in the El-Salam area was much higher (68.5%) than in the El-Mukhtar area (4.2%). Plate 10.2 illustrates some of the few villas whose construction was entirely completed before moving-in.

Plate 10 - 2: Villas whose construction was entirely completed before moving-in in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

10.7.1 Elements Incomplete at Moving in

Of the 120 OBs who moved into their houses before the completion of all construction work, the great majority (99.2%) moved before the completion of exterior finishing. Added to this, roughly half (47.5%) and one-quarter (26.7%) respectively had flooring and roofing work unfinished when they moved into their houses. On the other hand, only 12.5% had

interior finishing works uncompleted. Plate 10.3 illustrates some occupied villas in El-Mukhtar area whose construction is still unfinished.

Plate 10 - 3: Occupied Villas whose construction is not totally completed in El-Mukhtar Area



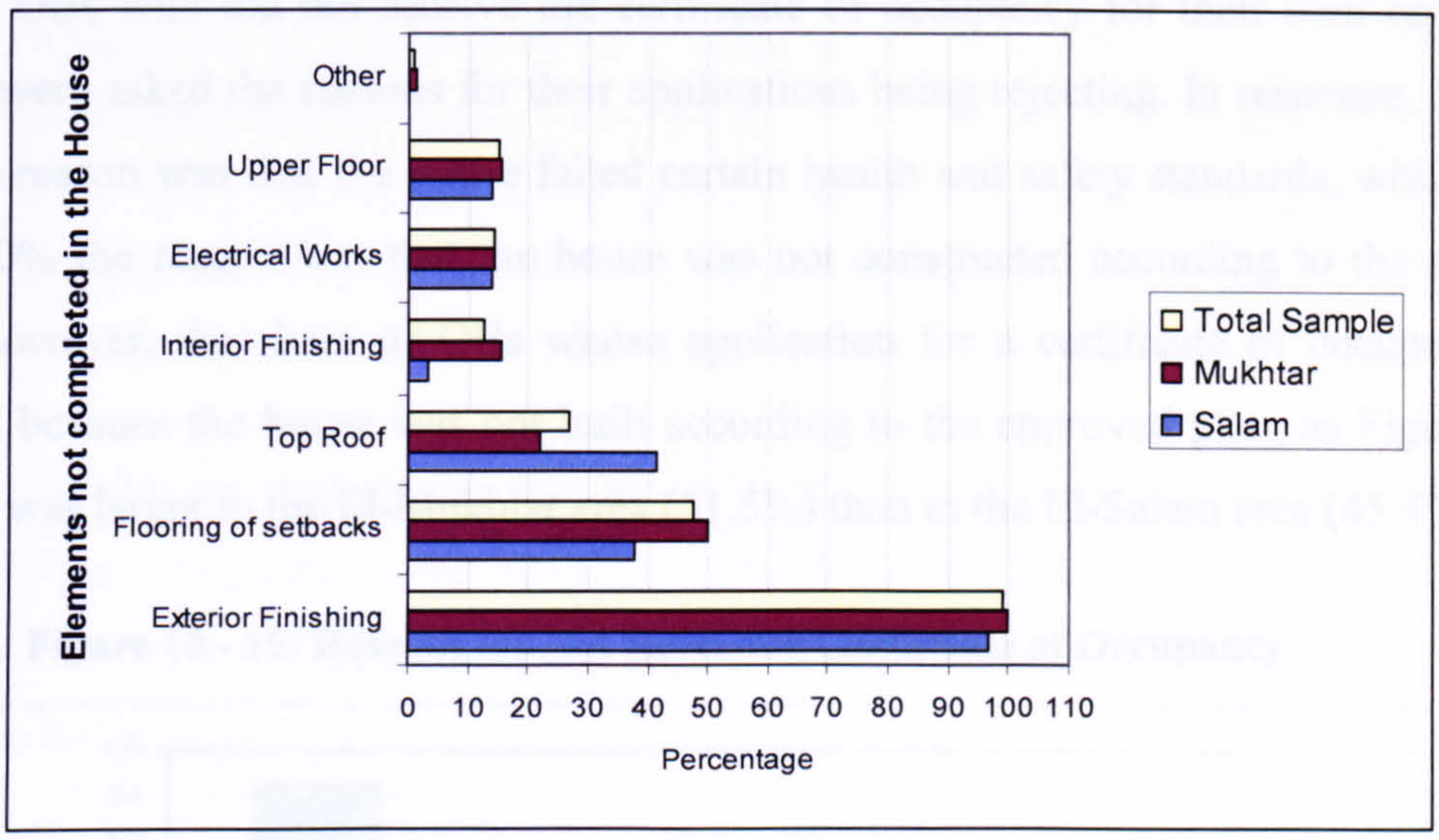
Source: Fieldwork, Benghazi (Feb-May) 2003

As Figure10.15 illustrates, although exterior finishing was the main element incomplete at moving in among a majority of OBs in the two selected areas, the share of OBs who had interior finishing incomplete at moving-in in the El-Mukhtar area was larger (15.4%) than in the El-Salam area (3.4%). For example, one OB from the El-Mukhtar area who claimed that his house was not completely finished at moving in, said that:

> "In addition to incomplete exterior *tashteeb*, the internal stairs leading to the top of the house were not tiled and neither was the floor-tiling of the setbacks. The water reservoir was also not completed and the top roof of the house still needed to be tiled in order to withstand the weather during the winter."

Such a high percentage of OBs with work incomplete at moving-in in the El-Mukhtar area can be attributed, as discussed in chapters 5 and 6, to the high cost of finishing materials during the 1990s. In contrast, the cheap price of building materials in the early 1970s allowed many OBs in the El-Salam area to be able to complete the work on their houses before moving into them.

Figure 10 - 15: Elements not Completed in the House at Moving in



Source: Fieldwork, Benghazi (Feb-May) 2003

10.7.2 Getting Certificates of Occupancy

As discussed in chapter 7, after the completion of house construction and prior to moving in, the OB has to contact the department concerned in the UPA to get a 'certificate of occupancy' showing that the house is ready to be occupied. If the OB made use of a building loan for construction, this certificate is also required to cancel the real-estate mortgage agreement[1] and to register the building as a habitable house at the 'Real estate Registration Office' (RERO). The Findings show that about two-thirds (76.5%) of OBs received the certificate of occupancy for their houses. However, the share of OBs who received this certificate in the El-Salam area was larger (88%) than in the El-Mukhtar area (65.3%). In this respect, an OB from the El-Salam area who received the certificate said that:

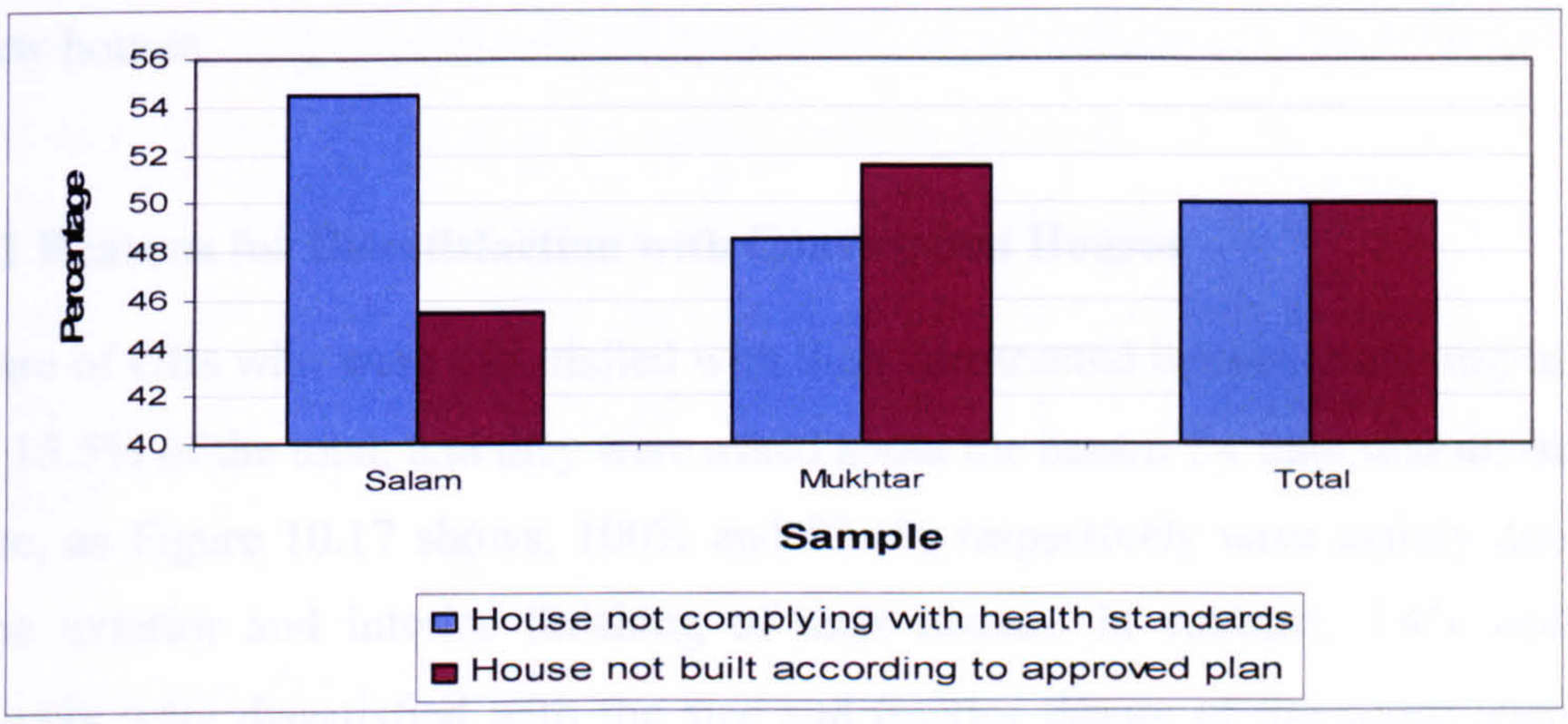
> "Yes, I obtained that *shahadat-etmam-albenna* [certificate of occupancy] almost a month after I applied for it. That certificate was necessary for the cancellation of the mortgage at the bank. The certificate was issued without any problem, as the house was built according to the approved plan."

[1] This agreement gives the loan lender the right to take possession of property given as security if the loan is not repaid.

10.7.2.1 Reasons for Not Receiving of Certificates of Occupancy

The 44 OBs who did not receive the certificate of occupancy for their own constructed houses were asked the reasons for their applications being rejecting. In response, 50% said that the reason was that the house failed certain health and safety standards, while for the other 50% the reason was that the house was not constructed according to the approved plan. However, the share of OBs whose application for a certificate of occupancy was rejected because the house was not built according to the approved plan, as Figure 10.16 shows, was larger in the El-Mukhtar area (51.5%) than in the El-Salam area (45.5%).

Figure 10 - 16: Reasons for Not Receiving Certificate of Occupancy



Source: Fieldwork, Benghazi (Feb-May) 2003

10.7.3 Satisfaction with the House at Moving in

The findings show that 84.5% (158) of OBs were satisfied with the condition of their own constructed houses at moving-in, while 15.5% (29 OBs) were dissatisfied. However, the share of OBs who were satisfied in the El-Salam area (90.2%) was larger than in the El-Mukhtar area (78.9%). For example, an OB from the El-Salam area said regarding his feelings when he moved into his constructed house that:

"To me it looked like *qasser* [palace] even though it was an ordinary house. For me, my wife and our five children it was the beginning of a new, happy and secure life. I invited my relatives and neighbours round for a big meal on the Friday. I remember that we continued to receive congratulations about our new house for more than three months."

Another OB from the El-Mukhtar area said:

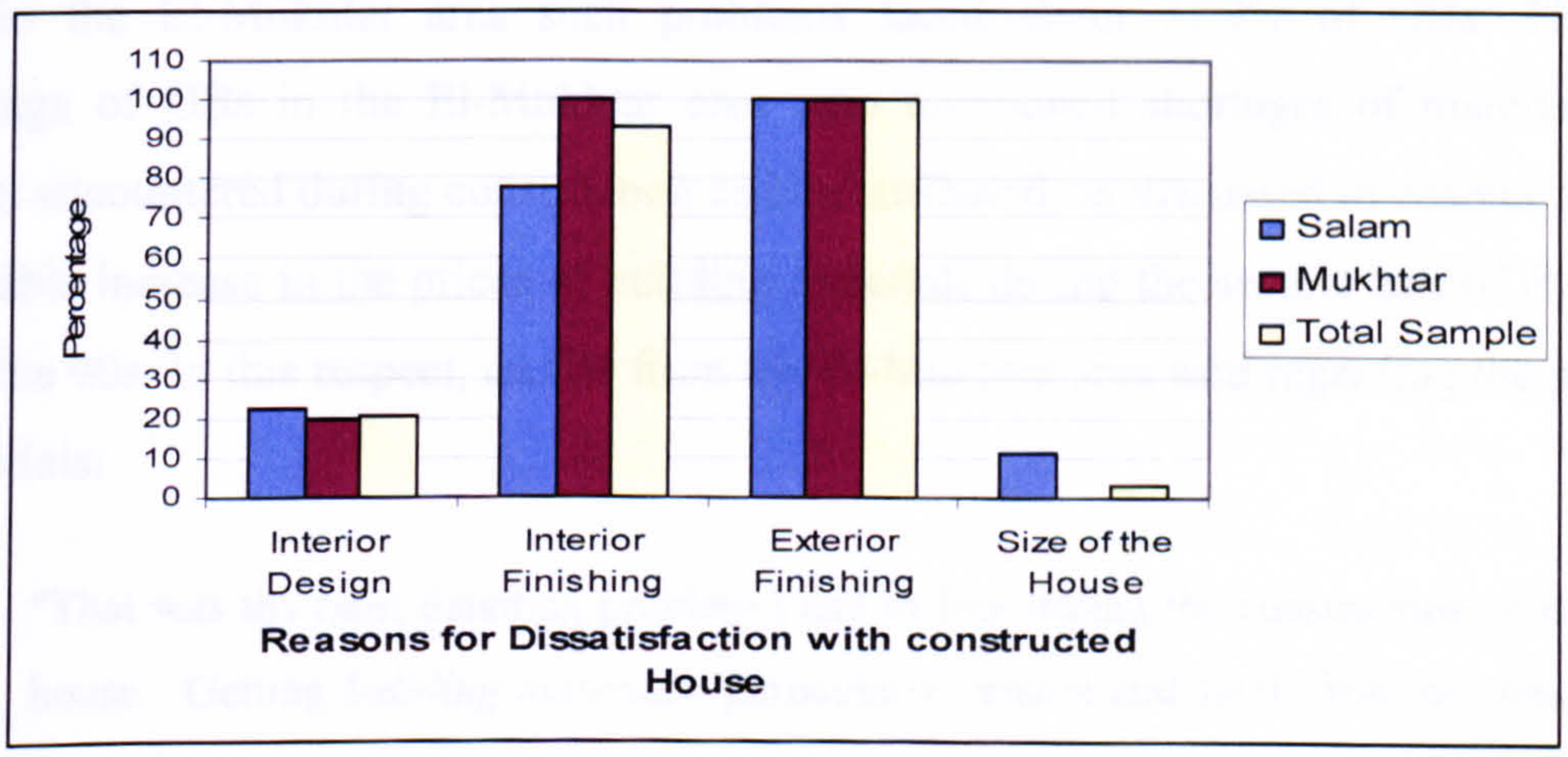
> "Despite the fact that some *tashteeb* works was yet to be completed, I felt over the moon when I moved into my new house. I and my family could almost fly. We were full of joy, as our dream to have our own house had come true and we realised that all our sufferings and sacrifices had been worth it. The outcome was our own house which could accommodate the whole family and secure its future."

It is obvious that the great majority of OBs were satisfied at moving-in though many of them still had some finishing works incomplete. This can be attributed to the fact that most OBs previously were living in small, rented and shared dwellings before they moved into their new houses.

10.7.3.1 Reasons for Dissatisfaction with Constructed Houses

The share of OBs who were dissatisfied with their constructed houses at moving-in did not exceed 15.5% of the total, and they were asked about the reason for their dissatisfaction. In response, as Figure 10.17 shows, 100% and 93.1% respectively were mainly dissatisfied with the exterior and interior finishing of their houses. In contrast, 3.4% and 20.7% respectively were dissatisfied with the size and interior design of the constructed house. This means that for the great majority dissatisfaction is related to the finishing rather than the design or size of the constructed house.

Figure 10 - 17: Reasons for Dissatisfaction with House at Moving in



Source: Fieldwork, Benghazi (Feb-May) 2003

10.8 Main Problems Faced During Construction

While about one-third (30.5%) of the OBs mentioned that they did not face any problems in the construction of their houses, 69.5% did encounter problems. It is clear that the majority of these (72.3%: 94 OBs) were from the El-Mukhtar area while only 27.7% (36 OBs) were from the El-Salam area. It is worth mentioning that the 36 OBs who faced problems in the El-Salam area had commenced the construction of their own houses during the late 1980s and 1990s.

10.8.1 Shortages of Funds

Of the total of 130 OBs who faced problems during the construction of their houses, 86.9% regarded shortages of funds was the main problem encountered. However, the majority (84) of these were from the El-Mukhtar area while only 29 OBs were from in the El-Salam area. Added to this, about 94.7% of the OBs who faced the problem of shortages of funds during construction mentioned that their own savings were the main source of funs used in construction.

10.8.2 Shortages of Materials

The findings show that 76.9% of the 130 OBs who faced problems during the construction of their houses regarded that shortage of materials as a major problem encountered during house construction. Remarkably, share of OBs who mentioned this problem in the El-Salam area represented (63.9%) of these who had problems during construction in the area, while in the El-Mukhtar area such problems faced about 81.9% of OBs. The high percentage of OBs in the El-Mukhtar area who mentioned shortages of materials as a problem encountered during construction can be attributed, as discussed in chapter 5, to the remarkable increase in the prices of building materials during the second half of the 1980s and in the 90s. In this respect, an OB from the El-Mukhtar area said regarding the problem of materials:

> "That was the most daunting problem I had to face during the construction of my house. Getting *building materials*, particularly cement and steel, from the *souq-alsawda* was very expensive while getting it from original sources was a very difficult and tedious process due to the long waiting time. To get cement, I remember that I used to wake up at five o'clock in the morning in order to join the

> long queue in the front of marketing department in cement plant. Believe me, sometimes I had to remain standing for more than four or five hours before I could hand my documents over and pay the money in order to receive a receipt to get the cement two months later."

10.8.3 Disputes with Hired Builders

The findings show that 118 OBs (90.8%) of the total 130 who had problems during construction mentioned disputes with hired builders as one of the main problems encountered during construction. However, while 36 (88.9%) of OBs in the El-Salam area who had problems during construction mentioned this cause, in the El-Mukhtar area 91.5% of such OBs mentioned this problem.

It is worth noting that while only 2.5% of OBs who mentioned disputes with builders as a problem encountered during construction had a turn-key arrangement with their hired builder, 97.5% had other types of arrangements in which the OB was responsible for supplying materials and workers. In this respect, an OB from the El-Mukhtar area who hired master builder to undertake the concrete work only, without having a written agreement with him, said that:

> "As I told you earlier, for financial reasons, I did not hire *muqawel* to undertake the whole building process on *tasleem-moftah* [turn-key] basis in order to cut down the total cost of construction. But, nonetheless, I had to struggle to get a builder that dedicated himself to finishing the work on time without unnecessary delays."

It can be concluded from the above discussion that disputes with hired builders was the main problem faced during construction, since it is mentioned by 90.8% of total OBs who had problems during construction. The great majority of these had verbal agreements with their hired builders. The second main problem was the shortage of funds, which was mentioned by 86.9% of the 130 OBs, of whom the great majority were dependent on their own savings, followed by shortages of materials (76.9%). In addition, the great majority of OBs who encountered fewest problems during construction had turn-key arrangements with hired builders.

10.9 Overall Impressions of the House Construction

The overall impressions of OBs about the construction of their houses are explored in this section.

10.9.1 Psychological and Physical Stress

When total OBs were asked to what extent they agree or disagree with this statement, about two-thirds (64.2%) either agreed or strongly agreed that it was stressful. In contrast, while 26.2% neither agreed nor disagreed; 9.6% of them did not deem the building task as stressful. However, the share of OBs who either strongly agreed or agreed that the building was a stressful task in the El-Mukhtar area was larger (91.6%) than in the El-Salam area (35.9%). The high percentage of OBs who thought it was stressful can be attributed to their role in building their own houses, such as supplying materials and hiring workers for the different tasks of construction. This was quite obvious from the fact that about 97.9% of them hired different builders on individual basis to carry out construction work of their houses.

10.9.2 Building Work at the Expense of Personal and Family Obligations

The findings show that about-two thirds (71.7%) of total OBs either agreed or strongly agreed that the building of their own houses was at the expense of their social and family obligations. The share who agreed with the above statement in the El-Mukhtar area was larger (97.9%) than in the El-Salam area (38%). For example, an OB from the El-Mukhtar area who believed that the construction of his house had affected his personal and family obligations said that:

> "It was very tiresome and time consuming. It took most of my time to the extent that I occasionally reported absent from work and sometimes I left the workplace earlier hunting for building materials or following up the building process. I received more than one warning from my boss regarding my negligence of duty. In many cases, I was punished by cuts in my monthly salary. My social commitments in the afternoon were also affected and my family accordingly missed many happy occasions such as trips and visits which were common practice before we started the building process. Believe me the building process was really very tedious and tiresome and had direct social and financial effects on my family."

The larger percentage of OBs who agreed or strongly agreed with the above statement in the El-Mukhtar area can be attributed to the length of time that they had to spend in carrying out the construction work. In this respect, it was obvious that about 97.9% of OBs in the El-Mukhtar area had to spend considerable durations of time in supplying materials and workers for the various tasks of construction based on the type of arrangement made with the hired builder.

10.9.3 Building the House was an Enjoyable Experience

It is obvious from the findings that, none of the OBs agreed or strongly agreed that building their houses was enjoyable. Meanwhile, while 69% of them either disagreed or strongly disagreed; 31% were neither agreed nor disagreed with this statement. However, the share of OBs who either disagreed or strongly disagreed with the statement in the El-Mukhtar area was much larger (97.9%) than in the El-Salam area (39.1%).

The high percentage of OBs in the El-Mukhtar area who disagreed or strongly disagreed can be attributed to the long duration of construction and the problems encountered. As discussed earlier, 86.3% of OBs in the El-Mukhtar area spent between 3 to 7 years in building their own house, and 91.6% had disputes and problems with the hired builder. This means that house construction was a rather exhausting and complicated task for the great majority of OBs who built their houses in the late 1980s and 1990s (in the El-Mukhtar area).

10.9.4 Building the House was worth the Social and Financial Sacrifices

Despite the differences found in respect to the OBs' impressions and attitudes towards the aforementioned statements, all OBs are either agreed or strongly agreed that building their own house was worth the sacrifices. This finding is supported by the fact that the great majority (84.5%) were satisfied with their constructed houses at moving in.

For example, when an OB from El-Mukhtar area who built his own house during the late 1980s was asked if the building of his house was worth all the sacrifices made, he answered that:

> "..... I shall never forget the huge sacrifices that have been made by everyone in my family in terms of time and money spent to build this house. It was real

suffering, about which we had no option in order to make the dream of owning our own house come true. However, the building of our home undoubtedly was worth all those sacrifices and the suffering even though not to that extent."

Another OB from the El-Mukhtar area said that:

"When I looked at every corner of my house, I could reflect on all the sacrifices made to it and see how fruitful these sacrifices were to build it in the way we planned and desired. Believe me, it is not just silent walls and roofs, it is a home full of life where my children grew up and enjoyed life. It is the place where my secrets and dreams exist. It is a real part of my life."

10.10 Preferences towards Selecting Future Houses

After exploring how OBs had managed the construction of their houses and their overall impressions about the construction process, they were asked what method they would prefer if they were given another chance to select a family house based on their experience in building their own houses. In response, about 85.6% mentioned that they would prefer to build the house, 3.7% would prefer to buy a ready-built house from a speculative builder and 10.7% would prefer to buy a ready-built house from the second hand market.

However, some differences were noticed between the two selected areas in this respect. For instance, while only 1.1% of OBs in the El-Salam area would prefer to buy a new ready-built house, 6.3% in the El-Mukhtar area preferred this method. In contrast, the share of OBs who would prefer to buy a ready-built house from the second hand market in the El-Salam area was larger (13%) than in the El-Mukhtar area (8.4%).

10.10.1 Reasons for Preference for Building

When the 160 OBs who would prefer to build their own family house were asked about the most significant reason for such a preference, they answered that it was the most affordable alternative. It is noteworthy that 97.5% of OBs who would prefer to build their house were mainly motivated by their inability to buy a ready-built house. This means that the preference for building the house is mainly based on the fact that it would be the most affordable method to acquire future family houses.

10.9.8.2 Reasons for Preference for Buying the House

27 of the OBs (14.4%) would prefer to buy a ready-built house. They justified this preference in that it is the easiest and manageable method of owning a house. It is worth mentioning that 80 % of OBs who preferred to buy a second hand ready-built house either agreed or strongly agreed that the construction of their own houses was a stressful task. In addition, 90% of who would prefer to buy a ready-built house either agreed or strongly agreed that the building of their own houses was at the expense of their social and family obligations. Therefore, they would prefer to buy a ready-built house instead of building another house.

The preference for building their own houses is also supported by some of the professionals interviewed during the fieldwork. They believed that OBH activity should be encouraged and supported instead of adopting PPH schemes, since the former helps the country's economy and provides satisfactory residential environments for its beneficiaries. In this respect, El-Mennefiy (the Libyan architect) said that:

> "I think people should be encouraged to build their own homes because this will boost the national economy as people will invest their personal and family savings to build and improve the condition of their own homes incrementally. Also this will give families a chance to build their own homes the way they desire to satisfy their needs. Thus, the state has to support OBH activity by giving them the right technical advice and by providing building materials at reasonable prices, besides controlling the labour market so that only skilled labour is used to do the job, given the fact that the houses should not be treated as consumer goods but rather as durable and long-lived assets.

10.9 Conclusion

This chapter has explored the way OBs managed the construction of their own houses as well as their attitudes towards and preferences in house construction. As the findings showed, all OBs commenced the construction of their houses without any background in construction. However, 72.2% of them were involved in this process by providing and utilizing resources and overseeing the construction work, while the remaining OBs left all construction work to be managed by the hired builder based on the turnkey arrangement

adopted with him. The main reason for not contracting out the whole construction work for most OBs built their own houses during the late 1980s and 90s was related to their aim to reduce the total construction costs or to fit spending to an irregular budget. In terms of inspecting the progress of construction works, the great majority of OBs whose houses had been regularly inspected were recipients of building loans, where inspection undertaken by the loan lenders was mandatory for the continued payment of the loan. In contrast, only 9.1% of total OBs arranged regular or occasional supervision of the quality of construction work. Added to this, disputes occurring with hired builders were largely mentioned by OBs who had verbal agreements with them or by those whose houses were never or only occasionally supervised during construction.

In terms of the duration of the construction process, 81.2% of OBs built their houses in periods of between 1 to 4 years; but the time spent by those who built their houses during the 1970s was much less (1 to 2 yrs) compared to OBs who built their houses during the late 80s and 90s (3 to 7 yrs). In this respect, construction was started sooner after getting building permits by OBs during the 70s (less than 6 months) than during the late 1980s and 90s (6 months or more). Added to this, frequent and long suspensions were more likely to be experienced by OBs who commenced the construction of their houses during the late 80s and 90s. This was mainly due to shortages of fund or affordable materials during this period.

The findings also showed that the great majority (99.1%) of OBs moved into their houses before the final completion of exterior finishing, but the great majority were satisfied with the condition of their houses at moving in. In general, disputes with hired builders and shortages of funds were the main problems encountered during the construction process particularly among those who built their houses during the late 1980s and 90s.

In terms of overall impressions towards the house construction process, although this was seen as a stressful task by those who did not adopt turnkey arrangements with hired builders; all OBs believed that the house was worth the social and financial sacrifices made by them in building their houses. It was also revealed that the great majority of OBs would prefer to build their own houses again if they were given another chance to select a family house. This is mainly due to their opinion that building the house themselves would be the most affordable method to acquire the desired home. The next chapter discusses how OBs

adapted their own houses and the extent to which they were satisfied with the resulting residential environment at both house and neighbourhood levels.

Chapter Eleven:

Adaptation and Overall Satisfaction with the Resulting OBH Environment

Chapter Eleven

Adaptation of and Overall Satisfaction with Resulting OBH Environment

11.1 Introduction

The previous chapter discussed how OBs managed and controlled the construction phase of their houses, the status of the constructed house at moving in as well as the overall impression and preferences towards house construction process. The current chapter is concerned with adaptation of and satisfaction with the resulting OBH environment. It aims to examine all sorts of interventions made by OBs in restoring or improving the conditions of their houses, such as additions, alterations, maintenance and repairs. An additional aim is to examine the overall degree of satisfaction with the constructed house and the surrounding environment.

11.2 Adaptability of the Constructed House

As Grindley (1972) argued, the desire to improve living conditions, to live in a better and more satisfactory neighbourhood, and to secure housing ownership are seen the main motives for many families for becoming OBs. Thus, people would be more likely to strive to improve their housing conditions incrementally using good building materials and producing cheap and high quality housing if they were enabled and allowed to do so.

11.2.1 Changes and Improvements Made in the House

As Rapoport (1977:370) argues, changes to residential environment can be viewed from two different perspectives. The first is that the more adaptations are made, the more suitable the environment can be considered. The second perspective, in contrast, considers that too many changes made are an indicator of an unsatisfactory environment.

However, Rapoport (1977) believes that the ability to modify the environment by its users can impose less stress on people. In housing, the ability of occupiers to control their territory (housing environment) at the home and neighbourhood levels can enhance their overall degree of satisfaction and wellbeing. In this section, all kinds of changes made by OBs to improve the quality of their houses beyond their original condition when the household first moved in are discussed.

The findings show that about two-thirds of respondents (73.5%) carried out changes to their houses. Of this total, 135 (91.8%) were OBs of their own houses while 12 (8.2%) became owner-occupiers through purchase. However, the share of OBs who made changes in the El-Salam area was larger (79.3%) than in the El-Mukhtar area (65.3%). Such a slightly larger proportion of OBs who carried out changes in the El-Salam area can be attributed to their longer duration of residence in their houses compared to those in the El-Mukhtar area. For instance, 60% of OBs who made changes in their houses in the El-Salam area had been living in their houses for more than 21 years while 30% had lived there for between 11 to 20 years and only 10% for 10 years or less. In contrast, about two-thirds (60.6%) of OBs who made changes in the El-Mukhtar area had durations of residence of 10 years or less, and 39.4% had between 11 to 20 years of residence.

11.2.1.1 Authorisation of Changes by the Concerned Authority

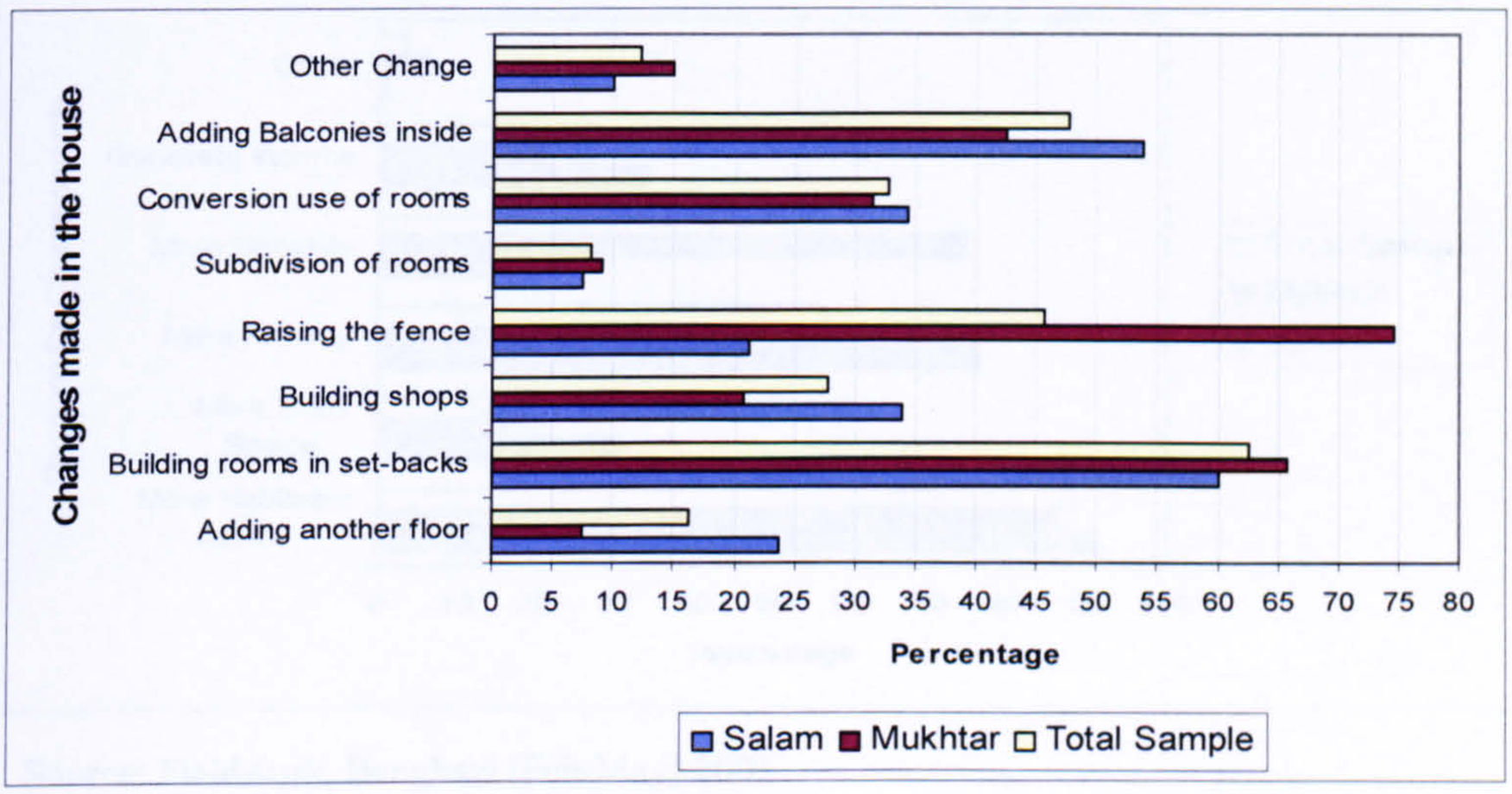
As stated in Article (49) of the Law (5) of 1969 concerned with urban development in Libya, any new construction work or addition or alteration in a building has to be permitted by the authority concerned. However, the findings show that only 20 OBs (14.8%) of the 135 OBs who made changes to their houses got permission from the authority concerned prior to making these changes, while the great majority (85.2%) made changes without any permission. In this respect, the share of OBs who got permission for changes in the El-Mukhtar area was larger (17.7%) than in the El-Salam area (12.3%). The low percentage of OBs who got permission for changes made to their houses may reflect the inefficiency of development control duties undertaken by the UPA as the authority concerned with these duties.

11.2.1.2 Type of Changes Made in the House

11.2.1.2.1 Adding More Space

The findings show that the main additions made by OBs to their own houses was building rooms in setbacks (62.6%) followed by building shops (27.9%) and adding another floor (16.3%). As Figure 11.1 shows, the share of OBs who added another floor in the El-Salam area was larger (23.8%) than in the El-Mukhtar area (7.5%). In addition, while 35.8% of OBs in the El-Salam area built shops in the setbacks of their houses, only 20.9% in the El-Mukhtar area did so. In contrast, the share of OBs who built rooms in setbacks mainly for utility purposes (i.e. kitchen, storage, laundry) in the El-Mukhtar area was larger (65.7%) than in the El-Salam area (60%).

Figure 11 - 1: Type of Changes Made in the House



Source: Fieldwork, Benghazi (Feb-May) 2003

11.2.1.2.2 Altering Existing Space

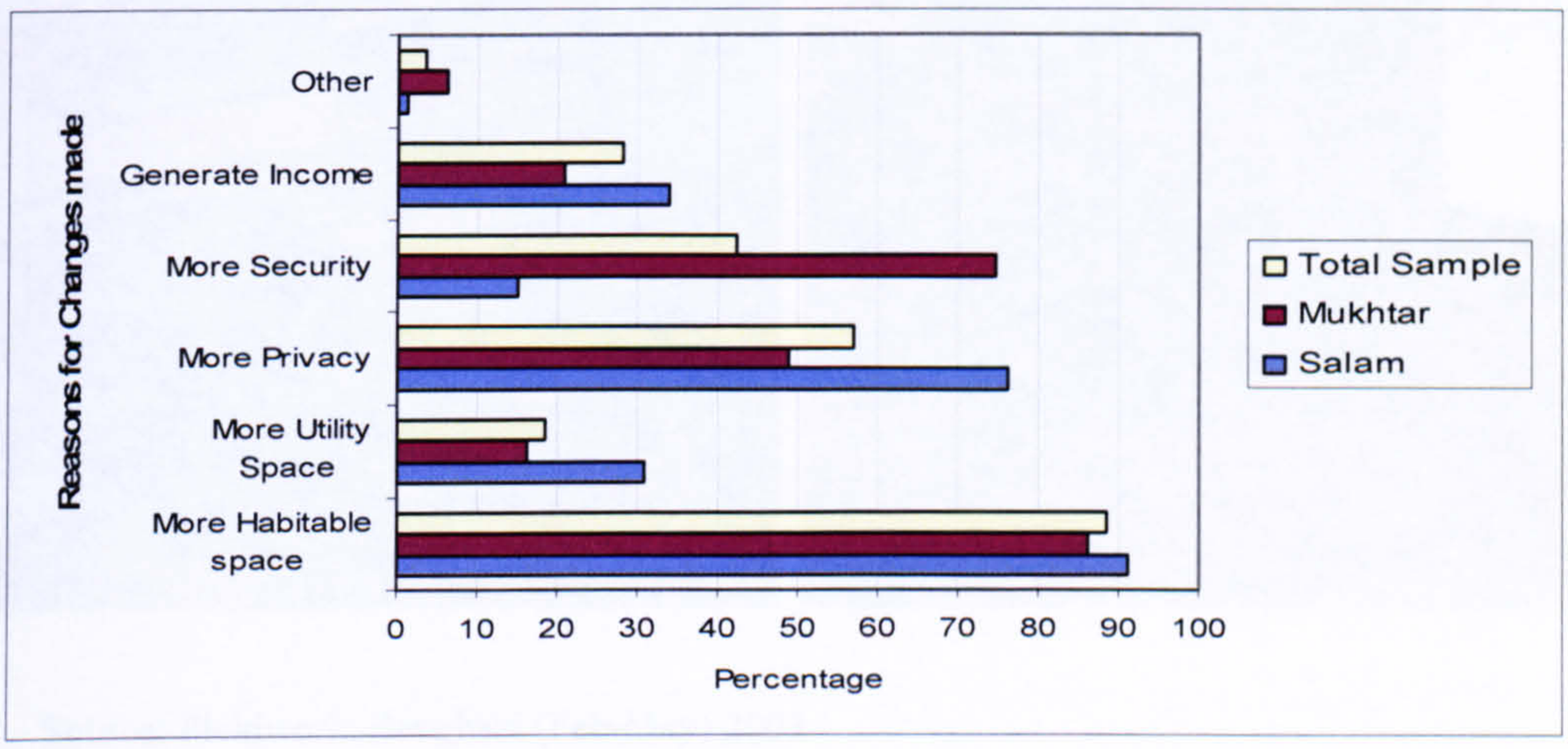
In terms of alteration, the main alteration made by OBs was adding balconies inside (47.6%) followed by raising fences (45.6%) and converting the use of existing rooms (32.7%). As Figure 11.1 shows, while (74.6%) of OBs in the El-Mukhtar area raised fences; only 21.3% in the El-Salam area did that.

