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# Transition urbaine et structures familiales au Pakistan, le cas de Faisalabad

Kashif Mahmood

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**UNIVERSITÉ D'ORLÉANS**



**ÉCOLE DOCTORALE SCIENCES DE L'HOMME ET DE LA SOCIÉTÉ**

Centre d'Etudes pour le Développement des Territoires et  
l'Environnement (CEDETE)

**THÈSE** présentée par :  
**Kashif MAHMOOD**

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Discipline/ Spécialité : Géographie, Aménagement et Environnement

**Transition urbaine et structures familiales au  
Pakistan, le cas de Faisalabad**

**THÈSE** dirigée par :

**Jean-Marc ZANINETTI**

Professeur, Université d'Orléans

**RAPPORTEURS :**

**Christophe BERGOUIGNAN**

Professeur, Université Montesquieu  
Bordeaux IV

**Philippe CADENE**

Professeur, Université Paris Diderot

---

**JURY** (*y reporter tous les membres de jury présents à la soutenance*):

**Michael F. DAVIE**

Professeur, Université François Rabelais de Tours

**Philippe CADENE**

Professeur, Université Paris Diderot

**Jean-Marc ZANINETTI**

Professeur, Université d'Orléans

**Xavier GALIEGUE**

Maître de Conférence, HDR, Université d'Orléans



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## Abbreviations

CBR	Crude Birth Rate
CDR	Crude Death Rate
CIA	Central Intelligence Agency
EFA	Exploratory Factor Analysis
FATA	Federally Administered Tribal Areas
FDA	Faisalabad Development Authority
GOP	Government of Pakistan
GPI	Gender Parity Index
HRCPC	Human Rights Commission of Pakistan
ICD	Islamabad Capital Territory
IMR	Infant Mortality Rate
IUD	Intra Uterine Device
KMO	Kasier-Meyer-Olkin
LDA	Lahore Development Authority
LPG	Liquid Petroleum Gas
MDGs	Millennium Development Goals
MI	Macro International
MMR	Maternal Mortality Ratio
NADRA	National Database and Registration Authority
NGO	Non Government Organization
NIPS	National Institute of Population Studies
PCA	Principal Component Analysis
PCO	Population Census Organization
PDHS	Pakistan Demographic and Health Survey
PRB	Population Reference Bureau
SPSS	Statistical Package for Social Sciences
SPU	Strategic Policy Unit
TFR	Total Fertility Rate
TTP	Tehreek Taliban of Pakistan
UNDP	United Nation Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UN-HABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
UNO	United Nation Organization
USAID	United States Agency for International Development
WASA	Water and Sanitation Authority
WHO	World Health Organization

## **Introduction**

Family has become one of the topics that generate intense debate and discussion. Family is gaining importance since the last half century in which urbanization is continuously expanding in all societies of the world. Family structure is passing through many changes as a result of urban transition and it is quite interesting and significant to investigate the family structure in context of urban transition in Pakistan. There is dire need to address all relevant issues associated with families like root of violence in Pakistani society, gender discrimination, women empowerment, and its opposite, bigotry, talbanization and terrorism.

## **Background of the Study**

The family is the basic social institution in all societies of the world, even in a period of transition with all the social changes that it entails. In preindustrial society, the majority of the population was agricultural and the extended family was dominant in the most core regions of Asia including present-day Pakistan (Todd, 2011). It had multiple functions such as production, health, welfare and education. Industrialization began in the mid 18th century in Europe and spread later to Asia from the late 19th to the mid 20th Century. Urbanization has accelerated in areas where there was a beginning of industrialization. With these movements of population from rural to urban areas, the extended family system was gradually replaced by the nuclear family system which ultimately became the dominant model. The nuclear family is more appropriate to an industrial society. The decline in fertility, increasing age at marriage and increasing life expectancy are changes in modern urban family (Anderson, 1971; Blessing, 2014; Charles Hirschman, 2002; Fay, 2008; Mahmood & Ashraf, 2005; Todd, 1983, 1984, 2011; Zaninetti, 2011) .

It is not a coincidence that urban transition occurred with the increase in population over past 200 years because the urban transition is an inextricable part of demographic transition and they both have roots in the same sets of technological advancement in the world. The root cause of modern population growth is the immense drop in death rate through advancement in medical science, provision of more and better food, shelter and clothing due to use of

modern technology in agricultural sector. Improvement in health results into increased life expectancy and further increases the urban population (J. Weeks, 2011).

For successful completion of demographic transition, there is need of successful urban transition because these both run parallel as stated by Weeks (2011). Rapid population growth is the major problem in developing countries and particularly in Muslim countries where religion is the base of resistance towards fertility transition. Pakistan emerged as a Muslim state after partition of India in 1947. Its population is continuously increasing and all efforts to reduce fertility rate in Pakistan became futile due to resistance from Pakistani families owing to multiple factors. Pakistan is still passing in the second stage of demographic transition and families of Pakistan are still showing resistance to limit family size.

There is no doubt in it that family remains a basic social institute in all societies of world throughout the history of mankind. Any change in a society affects family and any change in a family affects society. Family institute can play an important role in successful completion of demographic transition and process of urban transition in Pakistan through increasing age at marriage, reducing family size, empowering women in family and society, etc.

### **Statement of the Problem**

During the last thirty years, the Pakistani society has changed from a predominantly agricultural society to an industrial society and at the same time, it is also changing from a rural society to an urban society. Family structure has largely affected owing to these changes in the society. Urbanization is playing a leading role in bringing changes in the family structure and family itself. Migration flow is towards cities where economic, education and better health facilities are waiting migrants from economically depressed rural areas. There is not much space for the extended/joint family system due to small houses and expensive land in the cities so, the old extended/joint family is diminishing and the nuclear family system is emerging as a dominant family system in the cities of Pakistan.

Pakistani society is also changing rapidly due to many factors such as globalization, role of media, and western values. The family is a basic unit in a society so; it is an obvious fact that any change in society has a direct effect on it. Reducing family size, Empowerment of women in family affairs, minor improvement in the autonomy of mobility of women, increasing age at marriage, increasing love marriages, increasing nuclear family size, increasing monogamy, increasing participation of women in politics are the outcomes of the

changing Pakistani society. Moreover, Pakistan society is still male dominated society where spousal violence still exists but Pakistani families are westernizing and modernizing and adopting western cultures values through influence of media and increasing literacy level.

As stated earlier that Pakistan society is changing from a rural society to an urban society and its urbanization rate increased from 17.8% in 1947 to 35% in 2013. Pakistan is urbanizing at annual rate of 3% that is considered to be the highest in South Asia. However, Pakistan is lagging the world average of developing countries, estimated 46.5% in 2011 (PRB, 2013; *World Urbanization Prospects, the 2011 Revision*, 2011). In the regional context of South Asia, Pakistan urbanization has been the fastest. According to estimates of United Nation Organization, by 2030, cities are likely to house about 50 % of Pakistan's population as compared to 40% for India. More than half of the total urban population of Pakistan is already living in eight urban agglomerations –Karachi, Lahore, Faisalabad, Rawalpindi, Multan, Hyderabad, Gujranwala and Peshawar. These cities have increases at a rate of 3% per year during 2000-05, which is projected to continue for the next 8-9 years (Yuen & Choi, 2012 ).

Urbanization in the areas comprising Pakistan is not a recent phenomena and the history of urban living goes back to Indus valley civilization (K. S. Ahmad, 1966). Urbanization process had accelerated as soon as Pakistan emerged as an independent state after partition of India, eight millions Muslims migrated from India and majority of them settled in the cities of Pakistan. Wars in 1965 and 1971 also resulted into the migration towards city to escape war. The Afghan insurgency in the 1990s resulted into the further migration towards Pakistani's cities. After 9/11 incidence in 2001, Pakistan emerged as a front line state in war against terrorism and it resulted into the displacement of victims towards urban centres and further added millions to the urban population of Pakistan (K. S. Ahmad, 1955b, 1969; Hameed, 1973; Kugelman, 2013, 2014b). Recently, in July 2014, approximately 9 million people were displaced in the recent military operation in the North Waziristan against Tehreek Taliban of Pakistan (TTP) and they will finally merge into the population of major cities of Pakistan ("Registration of 895,423 North Waziristan IDPs completed," 2014).

There is no doubt in it that urban transition in Pakistan continues to be catalyzed by war, political turmoil in Afghanistan, insecurity, terrorism, talbanization and economic necessity but this is only one aspect which accelerate the urbanization rate. Rural-urban migration has a role in increasing urban population but natural increase has significant role in the expansion

of cities in Pakistan. Mechanization of farming, industrialization, better economic and health conditions also increased the migration flow towards cities.

Increasing need of housing, transportation, electricity, water, sewerage, sanitation and police services are the outcomes of rapid urbanization in Pakistan and when families were not able to afford expensive urban amenities; squatter settlements diffused in the major cities of Pakistan. Urban transition in Pakistan is considered to be a problem because urban areas are being developed without any planning and government of Pakistan was unable to do anything for the betterment of urban areas as expected, so it resulted into expanding slums in the cities. Pakistani cities do host slums (heavily populated urban informal settlement characterized by substandard housing).

As stated by Kugelman (2013), urbanization strengthens the electoral prospects of urban-based political parties but at the same time it heightens the risk of political violence in cities of Pakistan. Pakistani politicians gave great importance to family needs in formulating their party manifesto. They make their party agenda according to the needs of families and any clash with the institute of family would result into the defeat of their party. Pakistan People Party manifesto is to provide food and shelter to all families. Two new parties are emerging in the urban areas of Pakistan particularly in Punjab, one of them is led by former cricketer Imran Khan and his manifesto is to provide justice at family level and the other is led by a Canadian nationality holder religious scholar- Dr Tahir ul qadri who wants to bring a revolution through providing basic necessities of life to all families in Pakistan. Political instability along with terrorism, talbanization and sectarian violence have bad impacts on the economy and inflation continues to increase in Pakistan in recent years. Head of household is unable to provide all necessities of life to its joint family and it results into breaking of joint family.

With the introduction of new TV channels, families in Pakistan can now experience the whole world through satellites easily. Families in Pakistan have changed a lot due to the influence of media. Many new T.V channels are appearing in whole world through satellite. Western TV channels are diffusing western norms and values in Pakistani families. Indian channels have more influence due to common language and all Pakistani people can easily understand their programs. Cultural diffusion is on the rise and old traditions are breaking due to the mixing of culture. As a consequence of this cultural diffusion, new values are diffusing in families. We are not wrong to say that it is the age of rapid information flow. All

these things create a social change which in turn is bringing many changes in Family. Impacts of media and technology are more in urban areas than in rural areas.

Globalization is also playing an important role in bringing changes in families of Pakistan. Urbanization accelerates the process of globalization because cities are hub of information technology (internet, 3G/4G, Android Mobile, Tablet etc), social Media (Facebook, twitter, youtube etc) and electronic Media (TV, Radio) in Pakistan. Globalization is affecting more urban families than rural families.

Rising talbalization, terrorism and violence are also impacting families. Urban citizens are the victims of terrorist attacks. Karachi, Quetta, Peshawar, Lahore, Faisalabad and Islamabad are the target of terrorists and sectarian violence. It is due to the infiltration of Talibans in cities from Pak-Afghan border and weak law enforcement agencies. Taliban Groups are present in urban dwellings of Pakistan and they are involved in terrorist attacks in the cities of Pakistan. Fears of talbanization are present in the families of Pakistan.

Urban transition is bringing changes in family structure, household composition, family size, and family values Pakistan. The first important change is related the family structure. Joint family system is breaking and being replaced by a nuclear family system in Pakistan. Nuclear families are becoming a dominant family system in the cities of Pakistan. Joint family system is suitable for agricultural/rural society and a nuclear family system is convenient to an industrial /urban society, so nuclear families are increasing in numbers in each successive generation in the cities of Pakistan.

Second important change is the reduced family size. Family size begins to decrease due to the increasing education level, increasing age at marriage, growing awareness of family planning methods, and role of media, better health facilities, inflation, housing shortage, and limited resources in the cities of Pakistan. Pakistan is still passing through the second stage of demographic transition. It already took 35 years in this stage while Iran had completed demographic transition more rapidly as expected. Institute of Family in Pakistan is responsible for lagging behind in demographic transition through early marriages, joint family system, and influence of religion and low social status of women. Pakistani families are still showing resistance towards limiting family size. Millions of rupees have been spent on family planning programs but all efforts of government and international donor institutes render futile due to resistance from Pakistani society. All efforts to control rapid population growth rate were unsuccessful because policy makers ignored the institute of family. All

family planning policies should be designed according to the needs of the family system. Family planning policies will not succeed in the absence of harmony with norms of family system of that society. It is very easy for Family planning workers to convince and approach to a nuclear family couple as compared to joint family couple. Population policy makers require prior knowledge of family composition for formulating a policy to reduce family size. There is dire need to get cooperation of ulemas (religious scholars) and increasing literacy level along with awareness of family planning methods for successful demographic transition in Pakistan.

The third important change is the empowerment of Pakistani women in household, political and economic affairs. Working women are also increasing in numbers and attitude of male is becoming softer and allowing women to do job for supporting their family. Role of women in family affairs has increased and their opinion regarding limiting family size has a contribution in fertility transition of Pakistan. Women empowerment in society, outside family, still needs improvement.

Another important change is related to patriarchy. Now, important decisions are taken by women in family affairs but at the same time, 92.0% households are male headed in Pakistan. The proportion of female-headed households is about the same in rural (9 percent) and urban areas (8 percent). This could be attributed to out-migration of the male population from rural areas to urban areas or even overseas for employment purposes. Female headship of households is of concern to policymakers, particularly those dealing with poverty issues, because it is usually financially difficult for a woman to manage a household alone. Households in Pakistan tend to be large because of the predominance of the extended and joint family system. Economic pressure can also force middle- and lower-income families to live with their in-laws and other relatives because they cannot afford to build or rent separate dwellings (NIPS & MI, 2013b).

Divorce rate is also increasing in Pakistani families. Arranged marriages are being replaced by love marriages but still arranged marriages are dominant. Pakistan's society was considered to be a polygamous society in the past because polygamy was supported by the religion and state's laws but polygamous society of Pakistan has changed to a monogamous society. Age at marriage is also increasing. Pakistani families are modernizing and westernizing with increasing urbanization.

## Significance of the Study

Urban transition and family structure are of a great concern for sociologists, demographers, economists, anthropologists, political scientists, social workers and geographers (K. S. Ahmad, 1967b, 1969; Raza Ali, 2013; Syed Mubassar Ali, 1989b; Astone, Nathanson, Schoen, & J.Kim, 1999; Baqai, 1967; Carlson, 2006; Christina, 2008; Farooqui, 1990; Fay, 2008; HAGEWEN & MORGAN, 2005; Hameed, 1973; J.Waite & L.Lehrer, 2003; James M. Raymo, 2008; Jennifer E. Lansford, 2001; Mehtab S. Karim, 1974; Kei, 2008; Kugelman, 2013, 2014a, 2014b; Laslett & Wall, 1972; Martine, Mcgranahan, Montgomery, & Fernández-Castilla, 2008; Nathanael, 2008; Ruggles & Brower, 2003; Rutherford, Ogawa, & Matsukura, 2001; Sarkisian, Gerena, & Gerstel, 2007; Steven, 2003; Sultan, 2003; Sultana & Hashmi, 2003; Todd, 2011; Zahir, 2001; Zaninetti, 2006 page # 14) .United Nation places family issues at the priority list and conducted researches in various parts of the world to find out factors for the changes in the family in different parts of world and it is evident from findings that urbanization has played a significant role in bringing changes in the institute of family(Badran, 2003; Bernard, 2003; Bigombe & Khadiagala, 2003; El-Haddad, 2003; Jelin & Díaz-Muñoz, 2003; Nosseir, 2003; Philipov, 2003; Quah, 2003; Silva, 2003).

In developing countries like Pakistan, there is lack of researches on families and urban transition due to lack of funds and few researchers are attached to issues of family and urban transition. Sociologists and demographers have contributed more than geographer through conducting various researches. Geographers have less contribution in this regard. Few researches on family and urbanization in Pakistan conducted separately on each in the past. In the last 30 years, Pakistani society has changes a lot due to increasing urbanization, globalization and influence of media. There was a gap between existing knowledge and present situation of family and urban transition in Pakistan. There is need to conduct research on this topic to fill this gap and it will be the addition of knowledge in the existing knowledge. It will be quite important to study family structure and urban transition in Pakistani society because it is the most ignored topic of research in Pakistan. There is dire need to study family structure and urban transition of Pakistan in a geographical context.

There is no doubt in it that there were many constraints in such type of studies because family is the most sensitive institute in all societies of world particularly in the South Asian society. Sensitivity of topic has kept researchers away and few researchers take courage for field survey. Privacy is at the top priority in family affairs. No person is ready to disclose

information related to his family and household. It was a difficult task to get views about their families, reproductive life, family planning methods and privacy due to ethical values of Pakistani society. There is also element of shyness in Pakistani society and was a hindrance in getting some liberal views. Rising talbinization, terrorism and the worst law and order situation for years to nowadays in Pakistan had created fears in the minds of members of families and they did not like to disclose information regarding their families and households.

Our case study- Faisalabad is located in Punjab which contains 55.6% of the total population of Pakistan. Socio-cultural conditions of the whole Punjab is almost same and further, the urban areas of the rest of the provinces i.e. Sindh, Balochistan and Khyber Pakhtunkhwa face similar conditions more or less, so we are confident that our case study is the representation of whole Pakistani society excluding remote rural areas, tribal areas in northern areas, and tribes of Balochistan because they are sticking to their traditions and not ready to accept any change.

Faisalabad emerged as an industrial city in which effects of urban transition on families is more evident than other cities of Pakistan because of the fact that its urban population expanded rapidly due to migration from the surrounding rural areas. As we wanted to see impact of urban transition on the family so we selected Faisalabad for in-depth analysis due to the fact that being an industrial city, it attracted more migrants from the adjoining rural areas.

It is an admitting fact that family structure in relation to urban transition is not an isolated topic of research and it has link with the existing knowledge. It is quite interesting to study family structure in relation to urban transition in Pakistan and our work is an effort to increase in the existing knowledge and fill the gap in the existing literature.

Our findings depict the scenario of developing countries, Muslim world and emerging country (India) because our study area-Pakistan represents not only developing countries but also whole Muslim world and it has similar socio-cultural traditions with India. At the same time, our case study- Faisalabad is depicting the demographic and socio-cultural conditions of cities of India, Bangladesh and other developing countries.

## Objectives of the Study

In the light of above parlance, we outlined the main objectives of our study as follows:

- To find out the impacts of urban transition on the housing condition in Faisalabad
- To find out the impacts of urban transition on family structure and household composition in Faisalabad
- To discover latent factors in context of urban transition and family structure in Faisalabad
- To discover latent factors responsible for increasing nuclear family system in Faisalabad
- To uncover changes in family in Faisalabad
- To predict the probability of different family structure in rural/urban and in different socio-economic setup.

## Hypotheses

Taking into consideration our objectives, we outlined following hypotheses to be verified or rejected through our empirical findings:

### Hypothesis I

*Urban Transition is bringing changes in housing and living conditions of households in Faisalabad.*

### Hypothesis II

*Nuclear Family system is increasing in the urban areas of Faisalabad.*

### Hypothesis III

Pakistani society is still a male dominated society.

### Hypothesis IV

*Urban transition is changing the composition of family in Faisalabad.*

### Hypothesis V

*All households in Faisalabad are family households.*

### Hypothesis VI

*Household size is larger in rural areas than in urban areas in Faisalabad.*

### Hypothesis VII

*Trend towards a nuclear family system is increasing in Faisalabad.*

**Hypothesis VIII**

*Urban Transition is responsible for increasing nuclear family system in Faisalabad.*

**Hypothesis IX**

*Spousal violence is still common and being practiced in Pakistani society.*

**Hypothesis X**

*Talbanization and terrorism are affecting families in Faisalabad.*

**Hypothesis XI**

*Women participation in politics is improving in Faisalabad.*

**Hypothesis XII**

*Age at marriage is increasing in Faisalabad.*

**Hypothesis XIII**

*Pakistan society is still an endogamous society*

**Hypothesis XIV**

*Desire for a large family size is decreasing in Faisalabad.*

**Hypothesis XV**

*Electronic Media is responsible for changes in the family in Faisalabad.*

**Hypothesis XVI**

*Pakistani society is predominately a monogamous society.*

**Hypothesis XVII**

*Women are empowering in Faisalabad.*

**Hypothesis XVIII**

*Cousin marriages are decreasing in Faisalabad.*

**Hypothesis XIX**

*Love marriages are increasing in Faisalabad.*

**Organization of the Study**

As far as organization of present study is concerned, we tried our best to synchronize the whole work in such a way that it would easily be understandable not only for the professionals but also for general readers. First chapter presents theoretical concepts and

relevant literature that provide existing knowledge on the subject of urban transition and family structure in Pakistan. Second chapter brings light on the study area-Pakistan and case study Faisalabad. In this chapter, we discussed urban transition, population growth, demographic transition and household composition at macro level of all districts of Pakistan with emphasis on Faisalabad on the basis of available secondary data and our estimates in the absence of latest population census in Pakistan.

Third chapter presents the methodology in details and describes the procedures used for data collection and analysis. Chapter 4 contains the empirical findings and analytical discussions of our research. Finally, in conclusion, we summarized our whole work along with verification and rejection of our constructed hypothesis on the basis of our empirical findings. We also discussed limitations and shortcomings of our work and how we tried to overcome these limitations. We also gave a sketch for continuing present research work along with steps to be followed for future research work.



# **1 Chapter 1 -Theoretical Concepts and Review of Literature**

This chapter explains various complicated concepts and terms which are related to our study for better understating and comprehension of general readers from other inter-related disciplines. It also provides available existing literature related to urban transition and family structure in Pakistan.

## **1.1 Theoretical Concepts**

### **1.1.1 Family and household**

A household is defined as a person or group of related and unrelated persons who live together in the same dwelling unit(s) or in connected premises, who acknowledge one adult member as head of the household, and who have common arrangements for cooking and eating (NIPS & MI, 2013a).

The family is social group based on marriage and united by ties of kinship, with a common culture and common household. It is a small unit at the base of the social structure, but is the most widespread of social groups. The household, on the other hand, is not necessarily a family, for it merely means a group of people living together (Clarke, 1972).

Family is usually defined as a group of two or more people residing together and related by birth, marriage, or adoption. Family households are households maintained by a family, although the household may also contain other unrelated people. A household is defined as one or more persons who occupy a single housing unit. Household consists of unrelated persons or persons related by birth, marriage, or adoption whereas a family is a group two or more persons residing together and related by birth, marriage or adoption (Haupt & Kane, 2004; Haupt, Kane, & Haub, 2011) .

#### ***1.1.1.1 Family Structure***

Family structure refers the combination of relative that comprise a family.

Following two family structures exist:

**i. Nuclear Family**

The nuclear family is a type of family structure in which only two parents and children are living.

The simplest form of family is the nuclear or conjugal family which comprises father, mother and children. For statistical purpose, a husband and wife without children also constitute a family, and often widowed and divorced persons as well; all other relatives are excluded.

**ii. Extended /Joint Family**

The extended/joint family structure consists of more than one adult couple who are related, either by blood or marriage, living in the same household. Many extended families include cousins, aunts/uncles and grandparents living together (Blessing, 2014; Clarke, 1972).

**1.1.1.2 Household composition**

Information on household composition is critical for understanding family size, household headship, and orphan hood and for implementing meaningful population-based policies and programs. Household composition is also a determinant of better health status and well-being (NIPS & MI, 2013a).

Household composition is a derived variable that classifies households according to the relationships between usually resident people. Households are classified according to the presence, number, and type of family nuclei, and the presence of related and unrelated people ("2013 census information by variable ", 2013).

Households are classified into:

- i. Non-family households : it may be one person or more than one person (related or unrelated)
- ii. One family households : It consists of one family
- iii. Multi-family households : More than one family living in one household

### **1.1.1.3 Family size**

Family size is the number of persons living in a family.

### **1.1.1.4 Family Planning**

Conscious effort of couples to regulate the number and spacing of births through artificial and natural methods of contraception. ("Glossary of demographic terms ", 2014)

### **1.1.1.5 Household size**

Household size is the total number of persons living in a household.

### **1.1.1.6 Average household size**

Average household size can be calculated through dividing number of persons living in household by total number of household.

## **1.1.2 Marriage**

In Pakistan, marriage is one of the factors that regulate the level of fertility because marriage signals the onset of exposure to the risk of pregnancy for most women and, thus, is considered a proximate determinant of fertility (NIPS & MI, 2013a).

Marriage is a legal fact and it is not a biological one like birth and death whereas its legality is established by civil, religious or other means. Marriage statistics of different countries are not easily comparable.

### **1.1.2.1 Monogamy and Polygamy**

Following are three forms of marriage:

- i. Monogamy : The marriage of one man to one woman
- ii. Polygyny : The marriage of one man to two or more women
- iii. Polyandry : The marriage of one woman to two or more men (Clarke, 1972).

Polygyny and polyandry are the forms of polygamy in which more than one life partner is allowed. Pakistan is a country where polygamy is allowed by state laws and religion Islam but only polygyny is acceptable form of polygamy and there is no existence of polyandry in the Pakistani society.

Marital unions are predominantly of two types, those that are monogamous and those that are polygynous. The distinction has social significance and probable fertility implications. Polygyny, the practice of having more than one wife, has connotations for frequency of sexual intercourse and thus may have an effect on fertility. Nevertheless, the association between type of union and fertility is complex and not well understood. Polygyny is legal in Pakistan; however, according to the Muslim Family Law Ordinance promulgated in 1961, the husband needs to obtain written permission from his existing wife or wives if he wants to marry another woman (Muslim Family Law Ordinance, 1961)(NIPS & MI, 2013a).

### ***1.1.2.2 Arranged Marriage and Love Marriage***

Arranged marriage is a type of marital union where bride and groom are proposed by a mother and father or someone of the couples family or marriage consultants in modern time ("Arranged marriage," 2014).

Generally, the groom's parents and relatives visit to the bride's house and give their proposal. Once if the bride's parents and relatives accept the proposal, the "mangni" takes place. Mangni is the engagement function that takes place as a grand celebration with the presence of relatives and friends. On the marriage date, the bridegroom along with family members and friends goes to the house of the bride, where Nikah (marriage act) ceremony takes place.

Arranged marriage should not be confused with forced marriage such as *vani* in which young girls are forcibly married as a part of punishment of a crime committed by her male relatives. It is a form of arranged child marriage and fate of a girl is being decided by *Jirga* (Council of tribal). This custom became illegal in Pakistan in 2005 but it is still practiced against state laws ("*Vani* -custom," 2014). It is existed in some parts of Pakistan (Rural areas of Sindh, Balochistan and Khyber Pakhtunkhwa and some rural areas of Punjab)

Love Marriage is a type of marriage in which life partner is the choice of couple and they choose each other with the element of liking and love that's why it is called love marriage. In Pakistan, Love marriages are not considered good

### ***1.1.2.3 Endogamy and Exogamy***

Endogamy is a custom of marrying within own group ("Endogamy ", 2014).It is practiced within family or within caste or within a social group. Exogamy is a custom of marrying outside one's own group ("Exogamy ", 2014 ). There is no restriction of choosing life partner within family in exogamous society. India and Pakistan are endogamous society due to persistent caste system.

### ***1.1.2.4 Nuptiality***

Nuptiality refers to marriage as a population phenomenon, including the rate at which it occurs, the characteristics of people united in marriage, and the dissolution of such unions (through divorce, separation, widowhood, and annulment).

### ***1.1.2.5 Median age at first Marriage***

Half the people marrying for the first time in a given year got married before the median age, half after. The median age at first marriage is usually computed separately for males and females, because females typically marry at younger ages. The median age at first marriage has an effect on a population's fertility. The significance of this factor depends on the extent to which childbearing is limited to marriage (Haupt et al., 2011).

## **1.1.3 Population Growth**

Population growth refers to the growth of human population in a particular area during a specific period of time. It is the most fundamental demographic process with which all demographic attributes are directly or indirectly associated (Gosh, 1985).

### ***1.1.3.1 Component of Population Change***

There are two basic ways through which population change occurs. The first is the natural increase through births (Fertility) and deaths (Mortality) and the second is through migration. Fertility, mortality and migration are three basic component of population change (Haupt & Kane, 2004).

### 1.1.3.1.1 Fertility

Fertility refers to the number of live births women have. It differs from fecundity, which refers to the physiological capability of women to reproduce (Haupt & Kane, 2004; Haupt et al., 2011).

**Crude Birth Rate (CBR)** is the most common index of fertility. It is the number of deaths per 1,000 population in a given year (Clarke, 1972).

$$\text{CBR} = \frac{\text{Number of births}}{\text{Total Population}} \times 1000$$

### **Total Fertility Rate (TFR)**

The total fertility rate (TFR) is the average number of children that would be born to a woman by the time she ended childbearing if she were to pass through all her childbearing years conforming to the age-specific fertility rates of a given year. The TFR is one of the most useful indicators of fertility because it gives the best picture of how many children women are currently having.

### 1.1.3.1.2 Mortality

Mortality is the permanent disappearance of all evidence of life after birth has taken place. Crude mortality data are more continuous and reliable than fertility data as stated by Clarke (1972). In case of developing countries including Pakistan, People don't bother to register deaths and results into inaccuracy of data.

Crude Death Rate (CDR), Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR) are three important indices of mortality.

### **Crude Death Rate (CDR)**

It is the number of deaths per 1,000 population in a given year.

CDR is also called death rate.

$$\text{CDR} = \frac{\text{Number of deaths}}{\text{Total Population}} \times 1000$$

### **Infant Mortality Rate (IMR)**

It is the number of deaths of infants per 1000 live births in a given year.

$$\text{IMR} = \frac{\text{Number of deaths of infant in a given year}}{\text{Total Live births in that Year}} \times 1000$$

IMR is also a good indicator of health status of population.

### **Maternal Mortality Ratio**

The number of women who die as a result of pregnancy and child birth complications per 100,000 live births in a given year. It is also called Maternal Mortality Rate. (Blij, 1995; Clarke, 1972; Haupt & Kane, 2004; Haupt et al., 2011)

$$\text{MMR} = \frac{\text{Number of maternal deaths}}{\text{Total Live Births}} \times 100,000$$

#### **1.1.3.1.3 Migration**

Migration, like fertility and mortality, holds a place of prominence in a geographical analysis of population change in any area (Trewartha, 1969). Migration is defined as movement of people into or out of a country (Blij, 1995). Its definition further refined through adding duration of time so it refers to movement of people involving a change of residence of substantial duration (Clarke, 1972).

Migrants are people who move from their place of birth to another area or change their place of residence for a specific reason. Migration, which may be seasonal, temporary, semi-permanent, or permanent, is an important demographic element that has far-reaching socioeconomic implications for both individuals and society, both in the place of origin and in the destination. Migration is usually related to opportunities for education and employment that motivate people to out-migrate from their place of origin and culture and to geographic hardships that push people to move to a better or safer environment (NIPS & MI, 2013a).

### ***1.1.3.2 The Demographic Transition***

The demographic transition refers to the change that populations undergo from high rates of births and deaths to low rates of births and deaths (Haupt & Kane, 2004; Haupt et al., 2011).

### ***1.1.3.3 Fertility Transition***

A changing process in the birth rate of any society is known as fertility transition. Fertility rate is not stationary; it is declining or increasing so we can say that fertility is in transition

## **1.1.4 Population distribution and Population Density**

Population distribution and population density are inter-related terms but population geographers make a distinction between them for analytical purpose.

### ***1.1.4.1 Population Distribution***

Distribution of Population refers to the way how people are spread over the surface of the earth. It may be linear, dispersed or agglomerated (Gosh, 1985).

It can be defined also as the patterns of settlement and dispersal of a population (Haupt & Kane, 2004; Haupt et al., 2011) .

### ***1.1.4.2 Population Density***

The term population density refers to the number of persons per square kilometer. It indicates the man-land ratio.

Following are major types of population densities:

#### **1.1.4.2.1 Arithmetic Density**

The number of persons per square mile or kilometer is known as arithmetic density.

#### **1.1.4.2.2 Physiologic Density**

The number of people per unit area of agricultural land is known as physiologic density.(Blij, 1995)

#### **1.1.4.2.3 Agricultural Density**

Agricultural density means the number of agricultural people per unit of cultivable land. (Gosh, 1985)

### **1.1.5 Population Structure/Composition**

Geographers are interested in population structure as it varies territorially from country to country, from the rural to urban area, from one community to other community and from one ethnic group to other ethnic group (Clarke, 1972).

#### ***1.1.5.1 Population pyramid***

A bar chart, arranged vertically, that shows the distribution of a population by age and sex. By convention, the younger ages are at the bottom with males on the left and the females on the right (Haupt et al., 2011).

#### ***1.1.5.2 Sex Ratio***

The number of males per 100 females in a population is called sex ratio (Haupt et al., 2011).

#### ***1.1.5.3 Marital Status***

The marital status of a population refers to the proportion of single, married, widowed and divorced persons (Clarke, 1972).

## **1.1.6 Urban Transition**

### ***1.1.6.1 Metropolitan Area***

A metropolitan area is defined as a large concentration of population, usually an area of 100,000 or more people with an important city at its core plus suburban and “exurban” areas that surround the city and are socially and economically integrated with it (Haupt & Kane, 2004; Haupt et al., 2011).

### ***1.1.6.2 Urbanization***

Urbanization is the increase in the proportion of population living in urban areas- the process of people moving to cities or other densely settled areas. (Haupt & Kane, 2004; Haupt et al., 2011)

### ***1.1.6.3 Percent Urban***

The population living in urban areas can be expressed as a percentage of the area’s total population and is a measure of urbanization. Usually , the remainder of the population is considered rural , although some countries also have middle category designated “semiurban”(Haupt & Kane, 2004).

## **1.1.7 Exploratory Factor Analysis**

Exploratory Factor Analysis is used to identify complex interrelationships among items and group items that are part of unified concepts. It is helpful when the researcher has no prior assumptions about relationship of factors.

### ***1.1.7.1 Principal Component Analysis***

PCA is widely used method for factor extraction, which is the first phase of EFA (exploratory Factor Analysis). Factor weights are computed in order to extract the maximum possible variance, with successive factoring continuing until there is no further meaningful variance left. The factor model may be rotated for analysis.

### ***1.1.7.2 Factor loadings***

The factor loadings, also called component loadings in PCA, are the correlation coefficients between the variables (rows) and factors (columns). Analogous to Pearson's  $r$ , the squared factor loading is the percent of variance in that indicator variable explained "explained" by linear correlation (which does not necessarily means anything). To get the percent of variance in all the variables accounted for by each factor, add the sum of the squared factor loadings for that factor (column) and divide by the number of variables.

### ***1.1.7.3 Communality***

The sum of the squared factor loadings for all factors for a given variable (row) is the variance in that variable accounted for by all the factors, and this is called the communality. The communality measures the percent of variance in a given variable explained by all the factors jointly and may be interpreted as the reliability of the indicator.

### ***1.1.7.4 Eigenvalues***

The eigenvalue for a given factor measures the variance in all the variables which is accounted for by that factor. The ratio of eigenvalues is the ratio of explanatory importance of the factors with respect to the variables. If a factor has a low eigenvalue, then it is contributing little to the explanation of variances in the variables and may be ignored as redundant with more important factors. Eigenvalues measure the amount of variation in the total sample accounted for by each factor.

### ***1.1.7.5 Extraction sums of squared loadings***

Initial eigenvalues and eigenvalues after extraction (listed by SPSS as "Extraction Sums of Squared Loadings") are the same for PCA extraction, but for other extraction methods, eigenvalues after extraction will be lower than their initial counterparts. SPSS also prints "Rotation Sums of Squared Loadings" and even for PCA, these eigenvalues will differ from initial and extraction eigenvalues, though their total will be the same.

Factor scores (also called component scores in PCA)

Component scores are the scores of each case (row) on each factor (column). To compute the factor score for a given case for a given factor, one takes the case's standardized score on each variable, multiplies by the corresponding factor loading of the variable for the given factor, and sums these products. Computing factor scores allows one to look for factor outliers. Also, factor scores may be used as variables in subsequent modeling.

#### ***1.1.7.6 Kaiser criterion***

The Kaiser rule is to drop all components with eigenvalues under 1.0 – this being the eigenvalue equal to the information accounted for by an average single item. The Kaiser criterion is the default in SPSS and most statistical software but is not recommended when used as the sole cut-off criterion for estimating the number of factors as it tends to over extract factors

#### ***1.1.7.7 Scree plot***

The Cattell scree test plots the components as the X axis and the corresponding eigenvalues as the Y-axis. As one moves to the right, toward later components, the eigenvalues drop. When the drop ceases and the curve makes an elbow toward less steep decline, Cattell's scree test says to drop all further components after the one starting the elbow. This rule is sometimes criticised for being amenable to researcher-controlled "fudging". That is, as picking the "elbow" can be subjective because the curve has multiple elbows or is a smooth curve, the researcher may be tempted to set the cut-off at the number of factors desired by his or her research agenda.

#### ***1.1.7.8 Rotation methods***

The unrotated output maximizes the variance accounted for by the first and subsequent factors, and forcing the factors to be orthogonal. This data-compression comes at the cost of having most items load on the early factors, and usually, of having many items load substantially on more than one factor. Rotation serves to make the output more understandable, by seeking so-called "Simple Structure": A pattern of loadings where items load most strongly on one factor, and much more weakly on the other factors. Rotations can be orthogonal or oblique (allowing the factors to correlate).

Varimax rotation is an orthogonal rotation of the factor axes to maximize the variance of the squared loadings of a factor (column) on all the variables (rows) in a factor matrix, which has the effect of differentiating the original variables by extracted factor. Each factor will tend to have either large or small loadings of any particular variable. A varimax solution yields results which make it as easy as possible to identify each variable with a single factor. This is the most common rotation option. However, the orthogonality (i.e., independence) of factors is often an unrealistic assumption. Oblique rotations are inclusive of orthogonal rotation, and for that reason, oblique rotations are a preferred method.

Quartimax rotation is an orthogonal alternative which minimizes the number of factors needed to explain each variable. This type of rotation often generates a general factor on which most variables are loaded to a high or medium degree. Such a factor structure is usually not helpful to the research purpose.

Direct oblimin rotation is the standard method when one wishes a non-orthogonal (oblique) solution – that is, one in which the factors are allowed to be correlated. This will result in higher eigenvalues but diminished interpretability of the factors. See below.[clarification needed]

Promax rotation is an alternative non-orthogonal (oblique) rotation method which is computationally faster than the direct oblimin method and therefore is sometimes used for very large datasets.(Anna B. Costello, 2005; Bret Williams, 2010; "Exploratory factor analysis," 2014; Field, 2005; Norris & Lecavalier)

## **1.2 Review of Literature**

### **1.2.1 Introduction**

Urban Transition is a universal phenomenon that is visible at different proportion in all societies of world. It is one of the most discussed research topics by demographers, economists, sociologist, anthropologists, and policy makers from the latter half of 20<sup>th</sup> century to the present. In developed countries, literature on urban transition is available in abundance while in less developing countries including Pakistan inadequate researches are available. Moreover, scanty literature is the cause of poor planning of urban areas in developing countries.

Family is a basic social institute in a society and its importance cannot be denied in relation to demographic transition and urban transition. A minor change in a society has a direct influence on the institute of family. During the process of urban transition, when a person moves from a rural area to an urban area; it is the family of a migrant that is majorly affected. Migration from rural areas to urban areas results into the various changes in family structure, household composition. Unfortunately, this aspect is ignored by the researchers and is missed in the existing available literature and only few pieces of writing which explain relationship between urban transition and family structure are available.

Badran (2003), Bernard (2003), Bigombe and Khadiagala (2003), Cliquet (2003), El-Haddad (2003), Jelin and Díaz-Muñoz (2003), Nosseir (2003), Quah (2003) and Silva (2003) submitted their reports to United Nations in which they discussed in detail the major trends that affects families. Their work covers Central America & Caribbien, Europe, sub-saharan Africa, Gulf countries, Arab Countries, South America, North Africa, Central and Eastern Europe, East and South-East Asia and South Asia.

As stated earlier that sociologist, anthropologists, demographers, psychologists, economists and geographers have interest in the subject of family and urban transition. Sociologists, demographers, sociologists anthropologists had conducted more researches than geographers in Pakistan. Few geographers including myself made few researches on the topic of family and urbanization separately in Pakistan. Sociology and demography departments of Pakistani universities conducted few researches on families and urbanization separately but these were conducted in remote past and not a single research was conducted to explain the relationship between family structure and urban transition in Pakistan.

As it is an admitted fact that urban transition and family structure is one of the ignored topics in developing countries including Pakistan due to unavailability of data and sensitivity of the topic. We did not find a single comprehensive research that explains the relationship of urban transition and family structure in Pakistan. However, few researches are available that discuss indirectly the urban transition and family structure in Pakistan. Urban transition and family structure is the new and genuine idea in context of Pakistan.

We tried to analyze existing available literature that described urban transition and family structure in Pakistan; however literatures on the inter-related issues like demographic transition, fertility transition, women empowerment and household composition were also

included in the discussion for making the literature more interesting , comprehensive and more understandable.

Our literature focuses on the family and urban transition in Pakistan with special emphasis on Faisalabad.

### **1.2.2 Studies on Family in Pakistan**

Various diverse studies were conducted on family in Pakistan. We divided researches on the basis of various dimensions in the following sub sections for better comprehension:

- Studies on Family structure
- Studies on family Planning
- Studies on household composition
- Studies on marriages
- Studies on women empowerment
- Studies on impact of family on youth
- Studies on fertility transition

#### ***1.2.2.1 Studies on Family Structure***

Hashmi (1965) associated fertility level with family type in Karachi city. He found that fertility level in nuclear families is substantially higher than in extended or joint family system. He gave argument that the presence of one or more relative influences the fertility level of a couple in a family. Sex in public or in the presence of relatives is a source of shame in Pakistan. A couple needs privacy for sex. The extend of that privacy is reduced in extended /joint family system as compared to nuclear family system. In extended/joint family system, a couple has to wait for an opportune a moment and such a moment may not necessarily coincide with the time of ovulation in the reproductive cycle of female. Frequency of sexual intercourse decreased in joint family and resulted into lower fertility. Our empirical findings in Faisalabad were opposite to the Hashmi (1965) and we found that family size is large in a joint family in which family size is large due to joint responsibility in a joint family. High fertility level nuclear families in Karachi during 1960s might be due to the better economic

and health conditions in a nuclear family and at that time, mortality rate was decreasing during this period.

Baqai (1967) studied the trends in changes of Pakistani family and analyzed families of middle economic class in Lahore.

Z. A. Khan (1971) found that the nuclear family system was dominant in Karachi in 1964. Nearly 60 % of the population belonged to this family type. It is more common among natives (17%) and immigrants (69%) than in-migrants (14%). It might be due to the fact that many in-migrants were unmarried or had left their relatives behind them and are living in the city alone. There were 73000 single male (23% of the total population) who did not belong to a family. The Joint family system and extended family system - traditional family systems in the Indo-Pak subcontinent were not popular in Karachi. Low percentage of joint and extended family system was the primarily result of financial difficulties and lack of accommodation but on the other hand, it can't be denied that the social have greatly changed and the present generation desires to break pre-industrial traditions and prefers independent living.

Mehtab S. Karim (1974) conducted a comprehensive study on the family type of Pakistan and related family type with fertility . He found that family type might not be an important factor in determining fertility level because there was no statistically significant relationship between family type and fertility. Women from nuclear families are influenced by same cultural values and norms as women in a joint family. Moreover, nuclear families may be a part of a larger extended family network where women are still influenced by their relative living in different households. He argued that when nuclear family women will independent from their past affiliations and also will adopt values and norms as operative in independent nuclear families of the more modernized societies, and then the influence of a particular family type on fertility behavior may be more specifically determined. Our empirical findings proved that nuclear family has modernized and adopted western values in Faisalabad, so it is influencing fertility and supported the argument of Karim (1974) after 40 years. Urban transition played a major role in modernizing family in Pakistan.

Iqbal (1998) found in his study that there was a trend towards joint family system was obvious in the parent generation in Karachi and it was contradictory to Khan (1971) and our empirical findings.

Zahir (2001) proved that norms of larger family size were quite consistent. Son preference was common. Unwanted pregnancy is also seen in women who have three or more children.

Mahmood and Shirazi (2001) indicated that joint family system along with religion and customs are the most important cause of rapid population growth rate in Pakistan.

Silva (2003) discussed various determined for changes in family structure in South Asia. He proved that emerging feature in the modern family system is the changing attitude towards the value of children. In traditional societies, where human labour was a source of strength to the family, more children were preferred to the fewer. But as the economic contribution from the children in a family decreased, because of a move away from agriculture, the need for large numbers of children decreased. Improvements in health care and child survival also contributed. The emphasis was on the quality of life rather than the quantity of children, a new concept added to family values. The reduction of the family size could be attributed partly to the economic difficulties, low levels of income, the high cost of living, the costs of education of children and the desire to maintain a better standard of living, which is best achieved within the more affordable smaller size family. Consequently, the nuclear family with its parents and children became the model of society and soon ruled out the traditional, extended family usually constituting three generations.

Sultana and Hashmi (2003) suggested that majority of the married youth aspire having first birth soon after marriage regardless the place of residence, level of education attainment and socio-economic background. Father literacy and age at marriage emerged significantly associated with the family building intentions of young people in Pakistan.

Cultural and traditional factors play an important role in decision making about family formation. Parents make important decisions regarding marriage of their children in Punjab, Pakistan. 98.7 % marriages in rural and 78.7% in urban areas are arranged by parents (Cheung et al 1985 :cited in Khan 2011A. A. Khan, 2011)

Mahmood and Ashraf (2005) made a qualititative analysis of family structure in upper and middle class of Faisalabad city.Mahmood (2007) found that the rising nuclear family system in Faisalabad due to industrialization and urbanization is the cause of various crimes in bigger cities of Pakistan because family control is losing on young people and they are involved in various crimes.

### ***1.2.2.2 Studies on Family Planning***

Pakistan was one of the first developing countries to adopt an official policy to reduce fertility. Its national family planning program begun in 1965 and total cost was more than 165

million dollars over 15 years. It was widely considered to be a model for other nations to follow. Yet by the end of the 1970s it became clear that the program had not worked. Only 5% of married women were using any contraceptive method; 2/3 did not know where they could obtain a method; 70% had never met a family planning program staff member (Robinson, Shah, & Shah, 1981).

Campaign of promoting family planning program in Pakistan began on radio in 1960. It was shifted to TV in 1970s. The government has used mass media (Radio and Television) to create a motivation for the small and prosperous family. Mass media is a major source of information for diffusing family planning messages. By 1995, TV became the most important source of diffusion and we also found that majority of the households possessed TV. The use of contraceptive increased due to campaign through mass media ("Study to Assess attitudes towards sensitive messages in PAKistan ", 2003).

The usage of family planning services by women in urban slums is strongly linked to the individual and the household socioeconomic factors. Moreover, women were ten times more likely to have used a family planning service if her husband approved. (Stephenson & Hennink, 2004) The use of family planning services by women in urban slums is strongly linked to individual and household socioeconomic factors. In particular, women were ten times more likely to have used a family planning service if her husband approved (Stephenson & Hennink, 2004).

Syed Mubassar ALi (1989a) suggested that having one or more sons in the family is the principal predictor of the family size. Education of wife plays an important role in determining family size in Pakistan. Preferences for family size don't vary greatly between urban and rural areas.

There were only 35% women have the same number of children as their ideal family size. 16 % women still have less than their stated ideal, whereas almost half of women have excess children from their stated ideal number of children. The non-correspondence is certainly a matter of concern (Syed Mubashir Ali, Siyal, & Sultan, 1995).

A. Khan (1999) analyzed the impact of mobility of women on the access and usage of family planning methods. She found that there were certain traditions like family izzat (honour) and purdah (segregation of sexes) pertaining to women's status directly restricted women's mobility. Reduced mobility of women reduced the access and usage of family planning methods.

M. Hennink and Clements (2005) conducted a study the impact of franchised clinics in poor urban areas of Pakistan. They found that these clinics contributed a five percent increase in knowledge of all family planning methods but increase in knowledge of female sterilization was 15 % and intrauterine device (IUD) was 7 % . There was increase of 8 % in female sterilization and 7 % decline in condom use.

Zeba A. Sathar, Singh, and Fikree (2007) related abortion with family planning in Pakistan. They estimated 890,000 induced abortions are performed annually. They found that abortion rate was higher in provinces where contraceptive use is lower and where unwanted childbearing is higher. The unwanted pregnancy rate was estimated 77 per 1000 women or about 37.0% of all pregnancies. Abortions account for termination of one in seven pregnancies.

### ***1.2.2.3 Studies on Household composition***

Kureshy (1964) made a study on the age and sex composition of urban areas in Pakistan and found more males than females in all cities of Pakistan. He concluded that a higher sex ratio in towns was due to the outcome of rural-urban migration. The greater masculinity of the immigrant population to towns has its basis in the social bias of the people against allowing their womenfolk to seek remunerative employment in towns. Second cause was that, the employment that the towns provide at the present level of their commercial and industrial development is mostly of the nature which suits male labourers than the female workers. Z. A. Khan (1971) also found high sex ratio in Karachi and reaffirmed the role of migration for the higher sex ration in the cities. We also found high sex ratio in Faisalabad city and expensive land in the city was responsible for shifting whole family to a city.

Zaidi (1969) described the spatial pattern of sex ratio in Pakistan. The most puzzling aspect of the sex ratio in Pakistan was the small proportion of female population in all parts of Pakistan and males outnumbered females in all parts of the country in his spatial analysis. He blamed this gap to gender discrimination, more male births in Pakistan than western countries and under enumeration. We also found high sex ratio in our present study.

#### *1.2.2.4 Studies on marriages*

Delayed marriages have a role in fertility change in most societies. They underlie changes in family formation patterns and living arrangements, which ultimately are the bases of demographic transition. They also have impacts on population growth rate and fertility. In addition, they are also connected to the role and status of woman and living arrangements in Pakistan. Age at marriage has been rising since 1950s or 60s , fertility has only begun to decline in the decade of 1990(Zeba A. Sathar & Kiani, 1998)

The average age at marriage has increased about 4 years for males and about 5 years for females during the period 1951 to 1987 (Kausar & Shirazi, 2000).

A positive association is found between years spent in schooling and age at marriage in Pakistan. At the same time, age at marriage is increasing in Pakistan (Rehman, M.Satiruddin, & Qureshi, 2002).

Korson (1965) Studied the age and social status at marriage in Karachi from 1961-64. Formal registration of marriage was required after the implementation of Muslim Family Laws ordinance on July 15, 1961. All Muslim and Hindu marriages in Pakistan are arranged by the two families. Muslim law prescribed the minimum age at marriage for both male (18 years) and females (16 years). It helped in increasing the age at marriage because there is long tradition of early marriages for women in subcontinent. He also found that average age at marriage was lower in the low economic class families. Females married earlier than males in Karachi. According to 1961 census , Sex ratio was 132 in all age groups and Sadiq (1963) ascribed under-enumeration , lower resistance to diseases/or neglect in the younger years and high maternal deaths. Moreover , many married males moved to Karachi from rural areas and left their wives and children in the village and it might serve as a contribution factor for high sex ration in Karachi . There was a competition to get a wife and males did not wait for schooling of females.

Sheikh (1967) further added that low average age at marriage was due to the concealing age of women in the absence of births registration. Urbanization, industrialization, modernization and gradual loosening of joint-family ties also contributed in increasing age at marriage.

Marriage is nearly universal and family planning is not yet widely practiced in Pakistan. The number of marriages and age at marriage has important consequences for the fertility level of

the population. A Muslim marriage in this country is of additional social and economic significance because of the practice of mehr. In Islam, mehr is a sum of money which the husband is duty-bound to give to the wife as part of the marriage contract. Although marriage is an important social institution in Pakistan, little systematic research has been done thus far on its patterns. The most important reason behind this has been the lack of adequate data except that in the census, which unfortunately is very limited for the purposes of such a research. It may be mentioned here that until recently marriages were not officially registered. Average age of Females at marriage increased from 18.7 year in 1962 to 19.0 years in 1965 (Afzal, Bean, & Husain, 1973). At present, minimum mehr fixed is 500 Rs (4 euro) and majority of the families practiced this tradition. In rich families or where there is doubt of breaking family, its amount rose to million for the security of women.

Afzal, Khan, and Chaudry (1976) further proved that age at marriage has influence on fertility on the basis of data of 700 ever married women from Lahore.

#### ***1.2.2.5 Studies on Women empowerment***

Women's empowerment has five components: women's sense of self-worth; their right to have and to determine choices; their right to have access to opportunities and resources; their right to have the power to control their own lives, both within and outside the home; and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally (POPIN, 2009; UNDP, 2008).

The Millennium Development Goals (MDGs) have become a universal framework for development. According to the third Millennium Development Goal (MDG3), “promoting gender equality and empowering women,” is not only a key development goal in its own right, but also an important mean to achieve all MDGs. Even though impressive advances have been made in many countries towards achieving the MDGs, in 2008—halfway to the MDG attainment benchmark of 2015—progress on individual Goals in a number of countries is off-track. It is imperative that developing countries should accelerate their efforts to promote women’s rights. Women are facing many problems due to the predominance of men. The Pakistani society is also responsible for their plights. In the Pakistani Society, a woman is at risk to die if she bears a child. It may either be her physical death due to pregnancy complications in the child bearing process or her social death if she fails to bear a child because the Pakistani society condemns her infertility. Furthermore, women are discouraged

to work and those women who are doing jobs have to sacrifice a lot and bear the brunt of all consequences in the male dominated society.

Pakistan reaches the second stage of demographic transition in which there is start of decline of fertility rate due to improvement in status of women, increase in literacy rate and rising awareness regarding threats of rapid population growth rate in Pakistani society (Zaninetti, 2011 : Chapter 5) . There is no doubt that there is decline in the population growth rate in Pakistan but the United Nation third Millennium development goals regarding gender equality and women empowerment do not seem to be filled in the current scenario of socio-economic and political conditions in the Pakistani society.

One of the major targets of United Nation Millennium Development goal was eliminating gender disparity at all levels of education till 2015. Participation of women in politics has significantly increased through reserving 17.85 % seats in the National assembly in the 2008 general election, and 16% seats are reserved for women in the Senate. Dr Fehmida Mirza is the current speaker of National assembly. She is the first woman speaker in history of Pakistan. The Gender Parity Index is also used by international organizations, particularly in measuring the progress of developing countries. The Gender Parity Index is a socioeconomic index usually designed to measure the relative access to education of males and females. It is calculated as the quotient of the number of females by the number of males enrolled in a given stage of education (primary, secondary, and tertiary). The Gender Parity Index in 2008 was 0.83 at primary level, 0.76 at secondary level and 0.85 at tertiary level. Millennium development target is 1.00 at primary level and 0.94 at secondary level in 2015. This seems to be non-achievable in the present conditions of political uncertainty (rising terror threat, “talibanisation”) and socio-economic conditions like corruption, rural and tribal customs, inferior status of women, male-dominated society, rising crime against women and domestic violence.

As far as success of third millennium goal in Pakistan is concerned, conditions for women empowerment are still unfavourable in the Pakistani society. There is dire need of taking concrete steps to improve this situation. It seems difficult to achieve the target of gender equality and women empowerment in Pakistan in the current scenario. Conditions of supporting environment (education and job opportunities for women, financial autonomy, freedom of mobility, political participation and women’s freedom of choosing the life partner) are also not encouraging. Quality and regularity of survey information and quality of

survey information fall in weak category in capacity for monitoring and reporting progress. Statistical analysis and statistics in policy making are encouraging and fall in fair category. Reporting and dissemination of information is also very weak (GOP, 2004).

Gender discrimination in Pakistan is also seen in education. One of the indicators to determine the condition of woman emancipation is the women literacy rate. The literacy ratio is the percentage of literate persons among the population of 10 years and above. There is considerable difference in the literacy level of male and female. The gender gap in literacy rate is wider in rural areas and it is considerably reduced in urban areas. The condition is miserable in Baluchistan, rural Sindh and NWFP where literacy ratios for women are 29.3, 20.3 and 32.3 respectively. It is only 22.5 in rural Baluchistan. All rural areas of Pakistan are victim of low female literacy (GOP, 2010).

In Pakistan, 65 percent of ever-married women ages 15-49 do not have any education at all. The proportion of uneducated women is much higher in rural areas (76%) as compared to urban areas (43%). Provincial variation in educational attainment follows the national pattern of development. Punjab province has the most educated women (40 percent), followed by Sindh (33 percent) whereas only 15 percent of Balochi women and 23 percent of women in NWFP have any education. There is improvement in education of women in Pakistan. In 1990-91 the overall proportion of uneducated women was 79 percent. Today, it is 65 percent (NIPS & MI, 2008). Higher education of women affects all determinants of fertility and Pakistan should have to make efforts for increasing literacy rate of women (Bhatti, Munir, & Afsar, 2003).

Labour force participation of women is another important indicator of seeing current scenario of women emancipation. Labour force participation is the percentage of economically active population to the total population aged 10 years and above. Women contribution in the labour force is very low. This can be judged from the fact that labour force participation for females is only 21.5 % in Pakistan. There is contrast seen in rural(27.6) and urban areas(10.3) (GOP, 2010). The proportion of rural women in labour force is almost twice as high as their urban counterpart. It may be due to participation of women in agriculture (Faizunnisa & Ikram, 2004). Labour force survey has underestimated women's work due to inappropriate definition of work and faulty data collection. One of the major reasons of the low rates of women work participation is the use of male enumerator to obtain information from male heads of

household on the productive activities of women in their homes. Gender inequality is widespread and women have limited option of choosing profession (Nasir, 2007) .

Mohiuddin (1989) found that female-headed household in urban area are living in poverty and women are getting their earning through informal sectors which in turn is responsible for the poor economy of female-headed households in Pakistan. Kazi and Sathar (1993) stated that female labour force participation rate (LFPR) remained stagnant in urban Pakistan despite the two decades of industrial growth and development. LFPR for urban women ranged between 3 and 5 percent for the period - 1971-1998.

Women empowerment is critical for reducing fertility and a successful demographic transition in developing countries like Pakistan. Pakistan is in second phase of demographic transition, in which the fertility rate begins to decrease. Total fertility rate in Pakistan is 3.5 children per woman which is not only high among South Asian countries but also in comparison to other Muslim countries (GOP, 2011). Reproductive health of women has strong relationship with decline in fertility rate. Women can get their reproductive rights through empowering themselves. So empowering women is essential for a successful demographic transition (Zeba A. Sathar, Mehmood, & Faizunnisa, 2003). Fertility rate in Pakistan is high due to illiteracy, role of religion, desire of son, lack of awareness of family planning methods, early marriages, poverty and low status of women. Lack of entertainment facilities for couples is also one of the reasons of high fertility. It results in unwanted pregnancies. Consecutive births with interval of one year have also unfavourable effects on the health of women. Women are considered machines to produce children.

Syed Mubasher Ali and Sultan (1999) investigated the effects of socio-cultural influences on women empowerment and evaluated its impact on the fertility behavior . They found that education attainment of both husband and wife brings significant differences in the fertility behavior irrespective of the set up of their residence in Pakistan. Media is also playing a role in changing reproductive attitude of Pakistani couples.

Pakistan is the 6<sup>th</sup> most populous country in the world and its population is increasing rapidly. Its urbanization rate is also high due to migration and natural increase. The problems of rapid population growth along with a rising urban population are worsened when women are not participating in the labour force. Women with higher education are an essential part of the labour force of the country. Literate women can play a significant role in the economic development of a country especially in Pakistan. Education, fertility and urbanization

affected the female labour force in Pakistan (Chaudhry & Jabeen, 2007). Women empowerment has effects on important development outcomes like health, education, and fertility behaviour and income level (Malhotra, Shuler, & Boender, 2002).

Women constitute 52 percent of the total population of Pakistan. Pakistan is the 9<sup>th</sup> largest country with respect of its size of its labour market in 2010. According to the labour force survey 2009-10, it has a labour force of 54.9 million people out of which only 12.5 million are women. Labour force participation rate for female is 21.5 % in Pakistan as a whole while contrast is seen between rural areas (27.6 %) and urban areas (10.3%) (GOP, 2011). Women participation in the labour force is low and they are also included in dependent population. Problems of rapid population growth along with non-participation of women can make the economic crisis worse in any country.

Pakistan's dependency ratio, as of 2010, was 69, compared to 56 for India and just 39 for China. China's dependency ratio will rise somewhat in coming decades as its population ages, but India's will decrease as its falling total fertility rate reduces the population growth rate. Meanwhile, Pakistan's total fertility rate remains high, and as long as it does so, its dependency ratio will remain high as well. A high fertility rate keeps women out of the labour market. If women are not expected to enter the labour market, there is less incentive for families to send them to school. Women with lower education tend to have more children. These demographic factors reinforce one another to create a vicious cycle (Dolan, 2011).

Poverty is rising due to exclusion of women in labour force in the expanding cities of Pakistan (Mahmood, 2007). Women's role is critical for economic development. Socio-economic development is incomplete without their participation and contribution. Women especially in cities lag behind due to lot of obstacles and hurdles in Pakistan. Pakistani women are trapped in the web of dependency and subordination due to their low social, economic and political status in society (Chaudhry & Jabeen, 2007). Development in Pakistan cannot be achieved if 52% population is deprived of their rights. The United Nations are putting emphasis on the emancipation of women, an assignment which is also included in its Millennium Development Goals.

The family structure is also important to the rights of women. In the nuclear family system, a woman has more freedom to decide in family matters whereas there are many restrictions on the rights of women in the joint family system. It is comparatively easy to convince a nuclear family couple to use family planning methods as compared to a couple who is living in a joint

family system. There is less privacy and freedom in the Pakistani joint family system in middle economic class and lower economic class (Mahmood & Ashraf, 2005). Few South Asian women have a say in choice of their husbands or the timing of their marriages. Women's autonomy in terms of decision making, mobility, freedom from threatening relations with husband, and access to and control over economic resources is highly constrained in Pakistan and in north and south of India (J.jeebhoy & Sathar, 2001).

Zeba Ayesha Sathar and Kazi (2000) found that Northern Punjabi women have lower economic autonomy but greater mobility and decision making authority than women in Southern Punjab. Economic class has a weak influence on women's autonomy in rural Punjab. Moreover, education has also a less influence on the autonomy of women in rural areas of Punjab.

K. A. Ali (2011) focused on how working-class women encounter and negotiate economic uncertainty, social vulnerability and sexually threatening public spaces in contemporary Karachi. Fear exists in the women during leaving their home and entering into public places .At the same time, these women experience social violence. Working women face many problems in using public transport during rush hours due to limited seats for women in the buses. Moreover, men stare their body parts and give bad comments. We are agreed with Ali (2011) because working women are facing problems like low wages, sexual violence and public transport issues in Faisalabad.

Work primarily associated with women is relatively invisible compared to that associated with men almost everywhere in the world , but in Pakistan , this invisibility is particularly evident , because it is institutionalized in the separation of sexes called pardah (Veil). Purdah (Veil) divides village life of Pakistan into two domains – a Public (male one) and a private (female one). Markets, roads and public transport are the examples of public domains and markets are men realms, purdah prevents almost all women from entering them. At the same time, Male traders can't enter into the courtyard of houses. The female domain is the four walls of courtyard but this does not mean they can't go outside.(Carpenter, 2001). Invisibility of the work of a woman in rural household due to the present of veil shows the lower status of a woman in Pakistani rural society as indicated by author and we also found restrictions on the mobility of women in our present research findings.

Household size, Family system, permission to leave alone and job before marriage have significant effects on women labour force participation in Pakistan (Chaudhry & Jabeen,

2007). Labour force participation rate was shamefully low as compared to other countries. Punjab is the largest province in terms of population and considered to be the most developed as compared to other provinces but labour force participation for females is also low in it. As far as rural Sindh (Province of Pakistan) is concerned, conditions are unfavourable for women. Feudal system is still prevalent and women are not allowed to get education. It is considered a shameful act that a woman does job in office or somewhere else. Women are also being deprived of their basic rights of health, education and politics. Even, they are not allowed to choose their life partner with their consent. Rural Punjab is also depicting more or less same situation. Tribal traditions in Baluchistan are also cause of the plights of women.

N. Qureshi and Shaikh (2006) found that women's low social status, deprivation of education and lack of control over their own lives and bodies have a negative impact on their health status and that of their families.

Malik and Courtney (2011) conducted a study on the impact of higher education on the empowerment of women in Pakistan. They found that participation in higher education enabled women to minimize the impact of discriminations against them. They recommended for developing future educational strategies to promote gender equality.

It is evident from the above-mentioned discussion that there is great resistance from the Pakistani society regarding gender equality and women empowerment. Recent threat to women empowerment rising "talibanisation" in the Northern areas of Pakistan and it is creating fear in the minds of people and imposing many restrictions on women. They are not allowed to get education, to go to male doctor and to go outside without veil. In such circumstances, it is very difficult to empower women in Pakistan particularly in the northern areas. There is need to see this issue and create an atmosphere in which women can get their rights.

#### ***1.2.2.6 Studies on Impact of family on youth***

Any change in the family affects its members but young persons are more affected due to their dependency on parents or elder brothers/sisters. Domestic violence and the separation of couple have bad impacts on the Pakistani youth. They may become victim of social evils like drug abuse and alienation due to depression and in extreme cases it results into suicide. Youth (aged 15 -24) constitutes 21.6 % of the total population of Pakistan in 2010 and it can contribute a lot in the economic development of Pakistan. Millennium Development goals

cannot be achieved without the participation of youth. Importance of family cannot be denied in order to solve the problems of youth at gross root level.

