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IMPACT EVALUATION OF KATCHI ABADIS REGULARIZATION AND DEVELOPMENT PROGRAMME (CASE STUDY LAHORE)



SUPERVISOR
PROF.DR.SYED SHABIH-UL-HASSAN ZAIDI

RESEARCHERS

ZAHRA NASREEN 05-CRP-14
ANAIZA HIRA 05-CRP-22

DEPARTMENT OF CITY AND REGIONAL PLANNING
UNIVERSITY OF ENGINEERING AND TECHNOLOGY, LAHORE
2009

DEDICATION

Dedicated to Our Loving Mothers

DECLARATION

We declare that this effort is entirely our own work and has never been published in any form elsewhere. All the secondary material used has been properly referenced and acknowledged.

ANAIZA HIRA

ZAHRA NASREEN

Acknowledgement

Man is the most helpless creature without the support of his creator ALLAH, Almighty so the first and foremost thanks go to our Creator.

The research work would not also be possible without the encouragement of our advisor Prof. Dr. Syed Shabih-ul-hassan Zaidi (Dean of the Faculty of Architecture and Planning). He has over seen the research work through its every phase and endowed systematic guidance as he examined the research keenly and contributed worthy suggestions.

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Abstract

The regularization and development of squatter settlements/katchi abadis has been recognized all over the world and particularly in the developing world. Of late the government of Pakistan also realized that these katchi abadis must be formalized and improved. Therefore, a major Katchi Abadis Improvement Programme (KIP) was launched in 1978 under the LDA and continued up to 1991. After that in 1992, the government of Punjab launched a full-fledged Directorate General of Katchi Abadis & Urban Improvement under the Punjab Katchi Abadis Act, 1992. This department is working under the Local Government and Rural Development Department Government of the Punjab for the regularization and development of katchi abadis in Punjab.

The overall objective of this study was to gauge the progress against the intervention of Katchi Abadis Regularization & Development programme (KRDP) in Katchi abadis in Lahore and assess its impact on demographic, social, physical, economic, environmental and health related aspects of the households living in improved katchi abadis as well as to assess their perception about improvements and the level of satisfaction regarding the utilities and community facilities provided through KRDP. For this purpose 4 katchi abadis are selected, out of which two are regularized and other two are unregularized katchi abadis in Lahore. Socio-economic profile of the residents in case study area is collected through sampled questionnaires and observation sheets. It was analyzed that the living condition of residents of regularized and developed katchi abadis are quite better than the unregularized katchi abadis due to provision of water supply, sewerage and drainage system, street pavement and street lights at very low cost of Rs.1000/- per Marla. Secondary data is also collected through structured talk from concerned authorities like LDA and directorate of katchi abadis in Punjab. It was noticed that the Lahore development authority (LDA), has so far carried out the regularization and development work in 142 katchi abadis out of 297 katchi abadis in Lahore from 1985 to 2008.

It has been concluded that the Katchi Abadis Regularization/Development Programme is heavily subsidized in Punjab but its pace is very slow but the communities show irresponsible attitude toward the maintenance of the developed facilities. The dilemma is the absence of strategic planning in the roots of whole process. It has been recommended therefore, that the KRDP should be implemented in the form of comprehensive planned package with the participation of community and on component sharing concept. An appropriate research staff is needed for the mapping of Katchi Abadis and mobilization of people for their participation and maintenance of development work. The land owning agencies and city district government should take responsibility to stop the formation of new katchi abadis in Lahore by checking the acquisition of land by land mafia and squatter families.

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ACRONYMS

CODI	Community Organization Development Institute
DGKAP	Directorate General of Katchi Abadis Punjab
FDA	Faisalabad Development Authority
HDA	Hydra Abad Development Authority
JLNURM	Jawahar Lal Nehru Urban Renwal Mission
KKB	Khuda Ki Basti
KIP	Katchi Abadi Improvement Programme
KRDP	Katchi Abadi Regularization /Development Programme
LDA	Lahore Development Authority
MDA	Multan Development Authority
MNA	Member of Provincial Assembly
MPA	Member of Provincial Assembly
NGO	Non Government Organization
OPP-RTI	Orangi Pilot Project Reseach Training Institute
PC	Planning Commission
RDA	Rawalpindi Development Authority
SCWS	Sanghar City Water/Sanitation
SESI	Slum Environment Sanitation Initiative
SKAA	Sindh katchi Abadi Authority
SPSS	Statistical Package for Social Sciences
TMA	Tehsil Municipal Administration
UK	United Kingdom
UN HABITAT	United Nation Habitat
US	United State
WASA	Water and Sanitation Agency

1.0 INTRODUCTION

Shelter is one of the basic needs of human beings. The constitution of Islamic republic of Pakistan confers on the government the duty to provide food, shelter, clothing, health and education for all its citizens. Public planning and development agencies in Pakistan like other developing countries have launched housing programmes to overcome the problem of shortage of housing, particularly for low-income people. However, the process has been extremely slow and inappropriate to meet the demand. Resultantly, the low-income people have continued building katcha- rudimentary houses of cheap makeshift materials, affordable to them. This phenomenon took the shape of mushroom growth of squatter settlements with poor infrastructure and insecurity of land tenure, on public or private land lying vacant adjacent to the existing villages in rural areas and in major urban centers. These squatter settlements are called katchi abadis (dissolvable settlements) in Pakistan.

There are a lot of reasons behind the shortage of housing and creation of katchi abadis in Pakistan, but most important are unemployment and urbanization. At least one in every three city dwellers in Pakistan lives in katchi abadis. Many migrants, who move to cities in order to find jobs and have a better life, may not find jobs in the formal sector or any kind of decent shelter with a minimum of basic amenities. The informal sector provides employment to most migrants and they gravitate to squatter colonies where they build some kind of shelter for themselves. Moreover urbanization is also cause of creation of katchi abadis. Urbanization involves natural increase in population, migration of people from rural to urban areas and reclassification of rural areas into urban areas. The level of urbanization in Pakistan is the highest in South Asia. The available data for 2005 shows the level of urbanization as 35% in Pakistan. Apart from this, high "acceptable" building standards and rules & regulations, also cause katchi abadis settlement. As a result, squatter and marginal human settlements have spread in most urban localities, particularly in urban agglomerations.

Katchi abadis settlements emerged in Pakistan as a result of migration of refugees from India in 1947. The government between 1947 and 1959 failed completely in tackling the housing crisis of refugees. In fact, in these twelve years the supply of houses lagged far behind the demand. The earliest concept was the eviction of katchi abadis in 1951. As a

result of these evictions, 152,161 people lost their shelter.

The military government, between 1958 and 1968 initiated the bulldozing of inner cities katchi abadis and shifting to core housing schemes and Plot Township using revolving fund. The funds did not revolve and process came to halt. Then the government initiated the regularization process for katchi abadis in 1973 and the government decided to take measures for the formalization/ regularization and improvement of the katchi abadis, so that these may be made suitable for including in the housing stock. Therefore, the government made considerable efforts to regularize and improve the katchi abadis during 1978 to 1991 and a formal Katchi Abadi Improvement Programme (KIP) was launched in 1978. Later on, *Punjab Katchi Abadi Act (1992)* and *Punjab Katchi Abadis (Amendment) Ordinance (2002)* were enacted for the provisions of regularization, development and improvement of Katchi Abadis. The Katchi Abadis Regularization and Development programmes (KRDP) established in 1992, focused not only on physical aspects of squatter settlements but also on the social aspects, including crime reduction, awareness of people, and health facilities. Of late, the government of Pakistan also realized that the programmes of providing public housing have been inadequate to achieve the real target of providing housing, particularly to low-income people.

A Component Sharing Model has evolved from Orangi on component sharing concept of development with people and government as partners. The concept was developed and successfully implemented by OPP-RTI (NGO). Under this component sharing concept the communities are responsible for 'Internal Development like in the lane underground sewerage line, secondary or collector sewerage etc, and the government takes care of external development of the respective settlements like trunk sewer/natural nala development ,treatment plant, etc. Since 1983, community organizations, activists and non-government organizations from other Katchi-Abadis and informal settlements in Karachi and other cities of Pakistan have applied the Orangi Pilot Project (OPP) for help in replicating its Low Cost Sanitation Program in their areas. The concept is now being replicated in many cities of Pakistan.

A thorough analysis of katchi abadis' regularization and development programme is carried out in order to explore whether the scope and time of work undertaken under the KRDPs in different periods had the desired effects on the individuals, households and

institutions or not and whether those effects were significant and attributable to the KRDPs intervention. However, after long discussion with different stakeholders of KRDP and it was agreed that the KRDP was implemented with full concentration and on large scale from 1992 and still in progress state. During this period, major improvements and regularization of katchi abadis were carried out throughout the Pakistan.

This research project involves the demographic and socio-economic impact assessment/evaluation of the KRDP implemented in Lahore from 1992 to onward. This is an applied research to look the KRDP's effects on the demographic factors like type of family, number of households per structure, and type and status of occupancy and effects on socio-economic aspects like provision of water supply, sewerage, street pavement and street lights, drainage system, sui -gas and electricity. Therefore, an attempt has been made to identify people's satisfaction level and reasons of dissatisfaction about infrastructure facilities provided with the main focus on health and hygienic condition of dwellers of katchi abadis. The main objective of the study is to examine the effects and impact of the KRDP on the socio-economic aspects of the residents of squatter settlements (katchi abadis) by control group analysis.

The following section of this chapter present the statement of problem, research objectives, justification and scope of study. Finally, the methodology adopted has been presented in the form of research design with brief description of each of its components.

1.1 STATEMENT OF PROBLEM

Poverty, homelessness and begging have been part of the urban scene since the first cities of Mesopotamia. Poor people are, for the most part, consigned to socially segregated areas generically called "slums". A slum settlement therefore, can be defined as a heavily populated urban area (legal or illegal) with sub standard living, inadequate infrastructure and services, squalor and lacking in tenure security etc.

The basic features of slum life have not changed; the difference today is one of scale. Slum dwellers of the new millennium are no longer a few thousand in a few cities of a rapidly industrializing continent.

According to UN HABITAT, by 2008, more than half of the globe's population (6.7 billion), 3.3 billion people will be living in towns and cities. Out of 3.3 billion people,

more than 1 billion people (one out of every three city dwellers) live in slum settlements. Over 90 per cent of slum dwellers today are in the developing world. South Asia has the largest share, followed by Eastern Asia, sub-Saharan Africa and Latin America. There are at least 550 million slum dwellers in Asia, 187 million in Africa, 128 million in Latin America and the Caribbean and a further 54 million in the world's 30 richest countries.

There are over 3000 katchi abadis in our country Pakistan with a population approximating 7 million in 1985 and about 9 million at present, out of which 2302 are recognized katchi abadis with a population of 5.5 million in 1987. The growth of these informal katchi abadis in the two mega cities, Karachi and Lahore, has particularly been massive, in Karachi there are more than 539 katchi abadis while in Lahore 297 katchi abadis at present.

The Punjab province is the largest one among other three provinces, having 55.6% of the total population of Pakistan according to 1998 census report. The growth of katchi abadis is larger in 5 mega cities of Punjab. These are Lahore, Faisalabad, Gujranwala, Multan and Rawalpindi having more than 473 katchi abadis. There are 297 katchi abadis in Lahore out of which 25 are deleted that does not meet the criteria of katchi abadi, 93 in Faisalabad, 32 in Gujranwala, 32 in Multan and 8 katchi abadis in Rawalpindi at present.

Given the above scenario, it is evident that growth of katchi abadis has not been stopped yet. Hence, this situation calls for the critical evaluation of KRDPs implemented to regularize and develop the katchi abadis from the point of view of public satisfaction and consideration of socio-economic impact with particular reference on health and hygienic condition. Of course an in depth investigation of ground realities, people satisfaction and opinion regarding the regularization and development of katchi abadis are also need to underpin root causes of growth of katchi abadis and suggest measures to improve the situation and stop the growth of more katchi abadis.

1.2 OBJECTIVES

The aim of this research is to assess the socio-economic impacts of katchi abadis regularization and development programme (KRDP) that was implemented in katchi abadis of Lahore from 1992 to onward. However following are the specific objectives of this research:

- To analyze existing situation of katchi abadis in Lahore.
- To review literature on squatter settlement and approaches adopted towards solution of squatter settlement in developed and developing countries.
- To understand the regularization and development process of katchi abadis through KRDP in Lahore.
- To assess the socio-economic impact of KRDP on the dwellers-squatters of katchi abadis in Lahore.
- To assess the quality of life of residents with the main focus on health and hygienic condition in both regularized and unregularized katchi abadis in Lahore.
- To draw conclusion and make recommendations for ensuring better implementation of KRDP in katchi abadis in Lahore.

1.3 JUSTIFICATION/ RATIONALE OF STUDY

Creation of katchi abadis shows the failure of government policies to provide housing to every citizen at affordable price. It is also an indication of the society's failure in integrated planning taking grass-roots realities in view. Katchi abadis are seems as an eyesore but no doubt that these abadis occupy one third of city population, on the other hand, they have no house.

The existence, and increase in numbers, of katchi abadis have already started causing problems to out ruling elite. When 40% of the populations do not own land legally, this means that the state exchequer has neither received the cost of development, nor do the utility agencies receive user's charges, because the official agencies fail to provide utility services legally.

Most bureaucrats, city planners, engineers and developers detest the existence of katchi abadis as they believe that these abadis damaging the country' economy and reflects the authorities' incompetence to keep the city environment clean and free of encroachers. They also think that these areas are the hotbed of social and political unrest. Often, they accuse the 'land mafia' of creating these katchi abadis and NGOs for supporting them. They are also opposed to agencies initiating development work in these areas.

The need is, not to remove these katchi abadis and to use all land for profit purpose, but the work is to adopt sustainable approach that the problem of housing, access to proper

infrastructure facilities and clean environment can be solved at the same time. There is also need to review and analyze the present approaches for the regularization and improvement of existing katchi abadis and how to solve the problem of creation of new katchi abadis.

The literature on Lahore katchi abadis suggest that not much research has been conducted about the analysis of socio-economic impact of katchi abadis regularization/development programme on squatter in Lahore. This study is unique in its nature as it analyzes and reviews the katchi abadis regularization/development programme with specific emphasis on its socio-economic and demographic impacts on katchi abadis in Lahore in the light of Punjab Katchi Abadis Act 1992, national policy on katchi abadis, urban renewal and slum up gradation 2000 and Punjab Katchi Abadis (Amendment) Ordinance, 2002. The finding of this research will certainly help in understanding the issues involved improvement and regularization of katchi abadis. Finally, the implementation of recommendations of this research will help in enhancing the public participation, consideration socio-economic and cultural impacts and hence overall effectiveness katchi abadis improvement programme which ultimately leads to achieving the goal of improved planned and sustainable society.

1.4 SCOPE OF STUDY

This research intends to evaluate the katchi abadis regularization/development programme with the main focus on its socio-economic impact on dwellers of katchi abadis in Lahore. There are 272 katchi abadis in Lahore, out of which only 142 katchi abadis are regularized. Keeping in view the time limitation, 4 katchi abadis are selected from Lahore, out of which 2 are regularized namely khan colony in UC 99 of Gulberg town and tanki no. 56 in UC 31 of Gulberg town, while other two are un regularized katchi abadis namely bawoowala of ward no. 10 in cantonment board area and badar colony in UC 60 of Aziz Bhatti town. These four katchi abadis are surveyed for the preparation of their land use map and interviewed to assess the socio-economic condition of the dwellers of katchi abadis by the implementation and non implementation of KRDP. The concerned official authorities like directorate of katchi abadis Punjab and directorate of katchi abadis in Lahore (LDA) are also visited and interviewed through structured talk

to know their viewpoint about the implementation of KRDP in Lahore from 1985 to 2008.

1.5 LIMITATION OF THE STUDY

No project can be implemented in a way at which it was first conceived. No one can forecast the hurdles and problems, which would be faced during the execution of any project. This phenomenon depicts that there are always some limitations in every piece of work regardless of its scale. The foremost limitation faced during this task was the reluctant attitude of both the officials and residents of katchi abadis about giving the required data. Therefore, a lot of time was wasted in gaining access to the required data from concerned authorities for viewing and reviewing for the research.

1.6 RESEARCH DESIGN/METHODOLOGY

Research Methodology defines the way we do our research work and accomplish our objectives. It plays a key role in successfully achieving the tasks and can be defined as a plan or strategy to guide the work in particular right direction.

It is quoted by John Rollwagen that "*Always, always, always have a plan....*"

The subdivision under discussion not only convolutes the research proposed line of action to achieve the realistic & unbiased upshots, but attempts to provide the sound justifications to adapt this methodology with reference to context of similar study efforts at international & national level.

1.6.1 RESEARCH LINE OF ACTION

A general to specific approach has been adopted while establishing the study methodology after considering its prime importance. The specific steps which are considered in this connectivity have been enlisted and described below:

1. Selection of research topic
2. Literature review
3. Selection of case study areas
4. Planning & Data collection (Questionnaire designing, surveys involved, secondary data through formal interviews of officials and primary data through

- questionnaire based interviews of dwellers of katchi abadis)
5. Data processing (fulfilling the data gaps, making corrections, digitization and interpretation of the data, land use maps and profiles preparation through auto CAD and Ms world , inferences achievement through SPSS and Ms. Excel)
 6. Conclusion & recommendations
 7. Final documentation

1. SELECTION OF RESEARCH TOPIC

The base line task in any research is to identify the area of interest to conduct a research which is no doubt, a time taking, knowledge based & tough matter. Therefore, by taking into consideration this lengthy procedure, worthy efforts have been strived to choose a few researchable issues. For this, discussions have been conducted with thesis advisor & competent professionals; critical review of literature has been done & informal sittings have been organized with colleagues, which resulted in finding out the subject currently under study based on researcher's aptitude and intentions.

2. LITERATURE REVIEW

To construct the research foundation, opinions have been collected through international, national and local experiences. A laborious effort has been made. This includes the review of the experiences of technologically advanced countries as well as of developing countries regarding the creation of slums all over the world. The relevant approaches of developed and developing countries and of Pakistan have also been reviewed with a view to compare the practices and hence assess the quality of KRDP in Pakistan.

3. SELECTION OF CASE STUDY AREAS

To select a live & genuine case study to continue the research, there is always a need to establish some pre-requisites and principles around which, study areas should be revolved. The determination of study area is critical first step, since it determines the geographical extent of the data collection effort and consequently helps in setting up the scope of the study.

Paying considerations to the requirements of the study, a set of parameters has been established for the final and logical case study selection, which includes the following:

1. The case study areas should have the capacity to address the multiple scenarios & issues to formulate rigorous policy recommendations.
2. The study areas should be larger enough to give a sufficient strength to the scenarios designed from information collected.
3. From the researcher's point of view, the study area should be quite accessible and should be such about which basic material like base maps are available.

On the basis of the above discussion four case study areas were decided. First of all a list of all the katchi abadis in Lahore was sorted out. The list had been categorized two categories of regularized and unregularized katchi abadis in Lahore. Four katchi abadis were selected out of with two katchi abadis namely khan colony and tanki no. 56 are regularized and other two katchi abadis namely bawoowala and badar colony are unregularized. The locations of case study areas are described below.

- 1 Khan colony is a regularized katchi abadi located in union council 99 in gulberg town of Lahore. During 2001-2002, KRDP was implemented in this katchi abadi for the provision of water supply system, sewerage system, drainage system and street lighting and street pavement.
- 2 Badar colony is an unregularized katchi abadi located in union council 60 in Aziz Bhatti town of Lahore. Due to non implementation of KRDP the community is lacking of water supply system, sewerage system, drainage system and street lighting and street pavement. But the Government initiated the component sharing model approach that is in progress in this katchi abadi.
- 3 Tanki no.56 is a regularized katchi abadi located in union council 31 in Gulberg town of Lahore. During 2003-2004, KRDP was implemented in this katchi abadi for the provision of water supply system, sewerage system, drainage system and street lighting & street pavement.
- 4 Bawoowala is an unregularized katchi abadi located in ward no.10 in the cantonment area of Lahore. Due to non implementation of KRDP the community is lacking of water supply system, sewerage system, drainage system, street lighting and street pavement.

Profile of above selected case study area will be described in chapter 4.

4. PLANNING & DATA COLLECTION

Data collection is the most important tool to get the inferences at highest order to make the research valuable and successful. To assess the multiple phenomena in research hypothesis, the planning and data collection stage is of high inscription.

The main data collection parameters are:

1. Questionnaire designing
2. Selection of sampling technique
3. Secondary data collection (Semi structured and structured talk with responsible authorities)
4. Primary data collection (Socio-economic survey of the area and questionnaire based interviews of residents of katchi abadis)

However, after introducing the major elements of data planning & collection stage, this step has been categorized into two sub-stages; planning for data collection and data collection in the field. The planning stage includes the preparation and designing of questionnaire to be asked from the officials and residents of katchi abadis etc. The secondary as well as the primary data had been collected to clarify the scenario.

- **Questionnaire designing**

The survey questionnaire is mainly divided into four parts.

1. First portion deals with the collection of data related to general and demographic information of the residents of katchi abadis.
2. Second part concentrates on the housing condition and provision of infrastructure facilities to the dwellers of katchi abadis.
3. The third section deals with the impact of provision and non provision of infrastructure facilities on the residents of katchi abadis.
4. The forth section deals with the provision and non provision of public facilities.

- **Selection of sampling technique**

The sample size for the collection of primary information from respondents was selected equally for each case study. Due to some limitations, large sample size was difficult to select. 30 households from each case study area were selected to be inquired in respect to obtain a proper scnerio related to implementation and non implimentation of KRDP.

These figure includes sample size of 7.53% households from khan colony, 4.8%

households from badar colony, 7.3% households from tanki no. 56 and 1.08% households from bawoowala.

- **Secondary Data Collection**

During the research following visits are carried out to find out secondary data from concerned authorities.

1. Directorate of katchi abadis Punjab for collecting information about funding of katchi abadis in Lahore and to have structured talk with assistant director of Directorate of katchi abadis Punjab about the process of funding of katchi abadis in Lahore.
2. Directorate of katchi abadis (LDA) regularization wing for obtaining the list of all regularized and unregularized katchi abadis in Lahore and to have structured talk with assistant director about the regularization of katchi abadis in Lahore.
3. Directorate of katchi abadis (LDA) development wing for obtaining the list of all developed and undeveloped katchi abadis in Lahore and to have structured talk with chief engineer about the development of katchi abadis in Lahore.