11.2.1.3 Reasons for Changes Made in the House

"…. changes result not only from routine actions linked to repair and maintenance but also from actions by the dweller to make the dwelling correspond more closely to a range of requirements. We can perhaps interpret such changes as the more physical aspects of home making whereby the dweller and dwelling become more closely interrelated as the dweller, consciously and unconsciously, appropriates the offered forms and spaces." (Kellett, 1995:46)

As Figure 11.2 illustrates, the need for more habitable space to accommodate increases in household size was the reason for changes made by about 88.4% of OBs, followed by the need for more privacy (57.1%) and the need for more security (42.2%).

Figure 11 - 2: Reasons for Changes Made in the House



Source: Fieldwork, Benghazi (Feb-May) 2003

11.2.1.3.1 The Need for More Space

As mentioned earlier the need for more space was the main motive for making changes for about 88.1% of the total OBs. This was mainly achieved , as Figure 11.3,through the intervention of OBs by adding space (building whole floors or rooms) or altering existing space (adding balconies)

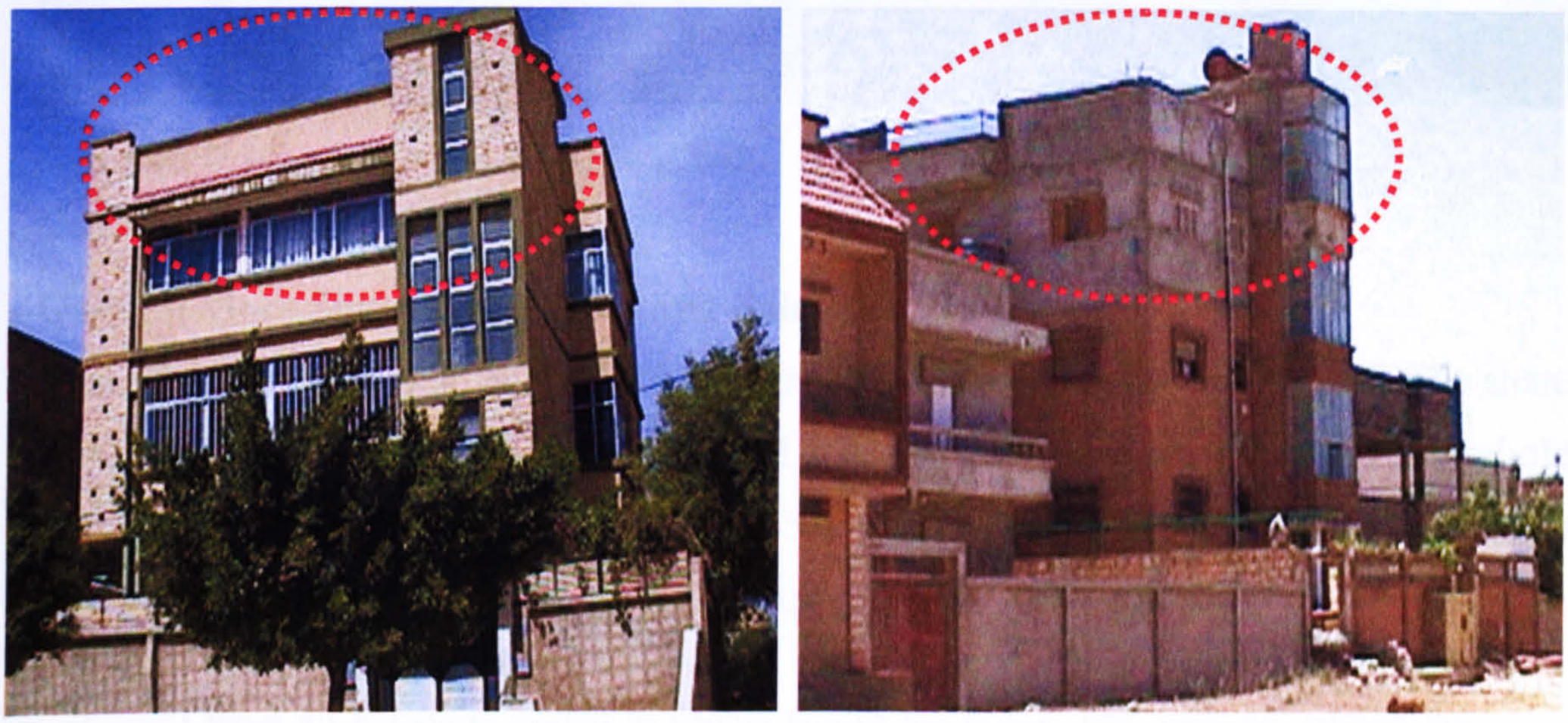
- Gaining More Space through Adding Another Floor

It was found that 91.7% of OBs who added another floor were looking for more space for their households. As Figure 11.3 shows, the share of OBs who added another floor in the El-Salam area was larger (100%) than in the El-Mukhtar area (94%). This can be attributed

to the large size of households in the El-Salam area which, as discussed in chapter 8, are mainly in the form of extended families where married sons live with their parents. In this respect, an OB from the El-Salam area who added another floor twenty years after moving in said:

> "Now I have got nine sons; of whom two have already got married and a third will get married shortly. Thus, I decided to build an additional floor for him to live in till he can afford to move into an independent home."

Plate 11 - 1: a third floor added to some villas in El-Salam Area



Source: Fieldwork, Benghazi (Feb-May) 2003

- Gaining More Space through Building Rooms in Setbacks

The findings show that 97.7% of OBs who built rooms in setbacks (such as kitchens, laundry rooms, or storage space) were mainly motivated by the need for more utility space. However, while all OBs in the El-Salam area who built rooms in setbacks were motivated by the need for more space, only 94% in the El-Mukhtar area gave this reason. For example, an OB from the El-Mukhtar area who carried out many changes in his house said:

> "Despite the fact that my new house is spacious and comprises big rooms to accommodate my family, I managed to build another external kitchen to be used in the summer time or during social occasions and celebrations."

Plate 11 - 2: Utility rooms (kitchen, storage) built in setbacks of villas in El-Salam Area (right) and El-Mukhtar Area (left)



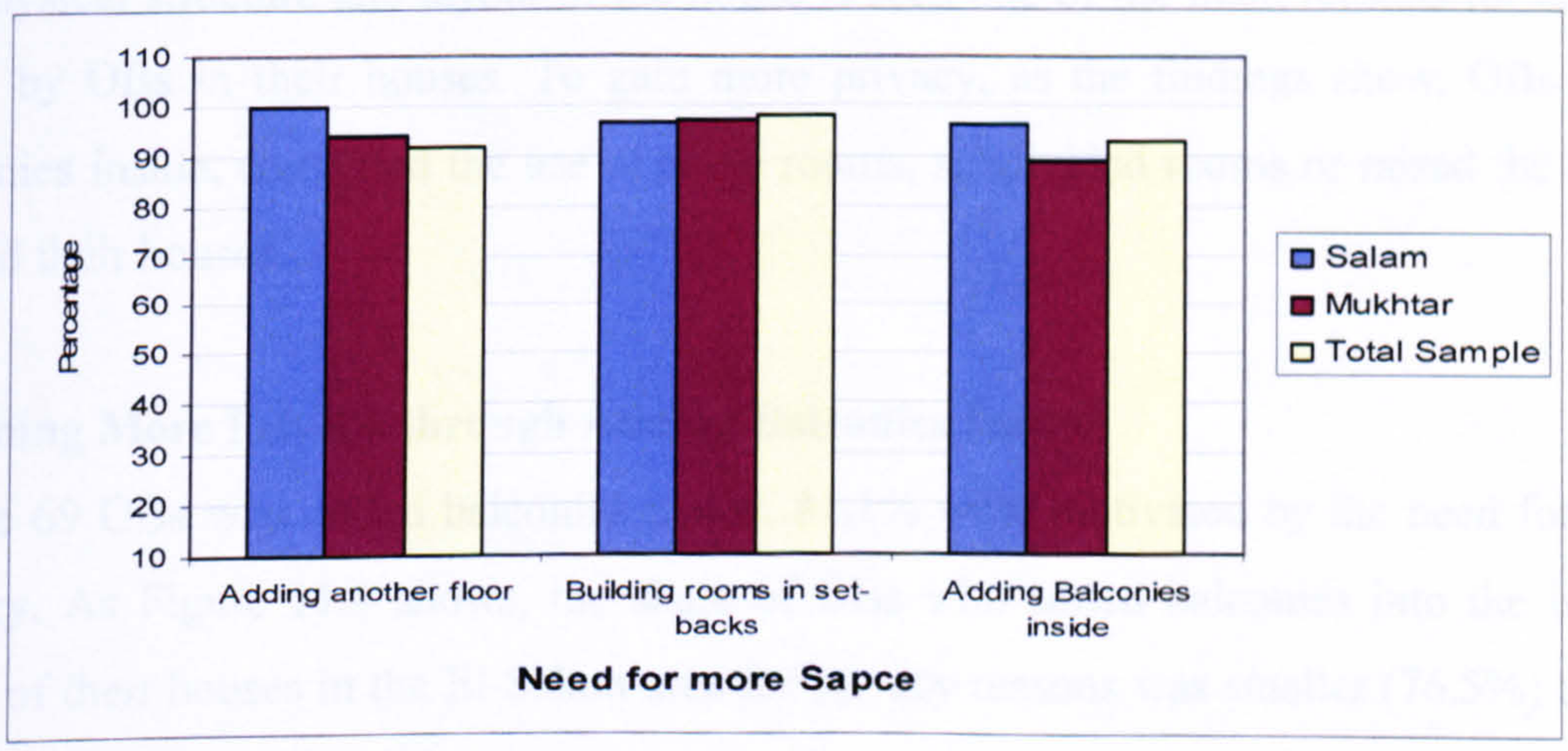
Source: Fieldwork, Benghazi (Feb-May), 2003

- Gaining More Space through Adding Balconies Inside

About 92.8% of OBs who added balconies inside were looking for more space. The share of OBs in the El-Mukhtar area who added balconies to get more space for household members was smaller (89%) than in the El-Salam area (96%). For example, an OB from the El-Mukhtar area who carried out many changes in his house said:

> "I have all balconies added to rooms within the house. For instance, adding the balcony to the *saloon* made the latter more spacious and more suitable to accommodate guests and relatives in all social occasions."

Figure 11 - 3: Changes Made to Gain More Space



Source: Fieldwork, Benghazi (Feb-May) 2003

Plate 11 - 3: Balconies added inside to gain more space in El-Salam Area



Source: Fieldwork, Benghazi (Feb-May), 2003

11.2.1.3.2 The Need for more Privacy

"Privacy, as a whole or in part, represents the control of transactions between person(s) and other(s) the ultimate aim of which is to enhance autonomy and/or to minimize vulnerability." (Margulis, 1977:10)

As Altman (1977) argues, privacy is one of the basic needs that any house should provide to its occupiers. It is important in all cultures and also differs among cultures in terms of the behavioural mechanisms used to regulate desired levels of privacy. Altman also suggested that privacy serves three main functions, including the management of social interaction, the establishment of plans and strategies for interacting with others, and the development and maintenance of self-identity. Thus, a lack of proper privacy provided by the physical structure and layout of the house is seen one of the main reasons for changes made by OBs in their houses. To gain more privacy, as the findings show, OBs added balconies inside, converted the use of some rooms, subdivided rooms or raised the fences around their houses.

- Gaining More Privacy through Adding Balconies Inside

Of the 69 OBs who added balconies inside, 84.1% were motivated by the need for more privacy. As Figure 11.4 shows, the share of OBs who added balconies into the interior space of their houses in the El-Salam area for privacy reasons was smaller (76.5%) than in the El-Mukhtar area (91.4%).

Plate 11 - 4: Balconies in the backyard added inside for privacy reasons of a villa in El-Salam Area

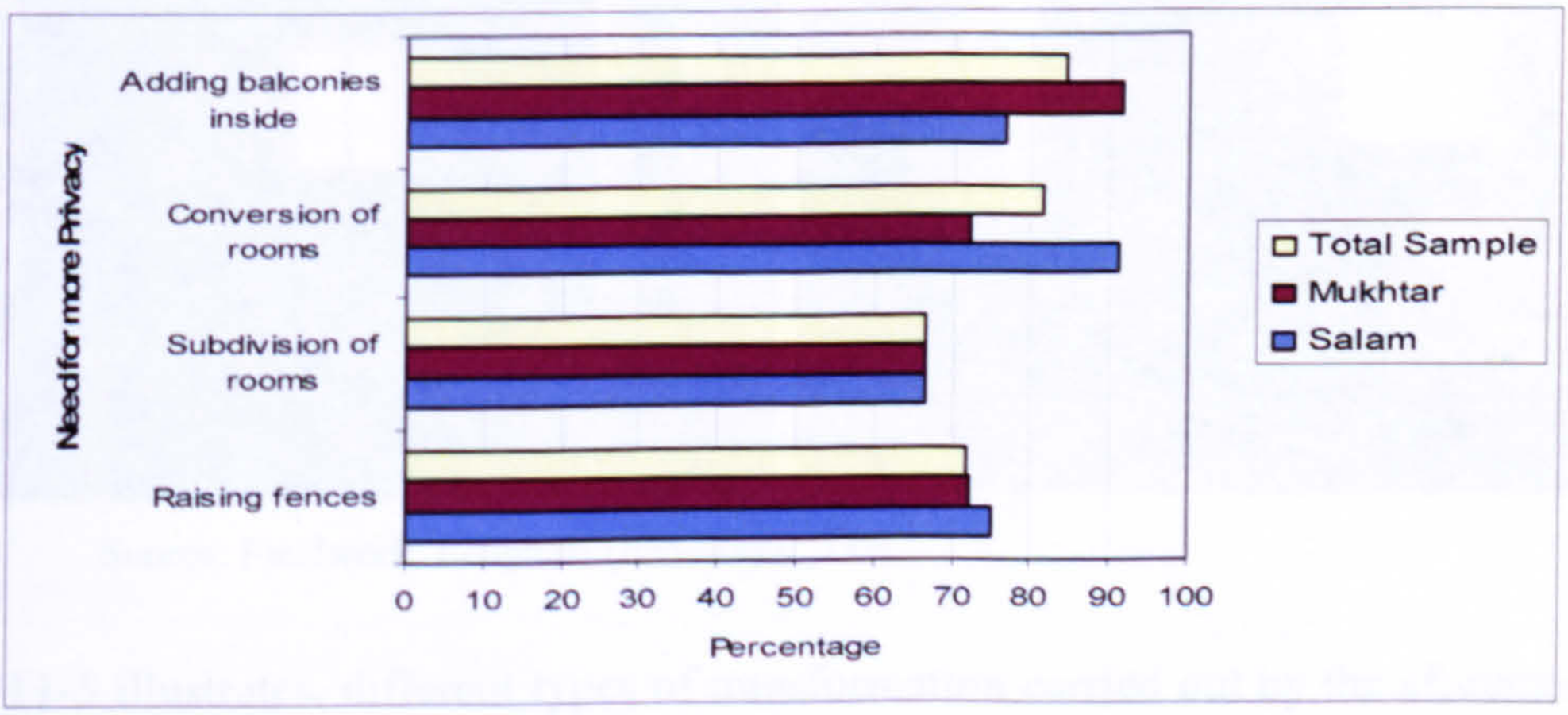


Source: Fieldwork, Benghazi (Feb-May), 2003

For instance, an OB from the El-Salam area who added balconies for privacy reasons (Plate 11.4) said:

> "Yes indeed. Five years ago, I closed the balconies that were opened to the backyard of my house. I always believed that those balconies were a waste of space since they were often kept unused because they were exposed to my neighbour's house. They only contributed to the accumulation of dust. By adding them inside, we got more interior space and improved privacy in the house."

Figure 11 - 4: Changes Made to Gain More Privacy



Source: Fieldwork, Benghazi (Feb-May) 2003

Gaining More Privacy through Converting the Use of Rooms

Of the 41 OBs who converted the use of rooms in their houses, 85.4% were motivated by the need for more privacy. In this respect, some OBs converted bedrooms to be reception rooms for women guests to have more privacy since they used to be received in the living room which is, as discussed in chapter (8), often located in the middle of the house and exposed to the kitchen. As Figure 11.4 shows, the share of OBs who converted the use of rooms to gain more privacy in the El-Salam area was larger (94.7%) than in the El-Mukhtar area (77.3%). This can be attributed to the limited number of rooms that houses in El-Salam area comprised compared to in the El-Mukhtar area, which led some OBs in the El-Salam area to convert rooms so as to accommodate other needs.

In this respect, an OB from the El-Salam area who altered bedroom to reception room for women guests (Plate 11.5) said:

> "Oh yes. In addition to adding balconies inside and converting the dining room to an office, I modified one of the bedrooms to become *daar-maqaad*. This happened only three years ago in response to the desire of my wife and daughters who preferred a separate room for receiving women guests instead of using *salaah* for that purpose. Nowadays, most newly built homes include a separate room for this purpose."

Plate 11 - 5: a bedroom altered to a reception room for women guests in El-Salam Area



Source: Fieldwork, Benghazi (Feb-May), 2003

Figure 11-5 illustrates, different types of transformation carried out by the aforementioned OB from El-Salam area in his own house.

Figure 11 - 5: Types of transformation carried by an OB from El-Salam area in his house

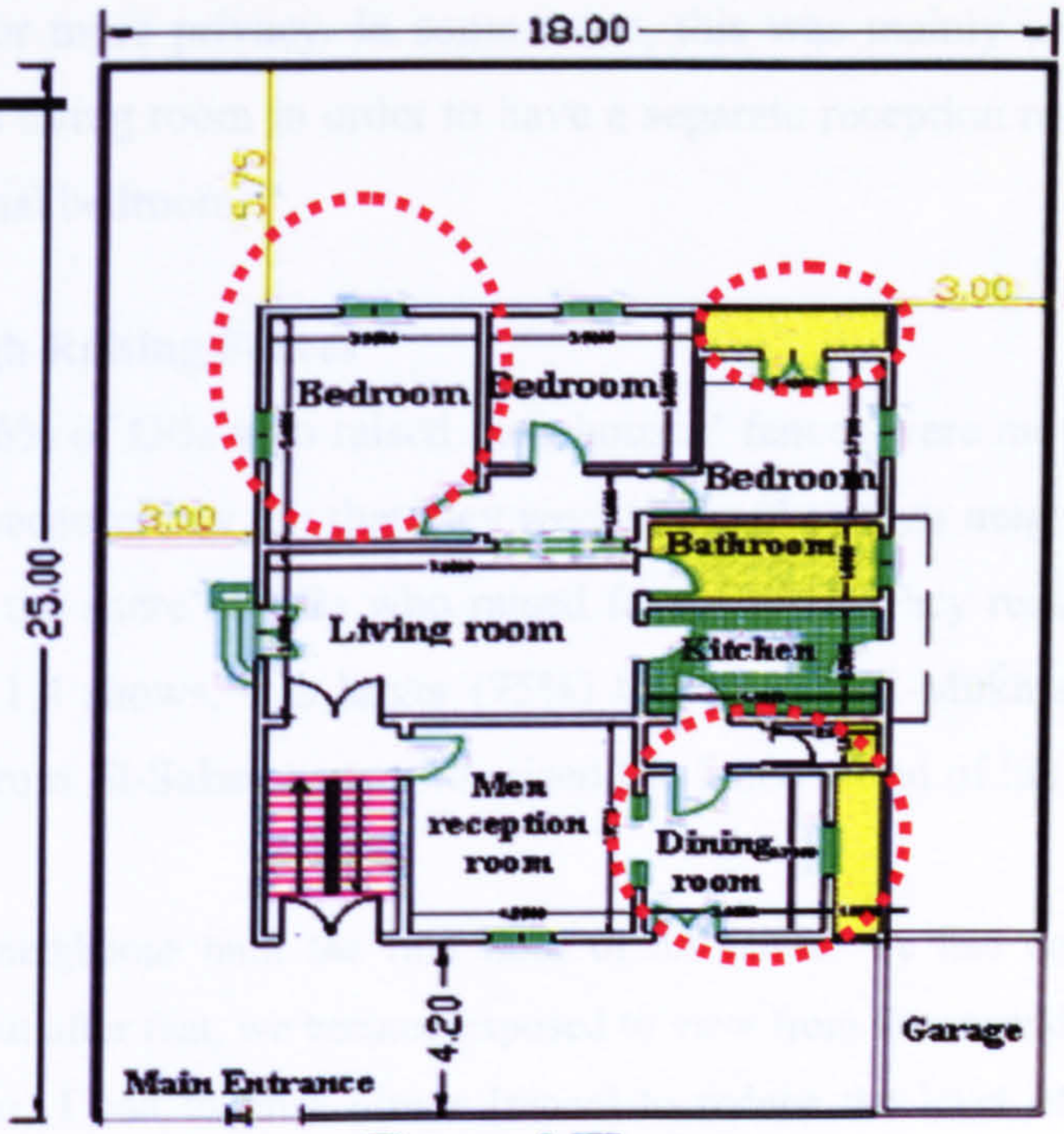
Pre-transformation

*A bedroom was altered to women reception room.

* Balcony was added inside to bedroom.

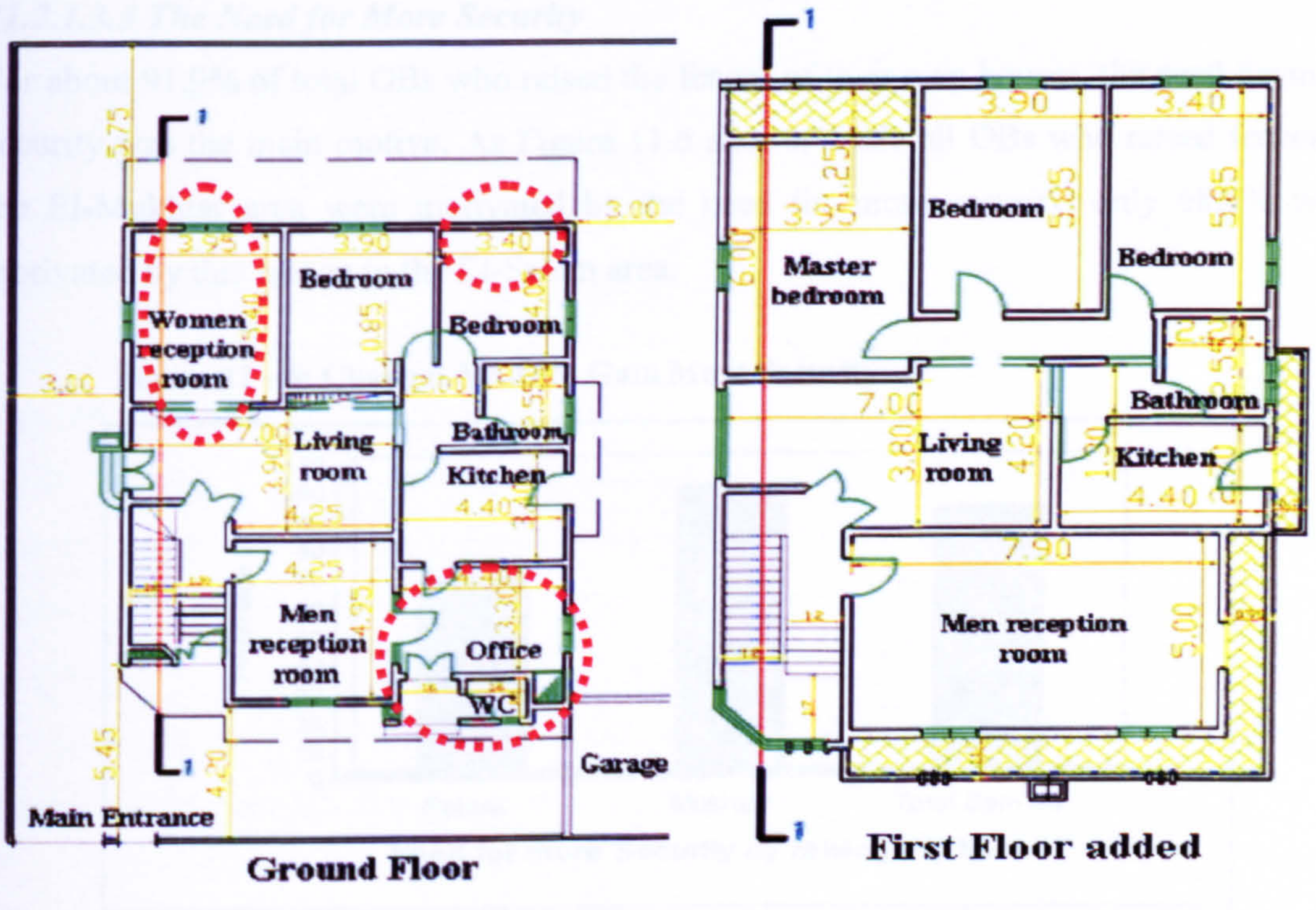
* Dining room and attached balcony were altered to an office attached to W.C.

* Additional floor was added to the house.



Ground Floor

Post-transformation



Ground Floor

First Floor added

Source: Fieldwork, Benghazi (Feb-May), 2003

Gaining More Privacy through Subdividing Rooms

Although the share of OBs who subdivided rooms in their houses did not exceed 8.2% of the total of those who made changes, about 63.6% of OBs who subdivided existing rooms were motivated by the need for more privacy. In some cases, this was mainly achieved through subdividing a spacious living room in order to have a separate reception room for women guests, or as an additional bedroom.

Gaining More Privacy through Raising Fences

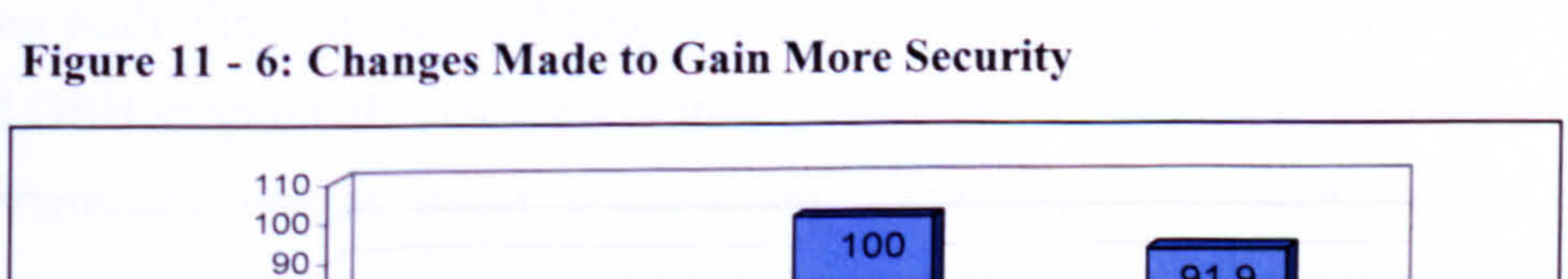
The findings revealed that, 72.6% of OBs who raised their houses' fences were motivated by the need for more privacy, because they felt that they were exposed to their neighbour's view from all sides. However, the share of OBs who raised fences for privacy reasons in the El-Salam area, as Figure 11.4 shows, was larger (75%) than in the El-Mukhtar area (71.7%). For instance, an OB from El-Salam area who raised the fence round of his house due to privacy concerns said:

> "Before my next door neighbour built the first floor of his house, we had no problem with privacy. But after that, we became exposed to view from the second floor of his house. Thus, I had to raise *alsoor* [fence] to reduce the level of exposure."

11.2.1.3.3 The Need for More Security

For about 91.9% of total OBs who raised the fences of their own houses, the need for more security was the main motive. As Figure 11.6 shows, while all OBs who raised fences in the El-Mukhtar area were motivated by the need for more security, only 68.8% were motivated by this reason in the El-Salam area.

Figure 11 - 6: Changes Made to Gain More Security



Source: Fieldwork, Benghazi (Feb-May) 2003

The high proportion of OBs who raised the fences of their houses in the El-Mukhtar area can be attributed to feelings of insecurity, as discussed later in the section on satisfaction with the neighbourhood. Plate 11.6 illustrates a villa fence that was raised for security reasons in El-Mukhtar Area.

Plate 11 - 6: a villa fence being raised for security reasons in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May), 2003

11.2.1.3.4 The Need for More Income

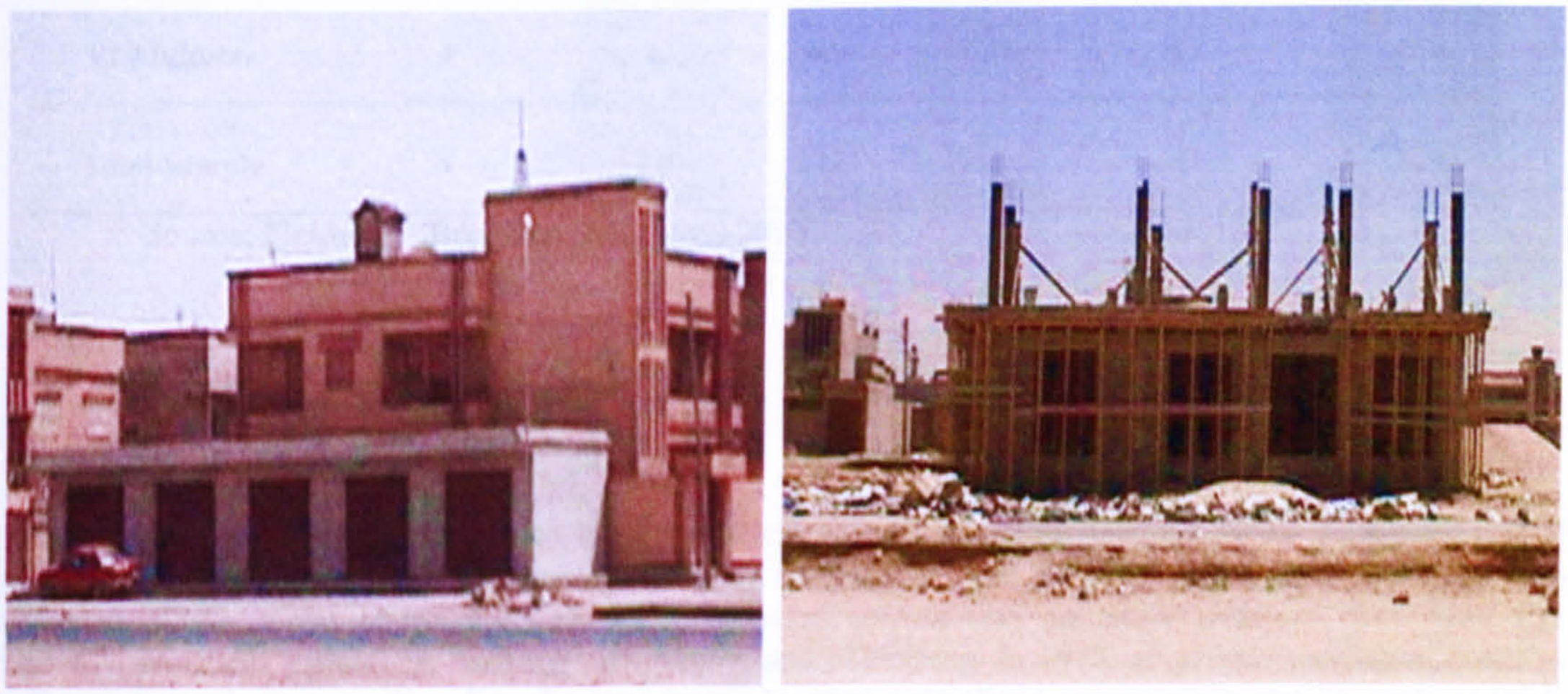
All of the 40 OBs who built shops in the setbacks of their houses were motivated by the need for more income for their own household. Of this total, 26 (65%) were from the El-Salam area while 14 (35%) OBs were from the El-Mukhtar area. The smaller proportion of OBs who built shops in the El-Mukhtar area can be attributed to the fact that the three selected OBH neighbourhoods are still under development, and most plots are still vacant or accommodate houses under construction. However, observation showed that the construction of most houses in the El-Mukhtar area, particularly those located along main roads began by the building of a row of shops along the main façade of the houses, mainly to generate income to be used for construction. Plate 11.7 and 11.8 illustrates some examples of shops already built or still under construction along the front or side setbacks of owner-built houses in the El-Salam and the El-Mukhtar areas.

Plate 11 - 7: Shops built in the front or side setback of villas in El-Salam Area (left) and El-Mukhtar Area (right)



Source: Fieldwork, Benghazi (Feb-May), 2003

Plate 11 - 8: Shops being built in occupied villa in El-Salam Area (left) and in under-construction villa in El-Mukhtar Area (right)



Source: Fieldwork, Benghazi (Feb-May), 2003

It is worth mentioning that when private commerce and retail was allowed again in the late 1980s and early 1990s[1], there was a shortage of already available subdivided sites for commercial and shopping facilities in most residential areas. Therefore, home owners whose houses were located along main roads were allowed to convert the use of existing garages to shops or they could build shops in the setbacks of their detached dwellings, on condition that the building of these shops would not affect natural lighting and ventilation in their houses.

11.2.1.4 Timing of Carrying Out Changes

The findings show that about three-quarters (74.1%) of OBs who made changes in their houses carried out these changes after moving in. 2.9% made these changes during the construction phase while 23% made changes both during the construction phase and after moving in.

Table 11 - 1: Timing of Changes Made in the House

Sample	Timing of changes made					
	During construction phase		After Moving-in		During construction & After moving-in	
	Frequency	%	Frequency	%	Frequency	%
El-Salam	0	0	70	87.5	21	12.5
El-Mukhtar	4	6	42	62.7	21	31.3
Total Sample	4	2.7	112	76.2	31	21.1

Source: Fieldwork, Benghazi (Feb-May) 2003

[1] As discussed in chapter 6, the state took control of virtually all economic domains during the second half of the 1970s. In 1975, the domestic marketing of certain commodities and the provision of certain services were restricted to the public sector. By 1977 these included construction materials, livestock, fertilizers, fish fodder, insecticides, insurance, banking, advertising, and publishing. In 1978, all private commerce, retail as well as wholesale became illegal as the state began to open centralized supermarkets run by local people's committees with the aim of undermining the numerous neighbourhood shops that previously had catered to the daily needs of most Libyans.

As Table 11.1 illustrates, the share of OBs in the El-Salam area who made changes after moving in was larger (86.3%) than in the El-Mukhtar area (63.8%). In contrast, while 33.9% of OBs in the El-Mukhtar area carried out changes during both the construction phase and after moving in, only 13.7% in the El-Salam area carried out changes in this way. In addition, while 6.5% of OBs in the El-Mukhtar area made changes only during the construction phase, no OBs in the El-Salam area made changes only during the construction phase.

It is clear that, no OBs in the El-Salam area made changes during the construction phase (Plate 11.9). This can be attributed to the common adoption of turn-key arrangements with hired builders which reduced the direct intervention of OB in construction work.

Plate 11 - 9: Changes (adding floors and shops) made after moving-in in El-Salam Area



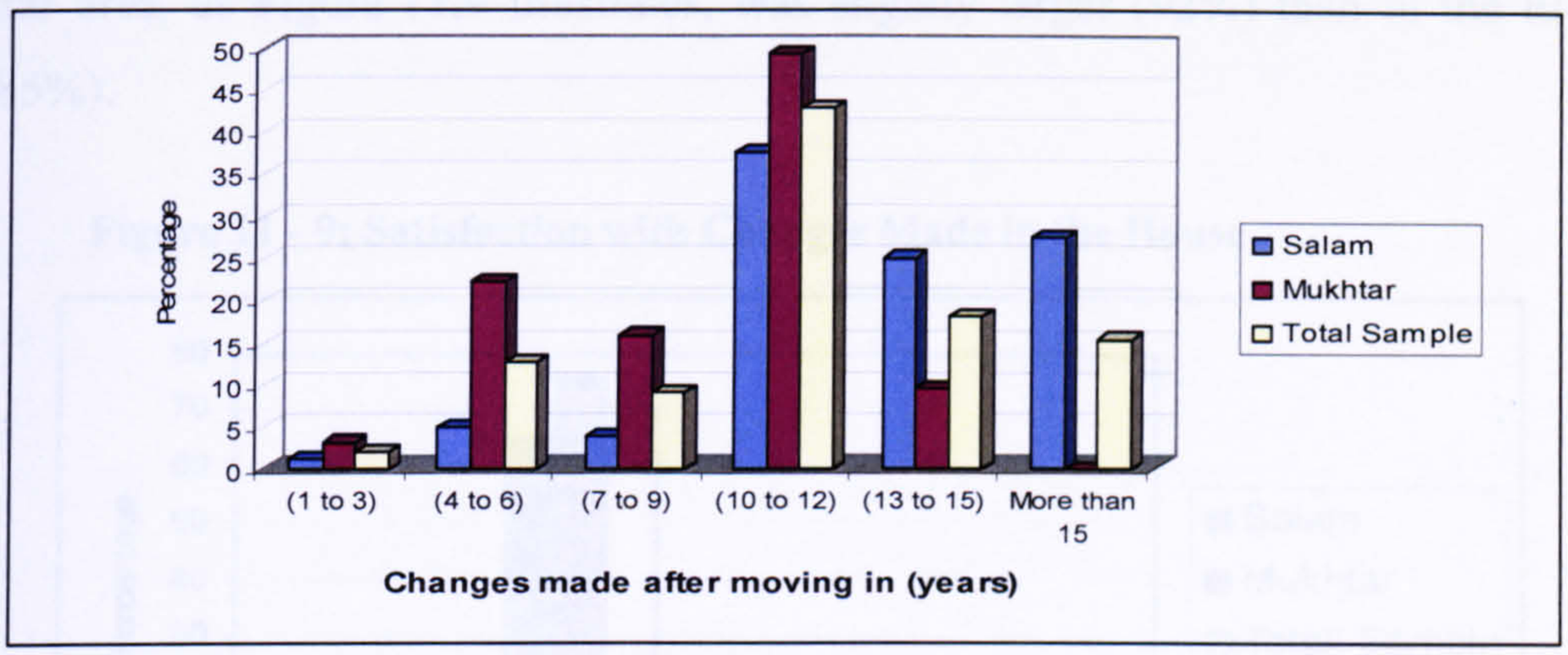
Source: Fieldwork, Benghazi (Feb-May) 2003

11.2.1.4.1 How Long After Moving-in Were Changes Made

As mentioned earlier, 131 OBs (74.1%) made changes after moving in, of whom 31 made them during the construction phase. As Figure 11.7 shows, more than three-quarters (79.4%) made the first change ten years after moving in, while 20.6% carried out the first change after 1 to 9 years from moving in. The share of OBs who made their first change ten years after moving-in in the El-Salam area was larger (93.2%) than in the El-Mukhtar area (62.1%). In contrast, while 37.9% of OBs in the El-Mukhtar area made the first change 1 to 9 years after moving in, only 6.8% in the El- Salam area made the first change this soon. This means that OBs in the El-Mukhtar area began to make changes in their houses earlier than those in the El-Salam area and most of these changes were in the form

of converting the use of existing rooms, adding balconies, raising fences or building shops in setbacks.