Durrant (1998) assessed the participation of youth in the work and schooling activities in Pakistan. He tried to find out household and community impacts on the youth.

G. M. Arif and Chaudhry (2008) examined youth employment in the context of demographic transition in Pakistan. They proved the benefits of demographic transition in terms of rising share of youth in the total population in the local market. They argued for youth employment policy for Pakistan to get benefit of ongoing demographic transition because Youth are a source of development and a high priority may be given for preparing them with appropriate skills needed for their adjustment in the labour market.

Yusuf (2008) discussed in detail the concept of radicalization in relation to youth in Pakistan and its implication for US policy in Pakistan.

Monique Hennink, Rana, and Iqbal (2005) explored experiences of Pakistani youth in gaining of knowledge of personal and sexual development. They found that young girls gained information from a limited number of sources within the home but young men accessed a wide variety of information sources outside home. Young people seemed to be confused and stressed on the information related to sex which they received from various scattered sources.

#### ***1.2.2.7 Studies on Fertility Transition***

Fertility rate was high in all developing countries in the 1950s. Since then, most of these countries experienced substantial decline in fertility and reached to replacement fertility. The records of fertility trends in the developing countries suggest that once fertility decline is underway it often continue without significant interruption until the replacement level of around two births per woman is reached (Bongaarts, 2008). The situation is reverse in Pakistan in which Pakistani society is resisting in declining fertility due to influence of islam, joint family , cultural traditions, early marriages and polygamy. Fertility in Pakistan has shown a stubborn resistance to change (Z. A. Sathar & Casterline, 1998).

Increase in population of Pakistan was the result of decreasing mortality due to advancement in medical science but at the same time fertility remained high. Early marriages and large families were also responsible for rapid population increase. Social customs and traditions favor early marriage and rearing large families. Low urbanization level of only 5% was also

responsible for large family size due to the fact because urban areas accept changes more rapidly than rural areas. Moreover, the bulk of present urban population was largely from the people migrated from rural areas so their attitudes did not differ very much from the people of rural areas (Patel, 1968).

According to the analysis of all censuses of data, fertility has declined in Pakistan. Proportion of married women has also declined in the last four decades due to the increasing age at marriage. Increasing poverty in Pakistan also resulted into the decline in fertility. The increased rate of unemployment and economic hardships may compel a man to leave home for job in cities or abroad, causing interruptions in the conjugal life (S. K. Qureshi and Arif (1999)cited in Ali (2001) ). Feeney and Alam (2003) traced the population growth of all census in Pakistan and pointed out that there was a decline in population growth since 1961. Infact, Population growth rate rose steadily from the early 1960s to the late 1980s and then decline in it began.

Pakistan showed a declining trend in crude birth rate from 1981(42.64) to 1998 (35.24) . Almost all births occur within wedlock in Pakistan so a change in the proportion married has implication for fertility. The proportion of married women of reproductive age (15-49) has continued to decline since 1961. It declined from 92.39% in 1961 to 69.96 % in 1998 (Syed Mubasher Ali & Hussain, 2001).

### **1.2.3 Studies on Urban Transition in Pakistan**

Kureishy (1958) discussed the increase of urban population in West –Pakistan (Present Pakistan) from 1901-1951 along with labour force. Total increase increase in urban population was 4.3 million from 1901 to 1951. Low percentage increase in urban population in 1911 was due to spread of epidemic - plague in the towns and as a result, large number of urban dwellers migrated temporarily to safer places in rural localities. He further found low rate of natural increase in urban areas as compared to rural areas. Elahi (1957) described the relationship of population growth and food supply in Pakistan and proved that higher density populated areas had carrying capacity to support population.

Kazi S. Ahmed, professor of Geography, made various studies on various aspects of urbanization in Pakistan during 1950s and 1960s (K. S. Ahmad, 1955a, 1955b, 1966, 1967a, 1967b, 1968, 1969). Hameed (1973) traced the process of urbanization in the upper Indus

plain. Phillips (1960) felt a social change in Pakistani society in early 1960s and discussed the role of urbanization in bringing social change in Pakistan.

Kureshy, professor of geography, made various researches on the urbanization of Pakistan during the time period 1958 to 1976. Age and sex composition of urban localities in Pakistan is worth mentioning in which he found higher sex ratio in the cities due to male migrants. He also related urbanization with civilian labour force and aridity in two different researches. He also made a study on the transport problem in the metropolitan centres of Pakistan. He also indicated housing problem in Pakistan (Kureshy, 1958; Kureshy, 1964, 1966, 1970, 1976).

Shirazi (2002) found that the rate of natural increase of total population has been lower than that of urban population in all districts of Pakistan, therefore, the higher average annual growth of urban population was the result rural to urban migration particularly in Punjab. His findings are based on the 1998 census.

Khan (2011) made the analysis of population growth and population structure in Punjab on the basis of 1981 census and 1998 census. Punjab is heavily populated and there is an immense pressure on the carrying capacity of land. Sex ratio revealed that there are more males than females but this gap is narrowing down gradually. Proportion of never married is on the rise and married population is on the decrease. Hafeez (2001) related rapid population growth with increasing poverty in Pakistan. Liberman (1982) related population growth with development of Pakistan.

Estimating level of urbanization is a very difficult task in the developing countries like Pakistan. Leading Pakistan demographers and social scientists raised the questions on the low urban population reported in the 1998 census and considered it to be inconsistent with trends and evidence based research. They argued that the urban population could not be less than 40 percent and could be up to 50 percent. Ali (2013) gave two other criteria other than on administrative unit for determining urbanization in Pakistan. The first criterion is related to population density and second is related to urban core and proximity. Both Ali (2013) and Arif (2013) tried to discuss definition of urbanization in the context of Pakistan and provided their estimate on the basis of population density, and urban core and proximity (Raza Ali, 2013; Altaf & Ahmed, 2013; G.M. Arif, 2013).

Kugelman (2013) discussed the causes and consequences of urbanization in Pakistan. According to his findings, migration is the most important cause of urbanization in Pakistan.

In Past decades , Indian Muslims and Afghan fled to Pakistani cities to escape war at their back home. Today , rural Pakistanis are entering cities to escape war , insecurity and natural disasters , and also to seek new livelihoods and better basic services. He also emphasized that the large natural increase in Pakistan's total population also explains the country's rising urban population. Urbanization strengthens the electoral process of urban-based political parties, empowers hard-line urban based actors, and increases the risk of political violence in cities. Industrial growth in the cities is a hope for the floundering economy of Pakistan but at the same time rising urbanization poses great challenges for job markets and service provider.

### ***1.2.3.1 Population concentration and Urbanization***

First attempt to see spatial pattern of population of Pakistan was made by K. S. Ahmad (1953). He made analysis on the basis of census on 1951. He argued that being an agricultural country, population distribution of Pakistan bears a close relationship to agriculture resources. His finding was true at that time because at that time urbanization rate was only 17.0 % and agricultural economy had a major contribution in the economy of Pakistan but at present , we found big population clusters around the big cities of Pakistan in our present analysis so we are confident in saying that rising urbanization has changed the distribution patterns of population in Pakistan through migration towards cities due to mechanization of farming , better economic and health facilities in cities and to escape war .The recent example to escape war is current military operation against Tehreek Taliban of Pakistan in North Waziristan in July 2014 and 0.9 millions have migrated to the cities for saving their lives.

Mahmood (2000) realized the importance of changing pattern of population distribution due to migration towards cities and presented his finding on the basis of 1998 census. He found major clusters along the five rivers of Punjab where major cities have been emerged. Karachi emerged as a largest city in Pakistan followed by Lahore and Faisalabad. Urbanization played a major role in shifting population concentration towards cities (Mahmood, 2000; Mahmood & Shirazi, 2002). Ahmad (1953) found that agricultural resources had close relationship with population distribution but I found a shifting trend in my current studies after 60 years of his work.

### *1.2.3.2 Studies on cities of Pakistan*

Muhajirs (migrants) constituted a great percentage of urban population federal capital of Karachi, Punjab and Sindh. These migrants replaced non-muslim population with muslim population and these areas were adjacent to Indian border. Migrant population was also high in towns of Baluchistan and NWFP (Khyber Pakhtwunkhawa) (K. S. Ahmad, 1955a, 1955b).

Industrial development in Karachi gave a great boost to its population growth. Number of migrants towards this city was more than any other city of Pakistan. Its population increased from 387,000 in 1941 to 1,068,000 in 1951, an increase of 161 percent. Whereas in the same decade, Lahore increased from 672,000 to 849,000 (26%) and Lyallpur (Old name of Faisalabad) increased from 70,000 to 179,000 (155%). Only sixteen percent of total population of Karachi was native while remaining was immigrants-migrant from other countries, particularly from India (66 %) and in migrants- migrant from various parts of Pakistan excluding karachi (18%). An analysis of the characteristics of the people of Karachi revealed that the extent to which the forces of urbanism associated with the introduction of industry have led to the modification of pre-industrial society. It also showed the problems in the culturally diverse city, population redistribution and ecological patterning (Z. A. Khan, 1971). We observed maximum population growth in Karachi and Faisalabad during this period and industrialization was common in these two largely distant cities and responsible for large influx of migration towards these two cities. Hasan (1956) made a study on refuge population and its settlement in urban and suburban areas of Karachi. Khan discussed the population growth, demographic trends and urban housing of Karachi in his various studies (Z. A. Khan, 1969, 1971, 1976). Rizvi (1965) discussed the housing and living condition of Karachi.

A. Ahmad (1974) traced the various phases of urban growth in the Multan city .Azimushan (1979) conducted a research on the urban growth strategy of Lahore. Bokhari, Professor of Geography discussed the urbanization of Faisalabad city in his various works like urban regions of Faisalabad, development of Lyallpur city and morphology of Lyallpur city (Bokhari, 1970, 1971, 1981) .

Gulzar (1978) analysed the population density and distribution of Lahore city .Mushtaq made three important studies on the Lahore city. In one research he pointed out major urban regions

of Lahore while in another study he discussed Lahore in time and space. He discussed also housing problems in urban areas (M.Mushtaq, 1967, 1977; Mushtaq, 1980).

Israr-ud-Din analyzed settlement patterns and houses types along with demographic aspects of population of Chitral district (Israr-ud-Din, 1966, 1971). Hassan (1973) conducted research work on the spatial pattern of population in Hyderabad (Sindh). Hassan (1973) and Gulzar (1978) confirmed that migration towards these cities was responsible for increasing population densities.

Bokhari conducted various researches on the urbanization of Faisalabad. His first articles described the morphology of city. He also discussed growth and development of Faisalabad. One of his articles dealt with urban regions of Faisalabad (Bokhari, 1970, 1971, 1981).

Mahmood (2007) found in his article titled “Rising social problems in the expanding cities of Pakistan: A case study of Faisalabad” that rising industrialization and urbanization are the causes of various crimes in Faisalabad.

Mazhar and Jamal (2009 ) made an effort to show the temporal residential growth of Faisalabad city. They indicated in their article that there are 140 private housing schemes in Faisalabad city whereas only 68 are approved while 49 are illegal. At the same time, there are 71 katchi abadies (Slums) and total number of dwellings in these slums is 23664. Major proportion of the land of city is under residential areas. It is a descriptive study and simply indicated number of residential colonies in different time periods. Rate of sprawl is of clustered and linear type and its North-eastern parts are mostly affected by it as compared to other regions of Faisalabad.

Anwar and Bhali (2012) explained the methodology of GIS and Remote sensing for urban population growth monitoring and land use classification and analysis was done on Faisalabad city. They found a very congested center city area of Faisalabad due to rapid population growth and it was the place of uncontrollable pollution and contaminated with industrial wastages. Expansion of cotton textile industry in Faisalabad without proper measure to control pollution is the major cause of contamination of water and air. We also found that urban dwellers had to bring water for drinking from the sites near canal because ground water is salty and contaminated. Development of residential areas is very close to industrial areas and intermingled with industrial development. It also lacked open spaces for playing and social purposes. Bridges on canal and railway crossing showed that the canal and

railway line acted as an obstacle in the development and extension of city to the south and the West.

#### **1.2.4 Conclusion**

The existing literature on urban transition and family structure reveals two things. The first thing is related to the non-availability of recent researches on the issue concerned and few researches were conducted in the past and there is a gap in the existing literature with current scenario in Pakistani society which has changed a lot due to rapid urban growth, talbanization, terrorism, westernization and modernization of family and influence of media. Second important thing is that impact of urban transition and family structure is modern concept in the context of Pakistan because Pakistan was an agricultural country in the Past. Urban transition is bringing changes in the family structure and family itself in Pakistan and this aspect is missed in the all existing literature and there was a dire need to conduct research on it and our current research work not only filled the gap in the existing literature but also gave a new dimension to the researchers in future.

## **2 Chapter 2- Study Area**

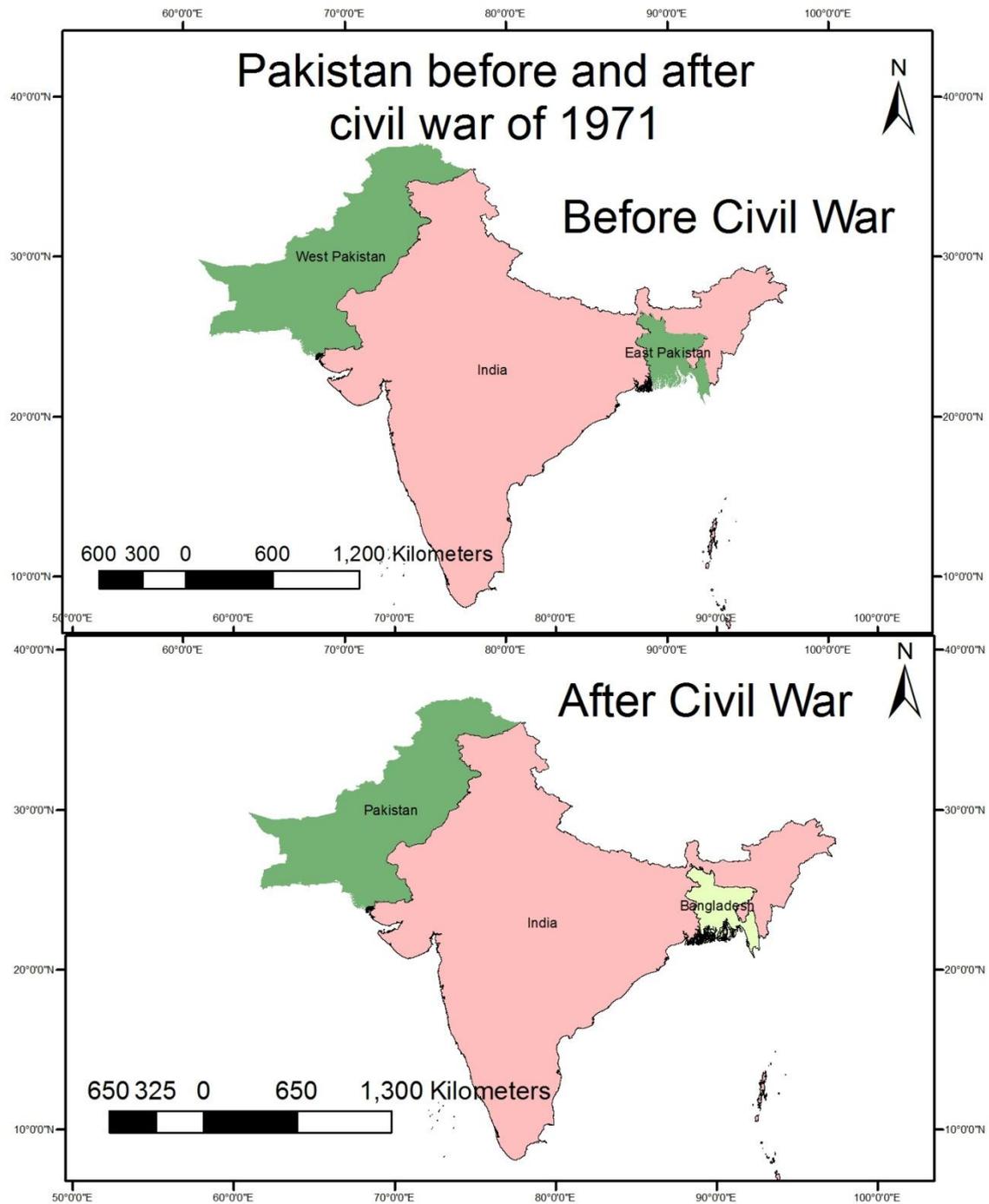
This chapter will bring light on the study area. It is necessary to know the geography, the demographic indicators relevant to the topic and the socio-economic conditions of that entity which we are going to study. It will also be a source for understanding the topic of research through seeing the ground realities that exist in the studied area for the foreign researchers, international organizations, policy makers and general readers. The study area is Pakistan. Pakistan has a variety of landscapes and cultures. Pakistan is a large country therefore it was not possible to extend the domain of our research to whole Pakistan so we selected Faisalabad city as a case study for in-depth analysis. It is necessary to see the issue in the general context as it existed in the whole Pakistan with great in-depth focus on the case study –Faisalabad.

### **2.1 Pakistan**

#### **2.1.1 Introduction**

The Islamic republic of Pakistan became independent from the British rule under the Indian Independence Act 1947 and appeared on the map of world on 14<sup>th</sup> August, 1947. It could be worth mentioning that the partition of the Indian empire was grounded on religious basis, creating this special - and unsustainable - pattern of East and West Pakistan. Islam was the majority religion being the only common feature to the two regions. At the time of the independence, it consisted of two separate territories, West Pakistan and East Pakistan. In March 1971, Civil war broke out between East Pakistan and West Pakistan, and it resulted into the creation of two separate countries: Pakistan, formerly West Pakistan and Bangladesh, which was formerly East Pakistan (Leong, 1984) (Figure 2.1).

**Figure 2.1 Separation of East Pakistan (Bangladesh) from Pakistan**



Realization : Kashif Mahmood and Jean Marc Zaninetti  
 Université d'Orléans , France 2014

### 2.1.2 Location and area

Pakistan is located in the continent of Asia between 23 degrees 30 minutes and 36 degrees 45 minutes latitude north and between the longitudes of 61 degrees and 75 degrees 31 minutes east (K. S. Ahmad, 1964).

It has shared border with India in the East, China in the North East, Afghanistan in the north-west, and Iran in the south-west while the Arabian Sea is located in the South. Pakistan has both Geo-strategic and Geo-political significance in the South Asia, the South East Asia, the central Asia and the Arabian Peninsula.

Its total area is 796096 square kilometer excluding the disputed territory of Kashmir. Baluchistan is the Largest Province in terms of area and its share is 43.6 % of the total area of Pakistan while its share in Population is only 5.2 % of the total population of Pakistan. Punjab, Sindh, Khyber PakhtunKhwa comprise 25.8 %, 17.7%, 9.4% of the total area of Pakistan respectively. Federally Administered Tribal Area (F.A.T.A) has only 3.4 % of the total area of Pakistan. Gilgit- Baltistan (formerly known as the Northern areas) is the fifth province that was created recently. Gilgit-Baltistan, Azad Kashmir and Jammu Kashmir form disputed territory of Kashmir ("Historical Perspective of Gilgit-Baltistan of Pakistan," 2014).

**Table 2.1 Distribution of area by administrated regions in Pakistan**

Administrated Regions	Area	
	Square Kilometer	% of the total area of Pakistan
Punjab	205344	25.8
Sindh	140914	17.7
Balochistan	347191	43.6
N.W.F.P	74521	9.4
F.A.T.A	27220	3.4
Islamabad (Capital)	906	0.1
Pakistan	796096	100

Source: Survey of Pakistan, Islamabad

### 2.1.3 Administrative Division

For administrative purpose, Pakistan is divided into Provinces. At present, Pakistan consists of five provinces – Punjab, Sindh, Baluchistan, Khyber PakhtwanKhawa, and Gilgit Baltistan. There is tribal area which is being administered through Islamabad and is known as Federally Administered Tribal Areas (F.A.T.A). (Figure 2.2)

Each Province is divided into divisions and each division is further divided into districts. Each district is further divided into Tehsils. The Federally Administered Tribal Area is, however, divided into agencies.

At present, Pakistan consists of 112 districts ("Survey of Pakistan ", 2013). At the time of 1981 census, there were only 64 districts. Districts number rose to the digit of 105 in 1998 census. 41 new districts were created during the inter-censal period 1981-98 (PCO, 2013). (Figure 2.3)

**Table 2.2 Administrative Units of Pakistan**

Province/Region	District
Pakistan	112
Punjab	34
Sindh	20
Khyber Pakhtunkhwa	24
Balochistan	26
FATA	7*
Islamabad	1

\* agency

Source: Population Census Organization of Pakistan

**Figure 2.2 Administrative Regions of Pakistan**

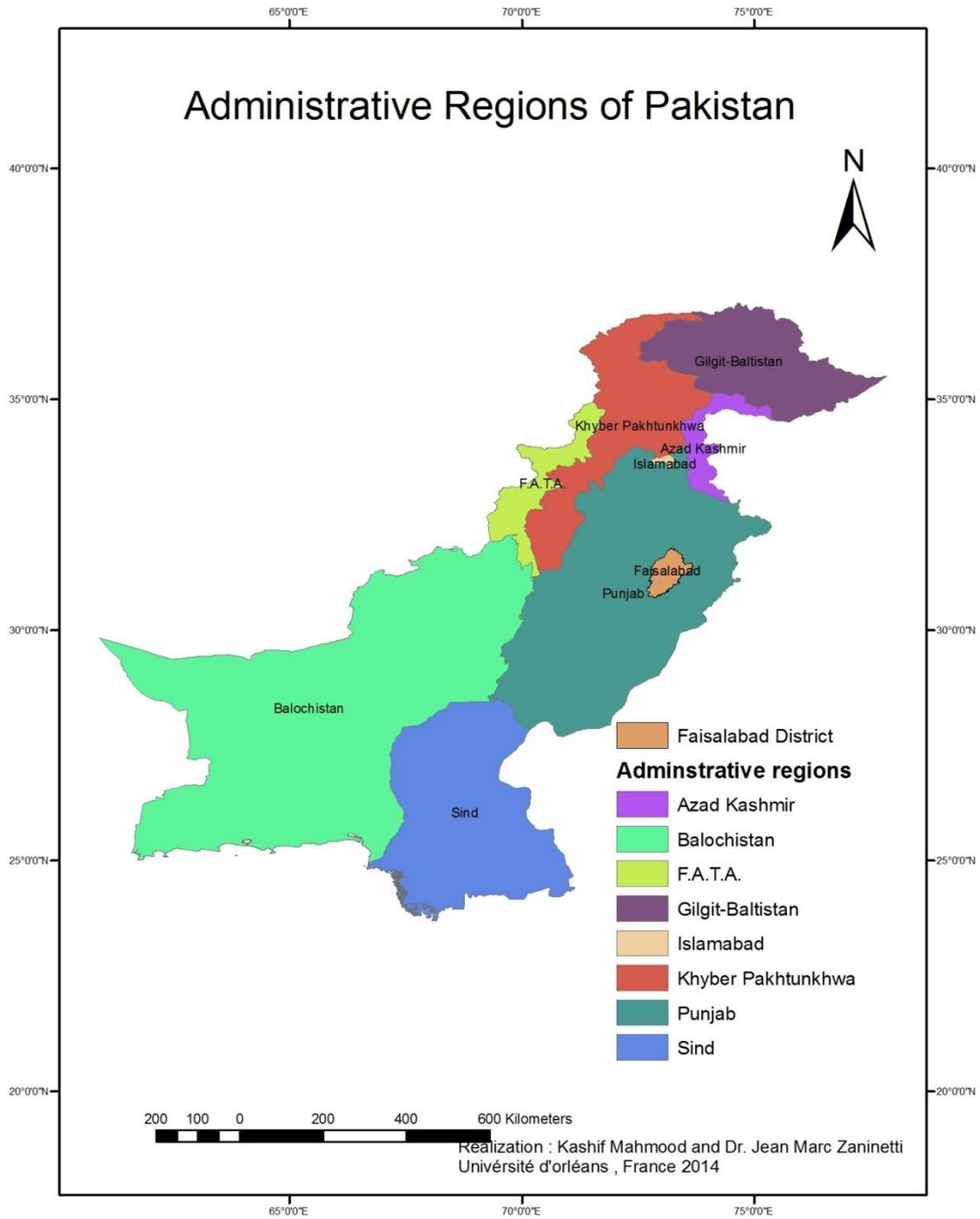
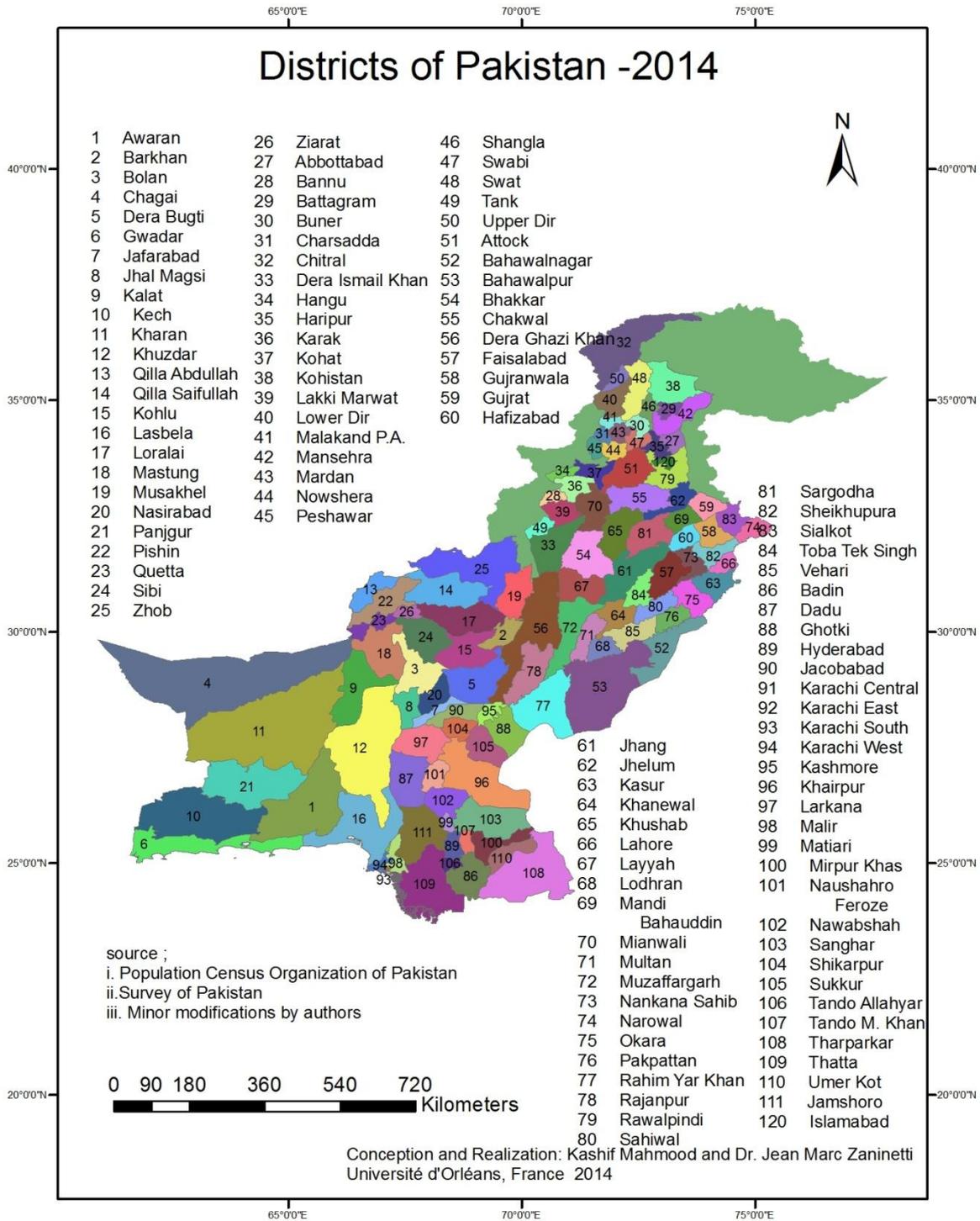


Figure 2.3 Districts of Pakistan



## **2.1.4 Population Growth in Pakistan**

### ***2.1.4.1 Introduction***

The reason for calling this part “Population Growth in Pakistan” rather than “Population change in Pakistan” is that there is no decline in population in the modern history of Pakistan. Rapid population growth is the most crucial problem in the Pakistani society and is a hindrance in the economic development of Pakistan.

Human populations differ from animal population in several important ways. Humans produce their food from agriculture since 12,000 years, and that provided the base for its regular population expansion from a few millions to the current 7 billion figure around the world (Zaninetti 2011, chapters I to III).

Population growth is the most fundamental demographic process with which all other demographic attributes are directly or indirectly associated. It determines population distribution, urbanization and composition of population (Gosh, 1985). Population Increase is the characteristic of the demographic transition and since the creation of the United Nations , World Population increased at the rhythm of +1.2% to 2% annually (Zaninetti, 2011).

Pakistan with population of 191 millions in 2013 became the sixth most populous country in the world, the fourth in Asia and the second in south Asia following India .Its Population will rise to 363 million in 2050 , it is only a model output , not a forecast and it will become the 5<sup>th</sup> most populous country after crossing Indonesia , . Its current rate of natural increase is 2.3% per year which is not only high in the regional context (India: 1.5, Bangladesh: 1.5, Srilanka: 1.2) but also high when compared with the less developed countries (1.4) and the least developed countries (2.5) (PRB, 2013).

### ***2.1.4.2 Measurement of Population Growth***

We discussed the absence and reliability of the latest population data in Pakistan in chapter 3- Methodology. We had to compute estimates some valuable indicators of population from the available secondary data in the absence of latest data.

We used following measures of population growth:

Average annual percentage increase

Apart from the absolute increase or decrease per annum, one of the most common measure of growth is the annual rate of increase. The average annual percentage increase is the most important indicator of measuring population growth. It is also called population growth and always expressed in percent (%). It was calculated from the following formula:

$$r = (\sqrt[t]{P_1/P} - 1) \times 100 \text{ (Clarke, 1972)}$$

Where,  $P_0$ = The population at the beginning of the period

$P_1$ = The population at the end of the period

$r$  = Rate of change

$t$  = number of years

Various new districts were created in Pakistan after 1998 census and no population data was available so above mentioned formula was used to calculate population growth of the newly created districts.

Percentage increase of population

Percentage increase of population is also an important indicator to measure population growth rate. It is more understandable than the average annual percentage increase for general audience.

The growth of population in terms of percentage is calculated by dividing the absolute change by population at an earlier date and multiplying it by hundred.(Chandna, 1986; Haupt & Kane, 2004; Haupt et al., 2011)

$$\text{Percentage increase in Population} = \frac{P_n - P_0}{P_0} \times 100$$

Where,  $P_0$ = the population at the beginning of the period

$P_n$ = the population at the end of the period

Above-mentioned percentage increase formula was used for seeing spatial patterns of population change in Pakistan at the district level.

### Population Estimation

Censuses were not conducted at regular intervals in Pakistan .The most recent census in Pakistan took place in 1998. At the start of our present research work in 2010, Government of Pakistan announced that census would be conducted in 2011 ("Census 2011 : Schedule of the census 2011 ", 2011) .We are still waiting the latest census data but unfortunately Government of Pakistan did not conduct census since 1998. The census in Pakistan is seemed to be a political process rather an administrative task of population census organization of Pakistan after seeing the recent statement of current prime minister of Pakistan –Mian Nawaz Shareef in which he stated that “we would conduct census soon and new election voter list would be based on that census” (Muhammad, 2013). I never understand the meaning of the word “soon” when it was uttered by the politicians of Pakistan as there is no time frame and it is only a statement for satisfying the poor depressed Pakistani nation.

As stated earlier that Government of Pakistan did not conduct census since 1998 and it seemed to be unrealistic to discuss issues on the basis of 1998 census data in 2014 particularly in a fast growing population context. We had to estimate current population of Pakistan due to unavailability of latest census data at district level. Population projections/estimates are based on the population growth rate. We assumed that current level of natural increase continued with a minor decline from 1998 to 2014.

Our estimates seemed to be correct due to following reasons:

We matched our estimations with population reference bureau and CIA World Fact Book in which estimated population of Pakistan was 191 million in 2013(PRB, 2013) and 196 million in July 2014 was projected by Central Intelligence agency USA (CIA, 2013). From 1981 to 1998, Average population growth rate of Pakistan was 2.61 % (GOP, 1998). In order to match our estimated population of Pakistan to PRB, UN projections and CIA, we had to decrease population growth rate 0.05 % for calculation of population estimates.

According to the latest 2013 Pakistan Demographic and Health Survey (PDHS) , Total fertility rate has not declined and it is still 3.8 , not 3.2 (NIPS & MI, 2013a; J. R. Weeks, 2014) .

Demographic Transition is a very slow process and we can't expect sudden and dramatic change in a country like Pakistan in which family institution is still very powerful with strong religious influence.

Due to the above-mentioned reasons, we were fully confident in using average population growth rate 1981-98 with a minor decline of 0.05 for the estimation of population in 2014 at the district level.

Estimated population in 2014 at the province and the district level was computed by using the following formula:

$$P_1 = P_0 \left( \frac{1+r}{100} \right)^T \quad (\text{GOB, 1995})$$

Where

$P_0$  = Population of base year

$P_1$  = Population of current year (Estimated Population Year)

$r$  = Growth rate

$T$  = Time Interval (Number of Years)

#### ***2.1.4.3 Population Growth at national level***

Bangladesh (formerly East Pakistan) was included in the territory of Pakistan till its separation in 1971. First census in 1951 reported population of 33.78 million for West Pakistan (Presently Pakistan) and 42.06 millions for East Pakistan and there was a difference of 8.32 million between East Pakistan and West Pakistan. According to the census of 1961, Population of Pakistan rose to 42.88 million and East Pakistan (Bangladesh) touched the figure of 50.85 million. Pakistan population growth rate was faster than its eastern part and difference was reduced to 7.87 million in 1961 as compared to the 8.32 million in 1951

census. Average annual population growth rate was 2.45 with percentage increase of 27.09 during the period 1951-61.

The third census was not conducted in 1971 and was postponed due to the political strife in East Pakistan. East Pakistan was separated from the West Pakistan and emerged as a sovereign state-Bangladesh. Third census was held in September 1972 and it reported a significance increase in population and it reached to 65.31 million from 42.88 million with average population growth of 3.65 and percentage increase of 52.31. This large growth of population aside from the natural growth and migration mainly from Bangladesh , was also result of over-enumeration by provinces for political representation and other financial gains from the federal government of Pakistan. Male dominated family system is the cause of high persistent fertility and is evident from our empirical findings in which we found large family size in the joint family system and 92.0 % household were headed by male.

Pakistan is lagging neighbor countries in the Demographic transition process, death rates are declining, but fertility rates are keeping higher than in neighbor countries except Afghanistan. We cannot deny the role of demographic transition during this period because Pakistan was able to reduce its death rate, predominantly infant mortality rate but Total fertility rate remained high due to many factors that are discussed in detail in the subsequent portion of this chapter. Crude death rate reduced to 11.73 in 1980 from 19.84 in 1960 while crude birth rate remained high during this period and a minor decline in Crude Birth Rate was seen from 44.212 (1960) to 42.396 (1980) . It resulted into rapid increase of population of Pakistan from 1960 to 1980. CBR remained above 40 till 1990 and gradual decline was observed from 39.55 in 1991 to 26.80 in 2013. Furthermore crude death rate (CDR) declined to 7.00 in 2013 from 11.73 in 1980 ("National Institute of Population Studies ", 2013; "Pakistan Economic survey 2012-13," 2013; *The World Bank*, 2013). Moreover, Male dominated society, joint family system and informal economy has played important role for the slow pace of demographic transition in Pakistan.

According to 1981 census, Population of Pakistan with a growth rate of 3.06 and percentage increase of only 29.01 touched the digit of 84.25 million. All efforts were made to curtail over-enumeration in the 1981 and low percentage increase balanced the 1972 over-enumeration. 1998 census showed the population of Pakistan rose to 130.58 million and the growth rate remained at 2.61% .Percentage increase was 54.98. At present, estimated population of Pakistan is 195.67 million (Table 2.3 & Figure 2.4).

The high rate of population growth was mainly due to the natural increase. The data used in compiling the vital statistics are not adequate, and under reported. (See chapter 3- Methodology) However, the presumption that the increased rate of growth rate was due to decline in the death rate and it is well established fact as a part of process of demographic transition in Pakistan .Improved medical facilities reduced the death rate, particularly infant mortality rate. A better average diet due to increased agricultural production with recent ameliorations in the socio-economic and health indicators is also responsible for decreasing death rate.

**Table 2.3 Population growth in Pakistan since independence**

<b>Census Year</b>	<b>Population (million)</b>	<b>Average Annual Growth rate (%)</b>	<b>Percentage Increase</b>
1951	33.78		
1961	42.88	2.45	27.09
1972	65.31	3.65	52.31
1981	84.25	3.06	29.01
1998	130.58	2.61	54.98
2014 *	195.67	2.0**	49.85

\*Estimated Population by authors

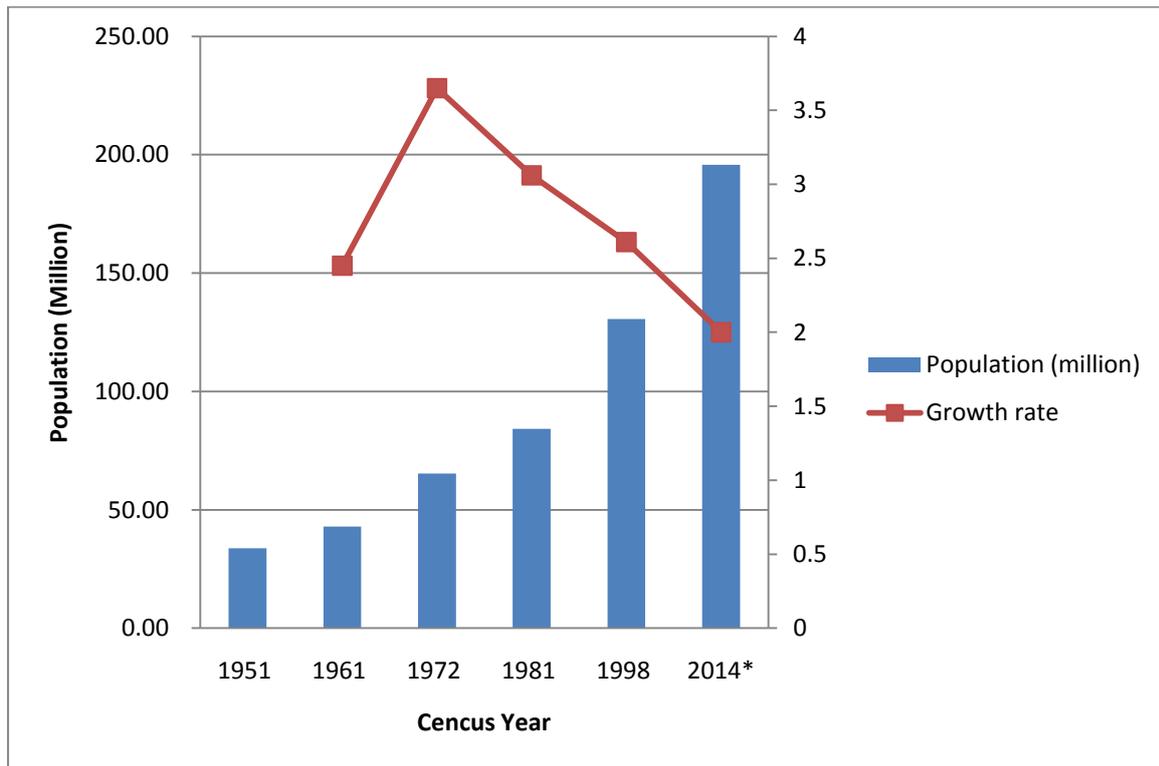
\*\* Estimated growth rate ("Pakistan Economic survey 2012-13," 2013)

Source: i) Population Census Organization.

ii) Pakistan Bureau of Statistics.

iii) Planning and Development Division.

iv) NIPS

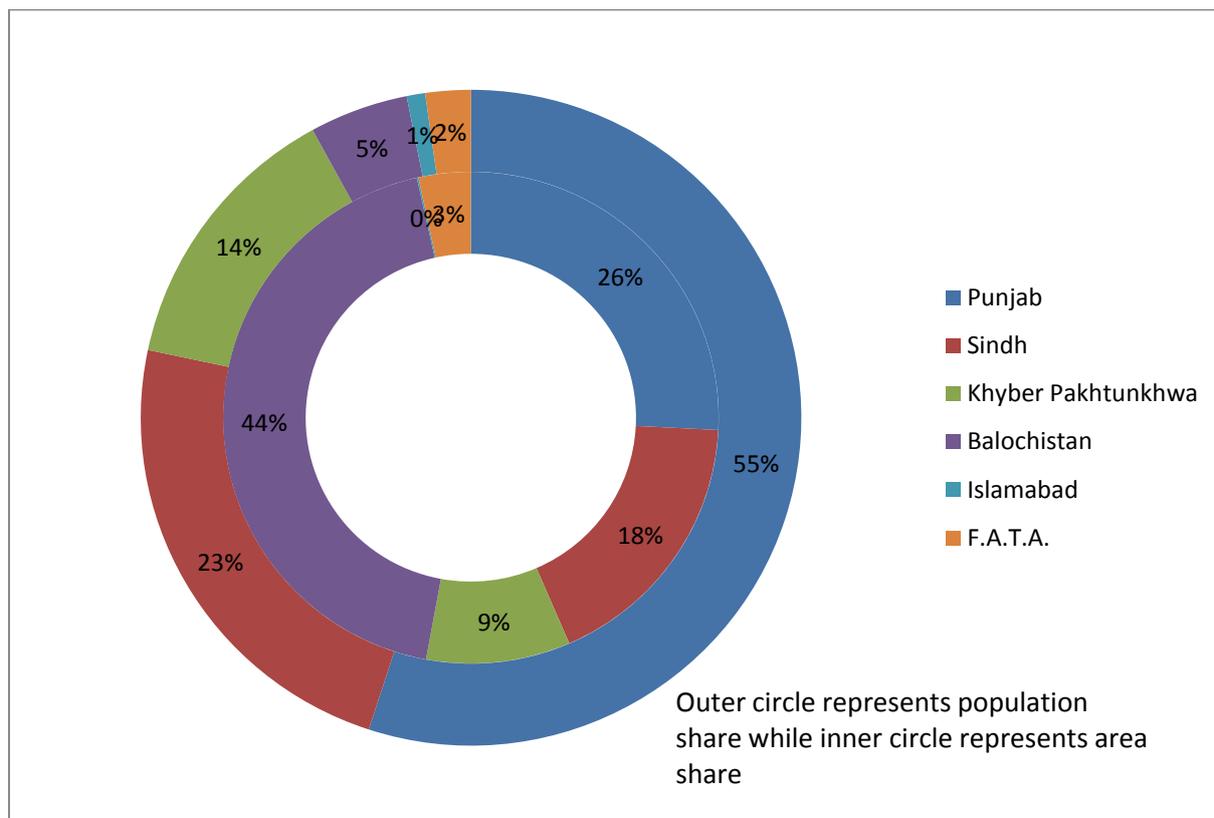
**Figure 2.4 Population Increase in Pakistan since 1951**

Source: Table 2.3

#### 2.1.4.4 Population Growth at Province Level

Punjab is located in the upper Indus plain, which offers fertile agricultural plains. Therefore, it has been the most populous region of Pakistan for a long time. Punjab is the leading province in terms of population size. It contains 55.6 % of the total population of Pakistan (Figure 2.5). Its estimated population is 107.75 million in 2014. According to 1998 census, its population was 72.585 million in 1998 as against 45.292 million in 1981 and 20.54 million in 1951. Population of Punjab increased 5 times since 1951 with population growth rate ranges from 2.20(1951) to 3.30 (1972 census after the partition of the east Pakistan from the west Pakistan) .Percentage increase was only 24 from 1951 to 1961 and it augmented to 47.50 in the period of 1961-72. It was result of migration mainly from East Pakistan and the effect of demographic transition. Migrant trends were towards fertile plains and major cities of Punjab – Lahore, Faisalabad, and Rawalpindi etc. Its population growth remained at 2.55 % during the period of 1981-98 while percentage increase was 50.30 (Table 2.4 & Figure 2.6).

**Figure 2.5 Diversity in Population Distribution by administrative regions of Pakistan-2014**



Source: Table 2.4

Balochistan is the smallest province in terms of population and it contains only 5% of the total population of Pakistan while constitutes 43.6% of the total area of Pakistan. (Please see 2.1.5.6: Causes of rapid population growth in Pakistan and 2.1.6: Population distribution in Pakistan for in-depth relevant discussion). Its estimated population is only 9.47 million in 2014 as compared to 107.75 million in Punjab. Balochistan is the most backward province in Pakistan. Balochistan has a record of both maximum population growth rate (7.10 in 1971-82, 5.10 in 1962-71) and minimum population growth rate 1.50 during 1951-61. It is quite interesting because percentage increase remained above 75% from 1961 to 1981. This unnatural growth rate points out to migrations and other explanations like high fertility, reducing death rate and over-enumeration. This rapid growth rate is the indication of the fact that Balochistan was at the start of just the first stage of demographic transition in which death rate begins to decline and births rate remain high, or it may be the result of migration from other cities and, this is evident from the unnatural number or it is the result of over

enumeration in the census. First fact of declining mortality seems to be acceptable and may have contribution for rapid population growth rate during this period. This fact was ignored by policy makers and they continued to blame Balochistan for over-enumeration in order to get maximum political/economic benefits from the federal government because Balochistan is the most deprived and the least developed region in Pakistan. The second factor regarding role of migration towards this barren land does not seem to be sound except, possibly, for international Pashto migrations to and from Afghanistan. Over-enumeration seems to worth because of the fact that it constitutes only small fraction of the total population of Pakistan and for getting political and economic benefits. At the same time, it showed minimum population growth rate 1.50 and percentage increase 16.69 during the period of 1951-61. It again verified explanation of demographic transition that it was passing through the pre-transition phase of demographic transition in which both birth rate and death rate are high and as a result there is low natural increase.

Sindh is the second largest province of Pakistan in terms of population size. Its estimated population is 45.64 million in 2014 and constitutes one fourth population of the total population of Pakistan. It has also shown maximum population growth rate of 4.60 % during period of 1961-72. Its population is increasing at a rapid pace of 2.77 and higher than Punjab. Its population augmented 7 times from 6 million (1951) to 45.65 (2014).

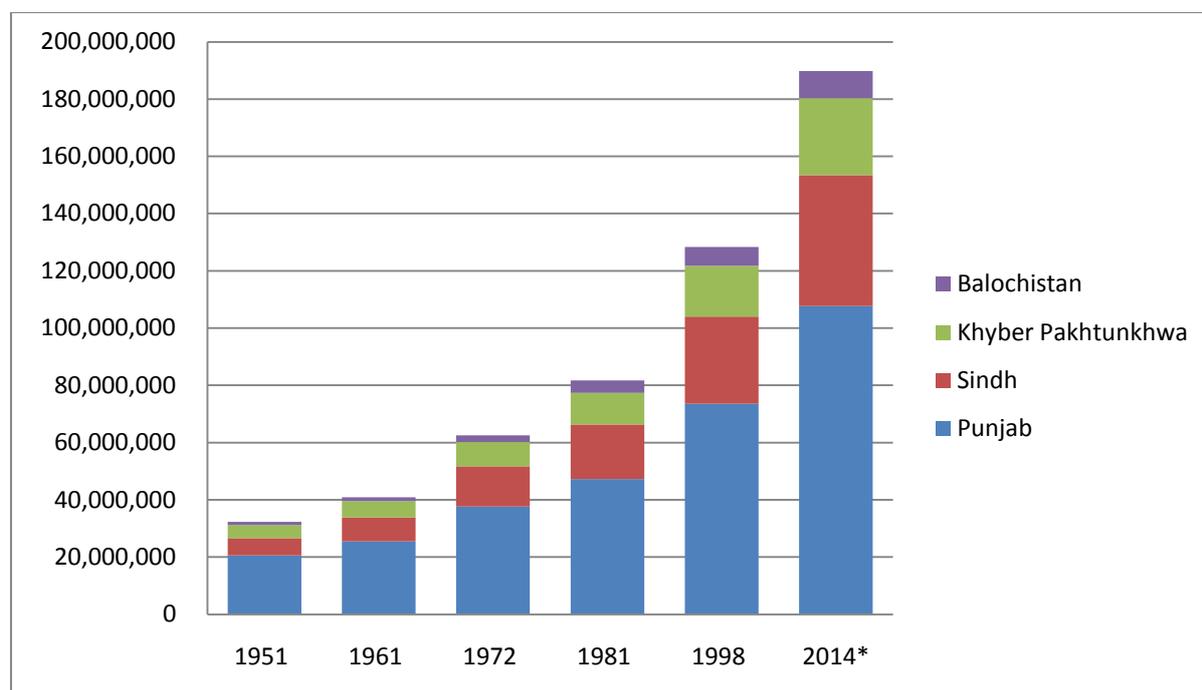
According to population size, Khyber Pakhtunkhwa is the third largest province of Pakistan with an estimated population of 26.88 million in 2014. Its population has increased 6 times since 1951. Its population growth is less fluctuating as compared to Balochistan and Sindh (Figure 2.8). This province comes under the direct influence of recent talbinazation in Pakistan from adjoining tribal areas-Waziristan and Afghanistan. Furthermore, men hide their spouses from the enumerators and results into under-enumeration of females.

**Table 2.4 Population Increase in Pakistan by Provinces since 1951**

	Population					
	1951	1961	1972	1981	1998	2014*
<b>Punjab</b>	20,540,762	25,463,974	37,607,423	47,292,441	73,621,290	107753479
Growth Rate		2.20	3.30	2.70	2.55	2.50
Percentage Increase		24.00	47.50	25.70	53.50	53.48
<b>Sindh</b>	6,047,748	8,367,065	14,155,909	19,028,666	30,439,893	45647126
Growth Rate		3.30	4.60	3.56	2.71	2.66
Percentage Increase		38.31	69.00	34.30	57.61	57.61
<b>Khyber Pakhtunkhwa</b>	4,556,545	5,730,991	8,388,551	11,061,328	17,743,645	26885608
Growth Rate		2.30	3.30	3.30	2.75	2.70
Percentage Increase		25.40	45.89	31.80	58.70	58.70
<b>Balochistan</b>	1,167,167	1,353,484	2,428,678	4,332,376	6,565,885	9471850
Growth Rate		1.50	5.10	7.10	2.42	2.37
Percentage Increase		16.69	75.61	78.10	50.29	50.30

\* Estimated Population by authors

Source: Population Census Organization of Pakistan

**Figure 2.6 Population change in Pakistan by provinces since 1951**

Source: Table 2.4

#### 2.1.4.5 Population Growth at District Level

We have observed a great disparity in population growth at province level in the previous section. It is quite interesting, valuable and logical to see spatial pattern of population growth at district level in Pakistan. Comparing two census data with spatial reference at district level is very difficult due to the creation of new districts during inter-censal time period and no organization has taken the responsibility to update the data and map of Pakistan so we updated newly created district boundaries. (Please, see also previous section measurement of population growth for further detail).

Figure 2.7 shows spatial patterns of population change in Pakistan from 1981 to 1998. It divides whole Pakistan into following categories on the basis of percentage increase:

#### Percentage increase above 100 %

Islamabad, Capital of Pakistan, showed the maximum percentage increase of 136.63 in population followed by Karachi West (130.74 %), Malir (128.46%) from Sindh and Qilla

Abdullah (109.97 %) from Balochistan during 1981-98. There was not a single district in Punjab and Khyber Pakhtwankhawa that showed percentage increase above 100%.

### **The Highest Percentage increase (75 % to 100%)**

Following regions showed the highest percentage increase in Population:

- i. Northern Balochistan ( Quetta , Pishin , Sibi , Nasirabad)
- ii. Northern districts of Khyber Pakhtwankhawa ( Peshawar and Buner)
- iii. Capital of Punjab province – Lahore.

### **Higher Percentage increase (65.6 % to 78.24%)**

Uniform spatial pattern of this category can be seen in the form of a long belt from the North Khyber Pakhtwankhawa to the south Punjab. Following regions are included :

- i. Southern Punjab ( Bahwalpur , Rahim Yar Khan , Rajanpur , and Muzaffargarh, Dera Ghazi Khan )
- ii. Two southern Sindh Districts ( Umer Kot , Tharparkar )
- iii. Two Northern Sindh Districts ( Larkana , Ghotki )
- iv. South East Balochistan district -Chagai
- v. Southern Balochistan Disrtict-Lasbela
- vi. Northen Balochistan District – Dera Bugti
- vii. A linear belt of districts( lower Dir , Swat , Malakand , Karak , Kohat , Hangu , Dera Ismail Khan ) from North to South in Khyber Pakhtawankhawa

### **Moderate Increase in Population (41 to 65 %)**

Following regions are included in this category:

- i. Whole northern Punjab except Chakwal , Khushab, Sargodha and Lahore
- ii. Whole Sindh excluding centre
- iii. South eastern and Southern Sindh Districts –Sukkur , Khair pur, Sanghar , Mir pur Khas , Thatta , Badin , Hyderabad , Jamshoro )
- iv. Western Sindh district bordering Balochistan – Dadu
- v. Kharan and Panjgur (South West) , Khuzdar (Bordering Sindh) , Gwadar (south ) from Balochistan

- vi. Upper Dir , Swabi , Mardan and Bannu from Khyber Pakhtawankhawa

**Lower Increase in Population (13.72 % to 41.22)**

Following regions are included in this category:

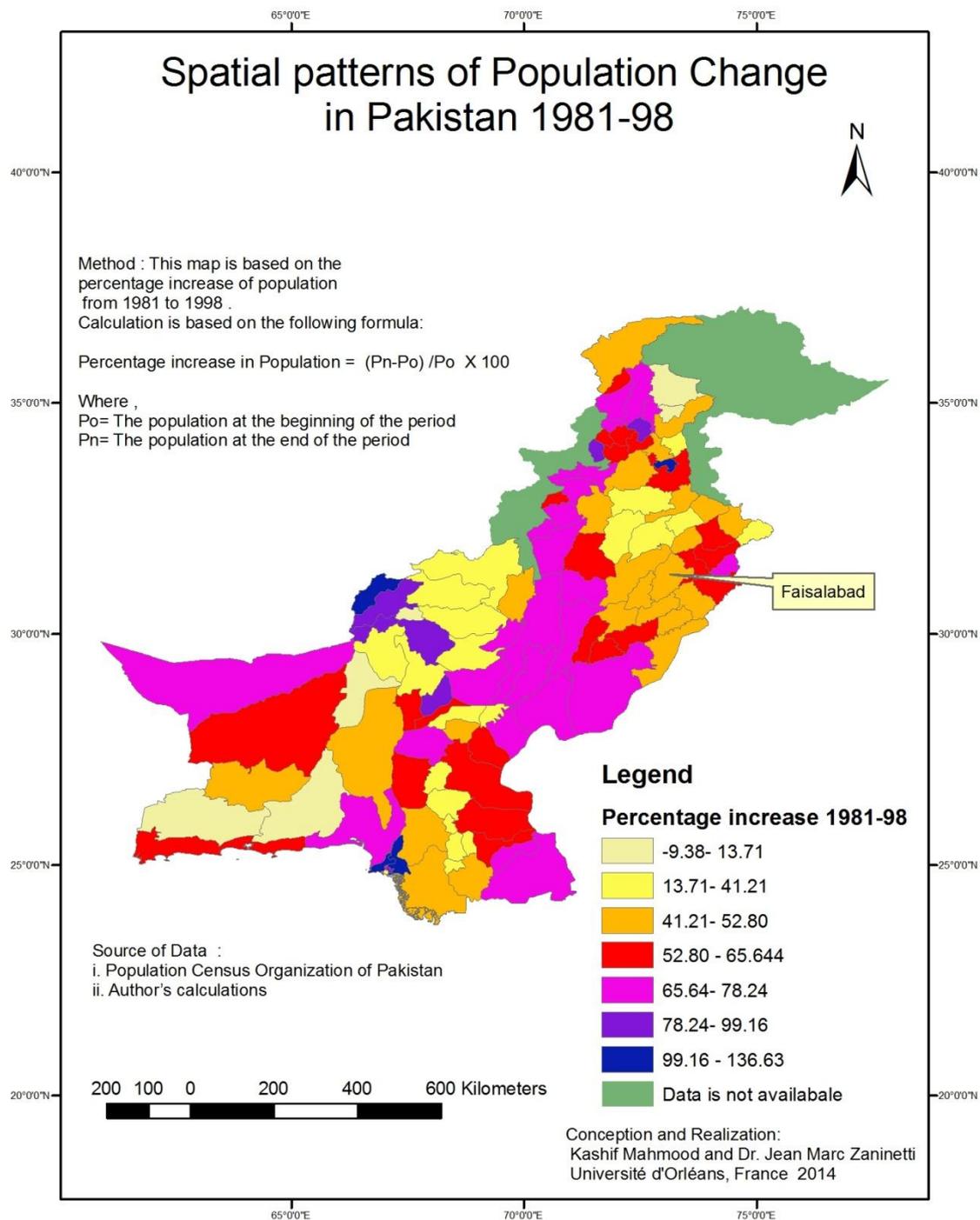
- i. North Eastern districts of Punjab bordering central Punjab – Chakwal , Khushab and Sargodha
- ii. Northern Balochistan
- iii. Central Sindh
- iv. Abbottabad from Khyber Pakhtawankhawa

**Lowest Increase in Population (Below 13 %)**

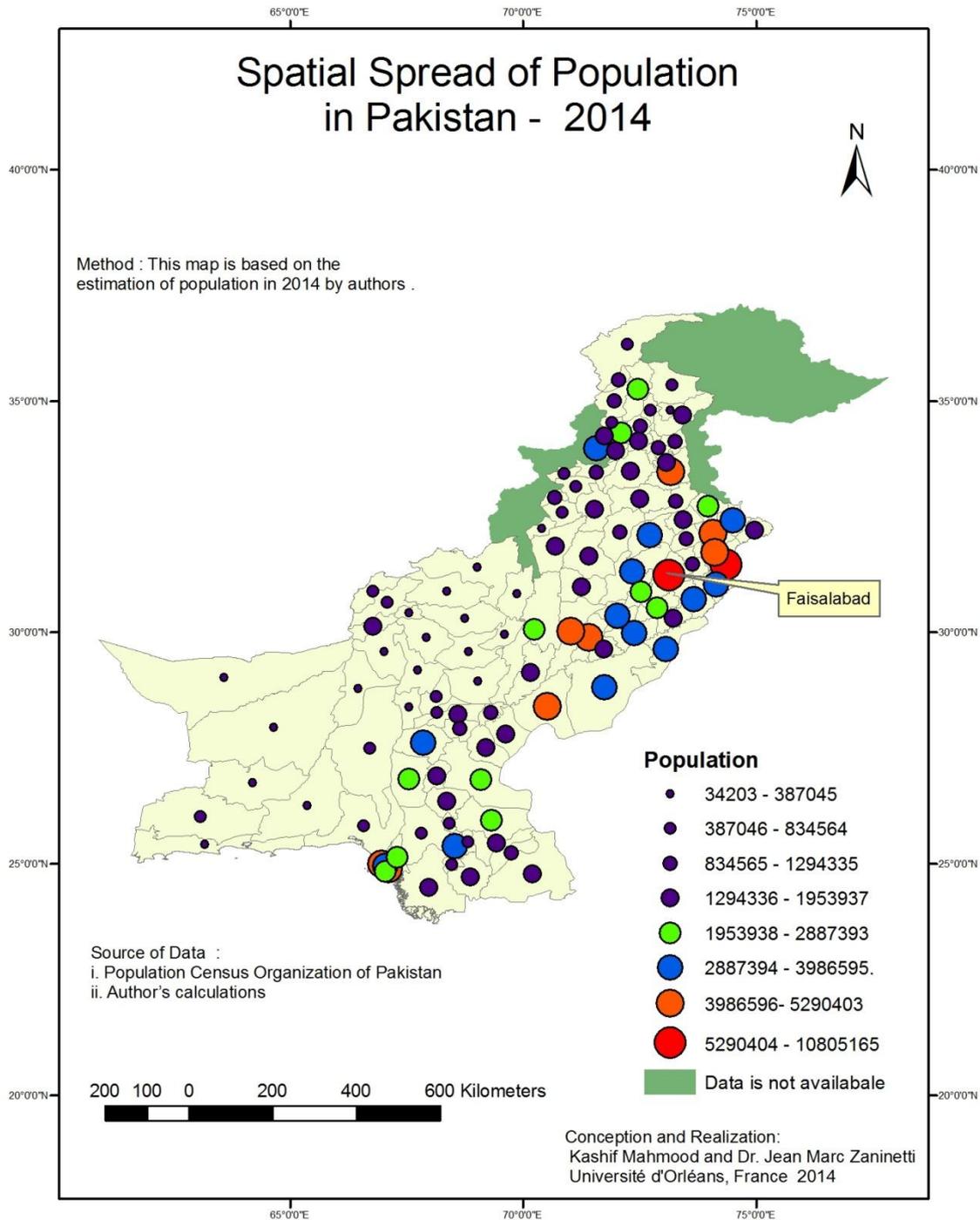
Following regions are included in this category:

- i. Ziarat , Kalat , Awaran and Kech from Balochistan
- ii. Kohistan and Batagram from Khyber Pakhtawankhawa . Batagram was the only district which showed negative percentage increase of -9.38 %.

**Figure 2.7 Spatial patterns of population change in Pakistan 1981-98**



**Figure 2.8 Spatial patterns of population change in Pakistan-2014**



#### ***2.1.4.6 Causes of Rapid Population Growth in Pakistan***

Researchers, demographers, geographers and policy makers gave various explanations of rapid population growth in Pakistan. Majority of them including myself ignored the ground realities and their explanations were based on the secondary data and self assumed perceptions (Elahi, 1957; Feeney & Alam, 2003; Hafeez, 2001; Amir Khan, 1982; Z. A. Khan, 1969, 1971; Mahmood & Shirazi, 2001). As focus of our research is on the family system relation with the urban transition therefore, we attempted to explain the causes of rapid population growth in the Pakistani society at the grass root levels – family. Our whole discussion is based on the ground realities which are taking place in the families and are responsible for rapid population growth. Family size determines household size and household size determines population size in a country. Our explanations are based on the micro level and revolve around the smallest unit – family in the Pakistani society, Furthermore; it would be more interesting, reliable and fruitful to see the causes of rapid population growth in a real without making it confusable through complicated statistics and unreliable available secondary data.

Following are the major causes of rapid population growth at family level:

1. Influence of Religion-Islam
2. Desire of son
3. Early marriages
4. Illiteracy
5. Uneducated mothers
6. Children as an asset for parent
7. Joint/Extended family system
8. Unwanted pregnancies
9. Poverty
10. Polygamy
11. First child birth as a proof of manhood/womanhood
12. Social status of women
13. Unawareness of family planning methods
14. Role of media for early puberty

15. Decreasing deaths of children with the improvement in health facilities

16. Rural families

#### **2.1.4.6.1 Influence of Religion**

Pakistan is an Islamic country and it was separated from India –a Hindu majority community on the basis of religion. A great proportion of Muslim families migrated from India and Hindus /Sikhs families migrated to India at the time of partition in 1947. 96.4 % population of the total population of Pakistan was muslim in 2013 (CIA, 2013; "National Institute of Population Studies ", 2013; PCO, 2013).

Religion Islam influences the individual life of Pakistanis and they seek guidance from the religion in all family affairs like marriage, divorce, remarriage, sex, inheritance, and chastity. They feel fears in breaking instructions of Islam. Ulemas (religious scholars) or in common language mulla/molvi (a person who provide sermon after Friday prayers) provide all religious information to a common man who always acts on the words of Ulemas.

Ulemas of Pakistan are preaching that family planning is Haram (sin) and forbidden in the Islam. Allah (God) has promised to feed every human being in the world and people should not kill their children (abortions and family planning) due to fear of food shortage .It is a great sin to use any family planning method. Religion is a major factor in increasing population in the Pakistani society. Ulemas in their sermons warn Muslims about the religious consequences of using family planning.

Education is playing an important role and people become aware of the fact that large family sizes are responsible for their miseries, plights and all economic problems, and as a consequence they are now being attracted towards family planning methods but a large proportion of population in Pakistan opposes limiting family size owing to the influence of religion.

According to our empirical findings, education has a significant role in determining family type in Faisalabad. One level increase in education level from illiterate to primary education (5 years of schooling ) , there is increase of approximately 16 times more

chance to live in a nuclear family. Family size in nuclear family is smaller as compared to joint family.

#### **2.1.4.6.2 Desire of Son**

Desire of son is an universal desire that is present in all couples but with a different intensity in each couple. Desire of son is responsible for a large family size in the Pakistani society. It is more intense in an uneducated and poor family couples because male members are the bread winners in families. Having son is also a symbol of prestige in such families. A couple who has more boys than girls is considered to be lucky and everyone tries his/her best to become lucky through taking as many chances as possible through consecutive births just like a lottery ticket , in case of birth of daughter , they console themselves through saying that they will get a son next time.