- **Primary Data Collection**

On the other hand, second part of data collection concentrates on assembling the primary data. The primary data about the socio-economic and health impacts of implementation and non implementation of KRDP on residents of katchi abadis is collected through observation sheet and questionnaire based interviews. For this purpose, after finalizing the field questionnaire and devising a systematic approach to collect the necessary input, sample based survey is conducted and within during surveys land use maps and profile of the case study has been generated after gathering the data.

5. DATA PROCESSING

The Data processing is very important to find out the results. Once the data has been accumulated, the next step in research is to process data i.e. to go through a series of actions or operations in order to make sense of data collected. Data processing involves two phases; data preparation & data analysis.

In first of data processing, data has been checked out for accuracy, errors, incompleteness, and gaps in the data. It also includes coding the data and verifying it, entering the data (using MS Excel & SPSS) and Land use maps of all the selected katchi

abadis were prepared using auto CAD.

The analysis breaks the data into two parts; descriptive & Inferential statistics. After sorting out the descriptive nature of the research data, various scenarios are developed with the help of cross tabulation and the application of several other tests. This data analysis helped lot to draw the major conclusions & inferences about the main hurdles.

6. CONCLUSION AND RECOMMENDATION

In the light of the inferences evolved through the research work, some of the recommendations have been drawn, that put forward infect the policy directions to improve the system and to aggrandize the efficiency in more appropriate way.

7. FINAL DOCUMENTATION

This is the final stage of any research process in which a document (describing the whole scenario) is formed with dedication. It provides an authenticated form to the research work. In this step, it is tried to put into a nut shell by presenting research problem, objectives, its methodology, the literature review, case study area selection and their land use maps and profiles, data collection and analysis efforts and final recommendations in distinguishing chapters. *(See fig 1.1)*

1.7 RESEARCH FRAMEWORK

The research thesis is composed of six well organized chapters. The first chapter as seen above introduces the research work and fits it into the existing investigation on the topic. The second and third chapter deals with the literature review done on the topic and explains what other authors have written about the topic under discussion at international and national level. The fourth chapter deals with the comparative data analysis of Regularized and Unregularized katchi abadis in Lahore city. In this chapter the reader will witness the methodology adopted in order to achieve the defined objectives. The collected information is processed using mathematical analysis methods and presented by tabular and graphical tools. The chapter five deals with the analysis of impact of KRDP on improved katchi abadis in Lahore. The research work is concluded by the conclusions drawn from the analysis of data and the recommendations formulated by the researchers in the light of their experiences in the final chapter of thesis.

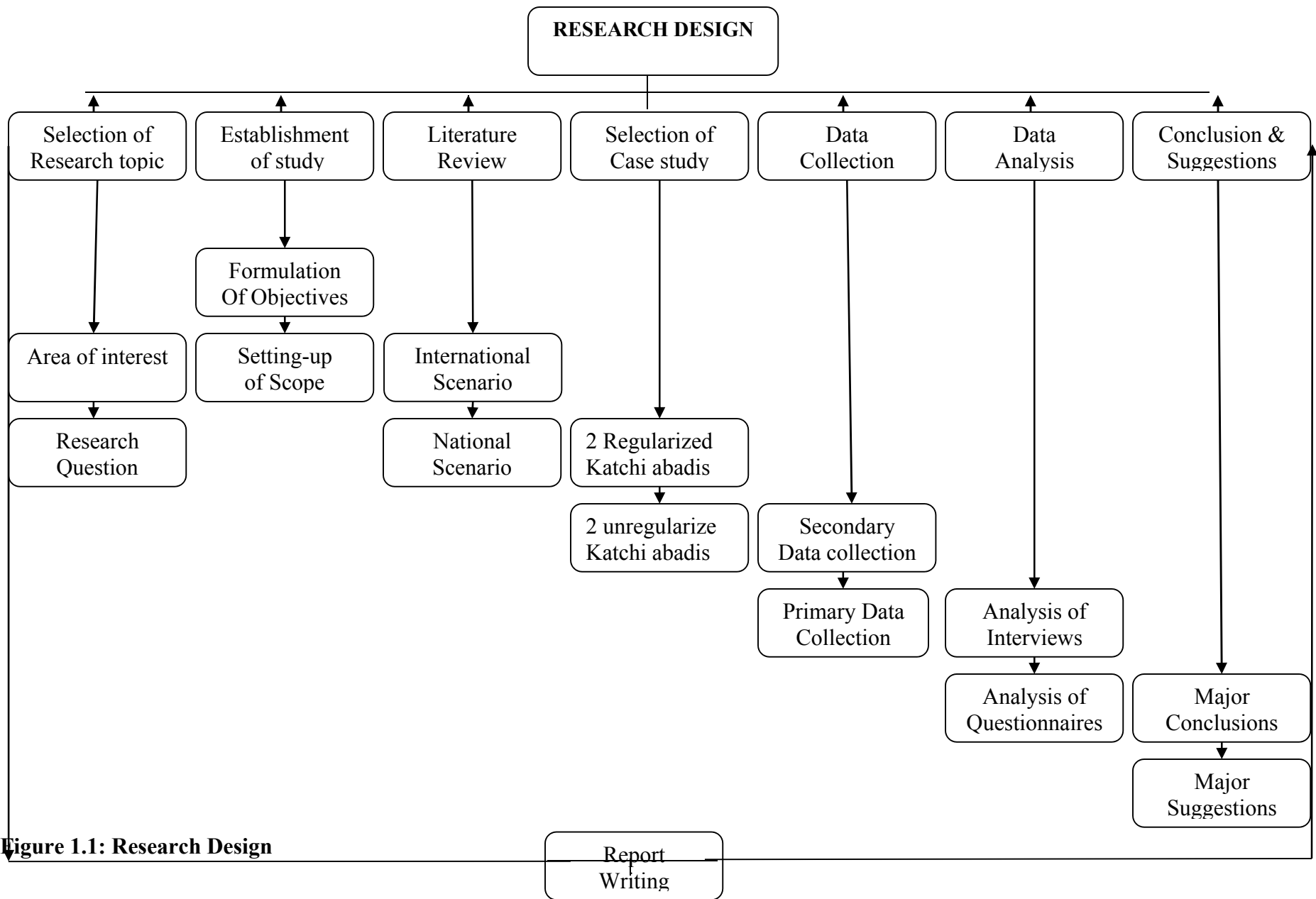


Figure 1.1: Research Design

2.0 INTRODUCTION

Squatter settlements have been appearing in almost all the big cities of the world. The reasons for development of these settlements in different cities of the world seem similar as these falls in the same economic condition.

A careful deliberation about history and process of katchi abadis regularization/development programme and appraisal of treatment of the problem related to squatter settlements/katchi abadis, may required to be undertaken to have a better understanding of the problem before any solution is considered.

This chapter describes the strategies regarding improvement of squatter settlements adopted in various developed and developing countries and draws conclusion that how these measures are helpful for the prevention of squatter settlements(katchi abadis) in the context of Pakistan.

2.1 SQUARTER AND SLUM SETTLEMENTS

The term "squatter settlement" is in fact a more recent western-initiated development, which came about by the writings of Charles Abrams and John Turner and particularly during and immediately after the Habitat Conference of 1976 in Vancouver, Canada. Abrams (1964) illustrates the process of squatting as a "conquest" of city areas for the purpose of shelter. Turner (1969) takes a positive outlook and portrays squatter settlements as highly successful solutions to housing problems in urban areas of developing countries. Payne (1977) similarly puts the development of squatter settlements in the overall perspective of urban growth in the third world and its inevitability.

A squatter settlement can be defined as a residential area which has developed without legal claims to the land and/or permission from the concerned authorities to build; as a result of their illegal or semi-legal status, infrastructure and services are usually inadequate. A "squatter" (in the Concise Oxford Dictionary) is a person who settles on new especially public land without title; a person who takes unauthorized possession of unoccupied premises. Therefore, a residential area occupied by squatters becomes a squatter settlement.

Slum is defined as ‘a heavily populated urban area characterized by sub standard housing occupied by poor and squalor, who cannot afford to live elsewhere (UN-HABITAT). A slum settlement refers to the condition of a settlement, while the squatter settlement refers to the legal position of the settlement.

2.1.1 CHARACTERISTICS OF SQUATTER SETTLEMENTS

There are essentially three defining characteristics that help to understand squatter settlement.

Physical Characteristics: A squatter settlement, due to its inherent "non-legal" status, has services and infrastructure below the "adequate" or minimum levels. Such services are both network and social infrastructure, like water supply, sanitation, electricity, roads and drainage; schools, health centers, market places etc.

Social Characteristics: Mostly, squatter settlement households belong to the lower income group, either working as wage labour or in various informal sector enterprises.

Legal Characteristics: The key characteristic that delineates a squatter settlement is its lack of ownership of the land parcel on which they have built their house.

2.1.2 REASONS OF DEVELOPMENT OF SQUATTER SETTLEMENTS

There are two most important reasons for the development of squatter settlement; one is internal to the squatter, and the other is external. Internal reasons include, lack of collateral assets; lack of savings and other financial assets; daily wage/low-income jobs. External reasons include, high cost of land and other housing services; apathy and anti-pathy on the part of the government to assist them; high "acceptable" building standards and rules and regulations; lopsided planning and zoning legislation.

These reasons leave no option for the low-income householder to squat on a vacant piece of land. The actual squatting is done by an initial small group of core squatters. The core group squatters are a small number of families who, almost overnight, occupy a piece of land and build a rudimentary and temporary shelter. Later, depending on the degree of threat of eviction, this may be upgraded to a permanent and more families may join this group (Mangin William, 1967; 233-240).

2.2 APPROACHES TOWARD SOLUTION OF SQUATTER SETTLEMENTS

'Squatter' prevention can be construed in many ways. Large scale bulldozing is discouraged now a days because bulldozing of 'squatters' and controls which prevent new informal settlements forming might be seen as 'prevention' in that it reduces the number of 'squatter' housing, but it does not reduce the number of households living in 'squatters' as those who are displaced by this bulldozing generally double up with other low-income households or create new 'squatters' as a result.

The most popular approaches used by the public authorities have been:

Settlement up gradation: It has been an option where a compromise has been reached by the land owner and the squatters on a Land Sharing basis, the squatter has been allowed to continue on the land parcel, but with a significant up gradation of the settlement's infrastructure and services.

Land sharing: It is an approach in which, squatters give the prime locations of the land to the owner and use the remaining for their housing.

Sites-and-services: It remained applicable where land compromises or sharing has not been possible, the squatters have been relocated to another location, where varying levels of "sites"-and-"services" have been provided.

2.3 SQUATTER SETTLEMENTS APPROACHES IN DEVELOPED COUNTRIES

Developed countries like developing countries also facing problems of squatter settlements but the phenomena are quite different. In developed world, squatter acquire empty house illegally. The eviction of these squatter settlements is done through courts. The eviction laws for squatter settlement are different for different states in developed countries. In many European countries, there are squatted houses used as residences and also larger squatted projects where people pursue social and cultural activities. It requires specific policies for meeting the needs of vulnerable groups like minorities, indigenous peoples, refugees and the displaced. There are also people with special housing needs such as the elderly, persons with physical disabilities and the mentally ill.

Some organizations also exist to support the squatters. They provided with access to financial resources, including grants, mortgages and other forms of capital.

2.3.1 SQUATTER SETTLEMENT IN UNIKED KINGDOM

In United Kingdom, the term squatting usually refers to occupying an empty house in a city. The emptiest homes in the UK are in Birmingham (17,490), Liverpool (15,692), Manchester (14,017), North West England has the most empty homes (135,106), which is close to 5% of its housing. The fewest empty homes are in South East England and East Anglia, but there are currently thousands of empty homes in London, as house prices are soaring above the level of income that most people earn. In 2003, it was observed that there were 15,000 squatters in England and Wales.

The owner of the house must go through various legal proceedings before evicting squatters. The legal process of eviction can take a month or longer, perhaps even years. This is what happens when the property is owned by a council or a housing association. Private landlords have been known to use various intimidatory methods to convince a squatter to move out or indeed, to pay squatters to leave. In the 1970's, some housing councils would attempt to deter squatters from entering their properties by "gutting" the houses. "Gutting" refers to the process by which empty houses are rendered uninhabitable by pouring concrete into toilets and sinks or smashing the ceilings and staircases.

To show that the occupier of the squatted building is in fact in physical possession of the property, squatters often put up a legal warning known as a "*Section 6*", a copy of which is often displayed on the front door. Doing so attempts to claim that there are people living there and they have a legal right to be there. It also claims that anyone, even the technical owner of the property, who tries to enter the building without permission is committing an offence. These claims are fallible following amendments to the law in 1994 (Criminal Justice and Public Order Act 1994). Some properties are still occupied by squatters who have resisted eviction for 20 years. Squatters have a right to claim ownership of a dwelling after 12 years of having lived there if no one else claims it, by adverse possession under common law. In practice, this can be difficult, since the squatter must prove in a court of law that he or she has lived in the building continuously for the whole 12 years. The law of adverse possession has been fundamentally altered following the passing of the *Land Registration Act 2002*. In effect, after 10 years of actual physical possession, a squatter must apply to the Land Registry to have their title recognised as the owner in fee simple. The original owner of the property will receive notification from the

Land Registry and will be able to defeat the application by simple objection. Obviously, this will seriously curtail the ability of squatters to claim adverse possession.

In the late 1960's, the Family Squatters Advisory Service (FSAS) was founded in London, England, to help defend the rights of squatters. However, in the 1973, the Court of Appeals stated that a landowner could re-enter a squatted property and use reasonable force to evict those occupying the property, while remaining exempt from the Forcible Entry Act. Thus, as a result of this ruling, all power lay in the hands of the possessor of the property, rather than the occupants (David C, 1975; 339). This case sparked a division amongst those fighting for squatters' rights at the FSAS, for new-wave advocates thought that the FSAS did not do enough to protect the unlicensed squatters' rights. That division birthed a different organization called the All London Squatters (ALS). The ALS was geared more toward direct action and was open to licensed and unlicensed squatters. ALS was perceived as more militant. As tensions heightened in London, FSAS split even further. The division between those for and opposed to unlicensed squatters grew deeper, and by 1975, divisions within the group led to its dissolution. In its wake grew a new organization called the Advisory Service for Squatters (Nick Wates, 1980; 80).

2.3.2 SQUATTER SETTLEMENT IN UNITED STATE OF AMERICA

In the United States, squatting laws vary from state to state and city to city. For the most part, it is rarely tolerated to any degree for long, particularly in cities. Most squatting in the US is dependent on law enforcement, and the person legally considered being the owner of the property being unaware of the occupants. Often, the most important factors in the longevity of squats in the US are apathy of the owner and the likeliness of neighbors to call the police.

In common law, through the legally recognized concept of adverse possession, a squatter can become a bona fide owner of property without compensation to the owner. Adverse possession is the process by which one acquires the title to a piece of land by occupying it for the number of years necessary, dictated differently by each state. A necessary component of this transfer of ownership requires that the landowner is aware of the land occupation and does nothing to put an end to it. If the land use by the new occupant goes unchecked for the said number of years, the new occupant can claim legal rights to the title of the land. The occupant must show that the "possession is actual, open, notorious,

exclusive, hostile, under cover of claim or right, and continuous and uninterrupted for the statutory period (Larson Aaron, July 2004; 1).

The United States Homestead Act legally recognized the concept of homesteading and distinguished it from squatting, since it gave homesteaders permission to occupy unclaimed lands. Urban homesteading is a form of self-help housing where abandoned private properties in urban areas are taken over by the building's usually poor residents. Sometimes this takes the form of squatting, which is not legal under many jurisdictions. Urban homesteading, in which residents rehabilitate the apartments through their own labor - may depart from squatting in some ways, especially philosophically.

Additionally, US states that have a shortage of housing tend to tolerate squatters in property awaiting redevelopment until the developer is ready to begin work. However, at that point, the laws tend to be enforced. *The Homestead Act of 1862* was applied to U.S. citizens and prospective citizens that had never borne arms against the U.S. government. It required a five-year commitment, during which time the homesteader had to build a twelve-by-fourteen foot dwelling, develop the 160-acre plot of land allocated, and generally better the condition of the unsettled property. After five years of positively contributing to the land, the homesteader could file for the deed to the property, which entailed sending paperwork to the General Land Office in Washington, D.C., and from there, "valid claims were granted patent free and clear"(Potter, Lee Ann and Wynell Schamel, October 1997; 359-364).

In New York City, homeless people squatting in underground spaces such as Freedom Tunnel have come to be known as Mole People. It is estimated that in the 1990s, there were between 500 and 1,000 squatters occupying 32 buildings on Manhattan's Lower East Side. Three buildings on 13th Street were evicted without notification following a prolonged legal battle in which the squatters argued through their lawyer Stanley Cohen that they were entitled to ownership of the buildings through adverse possession since they had lived there since 1983. In 1995, a preliminary injunction had been granted against the eviction plans, but this was overturned by state appellate. In 2002, eleven squats out of the twelve remaining on the Lower East Side signed a deal with the city council brokered by the Urban Homesteading Assistance Board (Lueck T, August 1996).

Take Back the Land is a Miami-based self-proclaimed housing liberation group that formed in 2006. They break into vacant, unused bank-owned foreclosed homes and move homeless people inside. Take Back the Land organized a shantytown called the Umoja Village to squat a vacant lot in 2006 and 2007 (Goodman Amy and Gonzalez Juan, April 4, 2008).

In Minnesota, a group known as the *Poor People's Economic Human Rights Campaign* has relocated families into thirteen empty properties, and one national organizer likened the advocacy and service work of her group to "a modern-day underground railroad" (Leland, John, April 2009).

2.4 SQUATTER UPGRADATION APPROACHES IN DEVELOPING COUNTRIES

Very few countries have managed to 'prevent' squatters, although some have managed to greatly reduce the proportion of people living in them. The solution of squatter settlement is to check the growth of new squatter settlements by providing cheap land and services for those who want them and to rehabilitate rather than eradicate most existing squatter settlements because these settlements presents a unique community formation that is important in the development of cities all over the world. The most important and acceptable approach is the formulation of government organization, supported by local NGOs to provide housing and infrastructure facilities to low income people.

2.4.1 SQUATTER SETTLEMENT UPGRADATION IN SOUTH AFRICA

In South Africa, squatters tend to live in informal settlements or squatter camps on the outskirts of the larger cities, often but not always near townships. In 1994, when Nelson Mandela was elected President, it was estimated that of South Africa's 44 million inhabitants, 7.7 million lived in these squatter settlements. Coupled to this, an estimated 720 000 serviced sites that were provided by provincial legislatures under the previous government required upgrading and 450 000 people lived in various, often inappropriate, forms of hostel accommodation .

Federation-based activities have grown rapidly in Africa since the early 1990s. The oldest federation in the region, the South African Homeless People's Federation (which named itself UMFelanda Wonye meaning, literally, "We die together") is a national network active in all nine of South Africa's provinces. It includes 1500 autonomous

savings and credit groups whose size ranges from a minimum of 15 to a maximum of more than 500 members.

The work of the federation has involved developing and renovating 12,000 housing units, providing incremental loans for a further 2,000 houses, building infrastructure for 2,500 families, securing land tenure for 12,000 families, offering hundreds of small business loans, obtaining three parcels of commercial land, and constructing and managing 10 community centers and several child care centers. It set up its own housing fund, the uTshani Fund, in 1994, in which savings are deposited and from which loans are made for infrastructure, provide access to grants through the government's housing subsidy program, and access to credit for small business loans.

In addition, the federation has set many precedents for what the urban poor can do, has helped to change national housing policy, and has developed a partnership with the municipal government in Durban for an ambitious citywide program of squatter upgrading involving more than 15,000 households. In Johannesburg, the local government is working with the federation on a major "people's housing process" program of new affordable housing.

The South African Homeless People's Federation is also working with the Methodist Church in South Africa to identify vacant land owned by the Methodist Church and allocate it for housing projects to benefit homeless urban families, and, in rural areas, for productive economic activities. This initiative has importance not only for the additional land it can provide for housing low-income households, but also for encouraging more action from the government on land redistribution and tenure reform and in setting an example for other churches in South Africa to follow (D'Cruz Celine and Satterthwaite David, March 2006; 4).

2.4.2 SQUATTER SETTLEMENTS UPGRADATION IN THAILAND

The Thai government is implementing one of the most ambitious upgrading initiatives currently underway, managed by the Thai Government's Community Organizations Development Institute (CODI), this channels government funds in the form of infrastructure subsidies and housing loans direct to community organizations formed by low-income inhabitants in informal settlements.

Within this national CODI programme, there are a variety of means by which those in illegal settlements can get legal land tenure, for instance by the inhabitants purchasing the land from the landowner (supported by a government loan), negotiating a community lease, agreeing to move to another location provided by the government agency on whose land they are squatting, or agreeing with the landowner to move to part of the site they are occupying in return for tenure of that site (land sharing). The CODI also provides loans to community organizations to on-lend to their members to help build or improve their homes. It also supports city governments in taking the initiative in collaboration with urban poor organizations, for instance providing a site on which those living in various 'mini' squatter settlements in their jurisdiction could relocate, with the land provided on a 30 year lease.

From 2003 to September 2007, within the Baan Mankong (secure housing) programme, CODI approved 495 projects in 957 communities in over 200 urban centres covering 52,776 households and it plans a considerable expansion in the programme within the next few years. Overall, CODI has provided loans and grants to community organizations that reached 2.4 million households between 1992 and 2007.

The Baan Mankong initiative has particular significance in three aspects: the scale; the extent of community-involvement; and the extent to which it seeks to institutionalize community-driven solutions within local governments so this addresses needs in all informal settlements in each urban centre in which it is implemented. It is also significant in that it draws almost entirely from domestic resources, a combination of national government, local government and community contributions. Low-income communities living in informal settlements know that CODI has resources they can draw on, so they can plan for what they need, look at the different possibilities, organize and develop their own savings groups. If they cannot negotiate tenure for the land they currently occupy, they can search for land, start land negotiations and draw in people from other urban poor communities to help them plan and develop solutions. They can also visit other places where community-driven development has worked well (Boonyabantha Somsook, December 2005).