Figure 11 - 7: How Long After Moving-in Were Changes Made

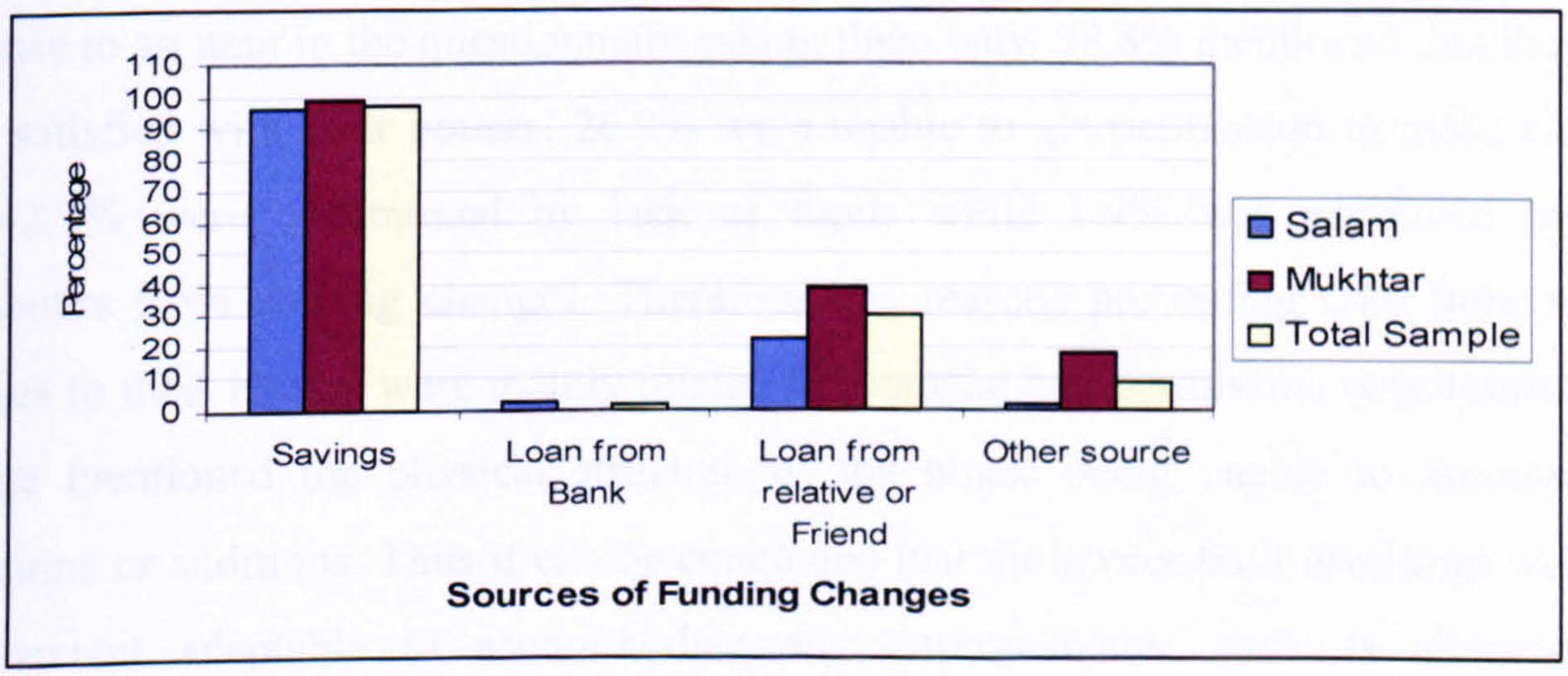


Source: Fieldwork, Benghazi (Feb-May) 2003

11.2.1.5 Source of Funds Used in Making Changes

As discussed in chapter 2, it is assumed that OBs would be more likely to make every effort to improve their housing conditions depending on their own savings, and would use good materials if they were enabled to do so. This assumption was supported by the fact that 97.8% of OBs who made changes to their houses, as Figure 11.8 shows, depended on their own savings to fund these changes, while only 0.7% used building loans to fund changes. Such a low dependence on loans from the banking sector can be attributed to the fact that the great majority of these changes were unauthorized. Thus it was impossible for the OBs to obtain loans from the banking sector to fund them.

Figure 11 - 8: Source of Funds Used in Making Changes

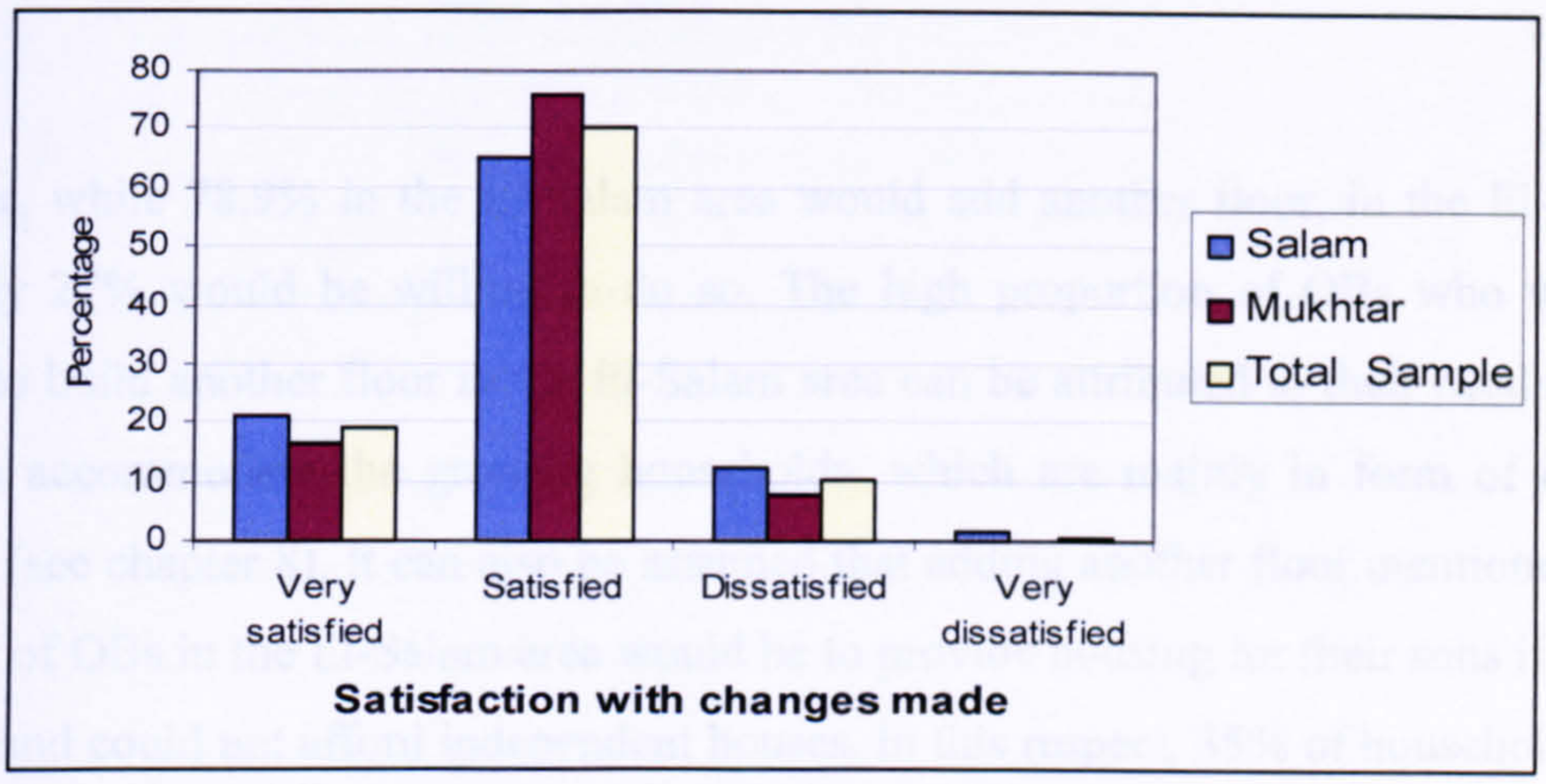


Source: Fieldwork, Benghazi (Feb-May) 2003

11.2.1.6 Satisfaction with Changes Made

The findings show that 88.1% of OBs who made changes in their houses were satisfied with them while 11.9% were dissatisfied. The share of OBs who were satisfied in the El-Mukhtar area, as Figure 11.9 illustrates, was slightly larger (92%) than in the El-Salam area (85%).

Figure 11 - 9: Satisfaction with Changes Made in the House



Source: Fieldwork, Benghazi (Feb-May) 2003

Regarding the main reasons for dissatisfaction with changes made, 75% mentioned poor finishing, 37.5% mentioned reductions in natural light and ventilation resulting from the changes, 31.3% mentioned poor structural quality such as cracks in ceilings and walls.

11.2.1.7 Reasons for Making No Changes

It was obvious that about 52 OBs (27.8%) did not carry out any changes to their houses. In response to an item in the questionnaire asking them why, 28.8% mentioned that they were quite satisfied with their houses, 26.9% were unable to get permission to make changes, and 42.3% were constrained by lack of funds while 1.9% was prevented by their neighbours from making changes. Therefore, the reasons preventing OBs from making changes to their houses were mainly related to financial and permission constraints, while no one mentioned the physical structure of the house being unable to accommodate alterations or additions. Thus it can be concluded that the owner-built dwellings were to a large extent adaptable to accommodate any improvements, such as alterations or extensions, desired by the owner-occupiers.

11.2.1.7.1 Willingness to Make Changes in the Future

Despite one-third (28.8%) of the 52 OBs who did not make any changes being satisfied with their houses, all of them mentioned that they would be willing to make alterations and additions to their houses in the future. In this respect, the main alteration that these 52 OBs would be willing to do was to add balconies inside, which were mentioned by 75% of them. Also, 55.8% would convert the use of some rooms in their houses. In additions, 46.2% of them would be willing to add another floor and 45.3% to raise the fence of their houses.

However, while 78.9% in the El-Salam area would add another floor, in the El-Mukhtar area only 27% would be willing to do so. The high proportion of OBs who would be willing to build another floor in the El-Salam area can be attributed to their need for more space to accommodate the growing households, which are mainly in form of extended families (see chapter 8). It can also be assumed that adding another floor mentioned by the majority of OBs in the El-Salam area would be to provide housing for their sons if they got married and could not afford independent houses. In this respect, 35% of households in the El-Salam area, as discussed in chapter 8, include adults of marriageable age (19 to 40 years).

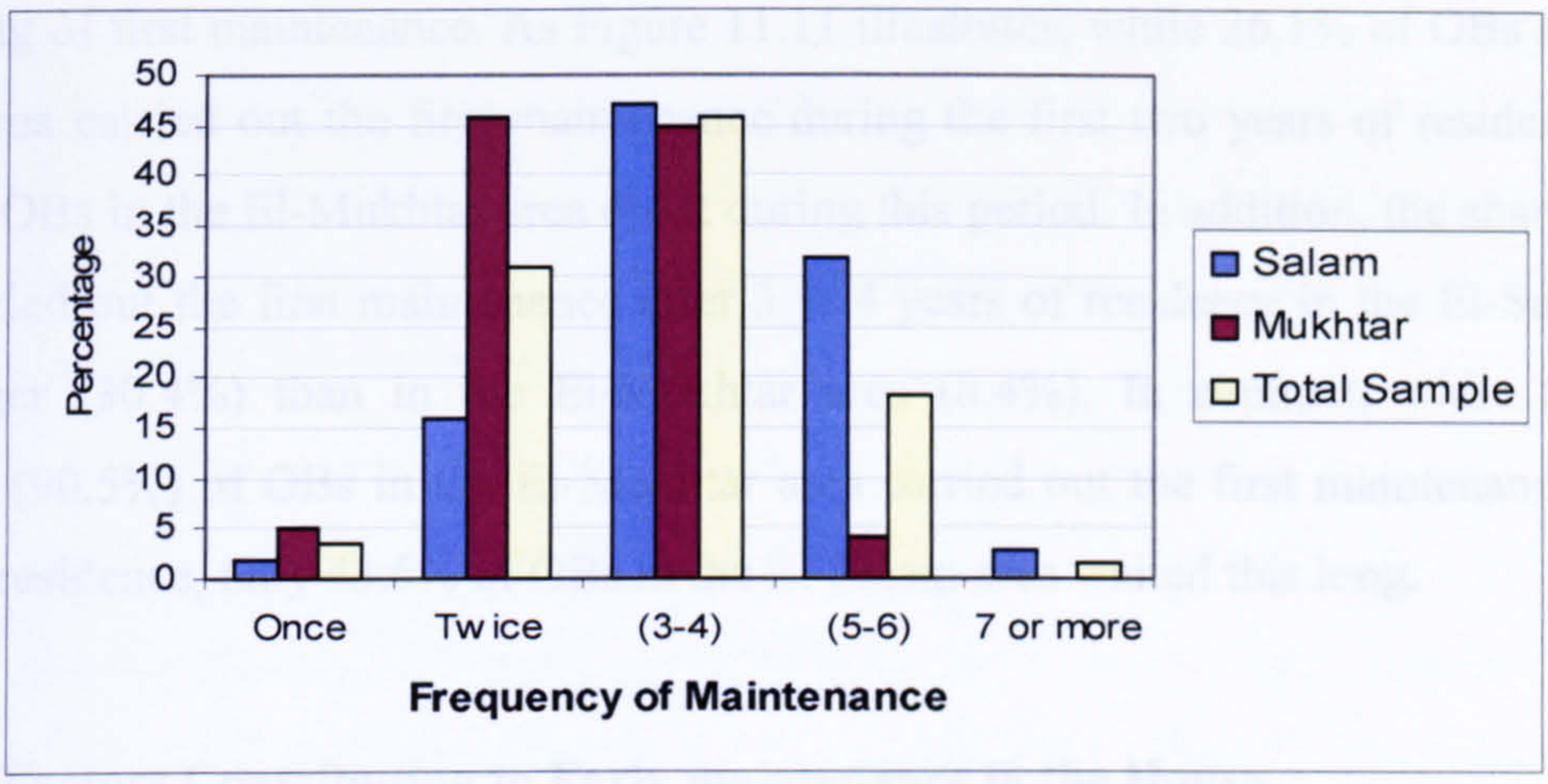
11.2.2 Maintenance and Repairs made in the House

One of the quality attributes of housing is minimizing the running costs of the house, which result mainly from the costs of major repairs work and day to day use. This, as Goodchild (1997) argued, can be achieved through employing a contractor (builder) of good repute and using good quality materials in the construction of the house rather than adapting a specific construction method. In this section, the kinds of maintenance and repairs made by OBs to restore the condition of houses or to overcome deficiencies are discussed. The findings show that all OBs needed to carry out some maintenance and repairs in their houses after moving in.

11.2.2.1 Frequency of Maintenance

In terms of the frequency of maintenance in the house, 67.9% of the OBs had carried out maintenance three or more time so far, while 32.1% had done this once or twice in their houses so far.

Figure 11 - 10: Frequency of Maintenance in the House



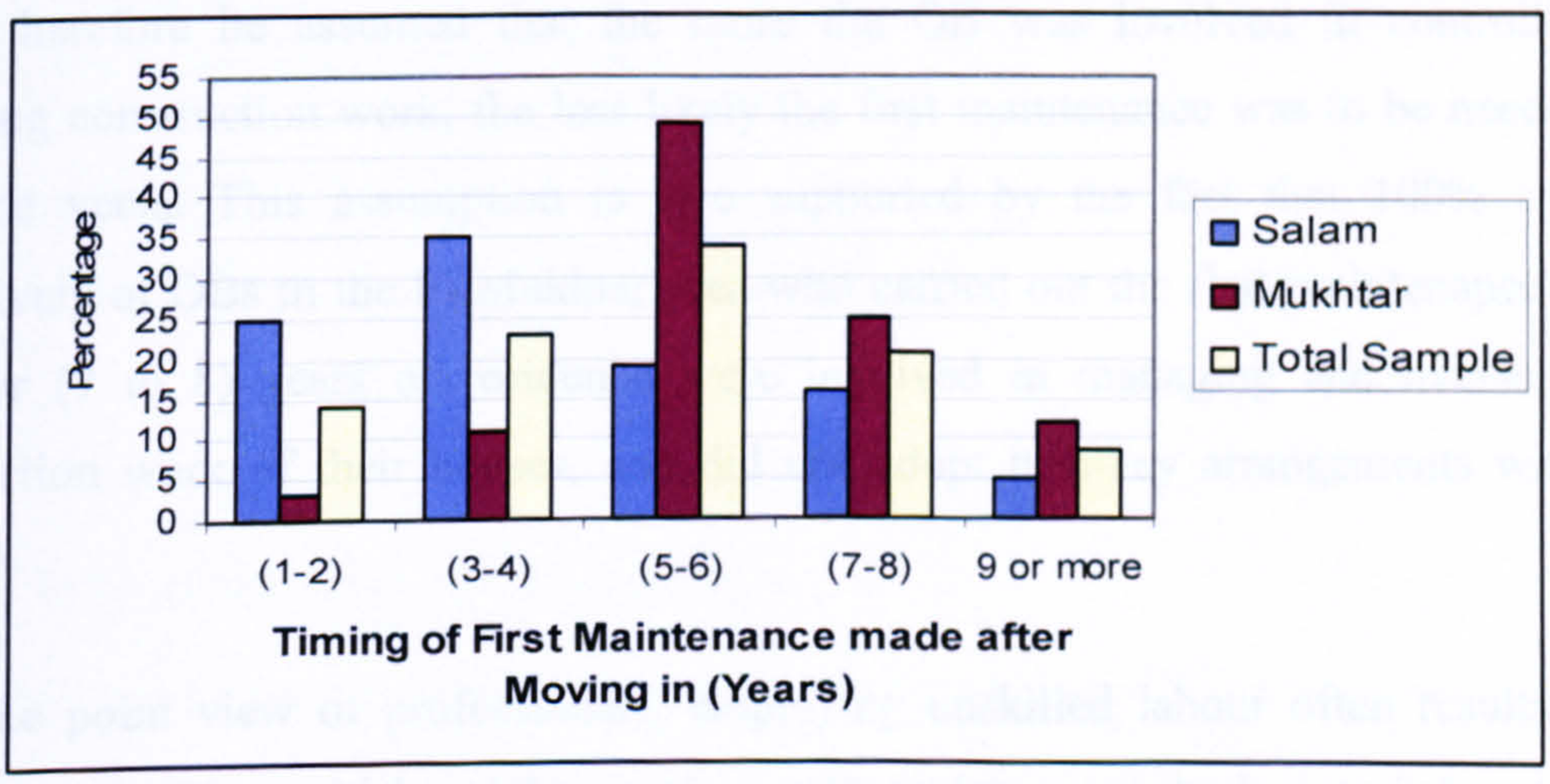
Source: Fieldwork, Benghazi (Feb-May) 2003

However, the share of OBs who carried out maintenances three times or more in the El-Salam area, as Figure 11.10 illustrates, was larger (85.9%) than in the El-Mukhtar area (50.5%). This can be attributed to the longer duration of residence by the great majority of OBs in the El-Salam area compared to those in the El-Mukhtar area.

11.2.2.2 How Long After Moving in Was Maintenance first needed?

Regarding the timing of the first maintenance carried out in the house, the findings show that about half (55.6%) of the OBs carried it out 3 to 6 years after moving in, 31% after 7 years, while 13.4% carried out maintenance during the first two years of residence.

Figure 11 - 11: Timing of first maintenance made



Source: Fieldwork, Benghazi (Feb-May) 2003

However, considerable differences were found between the two selected areas regarding the timing of first maintenance. As Figure 11.11 illustrates, while 26.1% of OBs in the El-Salam area carried out the first maintenance during the first two years of residence, only 1.1% of OBs in the El-Mukhtar area did it during this period. In addition, the share of OBs who carried out the first maintenance after 3 to 4 years of residence in the El-Salam area was larger (30.4%) than in the El-Mukhtar area (8.4%). In contrast, while the great majority (90.5%) of OBs in the El-Mukhtar area carried out the first maintenance after 5 years of residence, only 43.5% of OBs in the El-Salam area waited this long.

11.2.2.3 Factors Contributing to Early maintenance in the House

The findings of the study show that the early maintenance carried out in the house was due to the following factors.

- Type of Arrangement Made with Builder

The findings show that the earlier maintenance was largely influenced by the role and extent of intervention that the OB had in managing the construction of his house. For instance, 79.2% of OBs in the El-Salam area who carried out the first maintenance during the first four years of residence had turn-key arrangements with hired builders who were completely responsible for undertaking and managing all construction tasks without any intervention from the OB. In contrast, about 81.3% of OBs who carried out the first maintenance during the second four years of residence had arranged for the hired builder to build the concrete skeleton of the house only.

It can therefore be assumed that the more the OB was involved in controlling and managing construction work, the less likely the first maintenance was to be needed early and vice versa. This assumption is also supported by the fact that 100% and 96% respectively of OBs in the El-Mukhtar area who carried out the first maintenance after (5 to 6) or (7 to 8) years of residence were involved in managing and overseeing the construction work of their houses, and did not adopt turn-key arrangements with hired builder.

From the point view of professionals, employing unskilled labour often results in low quality construction which might require early maintenance to be carried out by the occupier. In this respect, El-Mennefiy said:

"Employing skilled *ommal* is a definitely key factor in building high quality houses at reduced costs, especially for running costs, and the houses can be used for years without renovation. In contrast, employing unskilled *ommal* often results in building a low quality house at high cost due to improper handling and use of materials and, thus, the constructed house might require costly maintenance works after a short period of occupancy."

- Status of Supervision during Construction

The relationship between the status of supervision during construction and the timing of the first maintenance made in the house is quite evident across the total sample and in both areas. The findings show that all OBs in the El-Salam and El-Mukhtar areas who carried out the first maintenance during the first four years of residence had no supervision of construction during the building phase. In contrast, those who carried out the first maintenance after 5 to 8 years of residence tended to have irregular supervision, while those who carried out the maintenance after 9 years or more of residence tended to have regular supervision.

These findings regarding the importance of supervision during construction are also supported by statements made in interviews with professionals. For instance, El-Mennefiy said that:

"Regular *eshraff* during the construction phase represents the safety valve for the owner to keep the construction work going according to the approved plan at the lowest possible cost by applying the right building techniques and using the proper quantity and quality of building materials."

It can be assumed that the better the supervision arranged by the OB for the construction of his house, the less likely earlier maintenance would be needed after moving in, and vice versa.

11.2.2.4 Type of and Reason for Maintenance

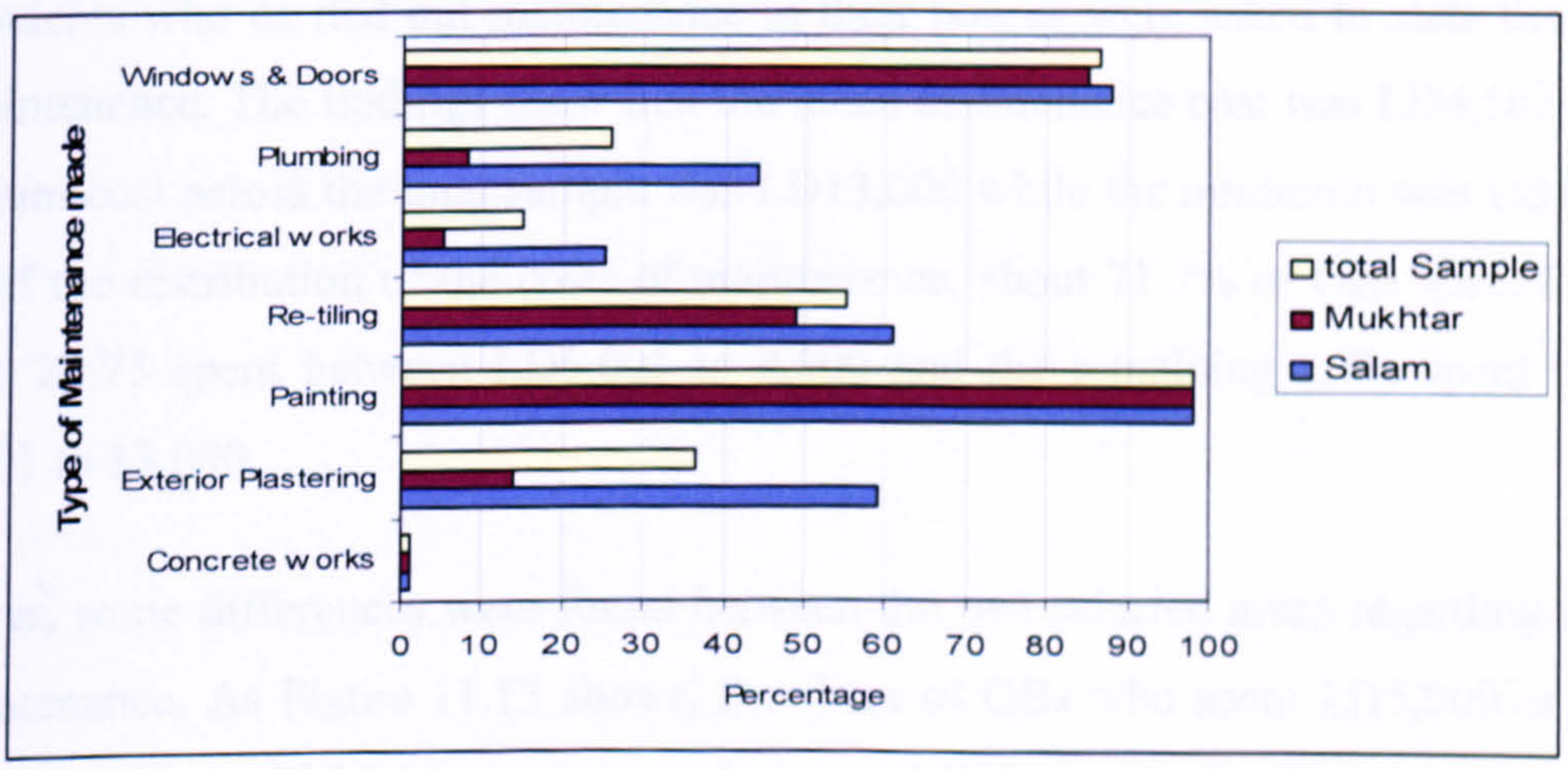
It was believed that investigating the frequency and timing of maintenance carried out in the house was not enough to determine how successful the OB was in building a good quality house. Thus, it was necessary to explore the type, reason and cost of maintenance

in the house. As the findings show, re-painting work was the most common type of maintenance carried out by 97.9% of OBs followed by repairing or replacing windows and doors in the house (87.7%). The third most important type of maintenance was re-tiling work (floors, kitchen, or bathrooms). In contrast, the least common type of maintenance was the repair of concrete (1.1%). In this respect an OB from the El-Salam area said that:

> "I used to repaint all bathrooms and kitchen when necessary or at least once every two years. I remember that a full refurbishment was made of the bathroom and kitchen after finishing the work on the first floor. That was to improve the internal *tashteeb* [finishing] of the ground floor and make it match the recently built first floor."

However, some remarkable differences are found between the two selected areas regarding the type of maintenance carried out. As Figure 11.12 shows, while about 98% of OBs in both areas repainted their own houses, the share of OBs who repaired the plumbing in the El-Salam area was much larger (47.8%) than in the El-Mukhtar area (8%). In addition, compared to 62% of OBs in the El-Salam area who repaired external plastering, only 13.7% of OBs in the El-Mukhtar area did this. The high proportion of OBs in the El-Salam area who repaired the external plastering can be attributed to their longer duration of residency compared to those in the El-Mukhtar area. Another possible reason is that all OBs in El-Salam area who repaired external plastering had moved into their houses before the completion of exterior finishing work which in turn led the plastering during this long period of residence to deteriorate gradually due to exposure to the weather.

Figure 11 - 12: Type of Maintenance Made in the House



Source: Fieldwork, Benghazi (Feb-May) 2003

Observation made during the fieldwork show some interior and exterior repair works undertaken by residents in their own houses. Plate 11.10 shows some repair works done for external plastering and bathroom plumbing in occupied villas in selected neighbourhoods.

Plate 11 - 10: Exterior plastering repaired in a villa in El-Salam Area (left) and a bathroom being entirely refurbished in a villa in El-Mukhtar Area (right)



Source: Fieldwork, Benghazi (Feb-May) 2003

As mentioned above, the repair of concrete was the least common type of maintenance carried out by OBs in their houses. The findings show that, however, one of the two respondents who repaired concrete in his house was an OB from the El-Mukhtar area who did not provide any sort of supervision for the concrete work during the construction phase, while the other was from the El-Salam area who became the house owner through purchase.

11.2.2.5 Cost of Maintenance

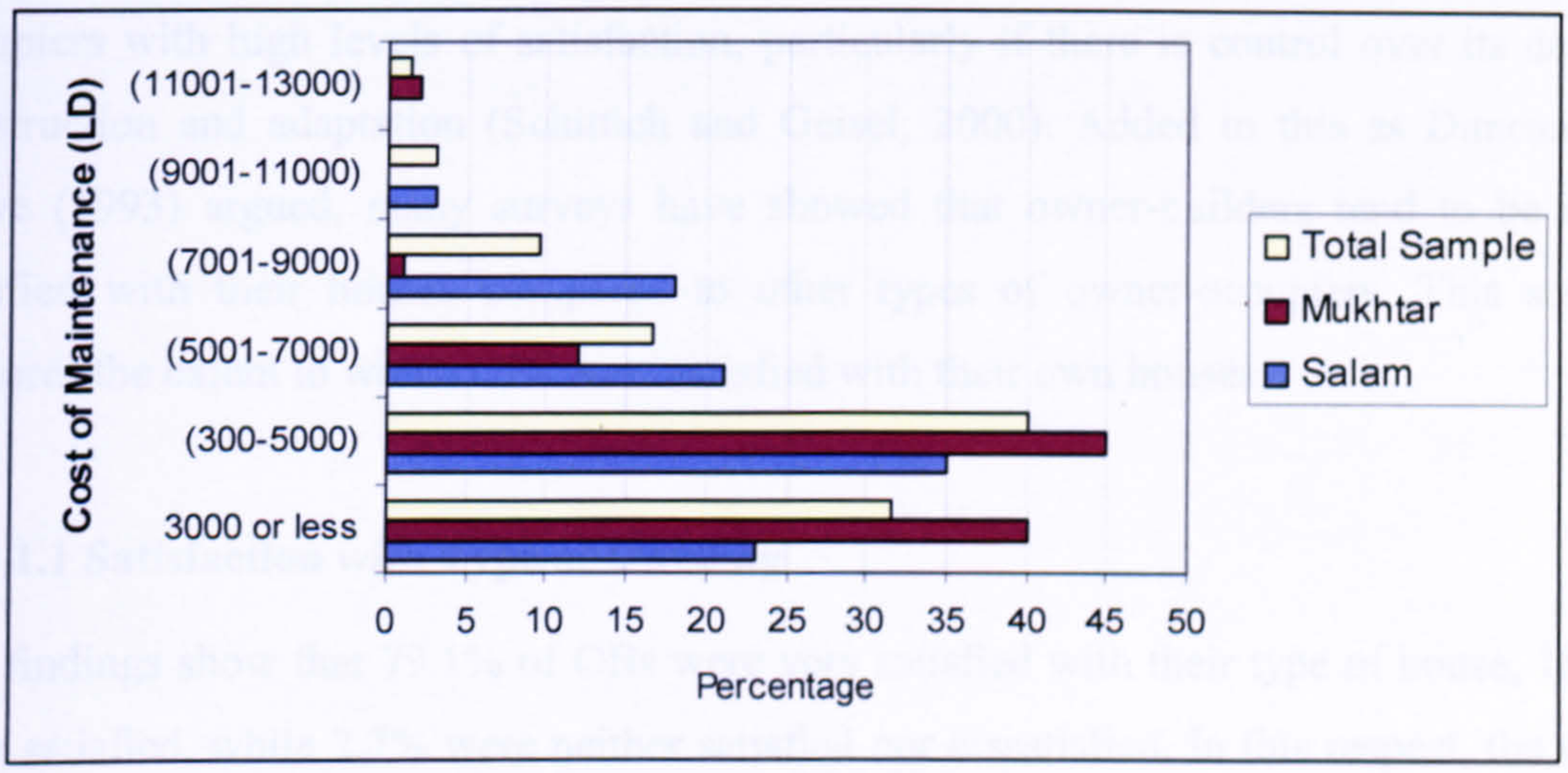
Respondents who carried out maintenance in their houses were asked to state the cost of the maintenance. The findings show that the mean maintenance cost was LD4,502 and the maximum cost across the total sample was LD13,000 while the minimum was LD1000. In terms of the distribution of the costs of maintenance, about 71.7% of OBs spent LD5,000 or less, 25.75 spent between LD5,001 to 9,000 and the remaining 2.7% spent between LD9,001 to 13,000.

However, some differences were found between the two selected areas regarding the cost of maintenance. As Figure 11.13 shows, the share of OBs who spent LD5,000 or less on maintenance in the El-Mukhtar area was larger (85.3%) than in the El-Salam area (53%).

In contrast, while 36% of OBs in the El-Salam area spent between LD5,001 to 9,000 on maintenance, only 13% in the El-Mukhtar area spent this much of money.

The slightly higher cost of maintenance spent by OBs in the El-Salam area compared to those in the El-Mukhtar area can be attributed to the type of maintenance involving higher costs. As discussed earlier, the share of OBs in the El-Salam area who repaired exterior plastering or plumbing in their houses after moving in was larger than in the El-Mukhtar area.

Figure 11 - 13: Cost of Maintenance Made in the House



Source: Fieldwork, Benghazi (Feb-May) 2003

11.3 Overall Satisfaction with Resulting OBH Environment

As discussed in chapter 2, allowing and enabling people to build their housing is more likely to result in producing their desired home and has also potential social advantages for deprived individuals and households (Turner and Fichter, 1972, Goodchild, 1997). To gain more insight into individual experiences with the resulting OBH environment, their degree of satisfaction with the house and surrounding environment (neighbourhood) has to be measured. In this respect, the objective characteristics of the resulting OBH environment and residents in addition to the subjective beliefs of residents are the main factors or components to be considered. The outcome of residential satisfaction assessment, as discussed in chapter 2, can be used to evaluate the success of any housing programme and in developing successful housing policies.

11.3.1 Satisfaction at Home Level

"The detached house receives adequate light and air from its four exposures and provides room for gardening, play, parking and other outdoor uses. It enjoys direct access to the street and its own private grounds, which can be shielded from noise and constructed at reasonable cost, although it is not the least expensive type of housing. In many parts of the world, it is popularly considered to be the ideal house. It symbolises the individual family." (Lynch, 1989; quoted in Goodchild, 1997:19)

From the above quotation, it seems that the single-family detached house can provide its occupiers with high levels of satisfaction, particularly if there is control over its design, construction and adaptation (Schittich and Geisel, 2000). Added to this as Duncan and Rowe (1993) argued, many surveys have showed that owner-builders tend to be more satisfied with their houses compared to other types of owner-occupiers. This section explores the extent to which OBs were satisfied with their own houses.

11.3.1.1 Satisfaction with Type of Dwelling

The findings show that 79.1% of OBs were very satisfied with their type of house, 18.2% were satisfied, while 2.7% were neither satisfied nor dissatisfied. In this respect, the share of OBs who were very satisfied in the El-Mukhtar area was slightly larger (86.3%) than in the El-Salam area (71.7%). In contrast, while 21% of OBs in the El-Salam area were satisfied, the percentage was slightly smaller in the El-Mukhtar area (13.7%).

Type of Previous House and Satisfaction with Current House

It was revealed that 79.8% of a total of 148 OBs who were very satisfied with their type of house; had previously lived in dwellings which were not detached or semi detached, such as terraced houses, courtyard houses or flats in multi-storey buildings. Thus, it is clear that the high level of satisfaction with their present detached houses was mainly mentioned by OBs who had lived in terraced houses, flats or courtyard houses.

11.3.1.2 Satisfaction with Size of Dwelling

As discussed in chapter 8, most owner-built houses in the five OBH neighbourhoods surveyed consist of one to two storeys with some exceptions and were built on plots of size

ranging between 450 to 700 m² with a total built area covering about 60% of the total plot size. This means that these owner-built houses involve rather larger sizes compared to other housing types in Benghazi. Added to this, 93.6% of OBs, as discussed in chapter 9, mentioned that they were looking for spacious dwellings comprising many and large rooms when they designed their houses. Despite this, only 11% of OBs were found to be very satisfied with the sizes of their houses while 49.2% were satisfied. In contrast, about 30.5% of total OBs were dissatisfied with the size of their own houses. In this respect, the share of OBs who were either satisfied or very satisfied in the El-Mukhtar area was larger (64.2%) than in the El-Salam area (55.4%). This can be attributed to the generally larger houses in the El-Mukhtar area which were built on plot sizes ranging between 600 to 750 m² compared to plot sizes of between 450 to 500 m² in the El-Salam area.

Impact of Household Size on Satisfaction with the Size of House

The findings show that there is an obvious relationship between household size and the OB's degree of satisfaction with the size of his house. For instance, about 65% of OBs who were very satisfied with the size of their houses had household sizes of 7 persons or less. In contrast, about 93% of OBs who were dissatisfied with the size of their houses had household sizes ranging between 8-15 persons per household.

11.3.1.3 Satisfaction with Privacy and Interior Layout of House

Although, as discussed in chapter 9, all OBs were involved in the design of their houses, the method and criteria by which the design was made varied. Thus, OBs were asked to state their degree of satisfaction with the level of privacy and interior layout of their houses. In response, about two-thirds (68.4%) of OBs were either satisfied or very satisfied with the level of privacy and the interior layout of their houses, while 17.1% were either dissatisfied or very dissatisfied and the remaining 14.5% were neither satisfied nor dissatisfied. In comparison, the share of OBs who were either satisfied or very satisfied with the level of privacy and interior layout of the house in the El-Mukhtar area was larger (83.2%) than in El-Salam area (53.3%). In contrast, the share of OBs in the El-Salam area who were either dissatisfied or very dissatisfied was larger (27.2%) than in the El-Mukhtar area (7.4%).

Impact of Household Composition on Satisfaction with Privacy and Interior Layout

Such differences between OBs in the two selected areas regarding their level of satisfaction with the level of privacy and interior design of their own house can be attributed to difference in the size and gender composition of their households, which is seen as discussed in chapter 2 the main factor that determines levels of privacy within the home.

For instance, it was found that 100% and 97% respectively of OBs in the El-Salam and El-Mukhtar areas who were very satisfied with the privacy and interior design of their own houses had 3 females or less in their households. In contrast, all of the OBs in the El-Salam and El-Mukhtar areas who were either dissatisfied or very dissatisfied had 4 females or more in their households. This means that the number of females in the household was the main factor influencing how satisfactory OBs judged their houses in terms of level of privacy. In other words, the more females the household included the more likely the OB was to be dissatisfied with the level of privacy and interior design of his house.

11.3.1.4 Satisfaction with Interior Finishing in the House

As discussed in chapter 9, only 6.4% of OBs mentioned that they were looking for high quality interior finishing when they designed their houses. However, the findings show that out of a total of 187 OBs, 59.4% were either satisfied or very satisfied with the interior finishing of their houses, while 23.5% were either somewhat dissatisfied or very dissatisfied. In this respect, while the share of OBs who were either satisfied or very satisfied were almost the same in the selected areas, more were dissatisfied in the El-Salam area (27.2%) than in the El-Mukhtar area (18.9%).

11.3.1.4 Satisfaction with Exterior Finishing of the House

As discussed in chapter 10, of the OBs who moved into their own houses before it was completely finished, 99.2% had the exterior finishing incomplete. Thus, about half (50.3%) of the OBs were either satisfied or very satisfied with the exterior finishing of their own houses while only 38% were either dissatisfied or very dissatisfied. However, the share of OBs who were either dissatisfied or very dissatisfied with the exterior finishing of their houses in the El-Mukhtar area was larger (57.9%) than in the El-Salam area (42.4%).

11.3.1.6 Satisfaction with Size and Use of Setbacks

Although specified distances have to be left as setbacks between the boundary wall and the built up area of the house from all sides, as discussed earlier, some OBs built shops or utility rooms in the surrounding setbacks. Therefore, OBs were asked to state their degree of satisfaction with the size and use of setbacks in their houses. In response, about half (46%) of OBs were found either dissatisfied or very dissatisfied while 48.7% were found either satisfied or very satisfied with the size and use of setbacks. The remaining 5.3% of total OBs were neither satisfied nor dissatisfied with the use and size of setbacks in their houses. However, while about 75% of OBs in the El-Salam area were either satisfied or very satisfied with the size and use of setbacks, in the El-Mukhtar area about 87.8% of OBs were either dissatisfied or very dissatisfied.

Factors Contributing to the Level of Dissatisfaction with Setbacks

The high level of dissatisfaction mentioned by OBs in the El-Mukhtar area regarding the size and use of setbacks can be attributed to their feeling that the setbacks made their houses more exposed and vulnerable to break in. This feeling was clearly reflected in the willingness mentioned by about 81.3% and 57% respectively of those who were either dissatisfied or very dissatisfied in the area to raise the fences of their houses to increase the level of security of their houses.