In some illiterate families, men torture women if they are unable to produce a son. They consider that woman is responsible for the birth of a daughter. Family size becomes larger and larger due to the desire of son. If first child is daughter, they take second attempt to get son, if second is also daughter, they take third attempts and they continue to produce children until they get a son. I have seen many families in Pakistan in which couples don't like large family size but the desire of son compelled them for large family size because the first five, six or seven children are daughters but most of them did not get a son and women reached at menopause.

Preference for male offspring to female offspring affects sex ratio of population (Christian, 1995). Parents give more value to son and desire of sons influence fertility in Indian society. Women with small number of sons or no son may continue child bearing (Chaudhuri, 2012). Demand for additional children depends on the presence of son in family in Pakistan. Desire of son influences family size in both rural and urban areas.

The desire for children was also examined in terms of existing children. Workers who have more sons were less likely to desire another child; however, those with 2 living daughters desired 1.63 more children and those with 1 of each desired .85 more children. Those with 2 sons desired .67 more children. The number of additional children desired decreases with the increasing number of living children, and with increasing numbers of living sons (Farooqui, 1990).

Various dramas and movies were made to highlight the issue of desire of son and the major objective for these productions is to create awareness of equality of son and daughter in the Pakistani society. Pakistani movie “Bol” (Speak) represented the true picture of male dominated Pakistani society in which main character is Hakeem (Quack of herbal medicines) who is a father of 12 daughters and one transgender. His quest for a male successor in family results into large family size. Film focused on the problems of a religious family in which using family planning is considered a sin and desire of son results into the births of 12 daughters and one transgender. One daughter stood against the cruelties of a father who represents the male dominated society. The film primarily objects to the idea of reproducing human beings into this world (blinded by faith and self-centered intentions) without taking complete responsibility of their existence. Concurrently, it also highlights the regressive attitude of a male-dominated society that offers no liberty to woman in choosing life-partner, refusing reproduction, gaining education or working independently ("Bol (film)," 2014; "Bol English Subtitles Trailer," 2011; Malani, 2011; Mansoor, 2011). This film received a lot of criticism from the Ulemas and conservatives people both at national and international level. (Maqsood, 2011; Naik, 2011)

#### **2.1.4.6.3 Early Marriages**

Early marriage means the marriage that is practiced at early ages like 18 or 19 and even below 16 years. We are not wrong to say it a child marriage in some cases. Early marriages were being practiced for many centuries in the Indian continent and it is still in practice in both Indian and Pakistani society. It resulted into the large family size in Pakistan. Females become victim of this tradition because in most cases it is a girl who is forced to do marriage before the legal age of marriage. Legal age of the marriage for male is 18 years and for female is 16 years in Pakistan but there is no authority to punish those who are involved in marrying their girls before the legal age. This tradition is being practiced in the rural Sindh, Balochistan, Khyber Pakhtunkhwa, and some parts of the rural Punjab. It is also common in illiterate urban families. This tradition exists in all parts of Pakistan but its intensity varies from regions to regions.

Sex outside marriage is a sin in the Pakistani society and the only way to fulfill sexual desire is through the marriage. Islam also instructs parents to do marriages of their children as early as possible for diminishing the immoral act of sex outside marriage

which is strictly forbidden in Islam and punishment is very severe in the religion. As a result, religious people do the marriages of their children at early ages. I also included this question in my questionnaire in order to know the present trend of early marriages in the Pakistani society. According to our empirical findings, Age at marriage is increasing in Faisalabad. (Please see the perceptions towards family –Chapter Results and discussions)

In illiterate families, People do not send their children specially daughters to the school. Girls do household work and parents consider them a burden. They try to marry their daughters as early as possible and in some cases below the legal age of marriage. They try to marry their daughter as soon as possible after puberty or in some cases before puberty for avoiding any misshapen like sex relation with another boy than the husband. Arranged marriage is the norm.

Condition is reversed in the educated families in which parents do not consider daughters as a burden. They provide all opportunities of education to their children without any gender discrimination. The First priority is education and career. Completing education and finding a job delay the age at marriage to 25 to 35 years but at the same time a illiterate couple starts their marriage at 17 or 18 years, has already 6 to 8 children but they are still young and motivated to add more children for increasing their family size.

Poverty is also cause of early marriages. Old rich men exploited the poverty of families and parents are ready to do marriage of their 16 /18 or even in some cases below 16, to an above 40 or 50 or even 60 year rich man. It is in the instinct of male to attract towards tender age females so older men are also responsible for continuation of this tradition in Pakistani society.

#### **2.1.4.6.4 Illiteracy**

There is no doubt in it that illiteracy is the root of all social evils in the Pakistani society. It is also responsible for large family size. Illiterate couples continue to produce children without seeing economic and health consequences on their family. They feel proud and consider themselves lucky in having large number of children especially more sons. They don't have awareness of family planning methods and Ulemas instigate them to avoid family planning in the mosque.

Literate couples can understand the economic and health consequences of a large family size so they limit their family size according to their resources and give a proper education along with other facilities to their children. Literate women have more knowledge of family planning methods than illiterate women (Rehman et al., 2002; Sultan, 2003). Women having higher education level had lower fertility in Pakistan (Zeba Ayesha Sathar, 1984).

Education appears to affect fertility because it delays marriage's age and thus reduces life-time exposure to the risk of childbearing. It also induces women to marry men with higher incomes (a phenomenon that either reduces the cost of fertility regulation or the demand for children). It leads women to become employed in the formal sector (leading to a reduction in the demand for children).. These findings lend support to increased investments in female education in urban Pakistan as a means of limiting the childbearing of married women. Although it is not clear if investment in female education would have the same effect in rural Pakistan, such action is important from a human and economic development perspective (Zeba A Sathar & Mason, 1993). It is an admitted fact that education has important role in controlling fertility in Pakistan (Basu, 2002; Diamond, Newby, & Varle, 1999; Jeffery & Basu, 1996).

#### **2.1.4.6.5 Children as an asset for parent**

One can consider the absence of any social security net provides some encouragement to large family size. Government of Pakistan does not take the responsibility of old population (above 60) and aged persons do not get any benefit. In the absence of such security, the only hope in the eye of parents is their children who can support them by proving all necessities of life (food, cloth, shelter, medicine) and only hope at older age when they don't have any resources. Parents consider their children as an asset and try their best to increase this asset through adding maximum children.

#### **2.1.4.6.6 Joint/Extended family system**

Joint family system is also responsible for increasing family size. Couples living in joint family system continue to produce children due to collective responsibility of whole family. It is necessary to explain collective responsibility for understanding the role of joint family in promoting large family size. Collective responsibility means that all couples earn money and

give that money to head of household who is usually father, elder brother, grandmother, after getting all revenue from couples, head of household dispenses on food, clothing, education, utilities without any discrimination and consideration of contribution of each couple so even less income couples get same benefits as high income couples in the family. They continue to produce children because the only way to get maximum benefit from the joint revenue of family through addition of children. Family structure has a relation with fertility and family structure is playing an important role in determining family size in Pakistan (Au, 1989; Donnan, 1997; M. S. Karim, 1974).

It is evident from our empirical finding that first level of education from illiterate to primary education (5 years of schooling has significant impact on the family type and literate people prefers to live in a nuclear family which in turn responsible for lower fertility due to small household size in Faisalabad. Upper economic class, migrant status and gender also have impact on the family type. Upper economic class couples tend to live in a nuclear family system and migrant population tends to live in a nuclear family system.

#### **2.1.4.6.7 Unwanted pregnancies**

Unmet needs of family planning methods result into a large numbers of unwanted pregnancies. Many Pakistani women don't like to be pregnant and want a considerable gap of 2 to 5 years in two consecutive births but unfortunately, due to absence of proper guidance, unawareness of family planning methods, hindrances in joint family system, male dominated society, they continue to become pregnant and deliver a child every year consecutively. In some cases, couple has completed their desire family size but unwanted pregnancies result into large family size.

#### **2.1.4.6.8 Poverty**

Economic status of a couple influences fertility. Poverty with its associated facts like illiteracy, bad health, and poor diet keep the birth rate high. Poor people tend to rely more on children work and to care less about their education, two reasons why they tend to have more children than middle class families. Middle class families are more Malthusians, they invest on children. In contrast, lower class families are "Proletarians", in Ancient Rome "The ones who produce offsprings". Children are their only asset.

Low economic class workers always need a labor in bulk for earning money so poor couples try to get as many children as they can produce with consecutive births at regular interval of one year.

For a poor couple, the only entertainment facility is to spend a night on the same bed and it results into pregnancy in the absence of proper measures to control births whereas for a rich couple, many alternatives are available with all measures to manage pregnancy.

#### **2.1.4.6.9 Polygamy**

Polygamy is allowed in Pakistan. Man is allowed to have four wives at a time in Islam and it is the indication of lower social status of women in Pakistan. As stated earlier that Pakistan is an Islamic state in which laws are made according to the teaching of Islam. A Pakistani man enjoys four wives at a time in accordance with state laws. Polygamy is also cause of rapid population growth. Trend towards monogamy is increasing in Pakistan due to empowerment of women but we cannot deny the presence of polygamy -fully supported by state laws.

In Khyber Pakhtun khawa , pathan population is involved in polygamy and a single pathan having more than one wife (up to four wives according to the instructions of Islam) can become the father of 30 to 40 children but in monogamous union it is impossible. Our empirical findings proved that polygamy is decreasing in the cities of Punjab due to economic and socio-cultural reasons.

#### **2.1.4.6.10 First child birth as a proof of manhood/womanhood**

First child is necessary to prove manhood or womanhood as early as possible after marriage in the Pakistani society otherwise people condemn the infertility of a couple. Women became victims of it. Husband puts whole responsibility of infertility on his wife. He does not allow her to go to a doctor for the medical treatments. Illiterate husbands do not like to be examined in the fertility clinic and even don't go for a simple semen examination. They prefer to take herbal medicines from non authorized practitioners. They consider it against the pride of men and continue to blame their wives for infertility.

#### **2.1.4.6.11 Social Status of women**

Social status of women plays an important role in controlling family size. Low status of women in Pakistani society results into large number of children per woman because husbands consider their wives as a machine to produce children. During my survey, one man responded that a woman is like a machine for producing children and we do not use this machine (woman) for producing children, it (woman) will be rusted like other iron machines which are not in use. In the presence of such mentality, it is difficult to reduce population growth without empowerment of women in Pakistan

#### **2.1.4.6.12 Unawareness of family planning methods**

Unawareness of family planning methods results into rapid population growth rate. There is no proper advertisement of family planning methods. Advertisements on Television are broadcasted in code words and people do not understand the purpose of product so instead of a couple, a child of five or six year demands that product from their parents and insists to get it daily after seeing the advertisement on TV.

Couples have many fears regarding family planning methods. They consider them unsafe and men feel hesitation in wearing condoms while women do not like to take pills. Men do not go for sterilization due the fear of losing erection after this procedure.

Purchasing a condom is the responsibility of husbands and it can never be expected from a woman to purchase condom in the Pakistani society. A large proportion of men feel shyness in demanding condom from the medical store. It is assumed that there is no need to wear condom in normal sexual relationship between husband and wife and men feel public shame in purchasing condom, eventually an untold link with adultery or sex with prostitute or even worse, homosexuality.

Now, condoms are available at grocery stores also but same shyness is present in men. Vendors place condoms in a hidden place and gives to purchaser in a non-seeing envelope that nobody can see with a mysterious body language and face expression. Women can get contraceptive pills from family health care centers.

#### **2.1.4.6.13 Role of media for early puberty**

Media has played its role for early puberty through providing access to porn movies through cable network and internet. There is no concept of parental control on TV and internet but in majority of the cases, children control password so their parents cannot see this porn material. Through seeing pornographic literature, early puberty is an obvious fact because brain secretes secondary sex hormone earlier as expected in normal puberty.

Porn users are mostly males due to their open and easy access to porn material through internet cafe, mini cinema and porn CDs shops. It results into the sexual violence against women. These porn addicted men rape girls and even minor girls become victim of their lustful desires.

#### **2.1.4.6.14 Decreasing deaths of children with the improvement in health facilities**

Although infant mortality rate (IMR) has declined with the improvement in the health facilities and proper vaccination yet a fear still persists in the minds of parents and they continue to produce maximum number of children for survival of family. They have seen that the couple of their grandparent's generation had given 20 births but only 2 or three children were survived so they continue to increase number of children and their all children survived due to better health facilities and proper vaccination. This fear results the large family size in Pakistan. This kind of generational time-lag is a common spread explanation of the 2 stages of the Demographic Transition.

#### **2.1.4.6.15 Rural families**

Rural areas in Pakistan are hubs of high natural increase in population due to illiteracy, unawareness of family planning methods and early marriages etc. In cities, there is also problem of space. Urban Couples can increase their family size according to the size or number of housing because housing is very expenses in the cities so their family size will never increase the limit. Rural couples can increase their family size as large as they desire and cannot be limited due to shortage of space as in the cities.

It is proved from our findings of field survey-4.2.3.3 , In urban areas, 61.5 % household had housing unit less than 100 square meter while in rural areas only 20.0 % households fell in this category. 75 % households possessed housing unit area less than 200 square meter whereas 84 % urban households constituted area less than 200 square meters. Housing units were small in urban areas as compared to rural areas due to lack of space and high price of land in cities.

#### ***2.1.4.7 Policy Recommendations***

It is surprising that Pakistan was one of the first countries to initiate population planning programme as an integral part of its development plan in 1960's , even after 50 years , country population growth rate is still higher as compared to other Less developing countries and neighboring countries in its region. There is dire need to control rapid population growth rate for the economic development of Pakistan and welfare of 195 millions Pakistanis. One of the major causes of failure of all programs to control population growth is that all researchers including policy makers recommended the steps which are not applicable and have no worth regarding the issue. All their recommendations were at macro level and could not be diffused to micro level of family where whole process of population growth is taking place. They did not focus on the institute of family and revolves around bad government policies, lack of budget, NGO involvement, and the importance of proper utilization of funds.

As we discussed earlier the causes of rapid population growth at micro level of family, now we made an effort to give following few concrete and practical recommendations on the ground realities of Pakistani society for controlling rapid population growth at gross root level:

- i. Religion has a great influence in the Pakistani society. We cannot convince a common man on anything that is against Islam. The only way which we can adopt is to convince ulemas and seek their support for reducing family size according to the resources in the teaching of Quran. Ulemas through their sermons in the mosques can convince masses to limit their family size. People will follow their religious leaders (ulemas) instead of a NGO worker or director.
- ii. There is no doubt in it that desire of son is a universal phenomenon with different intensities in all societies of the world. We cannot eliminate desire of son from the minds of Pakistani couples but we can decrease its intensity through educating a

couple that both son and daughters are equal according to the modern education and the religious teaching.

- iii. Education of a couple can bring a drastic reduction in the family size so there is need to provide education opportunities to all people of both genre and all age groups as well. In Pakistan, there is need to develop community centers for educating couples who don't have education. East Asian countries have made tremendous economic progress through mass education that has led to birth control, but education was highly valued in East Asian cultures prior to the Industrial revolution (Confucianism). In Muslim Pakistani culture, Education seems to be only for the rich due to inflation in Pakistan and poor people cannot afford the expenditures on the education of their children. Private schools with oxford syllabus and heavy tuition fees are for the children of rich families while government schools with traditional Urdu syllabus are for the children of poor families. There should be one education system for all. Mostly, people give more importance to education of a son and ignore daughter. There should not be gender discrimination in education.
- iv. There is no doubt in it that children are assets for poor parents. We cannot convince them that children are not an asset but we can give arguments e.g. Do you prefer to be the father of doctor, engineer, professor rather than the father of many cobblers, junkies and unemployed sons? His answer will be the first one and we can easily convince them that there is no need of large number of children but there is need of proper upbringing of one child instead of malnourished, uneducated and unskilled many children.
- v. We cannot impose nuclear family system with force for controlling population growth but we can educate them that there is need to reduce family size for proper upbringing of children.
- vi. It is very difficult for us to rise the economic status of a couple to get desired result of low population growth rate but we can convince poor couples that their economic conditions will ameliorate through smaller family size. Small family size can reduce the expenditures of couple and increase the saving of household.
- vii. We can't ban polygamy due to the influence of religion but can convince them for monogamy through discussing disadvantages of polygamy like quarrels among wives, depressions, economic problem, difficult to handle children etc. Polygamy is expensive and tends to rarefy in Muslim societies.

- viii. Creating awareness in the society that producing a child is not a sign of manhood or womanhood.
- ix. Consecutive births with one to two years intervals have bad impacts on the health of mother and there is need to warn the couples about all health consequence.
- x. Removing hesitations and misconceptions in both men and women regarding family planning method is necessary to achieve the target.
- xi. We cannot delay puberty but we can delay marriages through convincing parents
- xii. Remove the fear of infant deaths in the previous generation from the present generation parents so they should only produce required number of children as they desired.

## **2.1.5 Population Distribution in Pakistan**

### ***2.1.5.1 Introduction***

It is necessary to see the concentration of population for understanding the inequality between societies and continents before analyzing the demographic transition process that covers the whole world (Zaninetti, 2011). Population in Pakistan is unevenly distributed. It raises the demand of food and other resources in the cities and a cause of inflation (Mahmood & Shirazi, 2002). Unevenness distribution of population in Pakistan is evident from the fact that the largest province in terms of area –Balochistan (43.6% of the total area of Pakistan) contains only 5 % of the total population of Pakistan. Maximum concentration of population is seen in Punjab where 55.6 % of the total population is living while it constitutes only 25.8 % of the total area of Pakistan. Diversity in population distribution has risen to dramatic contrast situation in 2014 in which Karachi central (Sindh) has a population density of 53307 persons per square kilometer while in Awaran district (Balochistan), population density is only 4.23 persons per square kilometer.

The distribution of population of a country is governed mainly by agricultural, commercial and industrial possibilities, and resources. In an agricultural country like Pakistan, it bears a close relation to the agricultural resources (K. S. Ahmad, 1953).At present, situation has changed a little bit. There is no doubt in it that agriculture still has a influence in the population distribution but the mechanization of agriculture has produced surplus labour in the rural areas and they are continuously moving to the cities for jobs. The largest

concentration of population is seen in the major cities like Karachi (Sea port) , Lahore ( a big city in upper Punjab plain ) , Faisalabad ( Emerged as an industrial city ) Peshawar (The largest city in Khyber Pakhtawankawa ) and Quetta (The largest city in Balochistan).

#### ***2.1.5.2 Measures of Population Distribution***

Many attempts have been made to simplify the complexities of population distributions; to extract the bones by statistical analyses. As compared with most linear distributions , Areal distributions are less easy to analyze because of the irregular size of administrative units , the mobility of population and real variations in the physical environment (Clarke, 1972).

Various measures of population distribution are available but the most common and widely used measure of population distribution is population density.

Without going to long debate on the pros and cons of measures, it is necessary to remain specific relevant to our current objective.

The term population density refers to the number of persons per square kilometer. In other words, population indicates the man-land ration (Gosh, 1985).

We used the following formula to find spatial patterns of population in Pakistan:

$$\text{Population Density} = \text{Total Population} / \text{Area}$$

As stated earlier that population density is the most frequent used measure of population distribution. We used it due to the following reasons:

- The census Data is available for total population and total area at district level so we can easily calculated population density.
- It is impossible to get accurate data for calculating others forms of measures of population distribution- physiologic density , agricultural density , economic density , critical density and central distribution of population distribution (Mean Center, The Median Center , The Median Point )
- It can provide a clear picture of spatial spread of population at district level in Pakistan
- It can easily identify the sparsely populated and highly populated regions in Pakistan.

### 2.1.5.3 Distribution of Population at national level and at Province level

Average population density of Pakistan is 246 persons/square kilometer in comparison with the world average of 50 persons /square kilometer and the contrasted provincial averages.

According to the census of 1998, Punjab was the most populous province with population density of 353.5 persons per sq.km. , followed by Khyber Pakhtankhwa (235.6 persons per sq.km.), and Sindh (212.8 persons per sq.km.). Balochistan was the least populous province and its population density was only 18.8 persons per sq.km.

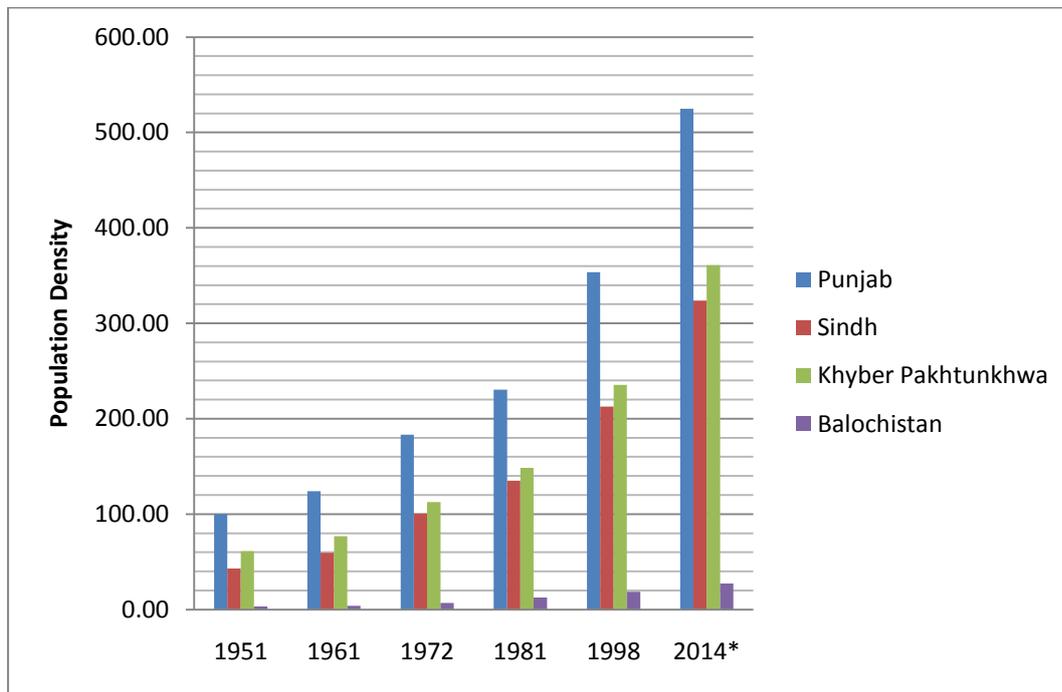
In 2014, population density in Punjab touched the figure of 524.75 followed by Khyber Pakhtunkhwa (360.78 persons per sq.km), Sindh (323.94 persons per sq.km) and Balochistan (27.28 persons per sq.km). Gradual increase in population density was seen in all the provinces of Pakistan since 1951. (Table 2.5 and Figure 2.9)

**Table 2.5 Population Distribution at province level since 1951**

	Population Density (persons per sq.km.)					
	1951	1961	1972	1981	1998	2014*
Punjab	100.03	124.01	183.14	230.31	353.48	524.75
Sindh	42.92	59.38	100.46	135.04	212.83	323.94
Khyber Pakhtunkhwa	61.14	76.90	112.57	148.43	235.57	360.78
Balochistan	3.36	3.90	7.00	12.48	18.75	27.28
Islamabad	105.89	129.88	262.20	375.59	881.99	1954.83
F.A.T.A.	48.93	67.86	91.52	80.77	115.28	159.75
<b>Pakistan</b>	42.38	53.86	82.04	105.83	164.03	245.79

Source : Population Census Organization of Pakistan

\*Estimated

**Figure 2.9 Population Distribution at province level since 1951**

Source: Table 2.5

\*Estimated

#### 2.1.5.4 Population Distribution at District Level

We made an attempt to classify Pakistan into the most populated regions to the least populated regions on the basis of 2014 estimated population densities (by authors) however maps showing spatial patterns of population distribution in 1998 on the basis of census and spatial patterns of population distribution in 2030 on the bases of projections (by authors) are also included for the comparison and to see how highly densely populated areas are expanding with passage of time. For making the distribution maps comparable at different time interval, we developed the key with same values.

The most important feature of the Population distribution of Pakistan is its unevenness. Population density ranges from 4.2 persons per square kilometer in Awaran district (Balochistan) to 53307.1 persons per square kilometer in Karachi central district (Sindh). There is a vast difference in the population density within a same country and various physiographic factors (Topography , Soil , Availability of water , Climate ) and socio-

economic factors ( Industry , Job opportunity , Law and order situation , political stability , infrastructure , Health and Education facilities ) are responsible for uneven distribution of population .

It is evident from the figure 2.10 to figure 2.15 that population is unevenly distributed in Pakistan.

Following are the salient features of the Population distribution in Pakistan:

1. High concentration of Population is present along the rivers- Indus, Jhelum, Ravi, Sutlej and Chenab.
2. Upper Indus Plain and Lower Indus Plain are the zones of the major concentration of Population. Karachi, Lahore, Faisalabad and Rawalpindi are the major cities in this belt. Indus civilization, one of the oldest civilizations in the world, developed in this region.
3. Moderately populated areas are present along the high concentration population belts, Quetta (Balochistan) and some northern districts of Khyber Pakhtunkhwa.
4. Low density areas desert areas of Thar, Tharparkar and whole Balochistan except Quetta, Pishin and Qilla Abdullah .

#### **Highly Densely populated regions (Density of 2000 to 53307) [Mostly urban districts]**

Karachi central has a density of 53307 persons per sq.km. , followed by Karachi East (34896.7 persons per sq.km) , Karachi South (19390 persons per sq.km ) , Lahore (6097 persons per sq.km ) Karachi west (4940 persons per sq.km) and Peshawar valley(2809 persons per sq.km) . Karachi is a sea port and people from all parts of Pakistan particularly from the Sindh migrated to Karachi for jobs. During the partition in 1947, there was also a large influx of migration to Karachi. Karachi remained capital of Pakistan till 1967.

#### **Densely population regions (Density of 1000 to 2000) [Urban districts with rural outskirts]**

Upper Indus Plain districts of Punjab (Islamabad (1981.9 persons per sq.km) ,Gujranwala (1460.6 persons per sq.km) , Faisalabad (1367.8 persons per sq.km) , Sialkot (1321.8 persons per sq.km) , Multan (1279.2 persons per sq.km) , ) and northern districts of Khyber Pakhtankhawa ( Charsadda(1604.2 persons per sq.km) , Mardan(1426.7 persons per sq.km) and Swabi (1053 persons per sq.km) ) are included in this category.

### **Above the national average (300 to 1000)**

This is high density according to world standards, moderate in South-Eastern Asian context.

These regions are present in Upper Indus Plains (Rawalpindi, Gujrat, Kasur, Sheikhupura, Sahiwal, Okara, Narowal, Vehari, Pakpattan, Toba Tek Singh, Khanewal, Jhang, Layyah, Rahim Yar Khan, Nankana Sahib, Hafizabad, Bahawalnagar, Lodhran, Sargodha, Jhelum, Abbottabad) and Lower Indus Plain (Malir, Hyderabad, Mandi Bahauddin, Haripur, Muzaffargarh, Shikarpur, Naushahro Feroze, Mirpur Khas, Matiari, Larkana, Jacobabad, Kashmore, Tando M. Khan, Nawabshah). They adjoin the populated regions along Indus river.

Kohat, Mansehra, Shangla, Swat, Buner, Hangu, Bannu, Malakand P.A., Nowshera, and Lower Dir from Khyber Pakhtawankhawa and Quetta from Balochistan is included in this category.

### **Moderately Populated Regions (100 to 300)**

These regions include district Pishin (in Northern Balochistan) and Nasirabad (bordering Sindh) in Balochistan, Khairpur, Dadu, and Umerkot from Sindh, Bahawalpur and Rajanpur from the Southern Punjab, Khushab and Bhakar from North West Punjab, Kohistan and Dera Ismail Khan from Khyber Pakhtawankhawa.

### **The least crowded regions (Population density below 100)**

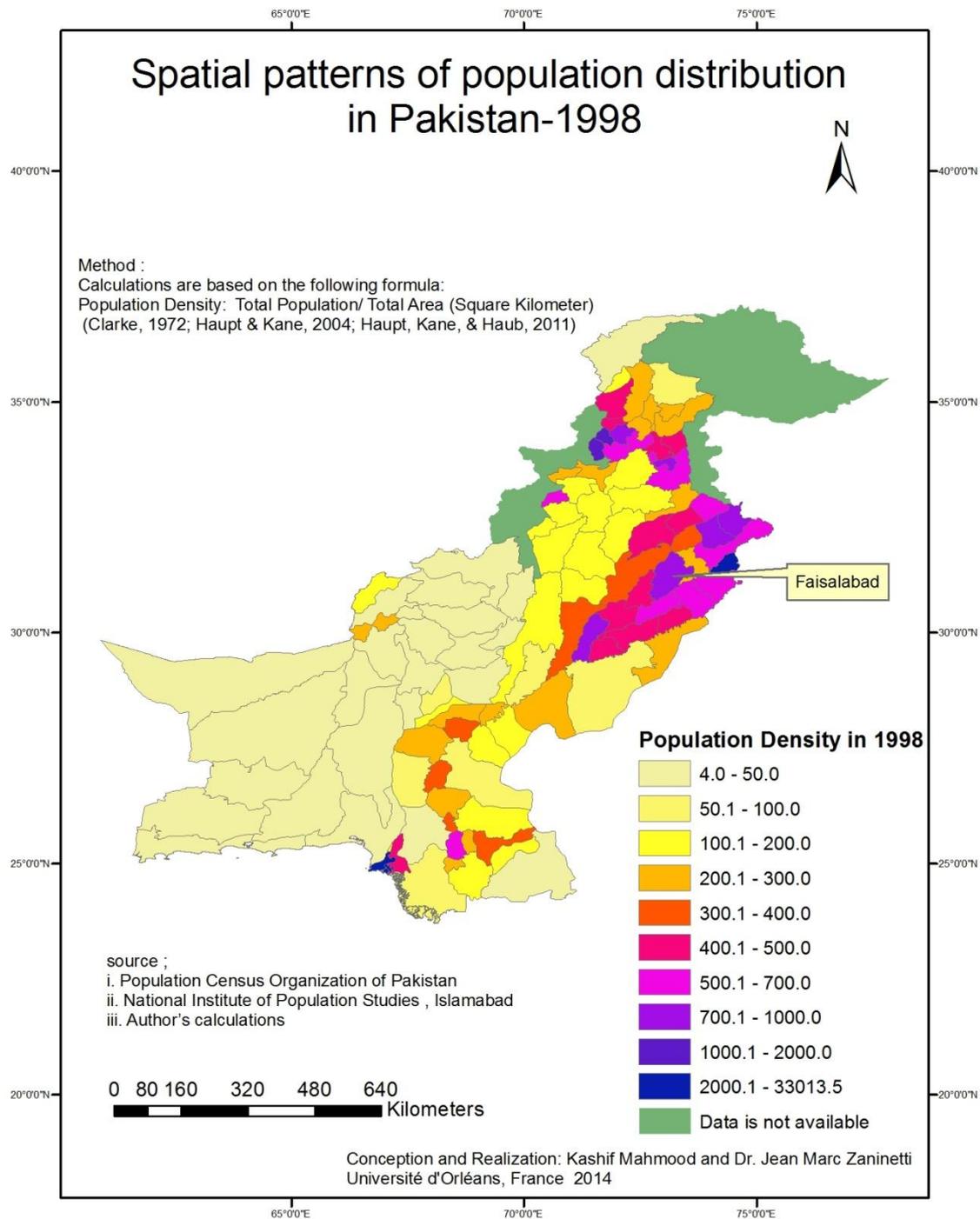
Whole Balochistan except Quetta (densely populated area) and Nasirabad (sparsely populated area), Tharparkar (desert), Thatta and Jamshoro from the southern Sindh, Chitral and Kohistan from Khyber Pakhtawankhawa are included in this category.

### **Changing spatial patterns of Population Distribution from 1998 to 2030**

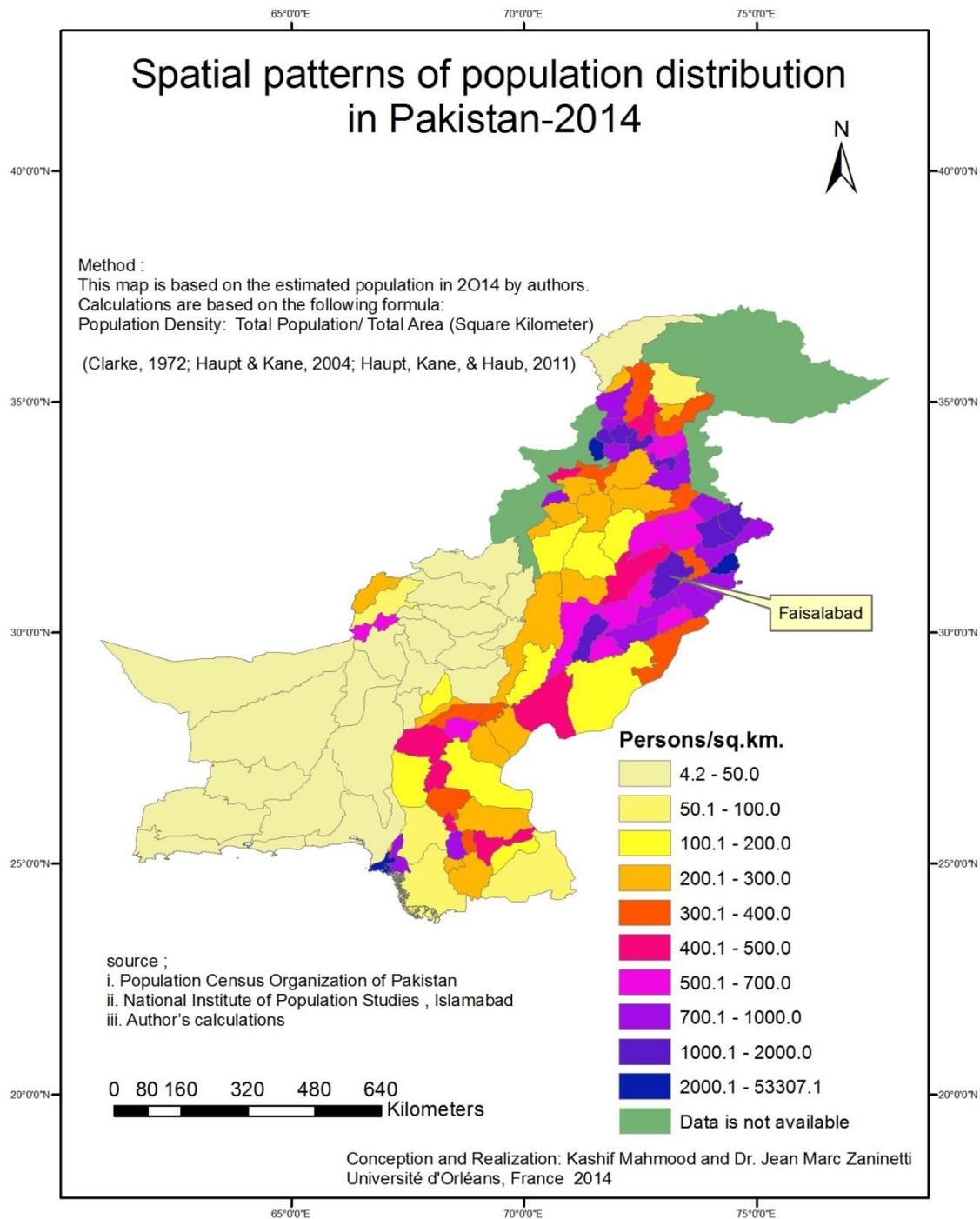
Rapid population growth is related to urban transition in Pakistan and it will result into the expansion of cities in Pakistan. It is apparent from figure 2.10 to figure 2.15 that highly densely populated regions are expanding and high density regions belts are gradually transforming into the adjoining moderate populated regions. From 1998 to 2030. Small cities will emerge near big cities. It depicts further expansion of urban transition in the forthcoming years. One example is the development of Shaikupura near Lahore. When a person travel

from Lahore to Shaikhupura , he will never observe discontinuity of settlement between the two cities due to merging of these two cities due to the expansion of Lahore city. Islamabad and Rawalpindi is another example. A conurbation is a region comprising a number of cities, large towns, and other urban areas that, through population growth and physical expansion, have merged to form one continuous urban and industrially developed area. This kind of expansion is seen in all parts of Pakistan and large expanding cities are engulfing small surrounding cities.

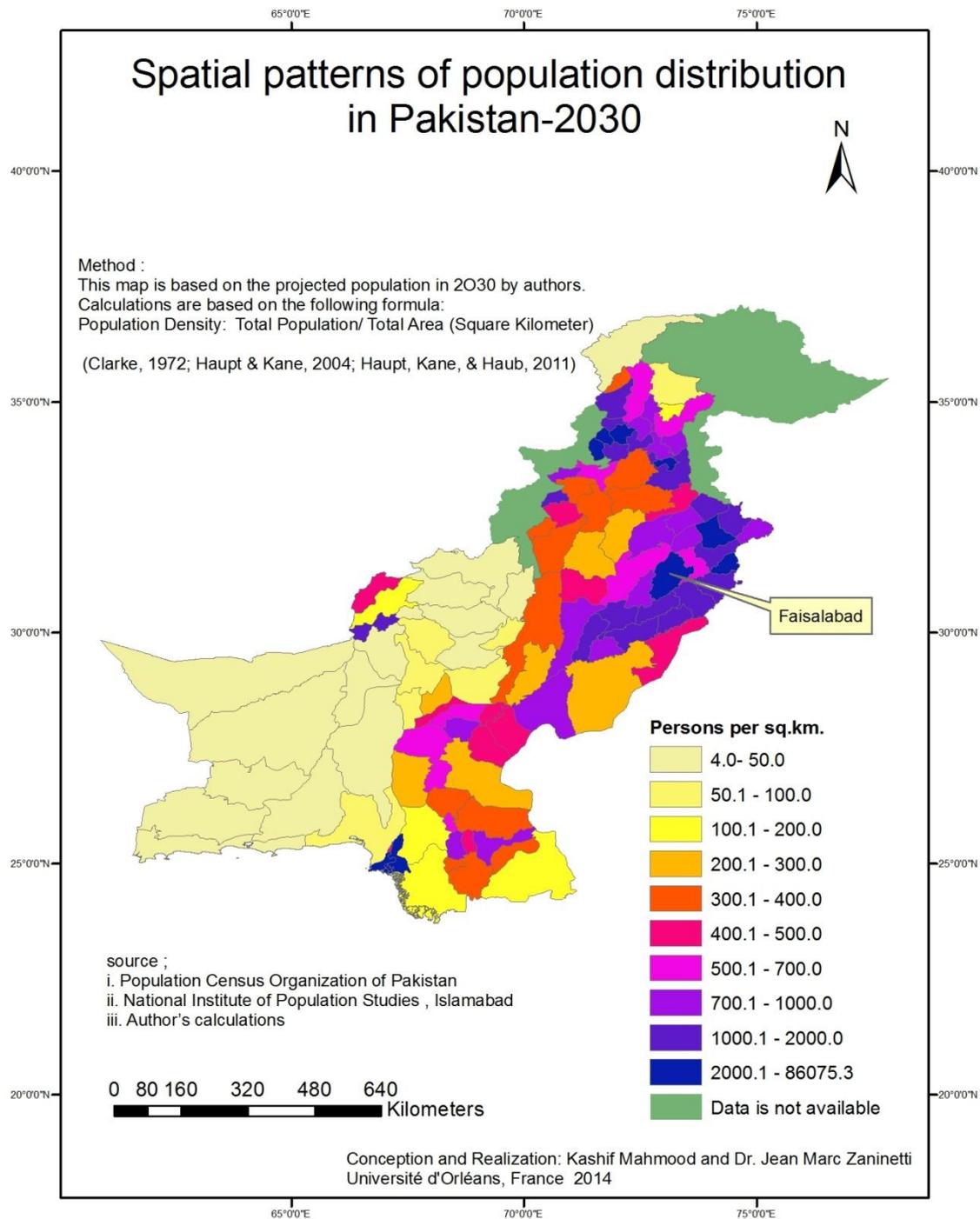
**Figure 2.10 Spatial patterns of population distribution in Pakistan-1998**



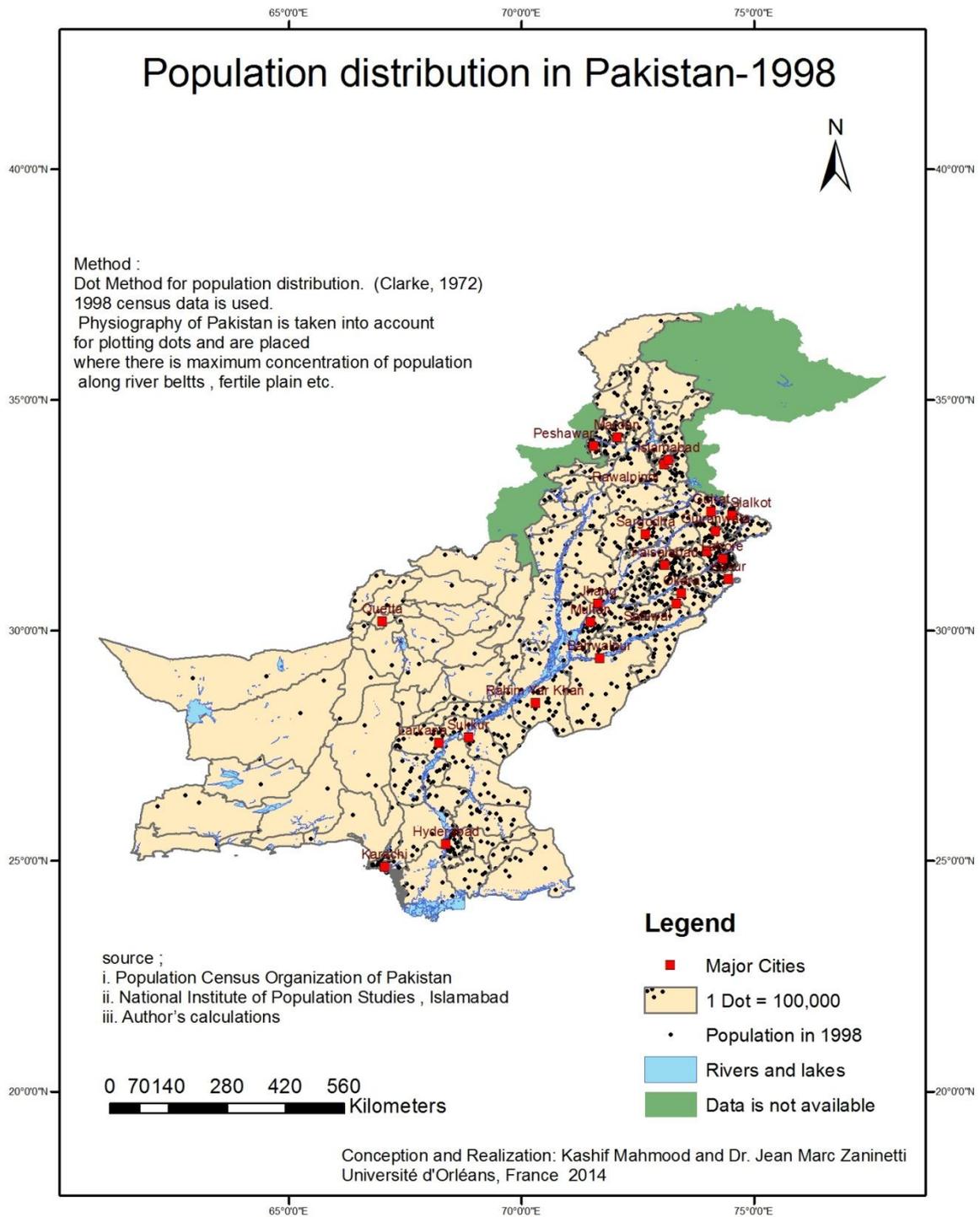
**Figure 2.11 Spatial patterns of population distribution in Pakistan-2014**



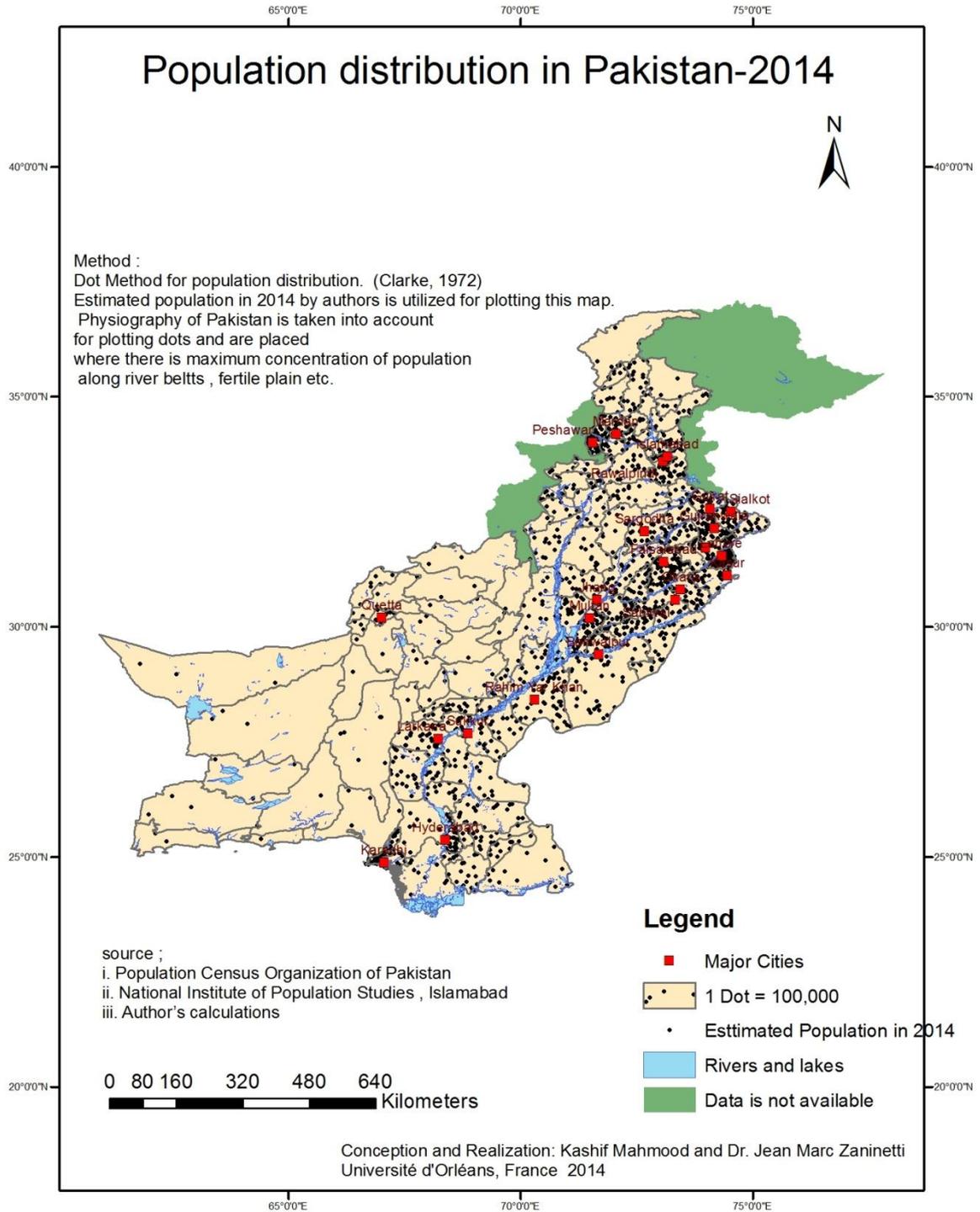
**Figure 2.12 Spatial patterns of population distribution in Pakistan-2030**



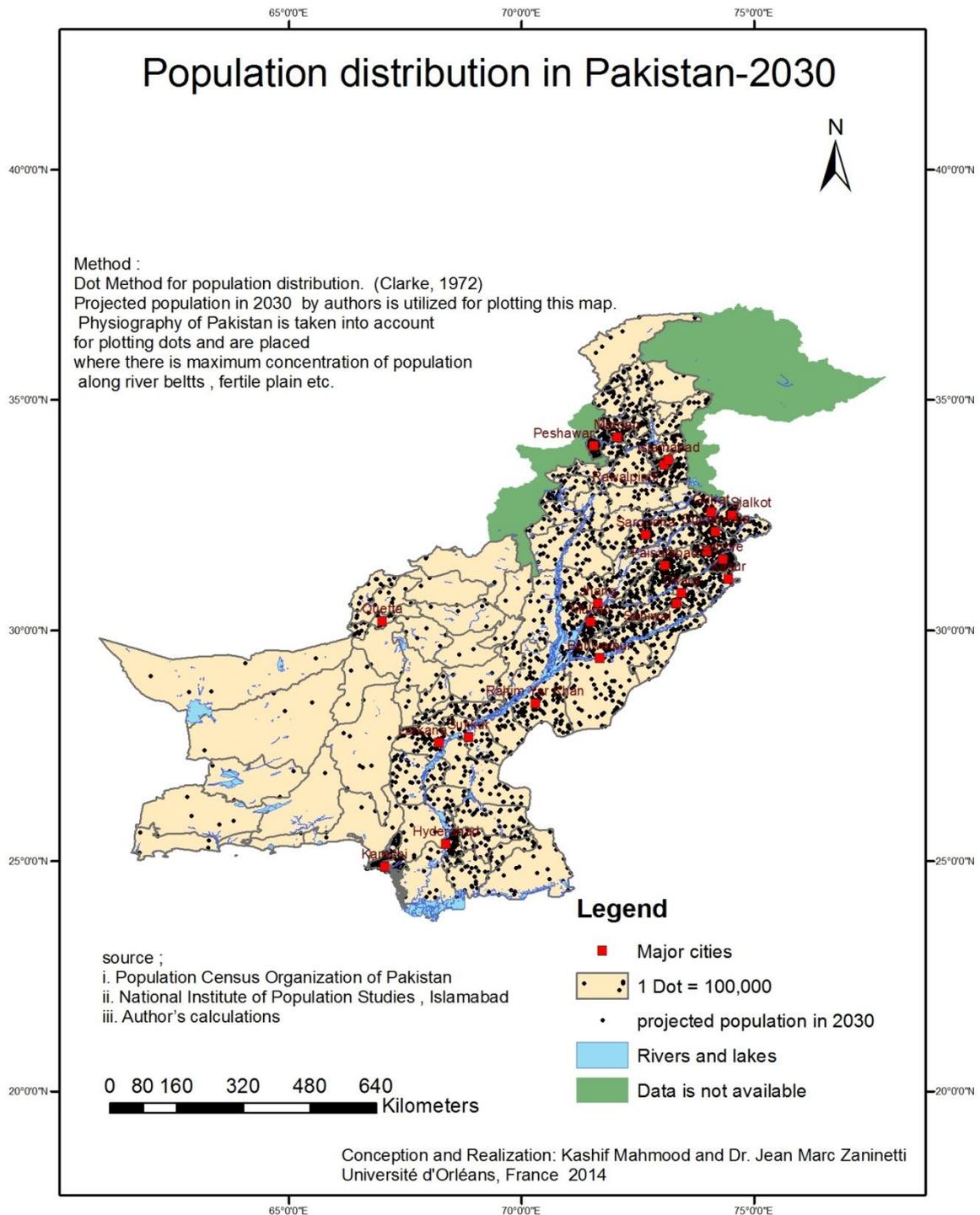
**Figure 2.13 Population Distribution in Pakistan 1998**



**Figure 2.14 Population Distribution in Pakistan-2014**



**Figure 2.15 Population distribution in Pakistan-2030**



## **2.1.6 Demographic Transition in Pakistan**

### **2.1.6.1 Introduction**

In 1929, American demographer Warren Thompson published the history of population in which he revealed the significant changes in crude birth rate and crude death rate that had transformed into the whole world since the last two centuries. He called this transformation demographic transition and it became popular in 1945 by the contributions of his two colleagues, Kingsley Davis and Frank Notestein (Zaninetti, 2011). Demographic transition is a model used to represent the transition from high birth and death rates to low birth and death rates as a country develops from a pre-industrial to an industrialized economic system. The transition involves four stages. Population condition is a function of birth rate and death rate. Birth rate and death rate work in such a way that population growth is either stationary or high, or low (Crossman, 2014a).

The demographic transition refers to the change that populations undergo from high rates of births and deaths to low rates of births and deaths. Historically, high levels of births and deaths kept most populations from growing rapidly. In fact, in rare occasion! On the long run, the world population increased from an estimated 230 million figure 2 millennia ago to approx. 600 millions around 1700, prior to the earlier stage of DT in England despite some major crises (Black Dearth in Europe in the 14th Century) (Maddison, 2005). The average growth rate is +0.056%/year, a near-equilibrium that resulted nonetheless in a 2.5 fold increase in 17 centuries. The pre-transition near-equilibrium is known as the "Malthusian cap". Death rates eventually fell as living conditions and nutrition improved. The decline in mortality usually precedes the decline in fertility, resulting in population growth during the transition period. In Europe and older industrialized countries, death rates dropped slowly. With the added benefit of medical advances, death rates fell more rapidly in the countries that began the transition in the 20th century. Fertility rates fell neither as quickly nor as dramatically as death rates, and thus population grew rapidly. Finland is an example of a country that has passed through the complete of demographic transition theory (Haupt & Kane, 2004; Haupt et al., 2011).

As stated earlier that Finland and other European countries have completed process of demographic transition. All countries of the world are present at different stages of the demographic transition. Developed countries took a long time period to pass through the

demographic transition as compared to the developing countries included Pakistan owing to the rapid transfer of advanced medical facilities to developing nations under the platform of United Nations while these medical and industrial advancements took centuries to approach in the advanced countries .

### ***2.1.6.2 Demographic Transition in Muslim countries***

It is often said that Islam is the fastest- growing religion in the world. This statement is true because of the pace of demographic transition in the Muslim-majority countries relative to the rest of world. Middle east and North Africa (MENA) region, the largest concentration of Muslim population (Above 90%), experienced rapid mortality decline during the second half of the 20<sup>th</sup> century whereas fertility rate remained high and population growth reached to its peak of 3.0 % per year in 1980's but at the same time the growth rate for the world reached its peak of 2.0 % annual growth rate more than a decade earlier. Iran, Lebanon, Tunisia and Turkey have completed their demographic transition and their total fertility rate (TFR) reached below 2.1 (replacement level) but at the same time their population is continued to increase in the coming decades due to young age structure owing to high fertility in the past. The speed of population growth will be faster in countries that are in the early or middle stages of demographic transition. TFR of Pakistan (3.6) is the second highest after Nigeria (TFR=5.9) in the top ten largest Muslim populations. It is difficult to predict the pace of demographic transition of a country and Iran surprised the world through dropping its TFR from 5.6 in 1985 to 2.0 in 2000- the fastest decline in the world (Fahimi, May, & Lynch, 2013 ).Pakistan is lagging in successful completion of demographic transition due to the influence of religion, male dominated society and family system.

### ***2.1.6.3 Demographic Transition in Pakistan***

Pakistan has a unique position in the demographic transition. Pakistan has passed rapidly the first stage of the demographic transition with the transfer of advanced medical facilities from the advanced countries whereas Pakistan is lagging in passing through the second stage of demographic transition and is still in the early phase of second stage in which birth rate begins to decline. Recent Pakistan and Demographic and Health Survey 2012-2013 also indicated that total fertility rate in Pakistan is not decreasing as rapidly as expected and it is still at 3.8, contrary to its expectation at 3.2. (J. R. Weeks, 2014) Pakistani society is showing resistance in using family planning methods for diminishing the family size due to the

religion influence. Ulemas (religious scholars ) preach in their sermons that limiting family size through using family planning method is a great sin and those who will commit this sin will be burnt in the hell . Developed nations transferred the advanced medical facilities for reducing mortality in Pakistan but these nations could not reduce the fertility rate that is being monitored by socio-cultural and socio-economic factors rather than medical factors due to the religion influence and other related factors which we discussed earlier in the section 2.1.5.6. Economic and social drivers of fertility drop are complex (Zaninetti, 2011 p. 78-81).

At present, Pakistan is passing through a critical situation and we cannot precise the exact time period for Pakistan to pass through the demographic transition. Pakistan may take long time to pass the process of demographic transition due to the attitude of Pakistani society towards limiting family size. We should be optimistic after observing rapid population decline in other conservative Muslim countries, e.g. Iran. For the successful demographic transition in Pakistan, there is dire need to acquire cooperation of Pakistani Ulemas, increasing the literacy level, creating the awareness of family planning, and providing the unmet need of family planning methods.

Following is a brief review of various stages of demographic transition in Pakistan:

### **Pre-Transition state (Till 1911)**

Figure 2.16 shows that Pakistan did not enter the demographic transition till 1911. We observed a minor increase in population due to high death rate during this period. In 1901, the population of Pakistan was only 16.58 million and it increased to 19.38 million in 1911 with a growth rate of 0.6 %. There is no doubt in it that this period was the turning point towards the second stage of demographic transition. After 1911, we observed gradual increase in the population growth rate of Pakistan.

### **First Transition Stage (1911- 1981)**

Pakistan entered into the demographic transition in 1911 and its population continued to increase with population growth rate 0.8 % in 1911-21, 1.1 % in 1921-31, and 1.9 during 1931-41. It showed that mortality rate began to decline while fertility rate remained high. Population growth rate reached to 3.65 % in 1972. Although, there was migration from East Pakistan but this period was considered to be the period of rapid natural increase in Pakistan.

It is also evident from figure 2.24 that CBR remained high till 1985 and then there was a minor tilt in crude birth rate. We observed first doubling of the population of Pakistan took 47 year in the 20<sup>th</sup> century and it reached to the figure of 32.5 millions in 1947 from 16.58 million in 1901. The second doubling in population took only 25 year while third doubling occurred in 1998 and took 25 year.

### **Second Transition stage (1981 to ....)**

As stated earlier Pakistan is passing through the second stage of demographic transition theory and it is very crucial stage for the successful demographic transition in all developing countries including Pakistan. Figure 2.17 shows that birth rate began to decrease in 1980s but this decline was very small when compared to other developed and developing countries. Pakistan already took 35 years in this stage and its natural increase in population has not declined as expected by international donors, experts and national policy makers.

**Table 2.6 Population increase in Pakistan since 1901**

<b>Census Year</b>	<b>Population (million)</b>	<b>Growth rate</b>	<b>Doubling Time</b>
1901	16.58		
1911	19.38	0.6	
1921	21.11	0.8	
1931	23.54	1.1	
1941	28.28	1.9	
1947*	32.5	1.8	47 years
1951	33.78	1.8	
1961	42.88	2.45	
1972	65.31	3.65	25 years
1981	84.25	3.06	
1998	130.58	2.61	26 years
2014*	195.67	2.0	

\*Estimated population

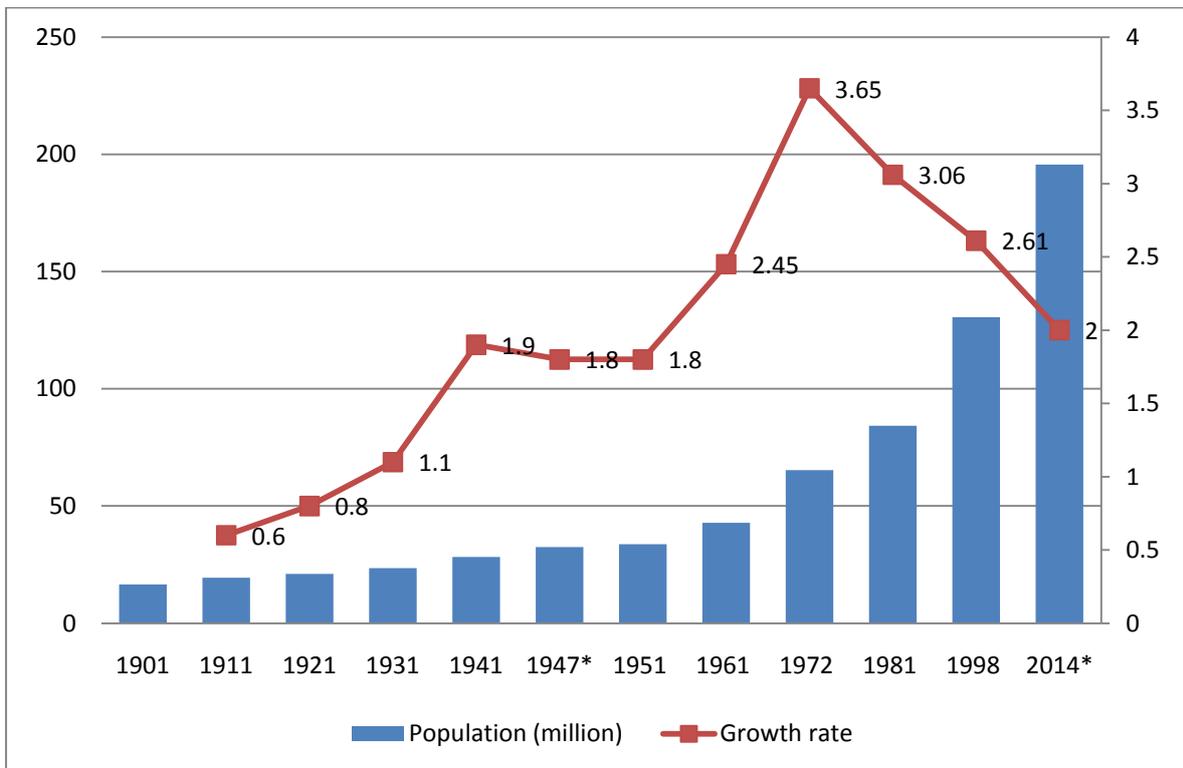
Source : i. Population Census Organization of Pakistan

ii. NIPS

iii. Pakistan Bureau of Statistics , Islamabad.

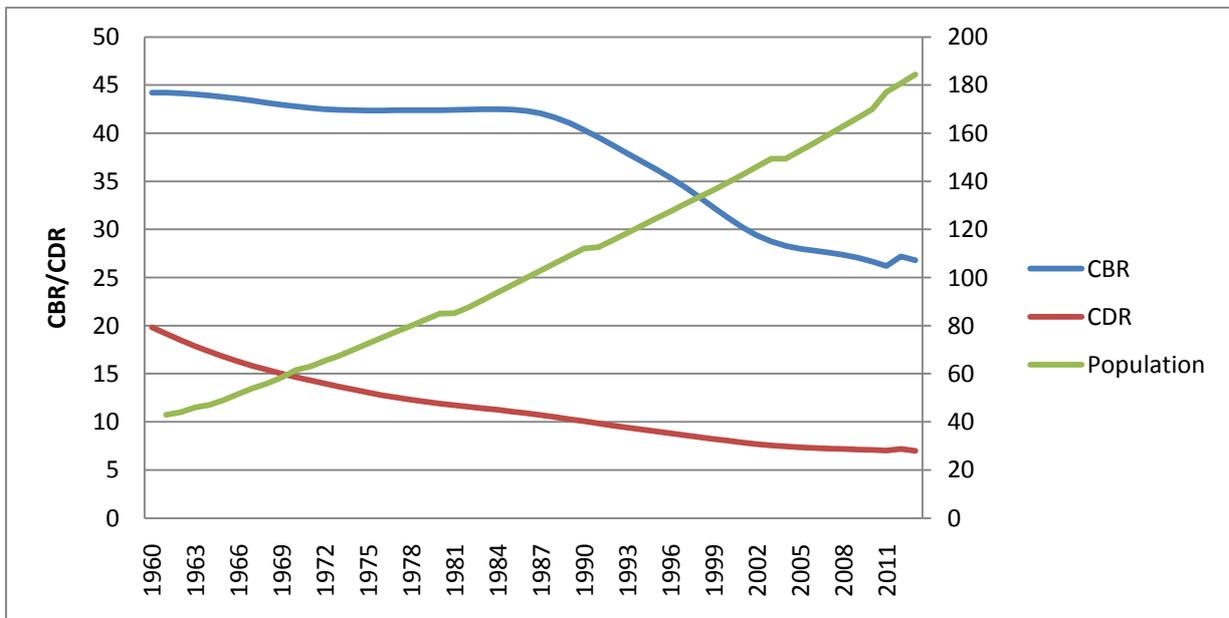
iv. Economic Survey of Pakistan 2012-2013

**Figure 2.16 Population increase in Pakistan since 1901**



Source: Table 2.6

**Figure 2.17 Demographic Transition in Pakistan**



Source : i. Economic Survey of Pakistan 2012-2013

ii. World Bank Data , iii. NIPS

**Table 2.7 Vital statistics in Pakistan since 1981**

	<b>Population</b>	<b>CBR</b>	<b>CDR</b>	<b>IMR</b>
1981 *	85.09	..	..	..
1991	112.61	39.50	9.80	102.40
1992	115.54	39.30	10.10	100.90
1993	118.50	38.90	10.10	101.80
1994	121.48	37.60	9.90	100.40
1995	124.49	36.60	9.20	94.60
1996	127.51	35.20	8.80	85.50
1997	130.56	33.80	8.90	84.40
1998 *	133.48	..	..	..
1999	136.40	30.50	8.60	82.90
2000	139.55	..	..	..
2001	142.76	..	..	..
2002	146.02	27.03	8.20	85.00
2003	149.32	27.30	8.00	83.00
2004	152.66	27.80	8.70	79.90
2005	156.04	..	..	..
2006	159.46	26.10	7.10	76.70
2007	162.91	25.50	7.90	72.40
2008	166.41	25.00	7.70	70.20
2009	169.94	28.40	7.60	73.50
2010	173.51	28.00	7.40	72.00
2011	177.10	27.50	7.30	70.50
2012	180.71	27.20	7.20	69.00
2013	184.35	26.80	7.00	67.50

.. Data Not available , \*Census year

Source : i. Pakistan Economic Survey 2012-13

ii. NIPS

iii. Population Census Organization of Pakistan

It is evident from table 2.7 that Pakistan is lagging in the fertility transition. There is a light decline in Crude Birth Rate (CBR) in last decade while there is further decline in Crude Death rate (CDR) reaching to only 7.0 in 2013. CBR is still persistent at 26.80 in 2013 and natural increase remains 1.9 which is considered high and shows that Pakistan is lagging behind in fertility transition. There is need to decline family size. Family can play an important role in successful fertility transition in Pakistan.