2.4.3 SQUATTER SETTLEMENT UPGRADATION IN INDIA

India is urbanizing very fast and along with this, the slum and squatter population is also increasing. In the 1970s and 1980s, the Indian government had a policy of 'No Slums Cities'. This warranted forceful resettlement and rehabilitation of slum dwellers. However, this didn't help in making cities slums-free. Then the Government started implementing slum upgrade programmes under which infrastructure development was encouraged.

Since 1972 the Government of India initiated a programme called "Environmental Improvement of Urban Slums" under which priority to drinking water and sanitation was given. Again in 1996 government initiated the "National Slum Development Programme" with substantial fund allocation. It had a specified focus on providing drinking water and community toilets. After spending close to Rs.3100/- crore in nine years, it was discontinued. It was estimated that 46 million slum dwellers benefited from it.

In 2005 government started the Jawaharlal Nehru Urban Renewal Mission (JNNURM), an initiative to encourage reforms and fast-track planned development of certain cities. It has a financial commitment of Rs150,000/- crore during 2006-12. The larger objective of the mission is to integrated development of infrastructure services; accelerating the flow of investment into urban infrastructure services; planned development of cities including the peri-urban areas and equal access of urban services among the urban poor.

In Madhya Pradesh the landscapes of slums across the state are literally changing. Madhya Pradesh is the sixth most urbanized state in the country having four almost million plus cities (Bhopal, Indore, Jabalpur and Gwalior) and a large number of small and medium towns (337). Interestingly, 26 towns account for 55.8% of the urban population, while the rest 44.2% live in other 311 towns. Toilets are sprouting in slums of the state's big cities like Bhopal, Indore, Jabalpur and Gwalior. New sewer lines and drainage systems are being laid out to have safe disposal of wastes. Residents who hardly talked about sanitation few years ago are now leading campaigns to build toilets and safe disposal of wastes.

The change is a cumulative outcome of a pilot initiative called the Slum Environment Sanitation Initiative (SESI) which is a joint Project of Water Aid India, UN Habitat and the municipal corporations of Bhopal, Indore, Jabalpur and Gwalior, started in November

2005 as a pilot to develop and demonstrate community led approaches for slum improvement focusing on water, sanitation and hygiene.

2.4.4 SQUATTER SETTLEMENT UPGRADATION IN PAKISTAN

Pakistan requires 570,000 new housing units per year for its urban areas. The formal sector is able to supply only 300,000 housing units per year. This gap is accommodated in katchi abadis (squatter settlements on government land) or through the informal subdivision of agricultural land on the periphery of cities and towns. It is estimated that nine million people live in katchi abadis in the urban areas of Pakistan and another 15 million in informal subdivisions. Both types of settlements are unserviced to begin with but over a 15 to 20 year period, residents manage to acquire water, electricity, gas and some sort of social infrastructure. However, sewage invariably flows into cesspools or into the natural drainage system. Since 1973, the government has been operating a Katchi Abadi Improvement and Regularization Programme but this reaches only a small proportion of those living in these settlements. There is no programme for the improvement on informal subdivisions, although their conditions (except for security of tenure) are no different from that of the katchi abadis.

Under the revised katchi abadis act 1987, squatter settlements can be declared as official katchi abadis under the conditions that it is not required for the development need of the city, not in economically dangerous zones, not on areas earmarked for amenities and has 40 or more household.

A Component Sharing Model has evolved from Orangi on component sharing concept of development with people and government as partners. The concept was developed and successfully implemented by OPP-RTI (NGO). Under this component sharing concept the communities are responsible for 'Internal Development like in the lane underground sewerage line, secondary or collector sewerage etc, and the government takes care of external development of the respective settlements like trunk sewer/natural nala development ,treatment plant, etc. Since 1983, community organizations, activists and non-government organizations from other Katchi-Abadis and informal settlements in Karachi and other cities of Pakistan have applied the Orangi Pilot Project (OPP) for help in replicating its Low Cost Sanitation Program in their areas. The concept is now being replicated in many cities of Pakistan. Participatory research identified four major

problems: sanitation, unemployment, health and education. Sanitation was considered the most important.

The OPP-RTI was very clear from the very beginning that the answer lay in local resources and local expertise, with resources drawn both from the low-income communities and from local government.

In around 300 locations in Pakistan, communities have financed, managed and built their own internal sanitation systems. Local governments can also afford to install the external systems as they no longer have to fund the internal components and as OPP-RTI has helped them develop much lower-cost methods for planning and building trunk sewers. In Orangi, 96,994 houses have built their neighborhoods sanitation systems by investing Rs 94.29 million (US\$ 1.57 million). In effect, what this small local NGO has done is to demonstrate the major improvements that are possible within informal settlements by careful use of household's resources addressing community-level problems supported by well-designed local government investment in the larger systems into which community-level improvements link (Hasan Arif, 2006; 451-480).

TABLE 2.1: DETAILS OF THE NATIONAL FEDERATIONS, SUPPORT NGOS, AND FUNDS

Federation	Year founded	Number of members	Support NGO/ federation-managed funds
SOUTH AFRICA: uMfelandu Wonye (South African Homeless People's Federation)	1991	100,000	Community Managed Resource Center The uTshani Fund (for housing), Inqolobane (The Granary) funds for employment/micro enterprise
THAILAND: Various regional and city-based federations	1990	Thousands of savings groups	CODI – fund set up by the government of Thailand
INDIA: National Slum Dwellers Federation and Mahila Milan	1974 and 1986	2 million plus	SPARC (1984) Community-Led Infrastructure Finance Facility (CLIFF)
PAKISTAN: Orangi pilot project	1980	31,00	OPP(Component sharing model).SKAA Katchi abadis improvement funds(KIPF)

Source: D'Cruz Celine and Satterthwaite David, March 2006; 2

3.0 INTRODUCTION

Katchi abadis are present in all the big cities of Pakistan, these abadis comprises at least 30% of urban population. In Pakistan reasons of development of katchi abadis other than high population growth rate, are high rate of unplanned urbanization, unemployment and migration into the cities from rural areas as the rural fraction of population has been decreased from 71.7 % in 1981 to 60% in 2005 and urban fraction of population has been increased due to concentration of facilities in limited number of major cities but the most important, old and basic reason of development of katchi abadis is high migration of people from India at the time of partition in 1947.

The chapter describe the reasons of development of katchi abadis in Pakistan and regularization and development process of katchi abadis that how katchi abadis are treated in Pakistan. The other past approaches for the provision of housing schemes and development of infrastructure are also discussed in this chapter.

3.1 KATCHI ABADIS

The Term refers to settlement on the Government/state land without ownership rights. Under the revised katchi abadis act 1987 the settlement can be declared as official katchi abadi that is not ecologically dangerous zone, not on areas earmarked for amenities, not required for the development needs of the cities and having at least 40 dwelling units.

3.1.1 CHARACTERISTICS OF KATCHI ABADIS

Katchi Abadi possesses the following characteristics;

- Dwelling unfit for human habitation predominate
- Delinquency, crime and disease generally flourish
- Unauthorized possession
- Areas requiring urban renewal and upgrading
- Inappropriate planning
- Low and under serviced areas

3.1.2 BASIC ISSUES OF KATCHI ABADIS

- Lack of Ownership rights
- Unhygienic condition regarding sanitation and water supply
- Poor infrastructure
- Low access to local institutions

- Environmental problems
- Fear of eviction
- Bad impression on society
- Illiteracy
- UN employment

3.1.3 THE PROCESS OF FORMATION OF KATCHI ABADIS

There are two distinct processes involved in the formation of a Katchi abadis. One is the organic and induced processes. The organic process refers to the forces and pressures which are initiated from within the settlement and squatter. They evolve naturally, without any outside intervention and using internal resources of the family or settlement for development, such as labour, locally available materials etc. The induced process refers to the "inducement" set up by agencies and organizations which are external to the settlement. Operating with objectives and goals on a larger, city-wide scale, they initiate programmes and projects for the overall development of the settlement. Both these put together act on the growth of a squatter settlement, through a series of consolidate stages of development. These stages are conclusive in their outcome, in the sense that they represent a continuum with one stage or process overlapping and even running parallel to each other

3.2 KATCHI ABADIS REGULARIZATION/DEVELOPMENT PROGRAMME

Different programmes have been applied to solve the problems of residents of katchi abadis that have been adopted by different organizations according to their specific circumstances.

Katchi Abadis Regularization/Development Programme (KRDP) aims at improvement of housing and general living condition of low income people living in katchi abadis in Pakistan. In order to achieve the goals and objectives of KDRP, the government adopts some measures to upgrade these katchi abadis. In this regard, provision of land tenure is very important as people illegally occupy land and the lack of security prevents the residents to invest in their dwellings as well as in their area which ultimately prevents the development in the area of katchi abadis.

3.2.1 PROCESS OF KDRP IN PUNJAB

In Punjab a full-fledged Directorate General of Katchi Abadis & Urban Improvement is working under the Local Government and Rural Development Department Government of the Punjab under the Punjab Katchi Abadis, Act 1992. All policy matters are being looked after by the Directorate General in liaison with the Katchi Abadis Cell of Ministry of Environment, Local Government & Rural Development, and Government of Pakistan. At the lower levels the Development Authorities are performing the functions of Executing Agencies and are responsible for implementing the Katchi Abadis Regularization/Development Programme in big cities like Lahore, Faisalabad, Multan, Rawalpindi, etc. As such the Lahore Development Authority is working as Executing Agency on behalf of Directorate General Katchi Abadis & Urban Improvement, Punjab, for implementing the policy decisions of the Federal/Provincial Government.

The executing agencies like LDA, MDA, RDA, FDA has following functions;

- To assist the Director General, Katchi Abadis & Urban Improvement Punjab in the performance of his duties/functions.
- To implement the regularization programme in the recognized Katchi Abadis within the jurisdiction of Lahore Development Authority.
- To carry out site verification/ re-verification of record/ facts of enlisted/declared Katchi Abadis under the direction of the Director General Katchi Abadis & Urban Improvement Punjab.
- To process/scrutinize the cases for issuance of demand notices to the eligible dwellers as per Government policy/Instructions and to recover the cost of land and development charges at the prescribed rates duly notified by the Government.

Demand notices are issued to the eligible dwellers in duly notified / declared/transferred Katchi Abadis on provisional basis on the criteria that name of the dweller should exist in the survey list, and dweller should furnish proof of continuous occupation/residence in a particular dwelling unit of a transferred Katchi Abadi prior to cut-off date of 23rd March, 1985. The dweller should also provide an affidavit on the prescribed stamped paper of Rs: 20/- duly verified/attested by a Magistrate Ist Class or a Notary Public. An application (on the prescribed form) along with requisite documents and copy of National

Identity Card may be presented in person by the bonafide dweller in the Directorate of Katchi Abadis.

As per prevailing policy of the Government, the cost of land and development charges are to be collected/ recovered before grant of proprietary rights to the eligible dwellers in duly notified/declared Katchi Abadis land which has been transferred/mutated in favour of Lahore Development Authority.

A. COST OF LAND

The cost of land is recoverable/chargeable at the following rates:-

- i. Residential unit up to 5-marla @ Rs.172/- per marla.
- ii. Excess land above 5-marla at market price of 23-03-1985.
- iii. Dwelling unit partly commercial up to 5-marla will be considered as residential @ Rs.172/- per Marla be charged.
- iv. Dwelling unit exceeding 5-marla partly commercial will be considered as commercial and market price of 23-03-1985 will be charged.
- v. Difference in area/name in the survey list of a dwelling unit partly commercial will be considered as commercial and will be charged market price of 23-03-1985.

B. DEVELOPMENT CHARGES

The Development charges are recoverable/chargeable at the rate of Rs. 1000/- per Marla in addition to the cost of land from the eligible dwellers.

Proprietary rights are to be granted to the eligible dwellers of those notified / declared Katchi Abadis land which has been transferred /mutated in favor of the Lahore Development Authority. The case for grant of proprietary rights to the bonfire dweller after recovery/realization of charges/dues regarding cost of land and development charges.

The development activities in Katchi Abadis falling under the jurisdiction of Lahore Development Authority are carried out by Engineering Section of Katchi Abadis, LDA, consisting of Director Engineering and his assisting staff. Following are the functions of engineering section of katchi abadis LDA.

- To prepare PC-I' for the Development/Improvement of Katchi Abadis.
- To execute the sanctioned schemes of Development/Improvement under approval from the Government/Director General Katchi Abadis and Urban Improvement, Punjab.
- To carry out Engineering/Development works in the Katchi Abadis in accordance with the Government Policy/Instructions under direction of Director General, K.A. & U.I.

3.2.2 PROCESS OF KRDP IN SINDH

The authorities in Karachi have gone through a whole range of policies in their attempt to solve the houses crises for the low income people. The policy ranges from resettlements of Basti dwellers in flats and low cost houses to various forms of sites and services schemes. But still they could not solve the housing problems of the urban poor, as dwelling units constructed under these programmes were too small to the enormous housing needs in the city.

Hyderabad development authority in Sindh, introduced a very innovative procedure for sheltering the poor by the name of incremental development scheme keeping in view the affordability, target groups, timely financing, social services, community participation and income generation programme.

In view of the failure of the work under obsolete local councils, Sindh government felt the need entrust the task to a semi-autonomous organization i.e. SKAA .Sindh katchi abadis act was promulgated in 1987 and Sindh katchi abadis authority (skaa) was established in 1987 under section 4(i) of the act. SKAA's vision is to Ensure Regularization, Improvement, Up-Gradation and Re-Settlement/Re-Location of Pre-1985 Katchi Abadis/Squatter Settlements bringing them to other posh localities of cities/towns and launching Low Cost Housing Schemes to provide shelter for the shelter less. Main functions of SKAA are as follows

- Implementation of government policies on katchi Abadis
- Declaration / notification of katchi abadis in accordance with the act
- Survey, planning, regularization and development of katchi abadis (either directly or through Local councils)

- Launching low-cost housing schemes

From 1991 SKAA is not getting any grant from the government to meet its development as well as non - development expenditure

Break-Up of Recoveries

- 1/3rd to pay cost of the land to the land-owning agency
- 1/3rd for development activities
- 1/3rd to meet non-development expenditures

Procedure for Allocation of Plot

- Registration of shelterless low income family
- Payment of entry fee ranging from rs.8,000/= to rs.10,000/= which cover a part of price of plot
- To reside in the reception area of the project at least for two weeks
- After assessment, possession of 80 sq. Yds plot is handed over for immediate construction
- A time of 30 to 45 days is allowed for construction and shifting to the Unit
- 60 monthly installments ranging from rs.300/= to rs.500/= to recover total price of plot ranging from rs.32,000/= to rs.35,000/=
- Occupation is the only guarantee of the ownership of plot during the period of 5 years and no transfer/transaction is allowed
- Ownership documents will be issued after 5 years from the date of possession subject to clearance of total price

3.3 PAST APPROACHES TO PROVIDE LOW COST HOUSING WITH PROPER INFRASTRUCTURE

In 1947, when the country got independence, there was a large influx of immigrants from across the border who mostly settled in Karachi, followed by Lahore and Rawalpindi. At that time the Government launched many resettlement schemes for low cost/low income category. However, this momentum was not maintained. These cities continued to face the problem of large scale urbanization and the issue of illegal habitat/squatter

settlements/slums. The current population of Pakistan is around 160million people, which makes it the world's sixth most populous country. Nearly one-fifth of the country is very poor, with monthly income not exceeding Rs 4,000 thus making it a good candidate for micro-housing and housing finance. Another 40% of the population has an income level of up to Rs 12,000 per month which creates demand for low cost/low income housing and housing finance.

3.3.1 PUBLIC SECTOR PROJECTS

1. Korangi Town Project, Karachi

In 1958, the Government launched a low income housing scheme for the rehabilitation of squatters under the “Greater Karachi Resettlement Program”, namely Korangi Township, Karachi. The projects were funded by the World Bank and were conceived and implemented in the early 60s by the then Governor General Azam Khan for the rehabilitation of squatters. The scheme initially did not have the desired success due to lack of essential services such as transport, schools and health services. Also some of the allottees sold their rights in order to make money and then went back to their slums. However, over a few years time, with the development of missing infrastructure, the project turned out to be a great success.

2. Metroville in Karachi

The metroville programme is in response of this need the term “metroville” implies the integrated development of viable urban communities covering their physical, social, economic, financial and administrative requirement.

Objectives

- To provide urban growth modules of 50,000 or more persons on a scale sufficient to meet the new growth demands in Karachi untill1985.
- To provide for 40% of the residential labor force employment opportunities within or near metroville sites.
- To provide public facilities like potable water, health facilities, sufficient bus transport, and financial assistance at terms and conditions related to the ability to pay, at an adequate rate.

Reasons of failure

- High growth rate of Karachi i.e.7.2 in 1985 affected the programme as all the projection made on that time was proved to be incorrect due to this high growth rate as Karachi was the major city of Pakistan and migration rate from rural areas and other small cities was very high so programme failed
- Like other low income schemes, middle and higher income groups also occupied the scheme.
- One of reason behind the failure of the programme was lack of co-ordination among development agencies and lack of administrative skills (Ahmed, Khan, Waqas, 2002; 17).

3.3.2 PUBLIC-PRIVATE PARTNERSHIP PROJECTS

There are not many public-private sector initiatives for low cost /low income housing in Pakistan. A brief summary of some of these initiatives is given below:

1. Township, kotlakh Pat Low Income Scheme in Lahore

The Lahore township scheme has been planned about 11 miles away from the core of the city near kotlakh pat industrial area. The purpose was to provide shelter to the shelter less jhuggi dwellers in the city of Lahore.

It is based on the concept of site and services scheme.

Reasons of failure

- Informal sector in which low income people mostly work was neglected.
- Scheme is located for off place from city centre about 11 miles away. But most of the low income population for which this scheme was started, engaged in the economic activities in /near the city centre. While living at township they had to travel a long distance to reach their work place. This takes a lot of spending on travels therefore most of the people left out their plot allotted to them in the scheme and again resettled in the main city centre.
- The concerned department did not complete development as mentioned in the plan and utility services were not adequately provided, this leads the scheme to the failure.

- Political pressure is also one of the main cause of the failure of this type of scheme.as most of the political leaders encourage the development of katchi abadis in order to enhance their vote bank (Ahmed, Khan, Waqas, 2002; 18).

2. Khuda-ki-Basti (KKB) by SAIBAN

In 1987, Mr. Tasneem Siddiqui, a civil servant, who at the time was the Head of Hyderabad Development Authority (HAD), launched a micro-housing scheme titled “Incremental Developmental Housing Scheme” on the concept of incremental or progressive housing. The scheme was initially implemented and managed by HAD, the public sector institution. Later on, an NGO that was associated with the project management was registered as SAIBAN in 1990. Mr. Tasneem Siddiquie founded SAIBAN, with an initiative to meet housing needs of very poor and very needy sections of the society who are the real candidates for micro-housing solutions.

SAIBAN launched housing schemes in Hyderabad, Karachi and Lahore based on the concept of ‘Incremental or Progressive Housing. Under this scheme, a poor and needy family is invited to personally visit the reception of KKB on site. After initial verification, the family is given a one-room temporary residence on rent at the site. Once the management at KKB is convinced of the genuineness of the family’s need, they are allotted a plot on site with payment in installments. The family is then permitted to start construction on an incremental basis subject to their financial means. Technical and other support in construction is provided by the management. The ownership of the plot is conditional to living on site and is non-transferable. This prevents any speculation or misuse of the scheme.

The schemes are adequately equipped with residential infrastructure, utilities and public transport, and have been successful enough to motivate its architects to launch similar schemes in other cities.

- **KKB-Hyderabad**

In 1987, the first scheme (KKB-1) was allotted 190 Acres of land in Gulshane Shahbaz, Hyderabad, which was subdivided into 3,180 plots of size 80 Sq.yards. Later another small size scheme (KKB-2) of 100 plots was launched in.

- **KKB-Karachi**

The KKB-3 project was initiated by SAIBAN in 1999 by Malir Development Authority (MDA). The project was implemented in two phases. Phase-1 consisted of 60 Acres and Phase-2 of 40 Acres, with a total land area of 100 Acres. The scheme developed 2,856 plots of 80 Sq. Yards each. Today the KKB-3 has a population of about 20,000 people. The average cost of the plot was Rs/- 40,000 wherein 25 % was to be paid in advance and the balance in easy monthly installments. The scheme was developed in strict compliance with prevailing laws of Town Planning, with ample provision for schools, hospitals/dispensaries, places of worship, community centers, play grounds and commercial areas. The residential infrastructure was also provided right at the initial stage.

- **KKB-Lahore**

The KKB-4 project in Lahore was started by SAIBAN in association with Acumen Fund of USA. At present it consists of 20 Acres of land, and efforts are being made to procure more land in the adjoining area. The layout plan of KKB-4 is based on a community concept that is divided into blocks of 23 housing units each, and a park in the center of each block. In order to ensure greenery and conserve water, the Scheme is equipped with water recycling facilities as well.

3. Orangi Pilot Project (OPP)

The Orangi Pilot Project (OPP) is based in one of the largest ‘katchi abadi’ (unauthorised settlements) located 12 kms from the centre of Karachi –the largest metropolitan centre in Pakistan.

The Orangi Pilot Project refers to a socially innovative project carried out in 1980s in the squatter areas of Orangi, Karachi, Pakistan. It was initiated by Akhtar Hameed Khan, and involved the local residents in solving their own sanitation problems. Innovative methods were used to provide adequate low cost sanitation, health, housing and microfinance facilities.

The project also comprised a number of programs, including a people's financed and managed Low-Cost Sanitation Program; a Housing Program; a Basic Health and Family

Planning Program; a Program of Supervised Credit for Small Family Enterprise Units; an education Program; and a Rural development Program in the nearby villages.

Today, the project encompasses much more than the neighborhood level problems.

Foundation of Orangi Pilot Project (OPP)

Dr Akhtar Hameed Khan (1914-99) was the founder and first Director of the project, and through his dynamic and innovative skills managed to bring modern sanitation to the squatter community of 1 million people. He had previously organized farmers' cooperatives and rural training centres and had served as an adviser to various development projects in Pakistan.

Comparing the OPP with his earlier Comilla project, Akhtar Hameed Khan commented:

"The Orangi Pilot Project was very different from the Comilla Academy. OPP was a private body, dependent for its small fixed budget on another NGO. The vast resources and support of the government, Harvard advisers, MSU, and Ford Foundation was missing. OPP possessed no authority, no sanctions. It may observe and investigate but it could only advise, not enforce."