11.3.1.7 Satisfaction with the Location of Houses within the Neighbourhood

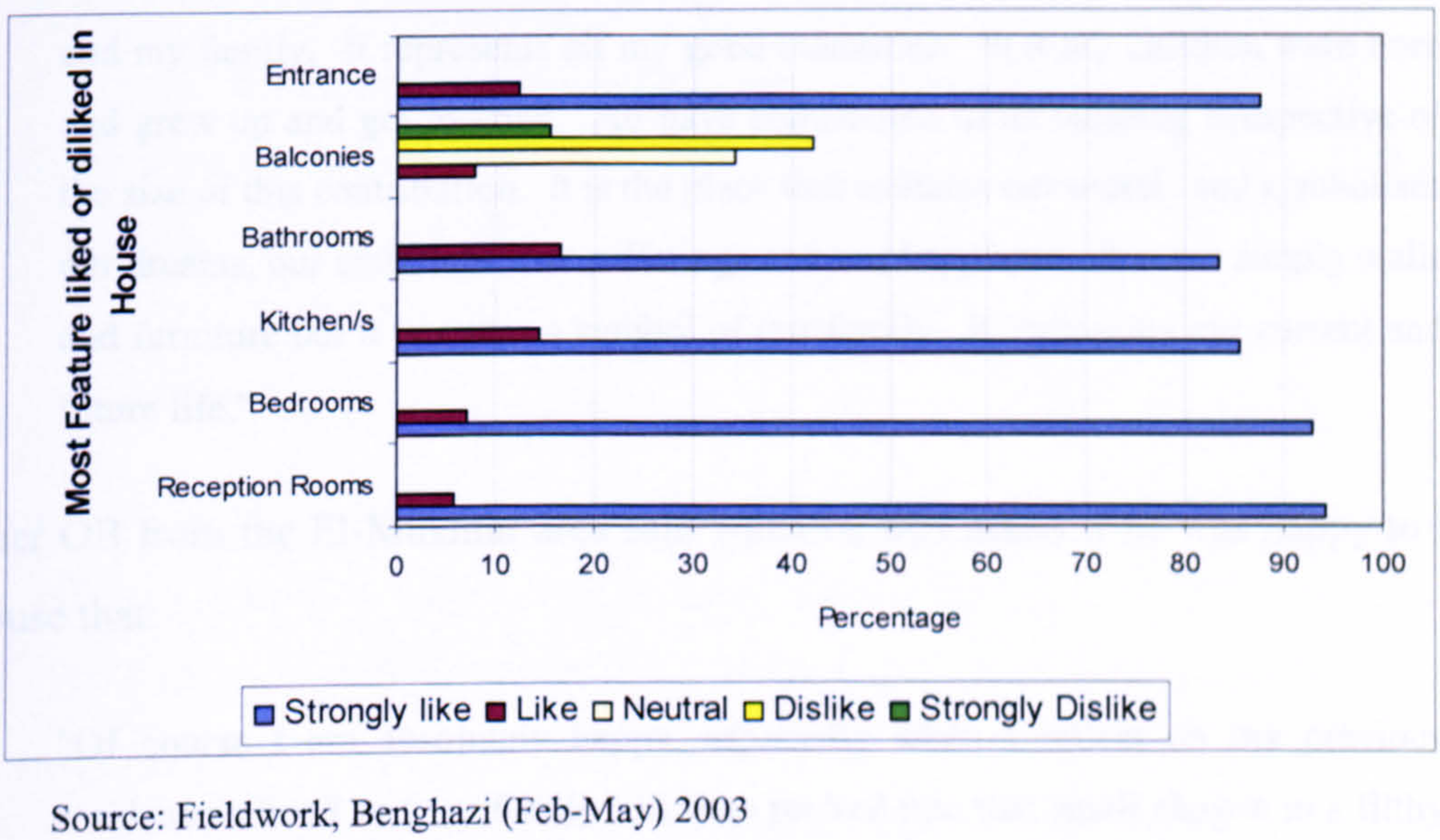
OBs were asked to state their degree of satisfaction with the location of their houses. In response, about 48.7% were either satisfied or very satisfied with the location of their houses, while 46% were either dissatisfied or very dissatisfied. However, while 95.7% of OBs in the El-Salam area were found either satisfied or very satisfied with the location of their houses, in the El-Mukhtar area about 83.1% were either dissatisfied or very dissatisfied. Such a remarkable degree of dissatisfaction with the location of houses mentioned by OBs in the El-Mukhtar area can be attributed to poor conditions of roads and public transport which left their houses relatively inaccessible as clarified later in this chapter.

11.3.1.8 Features Most Liked or Disliked in the House

After exploring the extent to which OBs were satisfied with conditions of their houses, their overall impressions towards certain features were elicited, mainly concerned with the layout and size of the habitable and utility spaces in their houses. As Figure 11.14 illustrates, the vast majority of OBs (94.1%) stated that the men's reception room was the feature most liked in the house followed by bedrooms (93%). The third most liked spaces in the house were the entrance hallway[2] of the houses, mentioned by about 87.7% of OBs followed by kitchens (85.6%) and bathrooms (83.4%). In contrast, the most disliked features in the house were the balconies, which were mentioned by about 42.2% of the OBs.

However, some differences were found between the two selected areas in this respect. For instance, the share of OBs in the El-Mukhtar area who mentioned that kitchen as the most liked feature in the house was larger (93.7%) than in the El-Salam area (77.2%). This can be attributed to the fact that most houses in the El-Mukhtar area had rather spacious kitchens due to the larger sizes of houses compared to those in the El-Salam area.

Figure 11 - 14: Most liked or Disliked Features in the house



Source: Fieldwork, Benghazi (Feb-May) 2003

[2] As Lawrence (1984:269) defined: "the entrance hall has a spatial order and purpose that is explicit and specific: it is intended to regulate the access of people and objects between private and public domains; it is required to control visibility between the exterior and the interior; it is not simply a space to store umbrellas and coats, but is place where personal appearance can be controlled; it is not just a passage between exterior and interior spaces, but is a space where people other than guests (the postman, salesman, etc.) can be received. This interpretation of the entrance hall can be contrasted with the current practice of designing flats and houses without an entrance hall such that the main door opens directly into the living room."

11.3.1.9 How Does the Current House Compare with the Previous One?

As discussed in chapter 8, the main motives that respondents had for moving from their previous residence were mainly related to the condition of the previous house rather than condition of the previous area of residence. Thus, it is assumed that OBs who were involved in the design and construction of their own houses would regard them as better than the previous ones. This assumption was supported by the study's findings, which showed that 98.5% of OBs regarded their current houses as better than the previous ones.

The high proportion of OBs who rated their current houses as better can be attributed to the serious housing conditions that they were previously living in before they moved. For instance, the findings show that about 65.2% and 52.6% respectively of OBs in the El-Salam and El-Mukhtar areas who rated their current houses as better had been living in shared houses with their parents or with other families. In contrast, two of the three OBs who regarded their current houses as no better than previous one had been living in unshared courtyard houses. In this respect an OB from the El-Salam area said that:

> "There is nothing more gorgeous than living in your own home, where you feel free to do what you like whenever you like to improve, refurbish or even sell the house when in need. This house which I managed to build meant everything to me and my family. It represents all my good memories. In it my children were born and grew up and got married. All have contributed to its building irrespective of the size of this contribution. It is the place that contains our secrets and symbolises our dreams, our ambitions, our sufferings and our happiness. It is not simply walls and furniture but it is rather a symbol of our family. It represents our current and future life."

Another OB from the El-Mukhtar area said when he was asked if he was happy to live in his house that:

> "Of course I am absolutely happy, especially when I reflect on my previous residence when I and my family had been packed into that small *shagah* in a filthy building with lacked basic necessities such as regular and sufficient water supply and cleanliness. I feel that it was a dream that came true for me and my family. Today we live in our own house which accommodates us all."

11.3.1.10 Preferred Type of Housing

All OBs were asked about the most preferred type of housing to live in. In response, the great majority of OBs (97%) preferred detached dwellings to live in while (1.5%) preferred terraced houses and (1.5%) preferred courtyard houses. The high proportion of OBs who preferred to live in detached dwellings can be attributed to the high level of flexibility that such type of houses can provide for their occupants in terms of design and adaptation. Thus it can be assumed that the great majority of OBs were satisfied with their dwellings since they rated them as better than their previous residences. In addition, the high level of satisfaction with house conditions and design is also reflected in the fact that the most preferred type of housing was a detached dwelling similar to their current houses.

11.3.2 Satisfaction at Neighbourhood Level

As discussed in chapter 2, most studies concerned with satisfaction with residential environments have considered the dwelling, neighbourhood and neighbours as the three fundamental and distinct dimensions of the residential environment (Amerigo, 2002). The term neighbourhood is often seen as an intermediary level of social organization between the dwelling and the city, where people can develop a sense of community or belonging. Thus, Rapoport (1977) believes that dwellings cannot be isolated from their surrounding spatial locations in which all elements (individuals, neighbours, and facilities) influence one another interdependently. This section explores the OBs' degree of satisfaction with their neighbourhoods.

11.3.2.1 Satisfaction with Location of Facilities

Location and layout of facilities within the neighbourhood is seen as a key factor that affects the daily life of residents. For instance, accessibility to facilities such as schools, shops and mosques is very important for residents, and particularly for children, women and the elderly. The findings show that 45.5% of OBs were dissatisfied with the location of facilities while 31.6% were satisfied. However, the share of OBs who were dissatisfied in the El-Mukhtar area was larger (82.1%) than in the El-Salam area (7.6%). This can be attributed to the lack of many basic facilities within neighbourhoods in the El-Mukhtar area which meant that residents had to walk rather long distances or drive along poor quality roads to take their children to schools or to other facilities located in the

surrounding areas. In contrast, the small proportion of dissatisfaction mentioned by OBs in the El-Salam area regarding the location of facilities can be attributed, as discussed in chapter 8, to the layout of neighbourhoods which takes into consideration a clear separation of cars from pedestrians. In addition, most of these houses were connected with passages and green areas leading to the neighbourhood's facilities.

11.3.2.2 Satisfaction with Condition of Open Spaces

The open spaces which are incorporated into the approved layout of neighbourhoods for outdoor uses, such as playground areas, gardens and parks are mainly devoted to producing some degree of comfort, recreation and wellbeing for residents in the neighbourhood. Observation revealed that most playground areas, gardens and parks shown in the layout of neighbourhoods, particularly in the El-Mukhtar area, had not receive much attention in terms of greenery, furniture and necessary equipment. Thus, the great majority (90.9%) of OBs, as the findings showed, were dissatisfied with the planning and condition of open spaces in their neighbourhoods. Such high levels of dissatisfaction were more apparent among OBs in the El-Mukhtar area (93.7%) compared to 88.1% in the El-Salam area.

Impact of Household Composition on Satisfaction with Open Spaces

The high level of dissatisfaction with the condition of open spaces in the neighbourhoods was more noticeable among OBs whose households included more children. In this respect, about 58.7% of OBs who were dissatisfied with the condition of open spaces had 2 children or more aged 5 years or less in their households. This percentage was larger in the El-Mukhtar area since about two-thirds of OBs (70.7%) who were dissatisfied had more than one child aged 5 years or less. Added to this, elderly OBs were more dissatisfied with the condition of open spaces, since 81.5% of those who were dissatisfied were aged 50 years or more while 15.4% were aged 49 or less.

11.3.2.3 Satisfaction with Safety and Security in the Neighbourhood

As discussed earlier, the proportion of OBs who raised the fences of their houses for security reasons after moving in was high particularly in the El-Mukhtar area. In addition, it was obvious that about 45.3% of OBs would be willing to raise the fences of their houses for security reasons. This means that security is a big concern for most of the OBs,

particularly in El-Mukhtar area. Thus, OBs were asked to state their degree of satisfaction with security in their areas. In response, 47.8% of OBs were found satisfied while 34.7% were dissatisfied. The share of satisfied OBs was far higher in the El-Salam area (76.1%) than in El-Mukhtar area (24.2%).

The large proportion of OBs who were dissatisfied with security in the El-Mukhtar area can be attributed to the frequent break-ins or burglary attempts experienced in these areas. This might be due to low rates of urban development and the poor condition of the environment in these neighbourhoods. As observation revealed, in the El-Mukhtar area many plots were vacant or full of construction waste, damaged or abandoned vehicles, or comprising houses under construction of which many had been left untouched for many years (see Plate 11.11). Most of the houses under construction, as observation revealed, were occupied by non-Libyan residents, of whom the great majority were informal construction workers.

Plate 11 - 11: Vacant plots full of construction and damaged vehicle waste in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

Observation also revealed that some preventive measures were taken by residents to protect their houses from break-in or burglary attempts. For instance, in addition to raising the fence, as Plate 11.12 illustrates, some residents used metal doors with reinforced locks for the main entrances. Added to this, iron grids and bars were also fixed on the windows

and balconies of many houses. Moreover, alarm systems were installed by residents in some houses to achieve more protection for their houses.

For example, an OB from the El-Mukhtar area said regarding security that:

> "In addition to the inadequate and poor condition of services, the feelings of insecurity in the area are another problem due to the frequent break-in and burglary attempts since we moved into the house. There are many houses under construction most of which are occupied by foreign workers. Thus, I had to take some preventative measures such as raising *alsoor* [fence], adding metal doors and windows, and installing an alarm system to protect my property and family."

Plate 11 - 12: iron grids and bars fixed on the windows, doors and balconies for security reasons



Source: Fieldwork, Benghazi (Feb-May) 2003

11.3.2.4 Satisfaction with Relationship and Interaction with Neighbours

The findings show that about two-thirds (62.6%) of OBs were satisfied with their relationships with neighbours. However, the share of OBs who were satisfied in the El-Salam area was larger (93.5%) than in the El-Mukhtar area (32.6%). Such differences in the levels of satisfaction with relationships with neighbours between the two areas can be attributed to the length of residence of OBs in their areas. For instance, about 65.3% of OBs who indicated high levels of satisfaction with their relationships with neighbours had lived for 21 years or more in their houses, while 45.5% of OBs who were dissatisfied had lengths of residence of 10 years or less. Thus, most OBs in the El-Salam area indicated high levels of satisfaction with the relationships and interaction with their neighbours, having lived in their houses for rather longer compared to those in the El-Mukhtar area. For example, an OB from the El-Salam area expressed his attachment to his place of residence as follows:

> "This neighbourhood is part of my residence. I have been living in it for almost thirty years and my neighbours have become part of my extended family. We come together on all occasions, we exchange visits regularly and cooperate and help each other at all times."

However, a link was also discovered between the degree of satisfaction with relations with neighbours and the feelings of security that OB had in their areas. For instance, it was found that about 73.4% of OBs who indicated high levels of satisfaction with relations with neighbours were among those who were also satisfied with levels of security in their areas. It is clear that the longer OBs had lived in their houses, the higher the levels of interaction and the better the relations would have been with their neighbours. In addition, the more secure OBs felt in their areas, the better the relations and interaction are likely to have been with their neighbours.

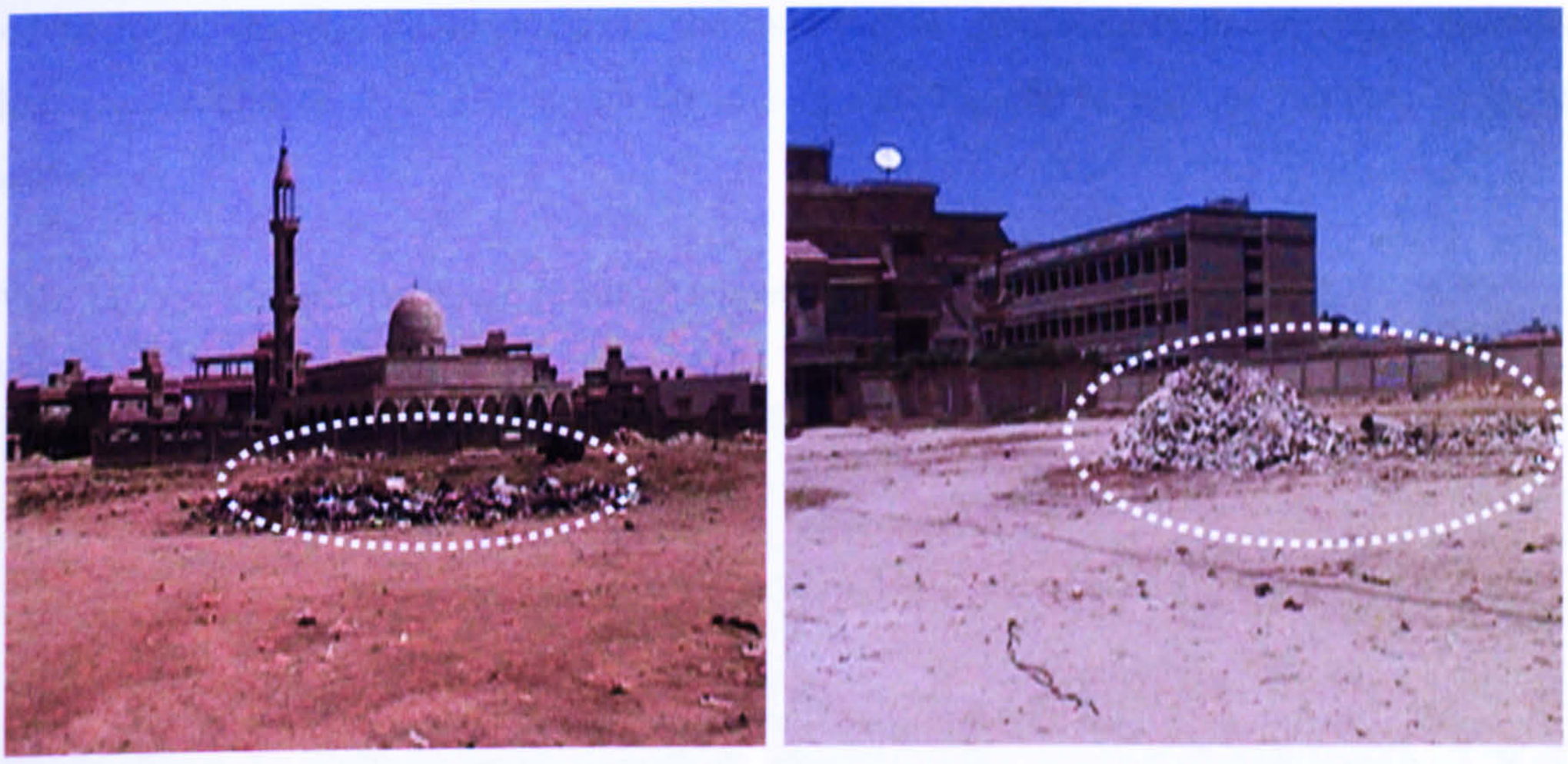
11.3.2.5 Satisfaction with Aesthetics and Cleanliness of the Neighbourhood

The level at which neighbourhood is clean and has a good appearance has an impact on the overall satisfaction of residents. The findings show that only 15.5% of OBs were satisfied with the cleanliness and appearance of their neighbourhoods, 25.7% were neither satisfied nor dissatisfied while 58.8% were dissatisfied. However, the share of OBs who

were dissatisfied in the El-Mukhtar area was larger (83.1%) than in the El-Salam area (33.7%). This can be attributed to the poor condition of open spaces in the El-Mukhtar area which often became dumping grounds for domestic and construction waste. As observation revealed, this waste had a direct effect on aesthetic features as well as on the environmental cleanliness and public health in these areas. For instance, the bad smell and the concentration of insects breading at waste disposal sites in these areas, as Plate 11.13 shows, is an obvious indicator of poor levels of cleanliness and aesthetic features in these neighbourhoods.

Despite the contribution made by residents to enhance the cleanliness and appearance of their areas, particularly close to their own houses, it seems obvious that a lot of work has to be done by the authorities concerned in this respect. The development of proper neighbourhood infrastructure in terms of roads, pedestrian paths, gardens and green areas is seen necessary to be undertaken to enhance the environmental quality in these neighbourhoods, which in turn would lead to more satisfactory residential environments.

Plate 11 - 13: undeveloped open spaces full of construction and domestic waste in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

11.3.2.6 Satisfaction with Availability and Quality of Facilities

As discussed in chapter 8, the extent to which the OB neighbourhoods in the two selected areas were serviced by basic facilities varied. For instance, while most basic facilities were provided in the El-Salam area, OBH neighbourhoods in the El-Mukhtar area in contrast

still lacked most basic facilities. Thus, OBs were asked to state their degree of satisfaction with the availability and quality of facilities in their neighbourhoods. In response, only 23.5% of OBs were found to be satisfied with the quality and availability of facilities in their areas, 13.4% were neither satisfied nor dissatisfied while 63.1% were dissatisfied. However, the share of OBs who were dissatisfied in the El-Mukhtar was larger (91.6%) than in the El-Salam area (33.7%). For example, an OB from the El-Salam area said that:

> "I would say after twenty five years of residence in this area that most services have greatly improved. Most of the roads are now paved and well lit. There are sufficient numbers of mosques and schools. Yet, the main problem is the sewage system. Actually I am fed up with emptying the septic tank every fortnight which costs me LD30 every time. Look at the roads becoming flooded with sewage, making our lives hell."

Such high levels of dissatisfaction reported by OBs, particularly in the El-Mukhtar area illustrate clearly the influence of the lack and poor quality of facilities provided on the overall satisfaction of residents (Plate 11.14). In addition, such high levels of dissatisfaction with facilities in the El-Mukhtar area can be seen as one of the reasons that led many potential OBs to postpone the building of their houses or, in some cases as discussed in chapter 9, to give up on the idea of building and instead selling their plots at low prices.

Plate 11 - 14: Mosque (left) and primary school (right) under construction in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

11.3.2.7 Satisfaction with Road Networks and Public Transport Conditions

Observation revealed that the condition of road networks in the two selected areas varied. In the El-Salam area, for instance, most of the main and collector roads were paved and in good condition while those in the El-Mukhtar area were largely unpaved and barely accessible. Observation during the fieldwork revealed that no public transport served the OBH neighbourhoods, except for irregular services along the main roads surrounding the two selected areas. Thus, most residents relied to a large extent on their own cars or on privately-owned mini-buses, which were generally in poor condition, for travelling from and to their areas. Thus, it was not surprising that 62.1% of OBs were dissatisfied with the condition of roads or public transport. However, the share of OBs who were dissatisfied in the El-Mukhtar area was far larger (89.5%) than in the El-Salam area (33.7%). As observation revealed, the level of infrastructure in the El-Mukhtar area was quite poor. Most roads and streets, as Plate 11.15 illustrates, were unpaved with no lighting.

Plate 11 - 15: unpaved collector road (left) and partially main road (right) in El-Mukhtar Area



Source: Fieldwork, Benghazi (Feb-May) 2003

11.3.2.8 Main Features Liked or Disliked in the Neighbourhood

After exploring the overall satisfaction with their neighbourhoods, the OBs were asked to mention what features were most liked or disliked in their neighbourhoods. In response, 77.5% of OBs mentioned that their relationships with their neighbours were the most liked feature in their neighbourhood. This was followed by the location of their areas within the

city (65.2%) while the third most-liked feature was the quality and quantity of water (43.4%).

However, the shares of OBs in the El-Salam area who mentioned the aforementioned attributes as the most liked features in neighbourhood was larger than in the El-Mukhtar area. For instance, while 95.7% of OBs in the El-Salam area mentioned their relation with neighbours as the most liked feature, only 60% of OBs in the El-Mukhtar area mentioned this. In this respect, an OB from the El-Salam area described his strong and close relationships with his neighbours:

> "I have been living in this area, so far, for more than 20 years. I knew some of my neighbours even before most of my children were born, and during this period we developed very strong relationships. They always looked after my children when I was away treating them exactly like their own. Actually I consider them as part of my family."

Added to this, while 70.7% of OBs in the El-Salam area mentioned that the quantity and quality of drinking water was one of most liked features in the neighbourhood, only 16.9% of OBs in the El-Mukhtar area mentioned this.

On the other hand, the condition of the sewage system was the most disliked feature of neighbourhoods, being mentioned by 83.4% of OBs. The second most disliked feature was the condition of playground areas, mentioned by 54% of OBs, followed by the condition of roads and public transport (48.7%). However, the aforementioned disliked features of the neighbourhoods were mentioned by more OBs in the El-Mukhtar area. For instance, while 84.2% of OBs in the El-Mukhtar area mentioned that condition of playground areas and open spaces as the most disliked feature in the neighbourhood, in the El-Salam area only 22.8% mentioned this. Added to this, the share of OBs who revealed that the condition of roads and public transport as the most disliked feature in their neighbourhoods was much larger in the El-Mukhtar area (73.7%) than in the El-Salam area (22.8%). In this respect, an OB from the El-Mukhtar area, describing the poor conditions in his neighbourhood, said that:

> "This is the real problem. I have been living in this place so far for more than ten years. Still no paved roads or power supplies have ever existed, let alone sewage systems, public parks and children's playgrounds. Only two years ago a primary

> school was established. In the past I used to take my children to school far from my home. This neighbourhood needs a lot of services and utilities to be established, but nobody cares."

It is obvious from the above findings that the poor condition of infrastructure, such as roads, sewage disposal and the condition of open spaces, constitutes the most disliked features in OBH neighbourhoods, particularly in the El-Mukhtar area. This clarifies the high level of dissatisfaction reported by OBs in relation to the physical and environmental quality of their areas.

11.3.2.9 Comparing the Present with the Previous Area

As discussed in chapter 8, motives relating to the condition of the previous place of residence had little impact on respondents' decisions to move. However, when OBs were asked how they rated their current neighbourhoods compared to the previous places of residence, 11.2% indicated that it was better; 47.6% mentioned that it was as good, while 40.6% regarded it as worse than the previous place of residence. In this respect, the share of OBs who regarded their current neighbourhood as worse in the El-Mukhtar area was larger (65.3%) than in the El-Salam area (15.2%). This finding is further evidence regarding the poor environmental and infrastructure conditions in the OBH neighbourhoods in the El-Mukhtar area.

11.3.2.10 Encouraging Others to Move and Live in the Present Area

After exploring the degree of satisfaction with the neighbourhood and how the current neighbourhood compared with the previous place of residence, OBs were asked if they would encourage a friend or relative to move and live in their current areas. In response, only 10.7% would definitely do so, 59.4% said perhaps, while 29.9% said they would never encourage a friend or relative to live in their neighbourhood.

The share of OBs in the El-Mukhtar area who would never encourage a friend or relative to live in their areas was notably larger (47.4%) than in the El-Salam area (12%). In contrast, while none in the El-Mukhtar area would definitely encourage others to move there, 21.7% the El-Salam area would do so. When one OB from the El-Mukhtar was asked during an open-ended interview if he would prefer to move to another area said that:

"Actually I have considered moving to another area but the problem was that I could not manage to get a house that would match the size and condition of my current house in a better place at a price similar to the value of my house. In those secure and well-serviced places, houses are very expensive. Another problem is that I feel emotionally linked to my house. It is a house that represents all my sufferings with my family to make it a reality. It is the house in which my children grew up."

Another OB from the El-Mukhtar area said that:

"In fact it was not my choice to live here, but it was rather my circumstances that forced me to buy land in this place, as it was relatively cheap and suited my financial capabilities at the time. But recently I have noticed the huge discrepancy between my house and the neighbourhood. I live in a state of the art house at the centre of a neighbourhood that lacks the basic requirements of life such as sewage system, roads and basic services. I wake up every day at six o'clock in the morning to take my children to their schools which are 20 minutes drive from our home."

The above findings are seen as another indicator of how unsatisfactory the neighbourhood conditions in the El-Mukhtar area are for most of its residents.

11.3.2.11 Preferred Type of Domicile to Live in

As discussed in chapter 2, the mismatch between the current housing situation and that desired housing needs creates stress or dissatisfaction with the current housing, which in turn might lead the household to move if they could not adjust their housing conditions. As the above discussion shows, the degree of satisfaction that OBs indicated towards their neighbourhoods tends to be far lower than that reported towards their own houses. Thus, OBs were asked what type of domicile in the city they would prefer to live in. In response, about 54.5% of OBs would prefer the suburbs of the city, 34.8% the city centre, while 10.7% would prefer to live in a village or town on condition that all facilities were provided.

The findings show that, the share of OBs in the El-Mukhtar area who would prefer to live in suburbs was smaller (45.3%) than in the El-Salam area (64.1%). This can be attributed

to the experience that OBs in the El-Mukhtar area had in living in the suburbs of Benghazi which lack basic infrastructure and many facilities. It is also clear that the share of OBs who would prefer to live in a village or town with all basic infrastructure and facilities was quite small. This can be attributed to the fact that the great majority of OBs had never lived in a village or town. Most of them had previously lived in another area of Benghazi or in another city.

11.3.2.12 Features Desired in the Present Area

It was obvious that most OBH neighbourhoods, particularly in the El-Mukhtar area were still lacking many basic amenities, which in turn led to the high levels of dissatisfaction indicated by respondents. Thus, OBs were asked to mention the main features that they would like to have in their neighbourhoods. In response, 48.7% would prefer to have a proper sewage system, 21.4% would like to have paved roads and pedestrian paths, 12.3% would like to have well equipped playground areas for their children, and 11.8% would like to have gardens and green areas.

However, considerable differences were noticed between the two selected areas with regard to the main feature that OBs would like to have in their areas. For instance, while a proper sewage network was ranked as the most important desired feature by OBs in the El-Salam area (68.5%); in the El-Mukhtar area this was ranked second (29.5%). The high proportion of OBs in the El-Salam area who mentioned the sewage network as the main desired feature compared to the El-Mukhtar area can be attributed to the bad condition of sewage disposal in the El-Salam area due to the excessive use of septic tanks over periods of more than twenty years of residence. In contrast, while paved roads and pedestrian paths ranked as the main feature (42.1%) mentioned by OBs in the El-Mukhtar area, none in El-Salam area mentioned this. This can be attributed to the reasonable condition of the road network in the El-Salam area compared to its underdeveloped state in the El-Mukhtar area.

For example, when an OB from the El-Salam area was asked what action should be taken by the authorities concerned to enhance and improve the quality of life in his area, he answered:

> "I hope that they pay more attention to public open spaces and playgrounds. In our area, there is no public park which can be used by elderly and retired people like

me especially in the summer time. Likewise the children do not have any proper and well equipped places to play. They usually use the roads as a playground, which is unsafe as many have been hit by cars. I wish they would pay attention to sewage system, which has become a major problem closely associated with contagious diseases. Drinking water is another problem which is yet to be sorted out, especially during the summer time. I hope that this problem will be solved in the near future so that we don't have to bring water from far away every day."

It is clear that the main features that OBs would like to have in their areas are mainly related to infrastructure rather than to facilities such as schools, shops or health clinics which are also inadequate, particularly in the El-Mukhtar area. This might be due to the negative environmental impact that the lack of proper infrastructure such as sewage and roads might have on general public health and the wellbeing of residents in these areas.

11.4 Conclusion

This chapter has been mainly concerned with exploring how OBs adapted their own constructed houses and to what extent they were satisfied with the resulting environment at the home and neighbourhood levels. The analysis shows that abut two-thirds of OBs had already carried out some changes to their houses while the remaining one-third who had not carry out any changes due to financial and permission constraints would be willing to make changes if they were enabled to do so.

Most of the changes made were unauthorised and mainly in form of adding space or altering existing space. In terms of adding space, some OBs built another floor, or rooms or shops in setbacks mainly to accommodate larger sizes of households or to generate more income. Regarding changes made by altering space, such as subdividing or converting the use of rooms, adding balconies inside or raising fences, OBs were looking for more privacy and security. In addition, the analysis shows that most of these changes were made ten years after moving into the house, and most of the OBs were satisfied with them.

The analysis has also revealed that most houses have undergone some sort of maintenance on three or more occasions particularly in the El-Salam area due to the long duration of residence that such OBs had in their houses. In this respect, it was shown that OBs in the El-Salam area conducted maintenance earlier than those in the El-Mukhtar area. The main

type of maintenance was repainting or re-plastering the exterior of houses. The cost of maintenance made by OBs in the El-Salam area was much higher than that in the El-Mukhtar area. Such high costs of maintenance made by OBs in the El-Salam area can be attributed to the frequency of maintenance as well as its type such as exterior plastering or plumbing work.

Regarding the overall satisfaction with the resulting environment, the analysis shows that the great majority of OBs were satisfied with the type and size of their houses, especially those who had previously lived in flats, or terraced or semi-detached houses. In terms of satisfaction with privacy, OBs in the El-Salam area were found to be less satisfied with privacy than those in the El-Mukhtar area, mainly due to differences in household composition with more females. The main feature that OBs were dissatisfied with in the house was the exterior finishing, mainly because most houses had unfinished facades. In general, most OBs regarded their current houses as better than the previous one, and they mentioned detached dwellings as their most preferred type of housing.

In contrast, the great majority of OBs, particularly in the El-Mukhtar area indicated high levels of dissatisfaction with their areas. Such high levels of dissatisfaction were mainly concerned with the poor condition of infrastructure and inadequate facilities and services in their areas as well as low levels of security experienced. In this respect, observation revealed that most OBs, particularly in the El-Mukhtar area had taken preventative measures to protect their houses from burglary attempts. However, the most satisfactory feature in neighbourhood was the relationships and interaction with neighbours, mainly in the El-Salam area. In addition, the under-developed sewage system and road network were the features of most disliked by OBs in both areas. Thus, most OBs, particularly in the El-Mukhtar area, indicated a very low possibility of encouraging a relative or friend to move into their areas.

Despite such high levels of dissatisfaction mentioned by OBs, about half of them preferred to live in the suburbs of the city because these were the only zones in the city that could accommodate detached dwellings which were regarded as the most preferred type of housing. Moreover, the general feelings of dissatisfaction with neighbourhoods were expressed in answers regarding the features most desired for their areas, such as the sewage system, paved road networks, and well equipped playground areas and open spaces.

Chapter Twelve:

Overall Discussion, Conclusion and Recommendations

Chapter Twelve

Overall Discussion, Conclusions & Recommendations

12.1 Introduction

This final chapter highlights, discusses and synthesises the emergent evidence and key findings of the previous chapters in order to answer the research questions. It also identifies some of the study's implications and suggests recommendations to make OBH more responsive to its beneficiaries' needs. Accordingly, the chapter is structured into four main sections. The first section summarises and reviews the study. The second section synthesises and brings together the key findings from the exploration of the socio-demographic and housing characteristics of those benefiting from OBH, how owner-builders got access to building resources, how they managed the construction work and adapted their houses. In the third section, concluding remarks are made regarding the main advantages and problems associated with the implementation of OBH. In addition, policy recommendations to enhance the performance of OBH and to make it more responsive to people's needs are provided. Finally, emerging issues for further research and the study's contribution to knowledge are highlighted.

12.2 Macro to Micro Analytical Approach

As discussed in the methodology chapter, the multidimensional and complex nature of the issues under investigation in this study required an analytical framework capable of clarifying the variables and factors that have to be considered in such a holistic investigation of the development of OBH in Libya over the past three decades. A macro-to-micro analytical approach was adopted due to the assumption that without such approach the collection, analysis and interpretation of data in this investigation would have been hollow and confused. The discussion in chapter 2 revealed a wide diversity of interpretations resulted from scholars' debate around the housing processes in which the end user is involved in planning, design and construction (i.e. self-help housing or owner-built housing). This required that any analysis of such housing processes must embrace an awareness of the context in which they operate and the motives underlying the methods

used, in order that valid interpretations of the process and its outcomes can be made. Thus, it was required that the analytical framework adopted for the investigation in this study should explore the development of OBH in Libya and the extent to which OBs have succeeded in building their own houses (micro level) given the socio-economic changes and trends that housing policy has undergone during the period covered by the study (macro level). The analytical framework has to link the macro and micro levels of analysis in exploring and assessing the development of OBH and in understanding and analysing the practices, attitudes and preferences of the beneficiaries of OBH. It was believed that the use of such a systematic research design, where multiple and complementary research tools are employed, is essential to ensure the credibility, reliability and validity of the analysis.

The introductory chapter of this thesis introduced the study's purposes in assessing the implementation of OBH in Libya over the past three decades and exploring the extent to which the OBH process is adaptable and responsive to the changing housing needs of Libyan families. To achieve this purpose, the following three main indicators were utilized.

- The first indicator was concerned with measuring how accessible and sufficient building resources were to OBs.
- The second indicator was related to the management and control of house construction, examining the methods OBs adopted in overseeing the construction phase.
- Finally the third indicator was concerned with assessing the adaptability of and satisfaction with the resulting OBH environment.

It was assumed that, the study's prime aim couldn't be fully achieved without understanding the practices, assessments, attitudes and preferences of beneficiaries (OBs) in relation to these three indicators. In addition, exploring the points of view of other stakeholders involved in the implementation OBH over the past three decades regarding these indicators were also seen as necessary to achieve the study's aim.

12.3 A Synthesis of Study Findings

The use of a systematic research design employing multiple and complementary research tools enabled the researcher to gain a richer picture regarding the main factors contributing to the development of OBH. The synthesis of study's key findings is presented in three main sections, starts by highlighting the impact of housing policy on the housing conditions in the country. In the second section, it highlights the policy impact on contribution of OBH to housing provision during the post-revolution era. In the third section, the policy impact on the nature of OBH processes, and to the ability of OBs to build and adapt their own houses in Benghazi city is discussed.

12.3.1 Impact of Policy on Housing Conditions: A Macro Perspective

The substantial changes in housing policy in Libya since the discovery of oil in the late 1950s, and particularly over the past three decades (post-revolution era) have significantly affected the performance of the housing sector and housing conditions across the country both quantitatively and qualitatively. In this respect, two distinctive stages were identified during which the state played completely different roles in housing.

12.3.1.1 Provider and Active Enabler Role 1970-84

During the period 1970-84 the state playing the simultaneous roles of provider and active enabler in housing and succeeded in overcoming many housing problems it inherited (i.e. substandard dwellings, overcrowding, shanty towns) and in fulfilling its commitment to provide adequate housing for every Libyan family regardless of income or ability to pay. The implementation of this policy was used by the state as a wealth distribution mechanism to maintain social stability and to improve living standards in the country, but depended on the availability of oil revenues and a stable and well-organised institutional and regulatory framework for the housing sector during the 70s. The availability of funds from oil revenues during the early 1970s enabled the state to fund about 95% of dwellings built during 1970-75.

As a result, remarkable improvements in housing conditions become apparent quantitatively and qualitatively across the country. For instance, the problem of housing overcrowding that had characterized the housing scene during the pre-revolution era began

to disappear, and the rate of occupancy had declined to 1.14 families per house by 1984 from 8.6 families per house in 1964. It was obvious that the main beneficiaries of this policy were low-income households through benefiting from publicly-built dwellings provided free or with subsidy of 90% of the cost, or from issuing building loans at easy terms to many low and middle-income families to build their own houses.

Despite what was achieved in the housing sector during the 1970s and early 80s, certain problems were encountered during this period. Some subsidy programmes were misused by beneficiaries, such as those related to exemption from paying instalments of building loans or concerning the payment of rent for publicly-provided dwellings. In addition, a notable deterioration was observed in many publicly-provided housing schemes due to lack of regular maintenance.

12.3.1.2 Passive Enabler Role 1985 onwards

The dependency on oil revenues to fund housing projects left the performance of the housing sector vulnerable from the mid 1980s onwards. This was clear from the long delays and frequent suspensions that many housing projects suffered due to notable shrinkages in budgetary allocations to the housing sector following the sharp drops in global oil prices in the mid 1980s. As discussed in chapter 5, this situation urged the state to adopt a new strategy capable of coping with such economic changes but still to achieve its targets in providing adequate housing for all Libyans. In this new strategy, the state attempted to play the role of enabler, encouraging the private sector (individuals and groups) to become real partners in housing provision. However, the housing needs of low income families were still to be met by the government through publicly-provided housing projects (General Planning Council, 2002a).