Infant mortality rate (IMR) decline also seems to be lagging too. It is probably related to widespread poverty among persistently large rural population. IMR reduced to 67.50 in 2013 from 102 in 1991 and it is due to improving health of women and births attended by health professionals. In Pakistan particularly in rural areas, deliveries at home are common and attended by a mid-wife who has not any formal diploma or any elder woman in family. It resulted into maternal and infant deaths, now people became aware of the consequences of it and the deliveries are being attended by health professional but still a great proportion of births are attended by mid-wives.

#### ***2.1.6.4 Factors for lagging behind in demographic Transition***

Many factors are responsible for the slow pace in the second stage of demographic transition in Pakistan. Influence of the religion on a family is the major cause of high fertility and it is augmented through early marriages, desire of son, unawareness of family planning methods, Joint family system. Fears of the deaths of children in their grandparent generation in 1960s and 1970s are still present in the minds of parents so they continue to increase their family size. (Please, see 2.1.5.6: causes of rapid population growth in Pakistan)

Family institution in Pakistan is playing a vital role in lengthen this phase through early marriages, joint family system, influence of religion and low status of women. Birth of a child outside wedlock is not possible in Pakistan and if it occurs somewhere, it is not reported due to a shame factor and fears of the legal proceedings. Crude birth rate (CBR) is still high and continues to remain high till the occurrence of changes in the attitude of Pakistani families towards limiting family size and is only possible with the help of religious scholars, increasing literacy rate, decreasing gender discrimination and empowering women.

There is no doubt in it that cultural factors stated above are responsible for the slow pace of demographic transition in Pakistan but economic factors like informal economy also played a decisive role in curtailing demographic transition's pace. The World Bank says that in Pakistan, roughly 70 percent work in the so-called informal sector, a part of the economy that is unregulated and untaxed (Behn, 2014). Informal economy not only has economic implications but also has demographic implications in Pakistan. It is one of the reasons of lagging behind in demographic transition. Unskilled labour is required to earn livelihood in the informal economy of Pakistan and so majority of the people don't have any formal education and training. It decreases the importance of education which has a decisive

influence on the fertility. Moreover, poor families increase family size to get more hands for earning money through adding unskilled workers.

#### ***2.1.6.5 When will Pakistan emerge out of the Transition period? (.....)***

As Pakistan is still in the early phase of second stage of demographic transition and we cannot precise the time for the successful demographic transition in Pakistan due to a great resistance from the family institute of Pakistan regarding limiting family size, so we cannot forecast any timeframe regarding into the end of demographic transition because social change in the societies like Pakistani society is very slow and can take several centuries.

#### ***2.1.6.6 Explanation of demographic transition in Pakistan through Population pyramid***

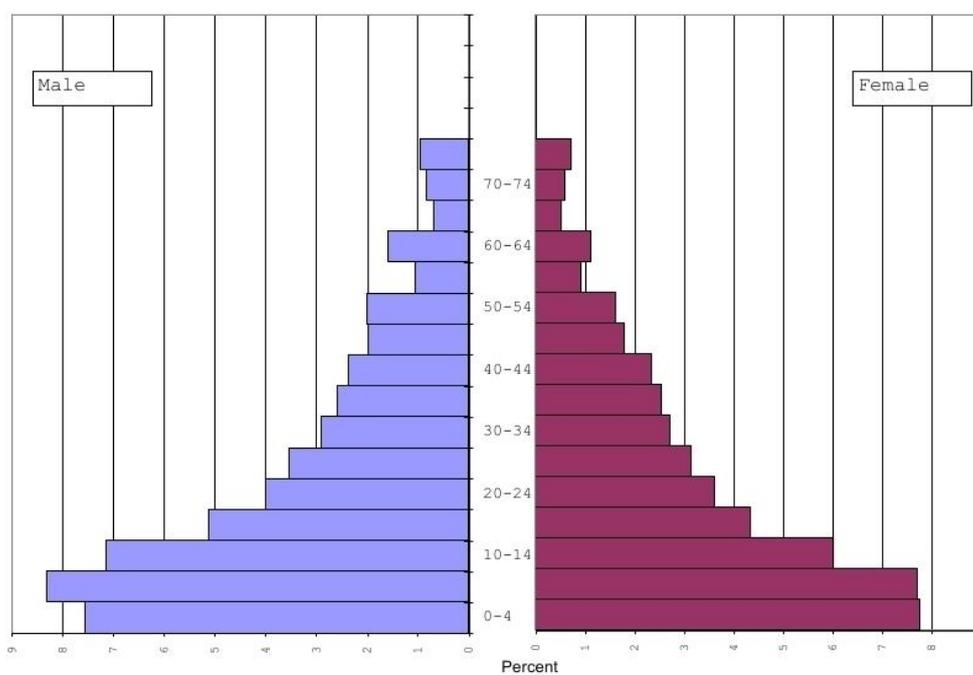
Population pyramid of Pakistan is a true representation of the developing countries in which young population under age 15 is more than 40 %. 44.5 % of the total population in 1981 and 43.4 % population of the total population in 1998 were under age 15 but this proportion decreases to 33.3% in 2014 according to the estimates of CIA –World Fact book. It means that there is decline in the natural increase in Pakistan from 1981- 2014. 1981 and 1998 data are based on the census result while 2014 are based on estimates so we cannot conclude there was rapid decline in fertility with 100% confidence.

15.3% of the total population in 1981 and 14.7% of the population in 1998 were below four years. Minor decline in the proportion of the age group (0-4) is the indication of decline in fertility. Gender discrimination starts at the birth of a child in the Pakistani society and we observed more boys (22.6% in 1981) than girls (20.7 % in 1998) under age 14 while this difference was less in the age group 0-4. There is a natural mismatch of 105/100 births in favor of males. This mismatch tends to disappear progressively with age due to higher male death rates before the age of 50. I'm not sure the observed imbalance can be entirely attributed to discrimination (though real).

We also observed that there was a gradual increase in the percentage of the population in the reproductive age (14 -49). It increased to 56% in 2014 from 45.6% in 1998 and 42.9% in 1981 so we cannot expect a decline in fertility in the next 50 years.

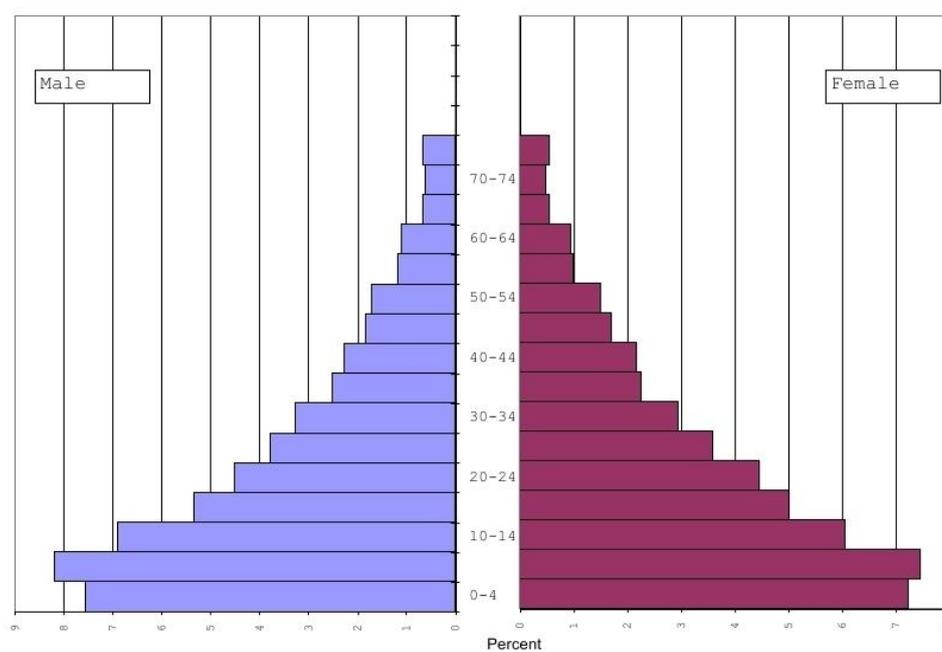
Low proportion in age group above 65 is the indication that there is little improvement in the life expectancy of Pakistanis. Total dependency ratio is 61.8 % in 2013 while youth dependency ratio constitutes 54.7%.

**Figure 2.18 Age and Sex Composition in Pakistan - 1981**

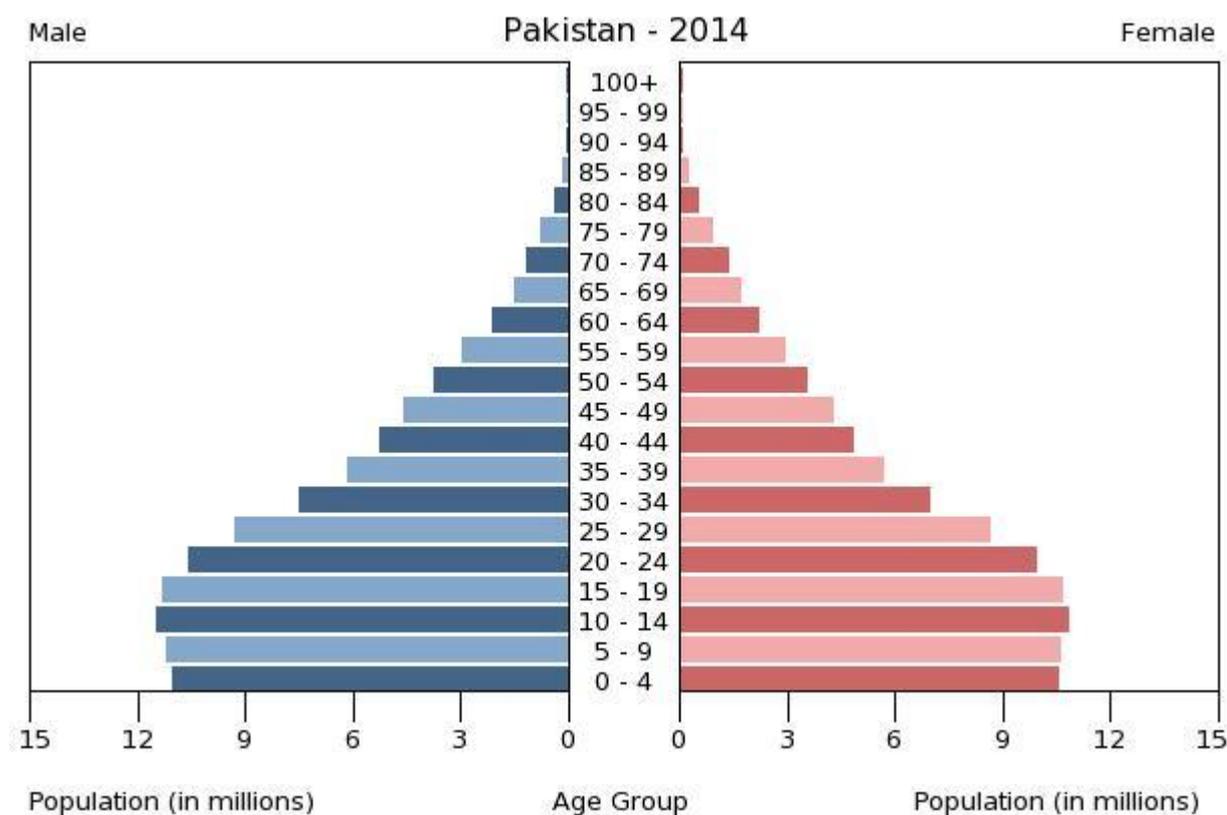


Source: Population census organization

**Figure 2.19 Age and Sex Composition in Pakistan - 1998**



Source: Population Census Organization of Pakistan

**Figure 2.20 Age and Sex Composition in Pakistan - 2014**

Source : (CIA, 2013)

## 2.1.7 Urban Transition in Pakistan

### 2.1.7.1 Introduction

Urbanization is not a new story in Pakistan. Six to eight million Muslims crossed the new border and entered into Pakistan during partition in 1947 and majority of them settled in the cities of eastern Pakistani provinces of Sindh and Punjab. The second big migration flow towards cities occurred in 1965 and 1971 during the wars between India and Pakistan. In the 1990s, the anti-soviet insurgency resulted into further migration to the urban centers. Four million Afghans crossed Durand line (border between Pakistan and Afghanistan) and arrived in the North-Western Pakistan (Khyber Pakhtwankhawa) in 1992. In the beginning, they

resided in the border refugee camps, Pakistan government forbade Afghans to cultivate land due to already existing economic struggle in these rural areas and the consequence was that they settled in the city of Peshawar and Quetta (Kugelman, 2013). After 9/11 incidence in 2001, Pakistan emerged as a front line state in war against terrorism. One of the consequences of war against terrorism in the northern-western parts of Pakistan was the displacement of population towards urban centers and it further added millions to the urban population in Pakistan.

At present, Urbanization in Pakistan continues to be fuelled by war, insecurity, and economic necessity. Pakistan military offences in the rural north-west Pakistan have induced many people to flee to cities. Most of them are civilian but at the same time militants including Pakistani Taliban are also on the move towards cities. According to some reports, 8000 Taliban fighters now operate in Karachi (Kugelman, 2013).

From the previous discussion , it seems that urban transition in Pakistan is a result of wars , insecurity , terrorism , international conflicts , soviet invasion , war against to curb terrorism in Afghanistan but this is only one aspect which accelerate the process of urban transition through adding millions in the urban population. Urban population in Pakistan has increased due to the natural increase and rural- urban migration but now, natural increase has significant role in the expansion of cities in Pakistan.

Being an agricultural country, Pakistan's economy is based on agriculture and most of the mandi (market) places have been turned into urban centres (K. S. Ahmad, 1966). At the time of its independence, urbanization rate was only 17.8 % and it rose to 32.5 % in 1998 census that means every third person was living in the city. In 2013, urban population was estimated 35 % (PRB, 2013) and it will rise to 50 % in 2025 according to United Nations population division estimates. Defining urbanization remains a difficult task in all countries including Pakistan. Some experts already concluded that urban population had already reached 50% in Pakistan on the density based criteria rather than administrative definitions of urbanization. Pakistan is urbanizing at annual rate of 3% which is considered to be the highest in South Asia. However, Pakistan is lagging the world average of developing countries, estimated 46.5% in 2011 (Reza Ali, Haque, Husain, & Arif, 2013; Kugelman, 2013; *World Urbanization Prospects, the 2011 Revision*, 2011). Many problems in Pakistani society are the consequence of rapid expansions of cities in Pakistan (Mahmood, 2007) .

### **2.1.7.2 Measurement**

Detail discussion regarding the problem of defining city, urbanization /urban transition, urbanizing area is already discussed in chapter 1-Theoretical Concepts and Review of literature and here, we attempted to discuss the main criteria of measuring urbanization for visualization of the spatial patterns of urbanization in Pakistan.

It is very difficult to give one definition of a city in whole world because it varies from country to country. In some countries, they define village on administrative criteria while in other countries, it is based on the number of persons living in agglomeration and in some parts on the economic criteria , proportion of active population that is attached to agriculture (Zaninetti, 2011).

Table 2.8 shows the criteria of urban area in the census of Pakistan. Urbanization suffers from a confusing variety of definitions (Clarke, 1972). The population living in urban areas can be expressed as a percentage of the area's total population and is a measure of urbanization. Usually the remainder of the population is considered rural (Haupt et al., 2011).

**Table 2.8 Criteria for urban area in the census of Pakistan**

<b>1951 census</b>	<b>1961 census</b>	<b>Census 1981 and 1998</b>
<p>“Urban Areas include</p> <p>a) Municipalities, cantonments and notified areas irrespective of population size;</p> <p>(b) Any other continuous collection of houses inhabited by not less than 5,000 persons and having urban characteristics”</p>	<p>Urban Areas include:</p> <p>(a) Municipalities as well as civil lines and cantonments not included within municipal limits;</p> <p>(b) Any other continuous collection of houses inhabited by not less than 5,000 persons and having urban characteristics which the Provincial Director of Census decided to treat as urban for census purposes;” and in certain cases</p> <p>(c) “areas which had urban characteristics but less than 5,000 population</p>	<p>“Urban areas – All localities which are either metropolitan corporation, municipal corporation, municipal committee or cantonment at the time of the census were treated as urban.”</p>

Source : i. (Reza Ali et al., 2013)

ii. Population Organization of Pakistan

We used following formula to calculate urbanization:

$$\text{Urbanization rate/Percent Urban} = \frac{\text{Number living in urban areas}}{\text{Total Population}} \times 100$$

(Reza Ali et al., 2013)

### 2.1.7.3 *Urbanization at national level*

The history of urbanization in Pakistan goes back to the time of Indus Valley civilization. Urbanization remained a hot issue for researchers, demographers, sociologists, economists, geographers and policy makers since the independence of Pakistan. Various researches were made to measure urbanization along with its causes and consequence at different time periods in the whole history of Pakistan (K. S. Ahmad, 1955b, 1966, 1967a, 1967b, 1968, 1969; Hameed, 1973; Husain, 1958; Iqbal, 1998; Kugelman, 2013; Kureshy, 1958; Kureshy, 1964, 1966; Shirazi, 2002).

History of urbanization in the region is older than age of Pakistan. Indus valley civilization is one of the oldest civilizations in the world and the oldest city Harappa was present in the areas comprising Pakistan now. Harappa is included in Sahiwal district (Punjab). The Harappa city is believed to have had as many as 23,500 residents and occupied over 100 hectares (250 acres) at its greatest extent during the Mature Harappan phase (2600–1900 BC), which is considered large for its time. The Indus Valley Civilization is also called the Harappan Civilization ("Harappa," 2014).

Figure 2.21 shows the rise of urban population since 1881. Urban population was 1.39 million in 1881, 1.7 million in 1901, 6 million in 1951 and augmented to 42.375 in the census of 1998. Gradual increase in the urban population was observed except in 1911. Low urban population during the period of 1901-1911 was due to the widespread epidemic- plague. This drop was not so much due to heavy casualties in towns but from the evacuation of towns and fleeing of people to the villages (K. S. Ahmad, 1966). Urbanization rate was 32.5 % according to the 1998 census. Current urban population is estimated 35 % (PRB, 2013) or 36% (*World Urbanization Prospects, the 2011 Revision*, 2011).

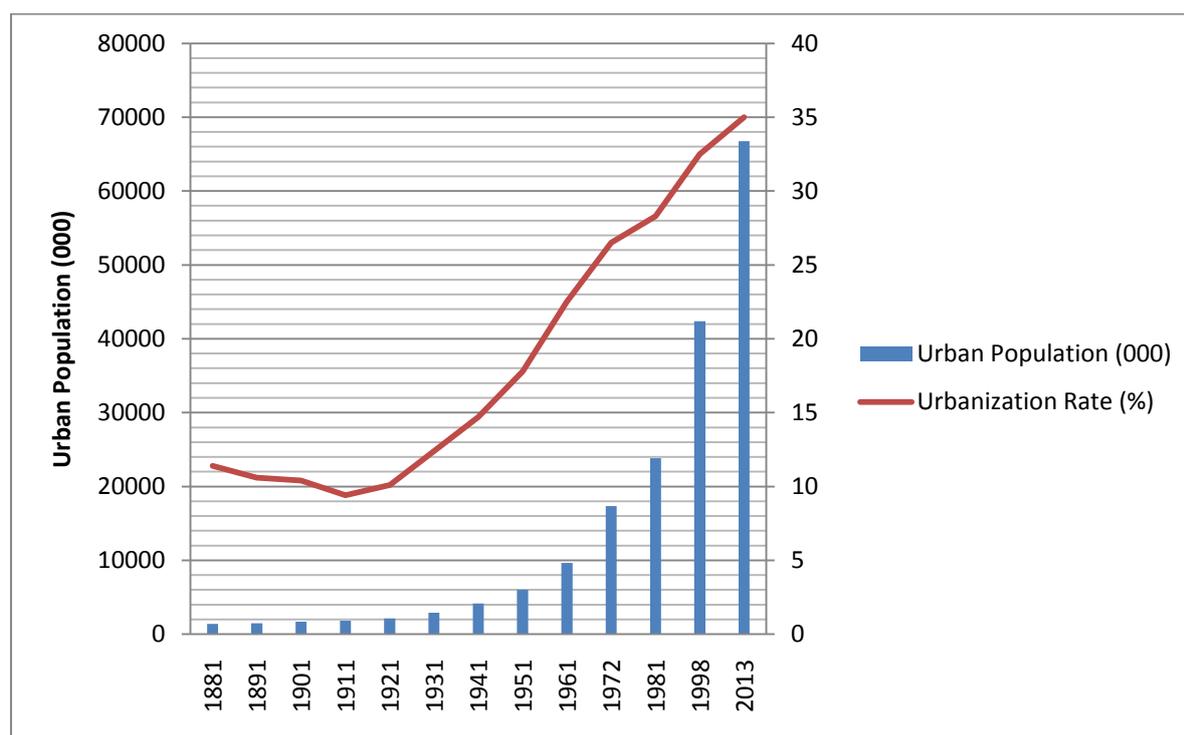
**Table 2.9 Urbanization in Pakistan since 1881**

census	Urban Population (000)	Urbanization Rate (%)
1881	1390	11.4
1891	1472	10.6
1901	1716	10.4
1911	1831	9.4
1921	2140	10.1
1931	2921	12.4
1941	4169	14.7
1951	6019	17.8
1961	9654	22.5
1972	17333	26.5
1981	23842	28.3
1998	42375	32.5
2013*	66745	35.0

\*Estimated

Source: i. Population Census Organization 1881-1998.

ii. World Population Data Sheet- 2013

**Figure 2.21 Urbanization rate in Pakistan since 1881**

Source : Table 2.9

**Table 2.10 Increase in Urban Population in Pakistan since 1951**

	Census Years					
	1951	1961	1972	1981	1998	2013*
Total Population	33780	42880	65309	84253	130580	190700
Urban Population	6019	9655	16593	23827	42458	66745
Share of Urban Population in Total Population (%)	17.8	22.5	25.0	28.3	32.5	35
Intercensal Annual Urban Growth Rate (%)	—	4.9	4.8	4.4	3.5	—
Intercensal Annual Rural Growth Rate (%)	—	1.8	3.4	2.6	2.2	—
Ratio of Urban to rural Growth*	—	3.0	1.6	1.8	1.4	—

Source: Population Census Organization of Pakistan

\*Estimated

#### 2.1.7.4 Urbanization at Province Level

Over all urban population at the national level had increased from 28.3 in 1981 to 32.5 percent in 1998. Islamabad had the highest urban population while FATA had the lowest urban population in 1998. Among the provinces, Sindh was the most urbanized province where 48.9 percent population was living in the urban areas. The second most urbanized province was Punjab where 31.3 % population lived in cities/towns. The least urbanized province was Khyber Pakhtunkhwa where only 16.9 percent population was urban.

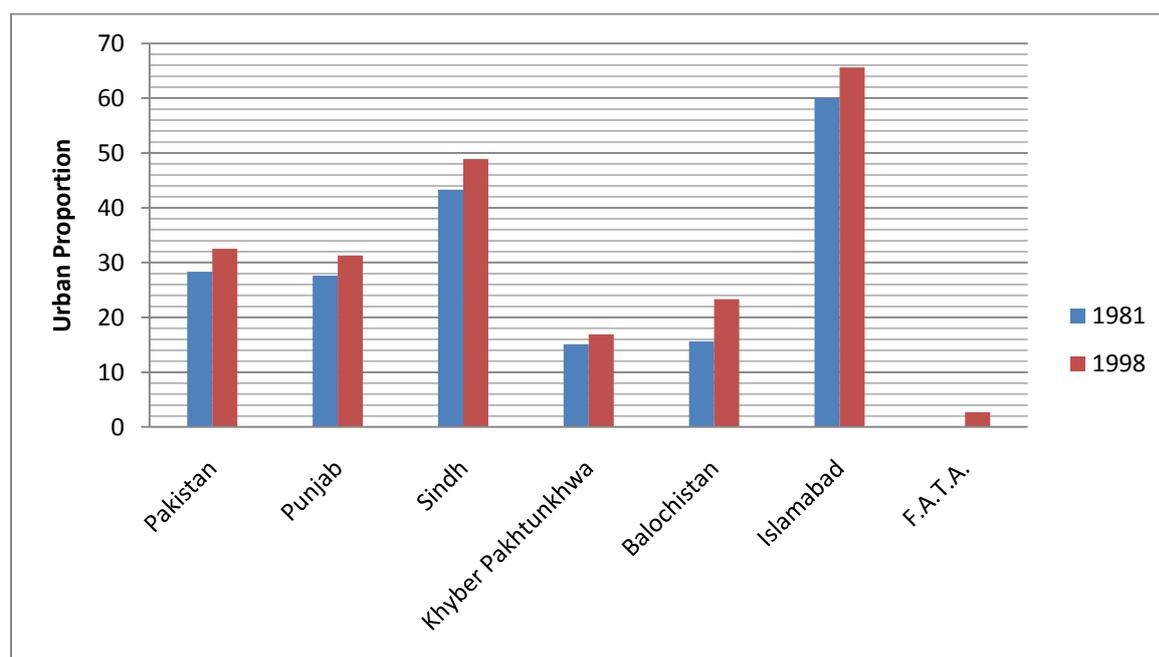
According to 1998 census, there were 23 major urban centre having population of 0.2 million and above. The biggest city in Pakistan is Karachi, followed by Lahore and Faisalabad. The other big cities recorded populations of one million were Rawalpindi, Multan, Hyderabad and Gujranwala. Almost, half of the total urban population lived in these seven big cities.

According to world urbanization prospects 2011, Karachi will be the largest city with a population of 15.5 million in 2015 followed by Lahore (8.491 million) , Faisalabad (3.434 million), Rawalpindi (2.452 million) , Multan (2.014 million) , Gujranwala ( 2.006 million) , Hyderabad (1.931 million) , Peshawar (1.730 million) , Islamabad (1.048 million) and Quetta (1.030 million) . 40 million people are living in these ten largest cities of Pakistan (*World Urbanization Prospects, the 2011 Revision*, 2011).

**Table 2.11 Urbanization in Pakistan by administrative units**

	Urban Proportion	
	1981	1998
<b>Pakistan</b>	28.3	32.5
Punjab	27.6	31.3
Sindh	43.3	48.9
Khyber Pakhtunkhwa	15.1	16.9
Balochistan	15.6	23.3
Islamabad	60	65.6
F.A.T.A.		2.7

Source: Population Census Organization of Pakistan

**Figure 2.22 Urbanization in Pakistan at Province Level**

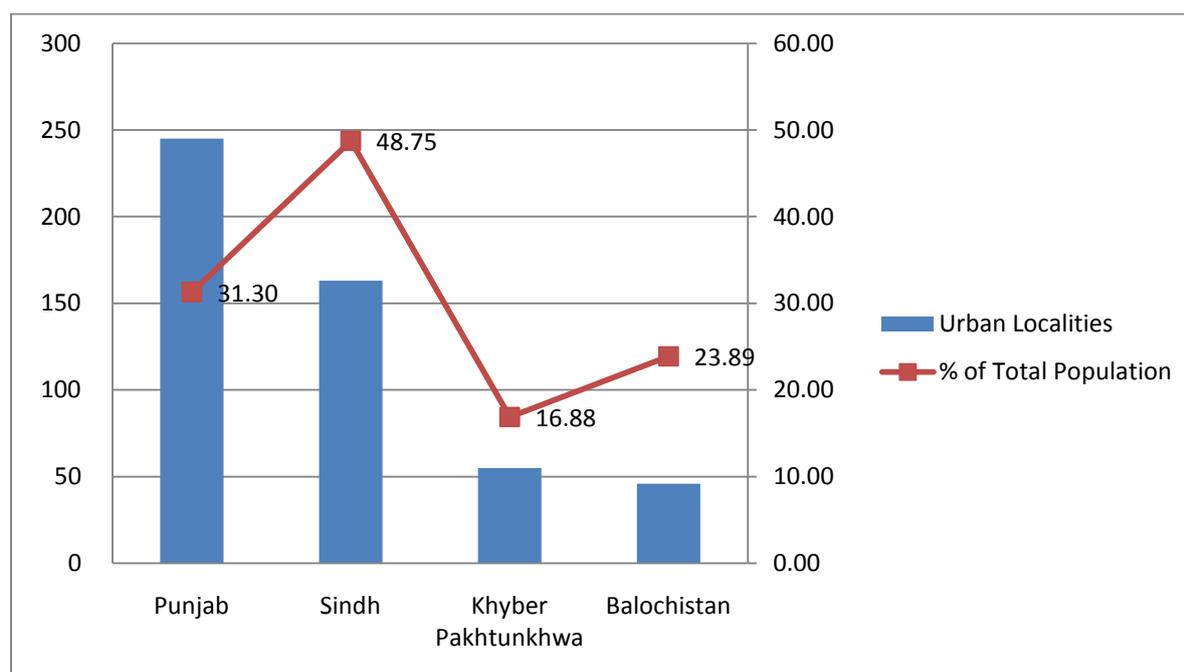
Source: Table 2.11

According to the census of 1998, 515 urban localities were present in Pakistan which constituted 32.50 % of the total population of Pakistan. There were 245 urban localities (31.30 % of total population) in Punjab, 163 (48.75% of total population) in Sindh, 55 (16.88%) in Khyber Pakhtunkhwa, 46 (23.89% of total population) in Balochistan and 5 (2.70% of total population) in FATA. Sindh is the most urbanized province in Pakistan. (Figure 2.23)

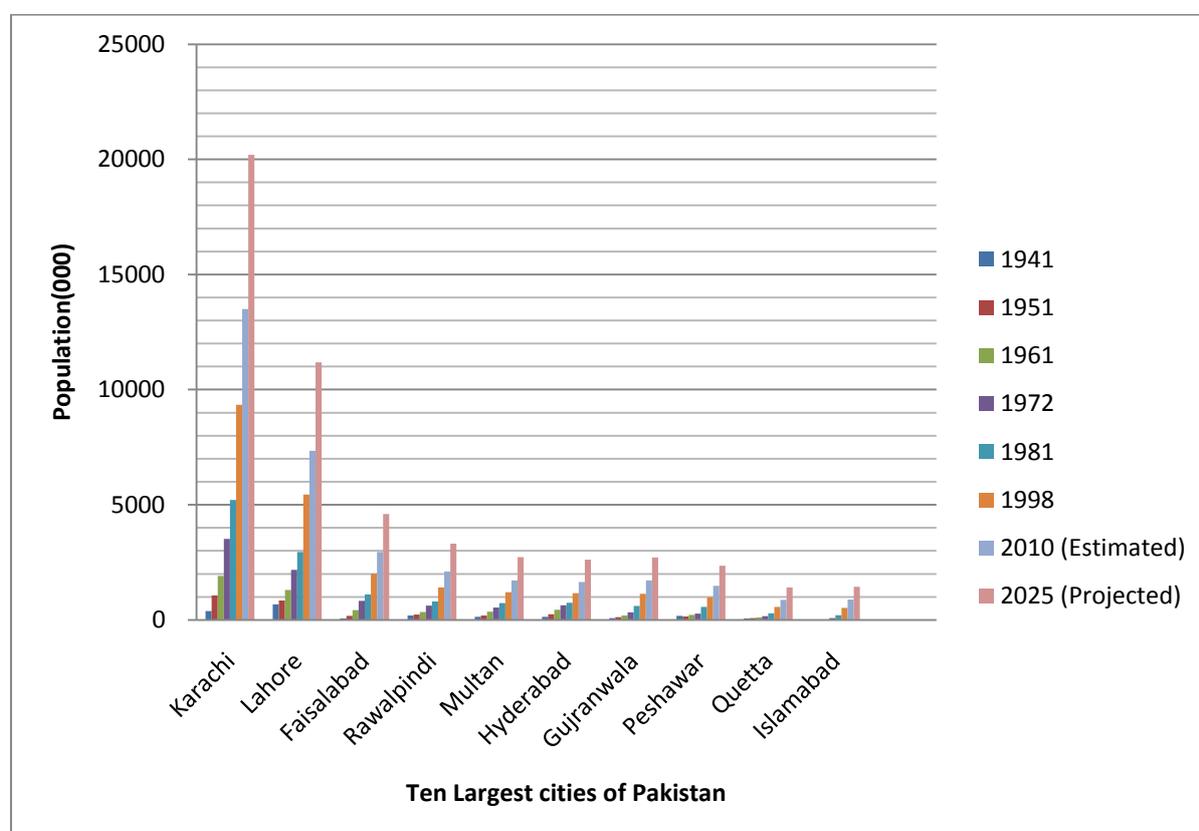
**Table 2.12 Number of Urban Localities in Pakistan according to 1998 census**

Province/Region	Urban Localities	% of Total Population
Punjab	245	31.30
Sindh	163	48.75
Khyber Pakhtunkhwa	55	16.88
Balochistan	46	23.89
Islamabad	1	65.70
FATA	5	2.70
Pakistan	515	32.50

Source : 1998 census Report , Population census organization of Pakistan

**Figure 2.23 Urban Localities in Pakistan -1998**

Source : Table 2.12

**Figure 2.24 Increase in urban population in Pakistan by major cities 1941-2025**

Source : (GOP, 1998; *World Urbanization Prospects, the 2011 Revision*, 2011)

### ***2.1.7.5 Changing spatial patterns of Urbanization from 1981 to 2014***

The location pattern of urban settlements during the time period of (1901-1961) particularly in 1941, 1951, and 1961 revealed that major areas of urban settlements were a) Sindh Plain along the Indus, b) the Punjab plains where the towns have been uniformly spaced, this is consistent with the theory of Christaller & Losch (1931-1940) relating to number, spacing and hierarchy of cities due to market access for rural population in a relatively uniform plain. The regular spacing of market-cities has been observed in many different parts of the World. Usually, industrialization introduces a perturbation in this regular pattern and changes the urban hierarchy and c) north-western sub-mountain strip and adjacent hills .These were the areas where major development in agriculture, industry, roads and railway had taken place (K. S. Ahmad, 1966).

Pakistan is on the margin of monsoon region of Indo-Pakistan, and availability of water for agriculture has always been an important factor influencing the distribution of population and the growth of settlement (Kureshy, 1966). We observed the same spatial pattern of urbanization trend in 2014 with the expansion towards adjoining areas but Balochistan plateau has emerged as a place of rapid urban transition which was missing in the earlier studies before 1981 so we can count it as a fourth centre of urbanization after Punjab plain , Sindh plain and the north-western sub-mountain strip.

Urbanization in Pakistan ranges from 0 to 100 percent (Karachi). In 1981, there were 14 districts (13.3% of the total districts) where there was no urban population. These districts were present in the North and North –East Balochistan and northern Khyber Pakhtunkhawa whereas their numbers were reduced to 8 (7.62) in 1998 census and assumed at 8 in the estimated urban population in 2014 (Figure 2.25).

#### **Urban Population less than 10 %**

There were 22 districts (20.95%) where urban population was less than 10 % in 1981. Their number progressively were reduced to 15 (14.29%) in 1998 and 12 (11.43%) in 2014. This is the indication that urbanization is progressively increasing in Pakistan. Majority of the districts are from Balochistan , Tharparkar (dessert ) and Thatta from Sindh , Chakwal , Rajanpur , Lodhran and Mandi Bahawadin from Punjab , Malakand , Mansehra , Karak , Swabi and Laki Marwat from Khyber Pakhtawunkhawa.

In 1998 many districts of Balochistan (Chagai , Kharan , Kalat , Bolan , Nasirabad and Loralai ) were excluded from this category and were included in high urbanized regions . In Punjab , there was not a single district in this category in 1998 . Thatta from sindh also advanced its category and entered into the next category.

This category is reduced in 2014. There is not a single district from Punjab included in it, whereas only three districts from northern Balochistan , Tharparkar from Sindh , and 5 districts from Khyber Pakhtunkhawa are still present in this category.

#### **Urban Population (10.1% -20%)**

There were 36 districts (34.29%) where urban population was from 10.1 to 20 % in 1981. Their numbers progressively were increased in 1998 to 39 (37.14 %) while there was rapid decrease in its numbers in 2014 to 25 (23.81%).

#### **Urban Population (20.1-30)**

In 2014, maximum numbers of districts are present in this category. 30 districts (28.57) are included in it but there were only 16 districts were present in this category in 1981. Rapid growth of urbanization is seen in the districts of Balochistan e.g. Chagai, kharan, loralai where urban population was less than 10 in 1981 are included in this category.

#### **Urban Population (30.1% -40.0%)**

Only 3 districts in 1981 and 1998 census were present in this category but these districts were augmented to 10 in 2014. Following are ten districts included in this category:

- i. Sibi from Balochistan
- ii. Daddu , NawabShah , Mirpur Khas , and Larkana from Sindh
- iii. Sargodha, Hafizabad , Gujrat , Sheikupura and Bahawalpur from Punjab.

#### **Urban Population (40.1%-60.0%)**

There were only six districts in 1981, eight districts in 1998 and 10 districts in 2014 in this category.

In 2014, Following districts are included in this category:

<b><u>District</u></b>	<b><u>Province</u></b>	<b><u>Urban Population(%)</u></b>
Jafarabad	Balochistan	41.8
Kalat	Balochistan	42.1
Multan	Punjab	43.0
Peshawar	Khyber Pakhtunkhwa	46.2
Faisalabad	Punjab	50.3
Khuzdar	Balochistan	54.5
Gujranwala	Punjab	56.8
Hyderabad	Sindh	57.3
Rawalpindi	Punjab	58.2
Sukkur	Sindh	58.8

#### **Urban Population (above 60 percent)**

There were only 2 districts (Karachi Centre and Karachi South) in 1981 where 100% population was urban. Karachi East attained 100 % urban population in 1998 and joined earlier mentioned two districts which had already 100 % urban population in 1981. In 2014, following districts are included in this category:

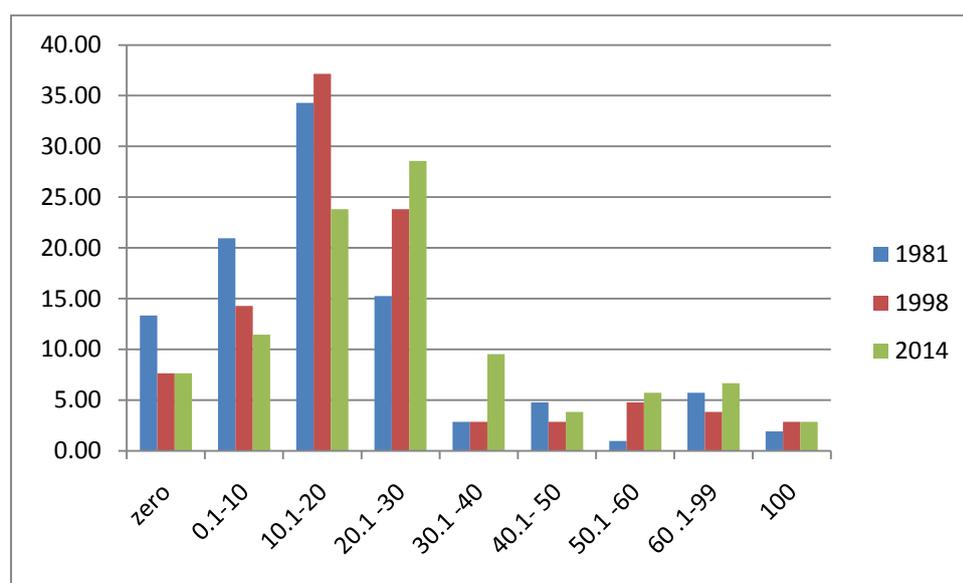
<b><u>District</u></b>	<b><u>Province</u></b>	<b><u>Urban Population(%)</u></b>
Lasbela	Balochistan	62.7
Gwadar	Balochistan	67.9
Islamabad	Islamabad	70.5
Quetta	Balochistan	72.7
Malir	Sindh	74.0
Lahore	Punjab	80.8
Karachi West	Sindh	82.0
Karachi Central	Sindh	100.0
Karachi East	Sindh	100.0
Karachi South	Sindh	100.0

**Table 2.13 Change in urbanization by districts from 1981 to 2014**

Urbanization	1981		1998		2014*	
	Number of district	%	Number of district	%	Number of district	%
zero	14	13.33	8	7.62	8	7.62
0.1-10	22	20.95	15	14.29	12	11.43
10.1-20	36	34.29	39	37.14	25	23.81
20.1 -30	16	15.24	25	23.81	30	28.57
30.1 -40	3	2.86	3	2.86	10	9.52
40.1- 50	5	4.76	3	2.86	4	3.81
50.1 -60	1	0.95	5	4.76	6	5.71
60 .1-99	6	5.71	4	3.81	7	6.67
100	2	1.90	3	2.86	3	2.86

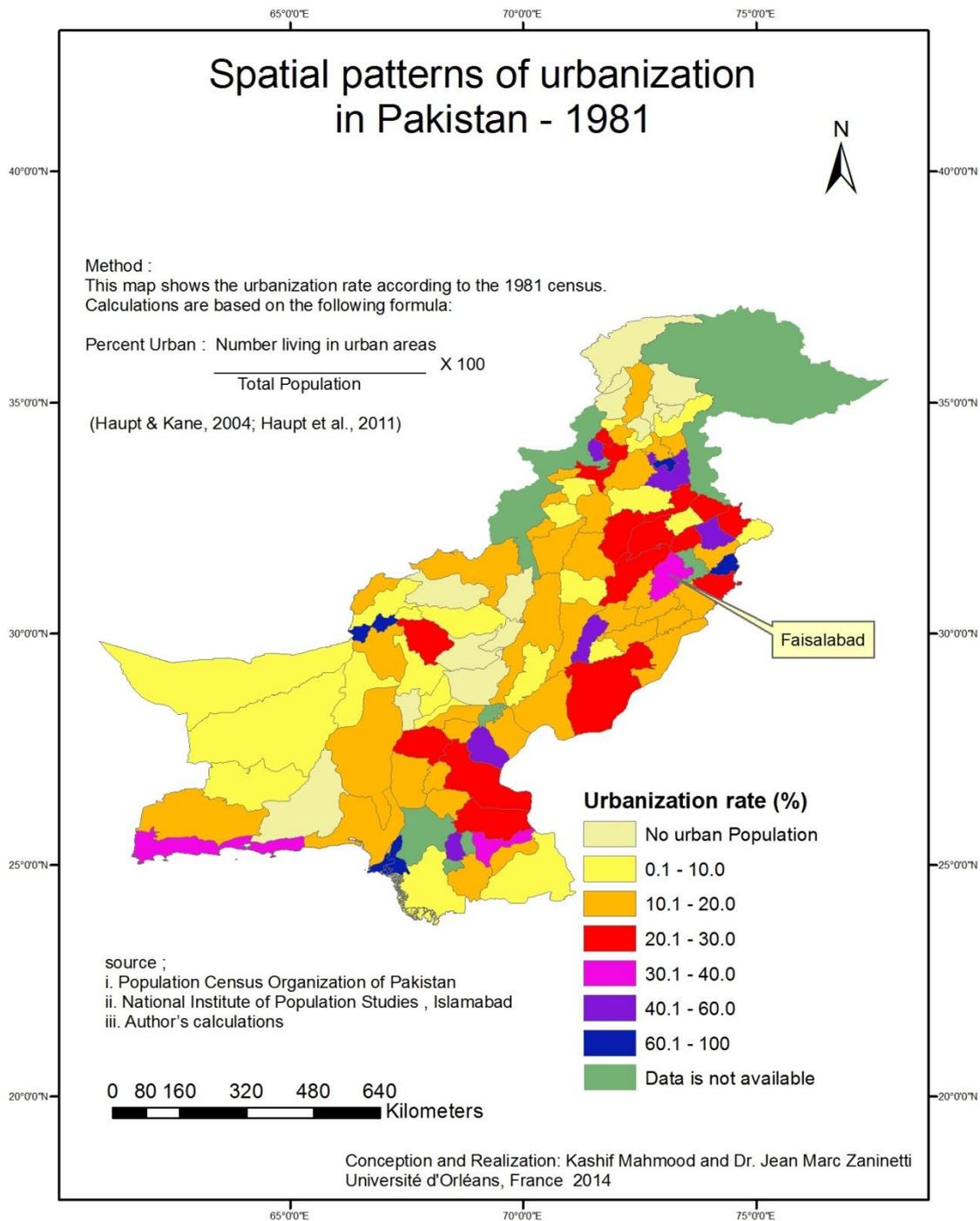
Source: Population Census Organization of Pakistan

\* Estimation

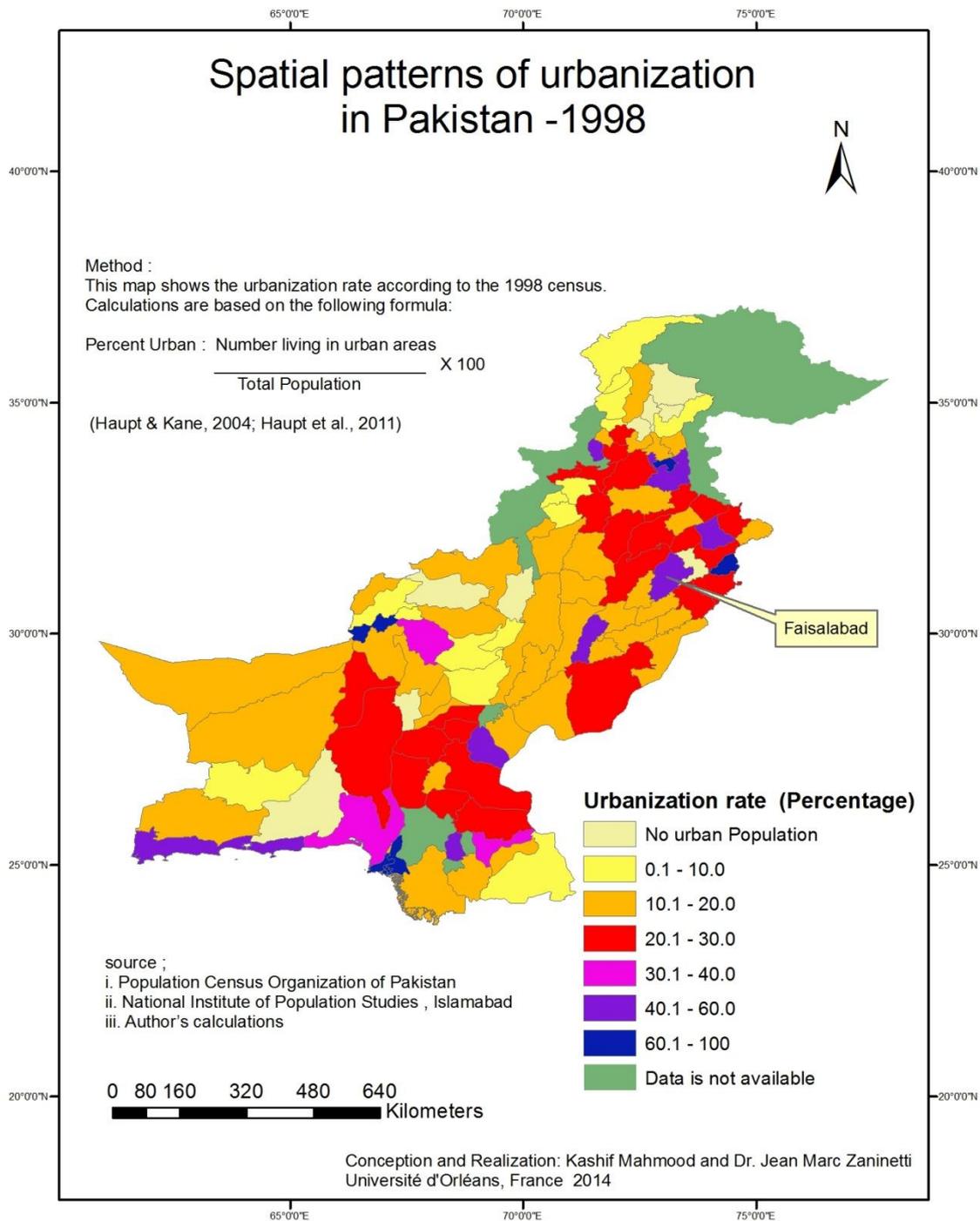
**Figure 2.25 Change in urbanization by districts from 1981 to 2014**

Source : Table 2.13

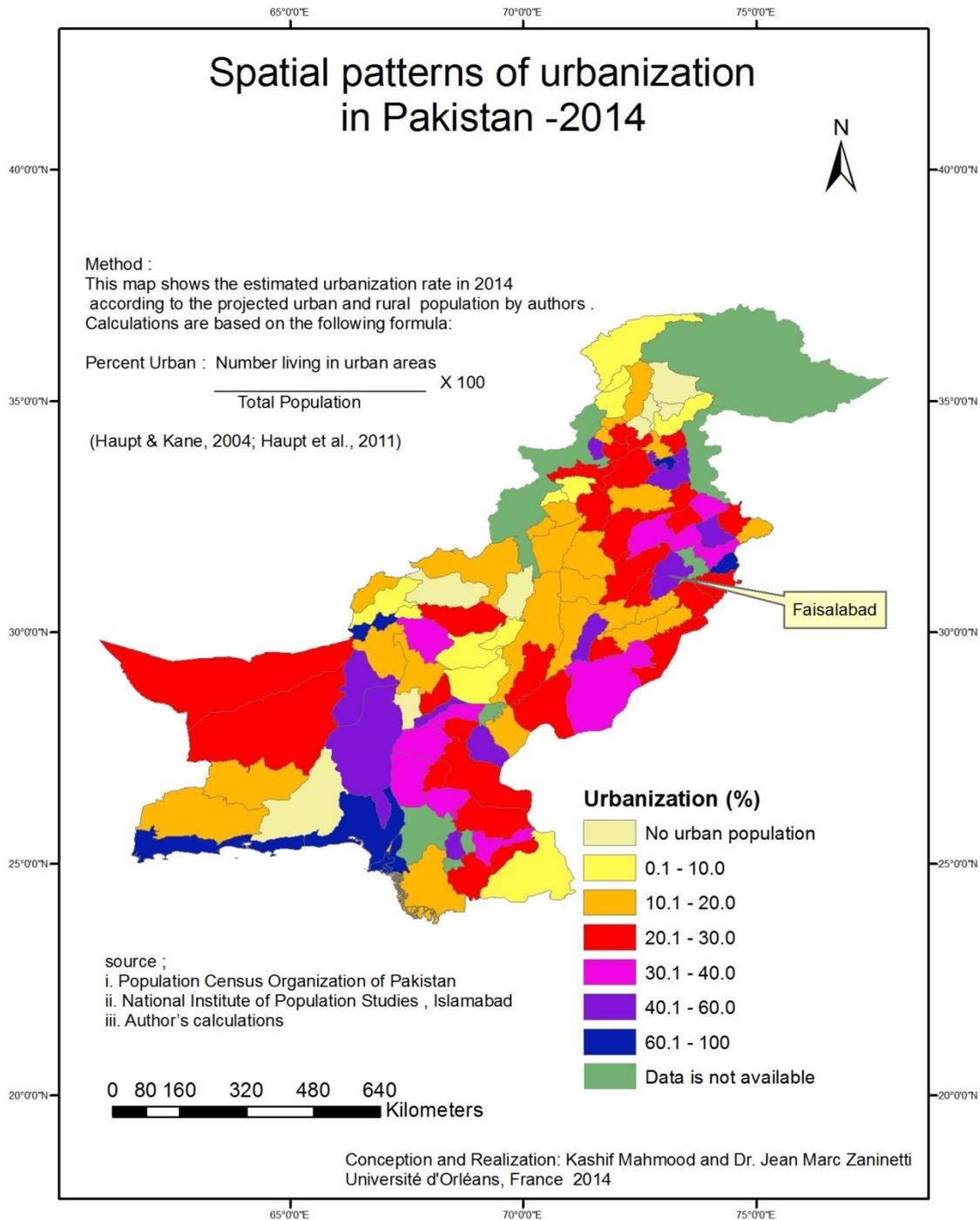
**Figure 2.26 Spatial patterns of urbanization in Pakistan-1981**



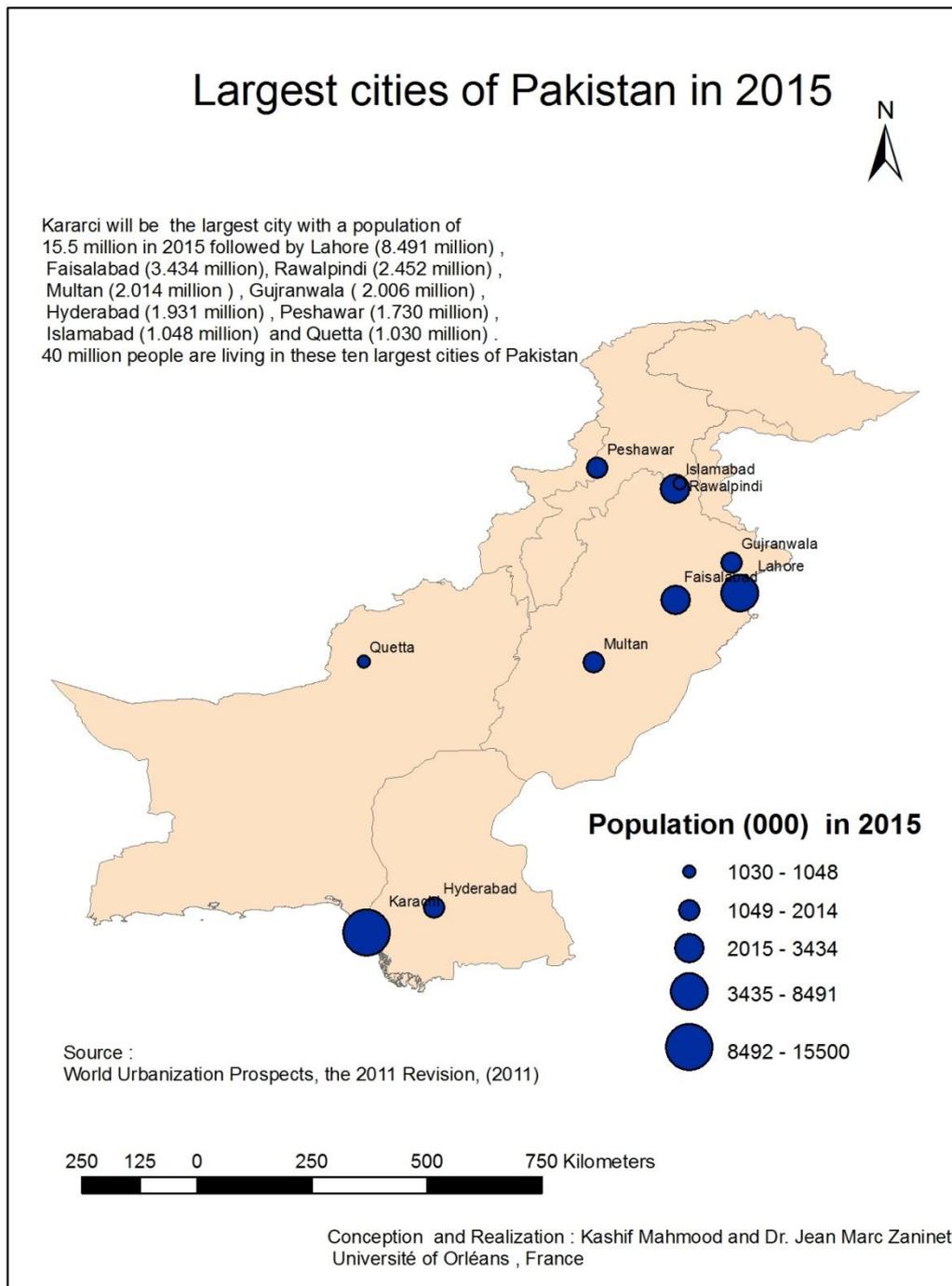
**Figure 2.27 Spatial patterns of urbanization in Pakistan-1998**



**Figure 2.28 Spatial patterns of urbanization in Pakistan-2014**



**Figure 2.29 Largest Cities of Pakistan in 2015**



### 2.1.7.6 Change in Urbanization from 1981 to 2014

Figure 2.30 shows the change in urbanization since 1981 to present. It depicts an interesting picture of urbanization in Pakistan. Balochistan has showed maximum change in urbanization but there are still many areas where there is no urban population. Negative urban change is also seen in some places which depicts that people are returning to villages.

#### Negative Change

Negative change is seen in the following regions:

<u>District</u>	<u>Province</u>	<u>Change in Urbanization</u>
Karachi West	Sindh	-13.4
Dera Ismail Khan	Khyber Pakhtunkhwa	-7.1
Tank	Khyber Pakhtunkhwa	-5.5
Bannu	Khyber Pakhtunkhwa	-5.4
Peshawar	Khyber Pakhtunkhwa	-4.6
Nowshera	Khyber Pakhtunkhwa	-4.1
Lahore	Punjab	-3.5
Charsadda	Khyber Pakhtunkhwa	-3.2
Pishin	Balochistan	-2.9
Khairpur	Sindh	-2.8
Quetta	Balochistan	-2.1
Tharparkar	Sindh	-0.5
Sialkot	Punjab	-0.4
Qilla Abdullah	Balochistan	-0.3

Maximum negative change -13.4 % is seen in Karachi West. Peshawar (Capital of Khyber Paktunkhawa ) Lahore ( Capital of Punjab ) and Quetta (Capital of Balocistan ) showed decrease in urban population .It is the indication that population of big cities are moving to neighboring or other small cities due to rising problem of pollution , housing problem , unemployment and rising crimes in the big cities.

#### Low Change in Urban Population (Below 4)

Following are the regions of Low change in urbanization:

- i. Northern Punjab districts excluding Faisalabad , Jhang, Rawalpindi , Narowal
- ii. Central Punjab districts – Multan , Muzafar garh , Khanewal
- iii. Thatta , Sanghar and Mirpur Khas in the southern sindh
- iv. A long linear belt from north to south except swabi in Khyber Pakhtunkhawa
- v. Only one district Zhob in North-West Balochistan

### **Moderate change in Urban Population (4.1 -7)**

Following are the regions of moderate change in urbanization:

- i. Panjgur and Kech in the southern Balochistan
- ii. A East –West Belt of districts(Mastung , Ziarat , Sibi , Kohlu , Dera Bugti ) in the northern Balochistan
- iii. A linear belt from North to South excluding Bhakar from Punjab to Northern Sindh - Jehlum (Northern Punjab ) to Ghotki ( south sindh )
- iv. Narowal , Sargodha , Jhang and Vehari from Punjab
- v. Abbottabad , Chitral and Laki Marwat from Khyber Pakhtunkhwa

### **Maximum change in Urban Population (7.1 – 46)**

Following regions show maximum change in urban population:

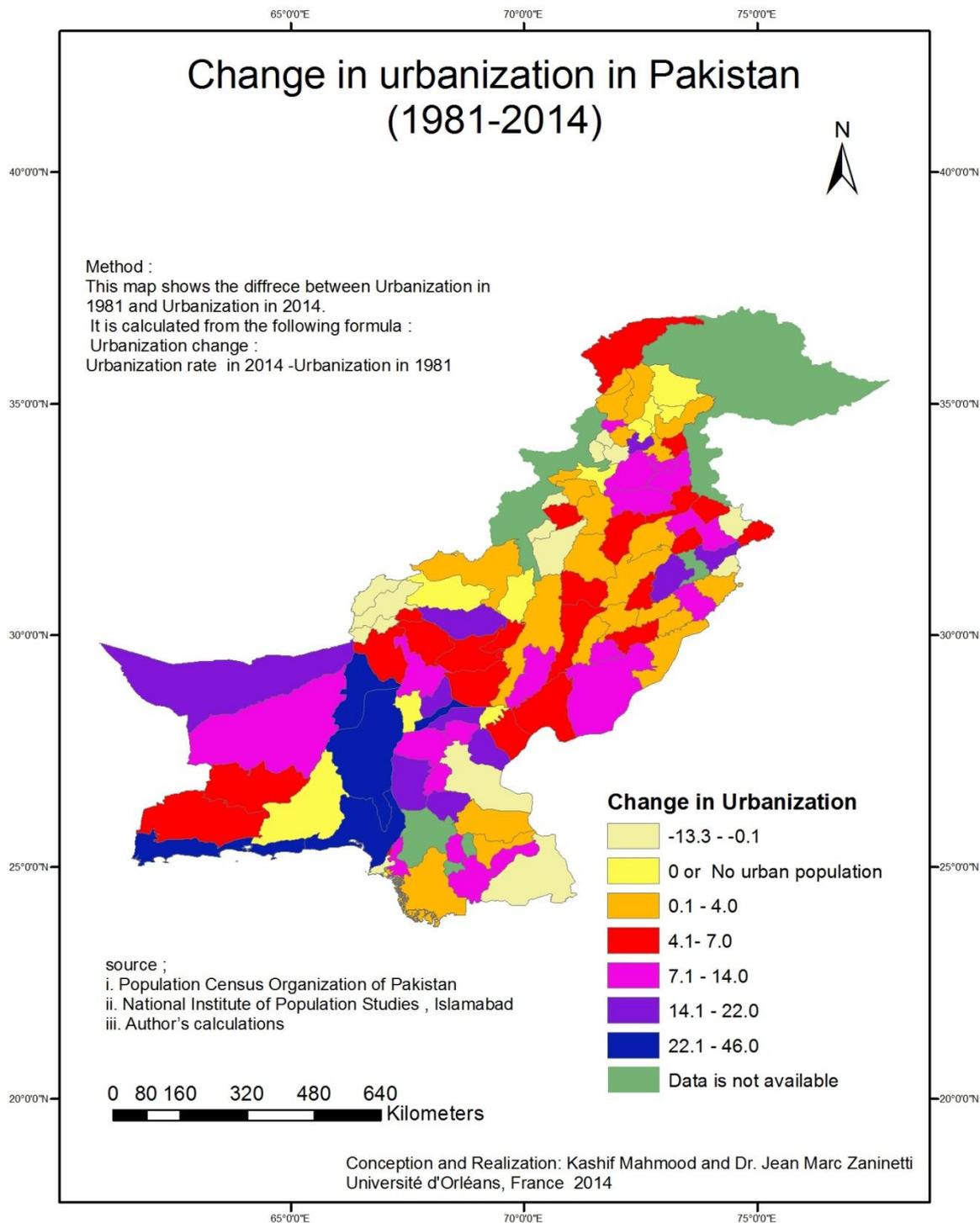
- i. Whole Balochistan except areas mentioned in moderate change category
- ii. The southern Punjab excluding Rahim Yar Khan
- iii. Faisalabad and Gujranwala from the central Punjab
- iv. The northern Punjab
- v. Islamabad
- vi. The northern districts of Khyber Pakhtunkhwa

Following districts show maximum change in the urbanization level:

<b><u>District</u></b>	<b><u>Province</u></b>	<b><u>Urbanization change</u></b>
Lakki Marwat	Khyber Pakhtunkhwa	7.0
Layyah	Punjab	7.1
Chitral	Khyber Pakhtunkhwa	7.2
Hafizabad	Punjab	7.5
Sibi	Balochistan	7.9
Kohlu	Balochistan	8.0
Bolan	Balochistan	9.0
Chakwal	Punjab	9.1
Umer Kot	Sindh	9.1
Bahawalpur	Punjab	9.3
Naushahro Feroze	Sindh	9.6
Shikarpur	Sindh	9.7
Lodhran	Punjab	10.1
Okara	Punjab	10.3
Rawalpindi	Punjab	10.4
Islamabad	Islamabad	10.5
Malakand P.A.	Khyber Pakhtunkhwa	10.5
Rajanpur	Punjab	11.0
Kharan	Balochistan	11.9
Gujranwala	Punjab	12.8

Hyderabad	Sindh	13.0
Mandi Bahauddin	Punjab	13.3
Attock	Punjab	13.3
Malir	Sindh	13.6
Larkana	Sindh	13.7
Badin	Sindh	13.8
Nawabshah	Sindh	14.8
Sukkur	Sindh	15.0
Faisalabad	Punjab	15.3
Dadu	Sindh	16.0
Loralai	Balochistan	17.5
Sheikhupura	Punjab	17.6
Jacobabad	Sindh	19.8
Swabi	Khyber Pakhtunkhwa	20.0
Chagai	Balochistan	20.4
Nasirabad	Balochistan	22.7
Gwadar	Balochistan	29.4
Kalat	Balochistan	32.5
Jafarabad	Balochistan	34.7
Khuzdar	Balochistan	43.4
Lasbela	Balochistan	46.1

**Figure 2.30 Change in urbanization in Pakistan (1981-2014)**



## 2.1.8 Household composition in Pakistan

### 2.1.8.1 Introduction

As stated in the first chapter- theoretical concepts that family and household are two different terms but these are interrelated concepts. The family is a social group that is based on marriage and united by ties of kinship, with a common household while the household is not necessarily a family; it is only a group of people living together. It is very difficult to differentiate family and household in the Pakistani society because there is no concept of households without marriage and ties of kinship and all households in Pakistan are family household with an exception of a small proportion the male households (boys hostels , male workers living together ) and the female households (girls hostel ). Mixed household (male and female) without marriage is not only acceptable but also illegal in Pakistan. Sex outside marriage is strictly forbidden both by state law, teachings of Islam, and traditions in the Pakistani society.