The OPP now considers itself a research institution whose objective is to analyze outstanding problems of Orangi, and then through action research and extension education, discover viable solutions. These solutions can then be applied, with modifications, where necessary to other settlements and become part of state policies. The OPP does not fund development but by providing social and technical guidance it encourages the mobilization of local resources and the practice of co-operative action.

Orangi was a squatter community, and did not qualify for government aid due to their "unofficial" status. With endogenous research, the community was able to make an affordable sanitation system for the treatment of sewage, which helped to reduce the spread of disease. The system was created and paid for by the local community, who would not have had access to a sewer system otherwise. The programme proved so successful that it was adopted by the communities across developing countries and other cities of Pakistan.

Concept of Orangi Pilot Project

The model has evolved from Orangi on component sharing concept of development with people and government as partner. The concept was developed and successfully implemented by OPP-RTI (NGO). The illusion is, there are two levels of modern sanitation system;

Internal development: it comprising of

- Inside the house sanitary latrine
- In the lane, underground sewerage line
- Secondary or collector sewerage

External development: This constitutes

- Trunk sewers, natural development
- Treatment plant

Under this component sharing concept the communities are responsible for internal development and government take care of external development of respective settlements. The concept is now being replicating in many cities in Pakistan e.g NGO, AHKMT in Rawalpindi City, The Punjab Katchi Abadis Directorate (PKAUI), successfully advocated adoption of the model for 21 towns under the Government by Asian Development Bank financed project, NGO Muawin in Lahore city is mobilizing the Town Municipal Administration (TMA) and community of nearby Town “Ferozwal and NGO SCWS in Sanghar Town has completed mapping and documentation of the Union Council which comprises of a population of about 20,000, all there are working under the OPP-RTI.

4.0 INTRODUCTION

Data are pieces of information that represent the qualitative or quantitative attributes of a variable or set of variables. Data is typically the results of measurements and can be the basis of graphs, images, or observations of a set of variables. Data are often viewed as the lowest level of abstraction from which information and knowledge are derived. After collecting the data from the field by conducting socio-economic survey through questionnaires, the data is then ready for data analysis stage.

Data analysis is a process of gathering, modeling, and transforming data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domains. After analysis of data, different data analysis techniques are used to show the required results. Comparative data analysis technique is adopted to show the desired results.

Comparative data analysis technique helps abstract figures take on meaning. In fact, comparative population data analysis has provided the foundation of theories of development transition.

This chapter is about comparative analysis of regularized and unregularized katchi abadis in Lahore. The comparative data analysis shows the level of difference between two stages. A comparison has been made to know the living standard and facilities in two unregularized katchi abadis as well as the living standard of people and to check the extent of development work being implemented government in two regularized katchi abadis. A socioeconomic survey has been conducted to gather the primary data which provides basis for the conduction of study.

4.1 ANALYSIS OF SOCIO-ECONOMIC SURVEYS OF UNREGULARIZED KATCHI ABADIS (CASE STUDY: BADAR COLONY AND BAWOO WALA)

Descriptive Statistics are used to describe the basic features of the data in this study after analysis of data by using SPSS 14. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually

every quantitative analysis of data. Descriptive statistics are simply describing what is, what the data shows.

BACKGROUND INFORMATION

Two unregularized katchi abadis namely, Bawoo Wala and Badar Colony have been selected. These two katchi abadis meet all the criteria of being katchi abadis and located in the centre of Lahore but are still ignored by the government for regularization and development.

- **Badar Colony**

Badar Colony (Union Council 60 in Aziz Bhatti Town) is situated in Sadar near Ranger's Head Quarter Lahore. Badar Colony was developed in 1960. Total area of Badar Colony is 400 kanals. There are total 1300 houses in this abadis having 7800 population. Some people are urban settlers and others are migrants from different villages of Pakistan. The near by localities are Ali Park, Jalal Town and Itthad Colony.

There are only 2% of respondents who have gotten ownership rights from LDA and remaining 98% of respondents are living with out having ownership rights. People complain about corruption by LDA for giving ownership rights. They charged more than RS.172/marla (According to katchi abadi act 1992) from residents of Katchi abadis. There are also some people who don't know the procedure of applying for ownership rights.

- **Bawoo Wala**

This settlement is located in Ward no. 10 of Cantonment board area near Allam Iqbal Air port Lahore. Total area of Bawoo wala is 840 Kanals & 15 Marls. There are total 2757 houses in this abadis and having 16,890 population. The people are heterogeneous by composition. Some are Muslims and other are Christians and the near by localities are Dagra, Dairy Form, Darpaty, and Malik Pura. As bawoo wala yet has not been listed in LDA as a katchi abadi so no one applied there for ownership rights and all people are living with out getting ownership rights. Residents of Bawoo wala are fully willing to get ownership rights.

4.1.1 DEMOGRAPHIC ANALYSIS

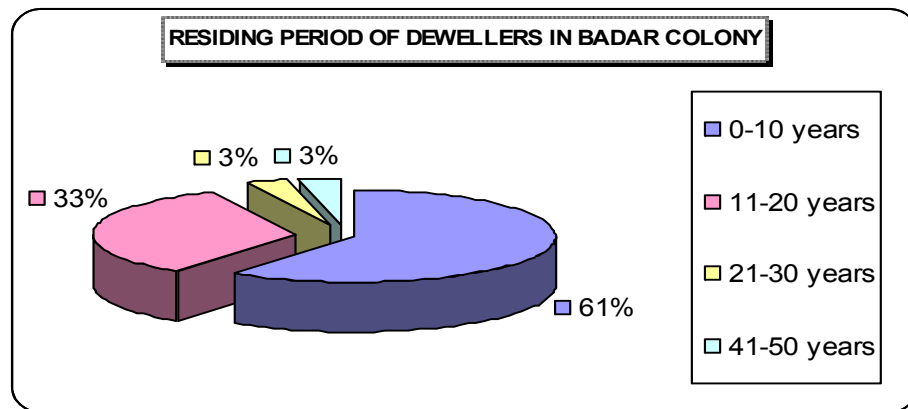
Demographic section includes the questions related to the residing period, household size, type of family, etc. The household size determines the level of overcrowding in the

dwellings of katchi abadis. The type of structure and type of family is an important parameter in relation to socio-economic status of the residents.

1. Residing Period

• Badar Colony

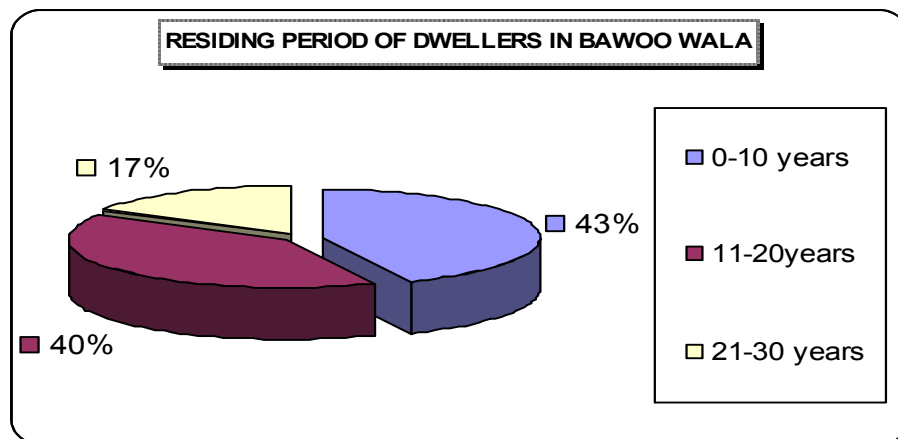
In Badar Colony, 61% of respondents are living here from less than 11 years, 33% of respondents are living from 11-20 years, 3% of respondents are living from 21-30 years and other 3% of respondents are living from 41-50 years.



Source: Field Survey by Researchers on July 20, 2009

ii) Bawoo Wala

In Bawoo Wala katchi abadi, 43% of respondents are living here from 0-10 years, 40% of respondents are living from 11-20 years and 17% of respondents are living there from 21-30 years.



Source: Field Survey by Researchers on July 23, 2009

2. Previous Residence

- **Badar Colony**

During survey it was found that in Badar Colony 77%of respondents were first living in others areas of Lahore like Dharm pura, Chungi.Sadar etc ,20%of respondents had their previous residence in other urban areas of Pakistan and 3%of respondents are those who came here to live from India at partition time.

- **Bawoo Wala**

On the other hand, it was found that in Bawoo Wala, previous residence of 60% of respondents was Lahore, 37%of respondents were first living in other urban areas of Pakistan and other 3%of respondents are living here since partition time as they have come here from India

Table 4.1: Previous Residence of Dwellers in Badar colony and Bawoo Wala

Previous Residence	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Lahore	23	77	18	60
Other urban area	6	20	11	37
India	1	3	1	3

Source: Field Survey by Researchers

3. Residing purpose of people

- **Badar Colony**

Although Badar colony has illegal status and is lacking with good quality of life but many people are living here due to many reasons. In colony 23% of respondents are living here for getting job opportunities, 7% of respondents are living for better education in the colony, othr 17% of respondents are living for better life and remaining 53% of respondents are living for other purposes.

- **Bawoo Wala**

In Bawoo wala, 30% of respondents are living here for getting job opportunities, 3% of respondents are living for better education in the colony, 30% of respondents are living for better quality of life and remaining 37% of respondents are living for other purposes.

Table 4.2: Residing purpose of people in Badar colony and Bawoo wala

Residing Purpose	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Job opportunities	7	23	9	30
Better education	2	7	1	3
Better quality of life	5	17	9	30
Other purpose	16	53	11	37

Source: Field Survey by Researchers

4. Type of Residence

- **Badar Colony**

In Badar Colony, 77% of respondents have their own houses and 23% of respondents pay rent for the houses.

- **Bawoo Wala**

In Bawoo Wala 67% of respondents have their own houses and 33% of respondents pay rent for the houses.

Table 4.3: Residence Type of People in Bader Colony and Bawoo Wala

Type of Residence	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	percentage
Owned	23	77	20	67
Rented	7	23	10	33

Source: Field Survey by Researchers

5. Type of Family

- **Badar Colony**

In Badar Colony nucleus family system dominates over joint family system. There are 67 % of respondents who live in nucleus family system, 27% of respondents live in joint family system and other 6% of respondents live as one single person in one house.

- **Bawoo Wala**

On the other hand, in Bawoo Wala, 50%of respondents have nucleus family system,46% of respondents have joint family system and other 3% of respondents live alone as only one person in each house.

Table 4.4: Type of Family in Badar Colony and Bawoo Wala

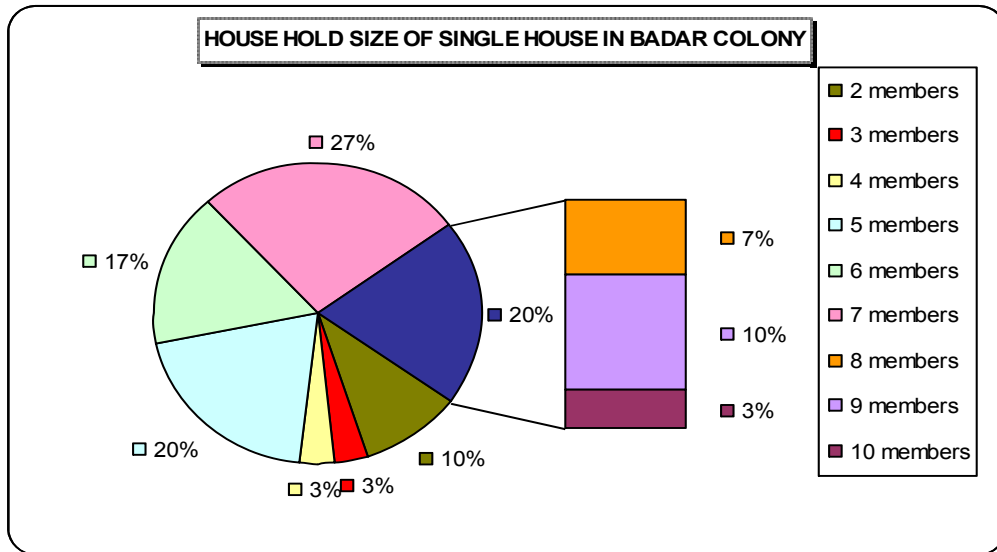
Family Type	Badar colony		Bawoo Wala	
	Frequency	Percentage	Frequency	Percentage
Nucleus	20	67	15	50
Joint	9	30	14	47
Single person	1	3	1	3

Source: Field Survey by Researchers

6. House hold size

• **Badar Colony**

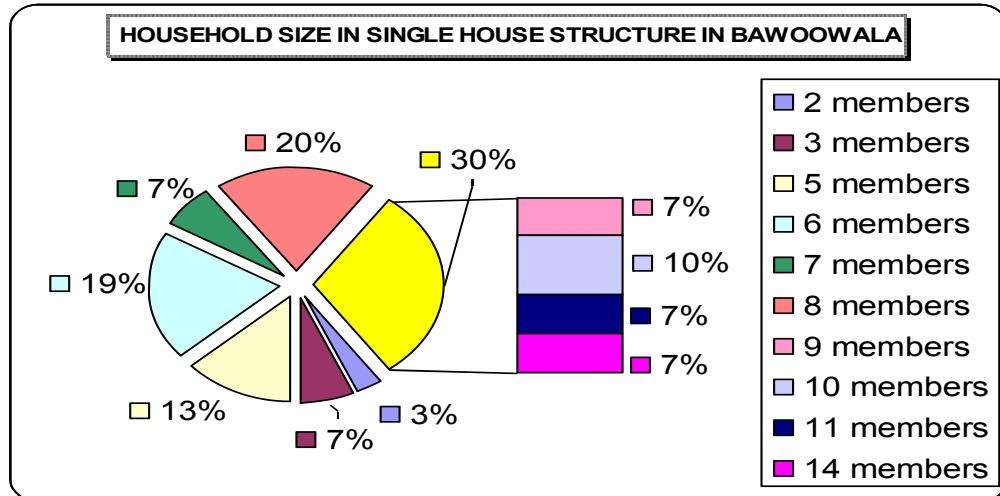
The household size in 10% of 30 houses is 2, in 3% of 30 houses is 3, in other 3% of 30 houses is 4, in 20% of 30 houses is 5, in 17% of 30 houses is 6, in 27% of 30 houses is 7, in other 7% of 30 houses is 8, in 10% of 30 houses is 9 and in remaining 3% of 30 houses is 10.



Source: Field Survey by Researchers on July 20, 2009

• **Bawoo Wala**

The household size in 3% of 30 houses is 2, in 7% of 30 houses is 3, in 13% of 30 houses is 5, in 19% of 30 houses is 6, in 7% of 30 houses is 7, in 20% of 30 houses is 8, in 7% of 30 houses is 9, in 10% of 30 houses is 10, in 7% of 30 houses is 11 and in other 7% of 30 houses is 14.



Source: Field Survey by Researchers

4.1.2 ECONOMIC ANALYSIS

Economic analysis was conducted to assess the economic impact of the Katchi Abadi regularization/ development Programme. Question included in this section are related to the total earning members of a family, type of occupation, monthly income and expenditures, etc.

1. Total Earning members in Single House Structure

- **Badar Colony**

There is only one earning member in 67% of 30 houses, 2 earning members in 13% of 30 houses, 3 earning members in 7% of 30 houses, 4 earning members in 10% of 30 houses.

- **Bawoo Wala**

In Bawoo Wala, 33% of 30 houses have only one earning member in each house, 14% of 30 houses have 2 earning members in each house,, 40% of 30 houses have 3 earning members and remaining 13% of 30 houses have 4 earning members in each house.

Table 4.5: Total Earning Members in Single House Structure

Total earners	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
1	20	67	10	33
2	4	13	4	14
3	2	7	12	40
4	4	13	4	13

Source: Field Survey by Researchers

2. Type of Occupation

- **Badar Colony**

In badar colony 37% of respondents are government employees,, 30% of respondents are labors, 13% of respondents do their own business and 20% of respondents are private employees.

- **Bawoo Wala**

In Bawoo Wala, 3% of respondents are government employees, 57% of respondents are labors, 33 % of respondents do their own business and other 7% of respondents are private employees.

Table 4.6: Type of Occupation in Badar Colony and Bawoo wala

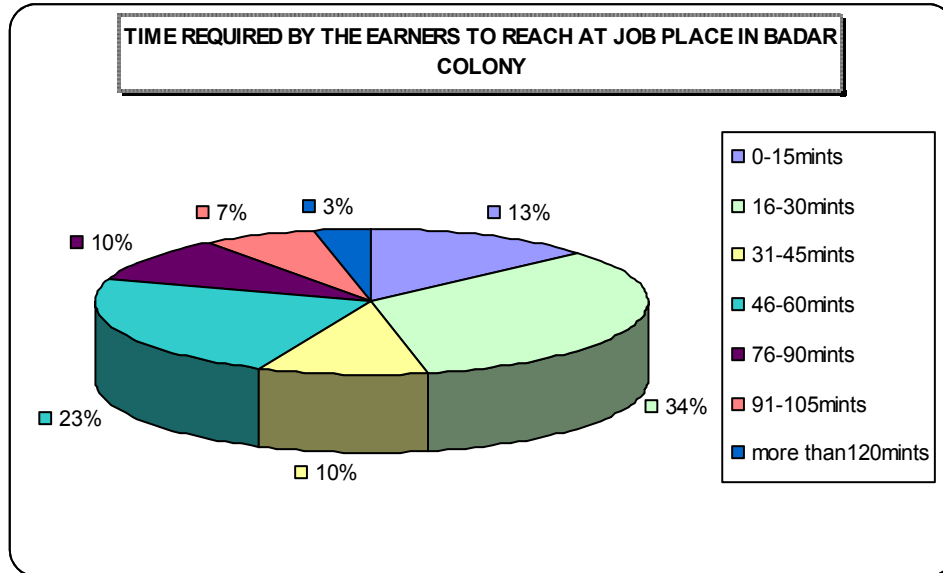
Type of Occupation	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Government Employees	11	37	1	3
Labors	9	30	17	57
Business	4	13	10	33
Private Employees	6	20	2	7

Source: Field Survey by Researchers

3. Time Required By the People to Reach at Job Place

- **Badar Colony**

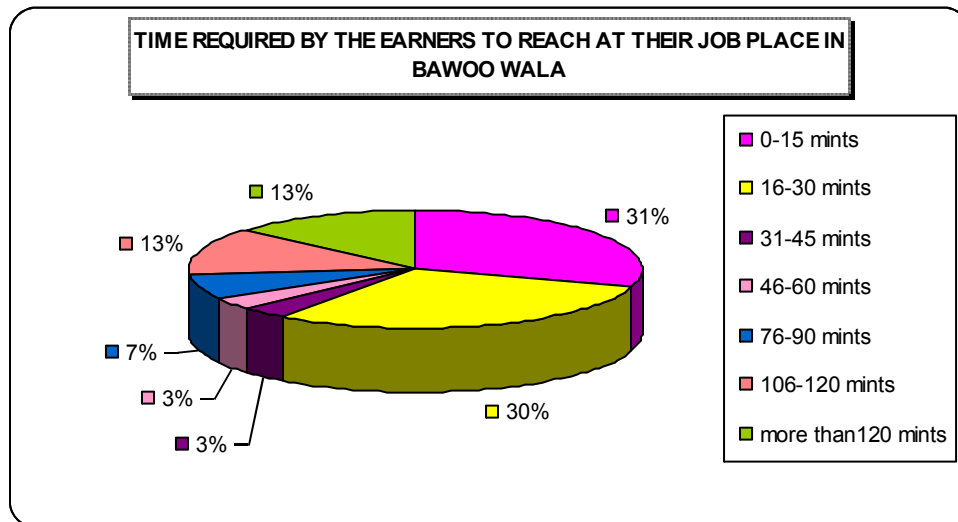
In Badar Colony 13% of respondents take 0-15 mints daily to reach at their job place, 34% of respondents take 16-30 mints, 10% of respondents take 31-45 mints , 23% of respondents take 46-60 mints , 10% of respondents take 76-90 mints, 7% of respondents take 91-105mints and other 3% of respondents take more than 120mints to reach at their job place.



Source: Field Survey by Researchers on July 20, 2009

• **Bawoo Wala**

In Bawoo Wala 31% of respondents take 0-15 mints daily to reach at their job place, 30% of respondents take 16-30mints, 3% of respondents take 31-45 mints, 3% of respondents take 46-60mints, 7% of respondents take 76-90mints, 13% of respondents take 106-120 mints and other 13% of respondents take more than 120mints to reach their job place.



Source: Field Survey by Researchers on July 23, 2009

4. Monthly Income

- **Badar colony**

After the analysis of the socioeconomic survey it is concluded that 7% of respondents earn from Rs.100 to Rs.5000/- per month, 23% of respondents earn from Rs.5100 to Rs.10, 000/-per month, 50% of respondents earn from Rs.10, 100 to Rs.15, 000/- per month, 13% of respondents earn from Rs.15100 to Rs.20, 000/- per month and remaining 7% of respondents earn from Rs.20, 100 to Rs.25, 000/-per month.

- **Bawoo wala**

In Bawoo Wala, there are 7% of respondents who earn from Rs.100 to Rs.5000/- per month, 33% of respondents earn from Rs.5100 to Rs.10, 000/-per month, 20% of respondents earn from Rs.10, 100 to Rs.15, 000/- per month and other 20% of respondents earn from Rs.15100 to Rs.20, 000/- per month.

Table 4.7: Monthly Income of Residents in Badar Colony and Bawoo Wala

Monthly income	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Rs.100/- to Rs.5000/-	2	7	8	27
Rs.5100/- to Rs.10, 000/-	7	23	10	33
Rs.10100/- to Rs.15, 000/-	15	50	6	20
Rs.15100/- to Rs.20, 000/-	4	13	6	20
Rs.20,100/- to Rs.25000/-	2	7	0	0

Source: Field Survey by Researchers

5. Monthly Expenditures

- **Badar colony**

In Badar colony 7% of respondents monthly expend from Rs.100 to Rs.5000/, 33% of respondents expend from Rs.5100 to Rs.10, 000/-, 40% of respondents expend from Rs.10, 100 to Rs.15, 000/-, 10% of respondents expend from Rs.15100 to Rs.20, 000/- and other 16% of respondents monthly expend from Rs.20,100 to Rs.25, 000/-.