The Act (9) of 1991 concerned with investment by the private sector, attempted to encourage it to play an effective role in housing provision. However, it was clear that the passive enabler role played by the state during this period negatively influenced the performance of the housing sector. This evident in the enormous financial and managerial constraints faced in the implementation of many housing projects. Financially, for instance, the dependency on fluctuating oil revenues led to a notable reduction in the size of state budgetary allocations to the housing sector. Administratively, the abolishment, the merger,

or split that the housing ministry and its departments witnessed during the 1980s and 1990s resulted in long delays in the implementation of many housing programmes. Furthermore, shortages and high prices of land, increases in the prices of building materials and the reliance on foreign labour in housing construction led to sharp increases in construction costs. The annual growth rate of housing supply thus declined to 1.9 per cent during the period 1982-1995, while the annual growth rate of demand increased to 2.9 per cent during the same period.

The resulting housing deficit from the 'passive enabler' role had social consequences. For instance, many recently married couples were forced to stay at their parents' homes due to the unaffordability of independent housing. The consequent overcrowding in turn led to complicated social problems, such as notable increases in divorce rates due to disputes in extended families living in the same houses. In addition, the average age of first time marriage increased to 31.3 years for males and 28.22 years for females in 1995, compared to 27.55 and 23.2 years respectively in 1984 (NCID, 1999:97).

12.3.2 Impact of Policy on the Contribution of OBH to Housing Provision

Owner-built Housing (OBH) has been the main supplier of housing over the past three decades, contributing two-thirds of the total dwellings built during the period 1970-1992. Despite its predominance in the housing supply, the contribution of OBH activity to housing provision has been strongly influenced by trends in housing policy adopted during the past three decades.

Accessibility of Building Resources and the Role of Housing Cooperatives (1970-84)

During the 1970s, the easy access that many OBs enjoyed to subsidized housing plots, low or interest-free building loans and subsidized building materials contributed to a remarkable expansion of OBH activity responsible for the construction of 63.6% of the total dwellings built during the period 1970-80. The proper management and allocation of publicly-owned land within urban areas, in addition to price control and simplified payment terms made land accessible and more affordable to low and middle income OBs during this period. The annual rate of building loans issued during the period 1970-1973 was almost twelve times those issued during the period 1964-1969. This rate increased further during 1973-1975 to almost six times more than those issued during 1970-1973.

The role that housing cooperatives played in expanding OBH activity was clear, enabling members to build their houses through easy access to land, loans and subsidized materials during the 1970s.

High Construction Cost and Poor Management of Resources 1985 onwards

By the mid-1980s, the state's tremendous support of OBH activity during the 1970s had begun to decline in line with the sharp drop in global oil prices in the early 1980s. The state attempted to play the role of enabler in housing to cope with the serious economic conditions, but their poor management made the accessibility, availability and affordability of building resources a real problem faced by OBs commencing the construction of their houses during this period, particularly those among the low and middle income strata of society. The contribution of OBH to housing provision therefore declined from 59.7% during 1988-92 to 33.7% of houses built during 1993-96. Despite variations in OBH activity over the past three decades, however, it has remained the main supplier of housing needs in Libya during this period (see chapter 5).

12.3.3 Impact of Policy on the OBH Process: Micro Perspective

The changes in housing policy in Libya in the post-revolution era have inevitably influenced the OBH process over this period. This section links and discusses the sequences and influence of policy change (macro level) on the nature of OBH process, and on the early mentioned three indicators regarding the accessibility and sufficiency of building resources, management of house construction and the adaptability of and satisfactory with the resulting OBH environment in Benghazi (micro level). For this purpose, comparisons are made between the study key findings gathered from selected neighbourhoods in El-Salam area which reflects the development of OBH during the period (1970-1984) and those in El-Mukhtar area which reflects the development of OBH during the period (1985-present).

The Owner-builder in Benghazi: Eligibility and Motives for OBH

Owner-builders (OBs) across the total sample were almost all males and heads of their households. About two-thirds (60.5%) were able to commence the construction of their own houses when aged between 31 to 40 years while only one-seventh (14.4 %) commenced the construction at age of 30 years or less. The share aged 30 yrs or less during

the 1970s was larger (18.5%) than during the late 1980s and 1990s (10.5%). The great majority of OBs were found eligible for OBH since they were not owners of their previous houses (either tenants or living at the parental home). The lack of affordable alternatives was the main motive that OBs in Benghazi had to go for building (OBH) rather than buying or renting a ready-built house to satisfy their housing needs.

12.3.3.1 Accessibility and Sufficiency of Building Resources

The main building resources for house construction are land, finance, materials and labour as well as the official permits and approvals required. For the process to be managed properly, as discussed in chapter 2, these resources must be synchronised and monitored to ensure that sufficient quantities of the appropriate quality arrive at the specified place at the required time. In Benghazi, although the great majority of OBs were eligible for access to OBH, their ability to get easy access to sufficient and affordable building resources was largely influenced by trends in the institutional, financial and regulatory frameworks concerned with the allocation and supply of these resources over the past three decades.

1 Factors Influencing the Supply & Allocation of Land

The OBs in Benghazi obtained their housing plots by applying to publicly-owned land allocation programmes from municipalities and housing cooperatives, or through purchase from private owners (the original allottees). The easier access to land through municipalities or housing cooperatives during the 1970s was clearly reflected by the short time that the majority of OBs had to wait to get their plots (4 years or less). In contrast, more than half of those who commenced the construction of their houses during the 1980s and 90s had to wait a rather longer time (13 years or more) to get plots.

The inadequate supply of land in Benghazi during the late 1980s and 90s was not caused by a scarcity of residential land available within the master plan of the city, but was due to delays in the official approval of many new residential subdivisions resulting from lack of coordination among governmental agencies and contradictions between different regulations concerned with land management, planning and subdivision during this period. In general, land allocation mechanisms were extremely unstable during this period. Transferring the rights to allocate publicly-owned land from municipalities to 'Local

People's Committee' (LPCOM) in early 1990s meant that many applicants for plots lost their priority in waiting lists, since they were asked to withdraw their applications from the municipalities and apply again to their LPCOM. Where OBs purchased the plots on which their houses were built, cheap prices of land were the main criterion for the choice of plots. Cheaper plots were located in neighbourhoods which lacked most public utilities and services.

2 Factors Influencing Access to Finance

In Benghazi, building loans and personal and family savings have been the main sources used by OBs in funding house construction. However, accessibility to sufficient building loans was easier for OBs during the 1970s than during the late 1980s and 90s. This was clearly reflected in the short time (one year or less) that the majority of OBs during the 1970s had to wait to get their loans compared to a period of 2 years or more that for the great majority of OBs during the late 1980s and 90s. The complex eligibility criteria applied by many building loan lenders during the late 1980s and 90s are seen as the main reason for the difficulty that many prospective Libyan OBs faced in getting building loans during this period. For instance, the criteria of a regular income disqualified many of the self-employed while for many qualified low-income applicants, the sizes of loan were often insufficient because they were calculated based on monthly total net income rather than on the estimated costs of construction.

As clarified by the empirical and statistical evidence of the study, the level of affordability of house construction during the 1970s in Benghazi can be mainly attributed to the ability of building loans to cover the low costs of construction which were often less than LD100 per m^2. In contrast, building loans during the late 1980s and 90s failed to cover the high costs of materials and labour of about LD350 per m^2. This meant that personal and family savings were the main sources of funds for house construction during this period. These savings were mainly earned either through the regular or occasional business of OBs or through wind-fall gains obtained from business enterprises operated by unmarried sons and daughters.

3 Factors Influencing Access to Labour

Shortages of domestic construction workers in a country with limited human resources such as Libya led to a reliance on foreign workers as the only way to meet the increased and intensive demand for construction labour. Over the past three decades, non-Libyan

informal master builders often originated in neighbouring countries (such as Egypt, Sudan, Syria, and Tunisia) and were the predominant type of labour employed by OBs in house construction in Benghazi. Added to this, informal individual artisans and craftsmen in different specialized building trades such as walling, roofing, plastering, plumbing and other construction tasks were also employed by some OBs in house construction.

Semi-structured interviews conducted with master builders in Benghazi showed that they often had no formal vocational training in the field of construction, and they tended to practise their work on a small scale with a high degree of informality depending on personal trust rather than formal contractual relations. However, while no skilled family members were found to be involved in the actual construction work, some OBs during the 1980s and 90s contributed their own unpaid labour in order reduce labour costs for example in loading and supplying materials or organizing and tidy up the construction site. The employment of un-qualified builders for private house construction by OBs is also common in many Arabic countries such as Jordan, Kuwait and Saudi Arabia which have experienced expansion in OBH activities during the past three decades (Al-Saati, 1989a, Sims, 1990, Koushki et al., 2005, Mubarak, 2004).

In most cases, personal contacts at construction sites dominated the selection of hired builders. The main criterion adopted by most OBs during the 1970s in selecting hired builders was a good reputation, while construction cost was the principal criterion by which the hired builder was selected by most of OBs during the 80s and 90s. This tendency to select a hired builder based on cost can be attributed to high labour costs experienced during this period.

4 Factors Influencing Access to Building Materials

The inadequate access to affordable building materials, as mentioned in chapter 5 and 6, is seen in addition to the cost of land as one of the principal constraints facing the poor in developing countries to provide housing for their families. In Libya, the accessibility and availability of building materials in the 1970s and early 1980s was to a large extent influenced by the subsidies devoted by the state to locally-produced or imported building materials. Added to this, fitting and finishing materials imported by private traders were cheap due to the strong value of the Libyan currency at the early 1970s. Furthermore, housing cooperatives were used by the government as an efficient instrument for

expanding OBH activity during the 1970s, and these also played a major role in ensuring easy access to subsidized and affordable materials.

During the late 1980s and 90s, expensive locally produced and imported materials was one of the main problems facing OBs during this period. Imported materials were mainly provided by private suppliers at high prices due to the government restrictions on imported goods and the low value of the Libyan currency. Locally-produced materials were also expensive due to the decline in their production and inefficient controls over their supply. For example, building permits were abused to get cement and steel from publicly-owned supply channels not for use in construction but to be sold on the black market at higher prices. This prevented many serious and needy OBs from getting what they needed from materials on time required.

Added to the aforementioned building resources, it was also obvious that the great majority of OBs during the late 1980s and 1990s encountered problems in getting the official permits to commence the construction of their houses. This was quite obvious from the fact that OBs during 1970s were able to receive their building permits much earlier compared to those during the 1980s and 90s. The latter encountered more difficulties in collecting the required documents for their permits. For instance, the lengthy process of acquiring the 'Title Deed Certificate'[1] for plots was due to the bureaucratic practices of land registration. This difficulty led many OBs to hire registered lawyers to deal with the legal procedures to get the title certificate. Added to this, many OBs had to wait longer to get building permits because of amendments that they were asked to make to the submitted house designs so as to conform to the relevant building regulations. This tended to happen when the designer, as will be discussed later, was trying to satisfy his client's needs, wishes and desires rather than sticking to the letter of the building regulations.

It is clearly demonstrated that building resources were accessible, affordable and sufficient for OBs who commenced the construction of their houses during the 1970s. In contrast, long waiting periods for resources (land, building permits, loans, and materials) as well the inadequacy of loans in covering the increased costs of construction were experienced by the majority of OBs during the late 1980s and 90s. The next section synthesises the study finding with regard to the management of OBH process.

[1] This certificate confirms that the specified plot is owned by the named person and he is authorised to build on it according to the approved building codes specified for the area where the plot is located.

12.3.3.2 Management of OBH Process

The study findings showed that the nature of construction and consolidation of owner-built houses was self-managed rather than self-built by OBs who had no background or previous experience in construction but who acted as general managers of the construction tasks. The progress of such self-managed OBH process was largely influenced by the availability and affordability of building resources. While most OBs were able to build their own houses in one go during the 1970s, those who commenced the construction of their own houses during the late 1980s and 90s built them incrementally, with frequent delays and suspensions experienced during the construction phase. The incremental nature of house construction during the late 1980s and 90s was mainly due to the inadequacy of resources such as finance, materials and labour. Added to this, frequent maintenance, alterations and extensions were accomplished by OBs over time during post-occupation phase in order to improve the quality of the houses and to satisfy their changing needs.

Although house construction and consolidation work were often carried out by different informal[2] builders (master-builder, artisans and casual workers) hired by the OBs, the OBH process and the resulted dwelling themselves can be considered formal, modern and standardised since all houses were built after getting the required approval and building permits. The formality of the OBH process resulted from the use of formal building resources such as housing plots within approved subdivisions (allocated by the municipality or purchased from original owners) and the use of standard and modern building materials supplied through the formal building sector. Added to this, the resulting owner-built dwellings were officially registered with the Real-estate Registration Office (RERO) and so were recognized and counted in the official housing censuses carried out by the state every ten years.

As discussed in chapter 2, adopting appropriate delivery and management methods is a key step in any project strategy. As Al Khalil (2002) argue, numerous factors concerning the project's characteristics and the owner's needs and preferences may complicate the project owner's decisions in selecting management methods. In this respect, the management of OBH process is mainly influenced by the way the house design was made, type and form

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[2] Informality here means that government regulations concerned with practising the activities of construction are not applied, such as those related to registration, holding business licences, paying taxes, or ensuring the safety and health of workers.

of arrangement adopted with hired builders as well as the status of supervision during construction phase. The OBs in Benghazi were to some extent able to manage the construction process of their houses, but the methods adopted were to a large extent influenced by the availability of credit and the cost of construction materials and labour.

1 Factors influencing House Design

The quality of house construction is directly related to the quality of the design, particularly in relation to the extent to which the features of the final product conform to the client's needs. As discussed in chapter 2, the poor designer-client communication often results in inappropriate designs causing changes during construction; contributing to delays and increases in construction costs. In Benghazi, although professional designers (architects) were employed by OBs to design the houses, various factors influenced the design. Household size and composition were the main factors during the 1970s, whereas for those who commenced the construction of their houses during the late 1980s and 90s, house design was largely influenced by financial factors, such as high construction costs and restrictive building loan requirements. For example, one of the latter was the down payment that the prospective OB had to make if there was a difference between the estimated cost of construction and the maximum amount of the loan that he was eligible for based on his monthly income. Most OBs with low incomes during the late 1980s and 1990s therefore they had to design their houses according to the building loan requirements rather than their socio-cultural needs, in order to reduce this down payment as less as possible.

2 Factors influencing Type of arrangement made with hired builders

During the 1970s, the low cost of construction materials and labour and the accessibility and sufficiency of building loans in covering the total construction costs led many OBs to adopt written agreements based on a turnkey arrangement with hired master-builder. Here, the hired builder was responsible for carrying out all construction work including the supply of materials. In contrast, the predominance of verbal agreements and piecemeal arrangement during the late 1980s and 90s where the hired builder was responsible for undertaking some of the construction works such as concrete skeleton, walling, plastering, flooring and/or plumbing was largely influenced by high construction costs. The main reason for not contracting out the whole construction work for most OBs built their own houses during the late 1980s and 90s was related to their aim to reduce the total

construction costs or to fit spending to an irregular budget. Verbal agreements between OBs and hired builders are also commonplace in other countries which have experienced significant OBH during the past three decades, such as Saudi Arabia and Jordan (Al-Saati, 1989a, Sims, 1990).

The impact of the type of arrangement adopted in managing the construction work is clearly reflected in the number and type of disputes occurring between OBs and hired builders. More disputes were reported between OBs and hired builders who used verbal agreements, and these often concerned the irregular attendance of the hired builder at the construction site. This was often attributed to his involvement in several projects at the same time, a situation also often experienced in OBH projects in Saudi Arabia during the 1980s (Al-Saati, 1989a).

3 Factors influencing Inspection and Supervision of Construction Work

Only irregular inspections were made of the progress of construction works in the case of OBs dependent on their own resources in funding the work. However, regular inspections were made when the OB was a recipient of a building loan, because this was a condition of the payment of the loan. About half of the OBs occasionally hired professionals to supervise the construction work, but the status of supervision was largely influenced by the type of arrangement made with the hired builder. In the case of turn-key arrangements, for instance, construction work was rarely supervised, whereas regular or occasional supervision took place when other arrangements were made with hired builders. A lack of inspection and supervision undertaken by local authorities or the OBs themselves of construction work involving unskilled builders has also been experienced in other countries such as Saudi Arabia (Al-Saati, 1989a).

The lack of regular inspection and supervision was clearly reflected in the scale and type of construction work that had to be redone by the hired builder, such as plastering, painting, plumbing, and electrical works. In contrast, OBs who regularly supervised construction work during the construction phase never mentioned work needing to be redone. This impact of the lack of supervision during house construction has also been reported in many countries in which the OBH activity has played a major role in housing provision, such as Saudi Arabia and Kuwait (Al-Saati, 1989a, Koushki et al., 2005).

4 Factors influencing the Completion of House Construction

The proportion of OBs who moved into their constructed houses after the interior and exterior finishing was completed during the 1970s was far larger than during the late 1980s and 90s. The ability of OBs to finish the entire construction of their houses prior to moving in was largely influenced by the adequacy of funds in covering costs. For instance, the sufficiency of building loans issued during the 1970s in covering the total construction costs made about two-thirds of OBs able to move into their houses after full completion. In contrast, none of the OBs who built their houses during the late 80s and 90s and who were dependent on building loans were able to move into their houses after total completion due to the high cost of finishing materials, the great majority of which were imported.

It was clear that the way OBs adopted to manage the construction of their own houses was largely influenced by the accessibility and affordability of building resources. In general, disputes with hired builders and lack of funds, frequent suspensions were the main problems encountered during the construction process particularly among those who built their houses during the late 1980s and 90s. It is evident that although all OBs commenced the construction of their houses without any background in construction, the majority (72.2%) of them were involved in managing this process by providing and utilizing resources and overseeing the construction work, while the remaining OBs left all construction work to be managed by the hired builder based on the turnkey arrangement adopted with him. Although the management of house construction was seen as a stressful task by those who did not adopt turnkey arrangements with hired builders, it was revealed that the great majority of OBs would prefer to build their own houses again if they were given another chance to select a family house. This is mainly due to their opinion that building the house would be the most affordable method to acquire the desired home. The next section synthesises the study findings with regard to the adaptability of and satisfaction with the resulting OBH environment.

12.3.3.3 Adaptability of and Satisfaction with the Resulting OBH Environment

Enabling people to have complete control over the planning, design and construction of their houses, as discussed in chapter 2, is likely to result in adaptable and satisfactory residential environments and enhancing people's well-being. The main factors influencing

the adaptability of and satisfaction with the resulting OBH in Benghazi are discussed below.

1 Factors influencing Adaptability

As discussed in chapter 2, the more the OB is able to modify his housing environment to accommodate and satisfy his household's changing needs, the more suitable the resulting environment is likely to be considered.

Transformations Made to the Constructed House

Owner-built dwellings in Benghazi were relatively adaptable and were able to accommodate the various different types of extensions and alterations which made by about two-thirds of the OBs. These transformations were initiated for two main reasons. The first was related to socio-cultural factors, such as the need for more space to accommodate natural increases in household size by adding rooms or floors (storeys) or changes in lifestyle by converting bedrooms into ladies' reception rooms. OBs made other changes to fulfil unsatisfied social needs, such as privacy by incorporating balconies or security by raising fences. The second main reason for transformations concerned economics and was motivated by the OB's need to generate income, such as by building shops. These two reasons for altering housing have also been explored in many government-built and traditional housing schemes in developing countries such as Saudi Arabia, Egypt and Indonesia (Al-Saati, 1989b, Tipple, 2000, Sueca, 2003).

Although the great majority of these changes were undertaken without official permission, a high degree of satisfaction with them was expressed by OBs who believed that the changes were affordable means of improving the quality of the housing environment. A real willingness was also shown by OBs who had not yet made alteration to their houses to carry out such changes in the future in order to make their houses more responsive to their needs, once they became financially capable of doing so.

Maintaining the Quality of the constructed House

Minimizing the running costs of the house including the costs of major repairs and day to day use, as discussed in chapter 2, is one of the quality attributes of housing. Maintenance was frequently undertaken by the OBs in Benghazi to improve or restore the deteriorated quality of their houses resulting from their long duration of residence or from the poor

management of the original construction work. For instance, major costly and early maintenance work (such as on external plastering, plumbing, or electrical systems) needed to be carried out when supervision during construction was inadequate. In contrast, less expensive, minor and later maintenance work (for example repainting, or repairing doors and windows) was carried out in cases where supervision of construction was regular and the OB was more involved in controlling and managing the construction work. This indicates that the more the construction work is well controlled, managed and supervised, the less likely early or major maintenance will be needed.

2 Factors Influencing Satisfaction with Resulting OBH Environment

Satisfaction with Constructed House

As the study findings revealed, the great majority of OBs in Benghazi were satisfied with the type and size of their current houses which were regarded better than previous ones. Added to this, the detached dwelling was mentioned as the most preferred type of housing. This high degree of satisfaction with the constructed houses was mainly attributed to the fact that most of OBs were not owners of their pervious houses (tenants or sharing them with their parents) which were in form of flats, terraced or semi-detached houses. An evidence of the high level of satisfaction with owner-built dwellings is the low rate of mobility among OBs, which is clearly reflected in the fact that the great majority of houses in the surveyed OBH neighbourhoods are still occupied by OBs.

Satisfaction with Surrounding Neighbourhood

The poor condition and inadequacy of infrastructure is a common problem experienced in most cities of developing countries. This is evident in the lack of water supplies, shortages of electricity power, and the bad condition of roads and sewage networks, which as discussed in chapter 2, caused by lack of resources or corruption and poor management.

In Benghazi, high levels of dissatisfaction with neighbourhood condition were expressed by most OBs who built their houses during the late 1980s and 90s. This can be attributed to the inadequacy and poor conditions of infrastructure provided in their neighbourhoods, such as sewage system, road network, and open spaces or to the low levels of public facilities such as education, health, and shopping. Added to this, low perceived levels of security resulting from the frequency of attempted burglary contributed to the low degree of satisfaction expressed by OBs in El-Mukhtar area towards their neighbourhoods. This

can be attributed to the absence of street lighting as well as the existence of many plots which were vacant or contained houses under construction that had been left incomplete for many years and which were mainly occupied by informal construction workers. This problem was not cited in the El-Salam area where basic infrastructure such as street lighting and accessible and paved main streets are to some extent provided.

The cleanliness and good appearance of neighbourhoods was also raised as another concern in the surveyed neighbourhoods. More than half of the OBs were dissatisfied with hygiene levels in their areas. This mainly resulted from the inadequate sewage networks and the poor condition of open spaces, particularly in the El-Mukhtar area. These factors had an obvious impact on the aesthetics, environmental cleanliness and public health of these areas, and led to unpleasant smells and concentrations of insects at locations of waste disposals in these areas. Further evidence of the poor infrastructure leading to high level of dissatisfaction with the surrounding environment was that the underdeveloped sewage and road networks which were mentioned as the most disliked features in these neighbourhoods. Most OBs who expressed high degrees of dissatisfaction with their neighbourhood conditions were consequently less willing to encourage others to move into and live in their areas. The same conclusions regarding the impact of the slow provision of infrastructure were also found in new housing areas in Dubai whose residents expressed high levels of dissatisfaction with the development and provision of infrastructure and particularly of sewage and roads, which often take many years to be provided (Aosaado, 2001).

Despite the overall high levels of dissatisfaction with the surrounding physical environment, strong relationships and interaction with neighbours was the most satisfactory feature of neighbourhoods, particularly for those who built their houses during the 1970s in the El-Salam area. The long duration of residence that OBs had in their areas of 21 yrs or more enabled frequent visits and strong ties to be established between residents, who supported each other during the different social and religious occasions. Added to this, regular sessions of the Basic People's Congresses (BPCON) allowed residents of these neighbourhoods to meet and discuss any problems experienced in their areas.

It can be concluded that owner-built houses are adaptable and satisfactory to their occupiers reflecting the remarkable level of alterations and maintenance carried out to

respond to their changes needs and to improve the quality of their houses. In contrast, high levels of dissatisfaction with neighbourhood conditions were reported mainly concerned with the poor condition of infrastructure and inadequate facilities and services as well as low levels of security experienced.

12.4 Learning from Libyan OBH

The present exploration of the implementation of OBH in Libya, and particularly the extent to which OBs in Benghazi have been able to build their own houses over the past three decades, has revealed certain advantages and disadvantages associated with the development of OBH over this period. This section highlights the main advantages of OBH which can be used to promote OBH in the future, and also illustrates the main problems which threaten the future development of OBH.

12.4.1 Key Advantages and most Successful Attributes of OBH

The discussion throughout this study concerning the development of OBH in Libya and Benghazi reveals certain successful quantitative and qualitative attributes that can be summarised as follows:

12.4.1.1 Socio-cultural and Economic Value of OBH

> "A single building can have two different values: a place to live in, to satisfy the essential needs of life (use value) and a generator of rent, a commodity for buying and selling (exchange value)." (Madanipour, 1998:173)

OBH as a Powerful Instrument of Housing Provision: Economic Value

The most important feature that made OBH the most preferred mode of housing provision to low income people is its affordability compared to the alternatives. This affordability often results from the incremental nature of house construction and consolidation process, which allows an OB with limited financial resources to spread the costs of construction over time. Added to this, the ability of the OB to utilize resources and manage the construction work properly as well as in undertaking some of the construction tasks help to reduce the total cost of construction (Friedman et al., 2000). Moreover, the widespread of

housing construction for own use, as Madanipour (1998) argued, is seen as a profitable investment that much higher than savings in banks or other types of investments. Madanipour (1998) believed that housing development for own use is more capable in coping with the growing demand for housing compared with other modes of housing construction.

OBH in Libya has accounted for a substantial proportion of house construction over the past three decades, and even given the severe economic conditions in the late 1980s and early 90s this mode of housing provision remained the predominant supplier of housing needs. In Benghazi, the capability of low and middle income OBs in managing the house construction process played a major role in minimizing the total costs of construction. This mainly resulted from avoiding administrative and operating costs (such as getting permission, supplying materials and overseeing construction tasks) usually borne by formal developers or contractors. In some cases, family labour input in supplying and loading materials and in organizing and cleaning-up construction sites resulted in further reducing construction costs.

Further economic advantages of OBH is demonstrated by OBs' capability in carrying out alterations and additions on their houses to provide more space for accommodating growth in household size or providing another source of income by building shops and workshops. A key indicator of the affordability of owner-built dwelling concerns its estimated market-value, which in most cases far exceeds the actual total construction costs. These economic advantages make building rather than buying or renting a ready-built house, the preferred method of acquiring housing among the great majority of OBs in Benghazi if they were to require a family house in the future. Due to the economic advantages of OBH, professionals should be aware that despite differences in economic status, people have the ability to control and manage the production of their own residential environment, and are willing to invest in housing for better quality lives at lower cost.

The Social and Cultural Value of Owner-built Homes

The positive side of a process in which the end-user is involved in the construction and adaptation of his house, as discussed in chapter 2, is not only economic but also social since it involves substantial social benefits. This is because in addition to having affordable housing, enabling people to be more involved in designing, building and adapting their

own houses, also encourages them to attach more socio-cultural value to their own houses through occupation 'use-value'. Thus, OBs through their ability and success in managing the construction and the continuous interactions with their houses through adaptation, alteration, maintenance and repair can feel good and acquire feelings of self-confidence from their ability and success in managing the construction of their houses.

In Benghazi, the symbolic representations and social meanings that OBs attached to their dwellings as home and as cultural entities rather than investment commodities that can be sold was confirmed by the fact that the great majority of owner-built dwellings were developed for own use which is clearly reflected in the low rates of mobility among OBs from their OBH neighbourhoods in Benghazi. The social and cultural value attached to the dwellings was also reflected in the fact that the quality of most owner-built houses in the OBH neighbourhoods surveyed in Benghazi was increasingly consolidated over time by their owners, showing that they built them primarily for use-value rather than exchange-value.

12.4.1.2 Building the Dream House Requires Household Sacrifices

As discussed in chapter 2, people would be more likely to strive to improve their housing conditions incrementally using good building materials to produce cheap and high quality housing if they were enabled and allowed to do so. Such desire that people have towards improving their living conditions in addition to the desires to live in a better and more satisfactory environment, and for secure ownership are seen as the main motives that many families have for becoming owner-builders. The affordability of OBH in Benghazi over the past three decades did not wholly result from easy access to subsidized building resources or employing cheap informal labour but also from the social and financial sacrifices that Libyan families devoted to realising their dreams of owning private homes to satisfy their needs and aspirations.

Social Sacrifices

Performing managerial tasks such as getting permission, acquiring materials and overseeing construction works required the OB in Benghazi to invest considerable amounts of time and energy. The time spent by OB in managing construction would represent a substantial source of profit for a developer or contractor in other modes of housing

provision, but for the OB it often meant less time what had to be spent with the family or fulfilling social obligations and commitments. Social visits made by OBs to relatives were much less frequent during the construction phase due to their daily involvement in managing and overseeing the work.

Financial Sacrifices

Another sort of sacrifice required to make the dream of the Libyan family to build its own house come true was the need to mobilize funds from all possible sources in order to carry out costly building or improvements work. These additional funds were mainly obtained from personal and family savings that had been intended to be used for other purposes such as buying cars, holidays, and weddings, or which were acquired by converting family assets such as cars, inherited land and other property, or jewelleries. It was clear that OBs with limited financial resources would simply never have been able to construct their own houses without help from family members and relatives.

The aforementioned social and financial sacrifices made by members of these Libyan families led in many cases to delaying other plans such as the weddings of sons or daughters and holidays. This clearly shows how united the Libyan families were in meeting their basic needs such as for housing. Accordingly, OBs have to be recognized and understood as powerful housing producers who are often capable in arranging and managing their priorities and resources, and are always willing to make considerable sacrifices in order to build their own houses and improve their quality. Thus, OBs should be supported in building and adapting their residential environment in order to make such environments more healthy, satisfactory and adaptable.

12.4.1.3 Role of Informal Labour in the Provision of Affordable OBH

In addition to small and unregistered enterprises operating in the informal sector of the economy, foreign (mostly from neighbouring Arabic countries) construction workers supply much of the labour employed in the construction sector in Libya. In Benghazi, the use of master builders, artisans and casual workers on an individual basis by OBs in building their own houses is seen as cost-effective because they are able to offer competitive prices for undertaking construction work given that they are able to avoid paying the taxes and administrative and registration fees that formal construction firms

must cover. Thus, it can be considered that the use of informal labour in OBH played a major role in the success of OBs in building affordable houses.

12.4.1.4 Benefits of the Incremental OBH process

The experience in Libya shows how the OBH environment has come into existence incrementally by a process of addition and piecemeal gradual improvement. This was clearly reflected in the long delays and frequent suspensions characterizing the house construction process during the late 1980s and 90s as OBs coped with shortages of funds and the unavailability of affordable materials. The incremental interventions made by OBs in the construction and consolidation of their houses should be valued and encouraged by professionals and policy makers due to its success in producing a more affordable and satisfactory residential environment.

12.4.2 Key Challenges and Problems Confronting OBH

Certain obstacles and problems confront the development of OBH in Libya as well as the ability of OBs to build and adapt their houses as desired and planned. These obstacles have been responsible for fluctuations in the performance of OBH and its contribution to housing provision over the past three decades, and to the problems experienced by many OBs in getting access to building resources, managing the construction process and adapting their houses.

12.4.2.1 OBH is not seen as an Integrated System within Housing Policy

Despite the predominance of OBH over the past three decades, it has never been treated as an integrated system within the context of public housing policy adopted. The extensive review in this study of published and unpublished government reports and documents shows that state support for OBH was mainly concerned with organising and setting eligibility criteria and facilitating the provision of three main building resources of land, credit, and materials. The management of OBH, integration of the roles of different private and public actors involved and the resulting OBH environment have never been considered in these reports and documents. OBH has therefore been subject to many obstacles and problems, such as unnecessary delays, the improper management of resources and misuse

of regulations, increased cost of construction, illegal development, and unsatisfactory resulting environments.

12.4.2.2 Instability in the Institutional and Regulatory Context of OBH

There have been frequent changes and upheavals in the institutional, financial, and legal frameworks for the provision, management and allocation of building land, finance, materials and labour. Particularly since the late 1980s these changes have played a major role in the difficulties that many OBs have experienced. For instance, in addition to the instability in the housing sector and its agencies, no stable institutional body has been directed by the state to monitor the performance of OBH and suggest solutions for constraints and obstacles that this mode of housing provision might confront in the short and long run.

In the regulatory framework for OBH, so many changes in regulations concerned with the provision and allocation of land, materials and building loans, again particularly during the late 1980s and 90s, has opened the door for corruption and the abuse of rights to be practised by public servants involved in the allocation of these resources.

12.4.2.3 Shortages and Irregular Supply of Building Resources

Although the provision of building resources such as land, credit, and materials has been to a large extent controlled by the state, the poor management and allocation of these resources since the mid 1980s has represented one of the key constrains facing the development of OBH. For instance, shortages and irregular supplies of land have been mainly caused by contradictions between different laws and regulations concerned with land protection, planning and subdivision, and many municipalities were thus unable to meet the increased demand for land. The number of applicants on waiting lists in these municipalities then began to increase. Furthermore, the large reliance of real-estate lending programmes for house construction on oil revenues has led the value of building loans to be reduced considerably, particularly in the late 1980s and 90s. The reduction in the values of building loans during the early 1990s meant that they no longer covered the higher costs of construction during this period.

In terms of building materials, the poor control and ineffective mechanisms through which materials particularly cement and steel made many serious OBs during the late 1980s and 90s, unable to get the required amount from these materials on time. The availability of foreign labour has often been subject to changes in the political and economic conditions in the country, and reliance on foreign workers has affected the progress and the cost of house construction. For instance, the departure of many foreign construction workers sector following the drop in oil prices in the mid 1980s together with the decline in the value of the Libyan currency during the 1990s slowed the progress of house construction for many low and middle income OBs, with frequent delays and suspensions due to sudden increases in costs.

It is clear that bureaucratic constraints in the provision and supply of building resources have hampered the availability and sufficiency of building resources. In addition, the unstable and ineffective institutional framework through which building resources have been allocated has led to corruption and abuse. This in turn has made house construction a more difficult task for many low and middle income OBs.

12.4.2.4 Ineffective Control by the State and the Marginal Role of the Private Sector

State control over the allocation of building resources, particularly following the adoption of the principles of socialism in the late 1970s, has strongly affected their provision and availability of theses resources. The state then attempted to release housing activity from its total control in the early 1990s by encouraging private sector individuals and partnership firms to become more involved in housing production. However, it seems that little has been achieved in this direction, mainly due to the numerous regulatory and institutional constraints that private investors face. The state still exercises ineffective control and management over the supply and allocation of building resources, and fails to monitor the development of housing properly.

12.4.2.5 Lack of Infrastructure: the Housing Environment is more than the Dwelling

The development of OBH has to a large extent been characterized by imbalances between housing and infrastructure development in most areas. This is clearly reflected in delays to the provision of basic infrastructure and public services in most of the neighbourhoods surveyed in Benghazi, often taking more than two decades to be provided. The social and

environmental impact of the lack of infrastructure made many plot beneficiaries in these OBH areas reluctant to commence or complete the construction of their houses. For those who did build and move into their houses, the impact of the poor conditions of infrastructure and facilities led them to report high levels of dissatisfaction with living conditions in their areas.

12.5 Implications of the Study: Towards a Responsive OBH

Based on the previous synthesis and discussions of the study's key findings, the following four levels of recommendations are suggested in order to make the OBH more responsive to people's needs and aspirations.

12.5.1 The Need for an Integrated Enabling Policy for OBH

There is a need to adopt stable, coordinated and transparent enabling policy, based on the findings of this study. It has become more urgent that a suitable environment for OBH is created so that it can play a more responsive role in housing production in the country. For this purpose, a specific national institutional body concerned with the development of OBH is suggested to be established. This could be called the 'National Corporation of Owner-built Housing' (NCOBH) and should have branches in all *Shabiyat* (provinces) responsible for managing OBH activity, monitoring its performance, identifying problems and challenges facing its development, and suggesting strategies, plans and programmes for future development. It should also have the ability to coordinate the roles of all actors and agencies involved in the formulation and implementation of OBH policies and programmes.

12.5.2 Ensuring Regular Supplies of Building Resources

Poor management and bureaucratic and legislative constraints have been key factors contributing to the irregular supply of building resources since the late 1980s. Thus, more efforts have to be made to eliminate these constraints in order that funding, materials, labour, and infrastructure be more accessible and affordable to lower and middle income owner-builders. Added to this, there is a need to encourage the private sector to play a more effective role in the provision of these resources. The following steps are suggested in this respect:

12.5.2.1 Reforming the Building Loan Programmes

The scale of real-estate lending programmes declined during the late 1980s and 90s due to their total reliance on fluctuating oil revenues as well as the irregular repayments of loans. In addition, the restrictive eligibility criterion set by financial institutions together with the fall in the number of building loans issued during the late 1980s and 90s made these loans inaccessible and insufficient to cover construction costs. Thus, the following steps are suggested in order to reform the real-estate lending programmes and to make building loans at affordable terms accessible to low-income earners.

-Building loan programmes should be self-financing, depending mainly on cost recovery and fund revolving rather than on fluctuating oil revenues

Building loan programmes should be more reliant on repayments from loans already issued rather than on injections from state funds. This can be achieved by encouraging regular repayments of loans by offering benefits to loan beneficiaries for early and regular repayment such as repayment discounts or offering other financial facilities through the banking sector.

- The sizes of loans issued should be based on estimated construction costs rather than the beneficiary's monthly income:

The principal criterion in determining the size of a loan should be the construction costs of the house rather than the monthly net income of the beneficiary. This would result in more adequate building loans particularly for those among the low-income strata of society. This may require extending the repayment period of the loan or allowing the loan's beneficiary with low income to repay the loan jointly with one or more of his family members.

12.5.2.2 Eliminating Supply Constraints and Instability in Land Allocation

There is a need to revise all legislation and regulations concerned with the planning, provision, and allocation of publicly-owned land, and to eliminate existing contradictions between regulations to facilitate the regular supplies of land capable of meeting demand in urban areas. In this respect, Angel and Pornchokchai (1990:190) argued that:

> "It is also clear that the state should take more action in certain directions first, it seems essential that state intervention is required to keep down the cost of land and

> to keep the supply open. This requires a subtle combination of controls over land speculation and appropriate land-use and subdivision regulations."

To eliminate supply constraints of land, bureaucratic and precluding legislative procedures practiced in considering new residential subdivisions should be eliminated and the number of official agencies involved in processing and approving these subdivisions should be minimized. Furthermore, stable mechanisms and transparent criteria for allocating publicly-owned land are important to prevent any avenues for corruption or the abuse of land allocation regulations and to protect the priority rights of applicants. For this purpose, it is suggested that an authorized institutional agency whose actions and decisions are effective and respected should be established where all actors involved in land reclamation, planning and allocation work together to ensure a regular supply of land.

12.5.2.3 Effective and Properly Controlled Materials Supply Systems

Having effective mechanisms for the proper control and targeted supply of building materials, particularly of cement and steel, is necessary to overcome the problems that OBs have faced in getting materials. This mechanism should operate with good communication system and advanced information technology to allow information to pass between materials suppliers and other actors involved in the implementation of OBH, particularly those involved in the issue of building permits. This in turn would prevent any misuse of building permits and enable those who are in real need of materials to get them easily. It is also recommended that the role of housing cooperatives should be restored in order to overcome problems in the supply of building materials, since they succeeded during the 1970s in supplying building materials at reasonable prices to members. By playing such a role, housing cooperatives could save their members (OBs) the time that they currently have to spend in traces their applications at the existing poorly-managed materials suppliers. Added to this, by having building materials centres in locations close to OBH areas, these cooperatives might also eliminate the high transport costs that OBs often pay in transporting materials from the distant far locations of the main suppliers.

More effort should also be made by the government to expand the production of building materials at national, regional and local levels. Added to this, private initiatives in the production of building materials, particularly when raw materials are domestically

available should be encouraged by offering uncomplicated access to loans and other financial benefits to local investors in the building materials industry.