It is quite interesting to study household composition because of its variation with regions, rural-urban composition, economic status, education level and traditions. Unfortunately , all census of Pakistan did not collect the data of family /household type however we can study household by using other valuable indicators like average household size , sex ratio , marital status , age structure and sex composition , from the available data .

### 2.1.8.2 Measurements

#### Average Household size

We used following formula for calculating an average household size at the national and at the district level:

$$\text{Average Household size} = \frac{\text{Number of people living in Household}}{\text{Total Households}}$$

(Clarke, 1972; Haupt & Kane, 2004; Haupt et al., 2011)

### Sex Ratio

Sex ratio according age groups is most interesting, particularly in the young adult population.

We used following formula for calculating sex ratio at the national and at the district level:

$$\text{Sex Ratio} = \frac{\text{Number of males}}{\text{Number of Females}} \times 100$$

(Clarke, 1972; Haupt & Kane, 2004; Haupt et al., 2011)

### Age and Sex Composition

Age and sex are the most important characteristics of a population. Every population has a different age and sex composition- the number and proportion of males and females in each age group (Haupt & Kane, 2004). Population pyramid are commonly used to study age and sex composition of a population (Blij, 1995; Clarke, 1972).

#### **2.1.8.3 Average Household size**

Figure 2.41 shows that average household size in Pakistan declined slightly from 6.7 in 1981 to 6.6 in 1998. It reached to the maximum level of 8.8 in FATA followed by Khyber Pakhtunkhwa (7.6). Household size was only 5.8 (minimum) in the Sindh and it declined from 7 according to the census of 1981. Household in Punjab was 6.8 in the census of 1998 while it was 6.4 in 1981.

Household size in 2012 was taken from household Integrated Economic Survey (HIES) 2011-12 which was conducted by Pakistan bureau of statistics. Results were based on the sample size of 15807 households from all over the Pakistan representing all administrative units so these figures are based on the survey so it showed a large difference in household size with 1998 census particularly in Sindh and Balochistan and it is the finding of survey and it should be not considered as the census statistics as in 1998 and 1998. At the same time, vide contrast in household size might be due to the destructions of houses during military operation against Taliban, terrorist attacks and floods. It also might be the shortage of newly constructed housing units as compared to the rapid increase in population.

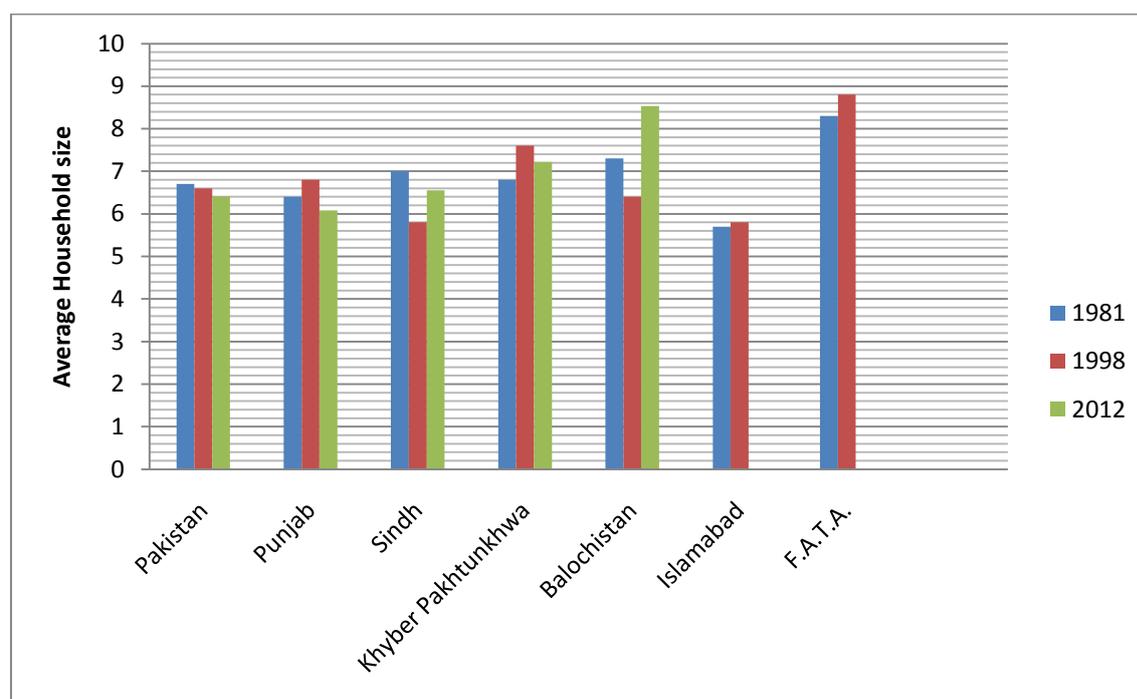
**Table 2.14 Average Household size in Pakistan by administrative units**

	Average Household size		
	1981	1998	2012*
<b>Pakistan</b>	6.7	6.6	6.41
Punjab	6.4	6.8	6.08
Sindh	7	5.8	6.55
Khyber Pakhtunkhwa	6.8	7.6	7.22
Balochistan	7.3	6.4	8.53
Islamabad	5.7	5.8	---
F.A.T.A.	8.3	8.8	----

\* ("Household Integrated Economic Survey (HIES) 2011-12," 2012)

Source : i. Population census organization of Pakistan

ii. Pakistan Bureau of Statistics

**Figure 2.31 Average household size in Pakistan by administrative units 1981-2012**

Source : Table 2.14

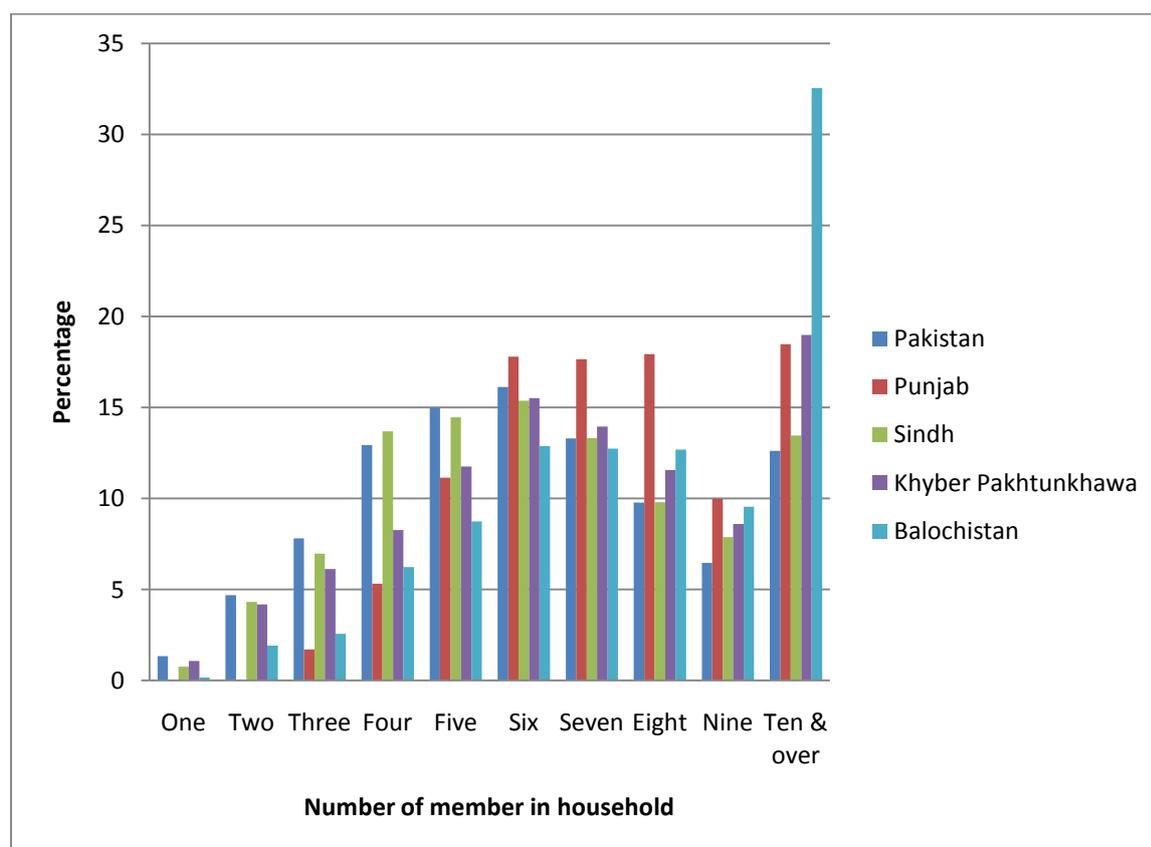
Figure 2.32 shows the percentage of household by number of members in 2012. In Pakistan, Large proportion of household lies in 6 member households (16.13 %), followed by five member household (14.96%) and seven members household (13.30%). 1.34 % households possess one member household in Pakistan. Balochistan contains 32.53% households of ten members and above followed by Khyber Pakhtunkhawa (18.98%), Punjab (18.48%), and

Sindh (13.46%). Large household size in Balochistan indicates large family size and the shortage of houses. Not a single household of one and two members is present in Punjab.

**Table 2.15 Percentage of household by number of members in Pakistan-2012**

<b>Number of Members of Household</b>	<b>Pakistan</b>	<b>Punjab</b>	<b>Sindh</b>	<b>Khyber Pakhtunkhawa</b>	<b>Balochistan</b>
One	1.34	0.00	0.77	1.08	0.16
Two	4.69	0.00	4.32	4.18	1.92
Three	7.81	1.70	6.97	6.12	2.57
Four	12.94	5.32	13.68	8.26	6.24
Five	14.96	11.14	14.45	11.76	8.74
Six	16.13	17.78	15.37	15.51	12.88
Seven	13.30	17.65	13.31	13.94	12.74
Eight	9.77	17.93	9.79	11.57	12.68
Nine	6.46	9.99	7.88	8.60	9.54
Ten & over	12.61	18.48	13.46	18.98	32.53

Source: Pakistan Bureau of Statistics

**Figure 2.32 Percentage of household by numbers of members in Pakistan-2012**

Source: Table 2.15

Figure 2.33 shows the spatial patterns of household size in Pakistan. We can easily find four clear cut and dominant uniform patterns of average household in Pakistan.

#### **Pattern 1 (Average Household size above 8)**

This pattern is restricted to the districts of Khyber Pakhtunkhwa and it makes a linear belt from North to south. Only one district-Quetta from Balochistan is included in this group.

#### **Pattern 2 (Average household size from 7.1 to 8)**

Following areas depict this pattern:

- i. The southern Punjab
- ii. Few districts in the northern Balochistan
- iii. Districts of the central Punjab– Faisalabad, Jhang, Sargodha, Lahore, Narowal, Layyah)
- iv. Chitral, upper Dir , Swabi and Kohat from Khyber Pakhtunkhawa.

#### **Pattern 3 (Average household size from 6.1 to 7)**

It is the most widespread pattern and can be seen in all provinces. It starts from the Kohistan (Khyber Pakhtukhawa) in the North and extends towards Punjab through covering northern Punjab and reaches Bahawalpur district (the southern Punjab) Majority of the districts in Punjab falls in this pattern of household.

Two districts along with Karachi from Sind and 11 districts from the Balochistan depict this pattern.

**Pattern 4 (Average household size from 5.1 to 6)**

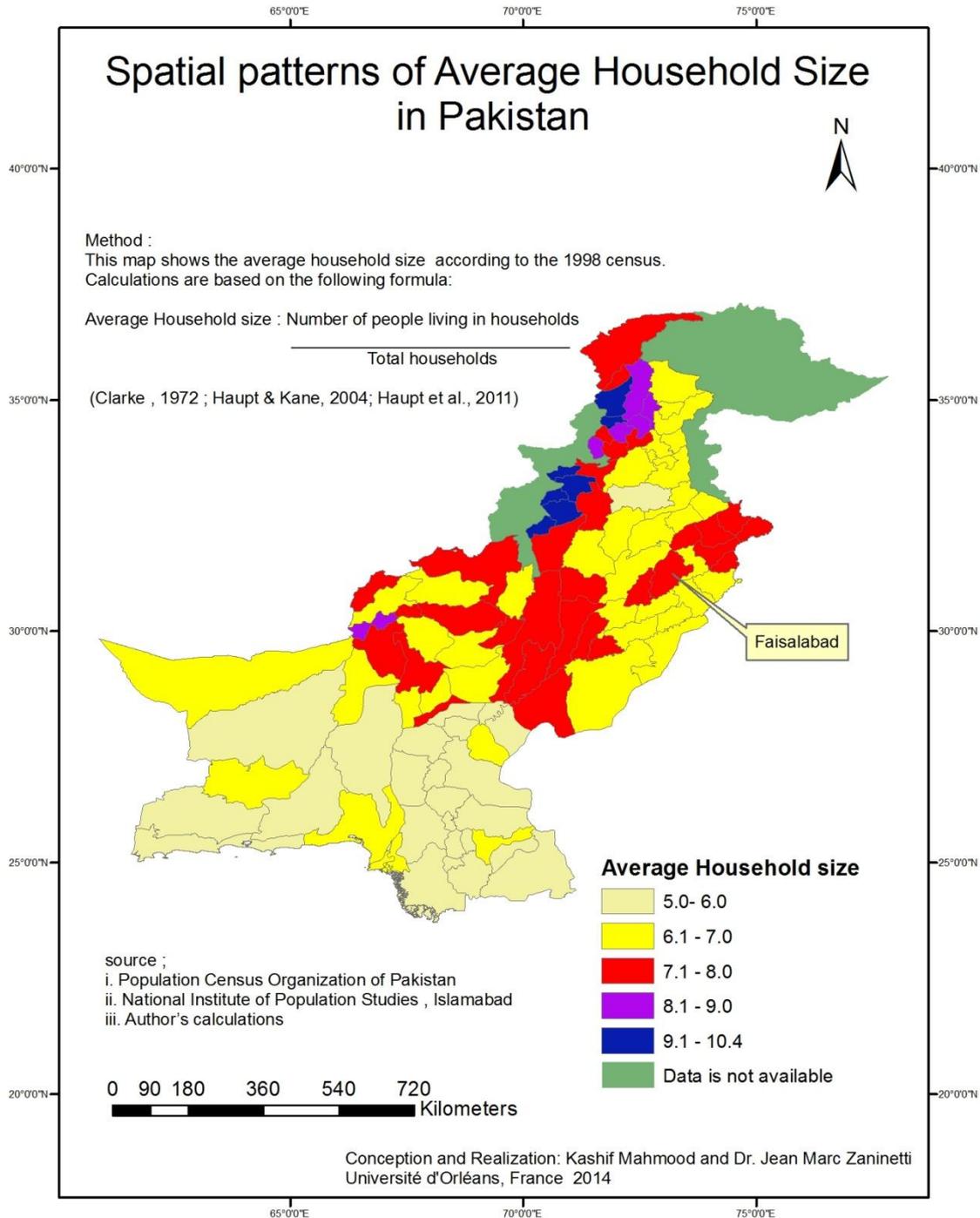
This pattern is dominant in the southern parts of Pakistan. We can this pattern in the following regions:

- i. Whole Sindh excluding sukkur and Mirpur Khas
- ii. Southern Balochistan excluding Panjgur and Lasbela district
- iii. One district (Chakwal ) from Punjab

Figure 2.34 shows the spatial spread of households in Pakistan. Maximum numbers of household are present in the following regions:

- i. Upper Indus Plain (Punjab )
- ii. Lower Indus Plains (Sindh )
- iii. North-western sub-mountain region from khyber Pakhtunkhawa

**Figure 2.33 Spatial patterns of average household size in Pakistan-1998**



**Figure 2.34 Spatial patterns of average household size in Pakistan-1998**

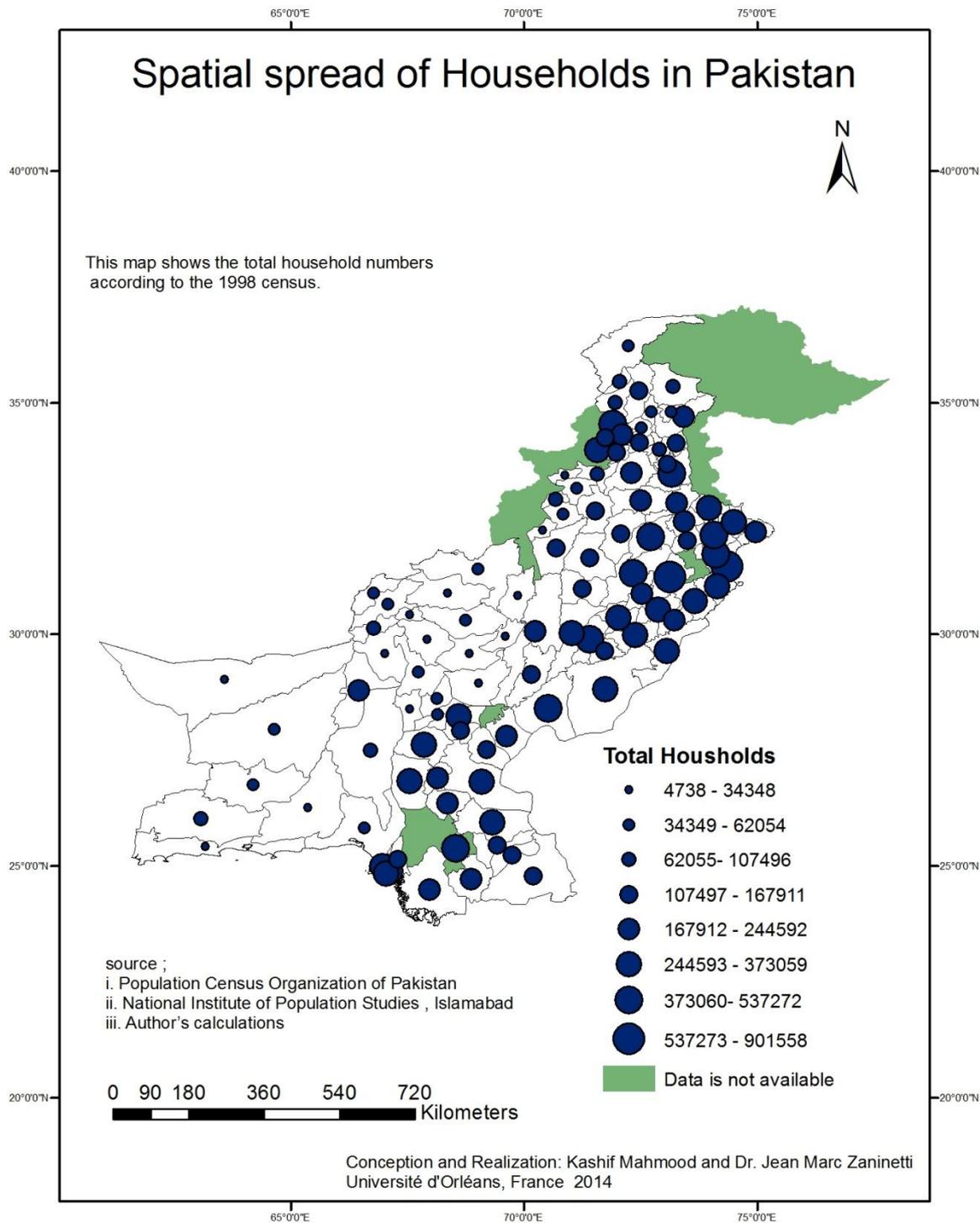
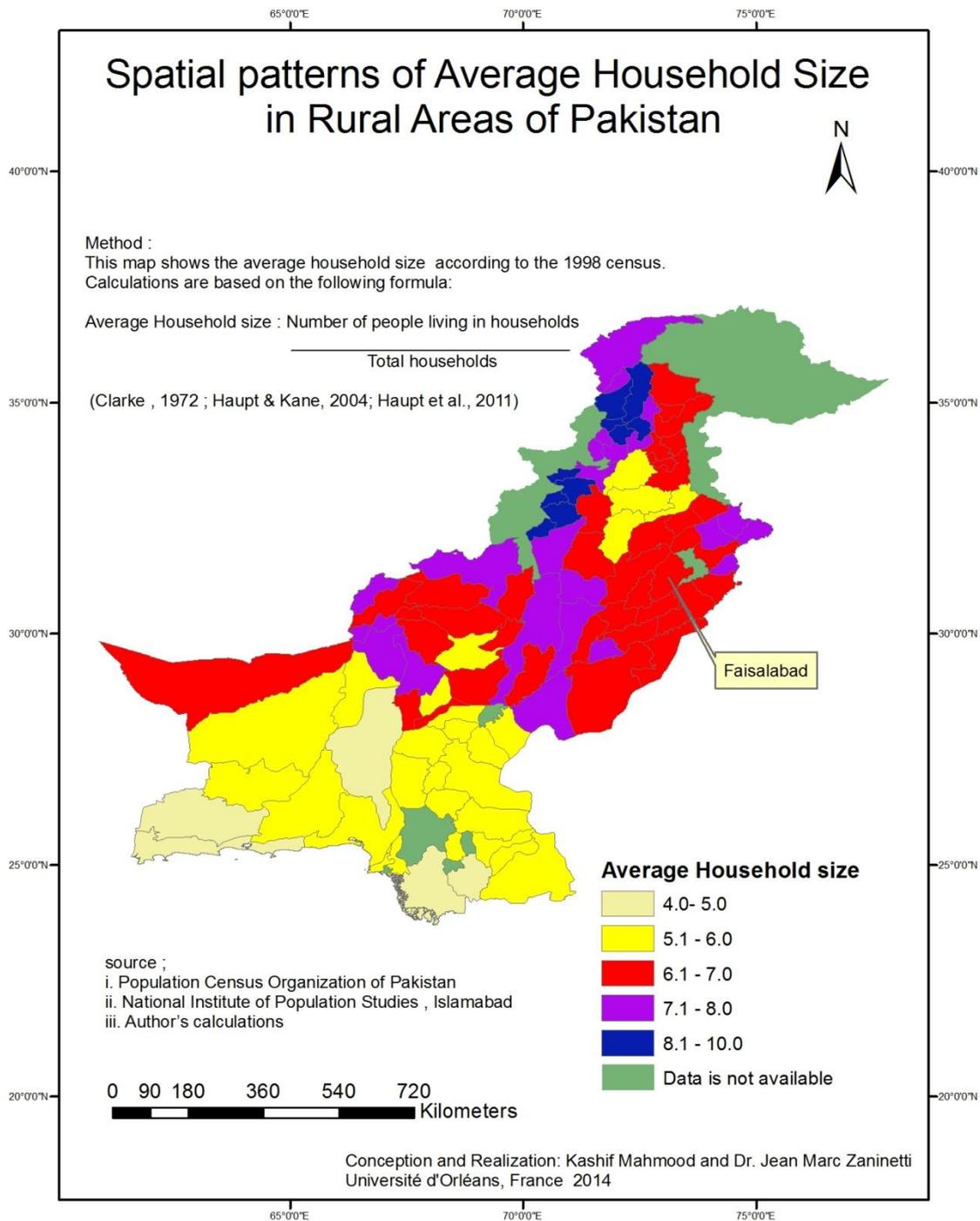


Figure 2.35 shows the spatial patterns of average household size in rural areas of Pakistan. It ranges from 4.0 to 10. Average rural household size ranges from 6.1 -7.0 in whole Punjab , Northern Balochistan and northern districts of Khyber Pakhtawankhawa where as in Whole Sindh and southern Balochistan it ranges from 5.1 to 6.0 . Maximum average rural household size is seen in Khyber PakhtawanKhawa and southern Punjab. It shows the shortage of housing and large family size in these areas.

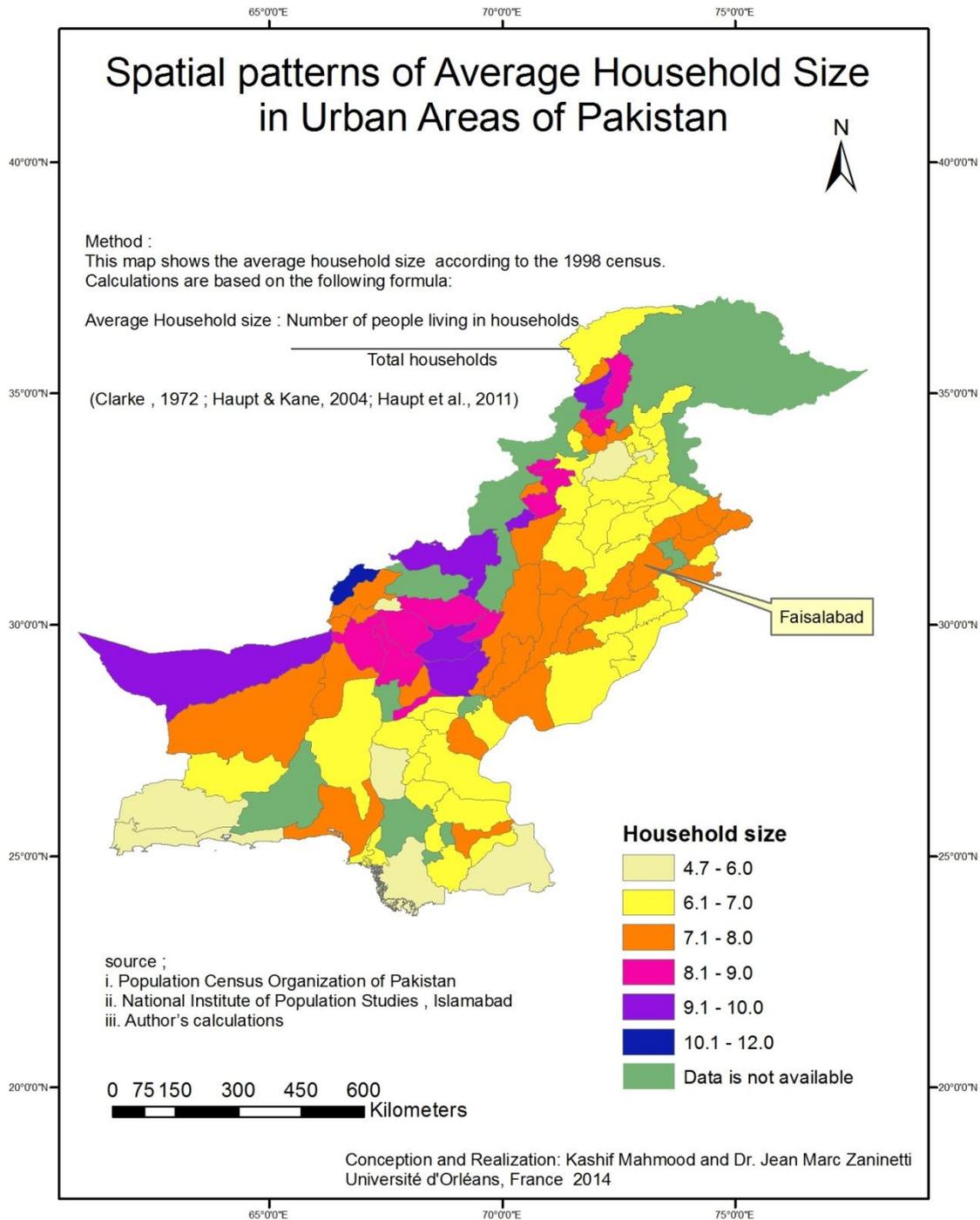
Figure 2.36 shows the spatial patterns of average household size in urban areas of Pakistan. It ranges from 4.7 to 12.0 . Households are larger in the urban areas than in rural areas. Dominant pattern of household size ranges from 6.0 to 8.0 in which whole Punjab and Sindh Province is included. Average household below six is present southern districts of Pakistan and in one district of northern Punjab along with Pishin (Balochistan) .

Figure 2.37 shows the difference in average household size between urban and rural areas in Pakistan. Rural household size is larger than urban household size in Khyber PakhtoonKhawa and in the southern Punjab. Difference is less than 1 in whole Punjab, few districts from Balochistan , Khyber PakhtoonKhawa and the Sindh. Difference is between 1.0 and 2.0 in central districts of Sindh and Balochistan. Maximum positive difference between average household size is present in the northern districts of Balochistan.

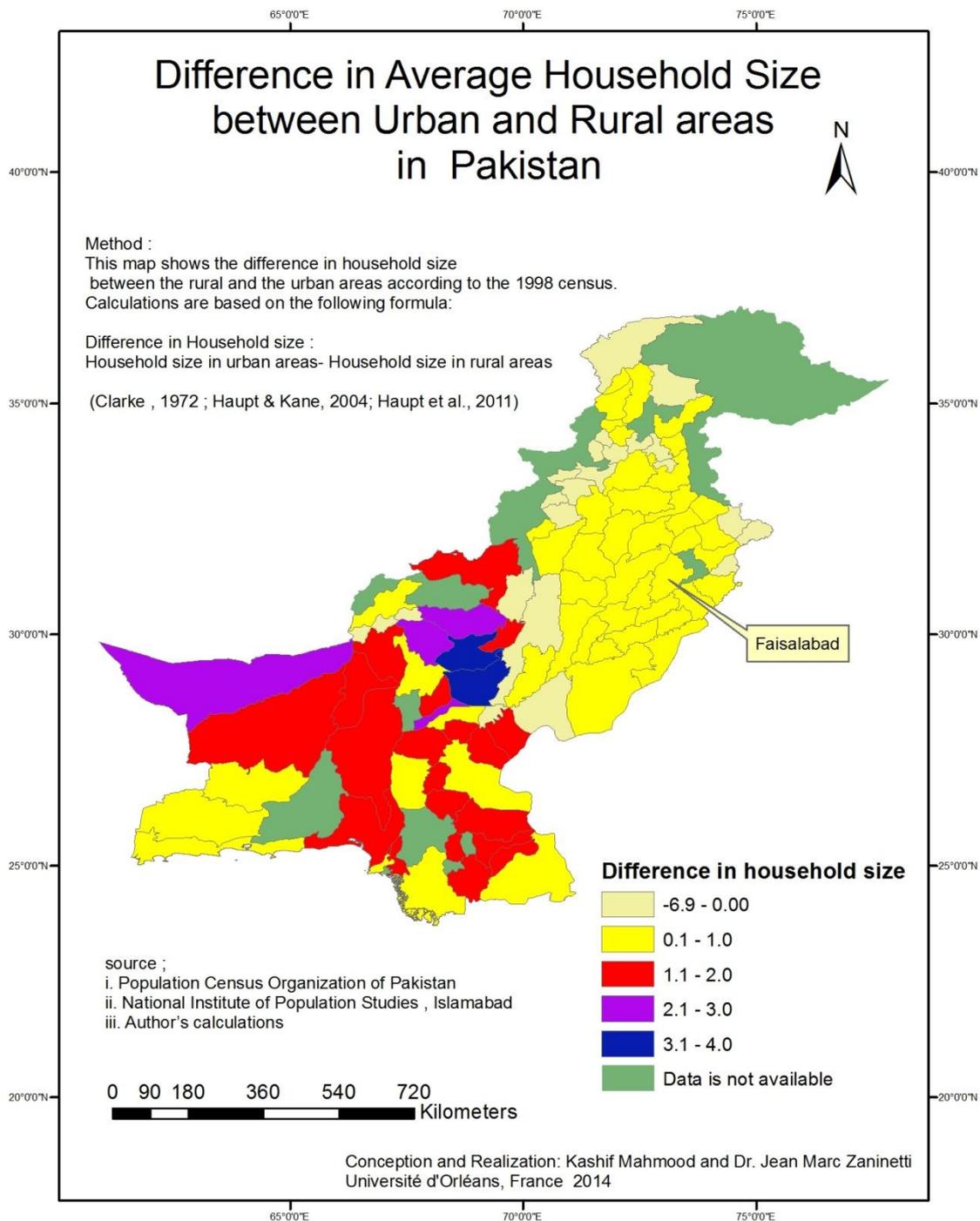
**Figure 2.35 Spatial patterns of average household size in rural areas of Pakistan**



**Figure 2.36 Spatial patterns of average household size in urban areas of Pakistan**



**Figure 2.37 Difference in average household size between urban and rural areas in Pakistan**



#### 2.1.8.4 Sex Ratio

Figure 2.38 shows the sex ratio in Pakistan since 1951. Sex ratio was at the peak of 116.4 in 1951 which was the indication of gender discrimination and under-enumeration of females due to illiteracy, veil, and feeling of shame in telling about their females. Sex ratio continued to decrease in Pakistan from 1951 to present. It means that enumeration process has improved a lot and at the same time, discrimination against the fragile sex is also decreasing.

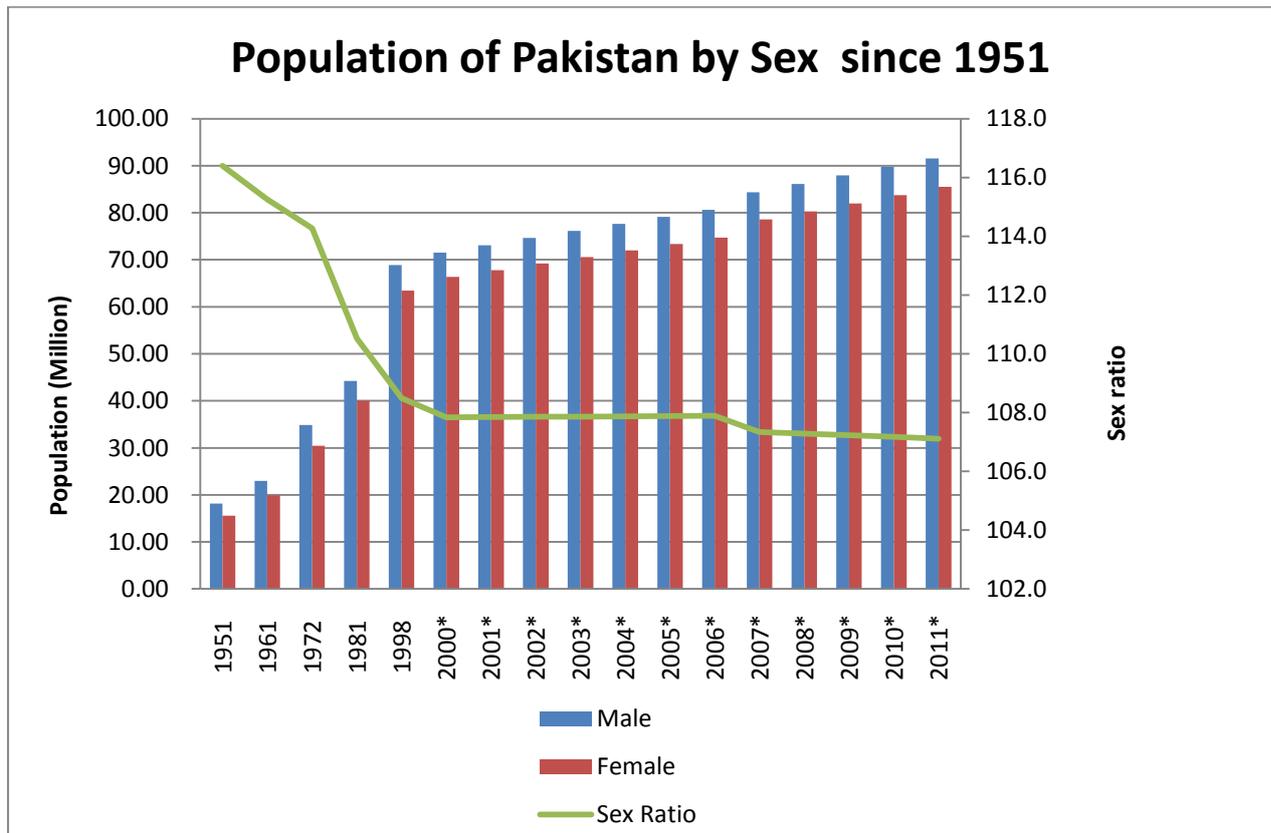
**Table 2.16 Sex Ratio in Pakistan since 1951**

Year	Male	Female	Sex Ratio
1951	18.17	15.61	116.4
1961	22.96	19.92	115.3
1972	34.83	30.48	114.3
1981	44.23	40.02	110.5
1998	68.87	63.48	108.5
2000*	71.56	66.36	107.8
2001*	73.10	67.78	107.8
2002*	74.63	69.19	107.9
2003*	76.15	70.60	107.9
2004*	77.66	71.99	107.9
2005*	79.15	73.37	107.9
2006*	80.63	74.73	107.9
2007*	84.34	78.57	107.3
2008*	86.13	80.28	107.3
2009*	87.94	82.01	107.2
2010*	89.76	83.75	107.2
2011*	91.59	85.51	107.1

Source : i. Pakistan Bureau of Statistics

ii. Population Census Organization of Pakistan.

**Figure 2.38 Changes in sex ratio in Pakistan since 1951**



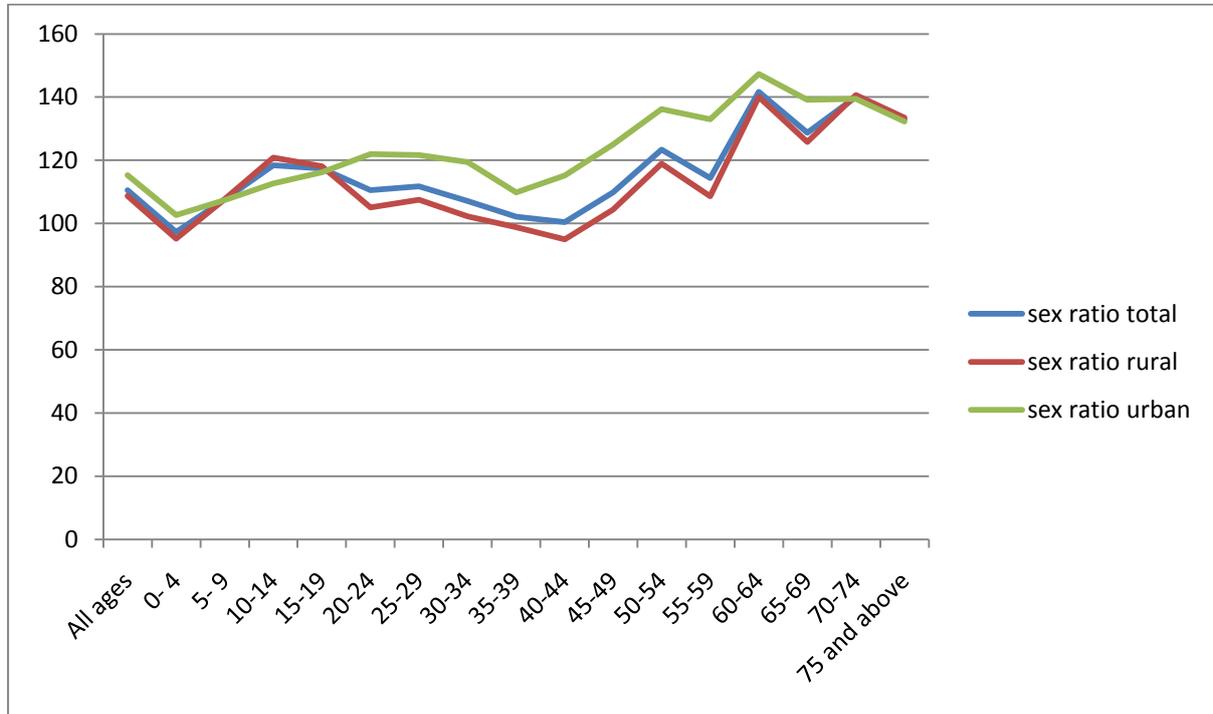
Source: 2.16

Sex ratio has decreased from 110.5 (1981) to 108.50 (1998) in Pakistan. Sex ratio according to age group is presenting a significant and interesting story of Pakistani society. Sex ratio was only 97 in age group 0-4 in 1981 and it has increased to 104 in 1998. Many questions arise in it. Is it improvement in the enumeration process? Is desire of son is increasing during these 17 years? Is gender discrimination cause of this difference? As far as first question concerned, it might not be under-enumeration because people feel shame in telling about females but it is not applicable because females are lesser than males. Second and third questions seemed to be valid because illegal selective abortions might be increased due to advancement in medical sciences. Daughters do not get proper diet and care and results into the deaths of females in age group 0-4. According to 1998 census, Sex ratio continued to increase to age group 10-14 and reached to 113.89. From age group 10-14, it continuously decreased 100.7 in age group 20-24. It again rose to maximum at 123.2 in age group 70-74.

We also found difference in sex ratio between urban and rural areas. Overall, sex ratio in rural areas was 106 and 112 in urban areas. Sex ratio in urban areas has reached to maximum

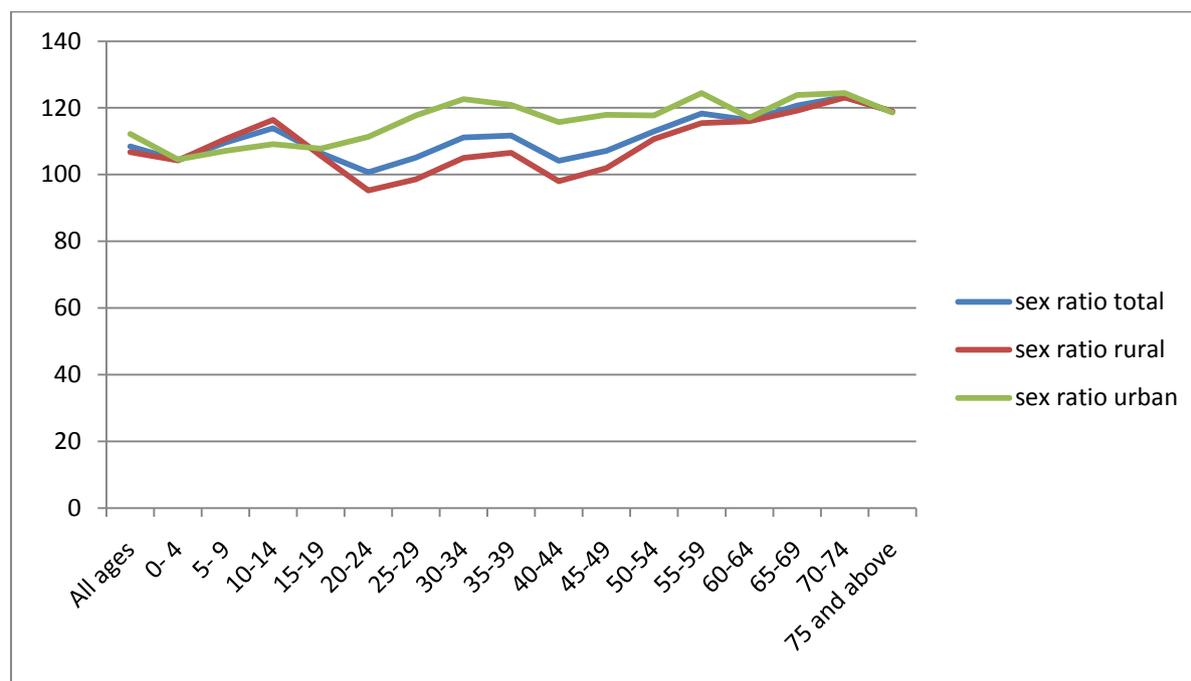
level from age group 20-24 (111.30) to age group 30-34 (122.59). The gap in sex ratio in rural and urban areas reached to maximum in the age group 20 to 34 due to the migration of young males to cities for job. (Figure 2.39 and Figure 2.40)

**Figure 2.39 Sex ratio by rural and urban areas according to age group in Pakistan , 1981**



Source: Population Census Organization of Pakistan

**Figure 2.40 Sex ratio by rural and urban areas according to age group in Pakistan, 1998**



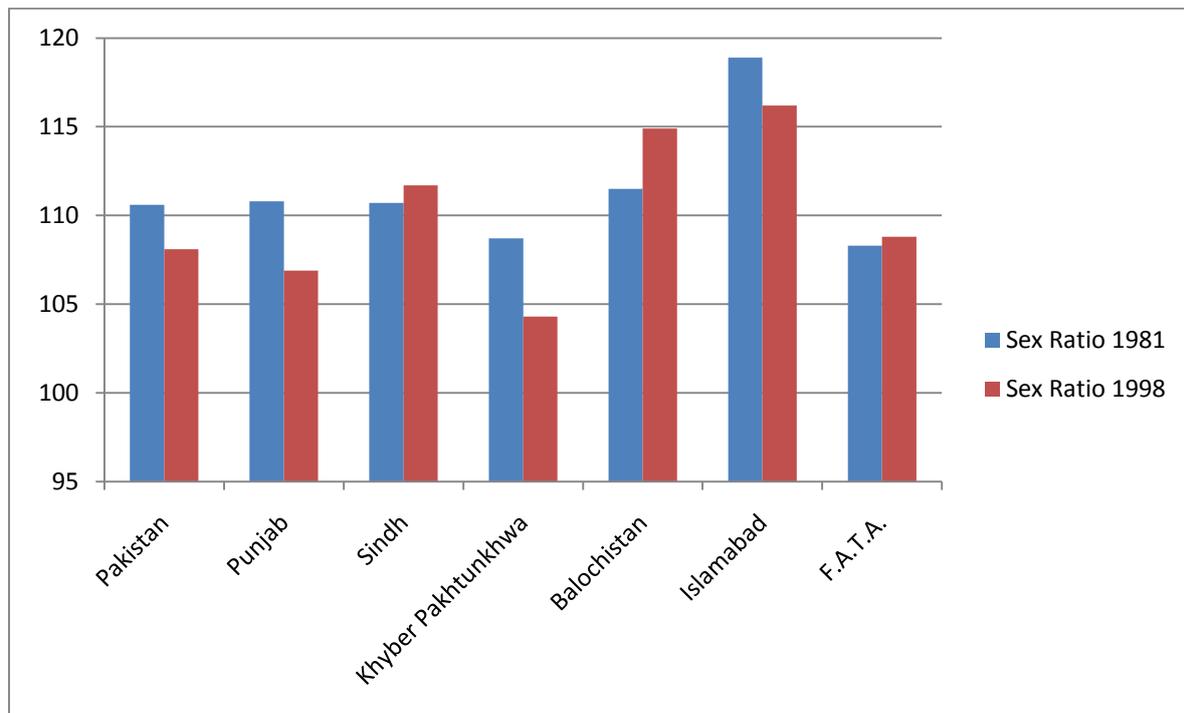
Source: Population Census Organization of Pakistan

Figure 2.41 shows the variations in sex ratio at province level. Sex ratio declined at national level from 110.9 in 1981 to 108.1 in 1998. It showed improvement in the enumeration process through controlling the under-enumeration of females in the various parts of Pakistan. It might be result of the improvements in life expectancy of females and decreasing gender discrimination. The sex ratio of Sindh and Balochistan slightly increased from 110.7 to 111.7 and 111.5 to 114.9 respectively. These unnatural ratios can be related to different factors, lower life expectancy, higher discrimination, widespread under-enumeration, etc. In Karachi, it may also be related to domestic labor migrations.

**Table 2.17 Sex Ratio in Pakistan by provinces**

	Sex Ratio	
	1981	1998
Pakistan	110.6	108.1
Punjab	110.8	106.9
Sindh	110.7	111.7
Khyber Pakhtunkhwa	108.7	104.3
Balochistan	111.5	114.9
Islamabad	118.9	116.2
F.A.T.A.	108.3	108.8

Source: Population Census Organization of Pakistan

**Figure 2.41 Variations in the sex ratio in Pakistan by provinces**

Source: Table 2.17

Figure 2.42 shows the spatial patterns of sex ratio in Pakistan. Sex ratio varies from 91.6 % in Chakwal (Punjab) to 126.8 % in Malir district of Karachi (Sindh). Sex ratio below 100 is seen in northern part of Pakistan. War against terrorism, insecurity, migration of males to cities in

search of jobs and international migration are the possible causes of fewer males than females or the reverse. Only one district Buner from Khyber Pakhtunkhwa had a balanced sex ratio of 100.

If we look at the overall trend of sex ratio, we are confident in saying that the sex ratio increased from north to south. The sex ratio is at a maximum in the big cities of Pakistan like Karachi, Lahore, Islamabad, Faisalabad and Sukkur. The main reason for the disturbed sex ratio is sex-selective migration towards big cities for jobs. Only the male member of the family leaves a village or a small town and moves towards a big city. Accommodation is very expensive in the big cities, so a male migrant cannot move his whole family to a city. Improvements in transportation facilities also decrease the distance. Latest communication through mobile and Skype also plays an important role in the communication of a male migrant with his family, so he prefers to live alone in a city and remains in contact with his family through Skype and frequent visits to his hometown.

Sex ratio is also high in whole Balochistan, the southern Punjab, whole Sindh and the northern Khyber Pakhtunkhwa. The reason for a high sex ratio in Balochistan might be due to under-enumeration of females and gender discrimination. High sex ratio in the southern Punjab, rural Sindh and northern part of Khyber Pakhtunkhwa is due to under-enumeration of females and gender discrimination.

All districts of northern Punjab have a sex ratio from 105 to 110, while few districts in the northern Punjab and Khyber Pakhtunkhwa have a sex ratio from 100.1 to 105. Under-enumeration of females is also present in the rural Punjab where providing information regarding female members of the family is considered against their so-called prestige. It may be the result of outmigration from these regions.

**Figure 2.42 Spatial patterns of sex ratio in Pakistan**

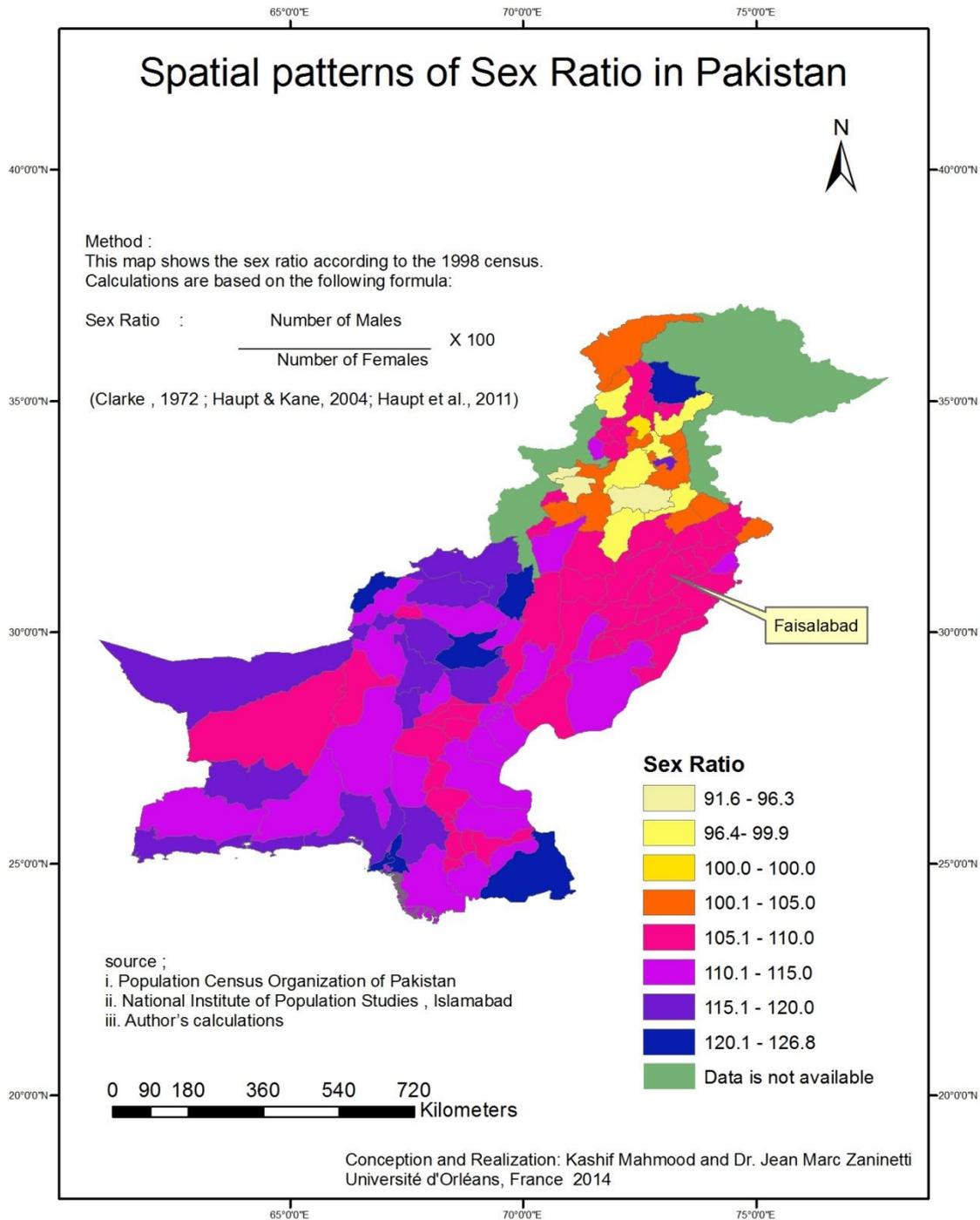
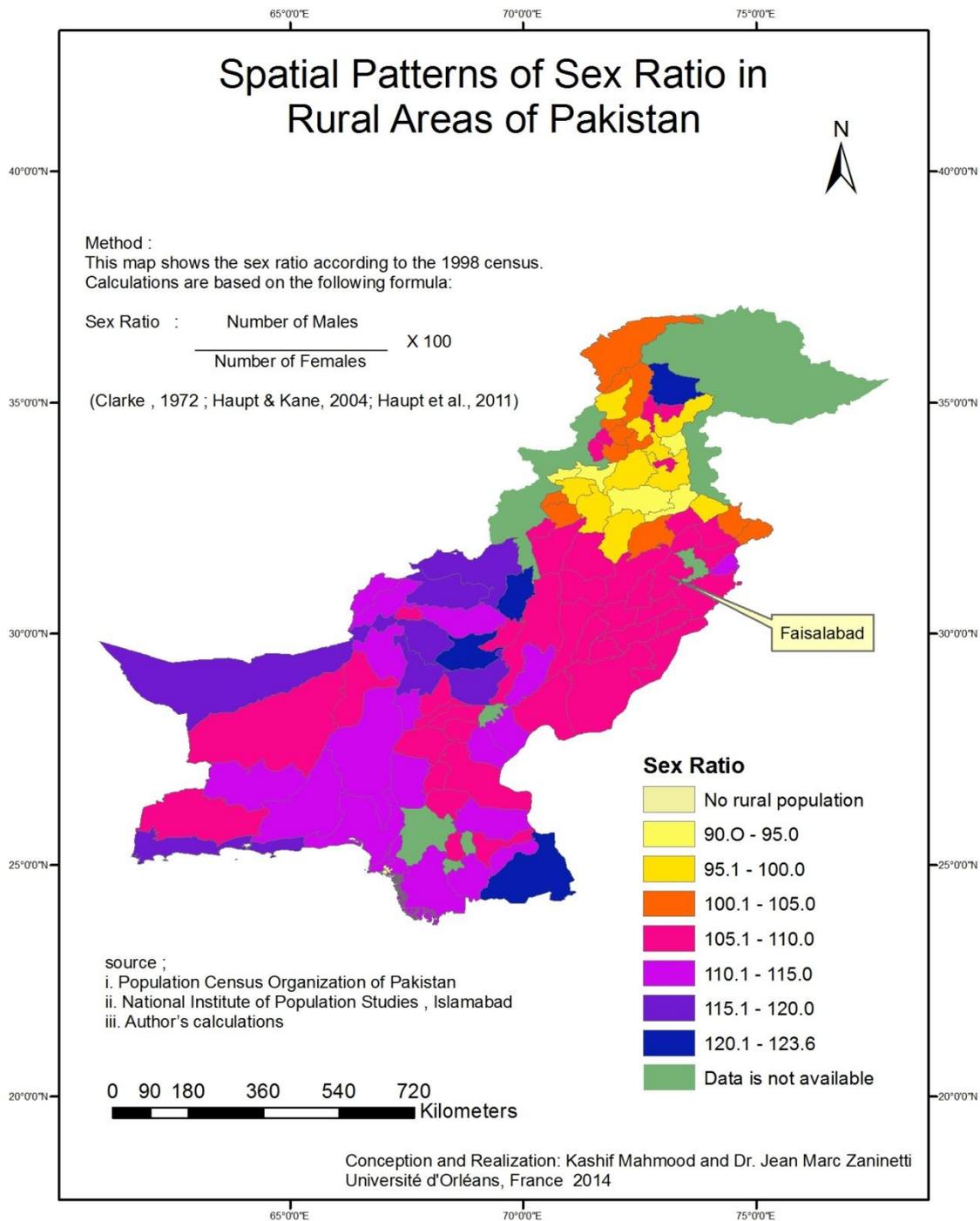


Figure 2.43 and Figure 2.44 show the spatial patterns of sex ratio in rural and urban areas of Pakistan at district level. Sex ratio in rural areas ranged from 90.0 to 123.6. Rural Sex ratio is less than 100 in the northern areas of Pakistan and mostly districts from Khyber Pakhtun Khawa have sex ratio less than 100. It is due to the under-enumeration of females in the census and desire of son. It may be due to out-migration of males to cities or abroad for jobs. Deaths of males during war might be the cause. Adjoining these districts, few districts fall in the category of sex ratio from 101-105. Maximum districts in Punjab and Sindh have rural sex ratio 105 to 110. High rural sex ratio is seen in the districts of Balochistan and southern Sindh.

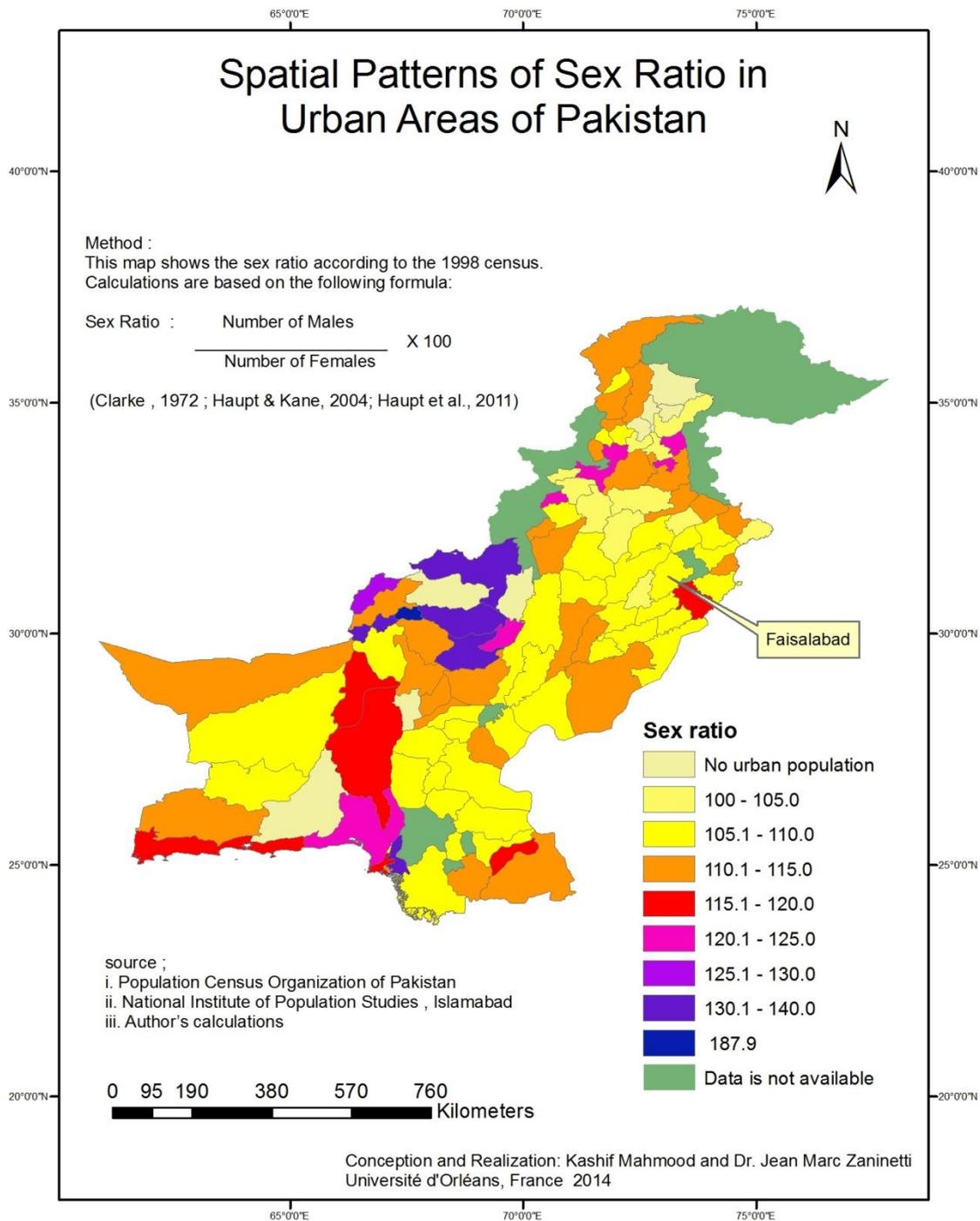
Urban sex ratio in urban areas ranges from 100 to 140 with one exception in which sex ratio rose to 187 in Ziarat (district of Balochistan). In Punjab, urban sex ratio ranges from 100 to 115. In southern and northern Punjab, urban sex ratio is maximum and rose to 115. Urban sex ratio is maximum in the districts of Balochistan. It might be due to migration of males to cities for job. Urban sex ratio reached to Karachi and Quetta. Migration of males towards cities is the major cause of high sex ratio.

Difference in sex ratio ranges from -9.0 to 30.0 with one exception of Ziarat in which difference rose to 81.66. Difference is higher in the northern parts of Khyber Pakhtawankhawa, few districts of Balochistan, southern Punjab and major cities like Karachi, Lahore, Faisalabad, Islamabad, Rawalpindi and Quetta etc. It is due to migration of males towards major cities of Pakistan.

**Figure 2.43 Spatial patterns of sex ratio in rural areas of Pakistan**



**Figure 2.44 Spatial patterns of sex ratio in urban areas of Pakistan**



### 2.1.8.5 Age and Sex Composition

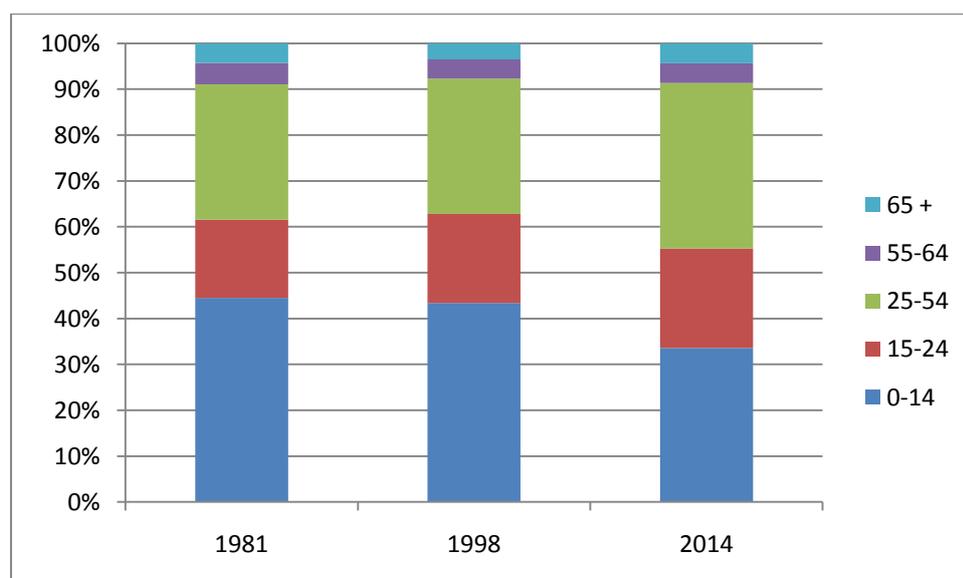
A great proportion of population in Pakistan lies under age group 14 which is the indication of rapid natural increase. This proportion is gradually declining in Pakistan as discussed earlier in the previous section –Demographic transition in Pakistan. Youth proportion (15-35) is continuously increasing in Pakistan from 1981 to 1998. 44.5 % of the total population was in age group 0-14 and there was a gradual decline in this age group and it is the indication of decreasing fertility. A slight ageing process is clearly under way. (Please, see 2.1.6: Demographic transition in Pakistan for discussion in detail)

**Table 2.18 Age distribution in Pakistan 1981-2014**

Age Group	1981	1998	2014
0-14	44.5%	43.4%	33.3%
15-24	17.1%	19.4%	21.5%
25-54	29.49%	29.56%	35.7%
55-64	4.66%	4.19%	4.3%
65 +	4.28%	3.5%	4.3%

Source: Population Census Organization of Pakistan  
Pakistan Bureau of Statistics

**Figure 2.45 Age distribution in Pakistan 1981-2014**

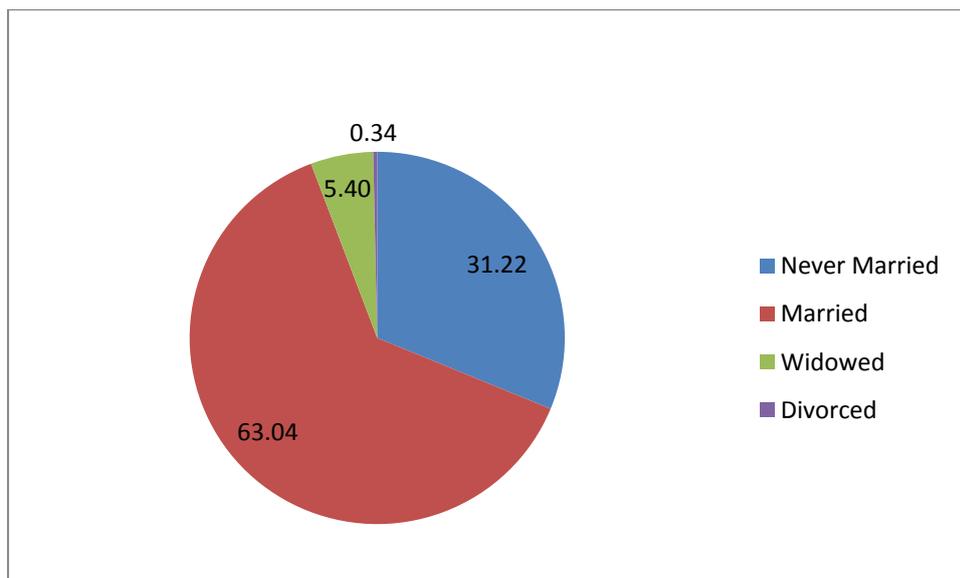


Source: Table 2.18

### 2.1.8.6 Marital status by age group

Figure 2.46 shows the percentage distribution of population (15 years and above) by marital status in Pakistan according to the 1998 census. 63.04 % people were married while 31.22% were unmarried including the age group 15-19. 5.4% of the total population was widowed and only 0.34 % was divorced.