- **Bawoo wala**

After analysis it is concluded that in Bawoo Wala monthly expenditures of 7% of respondents are from Rs.100 to Rs.5000/-, monthly expenditures of 33% of respondents are from Rs.5100 to Rs.10, 000/-, monthly expenditures of other 33%of respondents are

from Rs.10, 100 to Rs.15, 000/-, monthly expenditures of 20%of respondents are from Rs.15100 to Rs.20, 000/- and monthly expenditures of remaining 7% of respondents are from Rs.20, 100 to Rs.25, 000/-.

Table 4.8: Monthly Expenditures of Residents in Badar Colony and Bawoo Wala

Monthly Expenditures	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Rs.100/- to Rs.5000/-	2	7	2	7
Rs.5100/- to Rs.10, 000/-	10	33	10	33
Rs.10100/- to Rs.15, 000/-	12	40	10	33
Rs.15100/- to Rs.20, 000/-	3	10	6	20
Rs.20,100/- to Rs.25000/-	3	10	2	7

Source: Field Survey by Researchers

4.1.3 PHYSICAL ANALYSIS

It is important that the Physical conditions to be considered when evaluating the sufficiency of infrastructural services in any settlement. The questions for determining the physical analysis includes type of structure, condition of structure, area of dwellings, tenure status, etc

1. Structure of Houses

- **Badar Colony**

In Badar colony 70% of respondents have pucca houses, 23% of respondents have semi pucca and remaining 7% of respondents have katcha houses.

- **Bawoo Wala**

In Bawoo Wala 13% of respondents have pucca houses, 80% of respondents have semi pucca houses and other 7 % of respondents have katcha houses.

Table 4.9: Structure of Houses in Badar Colony and Bawoo Wala

Structure	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Pucca	21	70	4	13
Semi Pucca	7	23	24	80
Katcha	2	7	2	7

Source: Field Survey by Researchers

2. Condition of Houses

• **Badar Colony**

As far as condition of houses is concerned 7 % of 30 houses having beautiful elevation fall in good condition category, 43% of 30 houses are in fair(neither good nor bad, normal condition) condition and other 50% of 30 houses fall in bad condition category.

• **Bawoo Wala**

During survey it was found that 10% of respondents live in good conditioned houses,80% of respondents live in normal (neither good nor bad) conditioned houses and other 10% of respondents live in bad conditioned houses.

Table 4.10: Condition of Houses in Badar Colony and Bawoo Wala

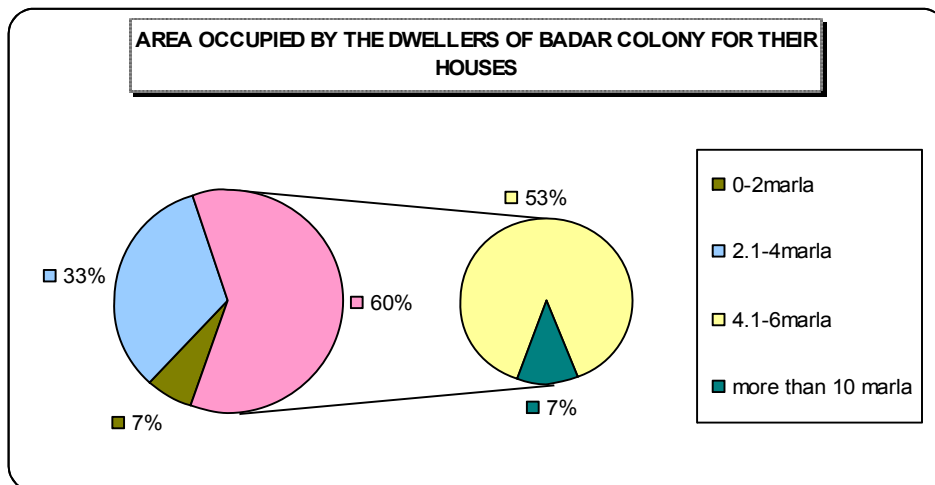
Condition of Houses	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Good	2	7	3	10
Fair	13	43	24	80
Bad	15	50	3	10

Source: Field Survey by Researchers

3. Area Occupied For Houses

• **Badar colony**

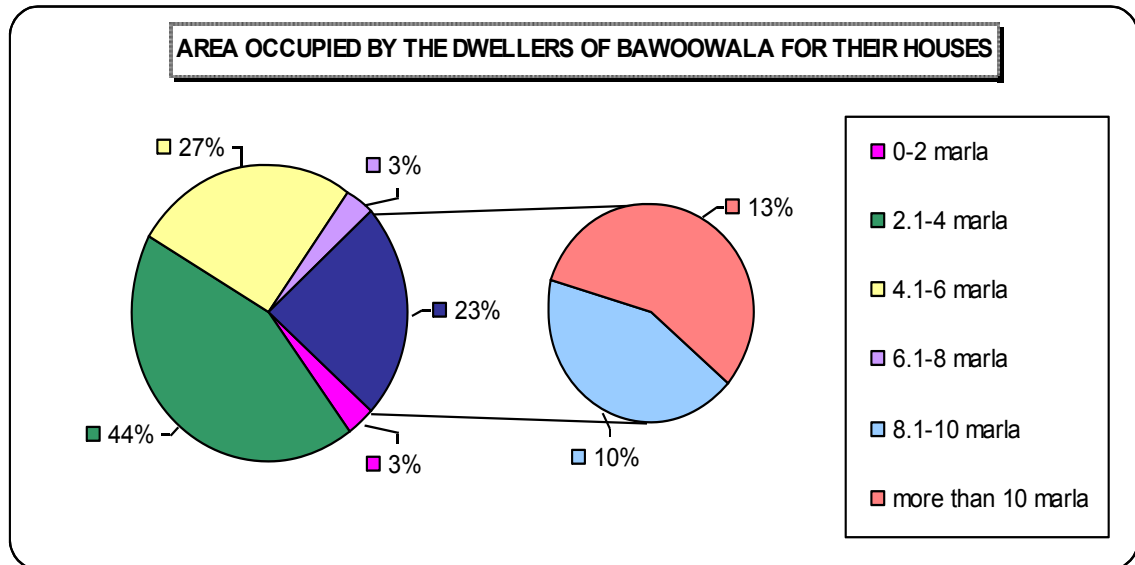
In Badar Colony, 7% of respondents have 0-2 marla houses, 33% of respondents have 2.1-4marla houses, 53% of respondents have in 4.1-6 marla houses and remaining 7% of respondents have more than 10marla houses.



Source: Field Survey by Researchers on July 20, 2009

- **Bawoo wala**

In Bawoo Wala 3 % of respondents live in 0-2 Marla houses, 44% of respondents live in 2.1-4 marla houses, 27% of respondents live in 4.1-6 marla, 3% of respondents live in 6.1-8 marla, 10% of respondents live in 8.1-10marla houses and other 13% of respondents live in more than 10marla houses.



Source: Field Survey by Researchers on July 23, 2009.

4. Condition of Water Supply System

The role of infrastructure in fostering economic growth and enhancing public welfare is more pronounced in developing economies like ours. For the successful assessment of any improvement program in a settlement, it is important to note the condition of infrastructural services and satisfaction level of residents of that locality. In these katchi abadis, there is no provision of water supply system at all; all people have water through electric motors boring system by self help basis.

- **Badar Colony**

In Badar colony quality of potable water is very poor only 7% of respondents are satisfied who have electric motors bored at high depth approximately of 200 metres and remaining 93% of respondents are fully dissatisfied.

- **Bawoo wala**

In Bawoo Wala, 17% of respondents are fully satisfied with the quality of water supply that they have through electric motors system with a bore of 200 meters and remaining 83% of respondents are dissatisfied with water supply.

Table 4.11: Condition of Water Supply in Badar Colony and Bawoo Wala

Water Supply	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Satisfied	2	7	5	17
Dissatisfied	28	93	25	83

Source: Field Survey by Researchers

5. Reasons of Dissatisfaction with Water Supply System

- **Badar colony**

Main reasons of dissatisfaction are bad taste and colored water with percentages of 7 and 93 respectively.

- **Bawoo wala**

During survey it was found that 24% of 25 respondents (who are dissatisfied with water supply system) are dissatisfied with water supply due to bad smell in potable water, 40% of them are dissatisfied due to bad taste and other 36% of them are dissatisfied because potable water shows color.

Table 4.12: Reasons of Dissatisfaction with Water Supply System

Reasons of dissatisfaction	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
bad smell	0	0	6	24
Bad taste	2	7	10	40
Show color	26	93	9	36

Source: Field Survey by Researchers

6. Condition of Sewerage System

- **Badar Colony**

In Badar colony there is no provision of sewerage system, except in some streets. In some streets soaked pits exist and in other streets condition of open drains is very poor as they are overflowing spreading very bad smell. Some open drains are choked by garbage and

acting as breeding place for mosquitoes and for other germs. However under changa Pani Programme the work on installing external pipes has been started by WASA.

There are 17% of respondents who are satisfied and remaining 83% of respondents are dissatisfied with sewerage system.

- **Bawoo Wala**

In Bawoo wala, 70% respondents have soaked pits in their streets on self help basis and sewerage system is not provided however 30% respondents have sewerage system in their streets by Government. In Bawoo wala out of 9 respondents who have sewerage system in their streets 44% of them are satisfied, 44% of them are dissatisfied and remaining 11% of them are indifferent with sewerage system provision.

Table 4.13: Condition of sewerage in Badar Colony and Bawoo Wala

Condition of sewerage system	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Satisfied	5	17	4	44
Dissatisfied	25	83	4	44
Indifferent	0	0	1	11

Source: Field Survey by Researchers

7. Reasons of dissatisfaction with Sewerage System

- **Badar Colony**

People are dissatisfied with no provision of sewerage system in their area, as soaked pits are costly and damaging house structures.

- **Bawoo wala**

In Bawoo wala, out of 4 respondents who are dissatisfied with drainage system, 50% respondents are dissatisfied due to chocking of sewerage system with garbage and other 50% are dissatisfied due to no provision of staff for cleanliness.

Table 4.14: Reasons of dissatisfaction with sewerage system

Reasons of Dissatisfaction	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
Chocked by garbage	2	50	2	50
No staff for cleanliness	3	60	2	50

Source: Field Survey by Researchers

8. Condition of Drainage System

• Badar Colony

In Badar colony only few streets are equipped with drainage system facility others are not, so 93% of respondents complained about non provision (neither by Government nor by self help) of drainage system and 7% of respondents have this facility in their streets on self help basis. These 7% people are dissatisfied with improper working of drainage system.

• Bawoo wala

In Bawoo Wala 67% of respondents have no provision of drainage system in their streets, 17% of respondents have this facility on self help basis and other 16% of respondents have drainage system in their streets by government.

Table 4.15: Drainage System in Badar Colony and Bawoo wala

Drainage system	Badar colony		Bawoo wala	
	Frequency	Percentage	Frequency	Percentage
No provision	26	93	20	67
Provided by self help	4	7	5	17
Provided by government	0	0	5	16

Source: Field Survey by Researchers

9. Condition of Street Pavement

• Badar Colony

In Bader Colony 27% of respondents complained about non provision of street pavement, 20% of respondents have this facility by Government and other 53% of respondents have street pavement in their streets on self help basis. In Badar colony 5% of respondents who have streets pavement in their streets are satisfied and other 95% of respondents are dissatisfied with street pavement.

• Bawoo Wala

In Bawoo wala, only street no.1 is paved with cement, 3 streets are of brick pavement and remaining all street are katchi streets. In Bawoo Wala 77% of respondents complained about non provision of street pavement, 10% of respondents have this facility by Government and other 13% respondents have street pavement in their streets on self help basis. In Bawoo Wala 13% of respondents are satisfied with street pavement, 83% of

respondents are dissatisfied and other 4% of respondents are indifferent (neither satisfied nor dissatisfied) with this facility.

Table 4.16: Street Pavement in Badar Colony and Bawoo wala

Street pavement	Badar colony		Bawoo wala	
	Frequency	percentage	Frequency	Percentage
No provision	8	27	23	77
Provided by Government	6	20	3	10
Provided by self help	16	53	4	13

Source: Field Survey by Researchers

10. Street Lights

- **Bader Colony**

In colony 27% people complained about non provision of street lights by government, 10% people have this facility by government and remaining 63% people have this facility in their streets on self help basis.

Table 4.17: Street Lights in Bader Colony

Street lights	Frequency	Percentage
No provision	8	27
Provided by government	3	10
Provided by self help	19	63

Source: Field Survey by Researchers on July 20,, 2009

During survey it t was sort out that out of 22 respondents (who have street lights in their streets ,both by government & by self help) 14% people are satisfied,77% people are dissatisfied and other 9 % people are indifferent with street light provision.

- **Bawoo Wala**

There is no provision of street lights in bawoo wala.

11. Sui gas and Electricity

- **Badar Colony**

Sui gas is provided in whole colony and people are fully satisfied with Sui gas provision. Most of the People are dissatisfied with electricity provided due to load shedding and high bills.

- **Bawoo wala**

Sui gas is provided in whole colony except of 3 streets and people are fully satisfied with Sui gas provision. In Bawoo wala residents are dissatisfied with electricity provided due to load shedding and high bills.

12. Participation Way of Community in Development of the Area

- **Badar Wala**

In Badar Colony 63% of respondents are willing to participate as un skilled labors,20% of respondents are agree to participate as skilled labors and 17% of respondents are willing to participate financially in the development of their area.

- **Bawoo wala**

In Bawoo Wala 83% of respondents are willing to participate as un skilled labors,20%of respondents are agree to participate as skilled labors and 7% of respondents are willing to participate financially in the development of their area.

Table 4.18: Participation way of community in development

Participation way	Badar colony		Bawoo wala	
	Frequency	percentage	Frequency	Percentage
Un-skilled labor	19	63	25	83
Skilled labor	6	20	3	10
Financial support	5	17	2	7

Source: Field Survey by Researchers

4.1.4 ANALYSIS OF PUBLIC FACILITIES

In the context of rapid urban growth and expansion, the provision of public facilities along with key infrastructure elements has been a major concern in Katchi Abadis. This study aims to provide a picture of the provision of public facilities such as schools and clinics, parks, shopping, Masjids, Graveyards, etc in katchi abadis.

1. Education

- **Badar Colony**

There is not a single government primary school in the colony however private school exists. But most of the residents complained about high fee of these private schools. there is one government school in Ranger Head Quarter near by the colony but it does not

come in the boundaries of colony. Over all literacy rate is not satisfactory and children enrollment rate is also not satisfactory.

- **Bawoo Wala**

In Bawoo wala there are no government schools, however private school exists. But residents are dissatisfied with private school due to high fee and no provision of books as they are provided in government schools.

2. Health Facilities

In Badar colony no clinics exist even there is no provision of any dispensary. There is no provision of clinics but there are five privet dispensaries in Bawoo Wala.

3. Parks

There is no park in the both colonies namely badar colony and Bawoo Wala.

4. Shopping Facility

In both unregularized colonies namely badar colony and Bawoo Wala, Residents have no access to shopping centre in colony except of utility stores and meat and vegetables selling shops.

5. Mosques and Graveyards

There is provision of Mosque and one Graveyard in the area of badar colony. But Residents of Bawoo wala have easy access to mosques but only one graveyard is provided both for Muslims and Christian communities and it causes social conflicts as both the communities require separate graveyards for them.

6. Access to Transport Facilities

The main transport modes of the residents in Badar Colony are local buses and Quingques. Access to main road and transport facilities is normal (neither good nor bad). There is no bus stop in the colony nearby. In Bawoo Wala access to transport is bad. There is no bus stop in the colony. Most of the residents travel by Quingques.

7. Environmental Aspects

- **Badar colony**

If we consider the environmental aspects in Badar colony, Physical out look and cleanliness condition of the entrance and main road is normal but in most of the streets open choked drains are spreading unbearable smell in surrounding so, here hygienic

condition is very poor. There is no provision of solid waste collecting containers in the whole colony.

- **Bawoo Wala**

The physical out look and cleanliness condition of bawoo wala is bad. There is heaps of garbage in the streets and no provision of solid waste containers exist.

4.1 ANALYSIS OF SOCIO-ECONOMIC SURVEYS OF REGULARIZED KATCHI ABADIS (CASE STUDY: TANKI NO. 56 AND KHAN COLONY)

Descriptive Statistics are used to describe the basic features of the data in this study after analysis of data by using SPSS 14. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Descriptive statistics are simply describing what is, what the data shows.

BACKGROUND INFORMATION

Two regularized katchi abadis namely, Tanki no. 56 and Khan colony have been selected. These two katchi abadis meet all the criteria of being katchi abadis and located in the centre of Lahore, in these abadis KRDP are implemented during 2001-2002 and 2003-2004 in Khan colony and Tanki no.56 respectively.

- **Tanki No.56**

Tanki no. 56 is located in 31 UC (railway colony) in Gulberg town of Lahore. The total area of Tanki no. 56 is 176 kanals and having 404 houses and 30 shops. In Tanki no 56 katchi abadi only 55 % of respondents have got ownership rights and other 45 % of respondents are living without ownership rights.

In Tanki no.56 katchi abadi no one got ownership rights without any charge, 37% of respondents have paid RS.172/marla for getting ownership rights, 63% of respondents have paid more than RS.172/marla. In colony 73% of respondents have not paid any development charges as Abdul Aleem Khan has paid development charges and remaining 27% of respondents have paid development charges more than RS.1000/marla.

- **Khan Colony**

Khan colony is situated in union council 99 of Gulberg Town, Lahore. It covers an area of 111 kanals and has 531 houses. In Khan colony 63 % of respondents have got ownership rights and other 37 % of respondents are living without ownership rights.

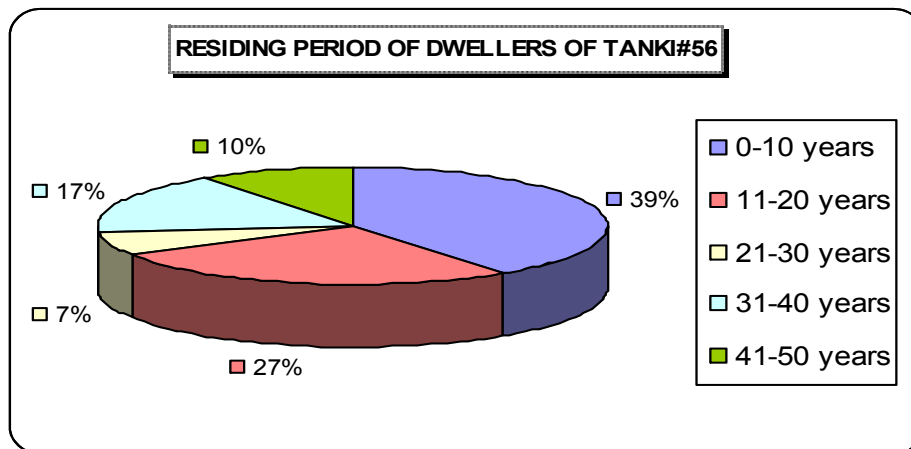
In Khan colony 12% of respondents have got ownership rights without any charge, 52% of respondents have paid RS.72/marla for getting ownership rights and 36% of respondents have paid more than RS.172/marla. In Khan colony 5% of respondents have not paid any development charges, 60% of respondents have paid RS.1000/marla and remaining 35% of respondents have paid more than RS.1000/marla.

4.2.1 DEMOGRAPHIC ANALYSIS

1. Residing Period

- Tanki No. 56

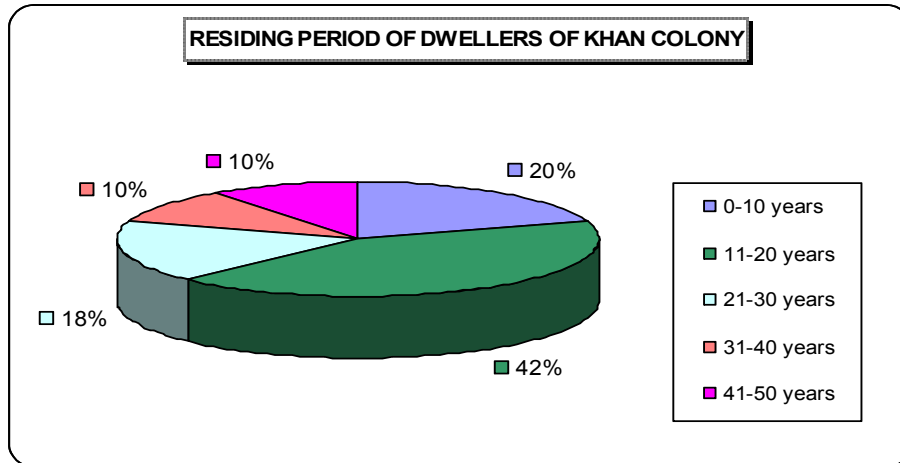
In Tanki no.56 katchi abadi 39% of respondents are living here from 0-10 years, 27% of respondents are living from 11-20 years, 7% of respondents are living from 21-30 years, 17% of respondents are living from 31-40 years and remaining 10% of respondents living here from 41-50 years.



Source: Field Survey by Researchers on July 25, 2009

- Khan Colony

In Khan colony 42% of respondents are living from 11-20 years, 20% of respondents are living from 0-10 years, 18% of respondents are living from 21-30 years, 10% of respondents are living from 31-40 years and other 10% of respondents are living from 41-50.



Source: Field Survey by Researchers on July 30, 2009

2. Previous Residence

- **Tanki No. 56**

During survey it was found that previous residence of 27% of respondents was Lahore, 27% of respondents are living here since partition time as they have come here from India and 47% of respondents were first living in other urban areas of Pakistan.

- **Khan colony**

Khan abadi came into exist in 1993 and many residents are living from many years. It was found that 82% of respondents were first living in others areas of Lahore like Chungi, near old Air Port, Naseera Abad etc ,15% of respondents had their previous residence in other urban areas of Pakistan and 3% of respondents have come here to live from India at partition time.

Table 4.19: Previous Residence of Residents in Tank no.56 and Khan Colony

Previous residence	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Lahore	8	27	33	82
Other urban area	14	47	6	15
India	8	27	1	3

Source: Field Survey by Researchers

3. Type of Family

- **Tanki No. 56**

In Tanki no56 katchi abadi 33% of respondents live in nucleus family system, 47% of respondents live in joint family system and other 20% of respondents live as one single person in each house.