12.5.2.4 Re-organising Informal Construction Labour in OBH

The reorganisation of the informal construction labour activity in the country is suggested in order to protect the rights of all parties. This could be done by establishing an attractive registration system for informal workers without imposing any bureaucratic or unaffordable administrative and financial burdens, in order to encourage them to register and work under some sort of control. This should be able to encompass most workers who are currently classified as informal and at the same time protect the rights of informal builders and clients. Meanwhile, more attention has to be devoted to encouraging and expanding training and vocational programmes in building construction in order to reduce the reliance on foreign labour and to provide more employment opportunities for Libyan nationals in this important and growing sector.

12.5.3 Technical Recommendations for a Manageable OBH Process

As the study shows, OBs often have no background in construction. Offering technical advice and support to them prior to and during the construction phase would positively influence the progress, management and quality of construction work. The following recommendations are suggested in this respect.

12.5.3.1 Providing Easy Access to Building Information

Facilitating the provision of information to prospective OBs would help them in managing their construction work properly, avoiding the waste of building resources and helping to achieve adequate quality standards in a reasonable time span. This information should include instructions about the proper selection and utilization of building resources, the adoption of suitable building techniques and the steps required in overseeing the quality of construction work. It is important that this building information should be presented in accessible, simple and clear formats provided free or cheaply to prospective OBs at all public and private departments concerned with OBH, such as engineering offices, building materials shops, building loan lenders and municipalities. Added to this, all publicly-

owned media channels should be encouraged to present specific programmes concerned with house building and renovation.

12.5.3.2 Appropriate House Design for Affordable and Adaptable OBH

> "Attention to the physical attributes of a house is not restricted to its condition and amenities but also focuses on its external appearance and internal layout- what may be called its design."(Clapham, 2005:126)

A full understanding on the part of the designer of the needs, aspirations and financial capability of the prospective OB is a key success factor in building affordable, adaptable and satisfactory dwellings (Habraken, 1980a, Lawrence, 1987, Habraken, 2005). The designer has to think about the house not as a finished product but as an adaptable structure that has to be capable of accommodating the alterations and extensions which may be required to meet the changing needs and aspirations of occupants. Commenting on the role of the designer in creating adaptable house designs, Habraken (1979) stated that:

> "...we professionals should work mainly to structure the environment in which non-professional power must operate. We have to create spaces for others to change and add to at any level."

The elimination of unnecessary house design features such as balconies or corridors should also be considered by designers, since the findings of the study have revealed that many balcony spaces were subsequently incorporated into the interiors of houses. Designers also have to be encouraged to provide prospective OBs with several different house plans and brochures for incremental OBH processes including three-dimensional models and visits to already built-houses. These would provide better comprehension before a final design for a house is chosen. Moreover, the house design should also emphasise important technical considerations for its features in order to avoid any future extensions and alterations that might harm the structural quality or comfort of the dwelling. This would also require revising and simplifying existing building and residential regulations to make them more flexible, suitable and capable of reflecting the cultural and economic realities for OBs when designing their own houses. In other words, the distinction between houses built for self-use and houses built for investment purposes has to be made explicit in these

regulations, so that the need for flexibility buildings constructed by OBs to reflect local needs and resources is taken into account.

12.5.3.3 The Necessity of Regular Supervision of Construction Work

Ensuring regular and efficient supervision of construction work is a key factor in cutting total construction costs and producing higher quality and more satisfactory dwellings. Thus, private professionals who have experience in construction and project management have to be encouraged to provide supervision and advisory services to OBs. In addition, the role of the Urban Planning Authority (UPA) in controlling OBH development might need to change. Here, building inspectors employed by the UPA could also perform the role of public servants advising OBs on home-building techniques and tackling building problems, rather than focusing merely on monitoring the progress of construction work for its adherence to building regulations.

12.5.4 Adaptability of and Satisfaction with the Resulting Environment

At this level, a set of actions are required to enhance the adaptability of and satisfaction with the resulting environment.

12.5.4.1 Allowing Changes and Improvements to be Undertaken in the House

Changes in household size and life style often call for improvements and alteration or extensions to be undertaken by residents to their houses. People should be allowed to make changes in their houses to suit their needs and to prevent them from undertaking unauthorized changes. For this purpose, it is necessary that the initial design of the house structure and layout should provide a clear guide concerning the potential for future extensions and alterations. The legitimate domain of building regulations should solely be the protection of health and safety, environment impact and the structural quality of the building, whereas enough room should be left for OBs to adapt their houses with some sort of flexibility.

12.5.4.2 The Need for More Balanced Development of Housing and Infrastructure

In addition to its impact on improving the quality of living conditions and on the image of OBH areas, the provision of infrastructure at an early stage of neighbourhood development

is seen as necessary to encourage and promote house construction activity in these areas. Thus, more attention has to be paid to the provision of accessible roads, street lighting and water supplies at the early stages of neighbourhood development to encourage OBs in commencing and continuing the construction of their houses. Meanwhile, the provision of public services for sewage disposable, education, commerce and recreation in these areas would result in a more healthy and satisfactory residential environment. Without a balance between the development of infrastructure and housing construction; as the study revealed, the overall resident satisfaction will be negatively affected.

However, the provision of urban infrastructure to serve residential neighbourhoods for long periods of time is expensive and requires substantial amount of funds. The way governments provide and fund infrastructure also has a profound influence on patterns of urban development. Thus, it is important here that infrastructure has to be provided and consolidated gradually in line with the incremental housing developments in OBH areas. As Habraken (1979) argued, providing a completed large project in a short time is not feasible where housing development is taking place slowly and incrementally as in the case of OBH process. Thus, the provision of affordable infrastructure has to be considered far more carefully by professionals and public authorities concerned with the development of OBH.

It is suggested that appropriate standards of roads and drainage networks should be applied in areas earmarked for OBH, rather than applying the highest standards of infrastructure which often result in a high cost of provision. In order to maintain and sustain the quality of the infrastructure and public services provided in OBH neighbourhoods, there is a need to reactivate and implement all decisions undertaken by the PBCON in Libya since the 1980s concerned with certain programmes such as *Al-Hay Al-Jamahiery* (people-managed community) and *Al-Amenn Al-Shabiey Al-Mahally*[3] (people's local security) which underline the involvement of residents in keeping up and maintaining the quality and security of their communities.

For this purpose, residents should be provided with the necessary tools and equipments to undertake regular voluntary activities such as planting trees, collecting waste for disposals,

[3] In the mid-1980s and aiming to strength and support people's participation, involvement and control over all affairs of their life, certain programmes based on regular and voluntary efforts were introduced to encourage residents of every community to keep up, protect and guard their neighbourhoods.

and guarding streets and community buildings. These voluntary community activities would result in reducing the public funds devoted to these services which could then be spent on the provision of other necessary community services. They would also improve the quality of the neighbourhood environment and strengthen the sense of attachment to place and relationships between residents.

Of course, the aforementioned methods of supporting OBH activity should avoid the imposition of any sort of improper control or regulations which would raise costs or complicate the process, which would ultimately make OBH less attractive to families with limited incomes.

12.6 Emerging Issues for Further Research

The complex nature of the issues concerned with the implementation of OBH meant that it is difficult for a single study to completely understand the phenomenon. Thus, more detailed theoretical and empirical research is seen as necessary to gain better understanding of issues that were beyond the scope of the study or which could not be covered in this study within the limited time available. The following main potential areas for future research are suggested:

1. Impact of the instability of institutional and regulatory framework on the development of OBH

Further research should be conducted on the impact of the institutional and regulatory framework concerned with the accessibility and availability of building resources. Experiences in similar contexts and using empirical evidence gathered from case studies and survey investigations would yield a better understanding of the main factors contributing to the difficulty in gaining access to sufficient building resources. In addition, such a study would help in establishing the proper institutional and regulatory framework through which building resources can be managed and allocated to OBs.

2. Affordability of OBH

Further research could concentrate on the affordability of OBH in order to provide more empirical evidence about the visible and invisible factors which affect the total cost of house construction. Such research could concern the impact of house design, the selection

and utilization of building materials, the employment of skilled and unskilled labour and the adoption of particular construction methods on the total costs of construction. It would also be interesting to investigate the role of effective and regular supervision of construction work in minimizing the cost of construction and in enhancing the quality of constructed dwellings.

3. Provision and development of basic public infrastructure in OBH areas

The main factors contributing to the impact of the provision of infrastructure on the social and physical quality of residential environments in OBH schemes should be investigated. It would be also interesting to shed more light on the current obstacles confronting the private sector and residents in the provision and maintenance of infrastructure and public services. This might yield practical alternatives in the development of infrastructure within the enabling strategy adopted in the housing sector.

12.7 The Study's Contribution to Knowledge

Being the first ever research exploring the implementation of OBH in Libya, the current study has contributed significantly to housing research, particularly in relation to Libya and developing countries. Its main significance is the contribution to knowledge concerning the implementation of OBH as the predominant mode of housing provision in Libya over the past three decades, a subject which has been neglected in the field of housing research.

A significant number of studies have assessed housing environments in which end-users were involved in design and production in many developing countries, but most of these have been carried out during the construction phase or shortly after its completion (Rakodi and Withers, 1995). This means that neither the longer term impact of the process as well as its outcome on adaptability of and the satisfaction with the resulting environment nor the impact of policy have been considered in these studies. Some of the present study's findings agree with those of other studies and in addition the following points represent the main contributions that the current study has made:

- The study has empirically confirmed the social and economic advantages of OBH and has to some extent succeeded in assessing the process of OBH in term of the accessibility of

building resources and the management of the construction process and its outcomes in term of adaptation and satisfaction;

- The exploration of OBH in Libya has provided more understanding of its implementation and development and fills the existing gap in the literature regarding the main factors influencing its contribution to housing provision as well as identifying the main constraints that OBs faced in building and adapting their houses over the past three decades,

- It is also believed that, by exploring the socio-economic and political context within which the implementation of OBH in Libya has developed, this research has facilitated an understanding of the development of OBH in the Libyan context with its unique characteristics. In addition, it makes a valuable contribution to the continuing debates about the merits of OBH all over the world,

– The discussions of key findings throughout the study have generated new issues and further areas of research which require more investigation.

- It is also believed that guidelines and recommendations based on the main findings of this study can be provided for policy makers, professionals and other key actors involved in the implementation and development of OBH in Libya. These recommendations for future housing policy may be of great value in helping to overcome the constraints that the implementation of OBH has encountered and could make it more responsive to its beneficiaries' needs and aspirations.

Due to the similarities in housing policy, and building regulations, techniques and materials as well as in the criteria for and mechanisms through which building resources are supplied across the country's regions, the study's findings and recommendations can be generalized to some extent to other Libyan cities. They might also be generalized to other countries with similar housing policy and economic and socio-cultural characteristics as in Libya. Generalization may be especially useful in relation to the findings and recommendations related to the accessibility of building resources, management and control over the house construction process, and adaptability of and satisfaction with the resulting environment.

12.8 Concluding Remarks

It is evident from the outcome of the exploration made in the study that many challenges remain for low and middle-income OBs if no serious action is taken to eliminate the current obstacles confronting the OBH process in relation to the provision and accessibility of building resources, providing technical assistance to OBs, and ensuring the balance between residential and infrastructure development in OBH areas. It is believed that these challenges can be met with more commitment, integration and coordination between all parties involved in the development of OBH, which still represents the most affordable, preferred and satisfactory mode of housing provision in the country in the future. It is evident that the assessment of the longer term impact of the implementation of OBH has to be based on having a better understanding of owner-builders' needs, characteristics and circumstances and on the socio-economic and regulatory environment within which it operates.

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Appendices

Appendix (1)

The Survey Questionnaire

(English version translated from the Arabic)

No. of Questionnaire: .....

Area Code: .....

Neighbourhood Code: .....

No. of House/ Plot: .....

Number of visits: .....

Time Started: .....

Time completed: .....

Date: .....

Part One: Socio-demographic and Housing Characteristics

Socio-demographic Characteristics

A-1 Position of respondent in household

1	Head of household
2	Other (specify)
0	N/A

A-2 Marital status and gender of respondent

1	Male: single	5	Female: single
2	Male: married	6	Female: divorced
3	Male: divorced	7	Female: widowed
4	Male: widowed	0	N/A

A-3 Age of respondent

Answer: ..... (Years)

A-4 Occupational status of respondent

1	Government employee	4	Retired
2	Private employee	5	Other (specify)
3	Self employed	0	N/A

A-5 Education level of respondent

1	Illiterate	5	University degree
2	Basic education	6	Postgraduate
3	Secondary school	0	N/A
4	Technical education		

A-6 Highest educational level in the household?

Answer: .....

A-7 How many families live in this house?
Answer: .....

A-8 How many persons live in your household?
Answer: .....

A-9 How many males in the household?
Answer: .....

A-10 How many females in the household?
Answer: .....

A-11 Number of children (1 month – 5 years)
Answer: .....

A-12 Number of children (6 – 18 years)
Answer: .....

A-13 - Number of adults (19 - 59 years)
Answer: .....

A-14 Number of elderly (60+ years)
Answer: .....

A-15 Number of members who attend school
Answer: .....

A-16 Number of members who go to work
Answer: .....

A-17 Total monthly income of household

Answer: ..... (LD)

Previous and Current Housing Conditions

B-1 - Where did you live before moving to your present residence?

1	Other area in Benghazi
2	Another city
3	Rural area (village)
4	Other (specify)
0	N/A

B-2 In what type of house did you live before moving here?

1	Courtyard house	4	Villa
2	Terraced house	5	Other (specify)
3	Flat	0	N/A

B-3 Was the previous dwelling shared with others?

1	Yes
2	No
0	N/A

B-4 What was the type of tenure in your previous house?

1	Owned through building	4	Privately rented
2	Owned through purchase	5	Publicly rented
3	Owned by your parents	6	Other (specify)

B-5 How long have you been living in your present house?
Answer: ..... (Years)

B-6 Why did you move to your present residence?

1	To be close to my workplace
2	Looking for good facilities
3	Looking for good services
4	Looking for good neighbours
5	Looking for more safety and security
6	Looking for more privacy
7	Looking for a big house
8	I did not choose the location
9	Other (specify)
0	N/A

B-7 For this house, are you the?

1	Owner
2	Tenant
3	Other (specify)
0	N/A

B-8 If you are the owner, how did you become the owner?

1	Through building
2	Through purchase
3	Other (specify)
0	N/A

B-9 If you became the owner through building, why did you decide to build instead of purchasing a ready-built house?

	Motive for building
1	I could not afford an already-built house
2	I wanted to design and build my dream house as I wish
3	Other (specify)
0	N/A

B-10 How many housing units are there in this building?
Answer: .....

B-11 How many floors are there in this building?
Answer: .....

B-12 How many utility rooms are there in your present house?

	Room	No.
1	Bedrooms	
2	Living rooms	
3	Reception rooms	

B-13 How many inhabitable rooms are there in your present house?

	Room	No.
1	Kitchens	
2	Bathrooms	
3	Storage rooms	
4	Garages	

B-14 Are all of rooms fully used in this building?

1	Yes
2	No
0	N/A

B-15 If not, which rooms are not used?

	Room	No
1	A whole floor	
2	Bedrooms	
3	Living rooms	
4	Reception rooms	
5	Kitchens	
6	Bathrooms	
7	Storage rooms	
8	Garages	

B-16 Are there any tenants in this building? If so, are rooms or complete units sub-let?

1	Yes
2	No
0	N/A

B-17 if yes, what type of rooms are sub-let?

	Room	No.
1	Whole floor	
2	Shops	
3	Others (specify)	
4	N/A	

B-18 Is your house serviced by?

	Utilities	Yes	No
1	Public drinking water supply network		
2	Public sewage network		
3	Public electricity network		
4	Public telephone network		

Note: If you built this house, answer Part Two, if not go to Part Three

Part Two: Practices and Attitudes towards the House Construction Process

Access to Building Resources

Land Acquisition

C-1 - Where from did you get the housing plot on which your house is built?

1	Purchased from original (initial) owner
2	Allocated by government (municipality)
3	Allocated by housing co-operative
4	Other (specify)
0	N/A

C-2 If you bought the plot from the original owner, what were your criteria for purchase?

	Criterion for plot purchase
1	Price
2	Proximity to facilities and work
3	Size and location
4	Other (specify)
0	N/A

C-3 If you bought the plot from the original owner, how much did it cost you?

Answer: .....LD

C-4 If the housing plot was allocated to you, how long did you wait to get it?

Answer: ..... (Months).

C-5 What was the criterion by which the land was allocated to you?

	Criterion for plot allocation
1	According to my position in the waiting list
2	Based on my application regarding an un-owned vacant plot
3	Other (specify)
0	N/A

C-6 What are your thoughts about access to the land?

1	It was quite easy
2	It was difficult and took longer
3	Other (specify)
0	N/A

C-7 What is the total plot area?

Answer: ..... (Square meters)

Design and Permission

D-1 Who designed your house?

1	Architect	4	Other (specify)
2	Builder	5	Copied from other design
3	Surveyor	0	N/A

D-2 If the design was made by an architect, what was the criterion for selecting the architect?

1	Recommendation
2	Reputation
3	Cost of design
4	Other (specify)
0	N/A

D-3 During the design process, how many times did you meet him before agreeing the final design?

1	Once	4	6-7 times
2	2-3 times	5	More than seven times
3	4-5 times	0	N/A

D-4 What was/were the main principle/s that influenced your selection of the final design for your house?

1	Household size and composition
2	Costs of construction and financial ability
3	Plot size
4	Plot location
5	Shape of the plot
6	Plot soil condition
6	Requirements of Building permit
7	Type and availability of building materials
8	Building- loan requirements
9	Other (specify)
0	N/A

D-5 What was the most important feature that you were looking for in your house?

1	Large rooms
2	High quality interior finishing
3	Well decorated facades
4	Large outdoor space
5	Others (specify)
0	N/A

D-6 Did you consult your family (wife and children) regarding the design of your house?

1	Yes
2	No
0	N/A

D-7 Was any structural design plan made for your house?

1	Yes
2	No
0	N/A

D-8 How long did the design process for your house take?

Answer: ..... months

D-9 How much did the design cost you?

Answer:.....LD

D-10 Did you get a "Building Permit" for your house from the relevant authority?

1	Yes
2	No
0	N/A

D-11 If yes, was the house design approved without any amendments?

1	Yes
2	No
0	N/A

D-12 If no, what was amended in the design of your house?

1	The size of the built area
2	The size of set-backs
3	The interior design
4	Others (specify)
0	N/A

D-13 If no, what was your impression of the amended design?

1	Much better than before
2	Less good than before
3	Other (specify)
0	N/A

D-14 How long did you wait to get a "Building Permit" after you had applied for it? (i.e. from submission to issuance of the permit)

Answer: ..... (Months)

D-15 What was the main problem you faced during the application for a "Building Permit"?

1	Difficulty in gathering required documents
2	Many amendments made to house design
3	Waiting time was too long
4	Others (specify)
0	N/A

Access to Funds and Costs of Construction

E-1 Were construction costs estimated prior to the construction phase?

1	Yes
2	No
0	N/A

E-2 If yes, what was the estimated cost of construction?

Answer: ..... LD.

E-3 Was the total amount of the estimates available before commencing the construction phase?

1	Yes
2	No
0	N/A

E-4 What was the actual total cost of construction including land, design, materials, and labour costs?

Answer: ..... LD

E-5 What is the estimated market value of your house?

Answer: ..... LD

E-6 What was the average total household income during the construction phase? (monthly)

Answer:.....(LD)

E-7 What was/ were the source/s of construction funds?

	Source
1	Personal and family savings (sources)
2	Building loan from banking sector
3	Loan from friends or relatives
4	Other (specify)
0	N/A

E-8 What was the most important source of funds?

Answer: .....

E-9 If you got a "Building-Loan" from the banking sector, could you specify the source?

1	Real-estate Investment & Saving Bank
2	Commercial bank
3	Housing co-operative
4	Others (specify)
0	N/A

E-10 If you applied for a "Building-Loan" from the banking sector, could you specify the reason?

	Reason
1	I had no funds for construction
2	It was available
3	To help me in funding the building process
4	Other (specify)
0	N/A

E-11 How long did you wait to get the "Building-Loan" after you applied for it?

Answer: ..... (Months)

E-12 What was the amount of the "Building-Loan" you received?

Answer: ..... (LD)

E-13 If you received all of loan, was it enough to complete construction?

1	Yes
2	No
0	N/A

E-14 If not, to which phase of construction was the loan enough for?

Answer: .....

E-15 If not, did you get a supplementary building-loan?

1	Yes
2	No
0	N/A

E-16 If not, why you did not get a supplementary building-loan?

	Reason
1	My application was rejected
2	I could not afford to repay the loan
3	Other (specify)
0	N/A

E-17 Are you still repaying your loan?

1	Yes
2	No
0	N/A

E-18 Who was responsible for repaying your loan?

1	Yourself
2	Jointly - with your wife
4	Other (specify)
0	N/A

E-19 What is the total period for the repayment for the loan?

Answer: ..... (Years)

E-20 Do you repay regularly?

1	Yes
2	No
0	N/A

E-21 If not, what is the reason preventing you from repaying regularly?

1	The monthly instalment is unaffordable
2	Need to spend money on other things
3	It does not matter about repaying regularly
4	Other (specify)
0	N/A

E-22 How would you consider the amount of the loan/s issued in the light of the total costs of construction?

1	Acceptable
2	Not acceptable
3	Other (specify)
0	N/A

Type of Labour used for House Construction

F-1 Could you please specify by what means your house was constructed

	Labour used in Construction
1	Self (your own and family efforts)
2	Informal contractor or sub-contractor
3	Formal private building firm (company)
4	Hired tradesmen
5	Other (specify)
0	N/A

F-2 If your house was constructed by employing more than one means, what was the most important means of building?

Answer: .....

F-3 If you or your family members have contributed to the construction work, could you specify the type of labour input?

	Type of labour input
1	Loading and supplying materials
2	Site tidying
3	Reinforced concrete work
4	Electrical work
5	Plumbing
6	Other (specify)
0	N/A

F-4 How did you find out about the builder/s selected?

	Source of information
1	Friends or relatives
2	Newspapers or journal
3	Building sites
4	Other (specify)
0	N/A

F-5 If you have employed tradesmen, what type of work did they undertake?

	Type of work
1	Reinforced concrete work
2	Bricklaying
3	Tiling and flooring work
4	Plastering
5	Painting
6	Plumbing
7	Electrical work
8	Other (specify)
0	N/A

F-6 What was your criterion in selection the builder/contractor?

	Criteria of selection
1	Cost of work undertaken
2	Good reputation
3	His legal situation
3	Other (specify)
0	N/A

F-7 if you hired a contractor to build your house, what type of arrangement did you have with him?

	Type of contract (arrangement)
1	Turn-key (building and supplying materials)
2	To carry out the entire building work
3	To carry out the skeleton
3	Other (specify)
0	N/A

F-8 If you did not contract out your house construction, could you specify the reason?

	Reason
1	To reduce the costs of construction
2	To fit my irregular budget
3	Other (specify)
0	N/A

F-9 Could you specify the form of agreement with the selected builder (contractor)?

	Form of agreement
1	Written contract
2	Verbal agreement
	Both verbal and written agreements
3	Other (specify)
0	N/A

F-10 Could you specify the mode of payment that you used with the hired builder (contractor)

	Mode of Payment
1	Lump sum
2	Unit price
3	Other (specify)
0	N/A

F-11 Did you have any disputes with the hired builder/s during the construction phase?

1	Yes
2	No
0	N/A

F-12 What was the main reason for disputes?

	Reason for Dispute
1	Quality of construction
2	Delay in work
3	Cost of work done
4	Other (specify)
0	N/A

F-13 Was any part of the construction work redone during the construction phase?

1	Yes
2	No
0	N/A

F-14 If yes, could you specify the part?

	Type of work
1	Reinforced concrete structure
2	Brick/block laying
3	Tiling and flooring work
4	Plastering
5	Painting
6	Plumbing
7	Electrical work
8	Other (specify)
0	N/A

Supply of Building Materials

G-1 Was the quantity of material needed for the construction of your house estimated during the design phase?

1	Yes
2	No
0	N/A

G-2 Who was responsible for supplying the building materials?

	Materials Supplier
1	Owner-builder
2	Hired contractor
3	Other (specify)
0	N/A

G-3 If you were responsible for supplying building materials, could you specify the source/s?

	Source of building materials
1	Government (subsidized scheme)
2	Private market
3	Other (specify)
0	N/A

G-4 If you got the materials from more than one source, what was the main source?

Answer: .....

G-5 If you got the main building materials (cement and steel) from government suppliers, could you mention the longest period that you waited to get them?

	Length of Waiting
1	Two weeks
2	One month
3	(2-3) months
4	(4-6) months
5	More than 6 months
0	N/A

G-6 Could you specify how often you got building materials on time (when you needed them)?

	Getting materials on time
1	Always
2	Sometimes
3	Very rarely
4	Never
0	N/A

G-7 Could you specify the criteria for selecting the materials?

	Criteria for selecting materials
1	Cost
2	Quality
3	Availability
4	Other (specify)
0	N/A

Delay and Suspension of Construction Work

H-1 During the planning phase, was the duration of construction estimated before commencing the construction phase?

1	Yes
2	No
0	N/A

H-2 If yes, what was the estimated duration of construction?

Answer: ..... Years

H-3 How long did you wait to begin the building phase after you got the building permit?

	Months
1	Less than 12
2	13-24
3	More than 24
0	N/A

H-4 If you did not start immediately, what was the main reason for the delay?

1	Waiting for building loan
2	Waiting for building materials
3	Waiting for builder
4	Personal and family circumstances
5	Other (specify)
0	N/A

H-5 During the construction phase of your house, did you suspend the building process for more than one month?

1	Yes
2	No
0	N/A

H-6 If yes, how many times?

Answer: .....

H-7 If yes, what is the longest period of suspension?

Answer: ..... (Months)

H-8 What was/were the main reason/s for suspension?

1	Financial difficulties
2	Waiting for building materials
3	Waiting for builder
4	Conflict with the authority concerned
5	Conflict with builder
6	Other (specify)
0	N/A

H-9 If you have more than one reason, what was the most important?

Answer: .....

Status of Inspection and Supervision

I-1 Have you or any member of your family had any experience or background in building skills when you began the building process?

1	Yes
2	No
0	N/A

I-2 How often has your house been inspected by the authority concerned or the bank's engineer during the construction phase?

1	Monthly
2	Regularly
3	Sometimes
4	Never
0	N/A

I-3 How often was the progress and quality of your house overseen by a supervisor hired or selected by you during the construction phase?

1	Regularly
2	When there is a need (upon request)
3	Never
0	N/A

I-4 If the construction phase of your house was supervised by a professional, could you state what sort of things that the supervisor intervened in?

	Items supervised
1	Reinforced concrete work
2	Laying the bricks (framing)
3	Plastering
4	Plumbing work
5	Electrical work
6	Flooring and tiling work
7	Exterior finishing
8	Others (specify)
0	N/A

I-5 Could you specify the qualifications of the supervisor?

	Supervisor's qualification
1	Architect
1	Civil engineer
2	Surveyor
3	Contractor
4	Other (specify)
5	N/A

I-6 How did you know about the supervisor?

	Supervisor selection
1	He is a friend
2	Recommended by a friend or relative
5	Other (specify)
0	N/A

I-7 Could you specify the form of agreement with the supervisor?

	Form of agreement
1	Written agreement
2	Verbal agreement
3	Both verbal and written agreements
4	No agreement was made
5	Other (specify)
0	N/A

I-8 Could you specify the mode of payment that you used with the supervisor?

	Mode of Payment
1	Lump sum
2	Fixed amount of money Per visit
3	Other (specify)
0	N/A

I-9What problem/s did you face during the construction phase?

1	Shortage of funds
2	Shortage and irregular supply of materials
3	Conflict with builder/s skilled labour
4	No problems
5	Other (specify)
0	N/A

Status of the Constructed House at Moving in

J-1 How long did the building process take before you moved in?

Answer: ..... (Years)

J-2 When you moved in, was your house completely finished?

1	Yes
2	No
0	N/A

J-3 If not, what sort of elements were not completely finished yet?

	Things not completed
1	Electrical work
2	Interior finishing
3	Exterior finishing
4	Flooring the setbacks
5	Upper floor
6	Dwelling top-roof finishing
7	Other (specify)
0	N/A

J-4 Were you satisfied with the constructed home at moving in?

1	Yes
2	No
0	N/A

J-5 if not, what made you dissatisfied with your home?

1	Interior design
2	Interior finishing
3	Exterior finishing
4	Size of house
5	Other (specify)
0	N/A

J-6 If you applied for a certificate of occupancy, did you get it?

1	Yes
2	No
0	N/A

J-7 If not, why was your application rejected?

1	The house was not completed yet according to the required standards
2	The house was not built according to the approved plan
3	Other (specify)
0	N/A

J-8 According to your experience in building your house, to what extent do you agree or disagree with the following statements regarding the building task?

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
Stressful task psychologically and physically				
At the expense of my social and family obligations				
Very enjoyable task				
Worth the sacrifices				
N/A				

J-9 Do you think that you have succeeded in building your house as desired and planned?

1	Yes
2	No
0	N/A

J-10 Based on your experience in building your house, what would you prefer if you were given another opportunity to select your family home?

	Preferred Option
1	Buying new ready-built house from speculative builder
2	Buying ready-built house from second-hand market
3	Building a new house
4	N/A

J-11 Could you specify why would you prefer that?

1	More affordable and cheaper
2	More manageable
3	Easier
4	Other (specify)
0	N/A

J-12 If you would prefer to build your house, what type of arrangement would you select to build it?

	Preferred Arrangement
1	Contracting out the whole process
2	Hired tradesmen
3	Other (specify)
0	N/A

J-13 Could you specify why would you prefer that?

Answer: .....

Part Three: Adaptability of and Satisfaction with the Resulting Environment

Changes Made in the House

K-1 Have you carried out any changes in your house not shown in the approved design?

1	Yes
2	No
0	N/A

K-2 If not, what was the main reason for making no changes?

1	I am satisfied with my house
2	I could not get permission
3	I do not have enough funds
4	Other (specify)
0	N/A

K-3 If not, would you be willing to make any changes in the future?

1	Yes
2	No
0	N/A

K-4 If yes, what sort of changes would you like to make?

1	Adding rooms
2	Adding another floor
3	Subdivision of existing rooms
4	Conversion of rooms
5	Closing balconies
6	Raising the fence
7	Building shops in setbacks
8	Others (specify)
0	N/A

K-5 If you have made any changes, did you get the proper permission from the authority concerned for these changes?

1	Yes
2	No
0	N/A

K-6 What kind of changes did you carry out in your house?

1	Adding rooms
2	Adding another floor
3	Subdivision of existing rooms
4	Conversion of rooms
5	Closing balconies
6	Raising the fence
7	Building shops in setbacks
8	Building rooms in surrounding setbacks
9	Others (specify)
0	N/A

K-7 When did you carry out these changes?

1	During the construction phase
2	After moving into the house
0	N/A

K-8 If you carried out these changes after moving in, how long after moving in did you carry out the first change?

Answer: ..... (Years)

K-9 What are the main reasons for the changes you made?

1	To get more space for the household
2	To generate more income
3	To get more space for storage purposes
4	To gain more privacy
5	To gain more security
6	Other (specify)
0	N/A

K-10 How did you fund these changes?

1	Personal and family savings
2	Loan from the banking sector
3	Loan from relatives or friends
4	Other (specify)
0	N/A

K-11 Are you satisfied with the changes you made?

1	Very satisfied
2	Satisfied
3	Neutral
4	Dissatisfied
5	Very dissatisfied
0	N/A

K-12 If you are dissatisfied with these changes, what is/are the reason/s for your dissatisfaction?

1	Poor structural quality
2	Created problems with my neighbours
3	Poor finishing and appearance
4	Reduced natural light and air
5	Other (specify)
0	N/A

K-13 Do you think that the authority concerned should allow residents to carry out changes freely?

1	Yes
2	No
0	N/A

K-14 If no, what do you suggest?

1	Changes should be controlled
2	Changes should be disallowed
3	Other (specify)
0	N/A

K-15 Have you carried out any sort of maintenance on your house since you moved in?

1	Yes
2	No
0	N/A

K-16 If yes, how many times?

Answer: .....

K-17 Could you mention after how long from moving in you carried out maintenance?

1	Less than one year
2	1-2 years
3	2-3 years
4	3-4 years
5	4-5 years
6	5 years or more
0	N/A

K-18 Could you state the first sort of maintenance work/s that you carried out after moving in?

1	Repairing reinforced concrete
2	Interior plastering work
3	Exterior plastering work
4	Painting work
5	Re-tiling bathrooms or kitchen
6	Electrical work
7	Plumbing
8	Doors and windows
9	Other (specify)
0	N/A

K-19 Could you state how much this maintenance cost you?

Answer:.....(LD)

Overall Satisfaction with Present Housing

At Home Level

L-1 How satisfied are you with each of things listed below related to your house?

(1) Very satisfied (2) Satisfied (3) Neutral (4) Dissatisfied (5) Very dissatisfied

Dwelling feature	1	2	3	4	5
Type of dwelling					
Size of dwelling					
Interior of dwelling					
Exterior of dwelling					
Privacy					
Size and use of setbacks					
Proximity to facilities					

L-2 Could you specify the features that you most like or dislike in your house?

(1) Strongly like (2) Like (3) Neutral (4) Dislike (5) Strongly dislike

Dwelling feature	1	2	3	4	5
Reception room/s					
Bedrooms					
Kitchen/s					
Balconies					
Entrance					
Bathrooms					

L-3 Compared with your previous house, how would you rate your present house?

1	Better
2	Same
3	Worse
0	N/A

L-4 What type of housing would you prefer to live in?

	Preferred housing type
1	Detached dwelling
2	Terraced dwelling
3	Flat
4	Courtyard house
5	Other (specify)
0	N/A

At Neighbourhood Level

M-1 How satisfied are you with the following features in your neighbourhood?

(1) Very satisfied (2) Satisfied (3) Neutral (4) Dissatisfied (5) Very dissatisfied

Neighbourhood feature	1	2	3	4	5
Proximity to facilities					
Condition of open spaces					
Safety and security					
Relationships with neighbours					
Aesthetics, cleanliness					
Availability and quality of facilities					
Road network and public transportation					

M-2 Compared with your previous neighbourhood, how would you rate your present neighbourhood?

1	Better
2	Same
3	Worse
0	N/A

M-3 Could you please specify the features you most like or dislike in your neighbourhood?

(1) Strongly like (2) Like (3) Neutral (4) Dislike (5) Strongly dislike

Neighbourhood feature	1	2	3	4	5
Relationships with neighbours					
Quality and quantity of drinking water					
Location within the city					
Sewage network					
Public transport and condition of road network					
Condition of open spaces					

M-4 In what type of area would you prefer to live?

	Preferred domicile
1	The city centre
2	Suburbs of the city
3	Village or town where all facilities are available
4	Other (specify)
0	N/A

M-5 To what extent might you encourage friends of you to move into and live in this area?

1	Certainly
2	Perhaps
3	Never
0	N/A

M-6 Could you please mention any important features you would like in your area?

Answer: .....

Appendix (2)

Key questions asked during open-ended interviews with owner-builders (OBs)

.

- Why did you decide to build your home, and why didn't you think about buying a ready-built house, for instance?

- Where did you live before building your house? Could you describe your housing conditions?

- How did you obtain the plot of land to build your current house on?

- Would you tell us about the design of your home and your initial expectations about that design?

- Who made the design and what did you expect of that design? Did your family play any role in making the design?

- Would you tell us about obtaining the building permit? Was it readily provided to you?

- Did you start the building straight away after you got your permit?

- How did you arrange for the construction of your house? And what factors affected this arrangement?

- Had the hired builder been involved in the design of the house or the selection of building materials?

- Were you involved in any construction task that was the responsibility of the hired builder?

- Who supervised the construction work of your house?

- Did you have any disagreements or disputes with the hired builder regarding the quality or progress of construction?

- How did you fund the construction of your house? If you were given a building loan, to what extent was it sufficient to cover the total costs of construction?

- How did you manage to obtain building materials, and at what cost?

- While the construction process of your house was in progress, did you make any changes to the approved plan?

- How would you describe your feelings when you moved into your new house for the first time? What did you think of the internal and external finishing?

- How have you adapted your home since you have been living n it? Have you made any changes to the house, and if so, why?

- Has any maintenance work been carried out in the house?

- How do you feel about your house now? To what extent are you happy, and why?

- What are the things you particularly like and don't like in this house?

- How do you rate the neighbourhood in general and your relationships with your immediate neighbours? Have you any intention of moving from here?

- How did your quality of life suffer while you were building the house?

- In what ways do you think the government should sponsor people to establish their own homes?

Appendix (3)

Key questions asked during semi-structured interviews with officials in the Urban Planning Authority (UPA)

- What are the main factors affecting the planning and approval of new residential subdivisions?

- Is it possible to meet the increased demand for land for OBH in the short and long term? Please explain your answer?

- What actions need to be taken to eliminate the constraints facing the supply of land for residential purposes?

- How is physical development in OBH areas controlled? And to what extent is the control mechanism adopted effective in preventing any illegal development from occurring in these areas?

- How is a building permit issued? What documents are required? And what are the main criteria used when considering applications for building permits?

- For how long is a building permit valid? How many times can it be renewed?

- Why do some applications for building permits take longer to be considered? And what are the main reasons for rejecting applications?

- To what extent do you think that the present physical planning standards and building regulations are appropriate, given the socio-cultural and economic conditions of Libyan families?

- Which building regulations do you think are unsuitable and need to be reconsidered?

- Why do many OBH areas lack basic infrastructure? And to what extent does the quality of neighbourhood infrastructure influence the satisfaction of residents in OBH areas?

- What are the main reasons behind the widespread of the phenomenon of changes carried out by people to their own houses?

- Based on your experience, what sort of spaces are most frequently subject to alteration or extension in houses? And why?

- What is your position with regard to physical changes carried out by residents in their houses? And how do you deal with applications made by house owners wishing to extend or alter their houses?

- Based on your experience, what sort of actions would have to be taken at national and local levels to improve and enhance residential and environmental quality in OBH areas?

Appendix (4)

Key questions asked during semi-structured interviews with officials in the Land and Real-estate Properties Office (LREPO)

- What factors have affected the availability and accessibility of publicly-owned land for residential purposes over the past three decades?

- How is publicly-owned land allocated to prospective allottees? And what criteria are used to determine the eligibility of applicants?

- To what extent have applicants for land applicants been affected by instabilities in the mechanism through which publicly-owned land has been allocated over the past three decades?

- How could a transparent and impartial allocation mechanism for publicly-owned land be established and operated?

Appendix (5)

Key questions asked during semi-structured interviews with designers

- How have the interior and exterior designs of single-family dwellings developed over the past three decades? And what are the main factors influencing this development?

- As a designer, do you think that all Libyan families regard the single-family dwelling as the ideal housing type that would satisfy their housing needs, desires and aspirations?

- What are main principles that the Libyan family often consider in making the design of a house?

- To what extent do you think that the phenomenon of copying ready made designs has spread in Libyan society? And why?

- Is it realistic that the state should prepare and enforce the adoption of typical house designs, and specify certain methods of construction and particular building materials? And why?

- Based on your experience, how could more flexible and adaptable house designs capable of satisfying the changing needs of Libyan families be developed?

- From your point of view, are the changes made by people into their houses the result of of their needs or their desires?

- To what extent do you believe that levels of satisfaction with houses are influenced by the ability of occupiers to carry out alteration and extensions?

- What are the main factors that would contribute to unnecessary increases in the total cost of OBH construction, particularly in relation to detached dwellings?

- Based on your experience, what building materials could be used less in building affordable dwellings without harming their quality and adaptability?

- What role can technical assistance and efficient supervision play in reducing the total costs of construction? Please give examples.

- Based on your experience, is there any relationship between the perceived quality of the interior and exterior of the house and that of the surrounding environment? And how could such perceptions be affected?

- To what extent does the type of labour employed in building the house influence its quality and the total costs of construction? Why?

- What sort of actions have to be taken to protect prospective owner-builders from fraud or cheating by construction workers?