**Figure 2.46 Percentage distribution of Population (15 years and above) by Marital status in Pakistan-1998**



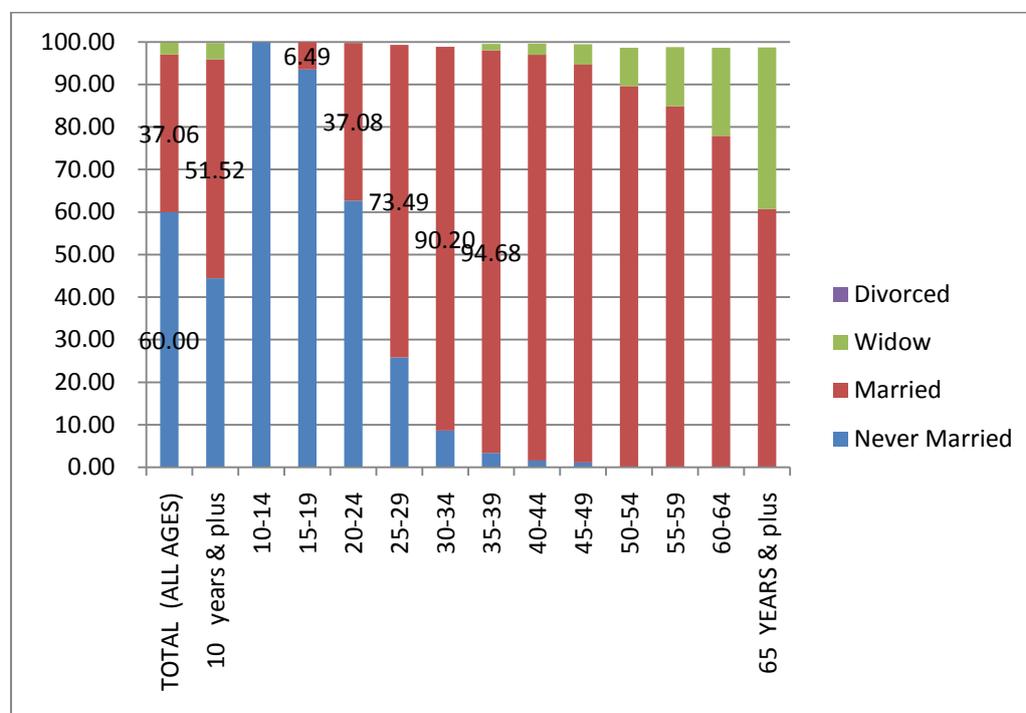
Source: Population Census Organization of Pakistan

Figure 2.47 shows percentage distribution of population by marital status and age. 37.06 % persons of the total population are married and 60.0 % are never married. Married proportion increases to 51.2% in the total population of 10 years and above. 6.49 % population in age group 15-19 is married. 37.08 % of the people in age group 20-24 are married and this proportion is 52.0 % for females. It is the indication of practicing early marriages in families of Pakistan which in turn cause of rapid population growth rate of Pakistan. It is also the major cause for lagging behind in demographic transition by Pakistan.

Divorced proportion is only 0.19 % of the total population of Pakistan and it proves that divorced is not considered good but according to our empirical finding divorced rate in Faisalabad is increasing. A great proportion of female widows indicate that remarriage of

females is considered bad in Pakistan and in later ages, great proportion of females indicates their longevity.

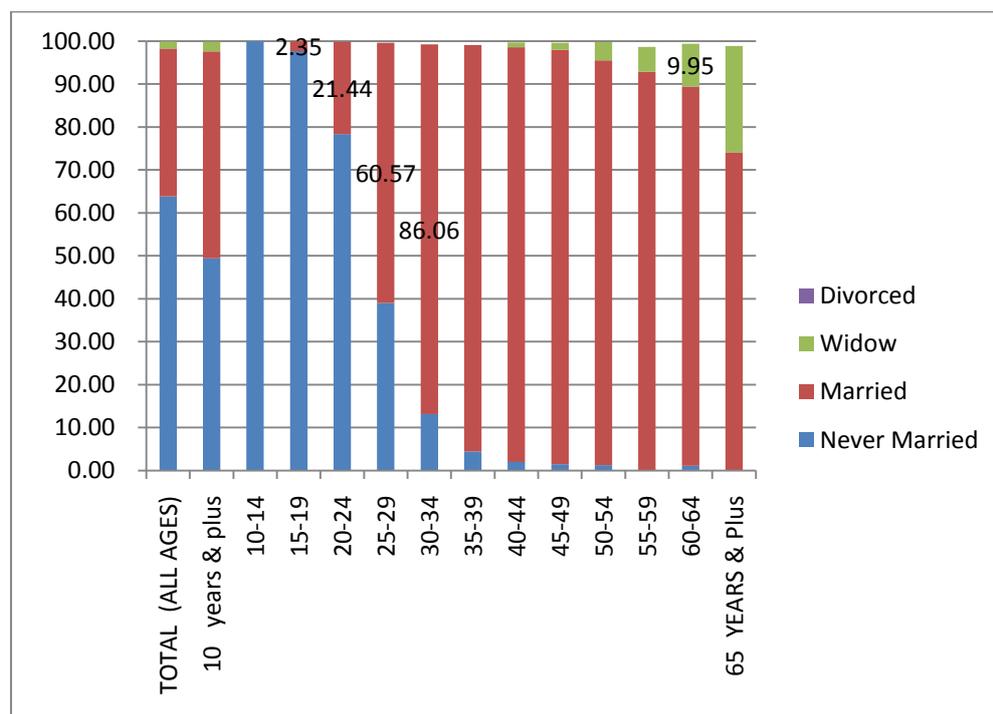
**Figure 2.47 Percentage Distribution of Population by Marital Status and age in Pakistan 2012-13**



Source: Labour Force Survey 2012-13, Government of Pakistan, Statistical Division , Pakistan Bureau of Statistics

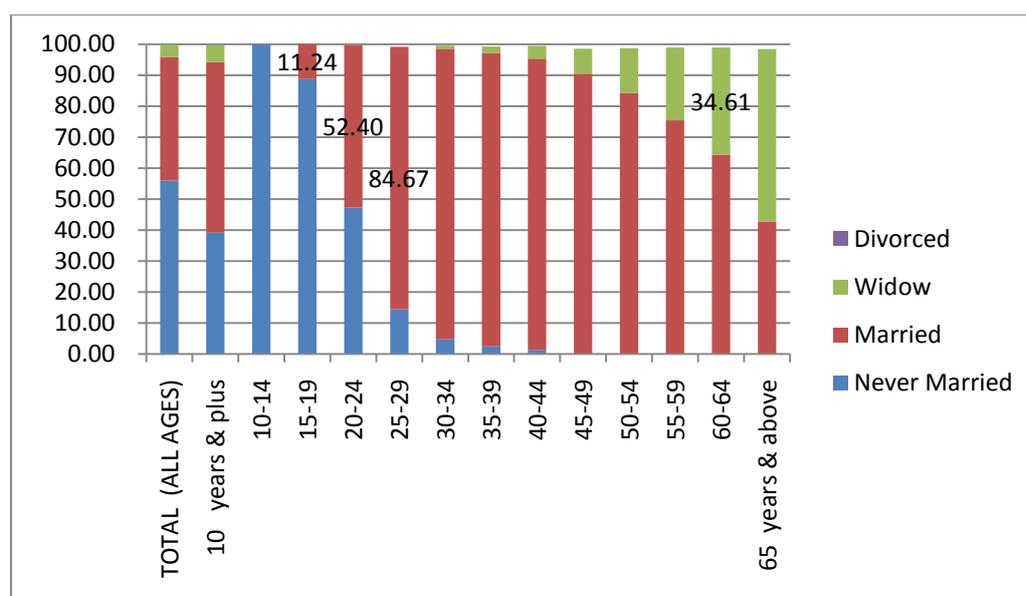
It is evident from Figures 2.48 and Figure 2.49 that females are married earlier than males in Pakistani society. 11.24 % females are married in this age group while this proportion is only 2.34% for males. . Early marriages of females further show that daughters are considered economic and social burden on parents and they try to marry their daughters as early as possible. It also shows the low status of women in Pakistani society. Proportion of married women has more impact than proportion of married men on the fertility. Moreover, early marriages are more frequently practiced in rural areas than urban areas in Pakistan (Figure 2.50 and Figure 2.51).

**Figure 2.48 Percentage Distribution of Male Population by Marital Status and age in Pakistan 2012-13**



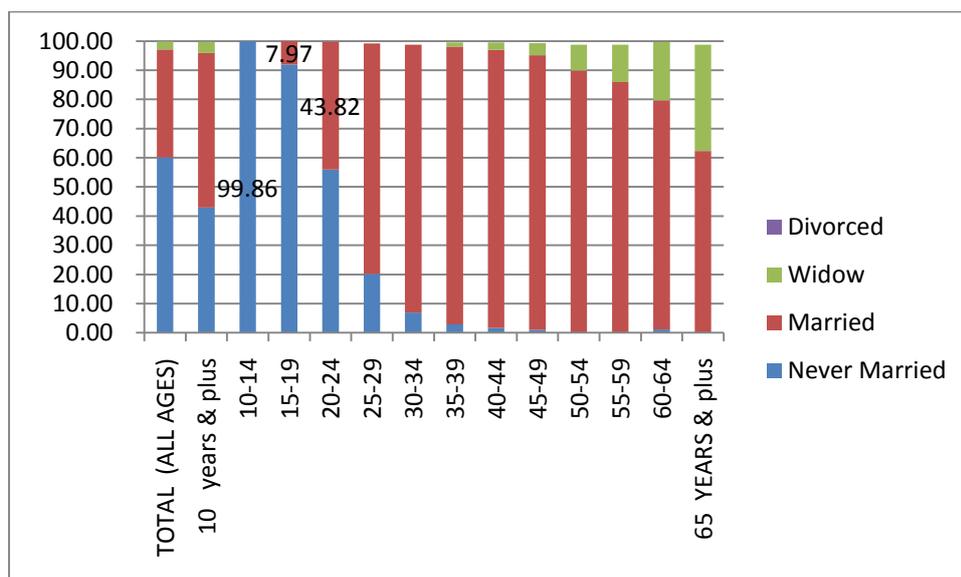
Source: Labour Force Survey 2012-13, Government of Pakistan, Statistical Division , Pakistan Bureau of Statistics

**Figure 2.49 Percentage Distribution of Female Population by Marital Status and age in Pakistan 2012-13**



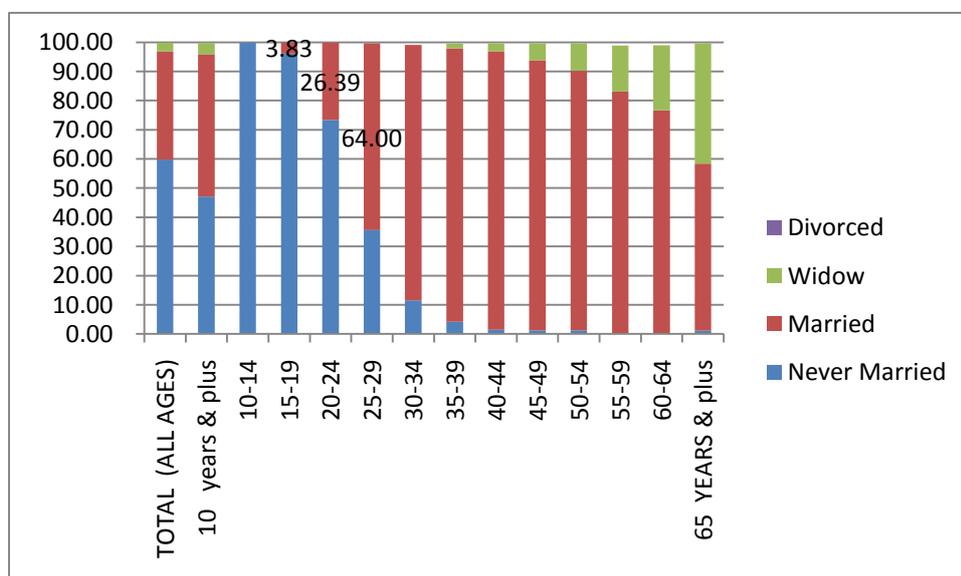
Source: Labour Force Survey 2012-13, Government of Pakistan, Statistical Division , Pakistan Bureau of Statistics

**Figure 2.50 Percentage Distribution of Population by Marital Status and age in rural areas of Pakistan 2012-13**



Source: Labour Force Survey 2012-13, Government of Pakistan, Statistical Division , Pakistan Bureau of Statistics

**Figure 2.51 Percentage Distribution of Population by Marital Status and age in urban areas of Pakistan 2012-13**



Source: Labour Force Survey 2012-13, Government of Pakistan, Statistical Division , Pakistan Bureau of Statistics

## **2.2 Faisalabad District**

### **2.2.1 Introduction**

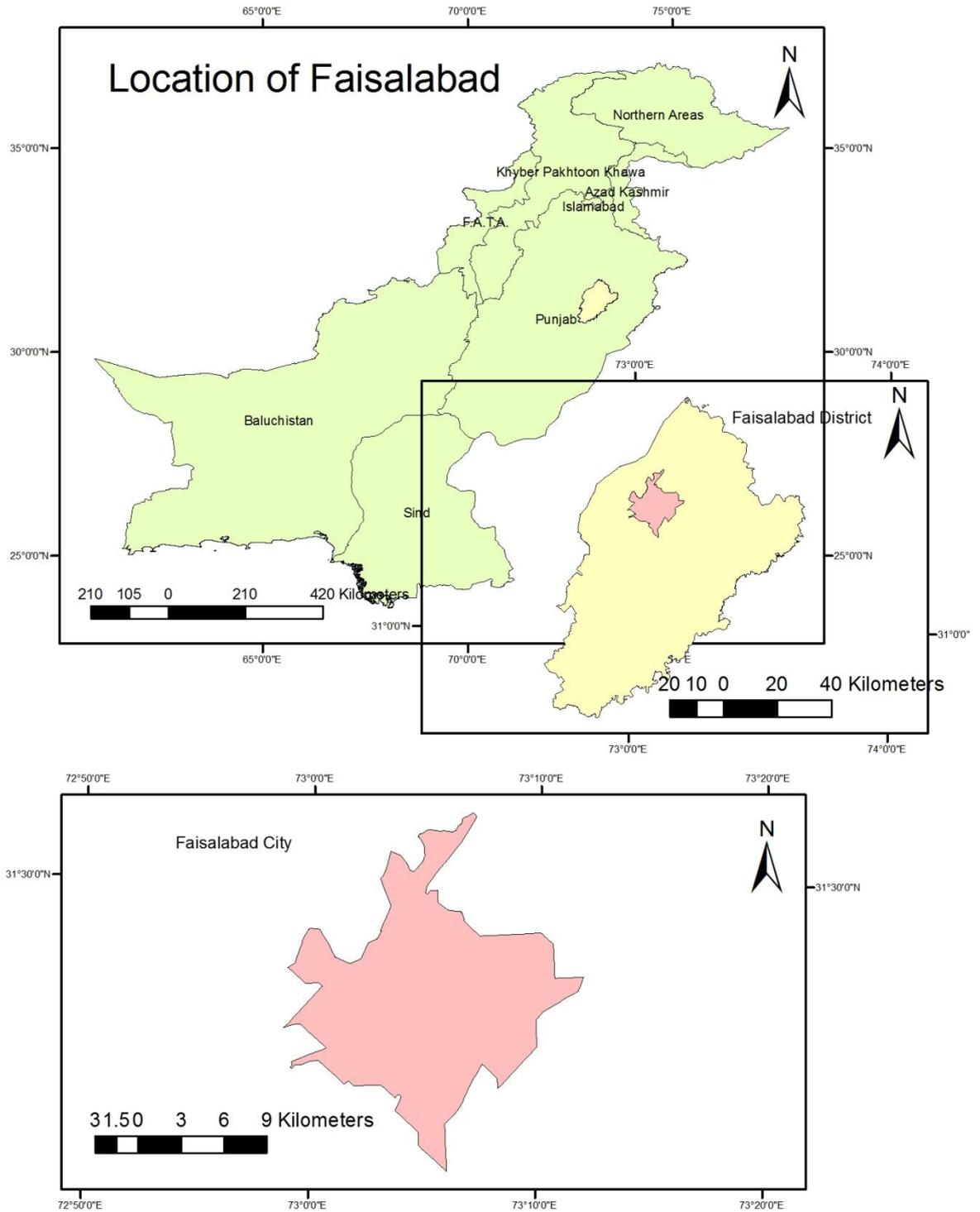
Faisalabad is the third largest city in terms of population in Pakistan. It is also called Manchester of Pakistan due to the establishment of large cotton textile industry. Faisalabad city previously known as Lyallpur was established as a Mandi (Market) Town in 1805 as a part of a program of colonization of west Punjab. Lyallpur was named after Sir James Lyall, the then Lt. Governor of the Punjab 1887-1892. Lyallpur was renamed as Faisalabad after the name of late King Faisal of Saudi Arabia in recognition of his outstanding services to Islam and the Muslim Umma on 1st September, 1977.

### **2.2.2 Location and Area**

Faisalabad lies between 30°42' and 31°47' north latitudes and 72°40' and 73°40' east Longitudes. Its altitude is 605 feet above sea level (PCO, 2000). Faisalabad is located in upper Indus plain between the river Ravi and the river Chenab. The Indus plain forms the western part of the Indo-Gangetic plain of the northern part of Indian continent. The Indus plain is known for its agricultural fertility and cultural development throughout the history. It is the most populated region in Pakistan. The Upper Indus plain differs from the lower Indus plain due to the major tributaries (Jhelum, Ravi, Chenab and Sutlej) divide the land into several interfluves. Faisalabad is located in upper Indus Plain.

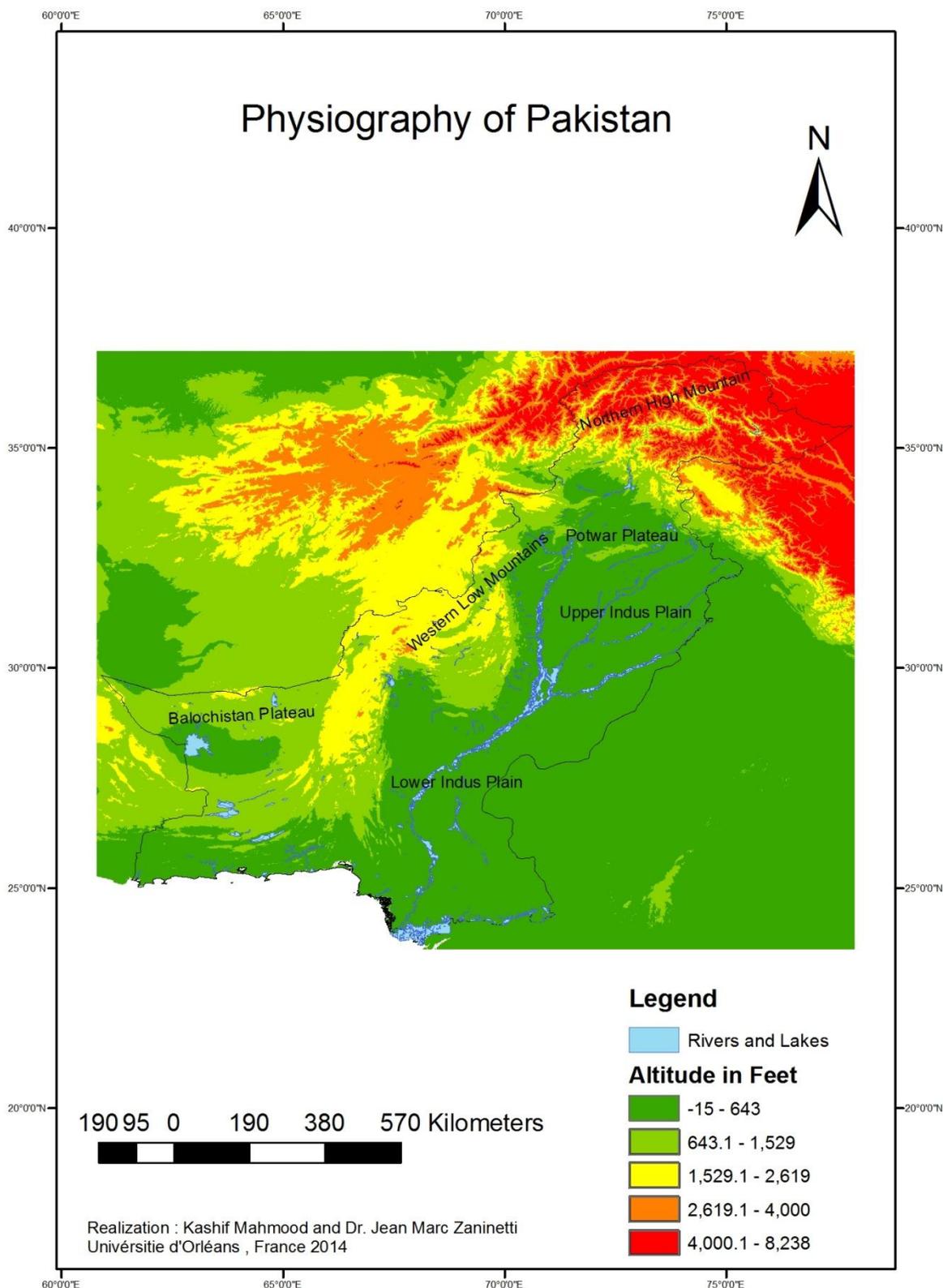
The total area of Faisalabad district is 5856 square kilometers (PCO, 2000). Sir James Lyall, Governor of Punjab province during the British rule, founded the Faisalabad city in 1904. It constituted only 5.8 square kilometers at the time of its establishment. Its present area is 213 square kilometers.

Figure 2.52 Location of Faisalabad



Realization : Kashif Mahmood and Dr. Jean Marc Zaninetti  
Université d'orleans , France 2014

**Figure 2.53 Physiography of Pakistan**



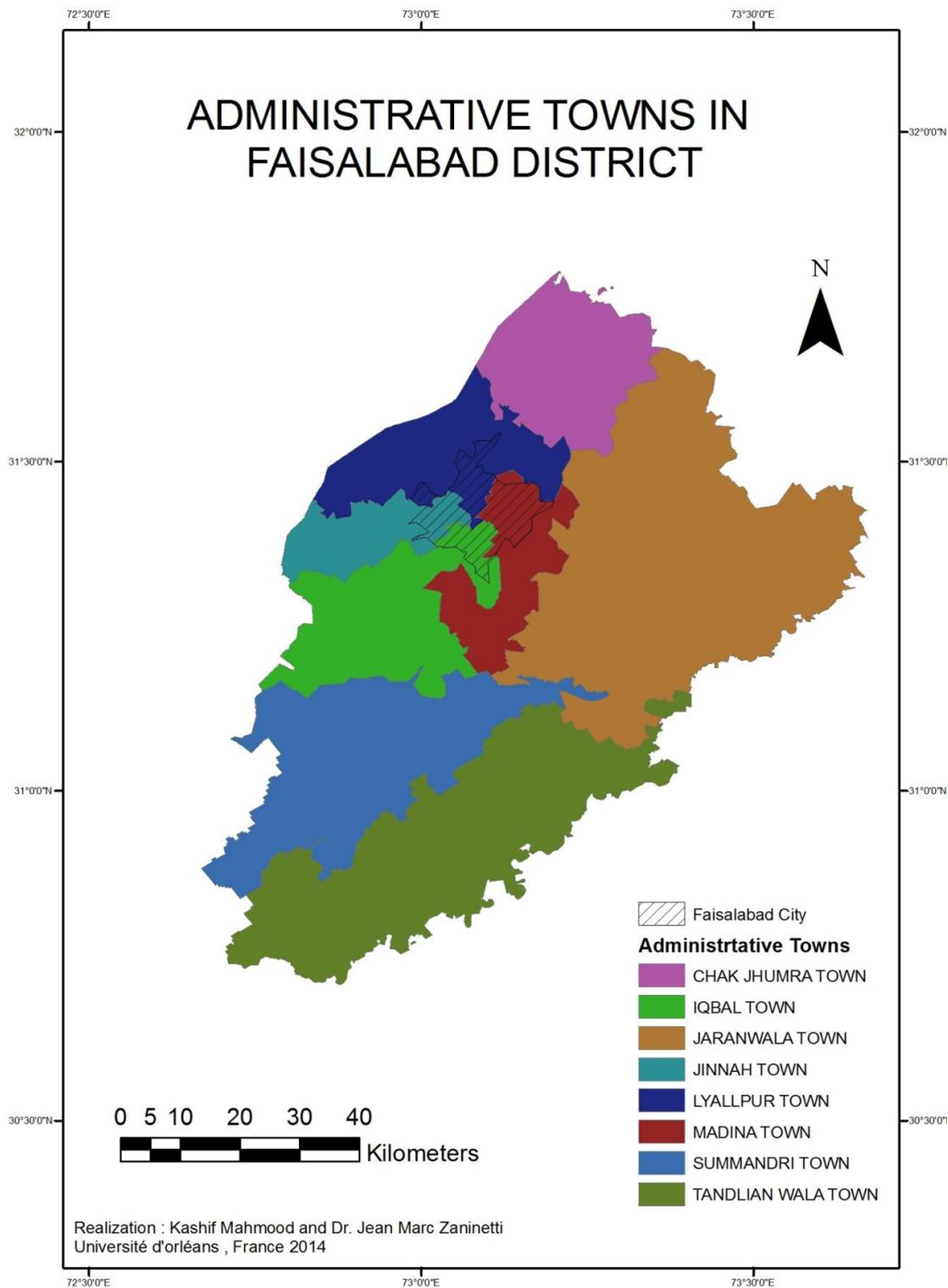
### 2.2.3 Administrative Divisions

Faisalabad (Lyallpur) emerged as a district in 1904 in India. At present, Faisalabad is divided into the various towns for administrative purpose. Faisalabad consists of the following towns:

- i. Iqbal Town
- ii. Jinnah Town
- iii. Lyallpur Town
- iv. Madina Town
- v. Chak Jhumra Town
- vi. Samundri Town
- vii. Tandlianwala Town
- viii. Jaranwala Town

Figure 2.54 shows that Faisalabad city covers only the area of first four towns (Iqbal Town, Jinnah Town , Lyallpur and Madina Town ) .

**Figure 2.54 Administrative towns in Faisalabad districts**



## 2.2.4 Physiography

As stated earlier that Faisalabad district lies between river Ravi and Chenab so it consists of flat alluvial plain which is formed by the deposits of fertile soil. The river Ravi flows along the south-eastern boundary of the district. The land close to the river is relatively lower than that away from the river towards the west. The area is exceptionally favorable for irrigation. The city is situated at an elevation of about 183.35 meters or 612 feet above the sea level. Whole district is a flat plain (Figure 2.53).

## 2.2.5 Population growth in Faisalabad

Figure 2.52 shows the growth of population in Faisalabad district from 1951 to 2014. Population was only 1.549 million in 1951 and it increased to 1.990 million in 1961. Population increased with average annual growth rate 2.5 % and Percentage increase remained 28.5 % from 1951 to 1961. There was rapid increase in percentage increase of 59% during the period 1961-72 which was consequence of migration during East Pakistan separation in 1971 and migrants in search of jobs from others districts of Pakistan . Population of Faisalabad district jumped to 3.164 million in 1972 from 1.990 in 1961. Population growth rate declined rapidly to 1.4 % during 1971-82 and population increased to 3.562 million in 1981. After this period, increase in population growth was seen from 1981 to 1998 and population of Faisalabad touched the figure of 5.430 million. Its current estimated population is 8.010 million. So we can say that population of Faisalabad increased rapidly since the creation of Pakistan in 1947. According to the census report 1998, the total in-migrants in Faisalabad were 679,676 and out of these total immigrants, 315, 658 migrants came from the rural areas and 364,018 from the urban areas.

Faisalabad was the first planned city of Pakistan. It emerged as an industrial city in Pakistan and its industrialization was the major cause of rapid population growth, People from surrounding districts and other provinces moved to this city due to employment opportunities in the industrial sector. Mechanization of farming also accelerated the process of migration towards this industrialized city. Its fertile plain is suitable for agriculture and raw material for cotton textile industry was abundantly available locally. Major roads were constructed to join it with other cities of Pakistan. Furthermore, these roads played a major role in attracting

people from surrounding areas .These roads also contributed a lot in bringing raw material from the surrounding areas for cotton textile industry in Faisalabad.

**Table 2.19 Population increase in Faisalabad district since 1951**

	1951	1961	1972	1981	1998	2014*
Population(000)	1549	1990	3164	3562	5430	8010
Intercensal increase(Per cent)		28.5	59	12.6	52.4	47.5
Average Annual Growth Rate (%)		2.5	4.1	1.4	2.5	+2.5

Source: 1998 district census report of Faisalabad \* Estimated

### 2.2.6 Population Distribution in Faisalabad

As stated earlier in the previous section that population of Faisalabad district is increasing rapidly since 1951 and it reaches to 8.010 million in 2014 from 1.549 million in 1951. As a consequence of its rapid population growth its population density continued to increase gradually with time. Population density was only 264.5 persons per square kilometres in 1951 and it continued to increase with increase in population due to migration and natural increase. It reached to 1367.8 persons per square kilometres in 2014.

Table 2.20 shows the average population density in whole district so we can say that there is more congestion in the city area than rural areas of the district. It resulted into the expansion of residential areas on the surrounding fertile agricultural land.

**Table 2.20 Population density in Faisalabad district since 1951**

	<b>Population density (Persons per sq.km.)</b>
1951	264.5
1961	339.8
1972	540.3
1981	608.2
1998	927.2
2014	1367.8

Source: 1998 district census report of Faisalabad

### **2.2.7 Demographic Transition in Faisalabad**

We have already discussed the demographic transition in Pakistan in the previous section. Position of Faisalabad city is similar to the rest of Pakistan particularly in Punjab. Being an industrial city, Faisalabad remained a place of attraction for migrants from the surrounding areas and resulted into rapid population increase while its natural increases showed a same pattern as in the rest of Punjab. We cannot say it similar to the whole Pakistan owing to the diversity in Pakistan which varies from Balochistan to Khyber Pakhtunkhawa.

Figure 2.55 shows the crude birth rate, crude death rate and natural increase in Faisalabad from 1999 to 2010. Natural increase was 2.20 in 1999 and it continued to decline till 2010 and touched the lowest figure of 1.90 and it is the lowest in last decade.

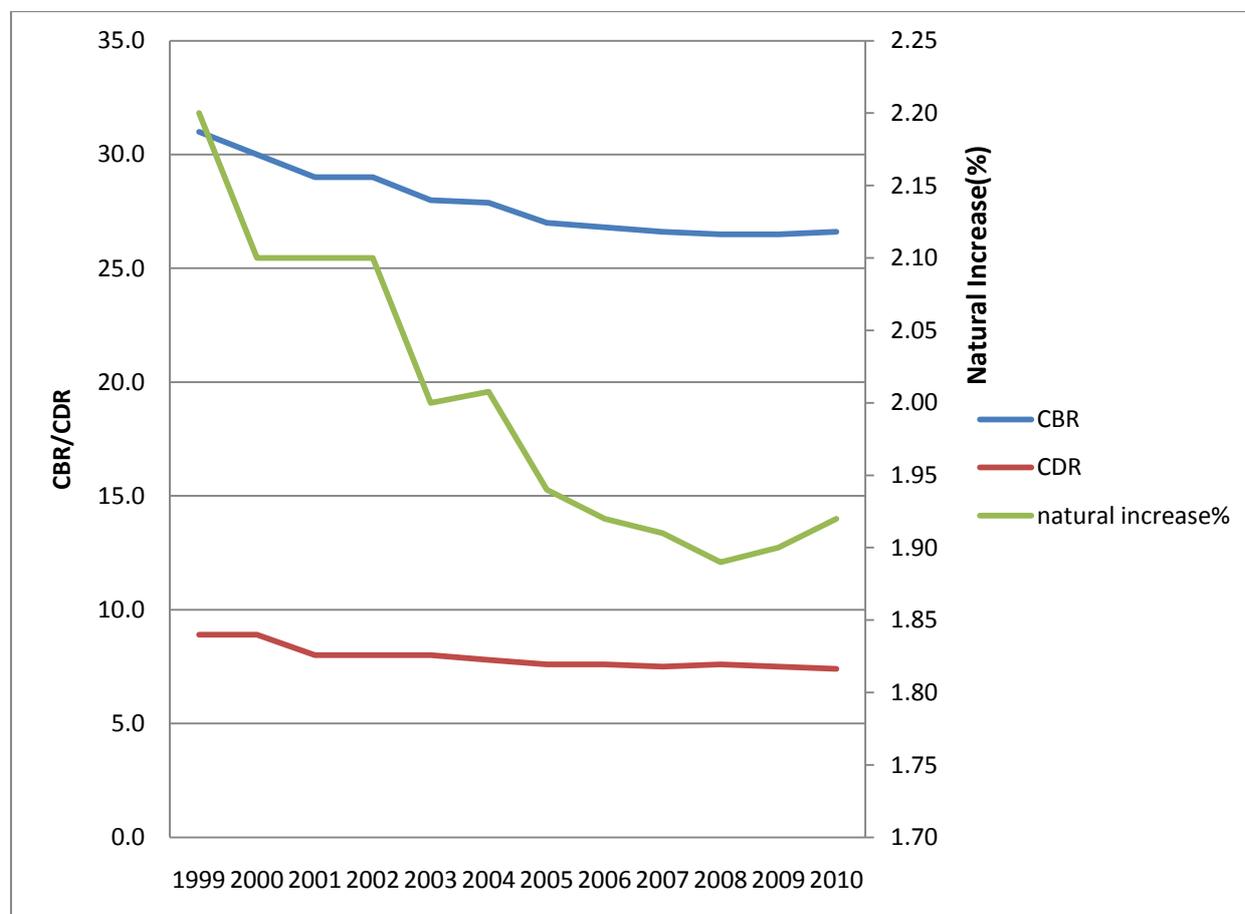
It also indicates that fertility has declined gradually since 1999 but the rate of decline remained imperceptible owing to the influence of religion on families, unawareness of family planning method, desire of son, requirement of labour force from poor families , illiterate workers , etc (Please also see 2.1.4.6 for detail discussion) Mortality remained constant after 2005 and a little rise and fall was seen in it. With an average annual natural growth rate of +2%, that means the migration balance exceed is +0.46% per year on average, In consequence, in-migration contributes to 1/5th of the total population growth, and 4/5th comes from the natural balance.

**Table 2.21 Natural Increase in Faisalabad city from 1999-2010**

	<b>Crude Birth Rate</b>	<b>Crude Death Rate</b>	<b>Natural increase (%)</b>
1999	31.0	8.9	2.20
2000	30.0	8.9	2.10
2001	29.0	8.0	2.10
2002	29.0	8.0	2.10
2003	28.0	8.0	2.00
2004	27.88	7.8	2.01
2005	27.0	7.6	1.94
2006	26.8	7.6	1.92
2007	26.6	7.5	1.91
2008	26.5	7.6	1.89
2009	26.5	7.5	1.9
2010	26.6	7.4	1.92

**Source : District Population Office Faisalabad**

**Figure 2.55 Demographic Transition in Faisalabad city in the last decade (1999-2010)**



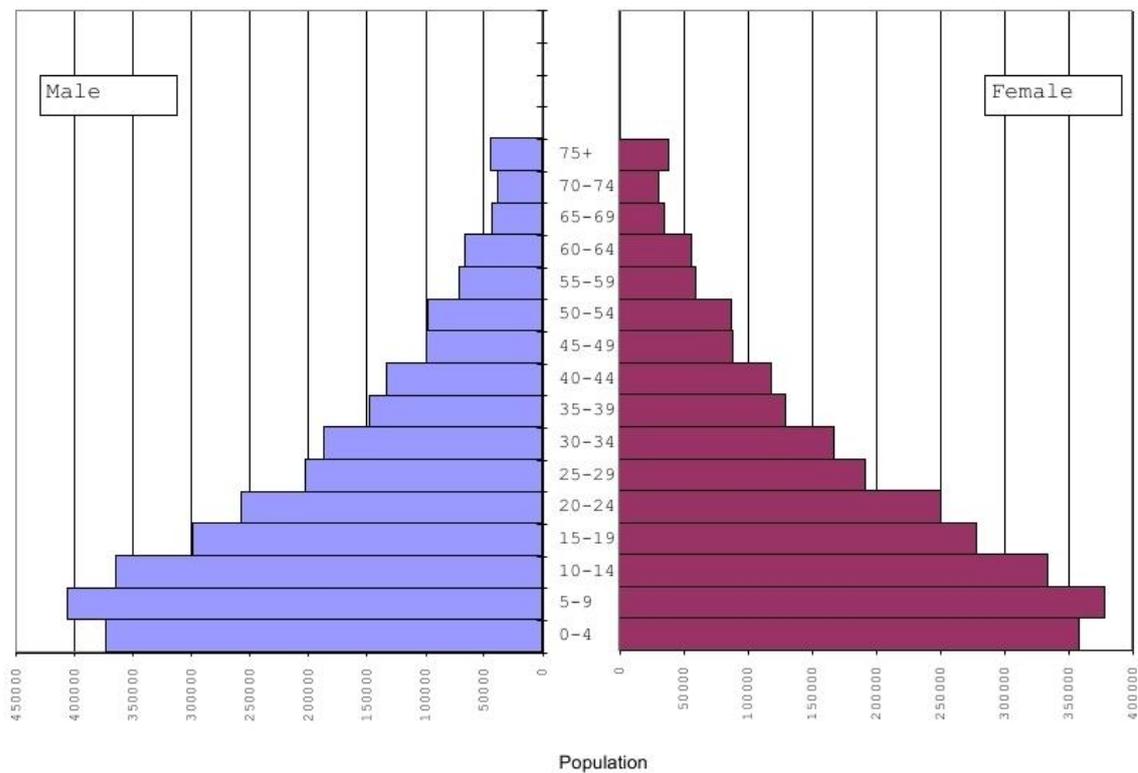
Source : Table2.21

Natural increase varies from areas to areas in Faisalabad due to different socio-economic condition. In poor residential areas, CBR is high and at the same time CDR is also high. Due to unavailability of data, we could not point out different spatial patterns of fertility and mortality in Faisalabad city. In forthcoming years, we will try to see this aspect through primary data collection.

Figure 2.56 shows the age and sex composition of Faisalabad district .it is evident from the population pyramid that the population of Faisalabad is still young. 40.8% population is under 15 and 60% population is below 25. Population in reproductive age (15-49) is 46.9% which indicates no decline in the fertility in near future. We can observe a slight decline in fertility from the age group 0-4 whose proportion is less than age group 5-9. It is the first major change in the age and sex pyramid of Faisalabad since 1951.

Sex ratio in prime reproductive age group 15-34 years is an unbalance with an excess of male population due to labor in-migration in Faisalabad. In the age group 15-19 , it was 106.9 which was decreased to 102.6 in the age group 20-24. From the age group 25-29 (105.3) , it continued to increase to 111 in age group 30-34 . It further increased to its peak of 114.3 in the age group 35-39. Maximum sex ratios of 121.7, 118.9 and 116.9 were observed in the age group 65-69, 55-59 and 60-64 respectively.

**Figure 2.56 Age and Sex pyramid of Faisalabad -1998**



Source: 1998 District census report of Faisalabad

### 2.2.8 Urban Transition in Faisalabad

According to 1998 census, the urban Population in Faisalabad was 2.318 million or 42.5 percent of the total population of the district which grew at an average rate of 3.7 % during 1981-98 and also had no change since 1972. This should be emphasized, The Faisalabad district (the size of an average French department) is not majority urban.

In the absence of latest census data , it was quite difficult to estimate the current population of a city Faisalabad . We estimated population of Faisalabad on the basis of current growth rate from 1981-98 because we did not have an averages from 1981 to 1998 . Our estimated population of Faisalabad was 4.02 million in 2014 and this calculated trend is not consistent with 2011 UN estimates that estimated population of 3.434 millions in 2015 for the city of Faisalabad. Moreover UN estimated population for Faisalabad in 2000 was 2.142 million which was inconsistent with 1998 census result in which population of was 2.318 million in 1998 and it was more than UN estimates. It was really a tough decision for us because we could not ignore UN estimates but at the same time we also observed that UN estimates were inconsistent with 1998 census results. To sum up, we considered it to mention the contradiction with UN data and restricted to our estimation of population on the basis of current trend of population increase of city. Our estimate might be flawed , but it is worth mentioning.

Table 2.22 shows the urban growth of Faisalabad city since 1901. Population of Faisalabad city was only 9171 in 1901. It jumped to 179,000 in 1951. It further rose to 2318433 during 1998 census. The total increase in 47 years is 1000%, which is 21.3 % per annum.

**Table 2.22 Urban Growth of Faisalabad city since 1901**

	<b>Population</b>	<b>Population Increase(Numbers)</b>	<b>Percentage increase</b>	<b>Average Annual Growth rate</b>
1901	9,171	-	-	-
1911	19,008	9,337	107.26	-
1921	23,136	4,128	21.72	-
1931	42,922	19,786	85.52	-
1941	69,930	27,008	62.92	-
1951	179,000	109,070	155.97	9.86
1961	425,240	246,240	137.56	8.9
1972	823,344	398,104	93.62	6.2
1981	1,232,000	408,656	49.63	4.6
1998	2318433	745,246	88.18	3.5
2014*	4020130	1701697	103.32	2.1 **

Source : Population Census organization of Pakistan , (*World Urbanization Prospects, the 2011 Revision*, 2011)

\* Author's Estimation

\*\* According to the UN estimate of 3.038 millions in 2011, the urban growth rate might possibly have slowed down to +2.1% per year in the 1998-2011 interval

The population of Faisalabad city increased from 9,171 to 23,136 from 1901 to 1921. Percentage increase from 1901 to 1911 was 107.2 % and it reduced to 21.62% in the period of 1911 -1921. This increase was due to the establishment of the city and its administrative structure. In this period the flood plain was brought under cultivation and in 1910 the railway was established to link the town with Karachi port.

Percentage increased to 85.52% from 1921-31. During 1921 – 1931, the increase in population was due to an increase of about 40 per cent in the production of wheat and almost 100 per cent in the production and export of cotton. Between 1931 and 1941 industries started to develop in Faisalabad and three large cotton mills, including the Lyallpur Cotton Mills, which was completed in 1934, were set up. Labour for these mills was also imported from eastern Punjab which resulted into rapid increase in population.

The population of Faisalabad city increased with percentage increase of 155.7% from 1941 to 1951. It was due to the arrival of refugees from India into the city. Camps for the incoming

refugees were set up near the city centre and these eventually became permanent settlements. Almost all these settlements were on agricultural land. In addition to the refugee influx, anarchic conditions in the countryside, as a result of the partition of British India, forced many people into the city.

In the period from 1951 to 1961 the population again increased by 147.62 per cent. This was because of two reasons: one, Faisalabad was declared an industrial zone with a tax holiday as an incentive for investors. Because of this a large number of textile mills came into being. Two, green revolution technologies were introduced in the agricultural hinterland of Faisalabad. This forced, and continued to force, a large number of peasants off their land or requires that at least one member of the family of small landowner's works in the urban areas so that the household can be sustained.

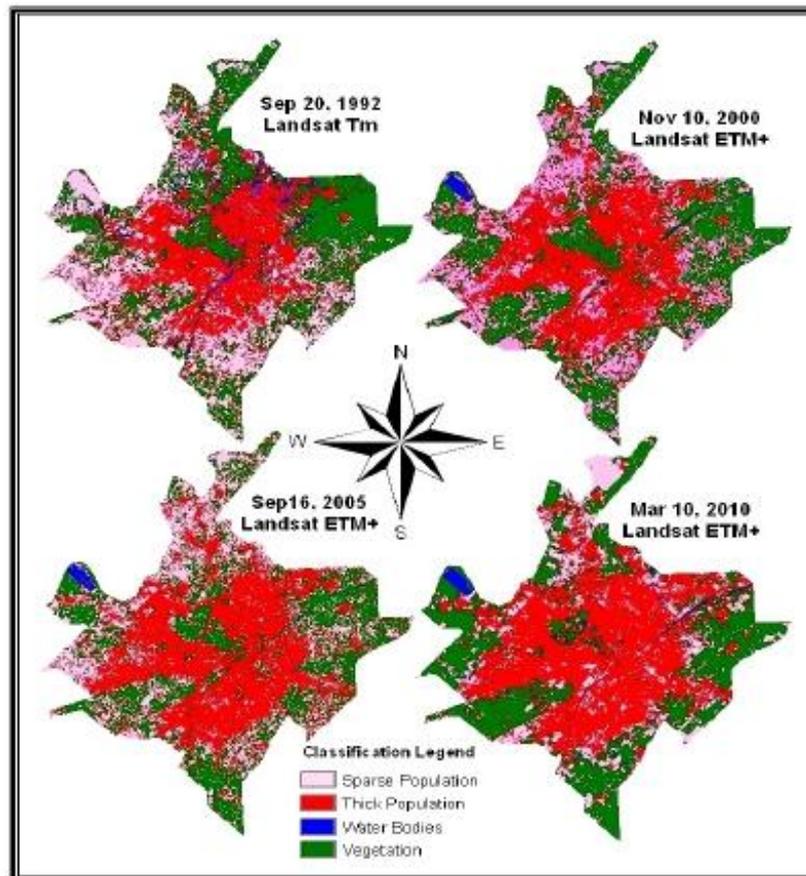
Faisalabad increased at a rate of 6.2 per cent per year from 1961-71. Natural growth rate was about 3 per cent. Migration into the city was the result of a demand in the international market for cotton yarn. To meet this demand small looms were installed all over the city and labour from the rural areas moved in to operate them.

Faisalabad has continued to grow at a rate of 3.5 per cent per year from 1981 to 1998. Since this time, the UN estimate suggests a much slower rate of +2.1% per year to 2014. This fall in the growth rate is due to the fall both in the natural growth rate and the migration rate. The rate of increase of industrial units has fallen considerably and the disruption caused in the countryside by the introduction of green revolution technologies in the 1960s, is stabilizing. In addition, Pakistan has over-produced both in cotton textiles and in yarn and wheat is no longer an item of export (Alimuddin, Hasan, & Sadiq, 1999; Bokhari, 1971, 1981; Mahmood, 2007; PCO, 2000; *World Urbanization Prospects, the 2011 Revision*, 2011).

Figure 2.57 shows the expansion of urban population in the Faisalabad city from 1992 to 2010. Population congestion was present only in the centre of city in 1992 and less populated regions adjoined the thickly populated centre of city. We can see green belts vegetation in the eastern, the centre and the northern side of the city while the southern side is devoid of vegetation due to the expansion of city towards south. These green belts shrank in 2000 due to the construction of residential colonies for accommodating rising urban population. The areas in the south which were sparsely populated in 1992 became highly populated areas in 2000 and we have observed a gradual expansion in densely populated areas from 2005 to 2010. We have observed a gradual decrease in vegetation cover from 1992 to 2010 which is

the result of rising pollution, congestion and diseases in Faisalabad city whereas increasing concentration of urban population resulted into the high price of houses , rising rent , increasing small areas houses, increasing nuclear families , poor sanitation conditions , rising street crimes and terrorism in the city. Condition is in the worst condition in the centre due to the shrinkage of vegetation cover in 2010.

**Figure 2.57 Spatial expansion of urban population in Faisalabad city from 1992 to 2010**



Source : (Anwar & Bhali, 2012)

### 2.2.9 Household composition in Faisalabad

Average household size in Faisalabad district increased to 7.2 in 1998 from 6.7 in 1981. It has further increased to 8.72 in 2012 according to our findings of first hand data. As we discussed earlier that population of Faisalabad has increased at a tremendous average annual growth

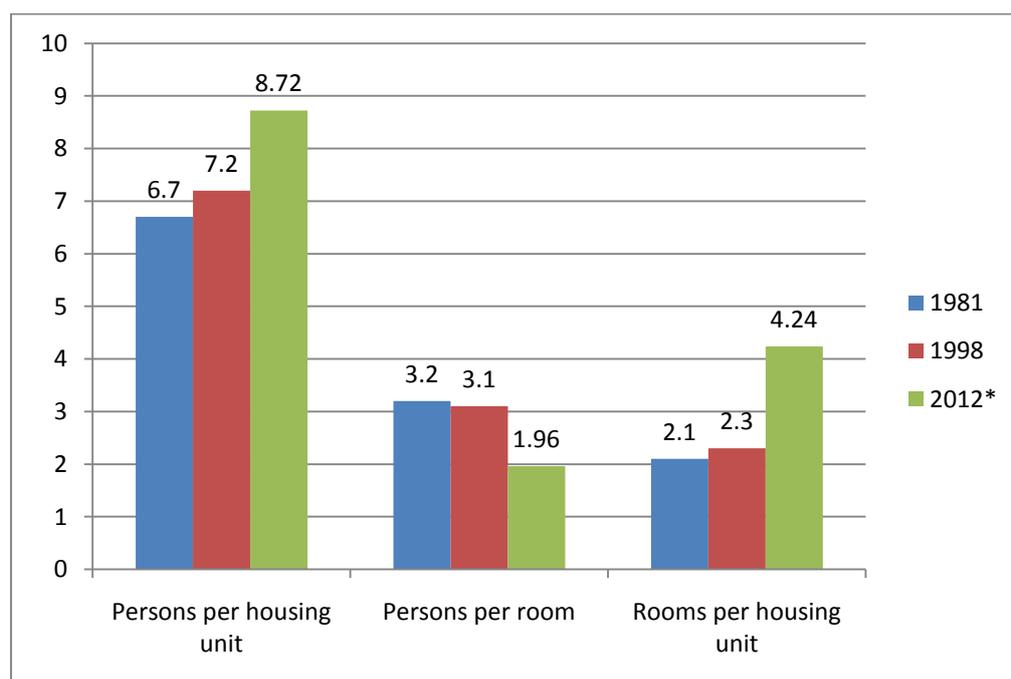
rate since its creation in 1901. However, speed of construction of houses remained slow as compared to rapid population growth in the recent decades; consequently, it resulted into the increase of average household size. Crowded housing might result in falling fertility due to delayed marriage of the youth and lack of intimacy in multigenerational housing.

Figure 2.58 shows the indices of congestion from 1981 to 2012. The persons per room decreased to 3.1 in 1998 from 3.2 in 1980 owing to the increasing rooms per housing units from 2.1 (1981) to 2.3 (1998). It has further declined to only 1.96 persons per room in 2012 according to our empirical findings. Rooms per housing unit have increased from 2.1 in 1981 to 4.24 in 2012.

Figure 2.59 shows the percentage distribution of housing units (households) according to the number of rooms. Percentage of one room housing unit declined to 30.1% in 1998 from 43.1% in 1981 while housing units with 2-4 rooms increased from 52.9% in 1981 to 62.4% in 1998 and we also observed increase in housing units with 5 rooms and above. It means households have significantly improved their living condition from 1988 to 1998.

According to the findings of our first hand data , the household further improved their living conditions post-1998 period and there were only 7.2% household having one room and at the same time , 37.7 % housing units had 5 rooms and above.

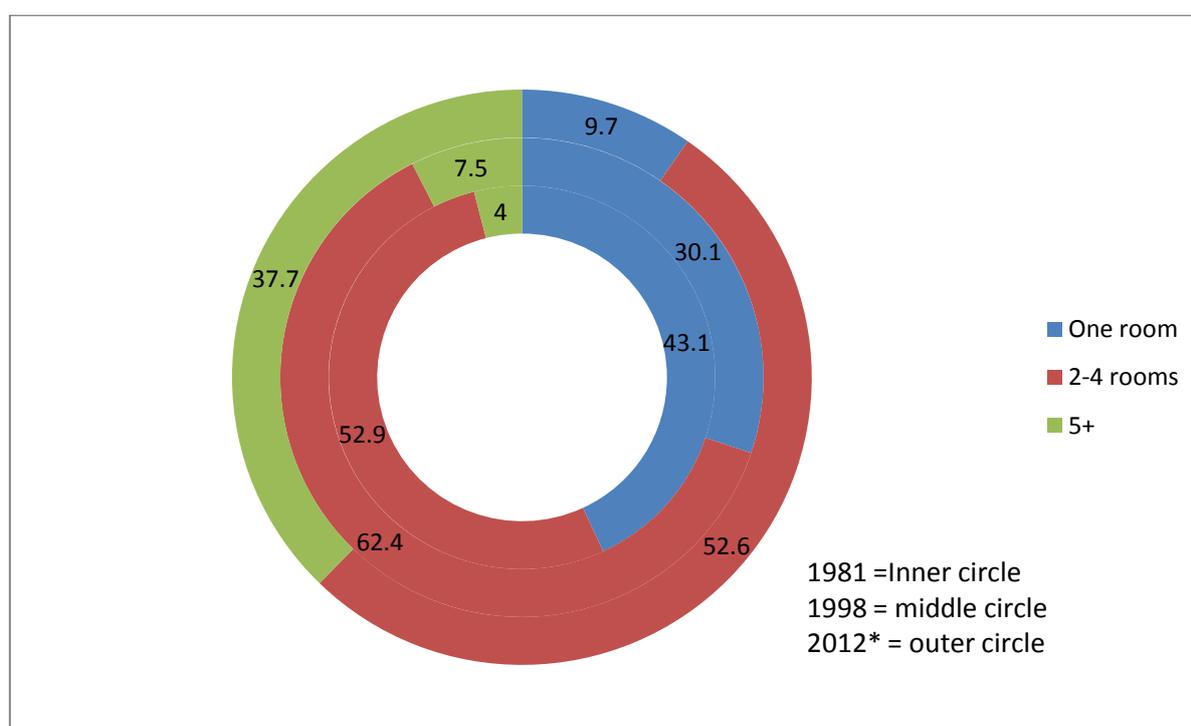
**Figure 2.58 Indices of congestion in Faisalabad district 1981-2012**



Source: 1998 District census report of Faisalabad ,

\* Primary data collected through survey, 2012

**Figure 2.59 Percentage distribution of housing units according to number of room from 1981 to 2012**



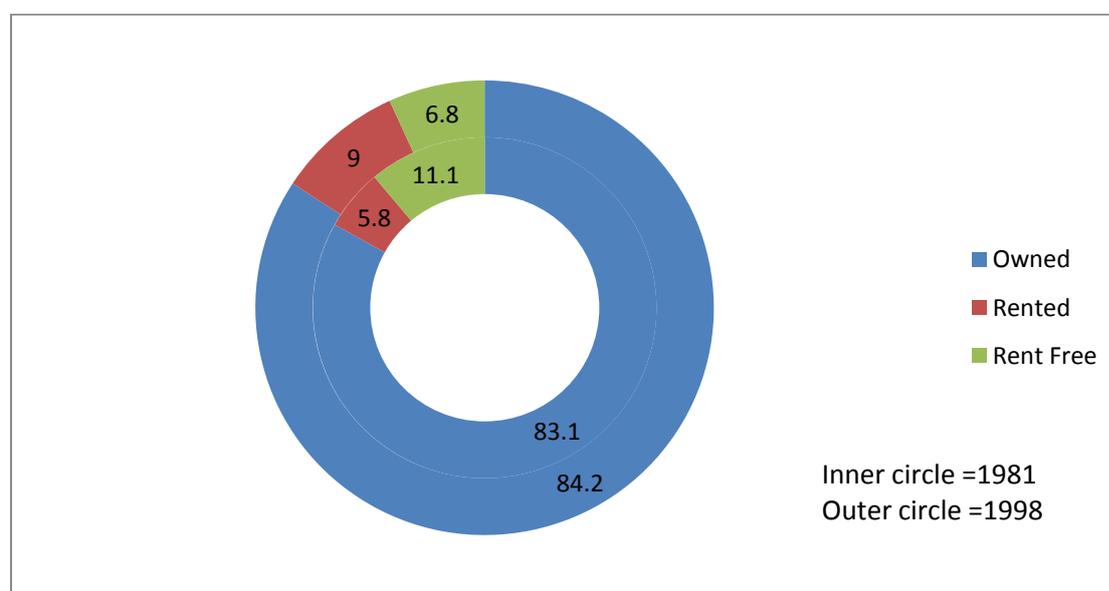
Source: 1998 District census report of Faisalabad

\*Primary data collected through survey, 2012

Figure 2.60 shows the nature of tenure in Faisalabad district. 84.2 % housing units were owned in 1998, 9% were rented and remaining 6.8 % were rented free in 1998. Owned and rented housing units increased while rent free housing units decreases from 1981 to 1998.

According to the findings of our first hand survey of 2012, majority of households (80.6%) were owned and 19.4% were rented. Ownership has decreased a little bit from 84.4 % in 1998 to 80.6 % in 2012. All rented households were present in the urban areas while all households in rural areas were owned by occupants. As far percentage of substandard housing is concerned, all slums areas along with poor economic class residential colonies have substandard housing .

**Figure 2.60 Percentage distribution of households by nature of tenure in Faisalabad district**

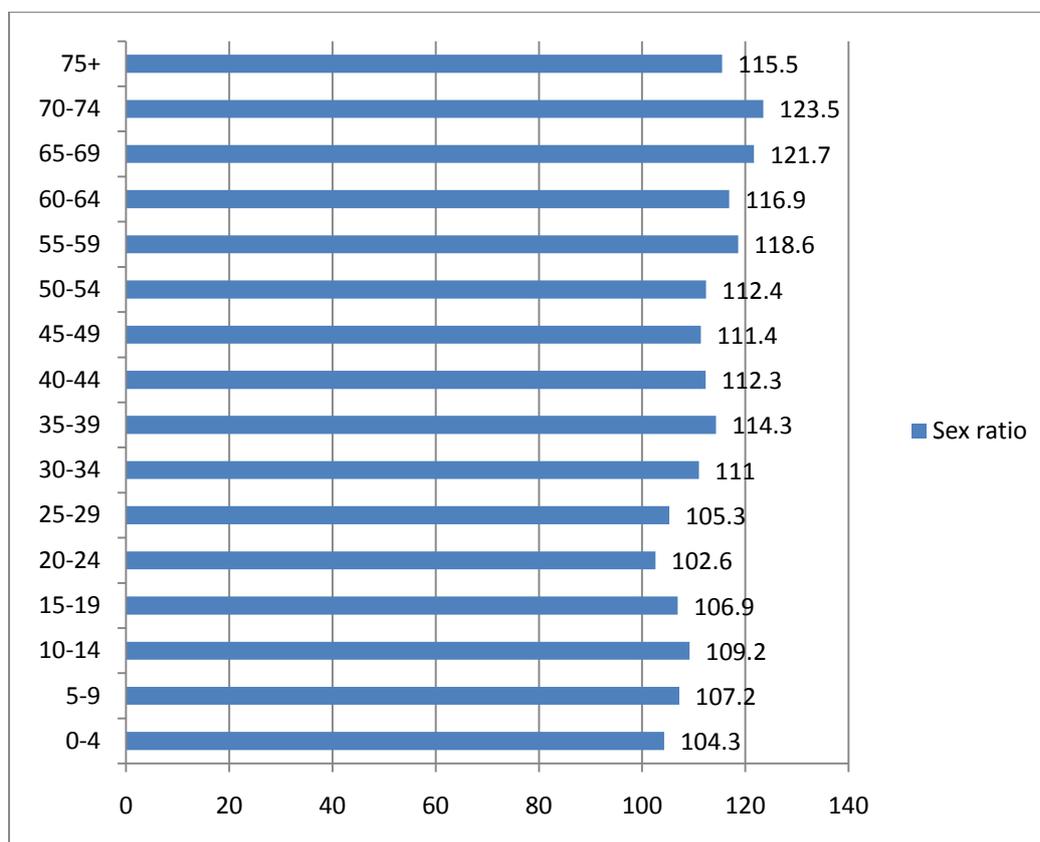


Source: 1998 District census report of Faisalabad

Sex ratio was 108.6% in Faisalabad district according to the census of 1998. Figure 2.61 shows the sex ratio in different age groups. We observed a gradual increase in sex ratio with the rise in age groups 0-19 from 104.3 (0-4) to 106.9 (15-19). A sudden decline in sex ratio was seen in the age group 20-24 in which it was only 102.6. It might be result of outmigration of students to Lahore, Islamabad, Karachi for higher education because there was only one agriculture university was present in 1998. It might be the result of international migration of young labor towards middle east countries, European countries and America. After this decline, it continued to increase up to 123.6 in age group 70-74 with minor fluctuation of rise

and fall. It is the indication of male migration in search of job towards the Faisalabad city during 1950 to 1990. Sex ratio remained high in the population of above 75 and it was 115.5. This unnaturally high sex-ratio might result from unequal access to health between men and women.

**Figure 2.61 Sex Ratio by different age group in Faisalabad district-1998**



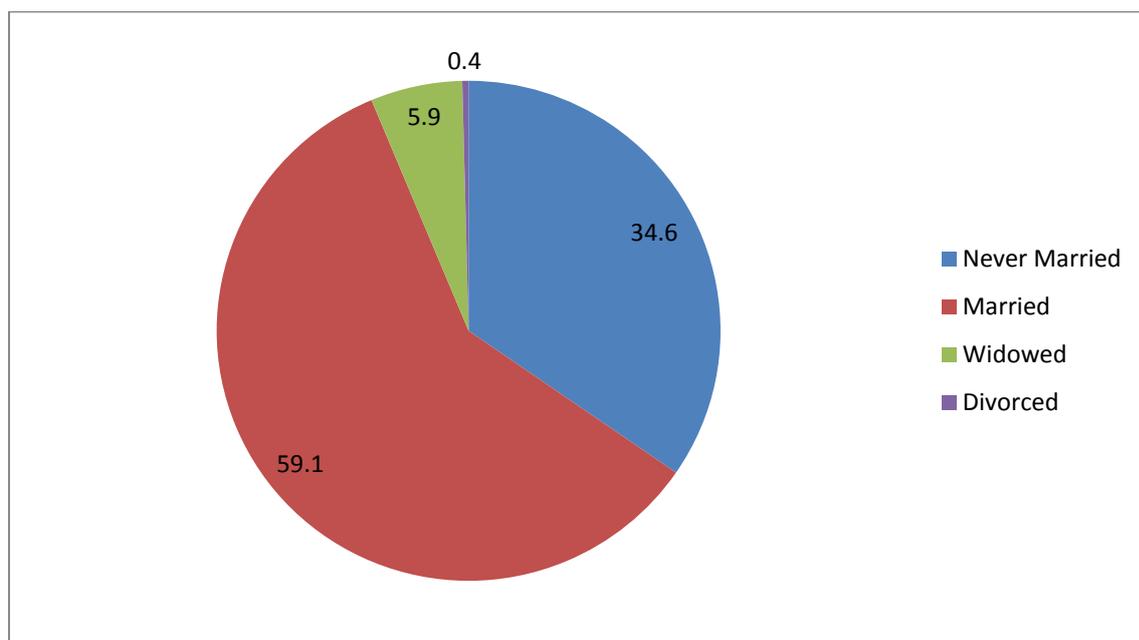
Source: 1998 District census report of Faisalabad

Figure 2.62 divides the population (15 years and above) into four groups according to marital status. 59.1 % of that population (15 years and above) was married while 34.6% was unmarried according to the census of 1998. Only 5.9 % people were widowed and 0.4% (divorced).