- **Khan colony**

In khan colony joint family system dominates over nucleus family system as 38% of respondents live in nucleus family system and other 62% of respondents live in joint family system.

Table 4.20: Type of Family in Tank no.56 and khan colony

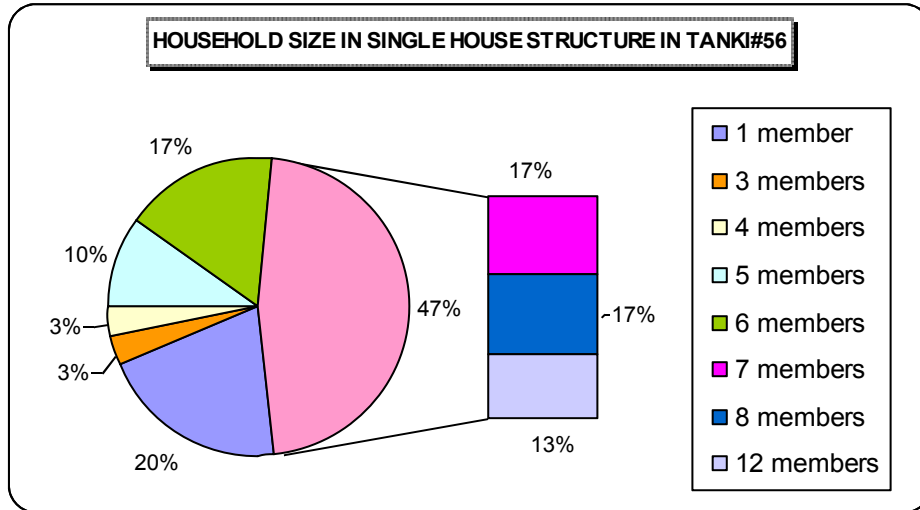
Family Type	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Nucleus	10	33	15	38
Joint	14	47	25	62
Single person	6	20	0	0

Source: Field Survey by Researchers

4. House hold size

- **Tanki No. 56**

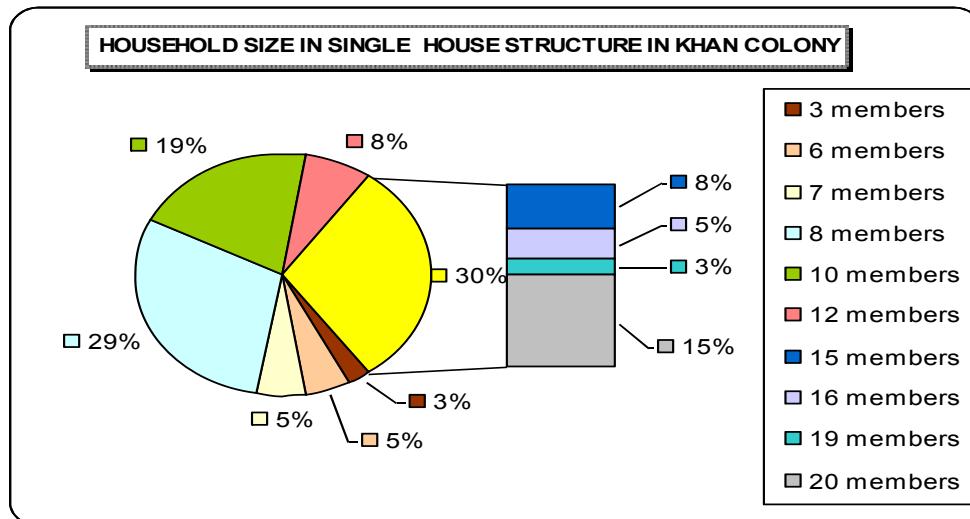
In Tanki no56 during survey it was found that in 20% of total 30 houses only one person lives,3% of 30 houses have 3 persons in each house ,other 3% of 30 houses have 4 persons in each house ,10% of 30 houses have 5 persons in each house ,17% of 30 houses have 6 persons in each house ,17% of 30 houses have 7 persons in each house, other 17% of 30 houses have 8 persons in each house and remaining 13% of 30 houses have 12 persons in each house.



Source: Field Survey by Researchers on July 25, 2009

- **Khan colony**

In khan colony house hold size of 3% of respondents is 3, household size of 5% of respondents is 6, household size of 5% of respondents is 7,house hold size of 29% of respondents is 8,household of 19% of respondents is 10,household size of 8% of respondents is 12,household size of other 8% of respondents is 15,household size of 5% of respondents is 16, household size of 3% of respondents is 19 and house hold size of remaining 15% of respondents is 20.



Source: Field Survey by Researchers on July 30, 2009

4.2.2 ECONOMIC ANALYSIS

1. Total Earners in Each House

- **Tanki No. 56**

There is only one earning member in 53% of 30 houses, 24% of 30 houses have 2 earning members in each house and 23% of 30 houses have 3 earning members in each house.

- **Khan colony**

There is only one earning member in 53% of 40 houses, 20% of 40 houses have 2 earning members in each house and 27% of 40 houses have 3 earning members in each house.

Table 4.21: Total Earning Members in Single House

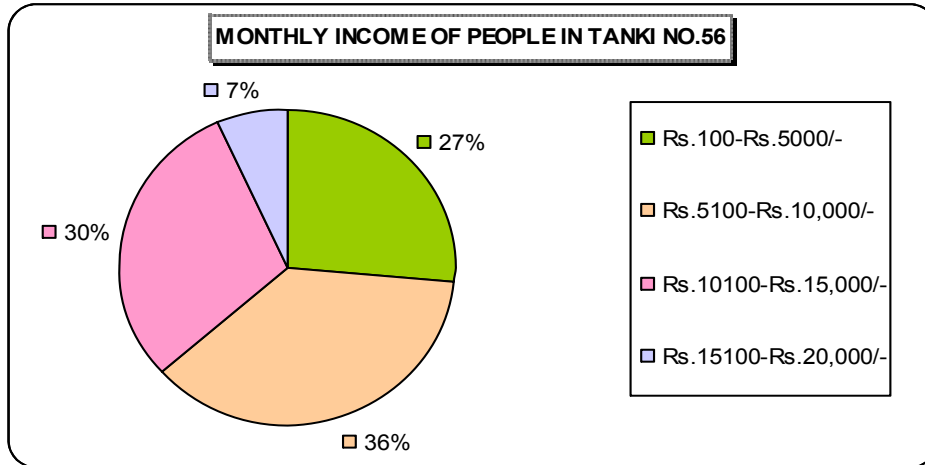
Total Earners	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
1	16	53	16	53
2	7	24	8	20
3	7	23	16	53

Source: Field Survey by Researchers

2. Monthly Income

- **Tanki No.56**

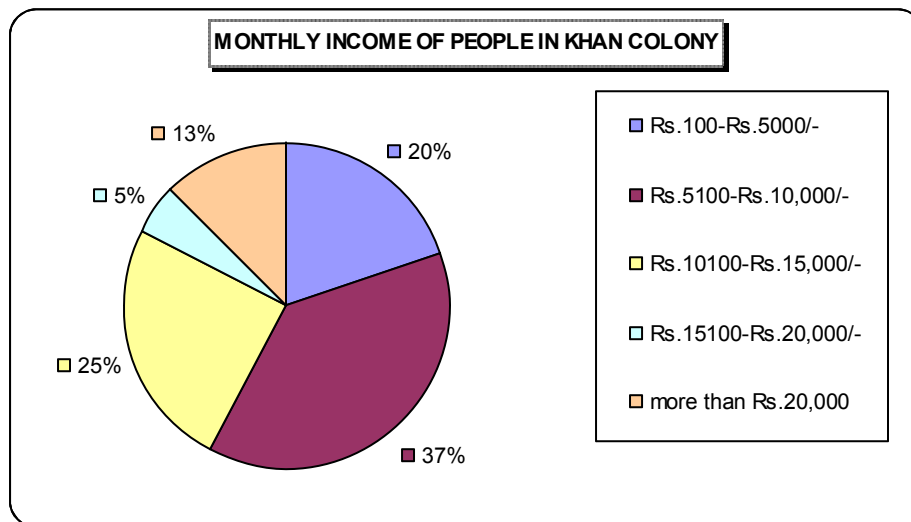
Residents of Tanki no.56 belong to low income class, after the socioeconomic survey it was found that 27% of respondents earn Rs.100 to Rs.5000/- per month, 36% of respondents earn Rs.5100 to Rs.10, 000/-per month, 30% of respondents earn Rs.10100 to Rs.15, 000/- per month and remaining 7% of respondents earn Rs.15100 to Rs.20, 000/- per month.



Source: Field Survey by Researchers on July 25, 2009

- **Khan Colony**

In Khan Colony 20% of respondents earn Rs.100 to Rs.5000/- per month, 37% of respondents earn Rs.5100 to Rs.10,000/- per month, 25% of respondents earn Rs.10,100 to Rs.15,000/- per month, 5% of respondents earn Rs.15,100 to Rs.20,000/- per month and remaining 13% of respondents earn more than Rs.20,000/- per month.



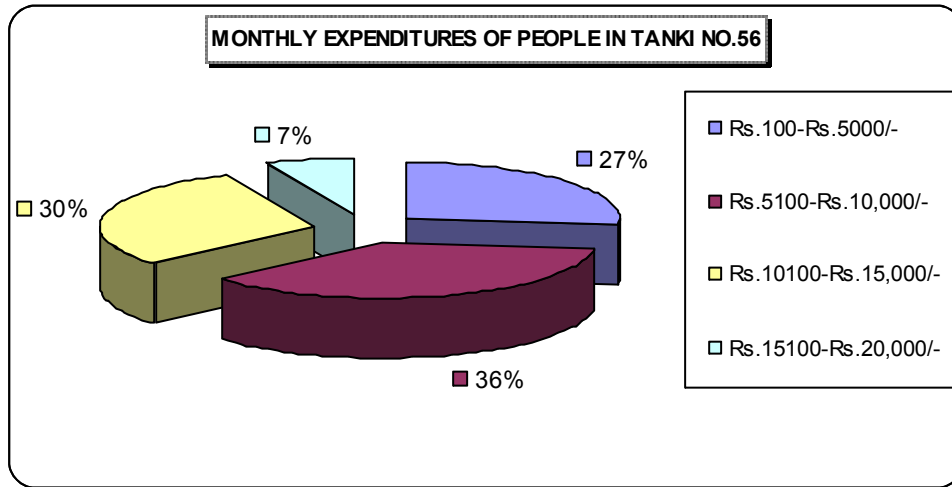
Source: Field Survey by Researchers on July 30, 2009

3. Monthly Expenditures

- **Tanki No.56**

In Tanki no.56 katchi abadi 27% of respondents expend Rs.100/- to Rs.5000/- per month, 36% of respondents expend Rs.5100/- to Rs.10,000/- per month, 30% of

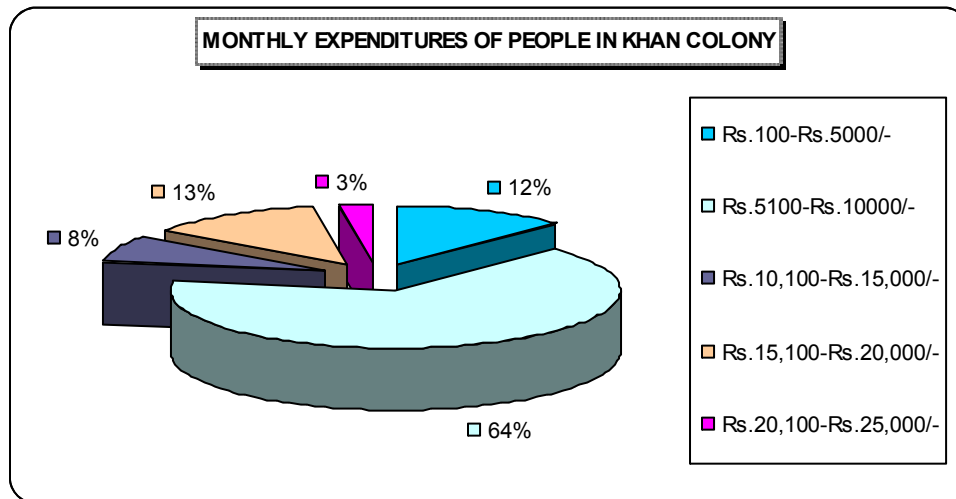
respondents expend RS.10, 100/- to RS.15, 000/-per month, and remaining 7% of respondents expend Rs.15, 100/- to Rs.20, 000/-per month.



Source: Field Survey by Researchers on July 25, 2009

- **Khan colony**

In Khan Colony monthly expenditures of 12% of respondents are Rs.100/- to Rs.5000/-, monthly expenditures of 64 % of respondents are Rs.5100/- to Rs.10, 000/-, monthly expenditures of 8% of respondents are RS.10, 100/- to RS.15, 000/-, monthly expenditures of 13%of respondents are Rs.15, 100/- to Rs.20, 000/- and monthly expenditures of remaining 3% of respondents are Rs.20100/- to RS.25000/-.



Source: Field Survey by Researchers on July 30, 2009

4. Type of Occupation

- **Tanki no.56**

In Tanki no56 katchi 27 %of respondents are government employees, 27% of respondents are labors, 43% of respondents do their own business and other 3% of respondents are private employees.

- **Khan colony**

In Khan Colony 2% of respondents do Government job, 60% of respondents are labors, 18 % of respondents are private employees and 20% of respondents do their own business.

Table 4.22: Type of Occupation in Tank no.56 and Khan Colony

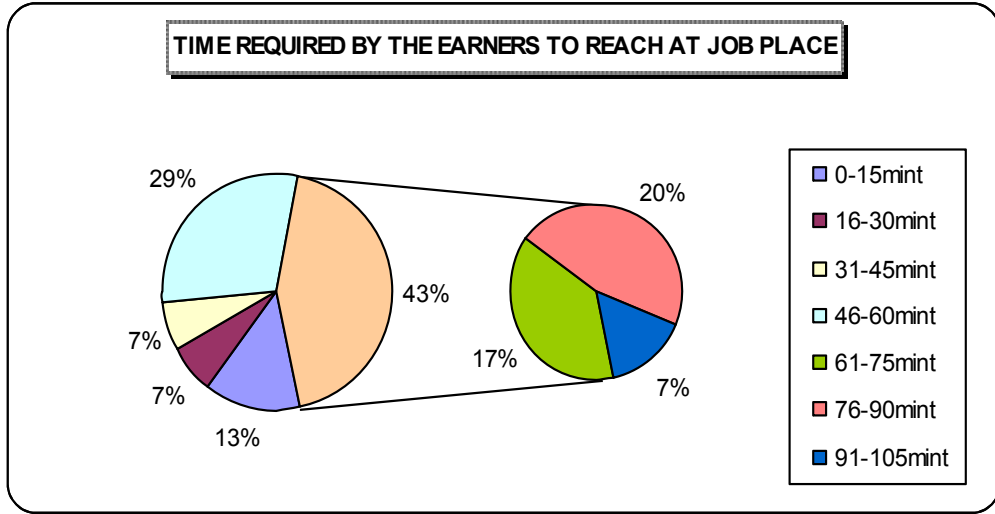
Type of Occupation	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Government employee	8	27	1	2
Labors	8	27	24	60
Business	13	43	7	18
Private employee	1	3	8	20

Source: Field Survey by Researchers

5. Time Required By the People to Reach at Job Place

- **Tanki # 56**

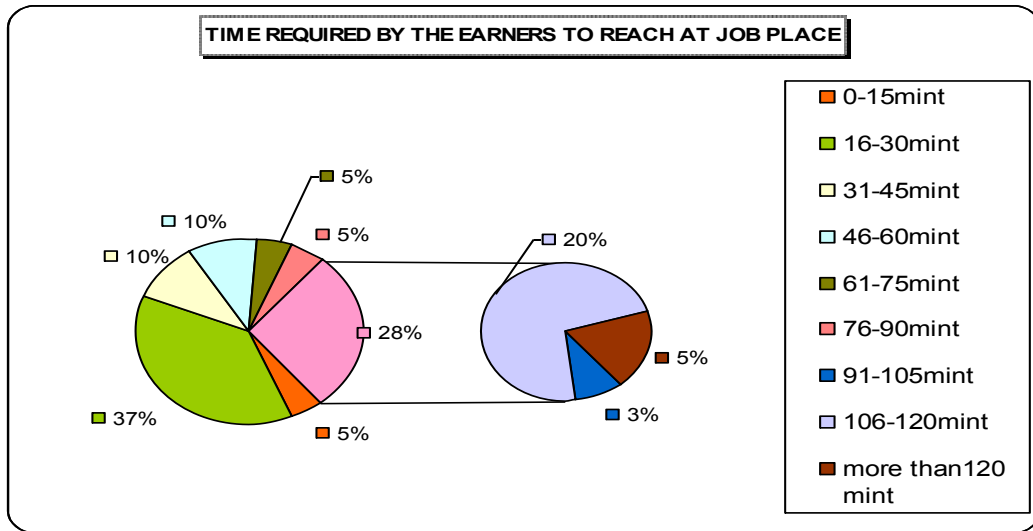
In Tanki no 56 13% of respondents take 0-15 mints to reach at their job place,7% of respondents take 16-30mints ,other 7% of respondents take 31-45 mints,29% of respondents take 46-60mints,17% of respondents take 61-75 mints,20% of respondents take 76-90mints and other 7% of respondents take 91-105 mints to reach at their job place.



Source: Field Survey by Researchers on July 25, 2009

- **Khan colony**

In Khan colony 5% of respondents take 0-15 mints to reach their job place, 37% of respondents take 16-30 mints, 10% of respondents take 31-45 mints, 10% of respondents take 46-60 mints, 5% of respondents take 61-75mints other 5% of respondents take 76-90mints, 3% of respondents take 91-105mints, 20% of respondents take 106-120mints and remaining 5% of respondents take more than 120mints daily.



Source: Field Survey by Researchers on July 30, 2009

4.2.3 PHYSICAL ANALYSIS

1. Structure of Houses

- **Tanki No. 56**

In Tanki no56 katchi abadi 80 % of respondents have pucca houses, 20 % of respondents have semi pucca houses.

- **Khan colony**

In khan colony 53% of respondents live in pucca houses, 27 % of respondents have semi pucca and remaining 20% of respondents have katcha houses.

Table 4.23: Structure of Houses in Tank no.56 and Khan Colony

House Structure	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Pucca	24	80	21	53
Semi pucca	6	20	11	27
katcha	0	0	8	20

Source: Field Survey by Researchers

2. Condition of Houses

- **Tanki No. 56**

During survey it was found that 50% of respondents live in good conditioned houses, 37% of respondents live in normal (neither good nor bad) conditioned houses and other 13% of respondents live in bad conditioned houses.

- **Khan colony**

As far as condition of houses is concerned, 30% well constructed houses having beautiful elevation fall in good condition category, 35% houses are in fair(neither good nor bad, normal condition) condition and other 35% houses are in damage status fall in bad condition category.

Table 4.24: Condition of Houses in Tank no.56 and Khan Colony

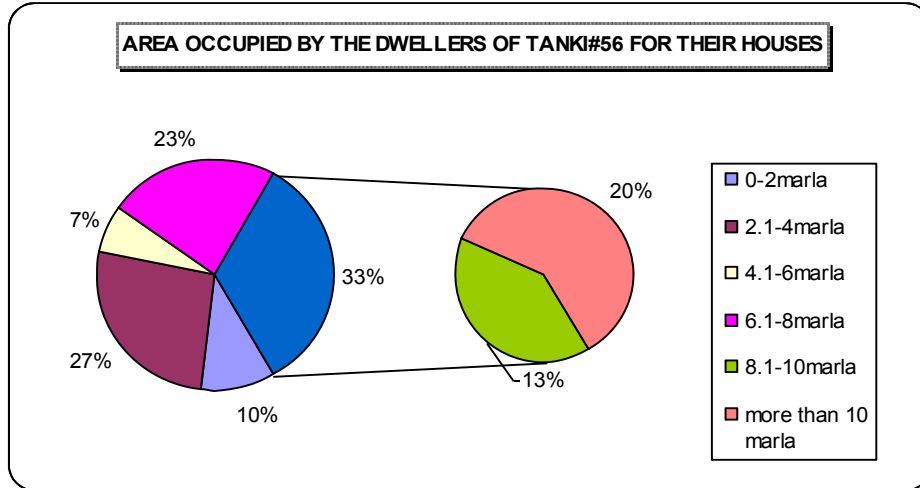
House Condition	Tanki no. 56		Khan colony	
	Frequency	Percent	Frequency	Percentage
Good	15	50	12	30
Fair	11	37	14	35
Bad	4	13	14	35

Source: Field Survey by Researchers

3. Area Occupied For Houses

- **Tanki No. 56**

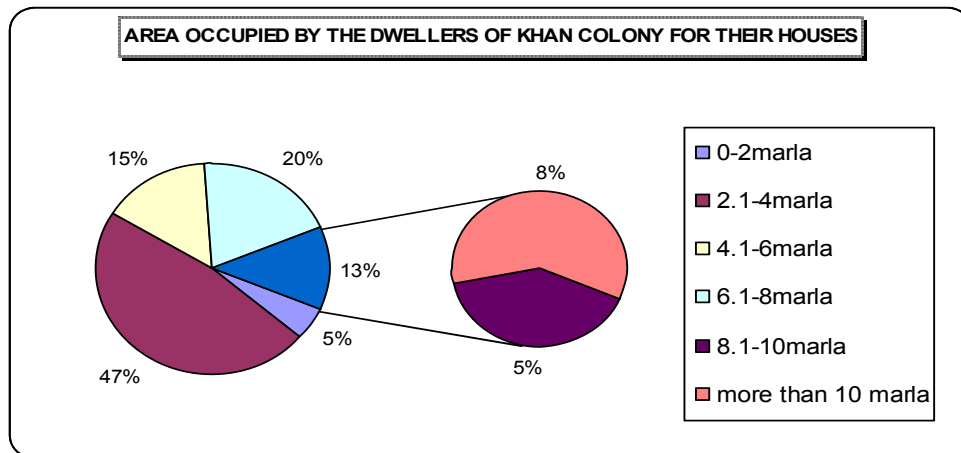
In Tanki no56 katchi abadi 10 % of respondents live in 0-2 marla houses, 27% of respondents live in 2.1-4 marla houses, 7% of respondents live in 4.1-6 marla, 23% of respondents live in 6.1-8 marla, 13% of respondents live in 8.1-10marla houses and other 20% of respondents live in more than 10marla houses.