- To what extent do you agree that the increases in the sizes of building loans do not reflect the increases in prices of building materials and labour over the past three decades?

- What are the main principles that have to be considered in determining the size and issuing of building loans?

- How can designers prepare designs that are capable of satisfying the current and future needs and aspirations of Libyan families?

Appendix (6)

Key questions asked during semi-structured interviews with master builders

- Would you tell us how you became qualified to be a builder?
- Do you belong to any building trade union?
- Are you aware of the building regulations enforced in Libya?
- Do you examine the building permit prior to starting work?
- What is the most common type of arrangement you enter into when undertaking construction work? And how do you regard the different types of arrangement?
- Based on your experience, how have the construction costs developed over the past three decades? And what are the main factors contributing to any changes?
- Have you ever been involved in construction work under the direct supervision of an engineer or architect? If yes, how would you judge your relationships with them?
- Based on your experience, to what extent have people's preferences changed concerning the selection of building materials for both the interior and exterior finishing of the house? Please give examples?
- To what extent do you agree with the statement that the hired builder is totally responsible for the quality of construction work? Please explain your answer
- Many people complain about hired builders who involve themselves simultaneously with more than one client. Have you ever done that? Why?

- Have you ever given advice with regard to the design of any house that you have been involved in building? If yes, what sort of advice did you give?

- Have you been involved in carrying out any extensions or alterations to houses? If yes, to what extent does such work influence the quality of the house?

- Based on your experience, what is the best type of arrangement that could be adopted by prospective owner-builder to construct his house? Why?

- How could the total cost of house construction be reduced without affecting its structural and aesthetic quality?

Appendix (7)

Key questions asked during semi-structured interviews with officials in the banking sector

- What have been the main trends in the real-estate loan programmes over the past three decades, particularly in relation to the size of loans, interest rates and eligibility requirements?

- What is the main criterion used in determining the size of a loan? And do you think this is rational in the light of the increased costs of construction?

- How have changes in the real estate loan programmes affected the ability of owner-builders to build their own houses, particularly those among the low-income strata of society?

- Why have many real estate lending institutions been unable to sustain a regular and sufficient supply of loans?

- Would you please clarify the main obstacles facing the expansion of real estate loan programmes, particularly those devoted to OBH activities?

- What sort of actions would have to be taken to make real estate lending programmes more effective and adequate to the increased demand for building loans?

Appendix (8)

Key questions asked during semi-structured interviews with officials in publicly-owned materials supply channels

- What sort of factors has affected the accessibility and availability of building materials to owner-builders over the past three decades?

- Do you think that the building materials in the market are sold at reasonable prices that reflect their production and marketing costs? Please explain your answer

- To what extent do you agree with the statement that the mechanisms through which basic building materials such as cement and steel are sold to individual owner-builders have been ineffective?

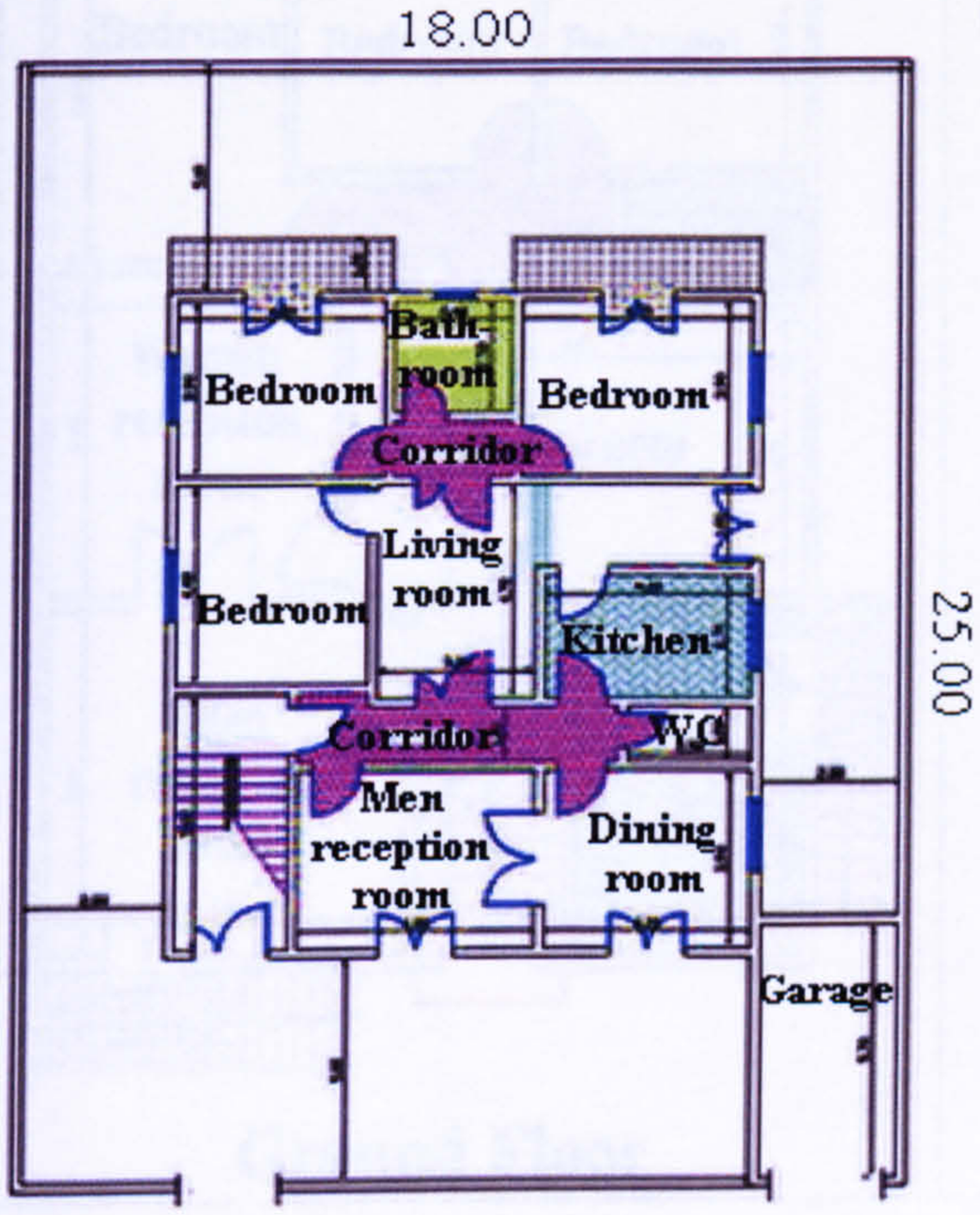
- Is there any co-operation between you and other actors involved in housing activity to sustain a regular supply of materials?

- What sort of actions would have to be taken at all levels to ensure regular, efficient and sufficient supplies of materials to builders?

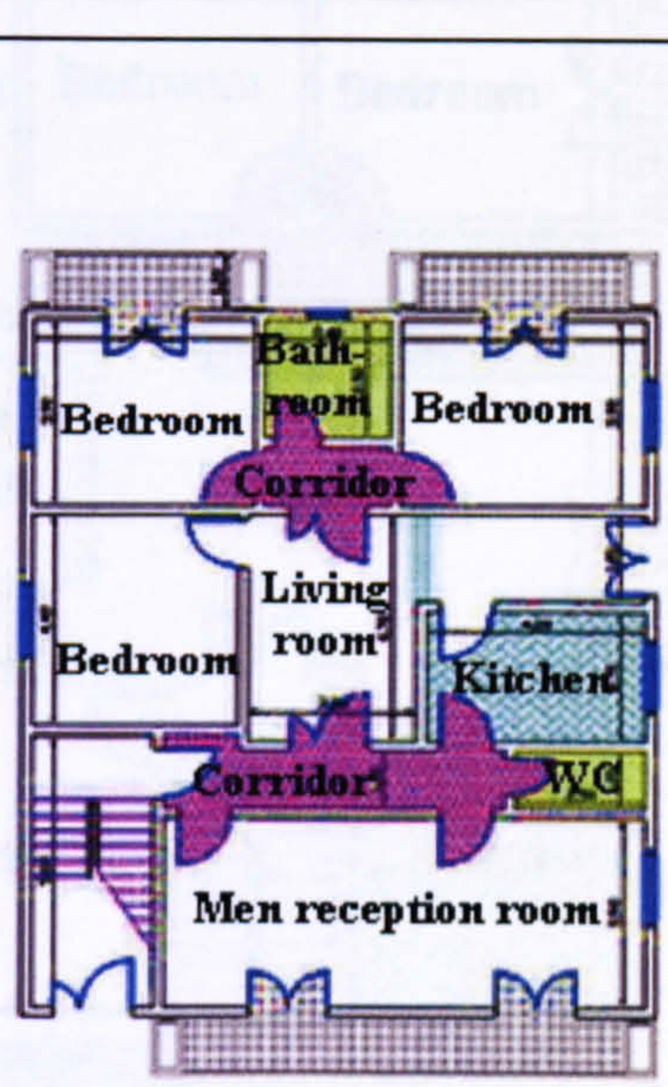
Appendix (9)

Typical Plans of Villas in El-Salam and El-Mukhtar Areas

Typical Plan of Villa in El-Salam Area

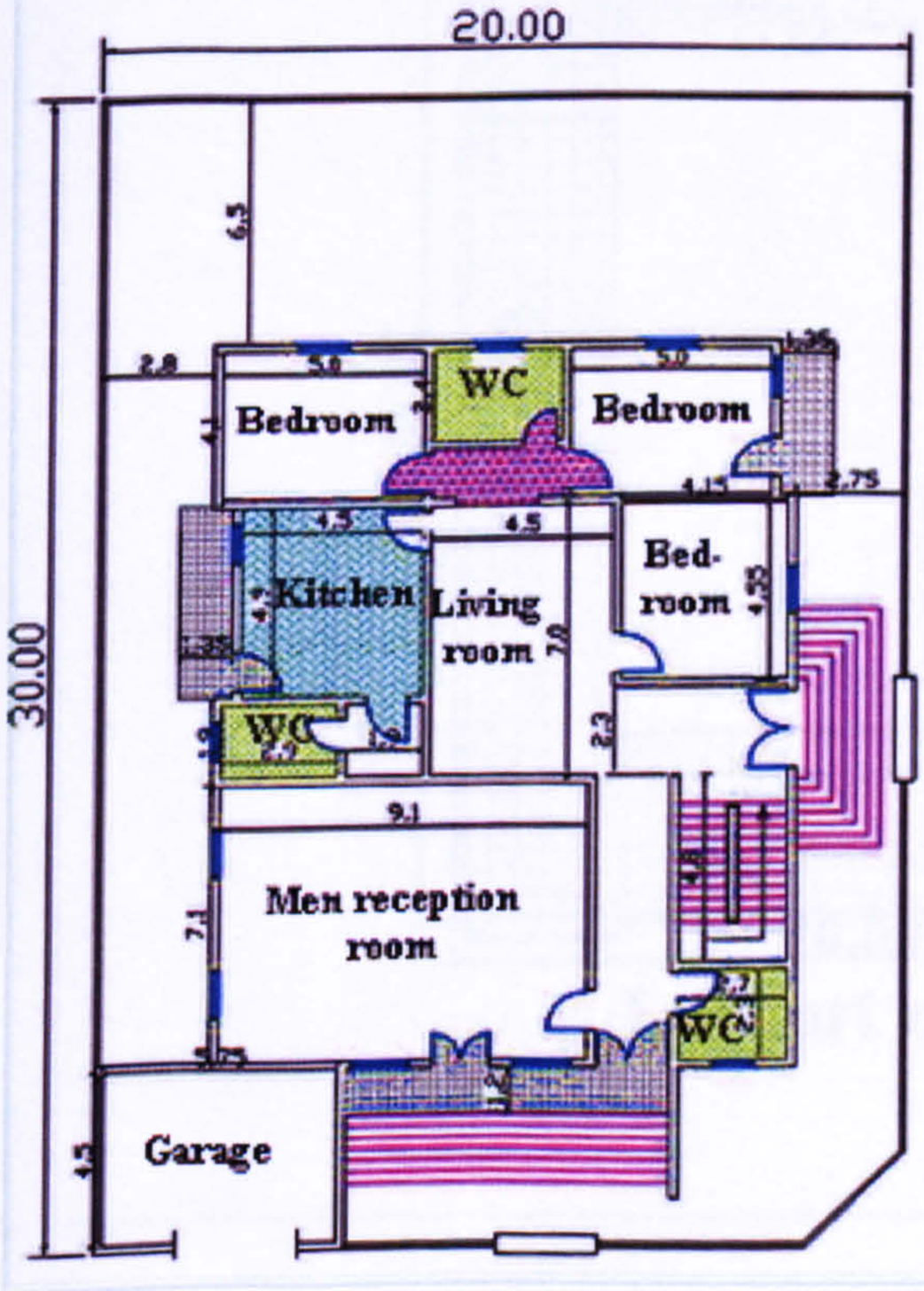


Ground Floor

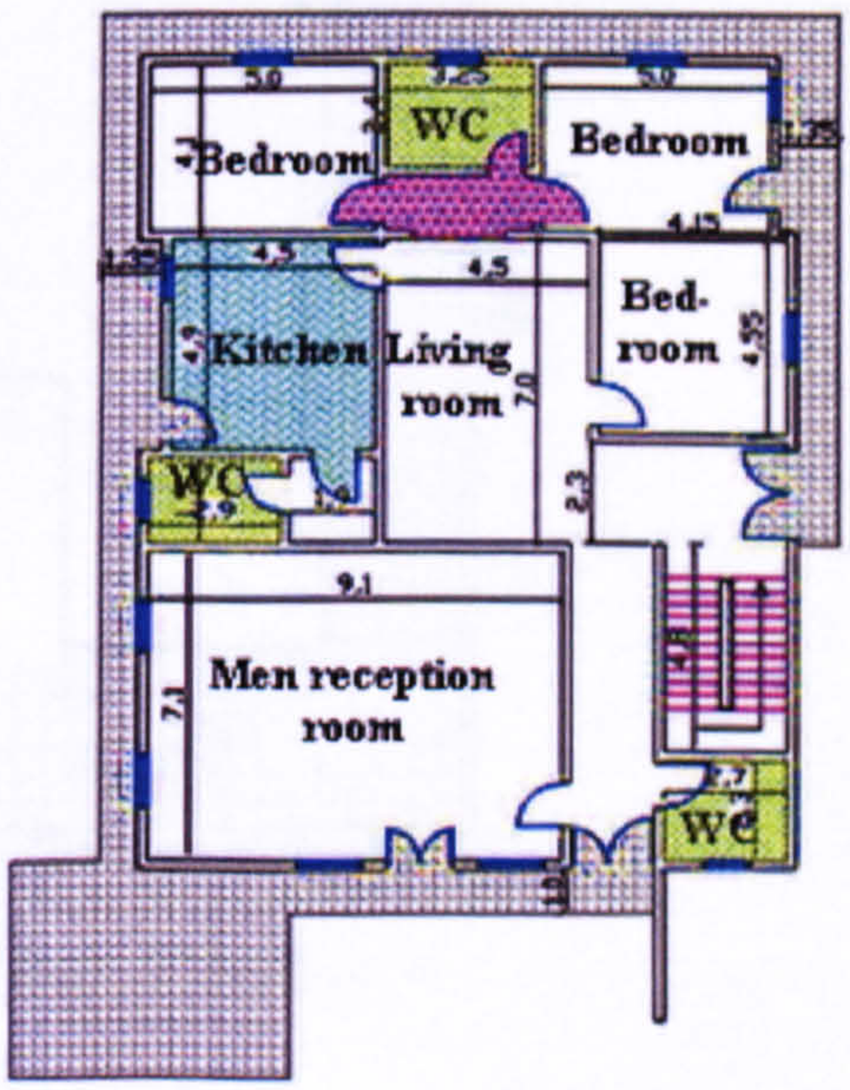


First Floor

Ground Floor

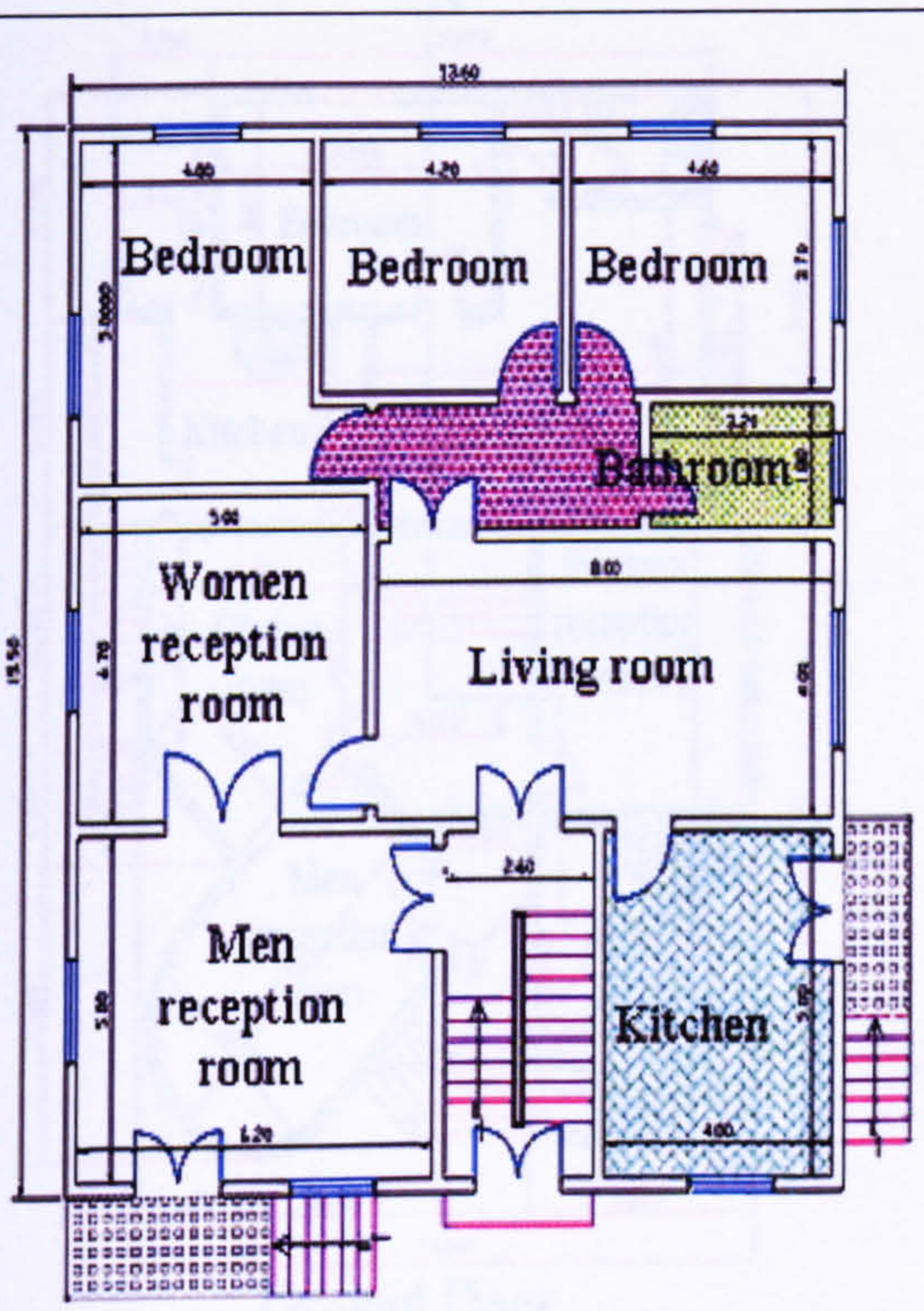


First Floor

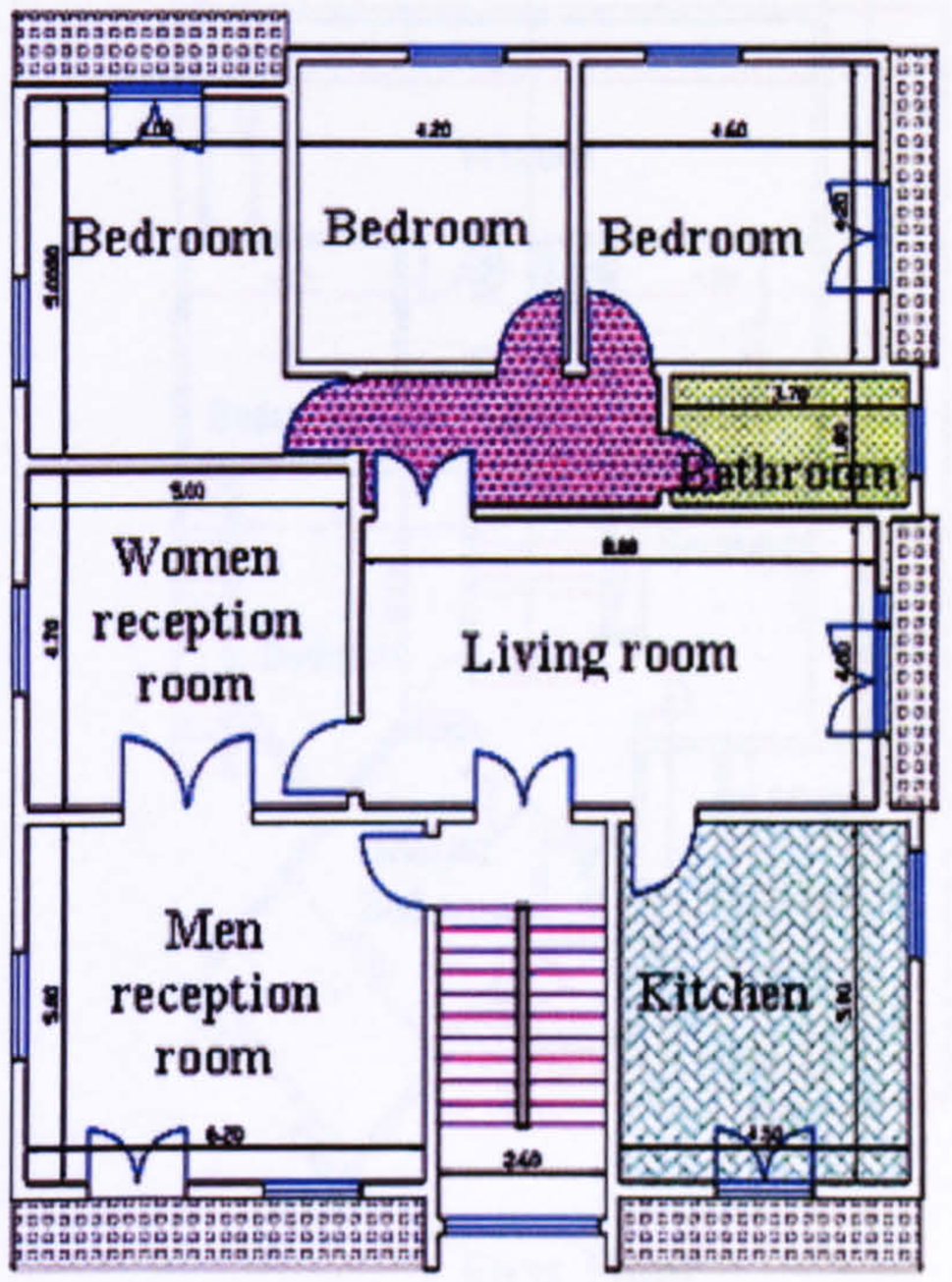


Typical Plan of Villa in El-Mukhtar Area

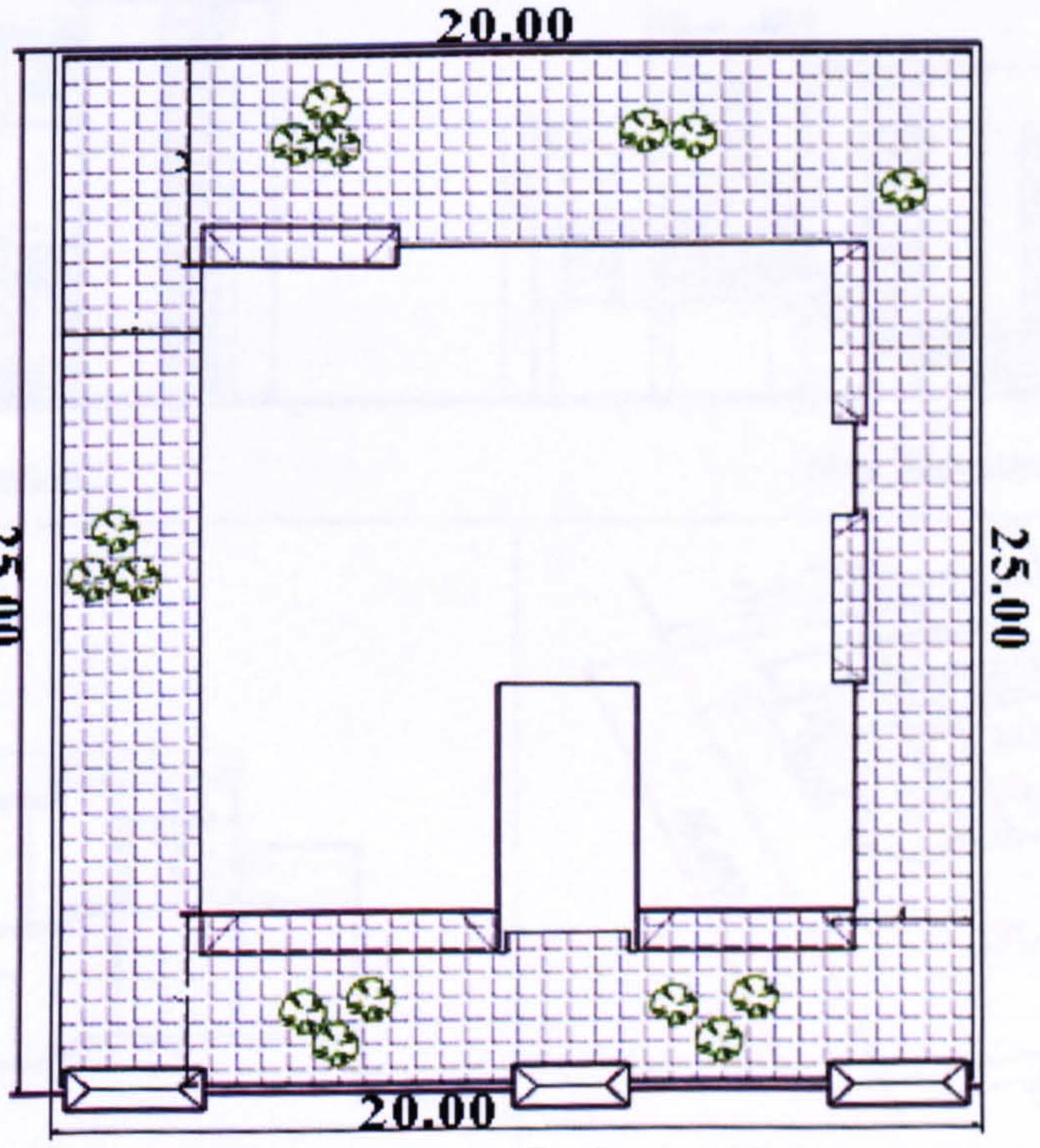
Typical Plan of Villa in El-Salam Area



Ground Floor

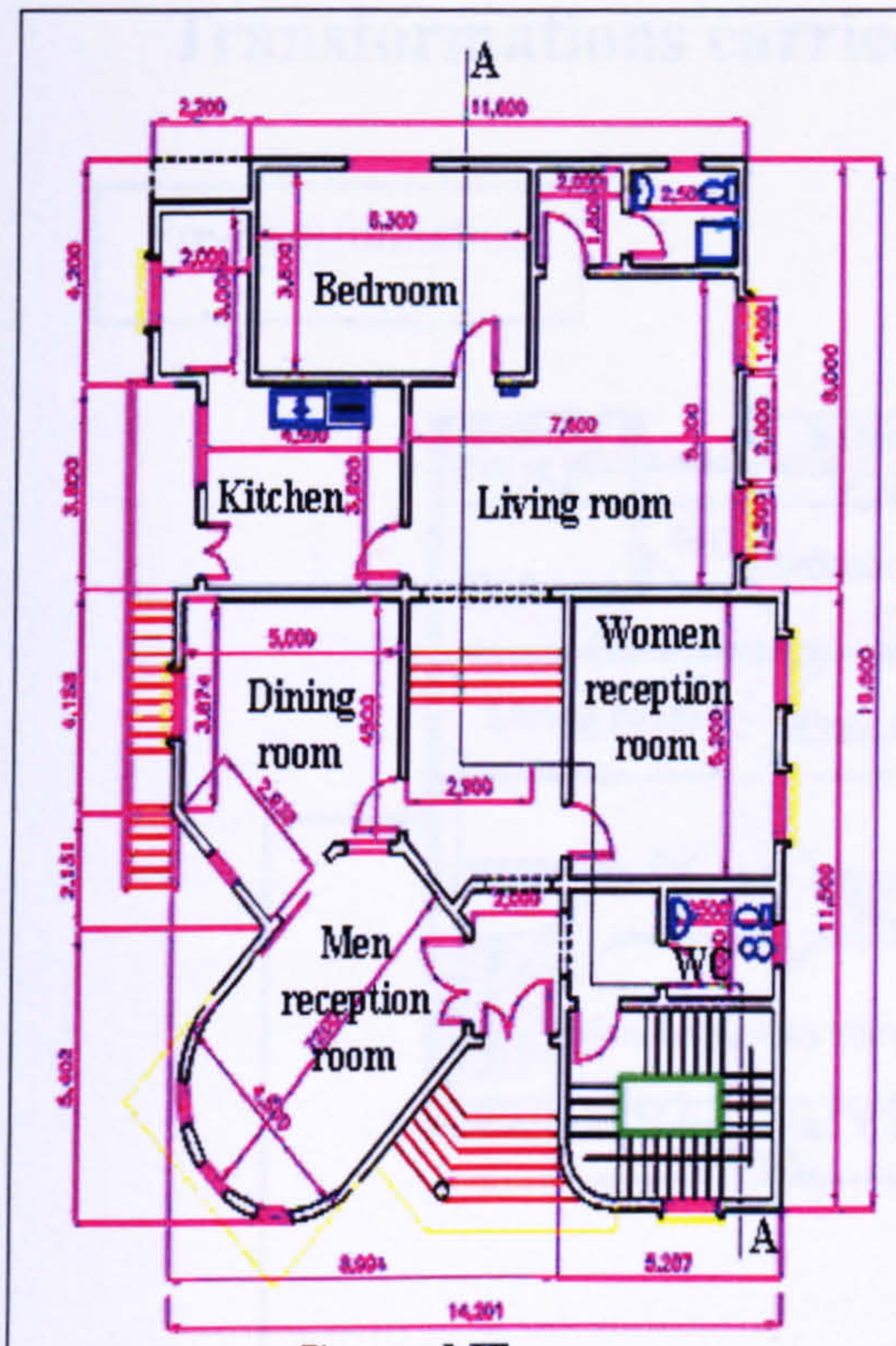


First Floor

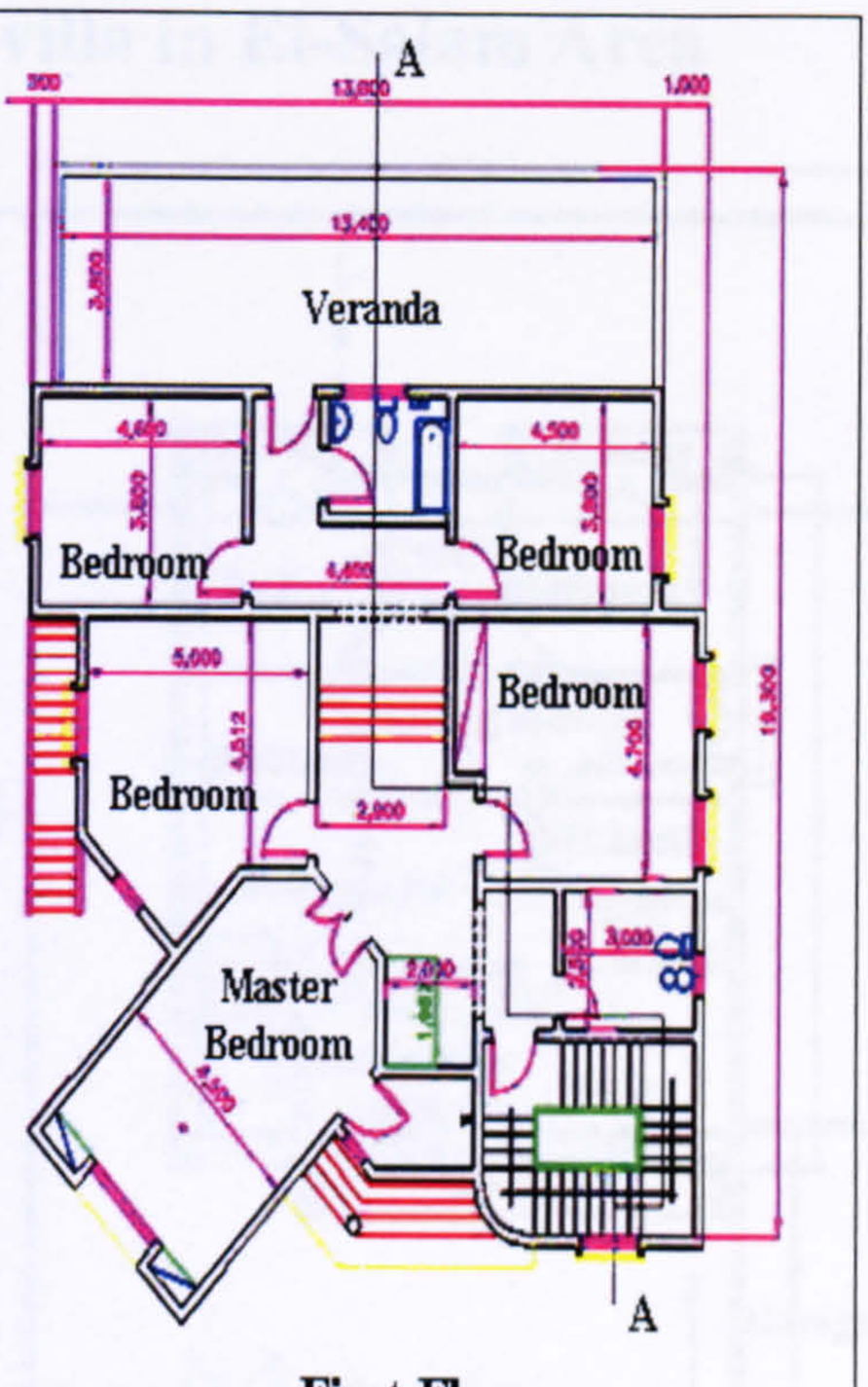


Layout of the Plot

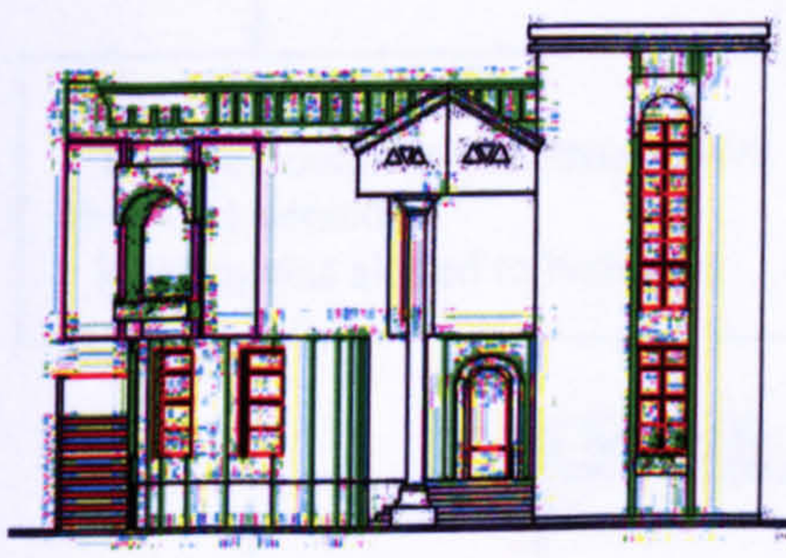
Typical Plan of Villa in El-Mukhtar Area