Figure 2.63 compares the difference in marital status by sexes. The percentage share of never married male (39.8%) was much higher than the female (28.9%) and situation becomes reverse in married proportion in which female percentage (62.5) was more than male percentage (55.9). This is consistent with the sex-ratio in a city full of migrant male labor from the countryside .It is the indication of early marriages of females due to several factors

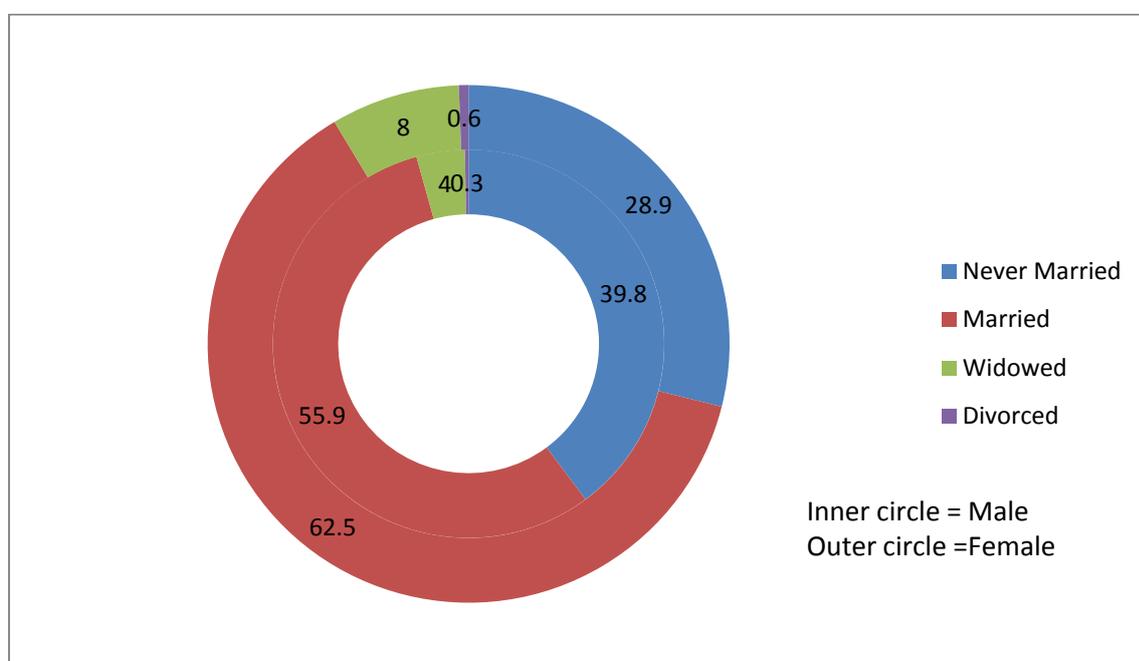
in the Pakistani society (Please see section causes of population growth for in-depth discussions relevant to early marriages).The proportion of never married females has drastically increased from 22.6% in 1981 to 28.9% in 1998. This is the indication of decline fertility level in Faisalabad district (PCO, 2000).

**Figure 2.62 Percentage distribution of population (15 years and above) by marital status in Faisalabad district-1998**



Source: 1998 District census report of Faisalabad

**Figure 2.63 Percentage distribution of marital status according to sex in Faisalabad district-1998**



Source: 1998 District census report of Faisalabad

### 3 Chapter 3-Methodology

Both quantitative research methods (Survey) and qualitative research methods (Interview, Observation) were utilized to fulfill objectives of the present research. A detail procedure of using these methods is discussed thoroughly in this chapter under the following headings:

#### 3.1 Sources of Data

As far as nature of our research was concerned, we could not rely on the secondary data but we had to collect first hand data from the field. Both primary and secondary data were utilized in the present study. Present research is primarily based on the primary data due to unavailability of the latest, reliable and micro-level secondary data.

##### 3.1.1 Secondary Data

Following secondary data sources were consulted:

- i. United Nations Publications
- ii. Population Census Organization of Pakistan
- iii. Pakistan Demographic and Health Survey
- iv. Survey of Pakistan
- v. National Institute of Population Studies
- vi. Faisalabad development Authority
- vii. Strategic Policy Unit, City District Government Faisalabad.

##### 3.1.1.1 *United Nations*

United Nations is also a major source for the estimates of population data in the developing countries like Pakistan where regular census are not being plasticized. UN-HABITAT, UNDP, UNFPA, UNESCO, UNWOMEN and WHO are publishing regularly reports on the urbanization and family issues (Badran, 2003; Bernard, 2003; Bigombe & Khadiagala, 2003; Cliquet, 2003; El-Haddad, 2003; Jelin & Díaz-Muñoz, 2003; Philipov, 2003; Quah, 2003; Silva, 2003).

### ***3.1.1.2 Population Census Organization of Pakistan***

Population Census Organization of Pakistan is responsible for the planning and the execution of decennial Population and Housing Census. It releases data for the public and the private use. Population Census Organization disseminate data in the form of regular census reports and a number of supplementary reports which are based on the analysis and research of the demographic data.

Following are the main functions of Population Census Organization:

- Planning and execution of the decennial Population & Housing Census.
- Processing and dissemination of the data in the form of the Census Reports.
- Analysis of the census data and the demographic research.
- Evaluation of census results
- Inter-census sample studies/surveys in related areas.
- Supply of the census data to the data users.
- Tabulation of data to meet the specific demand of data users (PCO, 2013).

### ***3.1.1.3 Pakistan Demographic and Health Survey***

Pakistan demographic and health surveys (PDHS) are also an important source of population data in developing countries like Pakistan. These surveys were conducted by National Institute of Population Studies (NIPS). Government of Pakistan provided financial assistance in the form government staff, offices and logistic support while Macro International provided financial and technical assistance for conducting the survey through the MEASURE DHS program, which is funded by the United States Agency for International Development (USAID). The PDHS is part of the worldwide Demographic and Health Surveys (DHS) program which is designed to assist developing countries to collect data on fertility, family planning, and maternal /child health. United Nations Population Fund (UNFPA) and United Nations Children's Fund UNICEF also supported this project.

Three surveys were conducted till now. First Pakistan Demographic Health survey (PDHS) was conducted from December 1990 to May 1991 where as the second Pakistan Demographic Health survey (PDHS) was conducted in 2006 /2007. The latest Pakistan Demographic and health survey was conducted from the first week of October 2012 to march

2013 with the exception of one team in Balochistan that completed the survey in the third week of April 2013(NIPS & MI, 1992, 2008, 2013a).

Macro International provided access to the data of all the above-mentioned survey for using in the research.

#### ***3.1.1.4 Survey of Pakistan***

Survey of Pakistan, which emerged as successor to pre-partition Royal Survey of India, is a National Surveying and Mapping Organization of the country. Its primary role is to publish topographical maps of the entire country. The department is actively participating in the national development projects and thus fulfilling the ever growing surveying and mapping demands of various government / semi-government and autonomous bodies ("Survey of Pakistan ", 2013).

#### ***3.1.1.5 National Institute of Population Studies***

National Institute of Population Studies (NIPS) is the first research organization established by the Government of Pakistan since 1986. It is working under the Ministry of National Health Services, Regulations & Coordination (NHSR&C). The NIPS has been mandated to act as a technical arm of the Government for undertaking high quality research and to produce evidence-based data, information for utilization by the Public sector and others agencies for policy formulation, strategic planning and making reference in the spheres of demography, population & development and health. NIPS played a major role in conducting Pakistan Demographic and Health survey with the assistance of Macro International, USA. ("National Institute of Population Studies ", 2013; NIPS & MI, 1992, 2008, 2013a).

#### ***3.1.1.6 Faisalabad development Authority***

Faisalabad Development Authority (FDA) is responsible for undertaking and monitoring the developments in the city of Faisalabad. The body acts as a regulatory authority for monitoring the construction of houses, commercial developments and residential areas in the city (WIKIPEDIA, 2013).

### ***3.1.1.7 Strategic Policy Unit, City District Government Faisalabad***

Strategic Policy Unit (SPU) is working under the city district government Faisalabad and its major role is to collect and digitize data of Faisalabad.

### **3.1.2 Primary Data**

Due to unavailability and lack of authenticity of the secondary data, we had to depend primarily on the Primary data. Both quantitative research methods (Survey) and qualitative research methods (Interview and Observation) were utilized to collect the primary data.

## **3.2 Reliability, availability and accuracy of Secondary data sources**

### **3.2.1 Reliability and availability of Secondary data**

As far as availability of the latest secondary population data is concerned, it is always missing. Fifth, the recent census in Pakistan was conducted in 1998 and there was no census after that. Sixth population census was scheduled in 2011 but it was not yet completed. Conducting population census at the regular interval is not in the norms of Pakistan. Delays in conducting censuses were due to the political motives, law and order situation in the country and lack of interest of the population census organization.

Table 3.1 shows the history of censuses in Pakistan. After independence, the first census of Pakistan was conducted in 1951, the second in 1961 while the third census was held in 1972 instead of 1971 due to political environment in the country and war with India. The fourth census was held in March 1981 and fifth one which was due in 1991 could be held in March, 1998 due to specific circumstances. It is evident from table 3.1 that census in Pakistan were not conducting regularly so it made it census a less reliable source for conducting any type of research.

**Table 3.1 Census History in Pakistan**

Census Year	Enumeration Period	Intercensal Interval (Years )	Census Method
1951	9 <sup>th</sup> to 28 <sup>th</sup> February		
1961	12 <sup>th</sup> To 31 <sup>st</sup> January	10.00	De-Jure
1972	16 <sup>th</sup> to 30 <sup>th</sup> September	11.62	De -Jure
1981	1 <sup>st</sup> to 15 <sup>th</sup> March	8.46	De-Jure
1998	2 <sup>nd</sup> to 18 <sup>th</sup> March	17.00	De-jure & De-facto
2011	Still not conducted	----	De-jure

Source : Population Census Organization , Government of Pakistan , Islamabad

Inter-census data is not comparable due to different methods adopted for data collection in every census. Population census organization of Pakistan was confused on it .De-facto census method ( in which persons are counted where they are found on the census data ) was used in one census while in other census De-jure method (in which persons are counted at their usual place of residence ) was adopted . It results into over-enumeration and under-enumeration so it becomes difficult to compare two census data. The Population of 1998 census excluded foreigners /non-Pakistanis including diplomats and their families while the census from 1951 to 1981 included foreigners/non-Pakistanis except diplomats and their families(R. I. A. Khan, 1998).

The census counts from 1951 to 1998 were conducted on de-jure method with the exception of 1998 census in which both De-facto and De-Jure methods were utilized to collect data but final analysis was based on De-jure data in order to make it comparable to the previous data.

There is also problem of authenticity of census data in developing countries like Pakistan due to the following reasons:

- Enumerators were not properly trained for collection of the data
- People hide information regarding age, income and other belongings of the household.

- There are no legal compulsions on the respondents and as a result of it they are not compelled to provide the required information.
- Law and order situation in the country creates the fear in the minds of the respondents of household so they feel hesitation in responding.
- Government has no proper record of the households and it results into non identification of households during field surveys.
- There are many draw backs from the data collection to the data analysis and it makes data non –reliable.
- Vital records (Records of life events: Births, Deaths and Marriage) are not properly maintained.

Pakistan Demographic and Health surveys provide data on the health issues with some demographic indicators of household. Quality of PDHS data is better than census data due to the involvement of Macro-International that monitored whole process from the data collection to the data analysis, assured proper training of enumerators, cross checking in the field, collecting GPS coordinates and proper data analysis under the supervision of the experts.

United Nations estimates and projections give some basic ideas of current situation in the developing countries like Pakistan but there are only estimates and don't truly represent population of that area so it is unrealistic to rely on such estimates for conducting a reliable research .

### **3.2.2 Accuracy of Secondary Data at different geographical scale**

#### **3.2.2.1 Census Data**

As stated earlier that census data lacks accuracy due to poor data collection methods, untrained enumerators, drawbacks in the compilation of data and inappropriate interpretation of the results. Census data at the district is accurate and provide some idea of the demography of a district but it is outdated in case of Pakistan because the recent census in Pakistan took place in 1998.

Population Census organization of Pakistan publish district census report of every district one by one without any time frame work. These districts reports provide data at tehsil level but

they lack geographical coordinates of the areas and cannot be useful for spatial analysis. Data is still not digitized.

### ***3.2.2.2 Data of Pakistan Demographic and Health surveys***

These are sample surveys and collect data pertaining to reproductive health issues and provide accurate information at the national and province level on the basis of survey results. They also lack geographical coordinates of the surveyed areas. Pakistan Demographic and Health survey 2007 provided GPS data record of the surveyed areas but the GPS recorded points were taken 10 to 15 kilometer away from the surveyed areas while other Pakistan demographic and health surveys do not provide geographic coordinates of the surveyed areas.

### ***3.2.2.3 Data of National Institute of Population Studies (NIPS)***

It regularly conducts various surveys and provides data that is only accurate for the specific area in which survey is conducted. Furthermore, it lacks spatial data. However, it provides estimations of demographic indicators at national level and in some cases at the province level.

### ***3.2.2.4 Data of Pakistan Bureau of Statistics***

It provides data at national level.

### ***3.2.2.5 Data of Development Authorities***

Development authorities like FDA (Faisalabad Development Authority), LDA (Lahore Development Authority) in each district. They provide some data at district level.

### ***3.2.2.6 Urban Policy Unit***

Recently, Urban Policy unit is working in few districts and it can be able to some useful digitized data at district level in the forth coming years. It will not conduct census or survey but it will digitize the existing data of census in future.

### ***3.2.2.7 Data of vital statistics***

The data for vital statistics is inadequate. It is not only under reported but also not maintained properly. Even a minor can go to municipal office and register a birth or death. Majority of the people don't bother to register the birth and the death in the municipal office. Whenever they need birth certificate, they go to office and get a fake birth certificate according to their desired date of birth. Now, situation has improved a little bit after the establishment of National Database and Registration Authority (NADRA) and computerized birth certificates are being issued but the base for this computerized birth certificate is the poorly maintained manual record of the municipal office. Registering death is still not in practice both in the rural areas and urban areas. Furthermore, this record is not for public and research purpose and it is treated as a secret data. NADRA is under the control of ministry of interior of Pakistan. A researcher can never get access to this data.

Same is the case with marriage registration. Marriage registers are under the custody of an imam/molivi (a person who leads prayers five time a day in a mosque) of mosque. Imam is authorized to do anything. Official fee of marriage registration in municipal committee is only 100 Rs (0.65 euro) while these persons charged 500 Rs (4 euro) to 10000 Rs (75 euro) or even more according to the economic status of bride and groom. After charging such black money, they try to save registration fee of 100 Rs (0.65 euro) and never register considerable marriages in the municipal committee office or delay their registration. This record is also confidential and it was poorly maintained by the concerned department.

Marriages in court are not considered good. Couples, who do love marriages against the will of parents and society, they have to do court marriage in the security. They have to leave their home without informing any family member. Immediate family members (Father, mother, brother, uncles) register a First Information Report (FIR) in the police station against the boy that he has abducted their daughter and a case is registered under the Hadood Ordinance (*The offence of Zina* 1979). In most of the cases, there is chance of killing of couple or groom in the name of honor (AFP, 2013; Ludovica; Post, 2014). In many cases, after leaving home, couple may not be able to do marriage in the court; police arrest them and court trial the under the Hadood Ordinance. Sometimes, fake marriage certificates are produced for avoiding police arrest and there is also possibility that bribed police officers do not accept the original marriage certificate and arrest the couple.

Births and death records are not available for research papers and population census organization of Pakistan did not collect and keep that record for policy makers and

researchers. Researchers have to conduct survey to get the primary data of vital statistics so we can say that vital statistics official data is only a secret document and officials do not give any detail to researchers. The only procedure and hope for the researchers is to get the data through surveys in which false information regarding age, births, deaths is provided by the respondents in the field so we can say that the data pertaining to vital statistics can only be accurate and authentic in Pakistan when a researcher collects it from the field with great care.

### **3.3 Survey Design and Implementation**

In order to collect primary data through survey method, it was necessary to plan a survey in the case study- Faisalabad to make this research more authentic and valuable in the absence of the latest and the authentic secondary data. Three surveys were conducted from December 2011 to February 2012. Surveys passed through the following phases:

- Questionnaire Designing
- Pre-Testing of Questionnaire
- Sample Design
- Data Analysis

#### **3.3.1 Questionnaire Designing**

Designing questionnaire was the first step in conduction of the survey. Macro-International USA regularly designed questionnaires for conducting the demographic and health surveys. Permission to consult and use these questionnaires for research purpose was taken from Macro International, USA. Modifications in questionnaire were made according to the requirements of the present research and redesigned it for fulfilling the objectives of our research.

Two structured questionnaires were designed. First questionnaire deals with household's conditions and characteristics while second questionnaire covers perceptions of individuals towards family structure. (Appendix I)

First questionnaire discussed subjects like type of household, composition of households, housing conditions of household, head of household, ownership status, building structure and family type. It consisted of closed ended and open ended questions. It was further divided into two sections.

Section 1 covered household by housing conditions. Following variables were utilized to find out the housing conditions of households:

- Area
- Religion
- Language
- Number of Floor
- Main material of roof, wall and floor
- Number of rooms
- Area of house
- Toilet facility
- Source of water for drinking and other household use
- Sources of energy
- Transportation Means
- Access to electronic Media
- Ownership status
- Credit and installment of loans for purchasing and construction
- Migration

Section II covered variable related to family in the household. It consisted of following variables:

- Family Type
- Number of families in household
- Head of household
- Size of household
- Characteristics of household

Second questionnaire covered perceptions towards changes in the family structure and family itself. Survey 2 and survey 3 were based on the questionnaire 2.

### **3.3.2 Pre-Testing of Questionnaire**

Second phase of questionnaire designing was its pre-testing. It was necessary to go into the field for testing. Pre-testing was done in the study area and final questionnaire with minor modification was adopted for conducting the survey.

### 3.3.3 Sample Design

Faisalabad was selected as a case study in our research and the survey was conducted for in-depth analysis.

Three different strategies for the sampling were utilized in the consecutive phases of the survey.

#### Phase 1

##### Survey I

Following considerations were given for selection and size of the sample to fill items of questionnaire 1:

- Maximum coverage to all parts of Faisalabad city ,
- Clusters were selected on the basis of the location , economic conditions ( rich and poor) , and the housing conditions etc

The sample size was 250 households. 10 clusters were selected for the survey on the basis of the location, economic conditions, ethnic and the area type (rural, urban). 25 households from each cluster were selected on the basis of random sampling in which every second household was surveyed. Surveyed household were pointed on Google earth and coordinates were noted for spatial analysis.

Table 3.2 shows the characteristics of the selected clusters. 8 clusters were taken from the urban areas while 2 clusters were taken from the rural areas. 5 clusters were from middle economic class, one from lower economic class, and two from upper economic class. In rural areas, upper, middle and lower economic classes were present in the selected village. One cluster was taken from the slums area. Government employee colony was also a part of cluster in which officers and low grade employee were living in one colony and depicted the clear picture of different standard of living in the small colony.

**Phase 2:**

Sample size was only 30. Interviews with open ended questions (interview schedule) were conducted from those who had given consent to share in-depth views in phase 1.

**Phase 3:****Survey II and Survey III**

In phase three, two surveys were conducted to get perceptions towards changes in family structure and family itself from residents of our case. Sample size was 200 individuals and random sampling technique was utilized. Questionnaire 2 - perceptions of individuals were filled from individuals at home, work, street, colleges, universities etc irrespective of their location. (Appendix II)

**Table 3.2 Characteristics of the selected clusters**

Cluster Number	Name	Location- Geographic coordinates	Characteristics
Cluster 1	D Type Colony	31°22'54.92"N 73° 4'40.74"E	i. Urban Area ii. Middle economic class
Cluster 2	Katchi Abadi	31°24'48.92"N 73° 5'29.77"E	i. Urban area ii. Lower Economic class iii. Slum
Cluster 3	Postal Colony	31°25'3.97"N 73° 5'3.20"E	i. Urban area ii. Both upper and middle economic class ii. Government employee
Cluster 4	Allama Iqbal Colony	31°22'58.69"N 73° 4'48.42"E	i. Urban area ii. Middle economic class
Cluster 5	Kot Tariq -254 RB	31°15'45.52"N 73° 0'49.26"E	i. Rural area ii. Middle economic class and lower economic class
Cluster 6	Ghulam Muhamad (G.M) Abad	31°26'28.40"N 73° 3'12.16"E	i. Urban ii. Middle economic class
Cluster 7	Gulberg Colony	31°25'25.78"N 73° 3'44.68"E	i. Urban area ii. Upper economic class
Cluster 8	Malah Gandian- Chak 273 JB	31°23'44.70"N 72°48'48.77"E	i. Rural area ii. Middle economic class
Cluster 9	Waris Pura	31°23'3.75"N 73° 5'34.61"E	i. Urban area ii. Middle economic class iii. Christian Colony
Cluster 10	Madina Town	31°25'8.46"N 73° 7'29.95"E	Urban area , Upper economic class

**Figure 3.1 Distribution of clusters in Faisalabad**

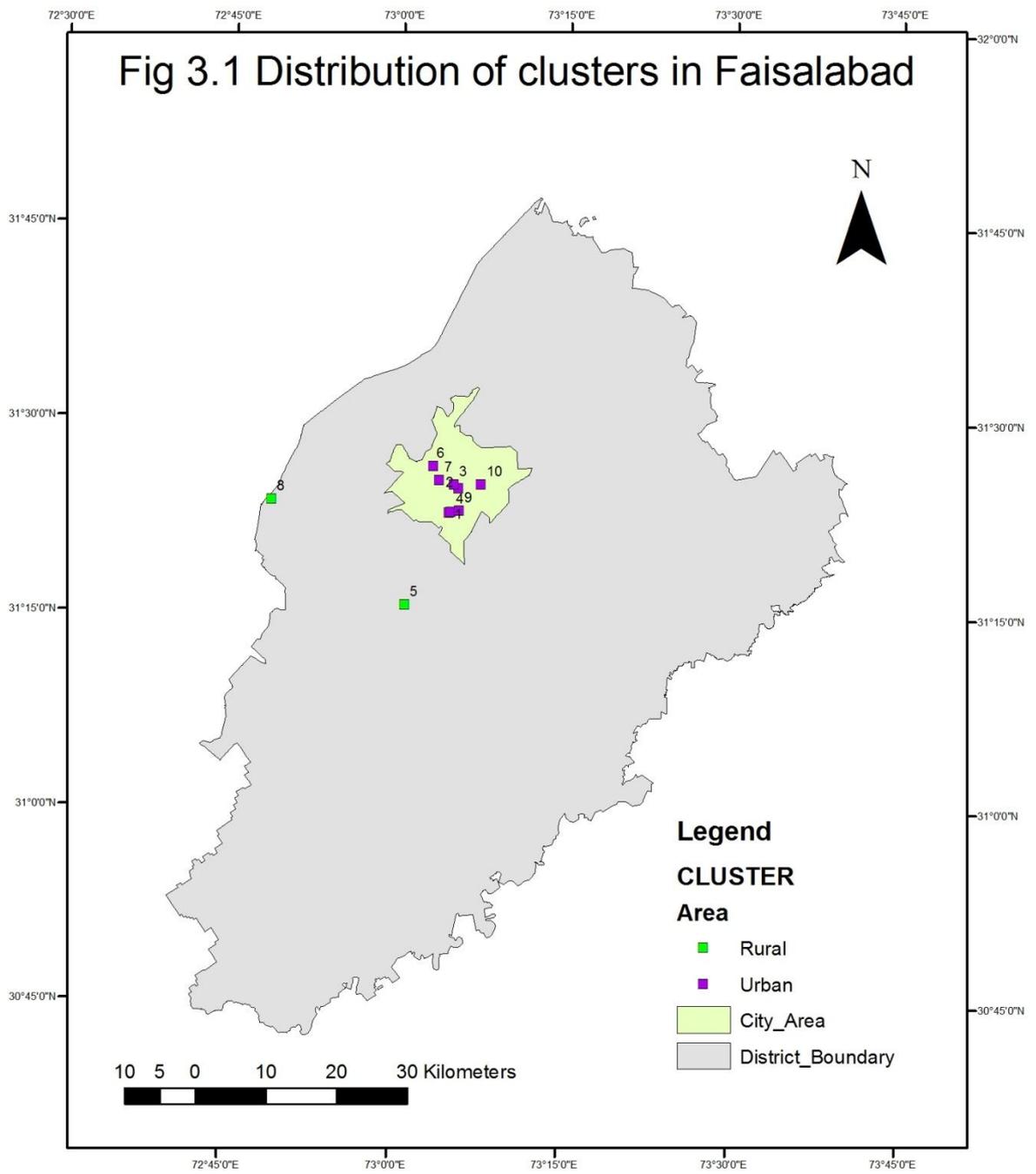
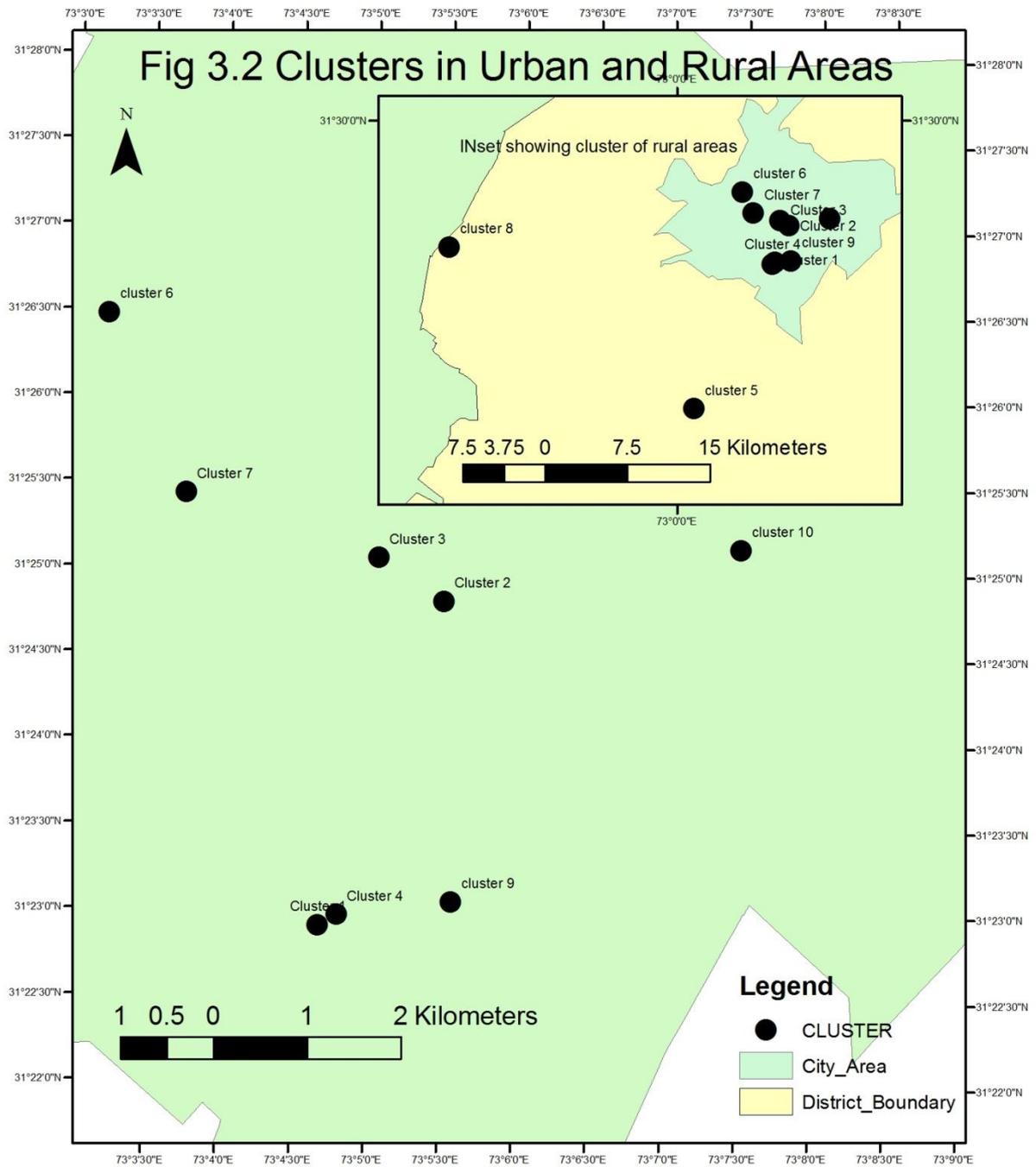


Figure 3.2 Clusters in urban and rural areas



### 3.3.4 Field Problems

Following problems were faced during field survey:

- Law and order situation
- Sensitivity of the topic and ethical issues
- False information of assets and ownership
- Fears of the respondents in the slum area

#### 3.3.4.1 *Law and order situation*

Pakistan is passing through a war against terrorism. Law and order situation is becoming worsened day by day. Innocent civilians are the targets in this war and terrorist groups of Pakistani Taliban and Afghan Taliban are responsible for all the miseries in Pakistan. Sectarian violence also makes the law and order situation worse. Taliban killed many health workers during vaccination of Polio campaign in the northern areas. Law enforcing agencies seem to be helpless in front of the suicide attacks.

Above-mention law and order situation created fear in the minds of Pakistanis and they were not ready to respond. It was very difficult to obtain data from the households in such a situation of fears and uncertainty in which no body is ready to take risk through providing information regarding their families and household.

#### 3.3.4.2 *Sensitivity of the topic and Ethical issues*

There is chance of misreporting about sensitive topics in survey studies. It depends on whether the respondent has anything embarrassing to the report and on the design features of the survey. Respondents try to edit information for avoiding embarrassing themselves in the presence of an interviewer (Tourangeau, 2007).

In our research, there is chance of misreporting because family is a sensitive topic in all societies while Pakistani society is more sensitive to family issues as compared to other open western societies. Pakistanis did not like to discuss their families and situation became difficult for me when respondents were illiterate or conservative and

it was difficult to convince them to respond on the questions of family. It was a difficult task to collect data on sensitive topic like family in such a society in which there is influence of religion.

Family affairs are considered to be private affairs in Pakistani society and nobody is ready to discuss one's family in the public. Privacy of the family is at the priority and asking about their family is like to interfere in their privacy.

Islam is a dominant religion in the region and majority of the women observe veil and they are not allowed to talk with men who are not in family relations like Father, brothers, husband, father in law, and cousins but in families that strictly observe Islamic teachings father in law and cousins are also excluded from the list of family relation. Women were not allowed to open door in the absence of men so it was a difficult task to collect data from such households. They refused to respond and I had to re-visit those households in the evening when male family members were present. I also had to get assistance of the famous personality of the surveyed areas in order to develop confidence of the respondents.

#### ***3.3.4.3 False information of assets and ownership***

Respondents were not ready to respond to the questions relevant to ownership, price of house, amount on the construction and source of income. They tried to provide false information and basic motive was to hide wealth from the government officials because it was not in the nature of Pakistanis to give taxes. The recent example of hiding information regarding assets was seen in the information which was provided to the election commission of Pakistan in last general election 2013. The richest man in the country, current prime of Pakistan, Mian Nawaz Shareef paid only Rs 5000 (34 Euro) tax on its property and income last year so what can we expect from a common man.

#### ***3.3.4.4 Fears of the respondents in the slum area***

One cluster was taken from the slum area in the Faisalabad city for making the present study more representative of the population. Legal occupants are rare in the

slum areas because land was occupied illegally. Respondents of the slum had fear of demolishing slum in their minds because they occupied illegally. They considered me as a representative of the government who was conducting survey for demolishing their houses. They became furious at the start of starting survey and refused to respond. After showing them university employment card in which I am lecturer, they were agreed to cooperate and survey was completed with success.

### **3.4 Interview Schedule**

30 Interviews with open ended questions were conducted from those respondents who had given consent to share in-depth views in phase 1 of survey.

## **3.5 Data Analysis**

### **3.5.1 Analysis through SPSS**

Statistical Package for social sciences (SPSS) was utilized for analysis of survey data. Data analysis passed through the following stages:

- Coding of variable
- Data editing and tabulation
- Problem of Missing value
- Descriptive Statistics
- Exploratory Factor analysis

#### **3.5.1.1 Coding of variable**

First step during analysis through SPSS is coding of variables. Variables were coded along with other necessary details of each variable were entered with care because further analysis would be based on that information.

### **3.5.1.2 Data editing**

Next step after coding was to enter data of the filled questionnaires. This task required full concentration and care because a single wrong entry could affect findings of the study. Data was cross-examined thrice and edited in order to make it error free.

### **3.5.1.3 Problem of Missing value**

#### **Survey I**

Many questionnaires were partially completed and responded were not ready to give information. These items were left blank during data editing because we did not want to drop the remaining important provided information of that household. SPSS treated missing values and ignored them during analysis of that variable in order to make analysis more realistic. We had to drop some variables due to fewer responses for final analysis. (Table 3.3)

#### **Survey II and survey III**

There was not a single missing value in the survey II and survey III because I took prior consent for filling questionnaire and removed the chance of missing values and we did not like to lose a single response on any item

**Table 3.3 Missing values in the Data**

<b>Sr. No.</b>	<b>Variable Name</b>	<b>Total items</b>	<b>Items Responded</b>	<b>Missing items</b>	<b>%</b>
1	Questionnaire Completion	250	250	0	0
2	Composition of area	250	250	0	0
3	Religion of Respondents	250	240	10	4
4	Language of Respondents	250	240	10	4
5	Total Number of Floors in House	250	250	0	0
6	Main Material of roof of the House	250	250	0	0
7	Main Material of walls of the House	250	250	0	0
8	Main Material of floor of the house	250	248	2	0.8
9	Total number of rooms in house	250	238	12	4.8
10	Age of Construction	250	207	43	17.2
11	Total area of House (Square meter)	250	250	0	0
12	Total covered area in Percentage of total area	250	242	8	3.2
13	Facility of Toilet	250	250	0	0
14	Total Number of toilets	250	236	14	5.6
15	Source of Drinking water	250	233	17	6.8
16	Source of water for other household use	250	235	15	6
17	Electricity Facility	250	238	12	4.8
18	Source of Fuel for cooking purpose	250	238	12	4.8
19	Means of Transport	250	227	23	9.2
20	Possession of Radio /TV/Refrigerator/Internet	250	227	23	9.2
21	Economic activity in house	250	223	27	10.8
22	Type of Ownership of House	250	216	34	13.6
23	Ownership at one's own name	250	146	104	41.6
24	Purchased/Self Made	250	113	137	54.8
25	Year of Purchase of House	250	40	210	84
26	Price at time of purchasing	250	39	211	84.4
27	Current estimated price	250	35	215	86
28	Amount spend on construction	250	56	194	77.6
29	Credit for Purchase	250	73	177	70.8
30	Source of credit	250	2	248	99.2
31	Instalment amount	250	0	250	100
32	Total amount of Rent	250	34	216	86.4
33	Year of coming into this house	250	84	166	66.4
34	Are you Migrated	250	157	93	37.2
35	From which area you were migrated?	250	250	0	0
36	Distance from ancient house	250	51	199	79.6
37	Reason of Migration	250	0	250	100
38	Family Type	250	227	23	9.2
39	Number of Families in house	250	227	23	9.2
40	Head of Household	250	227	23	9.2
41	Size of Household	250	227	23	9.2
42	Characteristics of Household	250	228	22	8.8

#### **3.5.1.4 Descriptive Statistics**

Cross tabulation was done through SPSS to find out the relationship among variables.

#### **3.5.1.5 Exploratory Factor analysis**

Exploratory statistical method was used to expose the hidden structure of large set of variables. Purpose of using this method was to identify the underlying relationship between measured variables. We ran three exploratory factors on the data of three distinct surveys.

Primary objective of using exploratory factor analysis method is to determine the number and nature of common factors and the pattern of their influence on the surface attribute (Tucker, 1997). EFA is used to the underlying relationship between measured variables. It is being used in those researches in which researchers have no prior hypothesis about factors or patterns of measured variables ("Exploratory factor analysis," 2014).

In our research, using EFA is quite appropriate due to following reasons:

- No prior research is available on the topic relationship between family structure and urban transition in Pakistan so there was no prior hypothesis to construct.
- More than 40 surface attributes (measured variables) were studied and there is need to compress them into few underlying hidden factors that control measured surface variables.
- In survey II and Survey III, there were 48 items related to the perceptions of individuals towards changes in family structure and family itself. There is dire need to find out the few latent factors that control the changes in family structure and family itself.

## Procedure, Concepts and Terminology

### - Consideration on the appropriate Sample size

There is dire need of appropriate sample size for conducting the Exploratory Factor Analysis .It is evident from the table that in large percentage of researches factor analysis were conducted on the relatively small samples. 62.9 % researchers performed analysis with subject (variable) to the item ratio of 10:1 or less. There is a surprising figure of 14.7 % researches in which factor analysis was done on subject to item ratios of only 2:1 or less. (Anna B. Costello, Jason W. Osborne, 2005) Rules of thumb for the appropriate sample size range everywhere from 3:1, 6:1, 15: 1 or 20:1. (Bret Williams, 2010)

**Table 3.4 Current practice of sample size in Factor Analysis**

Subject to item ratio	% of studies	Cumulative %
2:1 or less	14.7	14.7
>2:1, ≤ 5:1	25.8	40.5
>5:1, ≤ 10:1	22.7	63.2
>10:1, ≤ 20:1	15.4	78.6
>20:1, ≤ 100:1	18.1	97.0
>100:1	3	100.0

Source: (Anna B. Costello, Jason W. Osborne, 2005)

Our sample size is 250 items and that is quite appropriate for the exploratory factor analysis.

### - Fitting Procedure /Extraction Methods

Following extraction methods are being utilized in factor analysis for getting appropriate results:

1. Principal Component Analysis (PCA)
2. Principal Axis Factoring (PAF)
3. Maximum Likelihood (ML)
4. Alpha Factoring
5. Image Factoring

First three are widely used in the factor analysis.

- **Deciding the appropriate number of factors to be retained**

It is a difficult task in the factor analysis and researcher has to decide appropriate numbers of factors to be retained for the model. Scree plot and eigenvalue –greater than one rule (K1 or Kaiser Criterion) are the most popular methods for deciding the number of factors and are being utilized in the researches.

- **Factor Rotation**

After factor extraction, it might be difficult to interpret and name the factors/components on the basis of factor loadings. Factor rotation is the solution to overcome this difficulty. Factor rotation alters the pattern of the factor loadings and improves the interpretation.

(Field, 2013)

Following are two types of rotation:

1. Orthogonal Rotation ( there is no correlation between the extracted factors )
  - i. Varimax
  - ii. Quatrimax
  - iii. Equamax
2. Oblique Rotation (Correlation exists between the extracted factors)
  - i. Direct Oblimin
  - ii. Promax

- **Terminology**

- Factor loading

Factor loading are also called component loading in PCA. These are correlation coefficients between the variables (rows) and factors (columns). The squared factor loading is the percent of variance in that indicator variable explained by factor.

- Communality

Communality is defined as the sum of the squared factor loadings for all factors for a given variable (row) in that variable accounted for by all the

factors. It measures the percent of variance in a given variable explained by all factors collectively.

- Eigenvalue

The eigenvalue for a give factor, measures the variance in all the variables which is accounted for that factor. If factor has a low eigenvalue, then it contributing little to the explanation of variances in the variables.

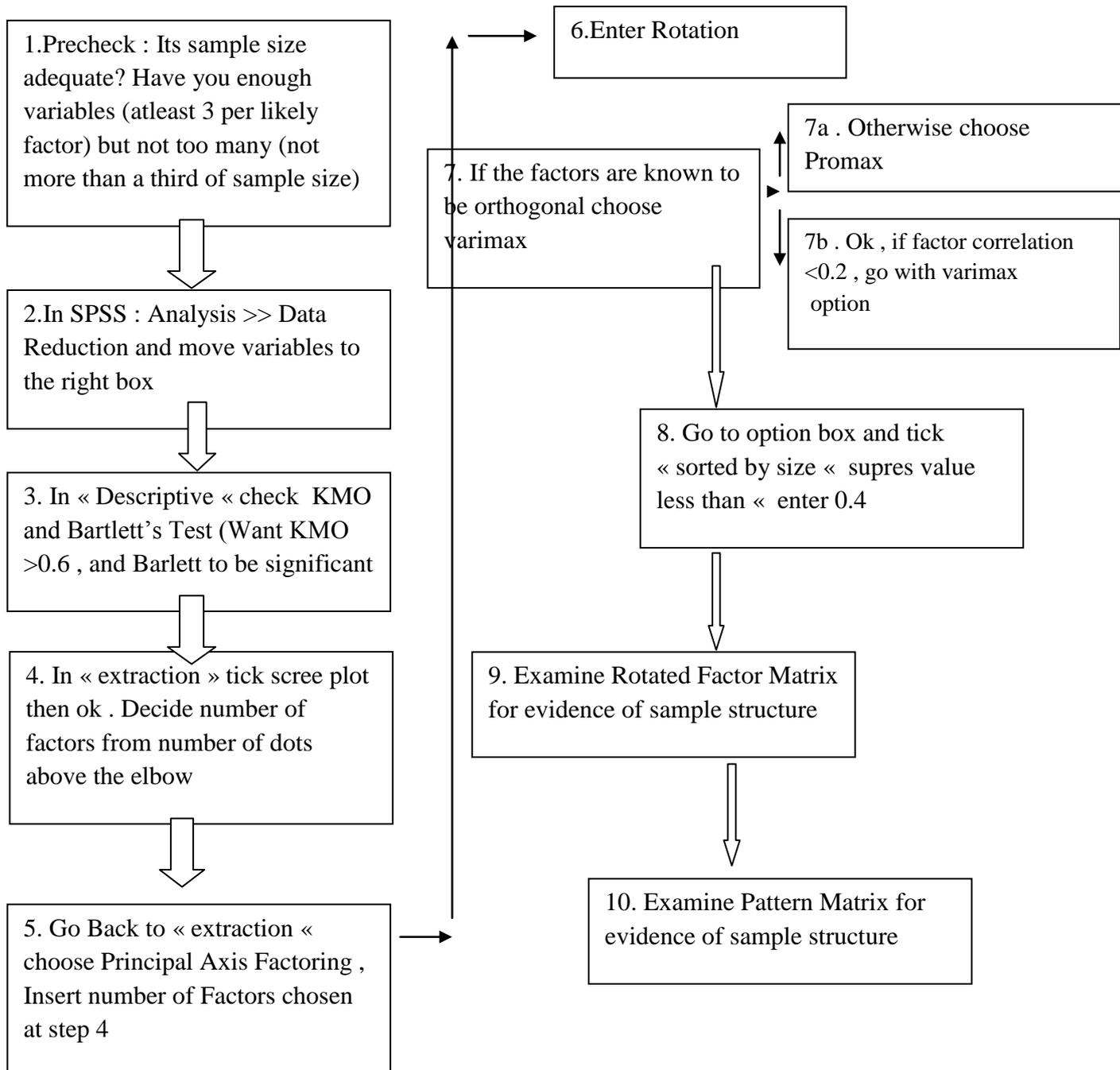
- Factor scores

Factor scores are also known as component score in Principal Component Analysis. These are the scores of each case (row) on each factor (column)

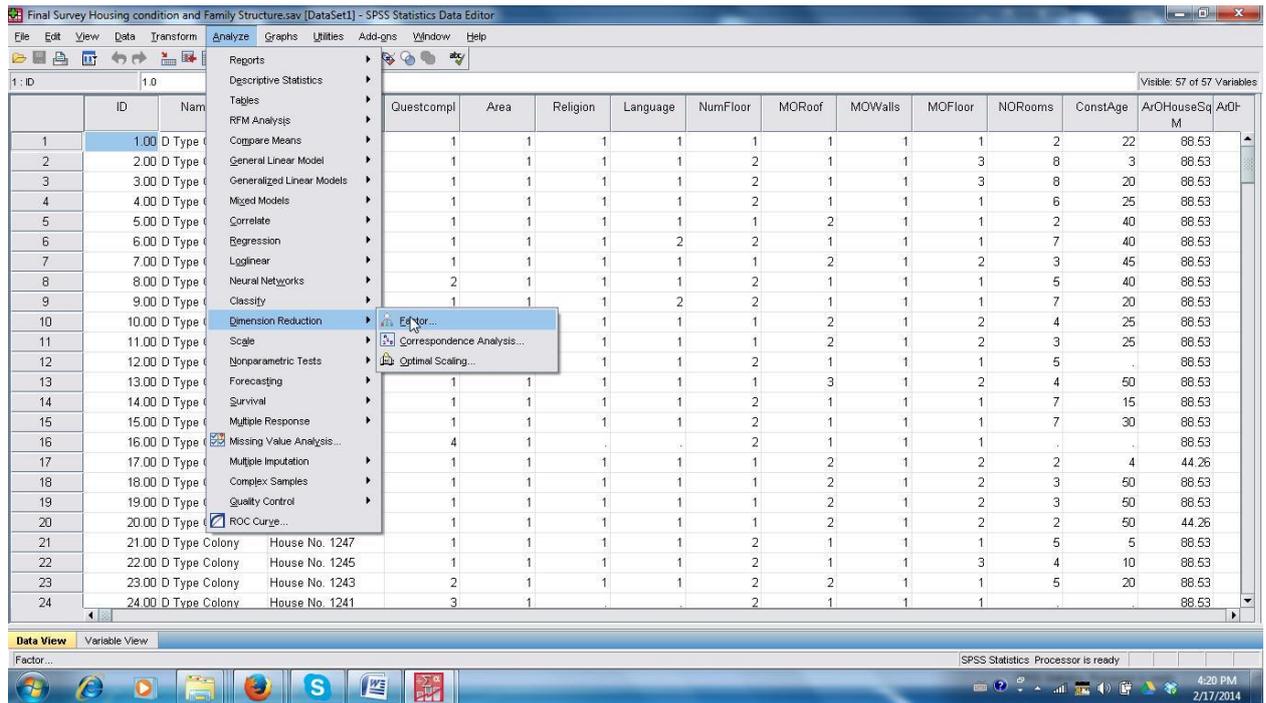
- **Running factor analysis through SPSS**

Exploratory Analysis was done through Statistical Package for Social Science (SPSS) 17. After entering data, coding variables into the SPSS, we followed following steps to conduct factor analysis:

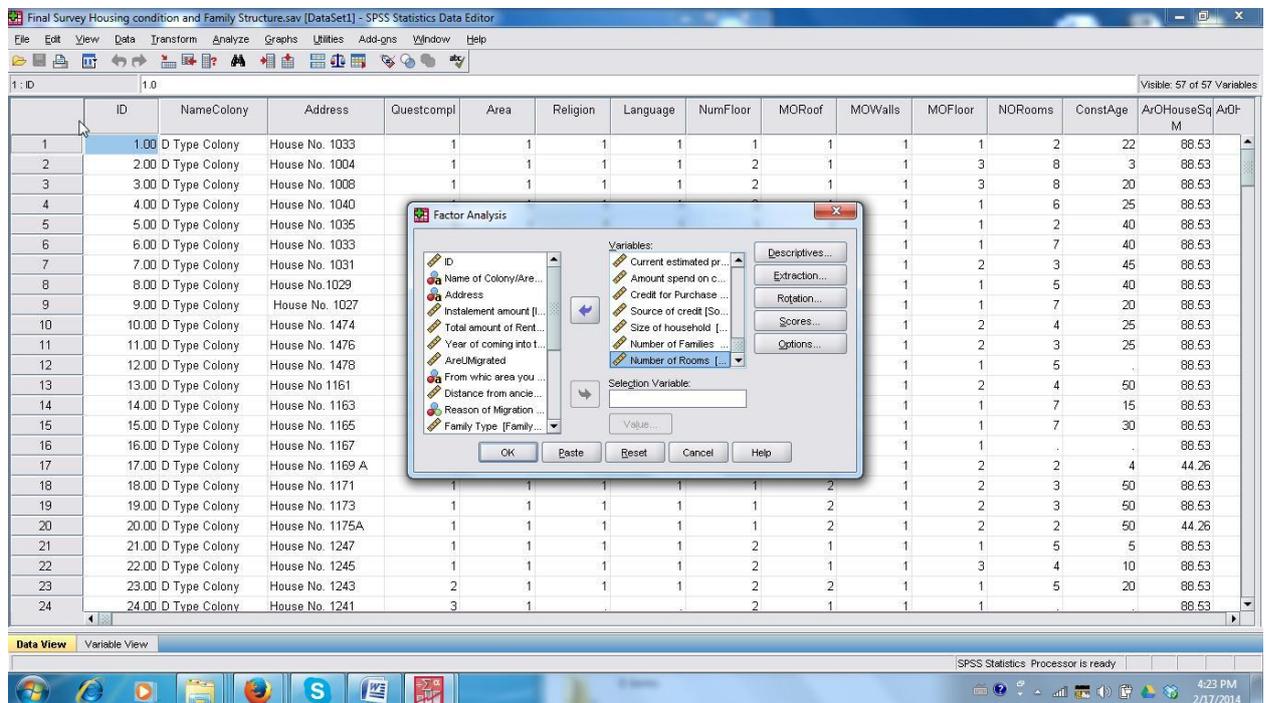
## Steps in SPSS for conducting Factor Analysis



### Step 1



### Step 2



### Step 3

The screenshot shows the SPSS Factor Analysis: Descriptives dialog box. The 'Statistics' section has 'Univariate descriptives' and 'Initial solution' checked. The 'Correlation Matrix' section has 'Coefficients', 'Significance levels', 'Determinant', and 'KMO and Bartlett's test of sphericity' checked. The 'Inverse' checkbox is also checked. The background shows a data table with columns: ID, NameColony, Address, Questcompl, Area, Religion, Language, NumFloor, MORoof, MOWalls, MOFloor, NORooms, ConstAge, ArHouseSq, and ArOfM.

### Step 4

The screenshot shows the SPSS Factor Analysis: Extraction dialog box. The 'Method' dropdown is set to 'Principal components'. Under 'Analyze', 'Unweighted least squares' is selected. The 'Display' section has 'Unrotated factor solution' and 'Scree plot' checked. Under 'Extract', 'Based on Eigenvalue' is selected, and 'Eigenvalues greater than:' is set to 1. The 'Maximum iterations for convergence' is set to 25. The background shows the same data table as in Step 3.

### Step 5

The screenshot shows the SPSS Factor Analysis dialog box and its Rotation sub-dialog box. The main dialog box has the following settings:

- Variables:** Current estimated pr..., Amount spend on c..., Credit for Purchase..., Source of credit (So..., Size of household [...], Number of Families ..., Number of Rooms [...]
- Method:** Varimax
- Display:**  Rotated solution
- Maximum iterations for Convergence:** 25

The Factor Analysis: Rotation dialog box has the following settings:

- Method:** Varimax
- Display:**  Rotated solution
- Maximum iterations for Convergence:** 25

The background data table is as follows:

ID	NameColony	Address	Questcompl	Area	Religion	Language	NumFloor	MORoof	MOWalls	MOFloor	NORooms	ConstAge	ArOHouseSqM	ArOH...	
1	1.00 D Type Colony	House No. 1033	1	1	1	1	1	1	1	1	2	22	88.53		
2	2.00 D Type Colony	House No. 1004	1	1	1	1	2	1	1	3	8	3	88.53		
3	3.00 D Type Colony	House No. 1008	1	1	1	1	2	1	1	3	8	20	88.53		
4	4.00 D Type Colony	House No. 1040													
5	5.00 D Type Colony	House No. 1035									6	25	88.53		
6	6.00 D Type Colony	House No. 1033									2	40	88.53		
7	7.00 D Type Colony	House No. 1031									2	3	45	88.53	
8	8.00 D Type Colony	House No. 1029									5	40	88.53		
9	9.00 D Type Colony	House No. 1027									7	20	88.53		
10	10.00 D Type Colony	House No. 1474									4	25	88.53		
11	11.00 D Type Colony	House No. 1476									2	4	25	88.53	
12	12.00 D Type Colony	House No. 1478									4	25	88.53		
13	13.00 D Type Colony	House No. 1161									2	4	25	88.53	
14	14.00 D Type Colony	House No. 1163									3	4	10	88.53	
15	15.00 D Type Colony	House No. 1165									1	5	20	88.53	
16	16.00 D Type Colony	House No. 1167									1	1	5	20	88.53
17	17.00 D Type Colony	House No. 1169 A													
18	18.00 D Type Colony	House No. 1171													
19	19.00 D Type Colony	House No. 1173													
20	20.00 D Type Colony	House No. 1175A													
21	21.00 D Type Colony	House No. 1247													
22	22.00 D Type Colony	House No. 1245													
23	23.00 D Type Colony	House No. 1243													
24	24.00 D Type Colony	House No. 1241													

### Step 6

The screenshot shows the SPSS Factor Analysis dialog box and its Factor Scores sub-dialog box. The main dialog box has the following settings:

- Variables:** Current estimated pr..., Amount spend on c..., Credit for Purchase..., Source of credit (So..., Size of household [...], Number of Families ..., Number of Rooms [...]
- Method:** Regression
- Display:**  Display factor score coefficient matrix

The Factor Analysis: Factor Scores dialog box has the following settings:

- Method:** Regression
- Display:**  Display factor score coefficient matrix

The background data table is the same as in Step 5.

## Step 7

The screenshot displays the SPSS Statistics Data Editor interface. The main window shows a data table with 24 rows and 17 columns. The columns are: ID, NameColony, Address, Guestcompl, Area, Religion, Language, NumFloor, MORoof, MOWalls, MOFfloor, NORooms, ConstAge, ArOHouseSq, and ArOH-M. The data table is partially obscured by two dialog boxes.

The first dialog box is the 'Factor Analysis' dialog, which is open to the 'Variables' tab. It shows a list of variables on the left, including 'ID', 'Name of Colony/Area...', 'Address', 'Instalment amount [...]', 'Total amount of Rent...', 'Year of coming into [...]', 'AreUMigrated', 'From which area you ...', 'Distance from ancie...', 'Reason of Migration ...', and 'Family Type [Family...]'. The 'Variables' list on the right includes 'Current estimated pr...', 'Amount spend on c...', 'Credit for Purchase ...', 'Source of credit [So...', 'Size of household [...]', 'Number of Families ...', and 'Number of Rooms [...]'.

The second dialog box is the 'Factor Analysis: Options' dialog, which is open to the 'Missing Values' tab. It shows the following options:

- Exclude cases listwise
- Exclude cases pair-wise
- Replace with mean

Under the 'Coefficient Display Format' section, the following options are checked:

- Sorted by size
- Suppress small coefficients

The 'Absolute value below:' field is set to 40.

### 3.5.1.6 Binomial Logistic Regression

We ran two binomial logistic regressions to predict the probability of finding different family structure in rural/urban status and in different socio-economic set up.

### 3.5.2 Using Arc-GIS as a Cartographic Tool

Arc-GIS 9.3 was utilized as a cartographic tool. Geographic coordinates of households were noted through Google earth software due to non-availability of GPS in the field. Households were plotted on Google earth as a place mark. These place marks were exported into KML file. KML file was imported into Arc-GIS and converted into shape file for further analysis.

We also used Arc-GIS 9.3 to get cartographic outcomes for related demographic indicators (Population growth, Population distribution, sex ratio, household size, urban transition etc.) at district level of Pakistan.



## **4 Chapter 4- Results and Analytical Discussions**

### **4.1 Introduction**

This chapter brings light on the major empirical results which are based on the three surveys (we already discussed in detail in chapter 3- Methodology) which we conducted in Faisalabad in 2012. First section deals with housing conditions, household and family structure (Survey 1). The basic aim is to find out the differences in housing and living conditions of household in the urban and rural areas of Faisalabad, Pakistan. Furthermore, it also uncovers the difference in family structure in rural and urban areas.

Second section deals with the perceptions of individuals towards changes in the family structure and family itself (Survey 2 and 3). Second section is highly interesting and makes a convincing case in favor of the principal hypothesis that urban transition causes changes in the family system.

We analyzed results through cross tabulations and with three Principal Component Analysis on three different surveys for seeing the role of urban transition in bringing changes in the housing conditions, household, family structure and family itself. The French tradition of Factor Analysis avoid using rotation, and interprets the initial unrotated output with the addition of the contribution score (CS) of initial variables to factor calculation so our interpretations are based on the unrotated components matrix solution.

First Principal Component Analysis- Family structure and urban Transition was based on the household survey in Faisalabad in which we collected data from the 250 households, out of which 50 households were from the rural area and 200 households were from the urban areas. Households were selected from 10 different clusters and 25 households were taken from each cluster.

Second Principal Component Analysis- Changes in Family structure was based on the perceptions of individuals regarding changes in the family structure and sample size was 200 respondents, selected randomly from the rural and the urban of Faisalabad.

Third Principal Component Analysis- Changes in Family was based on the perceptions of individuals regarding changes in the family and sample size was 200 respondents, selected randomly from the rural and the urban of Faisalabad.

We also ran two binomial logistic regressions on the data to predict the probability of finding different family structure in rural/urban status and different socio-economic set up.

## **Section I**

Section I deals with housing and living conditions of households from the rural and the urban areas of Faisalabad. It also covers the difference in family structure in a rural area and an urban area. Principal component analysis reduced the large number of items/variables into small latent factors that operate in relationship of family structure and urban transition. Empirical findings are based on the survey 1 in which structured questionnaire 1 (Appendix I) was used. As stated earlier the basic aim is to find out the differences in housing and living conditions of household in the urban and rural areas of Faisalabad, Pakistan. Furthermore, it also uncovers the difference in family structure in rural and urban areas.

### **4.2 Questionnaire Completion**

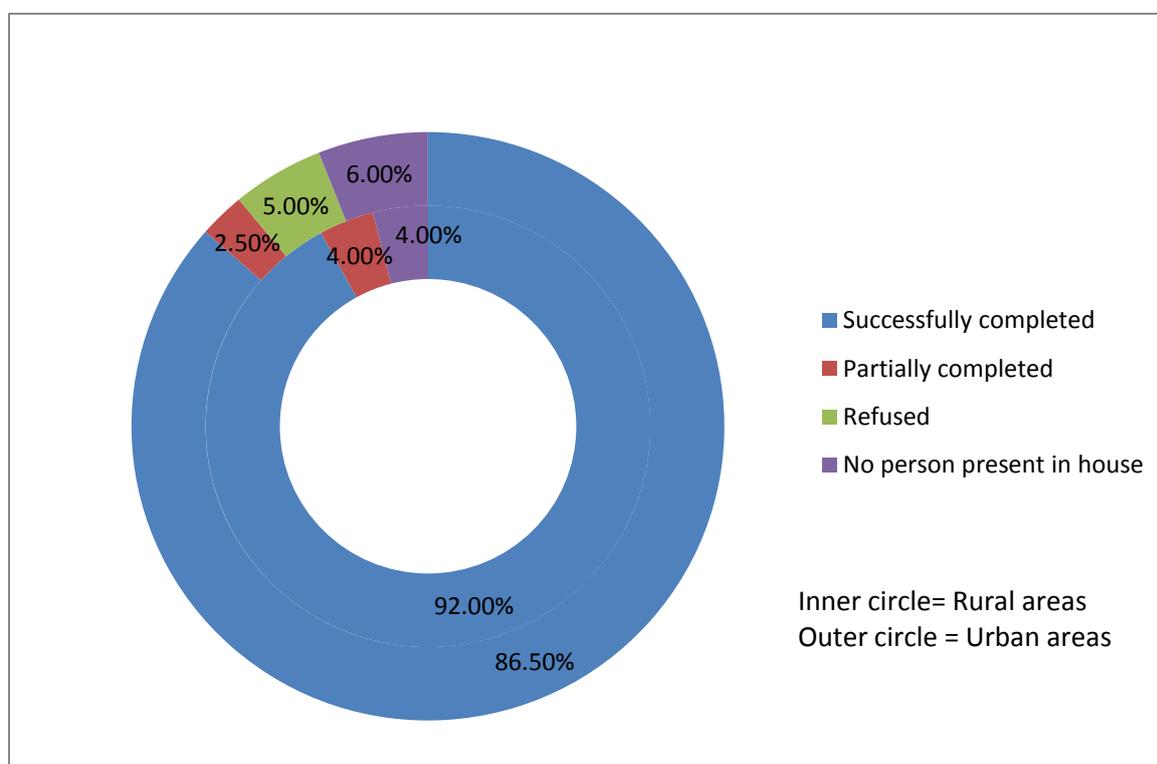
As stated earlier in chapter 3 that total sample size was 250, we filled 50 questionnaires from the rural areas and 200 questionnaires from urban areas. 87.60 % questionnaires were successfully completed while the percentage of successful completion of questionnaires from rural areas was 92 % which was a little bit more than urban areas in which success percentage was 86.50 %. People from villages were more cooperative than urban dwellers due to rising threat of terrorism, street crimes and the worst law and order situation due to rising terrorism and talbanisation in the cities of Pakistan after 9/11 incident. Not a single respondent refused in the clusters from the villages whereas 5 % respondents refused to respond in the urban areas. 4 % questionnaires in the rural areas and 2.50% in the urban areas were partially filled. 6% households in the urban areas no person was present in the house to respond in 4 % households from the rural areas and I inquired information of these households from the immediate neighbors. (Figure 4.1)

Figure 4.2 shows the percentage distribution of questionnaire completion by clusters in Faisalabad. I faced maximum refusal of questionnaires (20%) from the cluster 10 that was from urban areas and dwellers were from the upper economic class. Some of them assumed that I was conducting a tax survey while others did not respond due to bad law and order situation in cities of Pakistan. There was no refusal from 2 urban clusters (cluster 3 & cluster 4) and 1 rural cluster (cluster 5). I was able to get maximum successful completed

questionnaires from cluster 2 (Slum area, lower economic class) and cluster 8 (rural area). In slum area (cluster 2), I built the confidence of respondents through showing my university card in which I was employed whereas respondents from cluster 10 (upper economic class) did not accept any argument and remained consistent on non-responding behavior.

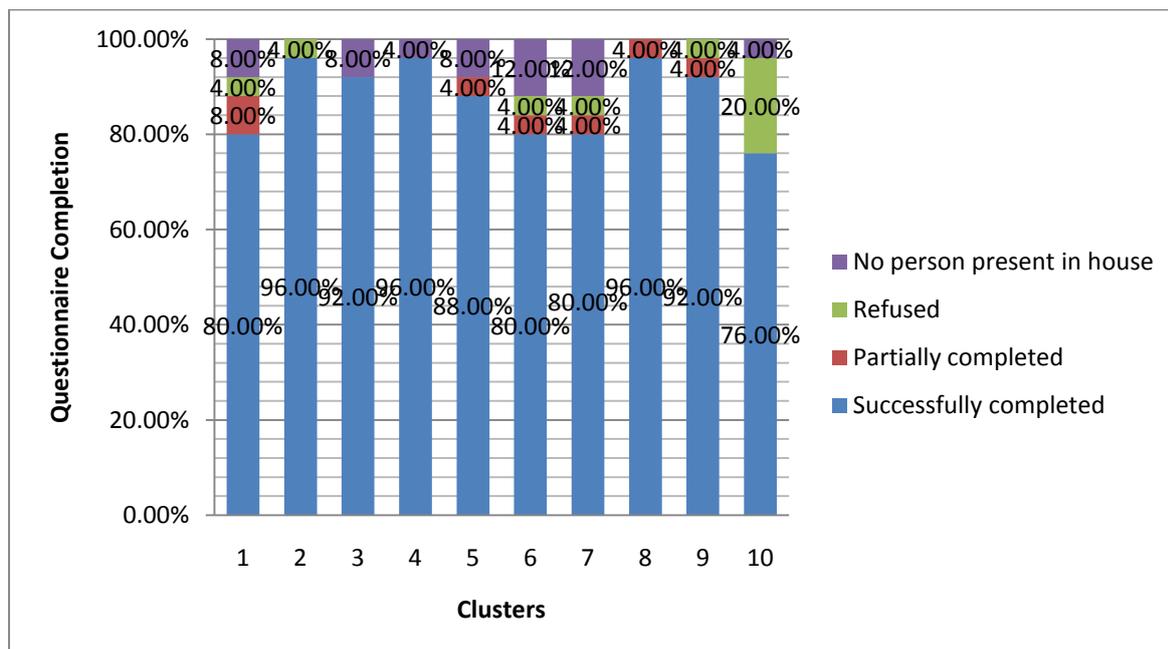
Table 4.1 shows the percentage of missing items during survey. We had to remove items related to house purchasing, amount on the construction, credit, income, rent and migration due to large percentage of missing values in the data due to many factors which we discussed in details in 3.3.4 Field problems.