Source: Field Survey by Researchers on July 25, 2009

- **Khan colony**

During survey in khan colony, it was found that 5% of respondents have 0-2 marla houses, 47% of respondents have 2.1.-4marla houses, 15% of respondents have 4.1-6 marla houses, 20%of respondents have 6.1-8mala houses, 5% of respondents have 8.1-10marla houses and other 8%of respondents have more than 10marla houses.



Source: Field Survey by Researchers on July 30, 2009

4. Condition of Water Supply System

- **Tanki No 56**

In Tanki no.56 katchi abadi 80% of respondents are satisfied and other 20 % of respondent are dissatisfied with water supply system.

- **Khan colony**

During survey it was found that 50% of respondents are fully satisfied with quality of water supply, 43% of respondents are dissatisfied and remaining 7% of respondents said that they are neither satisfied nor dissatisfied because they gave neutral statement.

Table 4.25: Condition of Water Supply System in Tank no.56 and Khan Colony

Water Supply	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Satisfied	24	80	20	50
Dissatisfied	6	20	17	43
Indifferent	0	0	3	7

Source: Field Survey by Researchers

5. Reasons of Dissatisfaction with Water Supply System

- **Tanki No. 56**

During survey it was found that out of 6 respondents 17 % of respondents are dissatisfied with water supply due to bad smell in water, 66% of respondents are dissatisfied due to bad taste of water and other 17% of respondents are dissatisfied due to colored water.

- **Khan colony**

People are dissatisfied due to many reasons, as 65% of respondents complained about bad smell in water, 23% of respondents are dissatisfied due to bad taste and remaining 12% of respondents are dissatisfied because water shows color.

Table 4.26: Reasons of Dissatisfaction with Water Supply System

Reasons Of Dissatisfaction	Tanki no. 56		Khan colony	
	Frequency	Percent	Frequency	Percentage
Bad smell	1	17	11	65
Bad taste	4	66	4	23
Show color	1	17	2	12

Source: Field Survey by Researchers

6. Condition of Sewerage System

- **Tanki No.56**

During survey it was found that 67% of respondents are satisfied with sewerage system and remaining 33% of respondents are dissatisfied. It was also found that 30% of respondents have sewerage system facility on self help basis and other 70% of respondents have this facility by government.

- **Khan colony**

In khan colony 60% of respondents are satisfied with the sewerage system provided, 32% of respondents are dissatisfied and other 8% of respondents are indifferent with sewerage system provision.

Table 4.27: Condition of Sewerage System in Tank no.56 and Khan Colony

Condition of Sewerage system	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Satisfied	20	67	24	60
Dissatisfied	10	33	13	32
Indifferent	0	0	3	8

Source: Field Survey by Researchers

7. Reasons of Dissatisfaction with Sewerage System

- **Tanki No. 56**

In Tanki no.56, 50% of respondents are dissatisfied with improper working of sewerage system,, 30% of respondents about non provision of municipal workers by government for cleanliness of sewers and remaining 20% of respondents are dissatisfied due to absorption of sewerage water in ground which is damaging the house structure.

- **Khan colony**

When the reasons of dissatisfaction were sort out it was found that out of out of 13 respondents 23% respondents are dissatisfied with sewerage system because it is not working properly, 38% respondents complained about the no provision of working staff for cleanliness., 16% respondents are dissatisfied due to choking of sewerage system with garbage and remaining 23% respondents are dissatisfied due to bad smell of main wholes.

Table 4.28: Reason of Dissatisfaction with Sewerage System

Condition of Sewerage System	Tanki No. 56		Khan Colony	
	Frequency	Percentage	Frequency	Percentage
It is not working properly	5	50	3	23
No staff for cleanliness	3	30	5	38
Chocked by garbage	0	0	2	16
It damaging house structure	2	20	0	0
Bad smell	0	0	3	23

Source: Field Survey by Researchers

8. Street Pavement

• Tanki No. 56

There are 90% of respondents who have paved streets in front of their houses by Government and remaining 10% of respondents have this facility on self help basis. In Tanki no.56 katchi abadi 80% of respondents are satisfied with street pavements and other 20% of respondents are dissatisfied.

• Khan colony

In khan colony 55% of respondents are satisfied with street pavement and 45% of respondents are dissatisfied.

Table 4.29: Street Pavement in Tank no.56 and Khan Colony

Condition	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Satisfied	24	80	22	55
Dissatisfied	6	20	18	45

Source: Field Survey by Researchers

9. Reasons of Dissatisfaction with Street Pavement

• Tanki No. 56

In Tanki no.56 out of 6 respondents 67% respondents are dissatisfied as they have brick paved streets in front of their houses but they want their streets cement paved. Other 33% of 6 respondents are dissatisfied due to undulating surface of the streets in front of their houses.

- **Khan colony**

In Khan colony out of 18 respondents who are dissatisfied with street pavement 11% of them are dissatisfied due to brick pavement of the streets as they want their streets cement paved, 22% of them are dissatisfied with undulating street surface and other 67% of them are dissatisfied due to damaged streets.

Table 4.30: Reasons of Dissatisfaction with Street Pavement

Reasons Of Dissatisfaction	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
No cement pavement	4	67	2	11
Undulating surface	2	33	4	22
Damaged Street	0	0	12	67

Source: Field Survey by Researchers

10. Condition of Drainage System

- **Tanki No. 56**

In Tanki no.56 katchi abadi 60% of respondents are satisfied with drainage system, 30% of respondents are dissatisfied and remaining 10 % of respondents are indifferent (neither satisfied nor dissatisfied).

- **Khan colony**

In Khan colony 65% of respondents are satisfied with drainage system, 35% of respondents are dissatisfied.

Table 4.31: Condition of Drainage System in Tank no.56 and Khan Colony

Condition of Drainage System	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Satisfied	18	60	26	65
Dissatisfied	9	30	14	35
Indifferent	3	10	0	0

Source: Field Survey by Researchers

11. Reasons of Dissatisfaction with Drainage system

- **Tanki No. 56**

There are 9 respondents who are dissatisfied with drainage system 56% of them are dissatisfied due to no provision of drainage system in their streets and remaining 44% of 9 respondents are dissatisfied due to choking of drainage system with garbage.

- **Khan colony**

In khan colony out of 30 respondents 14 respondents are dissatisfied with drainage system, 57% of 14 respondents are dissatisfied due to no provision of drainage system in their streets and remaining 43% of 14 respondents are dissatisfied due to choking of drainage system by garbage.

Table 4.32: Reasons of Dissatisfaction with Drainage system

Reasons of dissatisfaction	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
No provision	5	56	8	57
Chocking by garbage	4	44	6	43

Source: Field Survey by Researchers

12. Condition of Street Lights

- **Tanki No. 56**

During survey it was found that 80%of respondents are satisfied with street lights and other 20%of respondents are dissatisfied.

- **Khan colony**

During survey it was found that 70%of respondents are satisfied with street lights, 20% of respondents dissatisfied and other 10% of respondents are indifferent (neither satisfied nor dissatisfied) with it.

Table 4.33: Condition of Street lights in Tank no.56 and Khan Colony

Condition of Street lights	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Satisfied	24	80	28	70
Dissatisfied	6	20	8	20
Indifferent	0	0	4	10

Source: Field Survey by Researchers

13. Reasons of Dissatisfaction with streets Lights

- **Tanki No. 56**

There are 6 respondents out of 30 who are dissatisfied with street lights, 33% of 6 respondents are dissatisfied as the street lights are now out of order and remaining 67% of 6 respondents are dissatisfied due to inadequate no. of lights in their streets.

- **Khan colony**

There are 8 respondents out of 30 who are dissatisfied with street lights, 37% of 8 respondents are dissatisfied due to not proper working of street lights and remaining 63% of 8 respondents are dissatisfied due to inadequate no. of lights in their streets.

Table 4.34: Reasons of Dissatisfaction with streets Lights

Reasons of Dissatisfaction	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Not proper working	2	33	3	37
Inadequate no. of lights	4	67	0	
Inadequate no. of lights	0	0	5	63

Source: Field Survey by Researchers

14. Sui Gas and Electricity

- **Tanki No. 56**

Sui gas is provided in all streets of Tanki #56 katchi abadi and all residents are fully satisfied with it. Most of the residents of Tanki #56 katchi abadi are dissatisfied with electricity provided due to load shedding and high bills.

- **Khan colony**

Sui gas is provided in whole colony and people are fully satisfied with Sui gas provision. Most of the People are dissatisfied with electricity provided due to load shedding and high bills.

15. Participation Way of Community in Development

- **Tanki no. 56**

In colony 83% of respondents are willing to participate as un skilled labors,10% of respondents are agree to participate as skilled labors and 6% of respondents are willing to participate financially.

- **Khan Colony**

In colony 63% of respondents are willing to participate as un skilled labors,25% of respondents are agree to participate as skilled labors and 12% of respondents are willing to participate financially.

Table 4.35: Participation way of community in development

Participation way	Tanki no. 56		Khan colony	
	Frequency	Percentage	Frequency	Percentage
Un-skilled labor	25	83	25	63
Skilled labor	3	10	10	25
Financial support	2	6	5	12

Source: Field Survey by Researchers

4.2.4 ANALYSIS OF PUBLIC FACILITIES

1. Education

- **Tanki No.56**

There are no government schools in Tanki no.56 katchi abadi. At present residents have no access to even a single government or private primary school in the Khan colony. Children have to go far daily for it and most of the children especially of pathan's used to wander here and there in colony and nothing have to do. For Christian community there is one madrasa (padri).A plot was allocated for government school but construction has not been started and at present it has been occupied by some residents in form of jhugian in which they have their animals.

2. Health facilities

Neither government nor private clinics or dispensary exists in the area of Tanki no. 56. There is no particular diseases prevailing in colony as such however mostly children suffer from E.N.T diseases. In Khan Colony one private clinics and one health and care centre is present in sever cases residents usually go to Children Hospital.

3. Parks

There is one park in the area of Tanki no.56, which is at the stage of construction at present. There is a plot allocated for park in the Khan colony but construction work has not been started yet.

4. Shopping facility

There are only shops of daily usage like general stores in Tanki no. 56. Residents have to purchase their other needs from there and in Khan Colony; People have no access to shopping centre in colony except of general stores, vegetables and meat selling shops.

5. Mosques and Graveyards

Residents have easy access to mosques and graveyard and are satisfied with these facilities in both katchi abadis namely Tanki no. 56 and Khan colony.

6 Access to Transport

Residents of Tanki no. 56 katchi abadi have normal (neither good nor bad) access to transport facilities however there is no bus stop near by the colony. There is no bus stop in the Khan colony and access to transport is bad.

7. ENVIRONMENTAL ASPECTS

• Tanki No.56

As far as environmental aspects are concerned, the over all prevailing situation is poor. The main problem is existence of a nala at one corner of the area. It is spreading bad smell and is the breeding place of many mosquitoes and of other germs. People throw solid waste in this nala. Infected by doing this they are preparing a ground on the nala for the extension of their area illegally. In the area malaria, asthma and diseases of (ear.nose.throat) E.N.T are common. In some streets condition of open drains is very bad as they are choked by garbage and are spreading bad smell. However condition in other streets is relatively better. There is also provision of solid waste collection containers in the area but the municipal staff does not come regularly to collect solid waste.

• Khan Colony

Physical out look and cleanliness condition of the entrance and main road is bad however situation is relatively better in streets. There is provision of solid waste collecting containers and municipal workers to take it outside from the colony. But they don't come regularly.

4.3 COMPARISON OF REGULARIZED AND UNREGULARIZED KATCHI ABADIS

The quality of life in regularized katchi abadis is relatively better as compared to unregularized katchi abadis. In unregularized katchi abadis people always have a fear of eviction, they lack in mentally relief regarding their residence in that area. But when they get legal status of their dwellings, they start to improve their dwelling and the whole area as well, as the ratio of good condition houses in regularized katchi abadis is greater than in unregularized katchi abadis.

Government provides infrastructural facilities in regularized katchi abadis, so residents have easy access to all these basic services at minimum cost. These infrastructure facilities provided by government are efficient and are on broad spectrum; on the other hand, residents of unregularized katchi abadis obtain these facilities on self help basis. The provisions of these infrastructural facilities are expensive and unsustainable also as residents themselves arrange these facilities for the time being only, they neglect its sustainability.

After regularization and development of of any illegal area by government, residents themselves started to participate in improvement of their area as they have ownership rights now and starting to a feeling of possession. But along with regularization and development of infrastructure facilities, the provision of basic public facilities especially for education, health and convenience of shopping and transport modes should also provided by the government.

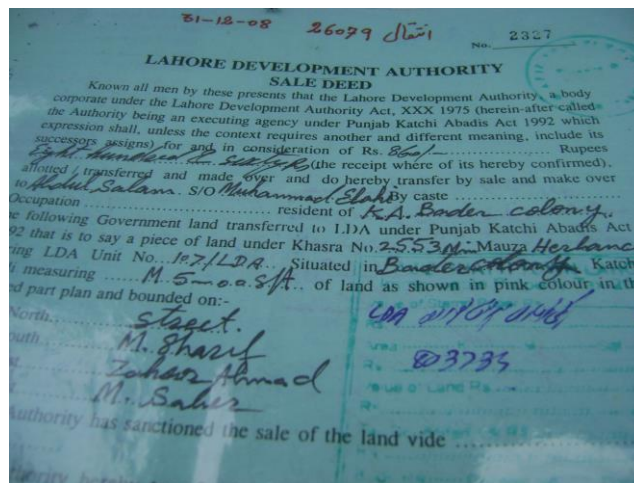


Fig 4.1: Ownership rights issued from LDA to resident in Tanki no.56

Residents of Unregularized katchi abadis have no access to clean potable water, no solid waste management system, not proper drainage system, streets are damaged, and open choked drains are spreading bad smell and acting as breeding places for mosquitoes so, the over all living environments prevailing in these areas are unhygienic and bad. The ratio of water born diseases in unregularized katchi abadis is much more than in regularized katchi abadis who have access to clean potable water.

4.3.1 Comparison of Tanki no.56 and Badar colony

1. Physical Outlook of Area

The physical outlook of streets in tanki no. 56 is very better due to provision of covered sewerage system and street pavement as compared to katchi streets with undulating surface, and open sewerage and drainage system in badar colony.



Fig4.2: Outlook of main street in tanki#.56



Fig 4.3: Outlook of main street in badar colony

2. Structure and Condition of Houses

The ratio of good conditioned and pucca houses in tanki no .56 are more than in badar colony (unregularized katchi abadis).



Fig4.4: House structure in tanki#.56



Fig 4.5: House structure in badar colony

3. Provision and Quality of Water Supply

The water system is provided to all the residents of Tanki no. 56 with full day supply at very low cost while on the other hand 90% residents of badar colony drink water after boiling it and remaining 10% people bring water from nearby planned localities like Bhagban pure, Sadar etc.

4. Provision and Quality of Sewerage System

In tanki no. 56, covered sewerage system is provided to all the residents. The walking environment in this abadi is quite better due to no smell of sewerage as compared to badar colony. On the other hand, residents of badar colony obtain this facility on self help basis. Soaked pits and uncovered sewerage lines are used for the management of their sewerage. The provisions of these infrastructural facilities are expensive and unsustainable also.



Fig 4.6: Open sewers in badar colony

5. Provision and Quality of Drainage System

In tanki no. 56, drainage system is provided in all the streets. The walking environment in this abadi is quite better as compared to badar colony. On the other hand, there is no drainage system in badar colony.

6. Provision and Quality of Street Pavement

In tanki no. 56, 90% streets are of cement pavement and remaining 10% are of brick pavement. On the other hand only one street in badar colony is of cement pavement, 5 streets are of brick pavement and remaining all the streets are katchi streets.



Fig 4.7: cement paved street in tanki no. 56



Fig 4.8: katchi streets in badar colony

7. Provision and Condition of Street Lights

Street lights are provided in all the streets of Tanki no.56 while in badar colony there are only 3 streets where people arrange street lights on self help basis.



Fig 4.9: Street lights in Tanki no.56

8. Health Condition

People get rid of water borne diseases and mosquitoes due to provision of water supply system and covered sewerage and drainage system in Tanki no. 56. While on the other hand in badar colony people complained about water borne diseases like diarrhea, cholera, typhoid, polio due to open drains and underground contaminated water. In the area malaria, asthma and diseases of (ear.nose.throat) E.N.T are common.

4.3.2 Comparison of Khan Colony and Bawoo wala

1. Physical Outlook of Area

The physical outlook of streets in Khan Colony is very better due to provision of covered sewerage system and street pavement as compared to katchi streets with undulating surface, and open sewerage and drainage system in Bawoo wala.



Fig 4.10: Out look of street in khan colony



Fig 4.11: Out look of street in Bawoo wala

2. Structure and Condition of Houses

The ratio of good conditioned and pucca houses in Khan Colony are more than in badar colony (unregularized katchi abadis).

3. Provision and Quality of Water Supply System

The water system is provided to all the residents of Khan Colony with full day supply at very low cost while on the other hand 60% residents of Bawoo wal drink water after boiling it and remaining 40% people bring water from nearby planned localities.



Fig 4.12: water supply tube well in khan colony

4. Provision and Quality of Sewerage System

In Khan Colony, covered sewerage system is provided to all the residents. The walking environment in this abadi is quite better due to no smell of sewerage as compared to Bawoo wala. On the other hand, residents of Bawoo wala obtain this facility on self help basis. Soaked pits and uncovered sewerage lines are used for the management of their sewerage. The provisions of these infrastructural facilities are expensive and unsustainable also.



Fig 4.13: Covered sewerage system in khan colony Fig 4.14: Open sewers in Bawoo wala

5. Provision and Quality of Drainage System

In Khan Colony, drainage system is provided in all the streets. The walking environment in this abadi is quite better as compared to badar colony. On the other hand, there is no drainage system in Bawoo wala.

6. Provision and Quality of Street Pavement

In Khan Colony, 95% streets are of cement pavement and remaining 5% are of brick pavement. On the other hand only one street in Bawoo wala is of cement pavement, 5 streets are of brick pavement and remaining all the streets are katchi streets.

7. Provision and Condition of Street Lights

Street lights are provided in all the streets of Khan Colony while in Bawoo wala there are only 5 streets where people arrange street lights on self help basis.



Fig 4.15: Street lights in khan colony

8. Health Condition

People get rid of water borne diseases and mosquitoes due to provision of water supply system and covered sewerage and drainage system in Khan Colony. While on the other hand in Bawoo wala people complained about water borne diseases like diarrhea, cholera, typhoid, polio due to open drains and underground contaminated water. In the area malaria, asthma and diseases of (ear.nose.throat) E.N.T are common.

5.0 INTRODUCTION

The regularization and development of squatter settlements/katchi abadis has been recognized all over the world and particularly in the developing world. Of late the government of Pakistan also realized that these katchi abadis must be formalized and improved. Therefore, a major Katchi Abadis Improvement Programme (KIP) was launched in 1978 and continued up to 1991. After that in 1992, the government of Punjab launched a full-fledged Directorate General of Katchi Abadis & Urban Improvement under the *Punjab katchi abadis act, 1992* and this department is working under the Local Government and Rural Development Department Government of the Punjab for the regularization and development of katchi abadis in Punjab. The overall objective of this study was to gauge the progress against the intervention of katchi abadis Regularization/Development programme (KRDP) and assess its impact on demographic, social, physical, environmental and health related, and economic aspects of the households living in improved katchi abadis as well as to assess their perception about the social and environmental improvements and the level of satisfaction regarding the utilities and community facilities provided through KRDP.

This chapter describes the analysis of demographic, economic, physical, social and environmental impact of katchi abadis regularization and development programme on the residents of regularized and developed katchi abadis. This chapter also deals with analysis of procedure of funding for development of Katchi abadis and also procedure of regularization and development of katchi abadis.

5.1 IMPACT OF KRDP ON KATCHI ABADIS

The katchi abadis Regularization/Development programmes (KRDP) focused not only on physical aspects of squatter settlements/katchi abadis but also on the demographic, social, economic, health related and Environmental aspects. To assess these impacts two regularized katchi abadis were selected namely khan colony and tanki no. 56. KRDP was implemented in khan colony during 2001 to 2002 while in Tanki no. 56 during 2003 to 2004 with great attention of LDA development wing of directorate of Katchi abadis and Water and sanitation agency.

5.1.1 DEMOGRAPHIC IMPACT OF KRDP

The changes in demographic characteristics (household size, type of family and type and status of occupancy) reflect the improvement made in the settlements or in other words better effects of KRDP. This confirms the findings of other studies on squatter settlements of South Asian's countries where the typical changes in the demographic characteristics are reported.

1. Impact on Household Size

The household size determines the level of overcrowding in the dwellings of katchi abadis. It is concluded from the data analysis collected through socio-economic survey that average house hold size is 8 and 5 in khan colony and tanki no. 56 respectively. This indicates that the size of household in these katchi abadis where the KRDP was implemented is medium level, which can be attributed to KRDP and is a positive impact.

2. Impact on Type of Family

The type of family is very important aspect of the demographic characteristics of any society. It is also important because of its association with household's formation. The percentage of joint and nuclear families is 75% and 25% respectively in Khan colony where was 95% joint family system before the implementation of KRDP while in Tanki no. 56 the percentage of joint family system and nuclear family system and single person is 33% and 47% and 20% respectively. This indicates that there is a great effect on the type of family and substantial change in types of family from joint to nuclear after the implementation of KRDP. The shifting from joint to nuclear families is an indication of penetration of modern family values, which is a positive impact. This is another indirect measure of low density that has happened due to implementation of KRDP.

3. Impact on Type and Status of Occupancy

Information about the status of occupancy i.e. original squatters, primary purchasers and secondary purchasers at present is of much importance to determine the squatters' association with that particular locality and the trend of formation of new katchi abadis. Similarly, the type of occupancy i.e. owned, rented and rent-free is also important to know the trend of housing need and commercial market in the informal sector housing.

In Khan colony, 75% people are original squatters while only 25% are primary purchaser and in Tanki no. 56, 70% and 30% people are original squatters and primary purchasers

respectively. Therefore, they have developed association and belongingness with the localities and it helps to mitigate the formation of new katchi abadis in Punjab.