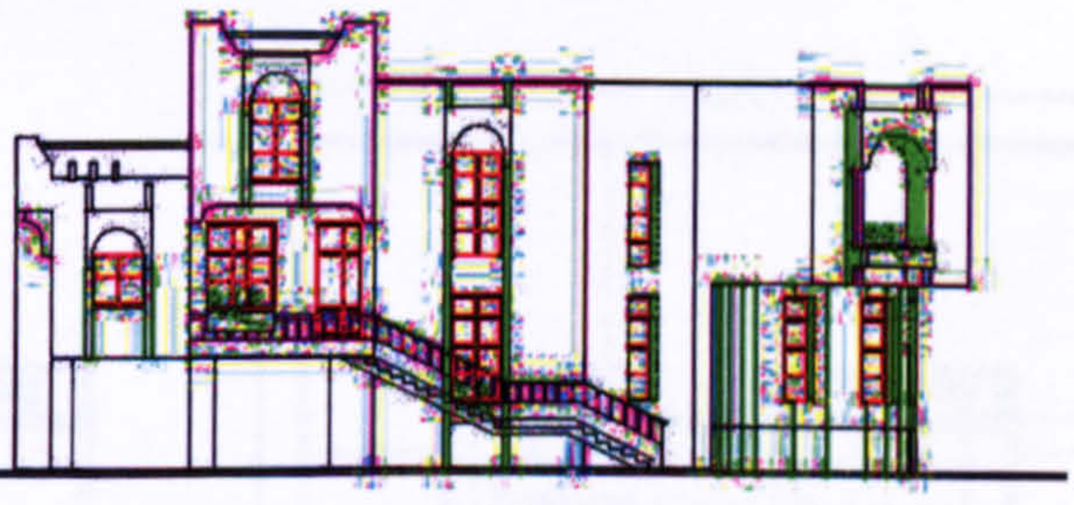
Ground Floor



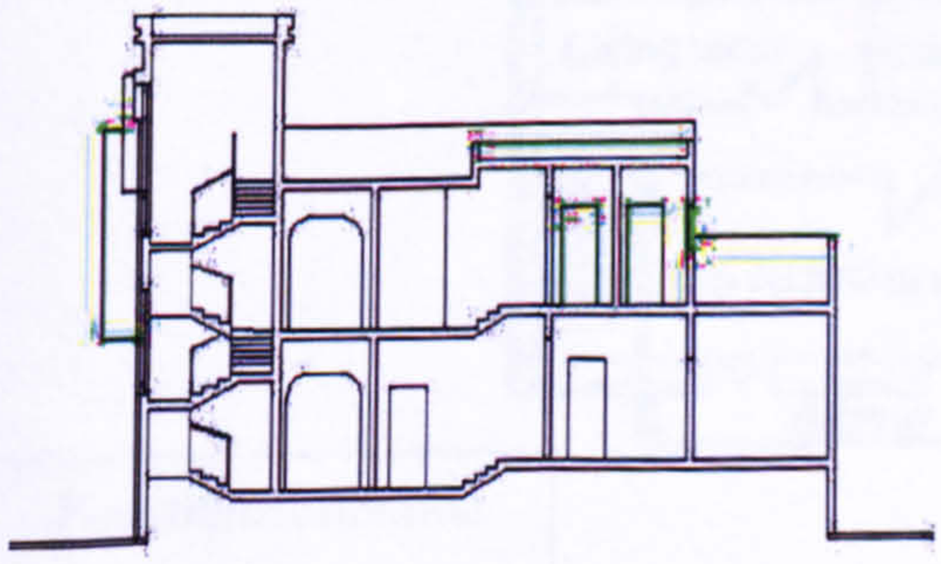
First Floor



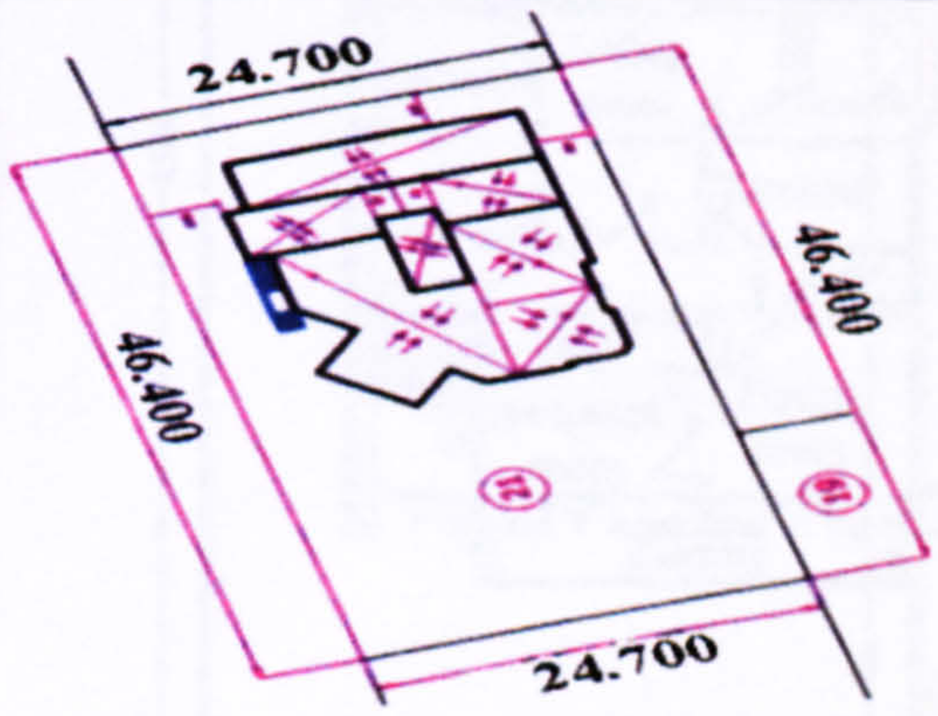
Front Elevation



Side Elevation



Cross-sectionA-A

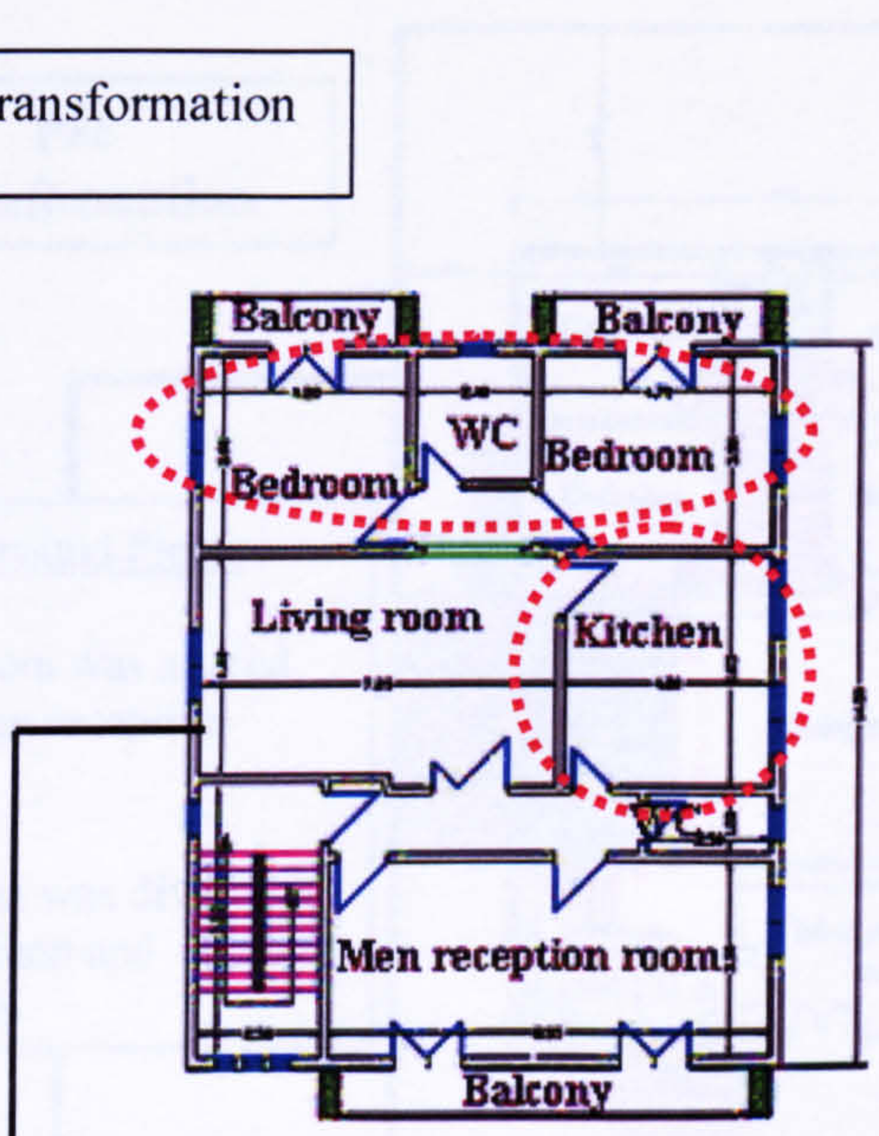


Layout of the Plot

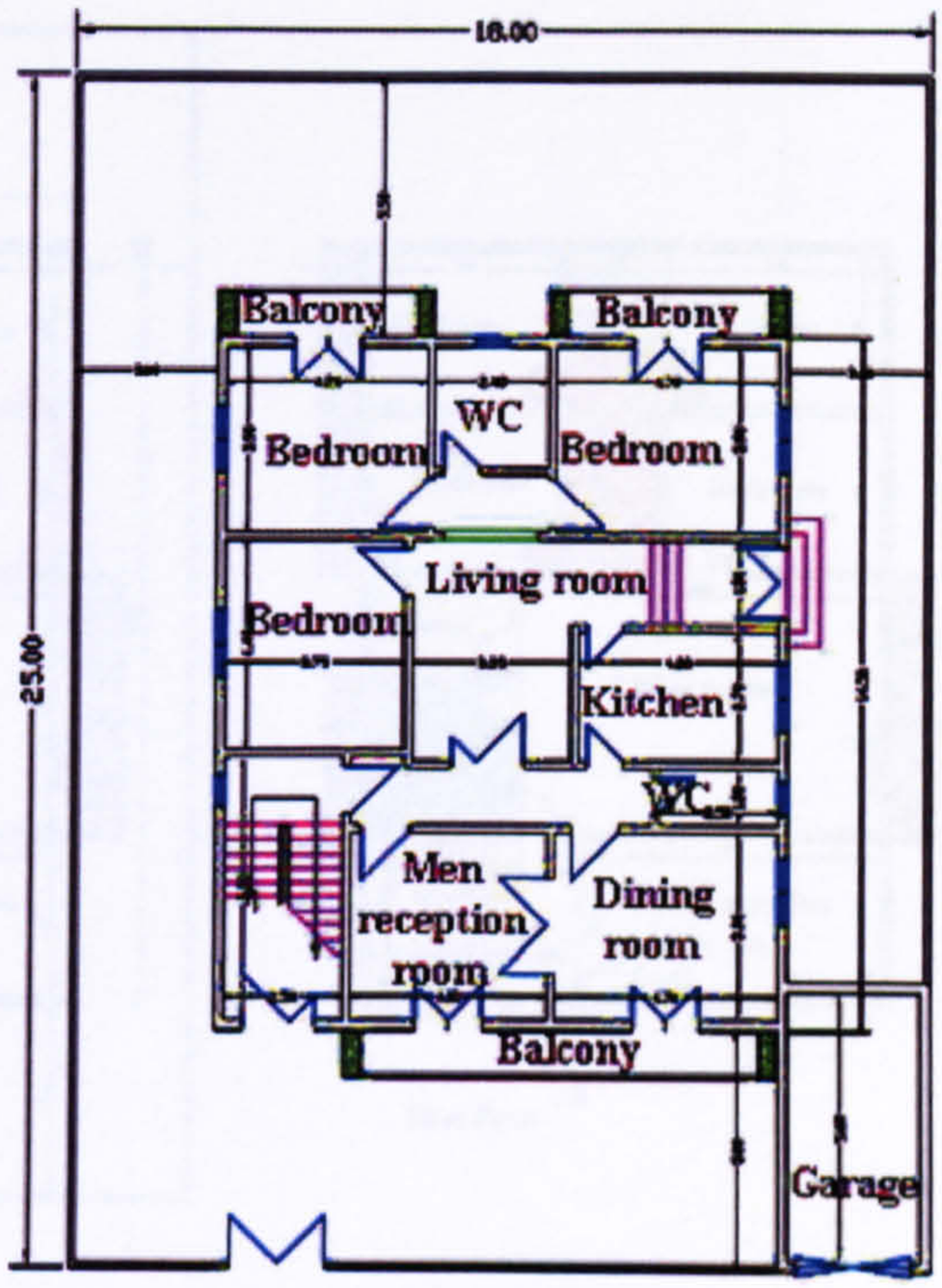
Appendix (10)

Transformations carried out in a villa in El-Salam Area

Pre-transformation

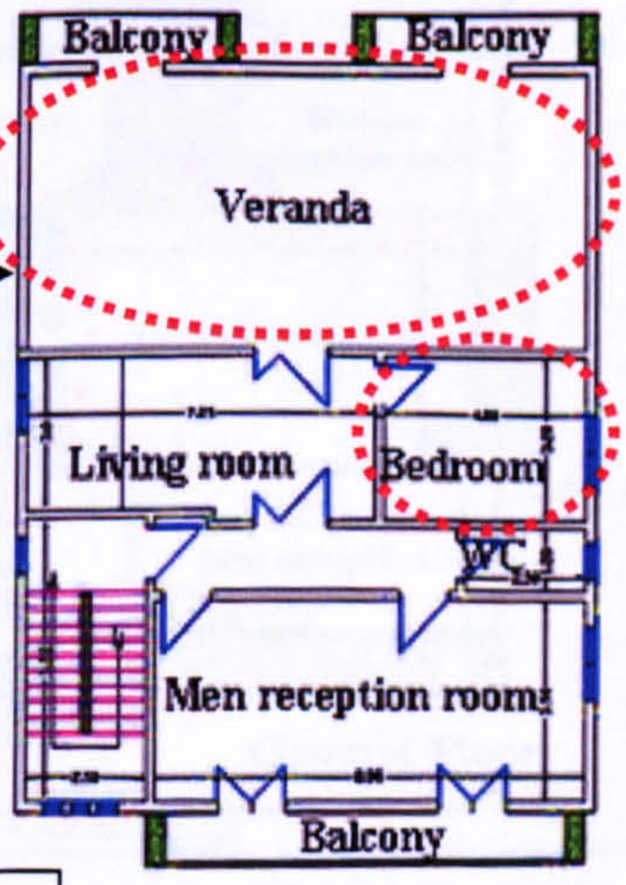


First Floor

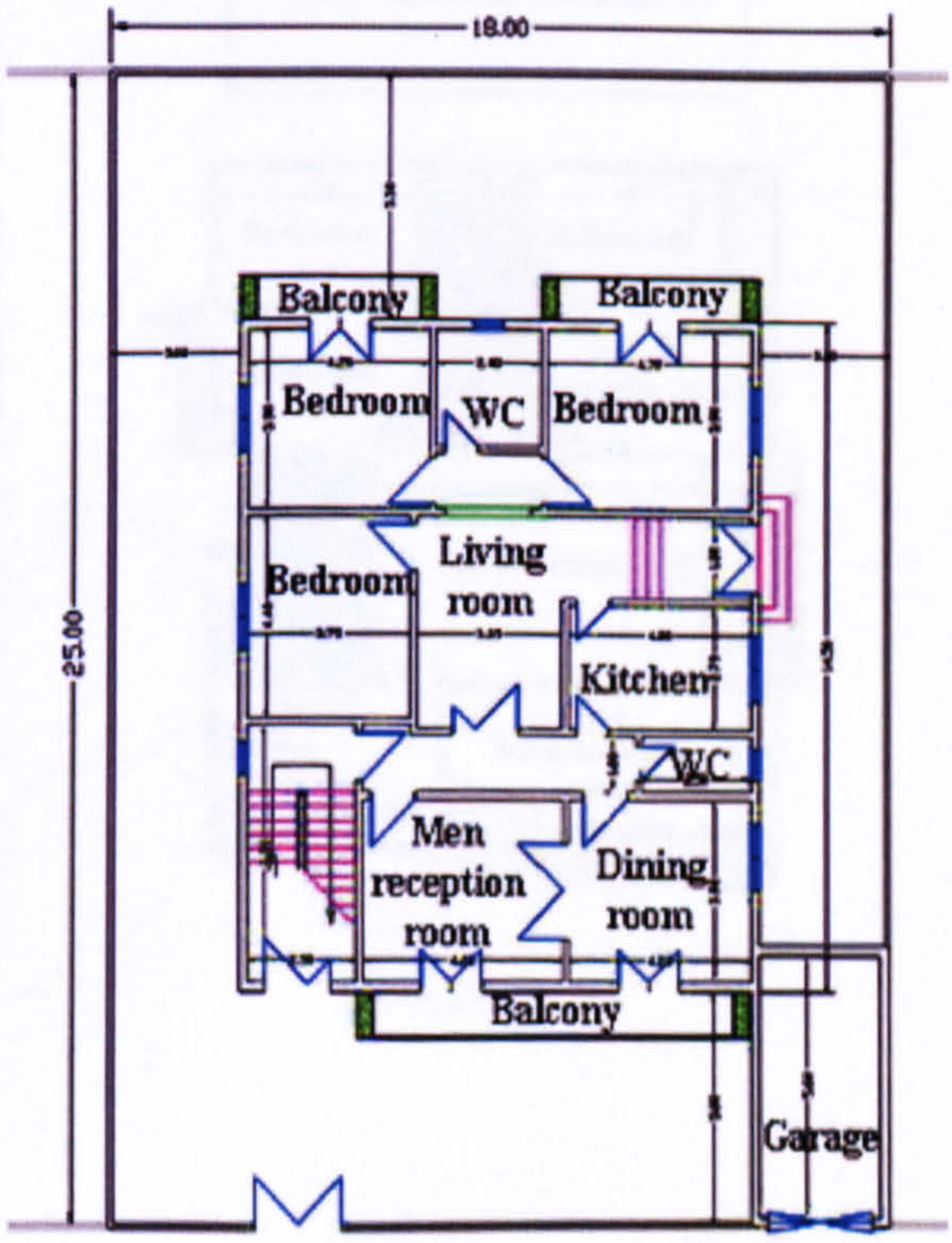


Ground Floor

In the First Floor:
* Two bedrooms and bathroom were altered to veranda.
* Kitchen was altered to bedroom.



First Floor



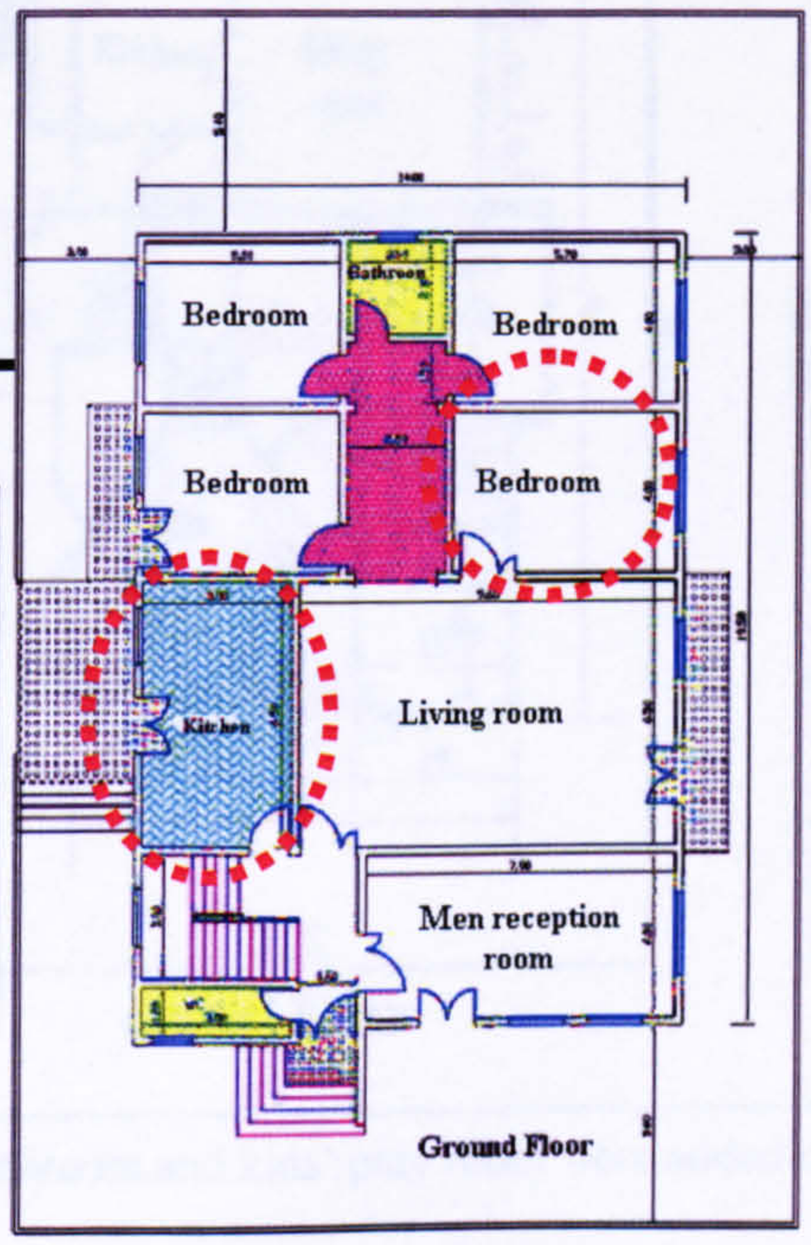
Ground Floor

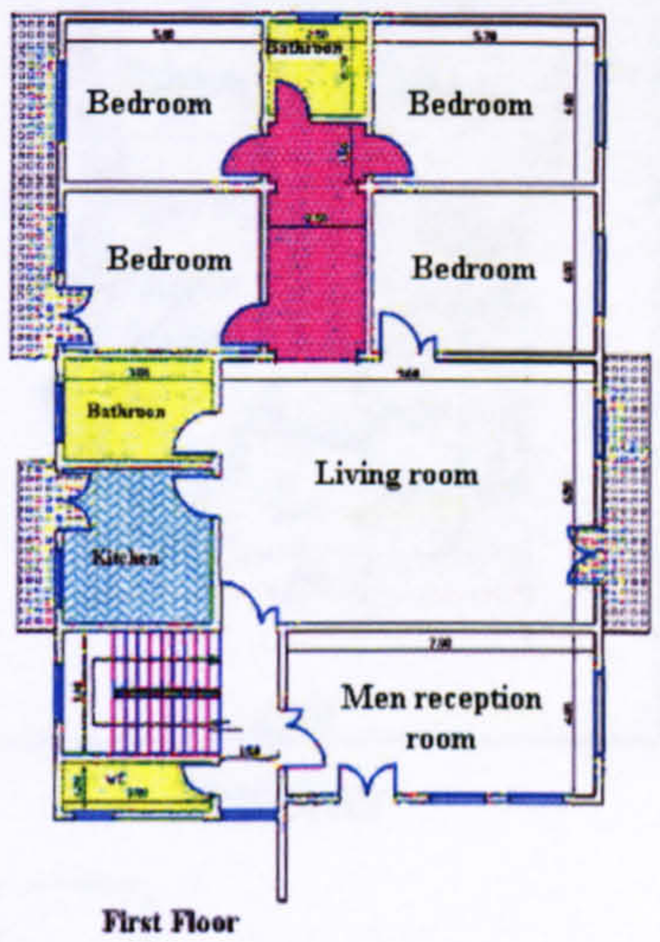
Post-transformation

Appendix (11)

Transformations carried out in some villas in El-Mukhtar Area

Pre-transformation



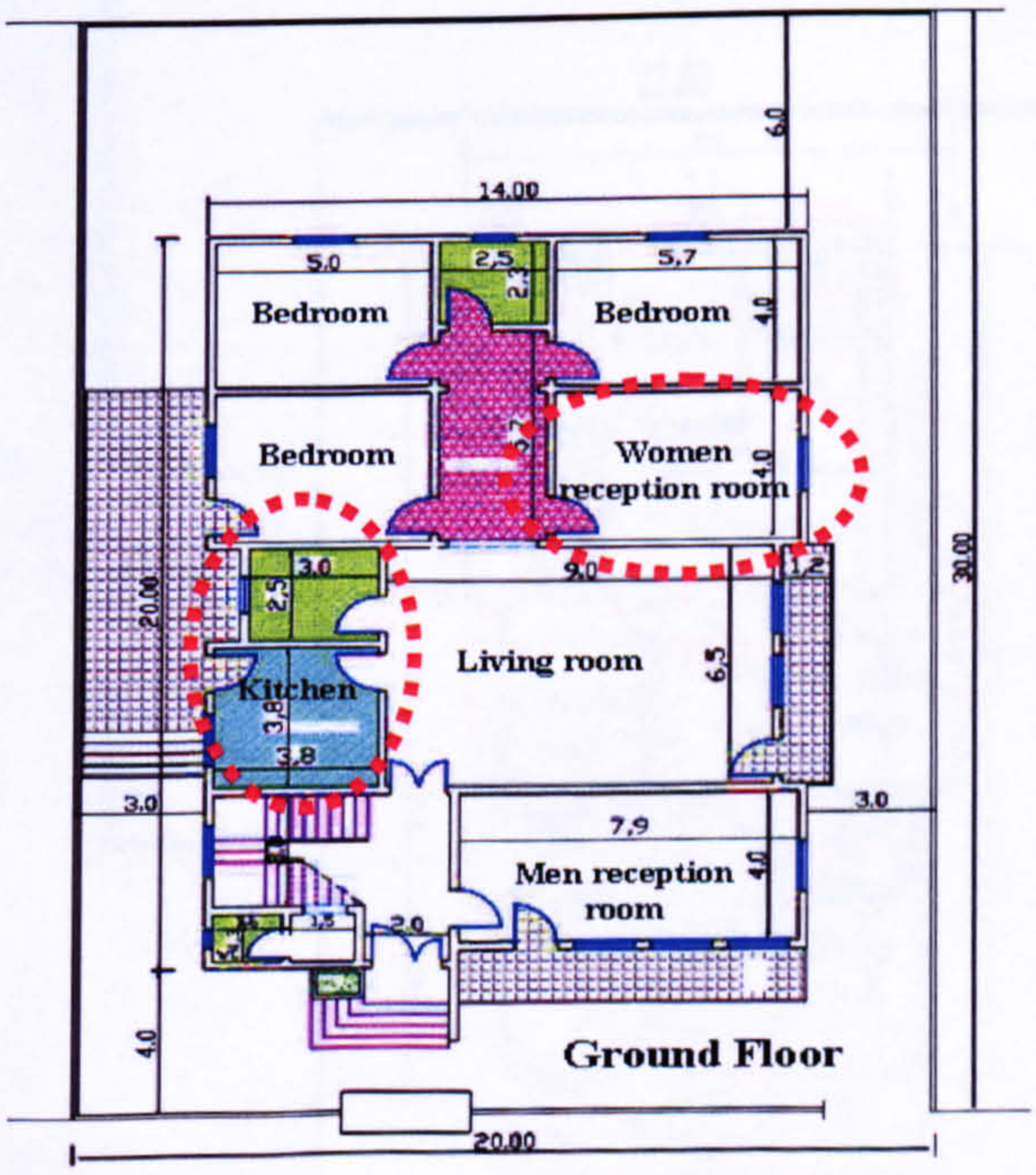


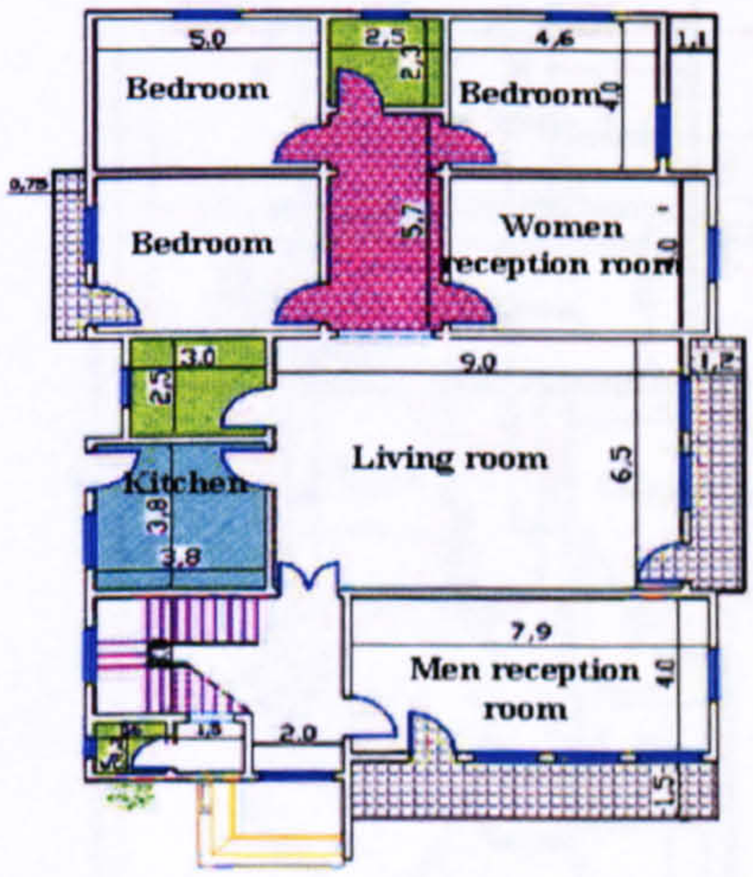
In the Ground Floor:

* Bedroom was altered to women reception room.

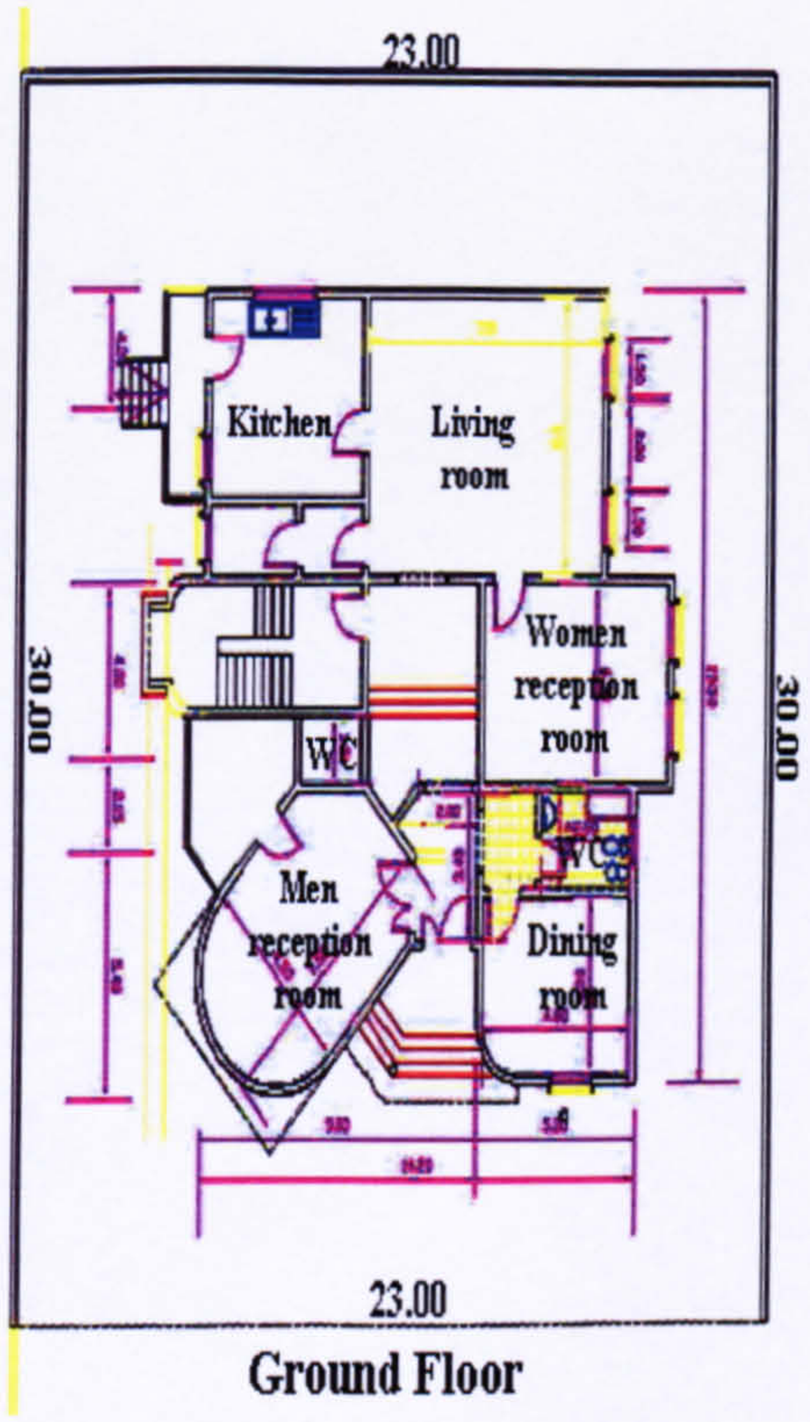
* Kitchen was divided to new kitchen and bathroom

Post-transformation

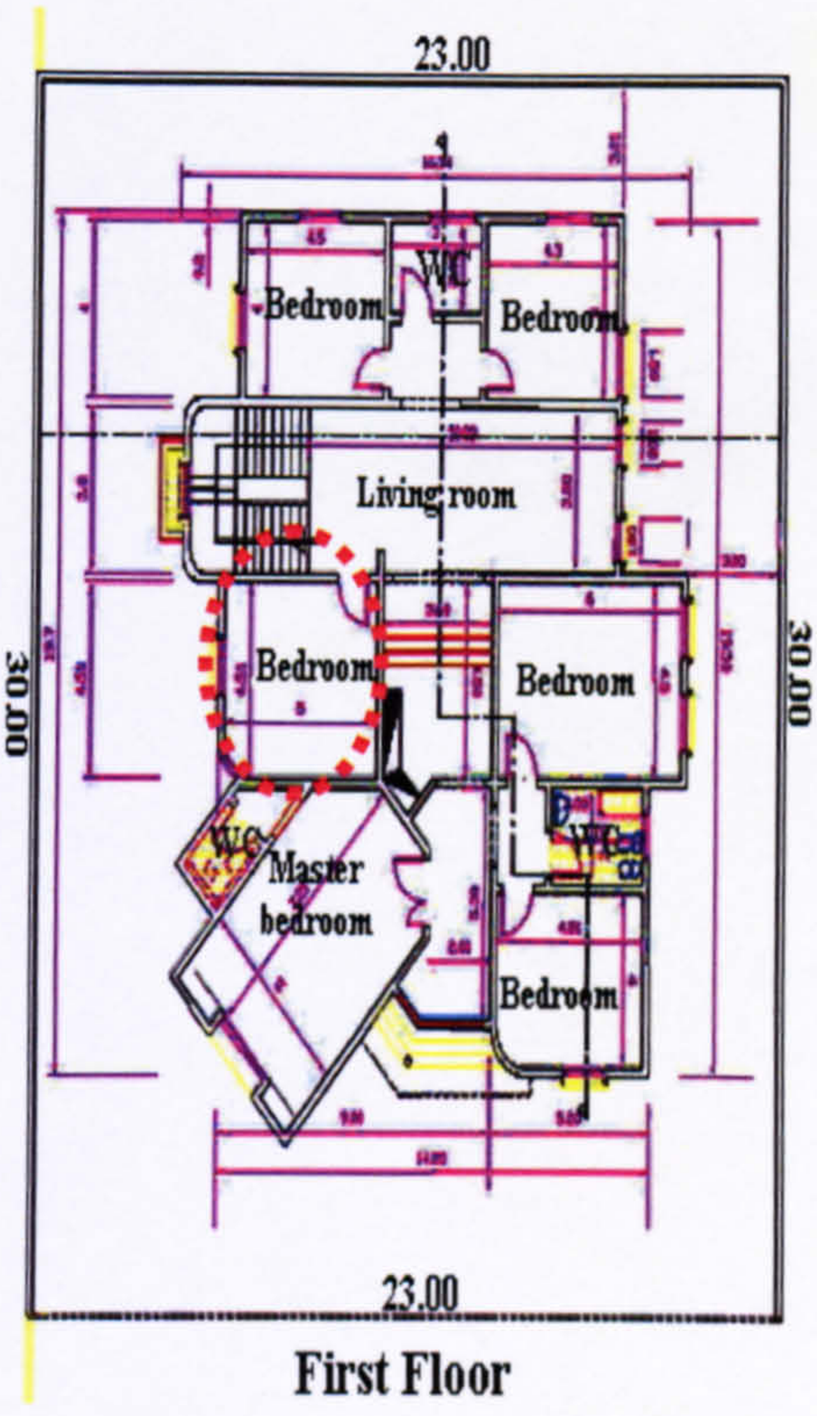




Pre-Transformation



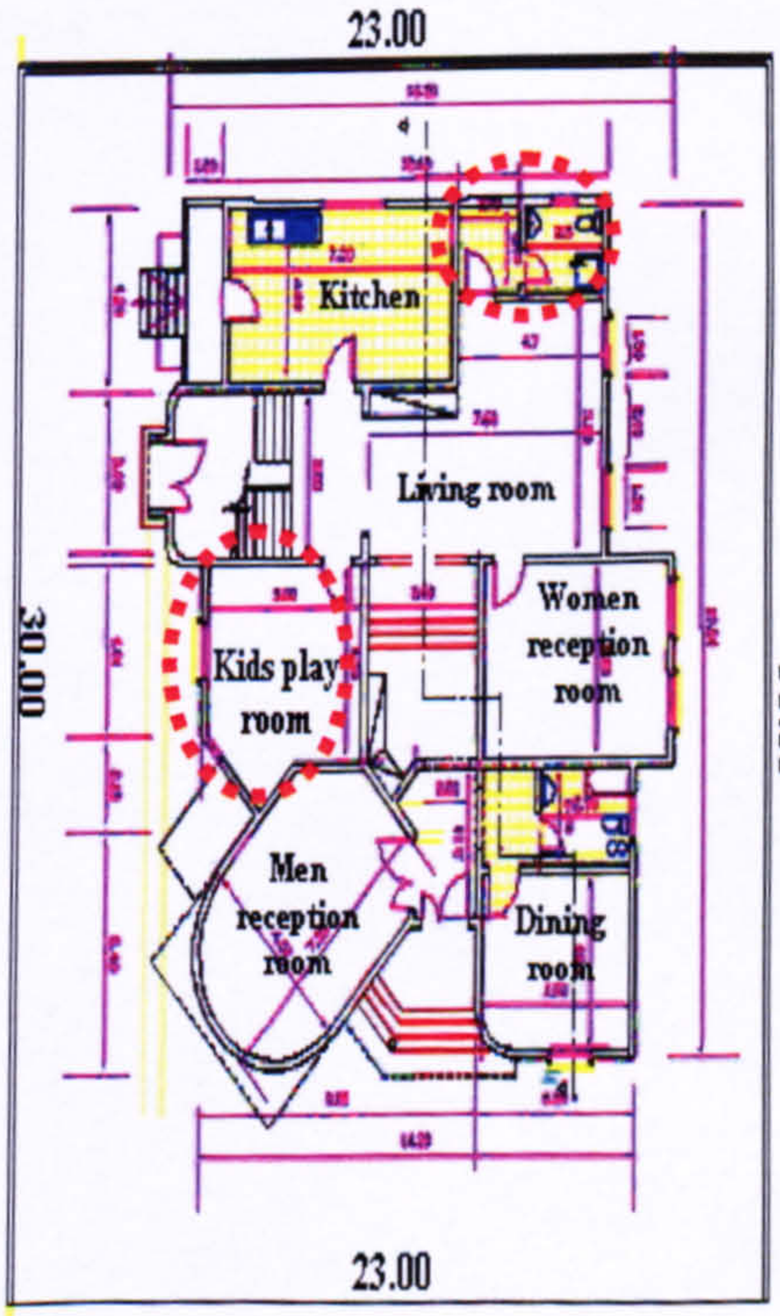
Ground Floor



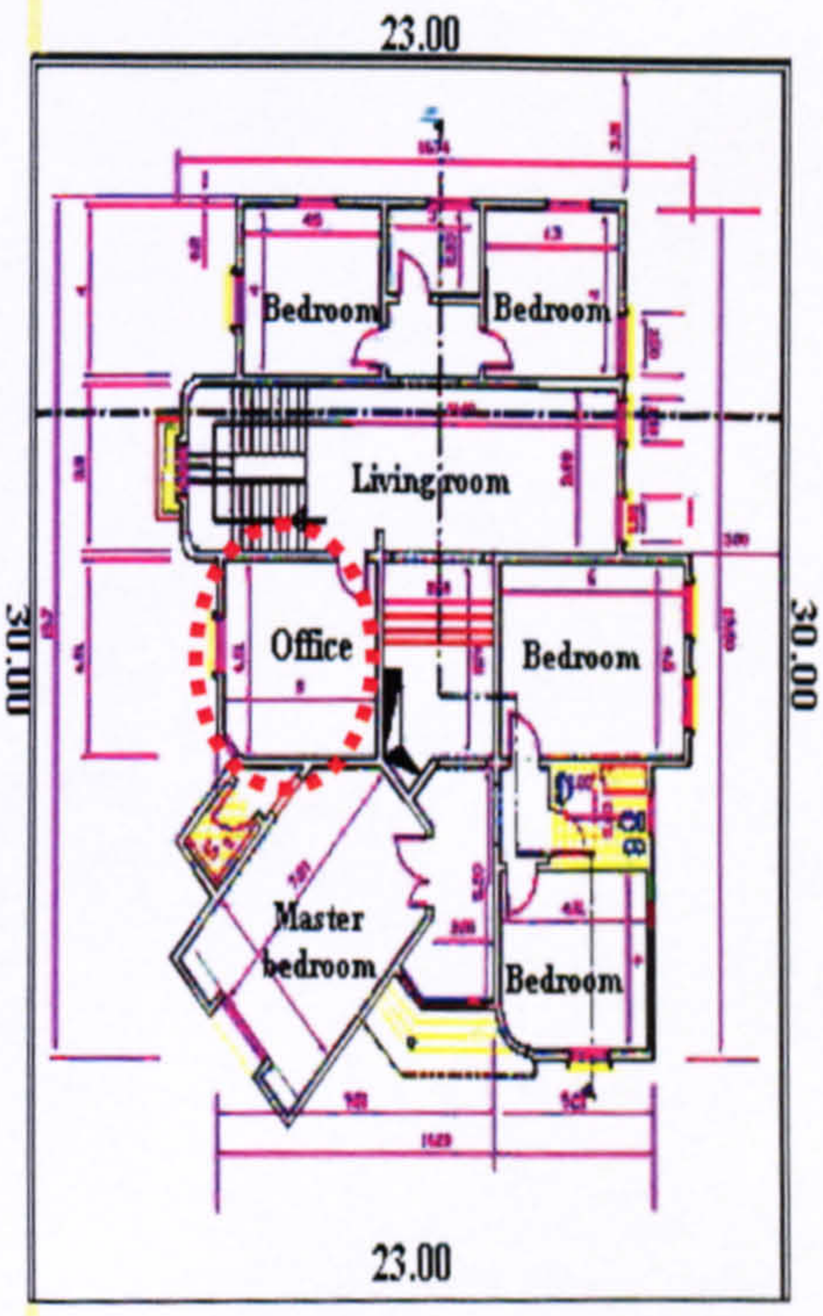
First Floor

In the ground floor: a bathroom and kids' play room were added during construction phase.
In the first floor: a bedroom was altered to an office after five years of occupation.

Post-Transformation



Ground Floor



First Floor