It is also concluded from data analysis that in Khan Colony, 15% people pay rent for their accommodation and 85% people has their own houses and in Tanki no. 56, 35% people have rented houses and 65% people have their own houses. It is also observed that people are very satisfied with their status of occupancy and infrastructure facilities provided to them through KRDP. Resultantly, the widening gap between the demand and supply of housing will be decreased and planned development in the rural and urban areas will come up. The low percentage (15%) of rented houses indicates that it supplements the low-income of the poor owners and that leads to improve the status and quality of life of the poor living in the katchi abadis. This all indicates the positive impacts of KRDP.

5.1.2 PHYSICAL IMPACT OF KRDP

In physical aspects, the survey included the investigation of some of the essential elements like out look of area, improvement occurred in the lay-out plan of the settlement, total area of houses, structure and condition of houses and type and quality of infrastructure facilities due to implementation of KRDP. A brief description of the above-mentioned aspects is presented below.

1. Impact on Outlook of Area

Physical outlook of area is very important in order to determine the condition and environment of the area. During land use and socio-economic surveys of Khan colony and Tanki no. 56, it was observed that outlook of areas is quite better due to pavement of streets with the provision of street lights and give neat look. The covered Sewerage and drainage systems are provided in both abadis that give better outlook of area.

2. Impact on Layout of Area

The base maps of Khan colony and Tanki no. 56, collected from secondary sources indicates that the street pattern before the implementation of KRDP was irregular and these selected katchi abadis were so poorly laid that most of the streets were dead ended and spiral in nature. It is also concluded from base maps that, in 1999 the layout plans of these abadis were about 90% zigzag in shape. One of the KRDP's interventions is to improve the layouts of these katchi abadis; because during land use and socio-economic survey it was observed that about 90% road layout is on grid-iron pattern. Moreover, the

respondents were asked to reflect on the improvement made in the layout of the settlements. The analysis of the data reflects that 82 percent of the respondents perceived better about the improvement made in the layout of the katchi abadis. A small fraction of the respondents (12.0 percent) did not agree with this statement. This indicates a positive effect of KRDP intervention on the physical layout of the katchi abadis.

3. Impact on Covered Area of Houses

The area of dwellings reflects the housing density in the study area. The analysis of data reveals that about 85 percent of the households had covered area of less than 5 marlas in both Khan Colony and Tanki no. 56 that concluded that the average covered area is 2.8 marla in both katchi abadis with standard deviation of 0.92, however about 45% people increased their number of rooms in houses after the implementation of KDRP. Increase in covered area is a positive effect of KRDP, which means that overall environment of the settlements, has been improved to encourage dwellers to construct more rooms.

4. Impact on Structure of Houses

The quality of the construction indirectly reflects the living standard of the society and affordability of housing construction cost. There are two factors, which compel the residents to invest in improvement of housing construction, that are the security of tenure and the environmental improvement. It was also evident from the data analysis that the percentage of households who improved the construction of their houses after the implementation of KRDP was 30% and 45% in Khan Colony and Tanki no. 56 respectively. It is also concluded from the data analysis collected through questionnaire in these katchi abadis that the percentage of pucca, semi-pucca and katchi houses is 53%, 27% and 20% respectively, in Khan Colony, while in Tanki no. 56, 80% houses are pucca and only 20% houses are semi-pucca houses. This all improvements made in the structure of houses of these katchi abadis indicated the effectiveness of KRDP. Therefore, due to positive effects of KRDP-improvement made in the katchi abadis, the dwellers improved their houses.

5. Impact on Condition of Houses

Condition of houses determines the people's satisfaction level about their living standard. It is evident from the data collected through the land use and socio-economic surveys of the area that in Khan Colony, 45% houses are in good condition, 35% houses are fair and

only 25% people have bad conditioned houses. In Tanki no. 56, 50%, 37% and 13% houses are in good, normal and bad condition respectively. The change in condition of houses from katcha to pucca indicates that people feel secure due to implementation of KRDP.

6. Impact on type and quality of infrastructure facilities

Due to katchi abadis regularization and development programme the residents get all the physical services like water supply, sewerage system, drainage system, street pavement and street lights at very low prices as Rs.1000/- per Marla. However the quality of these services is also of great importance whether these low cost infrastructure facilities are sustainable or people are satisfied of these services or not. In order to check the quality of services provided **Yeh's Index of Satisfaction** is used. The formula of Yeh's Index of Satisfaction is $S-D/N$ (Where S= Satisfied Persons, D=Dissatisfied Persons and N=Total no. of Persons)

- **Quality of Water supply system**

Through KRDP the water is provided to every house at very low cost. The KRDP for providing safe drinking water to the entire population of the katchi abadis is a major initiative under the WASA, which has great impact on the reduction of water pollution. The type of water supply is fully day supply in both these developed Katchi abadis. However, the quality of water supply system can be checked by applying the formula of Yeh's index of satisfaction.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Khan Colony)} &= S-D/N \\ &= 20-17/40 \\ &= +0.075\end{aligned}$$

The value shows the satisfaction of people with water supply system and positive impact of provision of water supply system on residents of Khan Colony.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Tanki No.56)} &= S-D/N \\ &= 24-6/30 \\ &= +0.6\end{aligned}$$

That value shows the satisfaction of people and positive impact of provision of water supply system on residents of Tanki no.56.

- **Quality of Sewerage system**

Due to provision of sewerage system the people get rid of expenditure on the development of unsustainable soaked pits for the flowing of their sewerage into underground surface. However, the quality of sewerage system can be checked by applying the formula of Yeh's index of satisfaction.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Khan Colony)} &= \text{S-D/N} \\ &= 24-13/40 \\ &= +0.275\end{aligned}$$

The value shows the satisfaction of people with sewerage system in Khan colony and positive impact of provision of sewerage system on residents of Khan Colony.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Tanki No.56)} &= \text{S-D/N} \\ &= 20-10/30 \\ &= +0.33\end{aligned}$$

That shows the satisfaction of people with sewerage system in Tanki no.56 and the positive impact of provision of sewerage system on residents of Tanki no.56.

- **Quality of Street pavement**

Through Yeh's index of satisfaction the quality of street pavement provided under KRDP can be analyzed.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Khan Colony)} &= \text{S-D/N} \\ &= 22-18/40 \\ &= +0.05\end{aligned}$$

That value shows the satisfaction of people with street pavement in Khan Colony and positive impact of provision of street pavement on residents of Khan Colony

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Tanki No.56)} &= \text{S-D/N} \\ &= 24-6/30 \\ &= +0.6\end{aligned}$$

That shows the satisfaction of people with street pavement in Tanki no. 56 and positive impact of provision of street pavement on residents of Tanki no.56.

- **Quality of Drainage system**

Due to provision of drainage system, the physical out look and walking environment in streets are quite better in both developed katchi abadis. However, the quality of drainage system can be checked by applying the formula of yeh's index of satisfaction.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Khan Colony)} &= \text{S-D/N} \\ &= 26-14/40 \\ &= +0.3\end{aligned}$$

That shows the positive impact of provision of drainage system on residents of Khan Colony.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Tanki No.56)} &= \text{S-D/N} \\ &= 18-9/30 \\ &= 0.3\end{aligned}$$

That shows the positive impact of provision of drainage system on residents of Tanki no.56

- **Quality of Street lights**

The provision of street lights reduced the crime rate in both abadis. However, the quality of street lights can be checked by applying the formula of yeh's index of satisfaction.

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Khan Colony)} &= \text{S-D/N} \\ &= 28-8/40 \\ &= +0.5\end{aligned}$$

That shows the positive impact of provision of street lights on residents of Khan Colony

$$\begin{aligned}\text{Yeh's Index of Satisfaction (Tanki No.56)} &= \text{S-D/N} \\ &= 24-6/30 \\ &= +0.6\end{aligned}$$

That shows the positive impact of provision of street lights on residents of Tanki no.56.

5.1.3 ECONOMIC IMPACT

1. **Impact on Household expenditure on health**

Due to provision of water supply, sewerage and drainage system in both selected katchi abadis namely Khan Colony and Tanki no.56, the level of water borne disease like diarrhea, cholera, typhoid, polio, hepatitis A & E, malaria, etc has been reduced. As a

result people expenditure on health reduced that show the positive economic impact of KRDP.

2. Impact on Household expenditure on development of infrastructure

The Katchi Abadis Regularization/Development Programme is heavily subsidized in Punjab, and hence it cannot be replicated every where. Through this programme people give only Rs.1000 per Marla for the provision of water supply, sewerage system, drainage system street pavement and street lights. Mostly people have 3-4 Marla houses in both these developed abadis, so the expenditure on infrastructure is very low ranging from only 3000 to 4000 per house.

3. Impact on Land Value

Due to provision of infrastructure facilities and street pavement after the implementation of KRDP, the land value of area increases, as a result people property values also increase. The land value in Tanki no. 56 is increased more than Rs.150000/- per Marla and also in Khan Colony Rs.100000/- per Marla.

5.1.4 SOCIAL IMPACT

1. Impact by Tenure security

Regularization of katchi abadis removes many impediments to better infrastructure and service provision (many urban governments, utilities and service providers will not work in or are not allowed to work in illegal settlements) and also removing the insecurity that is inherent to any illegal settlement (that discourages household and community investment). The regularization of these settlements does not so much increase the supply of land for housing as increase the supply of 'legal' housing with infrastructure and services. However, it may act to increase the supply of housing as providing legal tenure and improving infrastructure and services encourage and support house construction and expansion in what were previously illegal settlements. Due to tenure security people living standard boast up. The protection of housing rights through KRDP together with concrete efforts to improve the economic circumstances and tenure security of the poor are provided as a sound basis for identifying viable and innovative alternatives to eviction and harassment in both katchi abadis namely Khan Colony and Tanki no.56. This in turn enabled the occupants to invest even more in housing improvements with full confidence

that their houses would not be demolished or confiscated by the state that minimize evictions and help the urban poor to obtain decent housing with full confidence.

2. Impact on Crime Rate

Katchi abadis are seen as filthy, environmentally polluted areas, prone to social evils such as drug abuse, gambling, prostitution and all sorts of crimes, but it is critically analyzed that after the implementation of KRDP in two katchi abadis Khan Colony and Tanki no. 56, the level of crimes reduced surprisingly. Street crimes are reduced due to provision of street lights. The most important impact is on robbery and Street crimes.

3. Impact on Awareness level

People are aware about their problems and solution after the implementation of KRDP.

5.1.5 Environment impact

Pakistan generates over 50,000 tons of solid waste per day; out of which only 20 to 25 percent is collected but not managed in the proper manner; thus causing serious air, water and land pollution and health hazards. After the implementation of KRDP the people also take care about the management of solid waste. For this purpose, they managed big waste containers in both developed katchi abadis. These containers are placed at different appropriate locality in the locality. The provision of sewerage system and sewerage system reduced the contamination of surface and ground water sources in both developed katchi abadis with the great impact on the reduction of water pollution.

5.1.6 Health impact

Due to provision of this potable water and sewerage system, the water borne diseases like Cholera, Dengue, Diarrhea, Hepatitis, Malaria, Polio and Typhoid reduced surprisingly in both case study areas.

5.2 ANALYSIS OF PROCEDURE OF REGULARIZATION AND DEVELOPMENT OF KATCHI ABADIS

According to Nazir Ahmed bhatti Assistant Director of regularization wing of directorate of Katchi abadis LDA, there are total 272 katchi abadis in Lahore, out of these 142 katchi abadis are regularized and developed.

The main function of regularization wing of directorate of Katchi abadis LDA to give ownership rights to those residents of katchi abadis who apply for it by the regularization wing, while engineering wing is responsible for the development and up gradation of

these katchi abadis by improvement and construction of roads and WASA is responsible for the provision of sewerage, drainage and water supply.

He provided a list of 4 katchi abadis in which KRDP is being implementing recently

- Qalandarpura (road work)
- Harbanspur (road work and WASA work)
- Fareed colony shahdara (construction of boundary wall around the katchi abadi)
- Tariqabad, bhuto colony (construction of boundary wall around the katchi abadi)

For these katchi abadis the funds released in 2008 but funds lapsed and now the funds will use for completion of work during 2009-2010.

About the funding for development work of katchi abadis Hassnain Baqir(Chief Engineer of development wing) said that Directorate of katchi abadis Punjab releases funds for katchi abadis of Lahore, these funds are according to area of katchi abadis, LDA katchi abadis development wing make estimation and prepare pc-I of selected katchi abadis and apply for its funds to directorate of katchi abadis Punjab according to estimation, DG Punjab check the estimation and release funds, different for different katchi abadis. These funds are used for the construction of roads by LDA katchi abadis engineering wing and for construction of sewerage and water supply system by WASA.

They also pointed about their hurdles that they faced during regularization and development procedure that There is absence of any official staff to maintain these improved services so, these programmes are not sustainable because unfortunately most of residents of these abadis show very irresponsible attitude toward their society, for example they remove the covers of main wholes to get money by selling them and some throw solid waste in front of their houses in spite of having solid waste collecting containers. Most of the katchi abadis dwellers don't apply for ownership rights and some don't cooperate properly with LDA

They also said that through katchi abadis regularization and up gradation programme, people of katchi abadis get their own houses at very low price of 172 Rs/- per marla along with provision of basic services like electricity, water supply, sewerage, sui gas at the rate of 1000Rs/- per marla etc. As a result area gets developed and this development affects the economy of whole country. About the people participation they said that People participate in all development activities and after the regularization and

development work in these katchi abadis, residents are satisfied with the area as these abadis fulfilling their basic requirements. People of these residents should be aware about the procedure for applying for ownership rights and should take interest in participating and also in maintenance of these development works.

They gave good response but were reluctant and did not give other required data.

5.3 ANALYSIS OF PROCEDURE OF FUNDING OF KATCHI ABADIS

According to Hafiz Rashid Mehmood Assistant director, Government of Punjab releases funds for the implementation of katchi abadis regularization and development programme. Previous Government used to release funds of approx 100,000,0000 Rs/-per year, then it increased to about 300,000,0000 Rs/- per year from 2003-2006. Now recent Shahbaz Sharif Government also maintained this amount as 300,00,0000 Rs/- per year for improvement and up gradation of katchi abadis of Punjab. Moreover, MNA & MPA grants, city district government funds and senator's funds are also released. All these funds are used in those katchi abadis where development work is needed.

He provided the list of all katchi abadis and list of regularized and unregularized katchi abadis separately.

He also point out hurdles during and after the implementation of katchi abadis regularization and development programme and also give suggestions. According to him;

- First of all, there should be official survey of these katchi abadis to check whether there is really need of any development work in these abadis or not, as now most of these abadis have been redeveloped without any need.
- There is need for strategic planning to maintain the development of these abadis.
- If I consider ownership procedure of these abadis, then I suggest that Government should camps in these abadis so it will convenience for residents to get ownership rights like SKAA(Sindh katchi abadis Authority).Funds are sufficient but there is no proper way and place to use it where it really needed.
- There should be capacity building for the checking of development during the work by LDA in katchi abadis by directorate of katchi abadis Punjab
- The transfer or shifting of staff from one city to another affect the efficiency of process very badly, so there is need that staff especially director general should not be transferred before 4 years.

6.1 CONCLUSION

- Directorate General of Katchi Abadis Punjab (DGKAP) has sufficient funds for development work of katchi abadis i.e 3 billion but the rate of development work is nor up to mark.
- The main cause of slow process is absence of strategic planning in the roots of whole development process.
- As most of the katchi abadis have been developed and now as such there is no margin for launching another improvement programme in those abadis but due to lack of maintenance, some of the abadis requires redevelopment of infrastructure already provided.
- A clear cut policy is required for regularization and development of katchi abadis as there are many katchi abadis Bawoo Wala and Badar Colony, which yet have not been recognized by DGKAP.
- Absence of provision of public facilities like schools, mosques, dispensaries, graveyards and shopping area has been found in most of the katchi abadis.
- The sanitary conditions are generally poor in most of the katchi abadis.
- Lack of working staff especially professional in DGKAP is one of the main cause of slow process of improvement work in katchi abadis
- Appointed staff in DGKAP does not carry out proper field surveys to identify problems in katchi abadis
- There is lack of awareness among residents about government intentions and future planning regarding their abadis.
- Lack of community participation is another main cause of poor performance of DGKAP.

6.2 RECOMMENDATIONS

In general it is recommended that work should be useful on real ground otherwise target will not be achieved.

- Involvement of NGO is necessary as residents of katchi Abadis don't trust in Government departments and they believe that NGO understand their problems in a better way.

- There should also be provision of public facilities like schools, mosques, graveyards, shopping area, dispensaries, etc through KRDP.
- MNAs/MPAs grants can also be used for this purpose.
- There should be construction of boundary wall around each katchi Abadi to prevent its further extension.

A work plan has been recommended which is given below.

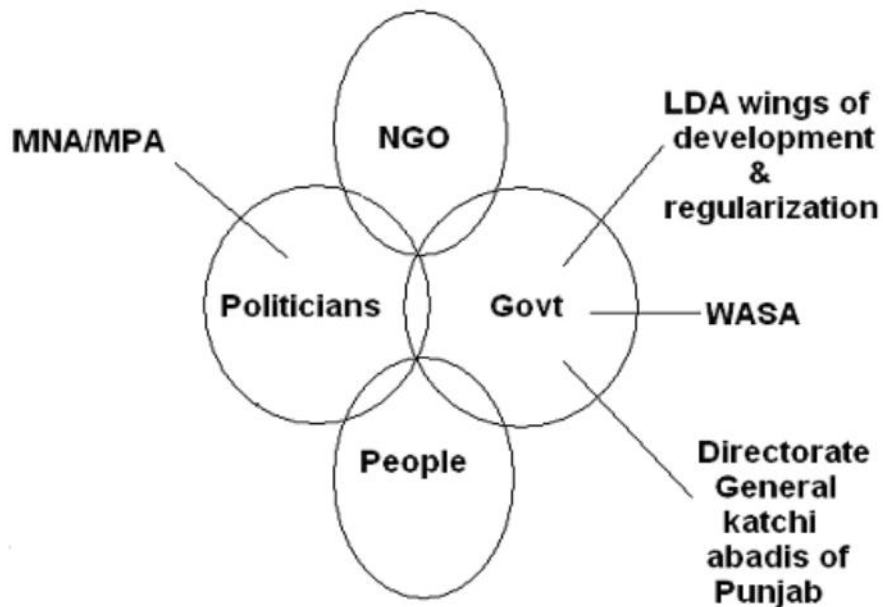
6.2.1 APPROPRIATE & ACHIEVEABLE WORK PLAN

Target

To upgrade the living condition of residents in Katchi Abadis through the involvement of all stakeholders at the planning and development stage.

Concerned Bodies

- Directorate General of Katchi Abadis Punjab(DGKAP)
- Lahore Development Authority (LDA)
- MPAs /MNAs, Social Workers, NGOs
- Residents of Katchi Abadis



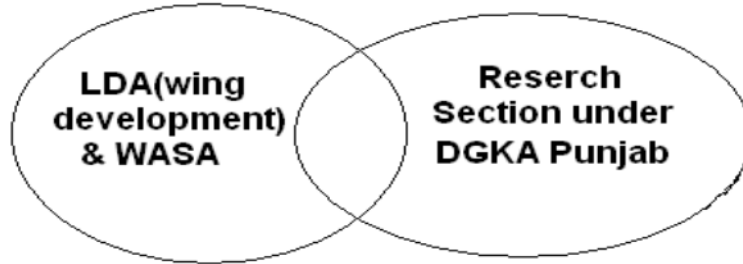
Full willingness and coordination among these above mentioned concerned bodies is required for achieving valuable results.

1. FIRST STEP (Research and Development Organizations)



- i. A separate section of professional surveyors and draftsmen should be made under Directorate General of Katchi Abadis Punjab for carrying out research work.
- ii. This section should mark the location of all katchi Abadis on map.
- iii. Base and land use maps for all the regularized katchi abadis must be prepare.
- iv. NGO must make profile of katchi Abadi clearly showing the existing scenario including the main problems, best possible solutions, potential for development, overall living condition of the residents and their requirements priority wise
- v. After that NGO make proposals for development of those abadis according to needs of people and make best use of area potentials.
- vi. After completing this work, NGO must submit this profile and development proposal to research section of Directorate General of Katchi Abadis Punjab.
- vii. If any MNA or MPA of that area want to develop any katchi Ababi then he also submit application to research section of Directorate General of Katchi Abadi Punjab for the same procedure.

2. SECOND STEP (Proposal and Funding for Development)



- i. Research section of DGKAP must send the development proposal of katchi abadis to LDA development wing and WASA for carrying out development work.
- ii. LDA should prepare pc-I of katchi abadis and submit it to Directorate General of katchi abadis Punjab for releasing funds.
- iii. Directorate of katchi Abadi Punjab check pc-I and release funds to LDA and WASA.
- iv. After that, LDA and WASA should start development work in those katchi abadis.

3. THIRD STEP (Regularization, Development and Mobilization of Community)



To speed up KRDP ownership procedure and development work must go side by side.

- i. LDA should hold temporary camps in katchi Abadis for giving ownership rights and must force residents to undergo this procedure as soon as possible approximately within 2 months otherwise after two months extra charges will be charged.
- ii. NGO should motivate residents of katchi abadis for getting ownership rights and there must be strong check on LDA to stop corruption (LDA must not demand regularization fee more than RS.172/marla according to Katchi Abadi Act 1992)
- iii. After paying charges people submit their challan forms to LDA.
- iv. Occupation is the only guarantee of the ownership of plot during the period of 5 years and no transfer/transaction is allowed.
- v. Ownership documents will be issued after 5 years from the date of possession subject to clearance of total price.

4. FORTH STEP (MAINTANENCE WORK)

After regularization and development work here come the maintenance problems.

Concerned Bodies

- i) Social Workers
 - ii) Residents of Katchi Abadis
- Maintenance body should exist at community level as well as at city level to charge fine to whom who attempt to ruin this development work. This maintenance body can be comprises of social workers of katchi Abadis.
 - Residents of Katchi Abadis themselves must maintain the development work done by government in their area.
 - Most of the funds in WASA are being used on maintenance work rather on new development work so there is a need to reduce negligence regarding maintenance work so that funds must be preserved.