**Figure 4.1 Percentage Distribution of Questionnaire completion by composition of Area in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

**Figure 4.2 Percentage distribution of questionnaire completion by clusters in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

**Table 4.1 List of Missing items in Survey I**

Sr. No.	Variable Name	Total items	Items Responded	Missing items	Missing (%)
1	Questionnaire Completion	250	250	0	0
2	Composition of area	250	250	0	0
3	Religion of Respondents	250	240	10	4
4	Language of Respondents	250	240	10	4
5	Total Number of Floors in House	250	250	0	0
6	Main Material of roof of the House	250	250	0	0
7	Main Material of walls of the House	250	250	0	0
8	Main Material of floor of the house	250	248	2	0.8
9	Total number of rooms in house	250	238	12	4.8
10	Age of Construction	250	207	43	17.2
11	Total area of House (Square meter)	250	250	0	0
12	Total covered area in Percentage of total area	250	242	8	3.2
13	Facility of Toilet	250	250	0	0
14	Total Number of toilets	250	236	14	5.6
15	Source of Drinking water	250	233	17	6.8
16	Source of water for other household use	250	235	15	6
17	Electricity Facility	250	238	12	4.8
18	Source of Fuel for cooking purpose	250	238	12	4.8
19	Means of Transport	250	227	23	9.2
20	Possession of Radio /TV/Refrigerator/Internet	250	227	23	9.2
21	Economic activity in house	250	223	27	10.8
22	Type of Ownership of House	250	216	34	13.6
23	Ownership at one's own name	250	146	104	41.6
24	Purchased/Self Made	250	113	137	54.8
25	Year of Purchase of House	250	40	210	84
26	Price at time of purchasing	250	39	211	84.4
27	Current estimated price	250	35	215	86
28	Amount spend on construction	250	56	194	77.6
29	Credit for Purchase	250	73	177	70.8
30	Source of credit	250	2	248	99.2
31	Instalment amount	250	0	250	100
32	Total amount of Rent	250	34	216	86.4
33	Year of coming into this house	250	84	166	66.4
34	Are you Migrated	250	157	93	37.2
35	Distance from ancient house	250	51	199	79.6
36	Reason of Migration	250	0	250	100
37	Family Type	250	227	23	9.2
38	Number of Families in house	250	227	23	9.2
39	Head of Household	250	227	23	9.2
40	Size of Household	250	227	23	9.2
41	Characteristics of Household	250	228	22	8.8

Source: Primary data collected through survey, 2012

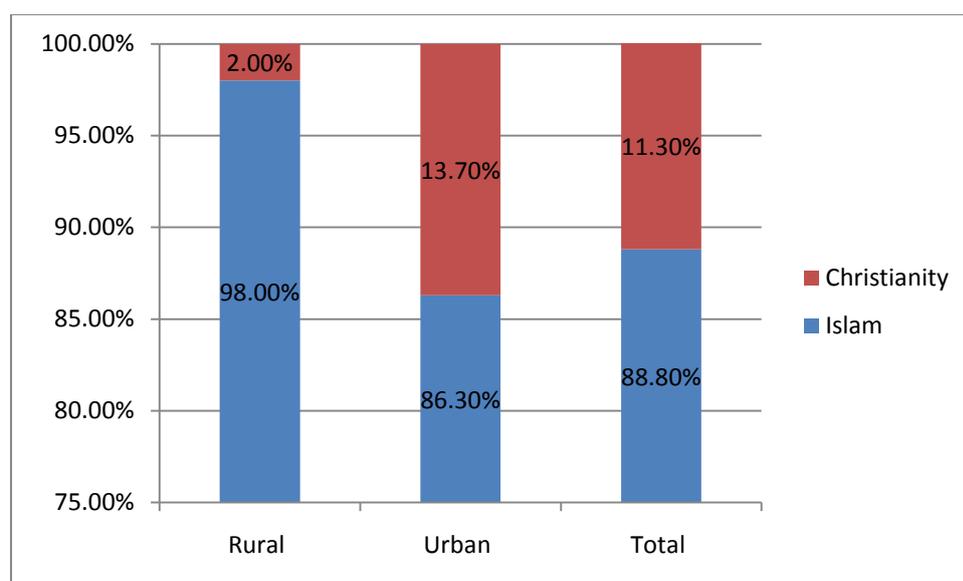
### **4.3 Housing, Household characteristics and Family structure**

#### **4.3.1 Households by religions in the rural and the urban areas**

As stated earlier that Pakistan was separated from the united India on the basis of religion-Islam. 96.4% of the total population is Muslim while remaining 3.6 % of total Population belongs to other religions like Christianity, Hinduism and Sikhism. Muslim Population is further divided into two Major sects Sunni (85-90%) and Shia (10-15%) (CIA, 2013).

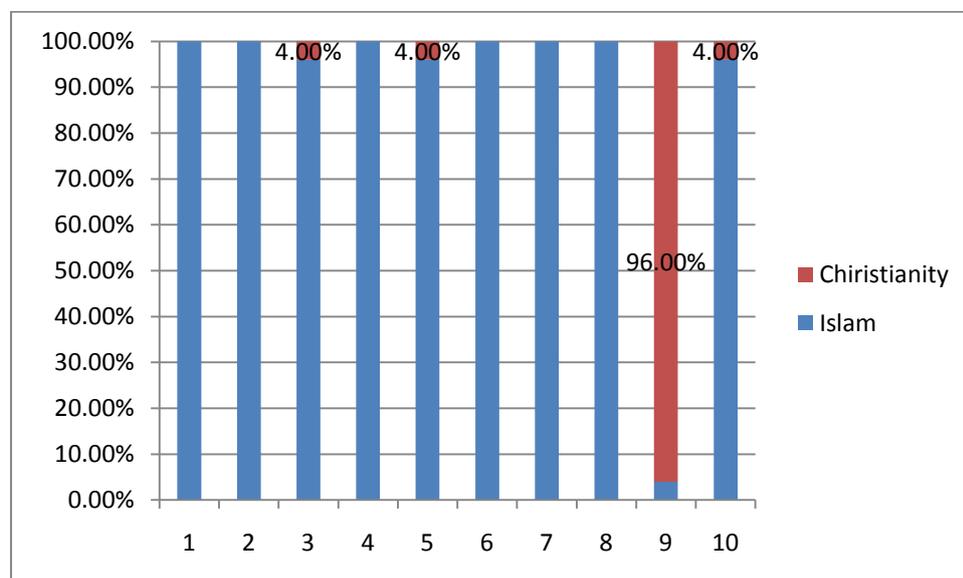
We included the question related to the religion of respondents in the households but we did not inquire about their sects due to rising sectarian violence in Pakistan and we did not like to make this survey controversial during data collection phase. As Christians are in minority in Pakistan and they are sparsely dispersed in whole Faisalabad and in some colonies they are living as majority because they feel secure in living collectively in some pockets of city. We intentionally included one cluster from the Christian colony for representing minorities. It affected results regarding composition of household according to religion because national figure is 96.4 % of the total population is Muslim while in our survey 88.8 % households belonged to religion Islam and remaining 11.3 % belonged to Christianity due to presence of one Christian colony cluster (cluster 9) in sample. In Rural areas 98.0 % households belonged to Islam and in urban area this proportion was 86.3 % due to presence of Christian majority clusters from the urban area in sample.

**Figure 4.3 Percentage Distribution of Households by religions in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

**Figure 4.4 Percentage Distribution of Households by religions in the Clusters of Faisalabad, 2012**



Source: Primary data collected through survey, 2012

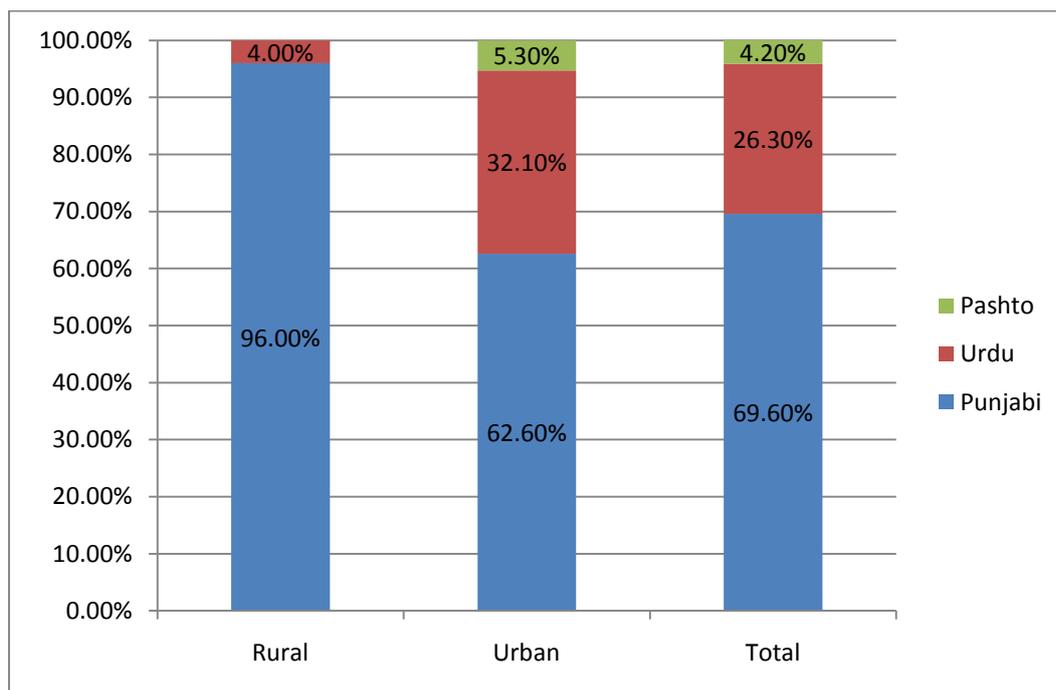
### 4.3.2 Household by language in rural and urban areas

Urdu is the national language while English is official language in Pakistan. Punjabi, Sindhi, Pashto, Balochi and Kashmiri are regional languages from Punjab, Sindh, Khyber PakhtonKhawa, Balochistan and Kashmir respectively. As our case study is from Punjab so 69.60 % of the total households spoke Punjabi while 26.30 % spoke Urdu and remaining 4.2 % household spoke Pashto. Pashto speaking households were migrants from Afghanistan and Khyber PakhtunKhawa and they were in majority in the slum areas (cluster 2) of Faisalabad. As stated earlier in chapter 3, we also included one cluster from slum area in our sample.

We observed a wide contrast in households on language basis in rural and urban areas. In the rural areas, 96.0 % of the total households spoke Punjabi while this proportion was 62.60 % in urban areas. Only 4 % of the total households in rural areas spoke Urdu while in urban areas, 32.10 % of the total household spoke Urdu. Not a single household in rural areas of Faisalabad spoke Pashto while 5.3% of the total households in the urban areas spoke Pashto due to settlement of migrant pashtoon population in the urban areas. (Figure 4.5)

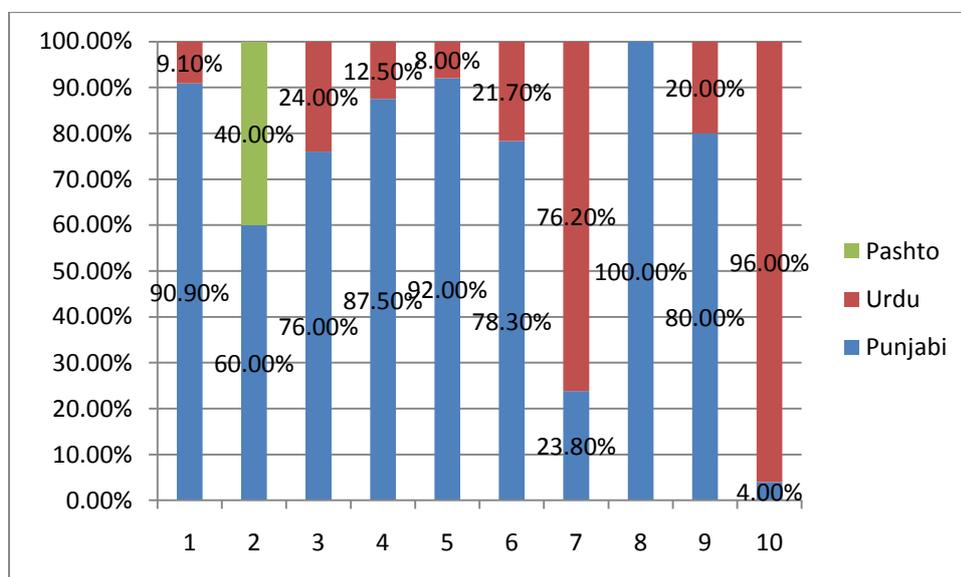
Fig 4.6 shows the percentage distribution of households according to the language by clusters in Faisalabad. We found Pashtu speaking households in cluster 2 that was a slum area in which migrant from Khber PakhtawunKhawa settled due to cheap houses and non- formal occupation of land. 40% of the total household in cluster 2 spoke Pashto while remaining 60% spoke Punjabi. Maximum number of Urdu speaking household were present in Upper economic clusters -Cluster 10 (96%) and cluster 7 (76.20%). Cluster 8 and cluster 5 from rural areas had 100% and 92% Punjabi spoken households respectively. All others clusters from urban areas had Punjabi spoken households more than 75%.

**Figure 4.5 Percentage Distribution of Households by languages in Faisalabad, 2012**



Source : Source: Primary data collected through survey, 2012

**Figure 4.6 Percentage Distribution of Households by languages in clusters of Faisalabad, 2012**



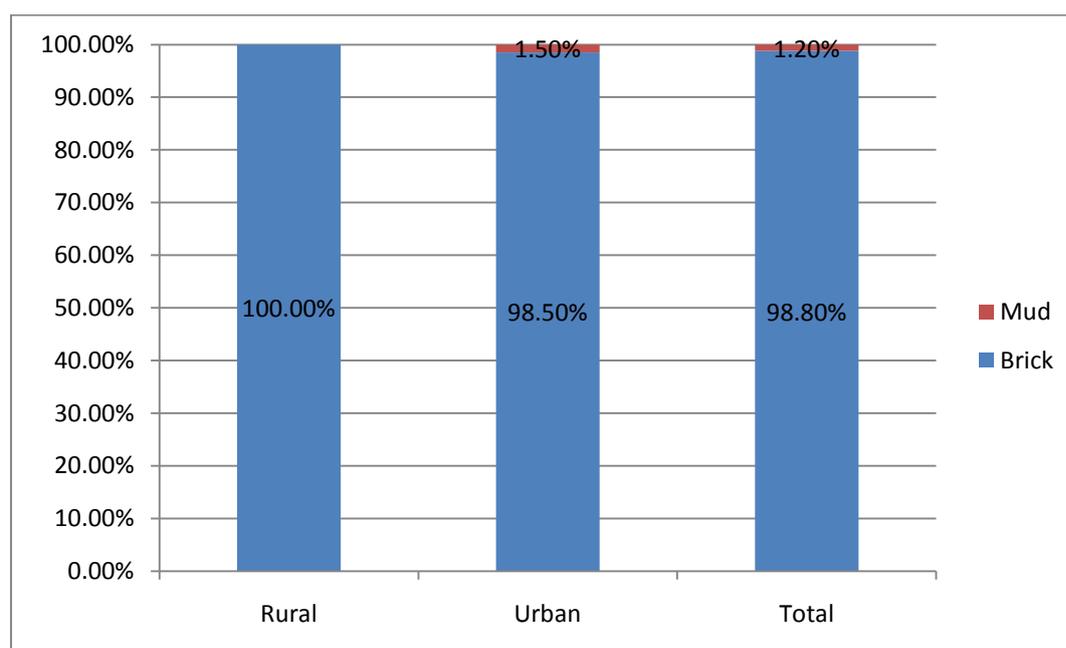
Source: Primary data collected through survey, 2012

### 4.3.3 Classification of Households by housing conditions in the rural and the urban areas

#### 4.3.3.1 Households by type of construction material of house

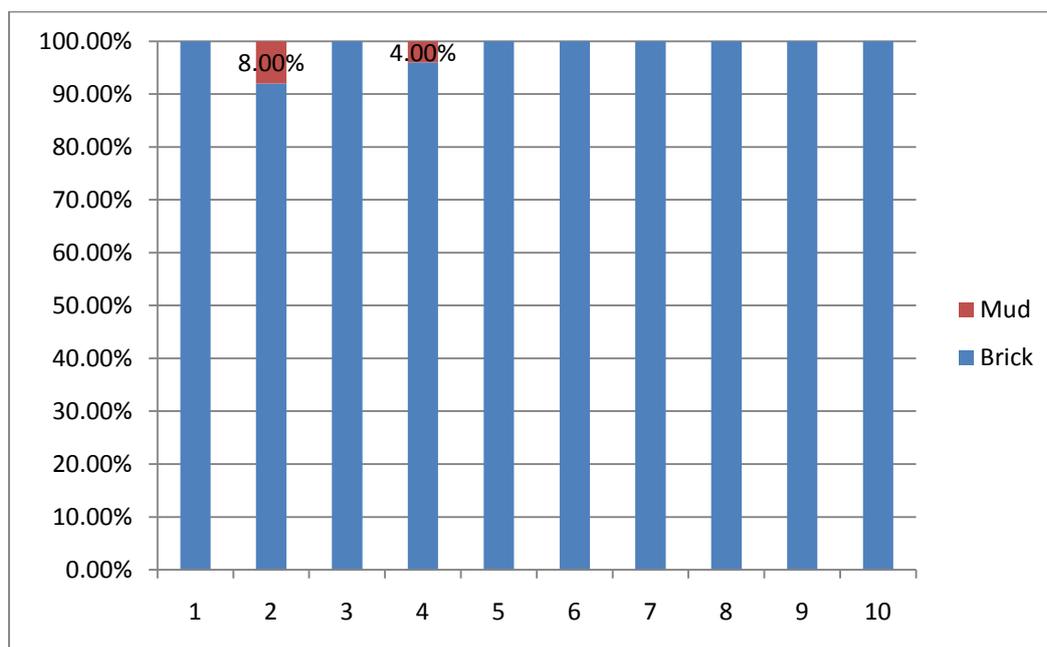
Figure 4.7 and Figure 4.8 show percentage distributions of household by the construction material of wall for rural- urban and clusters in Faisalabad. Mud and Brick were the main material used for the construction of walls in rural and urban areas. 100 % households in rural areas used bricks for construction of walls while in urban areas this proportion was 98.50 % due to the inclusion of slum area cluster 2 in which 8 % households used mud for construction of walls. Brick was used for the construction of walls of 100% households in clusters 1 to 10 excluding clusters 2 and 4 in which mud was used.

**Figure 4.7 Percentage distributions of households by main material for construction of wall in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

**Figure 4.8 Percentage distributions of households by main material for construction of wall by clusters in Faisalabad, 2012**



Source: Primary data collected through survey, 2012



**Image 4.1 Construction material of houses in urban areas: Bricks + Cement**

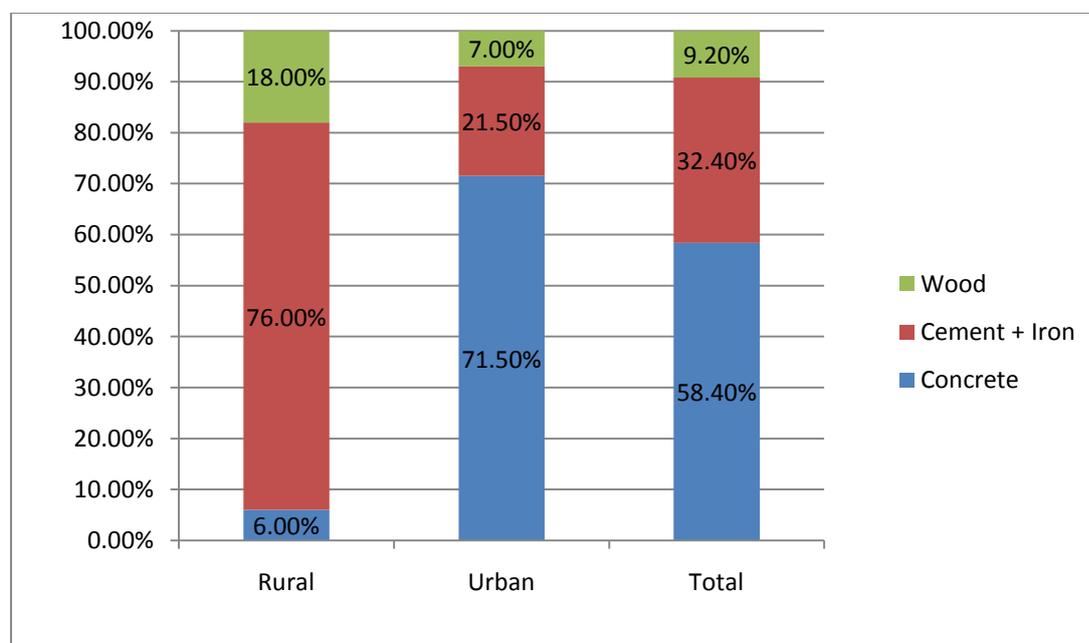


**Image 4.2 A double Storey House in urban area, Faisalabad**

Figures 4.9 and 4.10 describe the main material for the construction of roof in Faisalabad. Wood , cement+iron , and concrete were used to construct roof. Wood is the least expensive while concrete is the most expensive material for construction of roof. There was a wide contrast in the construction material in rural and urban area. In Urban areas, 71.50% household used concrete for construction of roof whereas this proportion was only 6.0 % in rural areas. 76.0% households in rural areas utilized Cement and Iron while this proportion was only 21.50% in urban areas. 18.0% households in rural areas and 7.0 % households in urban areas utilized wood.

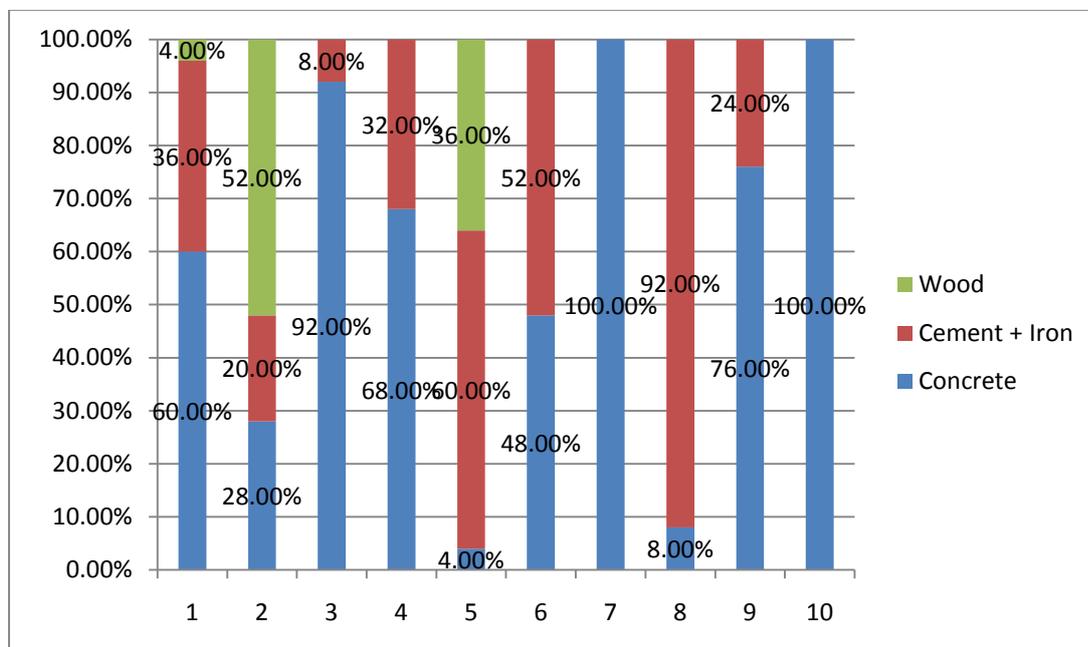
We observed a great diversity in constructing material for roof in our studied clusters which depicts the various level of development in these clusters. Houses in clusters 7 and 10 were built by concrete- the modern and expensive material for construction and these two clusters represented the upper economic class. In slum area (cluster 2 ) , wood (the least expensive material ) was utilized for construction of roof in 52.0 % household and this material was also utilized in rural cluster 5 and urban cluster 1 by poor people who could not afford expensive material for construction of their houses.

**Figure 4.9 Percentage distributions of households by main material for construction of roof in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

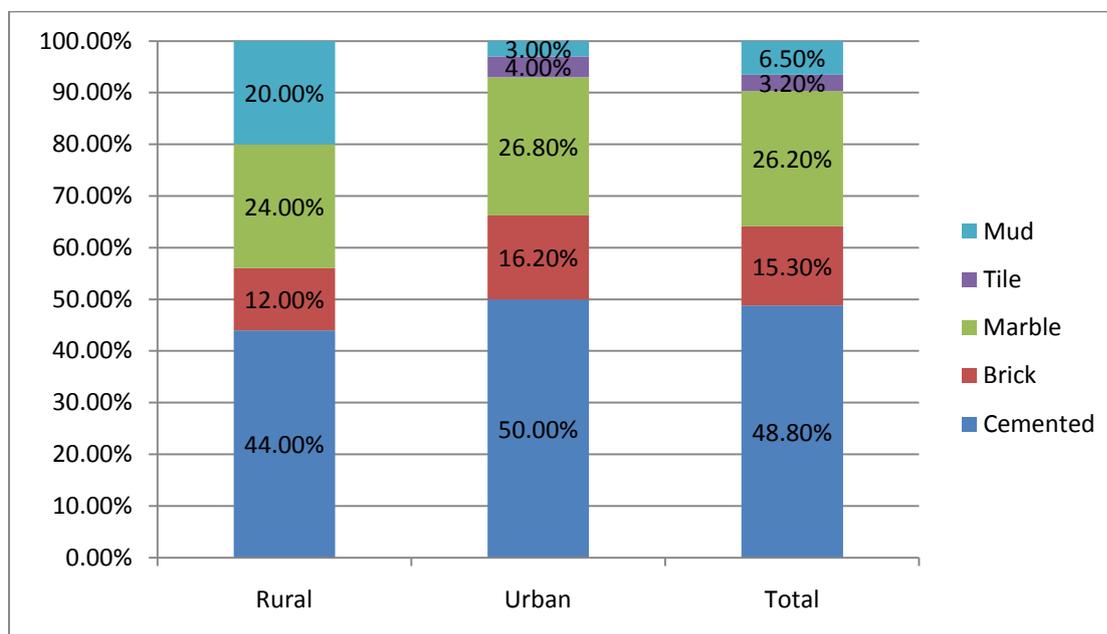
**Figure 4.10 Percentage distributions of households by main material for construction of roof by clusters in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

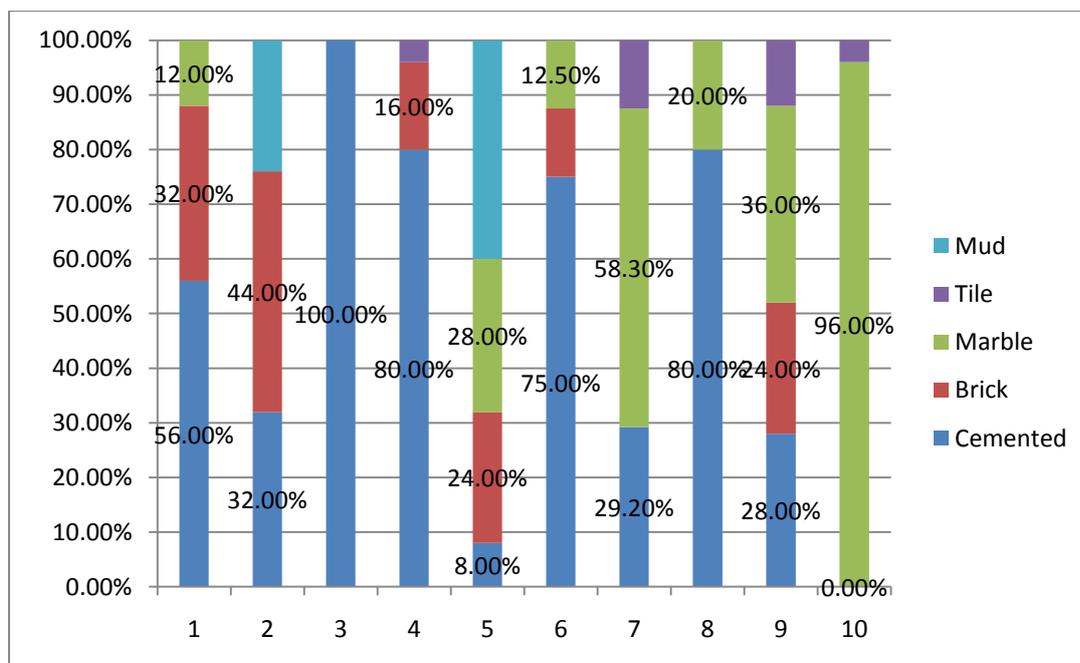
Figure 4.11 and figure 4.12 show the percentage distribution of households by main material of floor in Faisalabad. Mud (the cheapest), brick (cheaper), Cemented (Economically), Marble (expensive) and Tile (the most expensive) materials were utilized for the construction of floor. We found 50.0% cemented floor households in the urban areas and 44.0% in rural areas while mud was utilized in 20.0% households in the rural areas and 3.0% households in urban areas and these households were from cluster 2 that was a slum area in the urban locality where poor people could not spend more on the construction of house. Moreover, the fear of demolishing their houses by government due to illegal occupation of land was also in the minds of dwellers of slum areas. Marble was utilized by one fourth households in both rural and urban areas. Tile was used in urban areas only by 3.0% households.

**Figure 4.11 Percentage distributions of households by main material for construction of floor in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

**Figure 4.12 Percentage distributions of households by main material for construction of Floor for clusters in Faisalabad, 2012**



Source: Primary data collected through survey, 2012



**Image 4.3 A temporary build house in the slum area due to the fear of demolishing by government and abject poverty of household**



**Image 4.4 Building structure of studied slum area on the track of railway in the centre of city**

#### ***4.3.3.2 Households by nature of tenure***

It is evident from Figure 4.13 that majority of households (80.6%) were owned and 19.4% were rented. All rented households were present in the urban areas while all households in rural areas were owned by occupants.

According to the 1998 census, 84.5 % of the housing units were owned, 9 % rented and remaining 6.8 % were rent free in Faisalabad. 2.8 % houses were rented in the rural areas whereas this proportion was 17.7% in the urban areas (PCO, 2000).

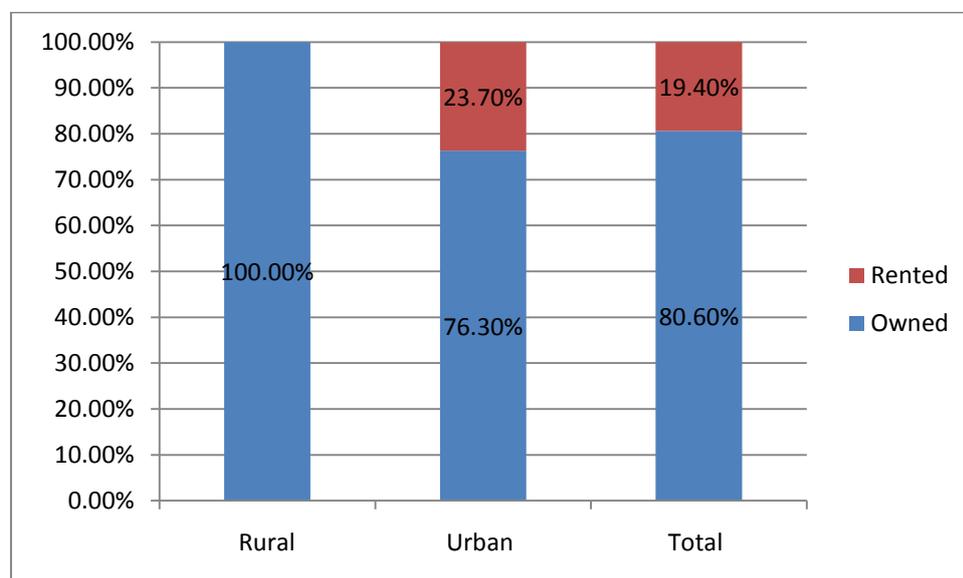
We did not include rent free household option in our survey due to the fact that actually houses were rented but occupants declared it rent free on the instructions of owner of house for saving property tax. Rent free households in the 1998 (6.8 %) in most of the cases were rented. One fourth rented households in the urban areas are due to high land value, lack of government financing, and rising urban population. I also inquired about the purchasing and self making of household along with amount spent on purchasing and construction of house but the responses were not authentic and they were hiding their wealth because their sources of income were not in the government records.

There was not a system of credit for purchasing and construction of houses for common man. There was credit scheme launched by banks for government employees only. In past years, Faisalabad development authority developed various housing schemes and allotted to the people on partial payments while remaining amount in the installments but unfortunately, a great proportion did not pay their installments and political representatives forgave the remaining installments for getting votes. Two clusters (Cluster 1 and Cluster 4) in our surveyed areas are included in this category. All the dwellers of slums areas acquired land illegally through occupation government land without paying a single rupee. Cluster 2 is the representation of slum area in Faisalabad. Private Housing colonies were constructed to cover the housing shortage but unfortunately land mafia earned a lot in the absence of government housing schemes.

I also did not get authentic information from the respondents regarding amount of rent, current price of house, purchasing price, amount on the construction, and source of income. They did not respond to these questions and if responded, provided fake and fabricated

information which was useless to be included in the analysis and we had to drop these variables for factor analysis due to lot of missing values and lack of authenticity.

**Figure 4.13 Percentage distribution of household by ownership of house in Faisalabad, 2012**

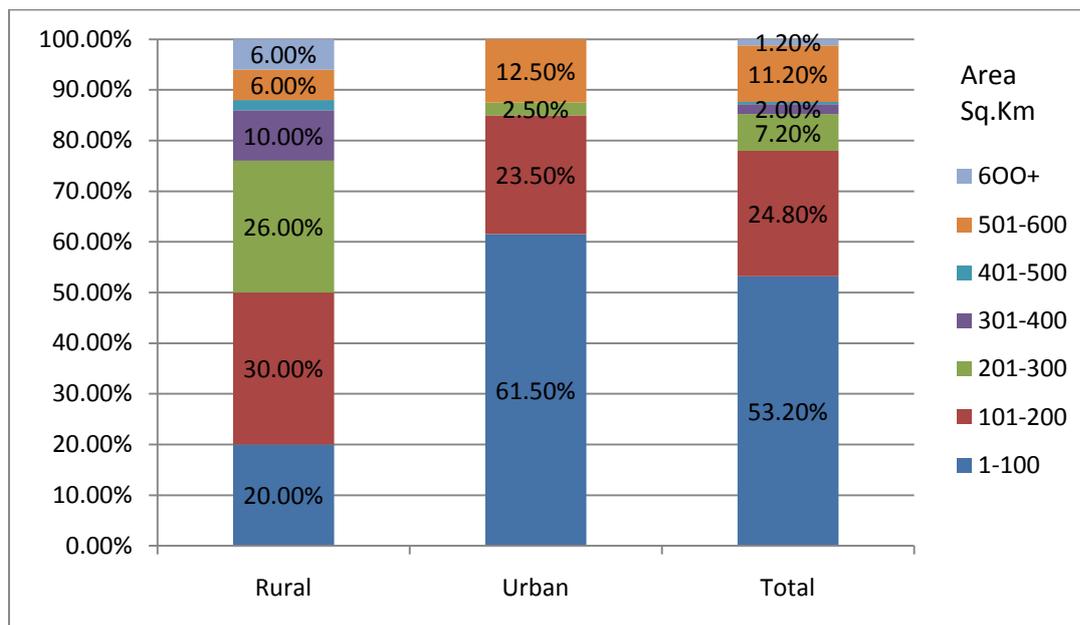


Source: Primary data collected through survey, 2012

#### 4.3.3.3 Households by size of house

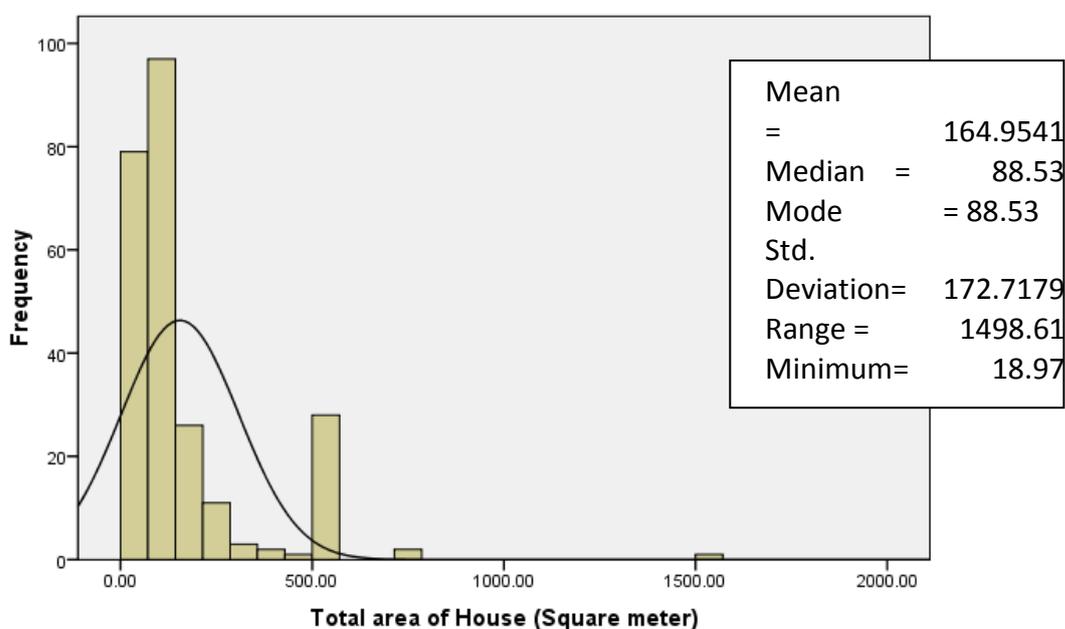
We observed great diversity of households in terms of size of housing unit and it ranged from 18.97 square meters to 1517 square meters. Mean value was 164.95 while median was 88.53 in our sample. More than half of households (53.20 %) possessed housing units that had area less than 100 square meters. In urban areas, 61.5 % households had housing unit less than 100 square meter while in rural areas only 20.0 % households fell in this category. 75 % households possessed housing unit area less than 200 square meter whereas 84 % urban households constituted area less than 200 square meters. Housing units were small in urban areas as compared to rural areas due to lack of space and high price of land in cities.

**Figure 4.14 Percentage Distribution of household by size of housing unit in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

**Figure 4.15 Frequency Distribution and basic statistical indicators of total area of house in Faisalabad, 2012**

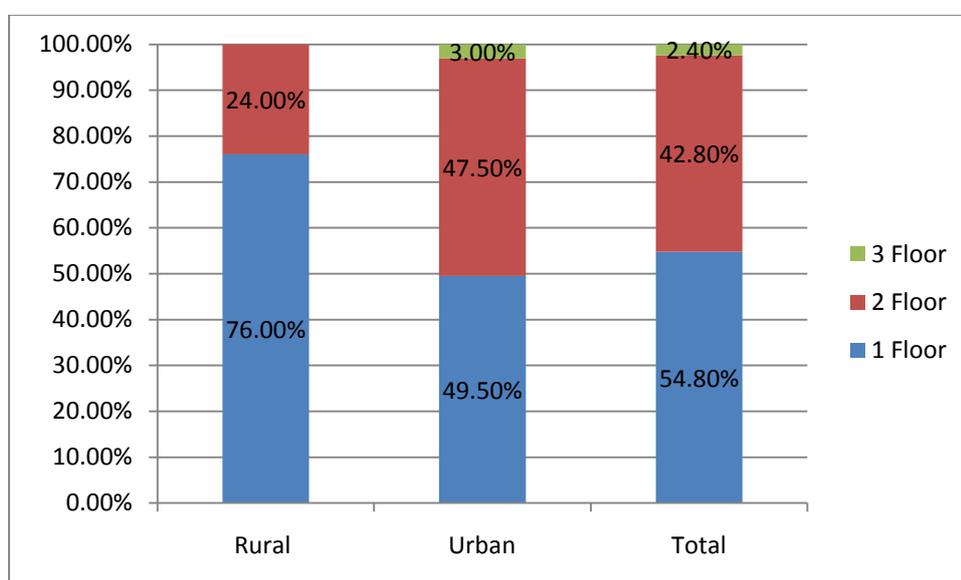


Source: Primary data collected through survey, 2012

#### 4.3.3.4 Households by number of floors in house

More than half households (54.80 %) had single floor house in total while this proportion was 76.0 % in rural areas and 49.50 % in urban areas. There was not a single household having three floors house in rural areas while in urban areas 3.0 % households possessed three floor houses. Urban areas had 47.50 % households that possessed two floors houses while this proportion was only 24.0 % in rural areas.

**Figure 4.16 Percentage Distribution of household by number of floor in Faisalabad, 2012**



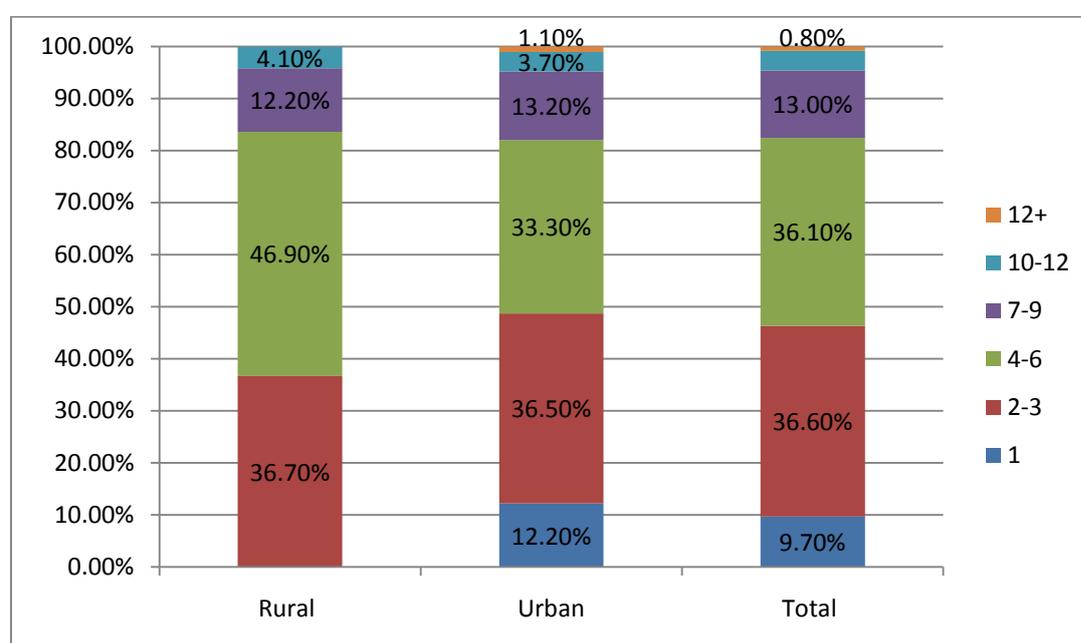
Source: Primary data collected through survey, 2012

#### 4.3.3.5 Households by number of rooms in house

Number of rooms per housing unit determines the level of congestion but at the same time, it may also attach to good standard of living. There was not a single household consisting of one room in rural areas while 12.20 % urban household had only one room. Both urban areas and rural areas had almost equal proportion of households 36.50 % and 36.70% respectively having 2-3 rooms. So we can say that every second household having rooms 1-3 in urban areas while every third rural household fell in this category. The difference between rural and

urban areas is evident in category 4-6 rooms in which 46.90 % household in rural areas fell in it whereas this proportion was only 33.3 % in urban areas. It may be due to shortage of land in urban areas and large family size along with joint family system in the rural areas. As we found in the later discussion as we move from rural to urban areas, the nuclear family system continues to increase due to several factors which were discussed in the perceptions of respondents. There is a slight difference in the remaining categories between the rural and the urban areas.

**Figure 4.17 Percentage Distribution of household by number of room in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

Table 4.2 shows the indices of congestion in Faisalabad from 1980 to 2012. The number of persons per housing unit increased from 6.7 in 1981 to 7.2 in 1998, it reached to 8.72 in 2012. The houses were congested with time due to slow pace of construction and high growth rate of population in the last decades. Persons per room decreased from 3.2 in 1980 to 1.96 in 2012 due to increase in rooms per housing units from 2.1 in 1980 to 4.24 in 2012. So we can say that the building of additional rooms has resulted in decreased housing congestion (Number of persons per room), but increased urban density (and probably street congestion).

**Table 4.2 Indices of Congestion in Faisalabad from 1980 to 2012**

<b>Index</b>	<b>1980 (1981 Census )</b>	<b>1998 (1998 Census )</b>	<b>2012*</b>
Persons per Housing Unit	6.7	7.2	8.72
Persons per room	3.2	3.1	1.96
Rooms per housing unit	2.1	2.3	4.24
Housing units with one Room (Percentage)	43.1	30.1	9.70
Housing units with 2-4 Rooms (Percentage)	52.9	62.4	52.6
Housing units with 5 rooms and more (percentage)	4.0	7.5	37.7

Source : (PCO, 2000) \* Primary data collected through survey, 2012

#### **4.3.3.6 Households by facility of toilet**

Toilet facility was present in both rural and urban surveyed areas. Only 0.5 % household in the slum areas of urban locality lack toilet facility due to extreme poverty in such household otherwise open sewerage system (Open sewerage system means that wastages flow through open places and not through pipes. Moreover, wastages are disposed off through open drain to nearby open land) was present in slum area. In rural areas, toilet facility was present in 100 % households but sanitation condition was very miserable and sewerage wastages were disposed off in the open places (see the image ) and it is the cause of various diseases like hepatitis , skin diseases , respiratory tract infections and diarrhea . The most recent spreading mortal disease was dengue fever due to a special kind of mosquito that breeds in stagnant water.

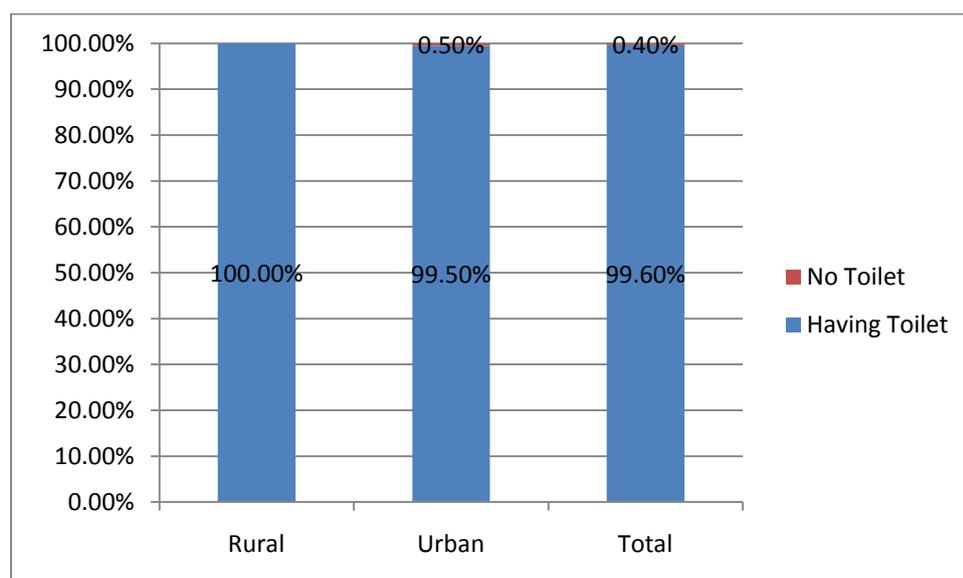
We observed good sanitation conditions in upper economic clusters, average sanitation conditions in middle economic class clusters and the worst in lower economic class clusters.



**Image 4.5 Open sewerage system in the studied slum area of Faisalabad**



**Image 4.6 Open disposed of dirty water from household uses and toilet in the rural areas of Faisalabad**

**Figure 4.18 Percentage distribution of household by facility of toilet in Faisalabad, 2012**

Source: Primary data collected through survey, 2012

#### 4.3.4 Classification of Households according to the necessities of life in Rural and urban Areas

##### 4.3.4.1 Households by source of drinking water and household use

Access to safe water and sanitation are basic determinants of better health. Lack of access to safe drinking water and sanitation facilities and poor hygiene are associated with skin diseases, acute respiratory infections (ARIs), and diarrheal diseases. ARIs and diarrheal diseases remain the leading causes of childhood deaths in Pakistan that are preventable with primary health care measures (NIPS & MI, 2013a).

I found following sources of drinking water in the surveyed areas:

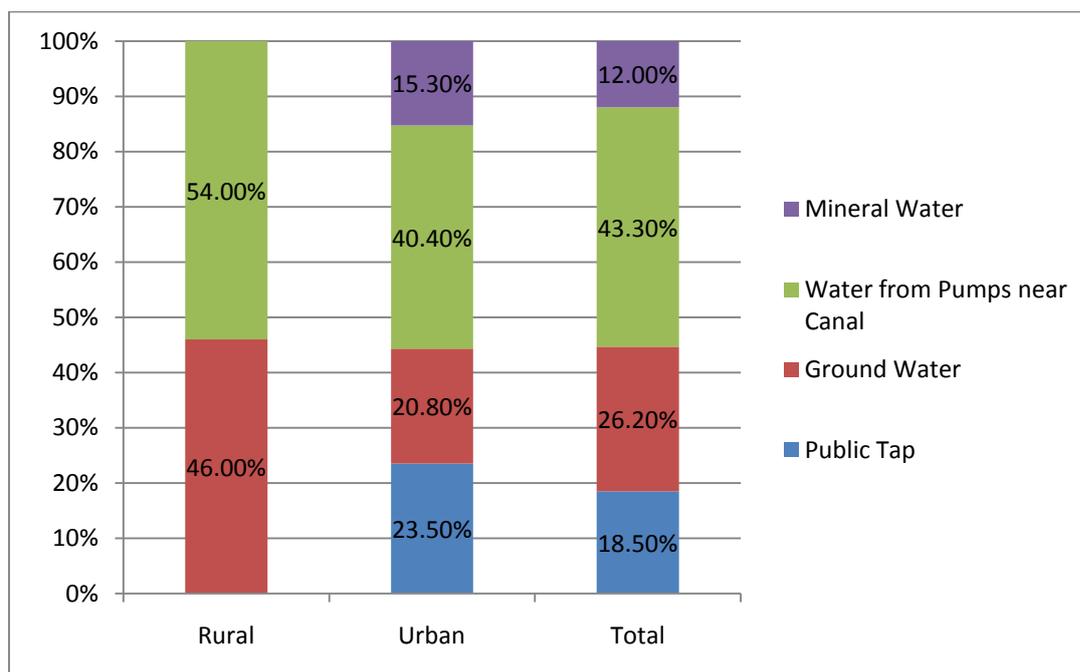
- i. Public Tap ( This is government water supply through pipeline to households )
- ii. Ground water ( Motors or pumps are used in each household separately to pull water from the ground )
- iii. Water from pumps which are located along the canal which pass through the city. Households purchased water from the persons who bring water on donkey cart.
- iv. Mineral water

Faisalabad is an industrial city and ground water is continuously contaminated through industrial wastages so ground water is becoming worsened for drinking purpose due to contamination of water through industry. Water logging and salinity problems in Faisalabad are also responsible for saline ground water which is not good for drinking purpose. It creates digestion problems and also source of many diseases like hepatitis. One fourth households (26.20 % ) in the surveyed areas used ground water drained through pumping for drinking purpose but at the same time we found this proportion was 46.0 % in rural areas and 20.80 % in urban areas. The main reason for this contrast is the contamination of water in the urban land due to the establishment of industry.

Majority of household in rural areas (54.0 %) and in urban areas (40.4%) used water from pumps near canal. Vendors bring water in the 60 liters cans on donkey carts and current price of one can is 10 to 15 Rupees (0.06 to 0.10 Euro) . A small proportion of households that were located near canal area, directly bring water from canal pumps by using motor cycle and bicycle and save this money for other household expenditures. Poor people don't care their health and drink water from ground water. Mineral Water is very expensive in Pakistan and only rich people can afford it so only 12.0% household used mineral water for drinking. Private businessmen built filter plants in various parts of city and supply filtered water for drinking purpose at cheap rate as compared to the registered companies like AQUAFINA and NESTLE. The price of 1.5 litre mineral water bottle cost 50 to 60 Rs (0.50 Euro ) ("Aquafina," 2014; "Nestle ", 2014).

More than nine in ten (93%) households in Pakistan have access to an improved source of drinking water (NIPS & MI, 2013a).

**Figure 4.19 Percentage distribution of household by source of drinking water in Faisalabad, 2012**



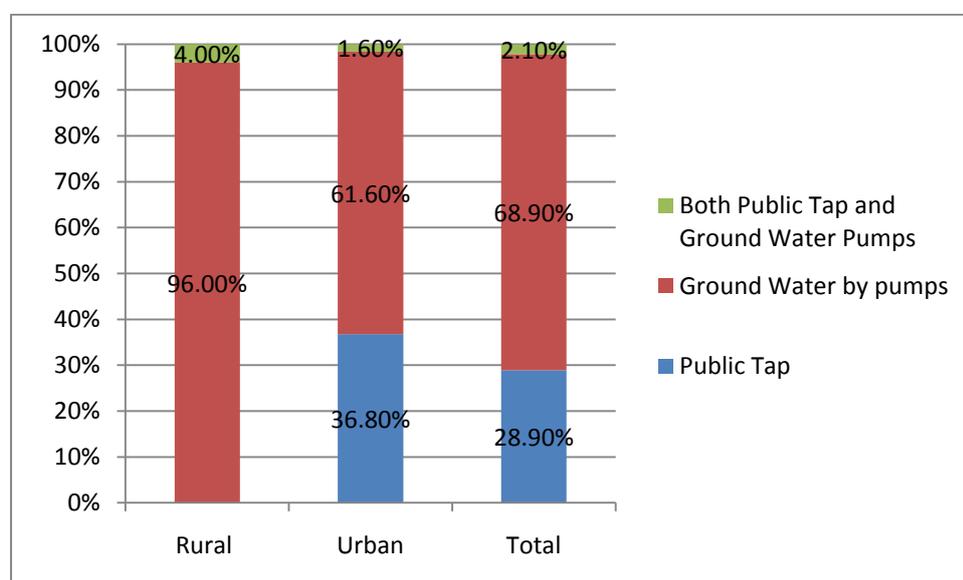
Source: Primary data collected through survey, 2012



**Image 4.7 Water supply from pumps near canal to urban residents**

Figure 4.20 shows the percentage distribution of household by source of water for household use other than drinking like bathing , washing clothes , and cleaning houses. There was not water supply by government in rural areas so 96.0 % households in rural areas used ground water for household uses , however public taps were present in schools and dispensaries in rural area so some household fetched water from these public places for household use. In contrast to rural areas, one third urban household (36.9 %) used public tap for water while 61.60 % used ground water for household uses and only 1.6 % used both public tap and ground water for household usage.

**Figure 4.20 Percentage distribution of household by source of water for household uses in Faisalabad, 2012**

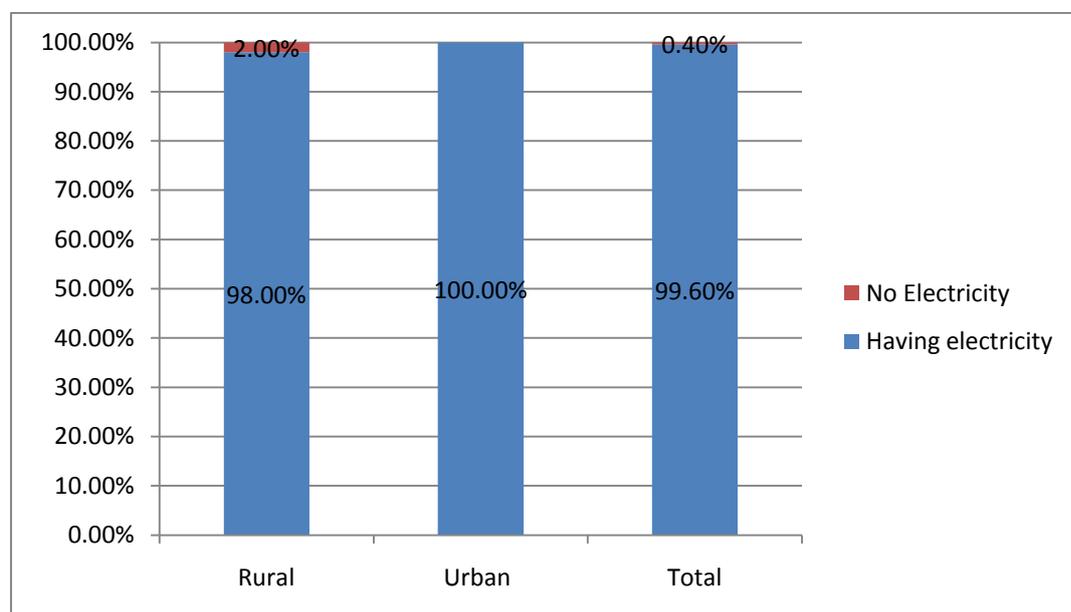


Source: Primary data collected through survey, 2012

#### 4.3.4.2 Households by Electricity facility

Electricity is available in all surveyed clusters but only 2.0 % households in rural areas did not have electricity due to abject poverty conditions and were living without electricity.

**Figure 4.21 Percentage distribution of household by electricity facility in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

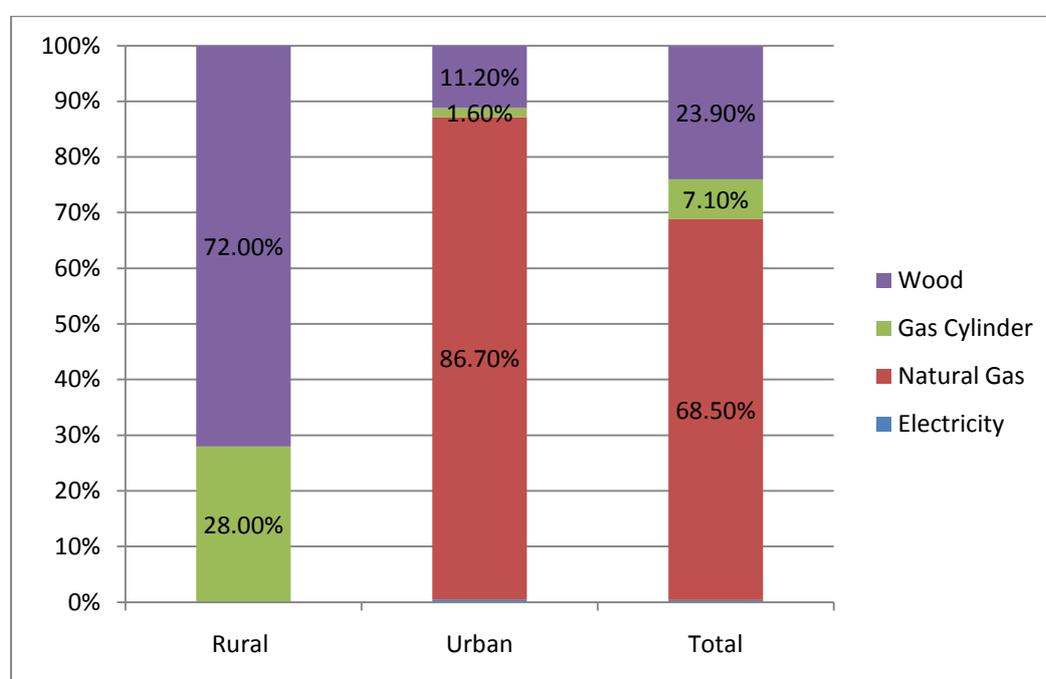
#### 4.3.4.3 Households by sources of fuel for cooking

Wood is the common source of fuel for cooking in rural areas of Faisalabad and 72.0 % household were using wood for cooking and remaining 28.0 % were using gas cylinder. In Urban areas, there was supply of natural Gas (Sui Gas) in major urban areas so 86.70 % were using it for cooking purpose and it is the cheapest source of fuel. Natural gas supply was not present in the slum area (cluster 2) so in that area wood as a source of fuel for cooking was utilized. Not a single household in the rural and urban area utilized electricity for cooking purpose owing to its high cost as compared to other sources of fuel and recent energy crisis in Pakistan also made it more expensive. (Figure 4.22)

According to PDHS 2012-13, More than half of households (62 %) use solid fuel for cooking. There are substantial urban-rural differences in the use of solid fuel, however. In urban areas, only 13% of households use solid fuel for cooking, while the majority of rural households (87 %) use solid fuel, including coal or lignite, charcoal, wood, straw, shrubs, grass, and animal dung that generate smoke that is unhealthy to breathe. The percentages of urban and rural households relying on wood for fuel decreased from 19 percent and 68

percent, respectively, in 2006-07 to 11 percent and 66 percent in 2012-13. As expected, use of liquid petroleum gas (LPG), natural gas, and biogas is limited to urban areas (86 percent). Reducing the proportion of the population that relies on solid fuels is one of the Millennium Development Goals (MDGs). The 2012-13 PDHS shows that Pakistan is slowly making progress toward this goal, with the proportion of the population using solid fuels decreasing from 67 percent in 2006-07 to 62 percent in 2012-13. (NIPS & MI, 2013a) In my view, this decrease in solid fuels is due to the increasing prices of solid fuels and it becomes out of reach of a common man.

**Figure 4.22 Percentage distribution of household by source of fuel for cooking purpose in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

#### 4.3.4.4 *Households by means of transport*

Figure 4.23 shows the percentage distribution of household according to means of transport in the surveyed area. Motor Cycle or Motor Bike is the most common mean of transport in Faisalabad. 47.9% in the rural areas and 34.60% in urban areas had motor cycle, and bicycle is the mean of transport for poor people in Pakistan and rich people feel ashamed in

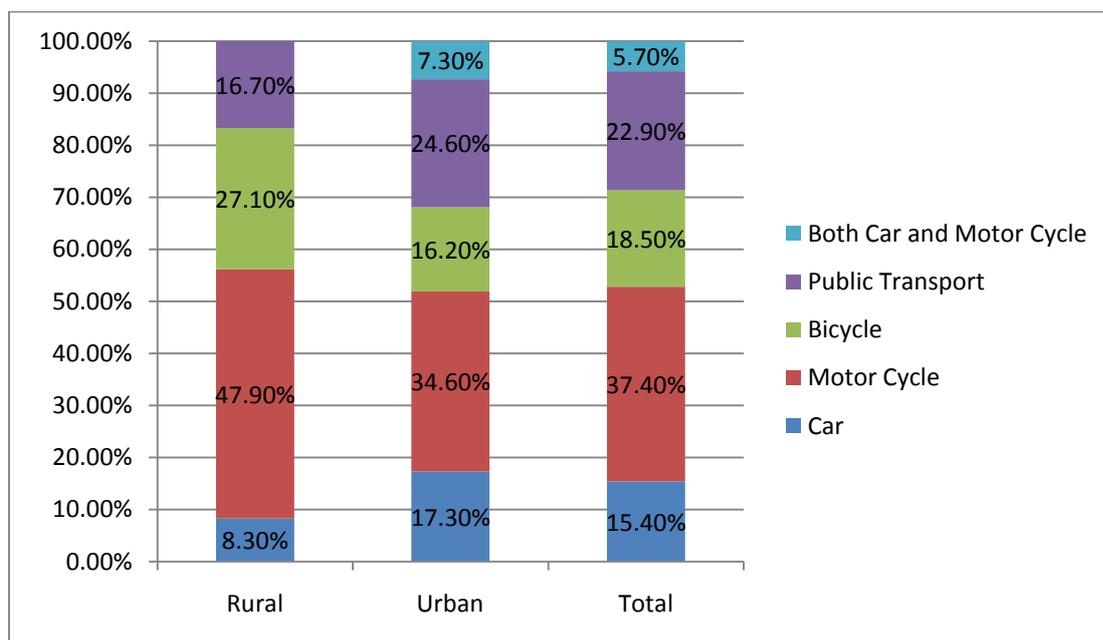
cycling. Cycle was utilized as a mean of transport by 27.10 % rural households and 16.20 % urban households.

Public Transport is the basic mean of transport in all cities of world but unfortunately, Faisalabad always lacked public transport facility due to no investment in public transport sector. A private company took the responsibility of running public transport through funding from Government of Punjab and bank loans, but unfortunately, it stopped working within a year and busses were utilized in the industry of owners for their workers. Students in Pakistan did not pay fair in public transport and whenever there was demand of fair from the student, it resulted into beating of driver and burning the buses. At present, Only Motor Cycle Riksha is the public transport for the urban and rural dwellers of Faisalabad city which is the first planned city and the third largest city of Pakistan.

Car is the most costly mean of transport and possessed by only 17.30 % urban households and 8.30 % rural households. It became in the reach of middle economic class due to loans for purchasing car from the banks on easy installments but majority of the houses did not possess garage for parking cars in middle economic class clusters due to small houses.

According to PDHS 2012-13, Motorcycles/scooters and bicycles are the most common means of transportation in Pakistan; 35 percent of households own a motor-cycle, and 28 percent own a bicycle. Motorcycle ownership is more common in urban (47 %) than rural (28 %) areas, whereas bicycle ownership is common in both urban and rural areas (27 % and 28 %, respectively). Only 9 percent of households own an animal- drawn cart; percentages are higher in rural (12 percent) than urban (3 %) households. Ownership of a car, truck, or bus is higher in urban areas (12 %) than in rural areas (4 %).(NIPS & MI, 2013a)

**Figure 4.23 Percentage distribution of household by means of transport in Faisalabad, 2012**



Source: Primary data collected through survey, 2012



**Image 4.8 Means of Transport in Faisalabad**

### **4.3.5 Classification of Households according to the accessories of life in Rural and Urban Areas**

Possession of durable consumer goods is another useful indicator of household socioeconomic status. The possession and use of household durable goods have multiple effects and implications. For instance, access to a radio or television exposes household members to updated daily events, information, and educational materials. Similarly, a refrigerator prolongs food storage and keeps food fresh and hygienic. Ownership of transportation allows greater access to services away from the local area and enhances social and economic activities (NIPS & MI, 2013a).

#### ***4.3.5.1 Households by sources of Information***

Radio, Television and internet are the three basic sources of information in Pakistan. Collectively, they form electronic media. Electronic media is more powerful than print media in developing countries including Pakistan in which majority can't read and understand the newspaper and they get informed through listening radio and seeing TV.

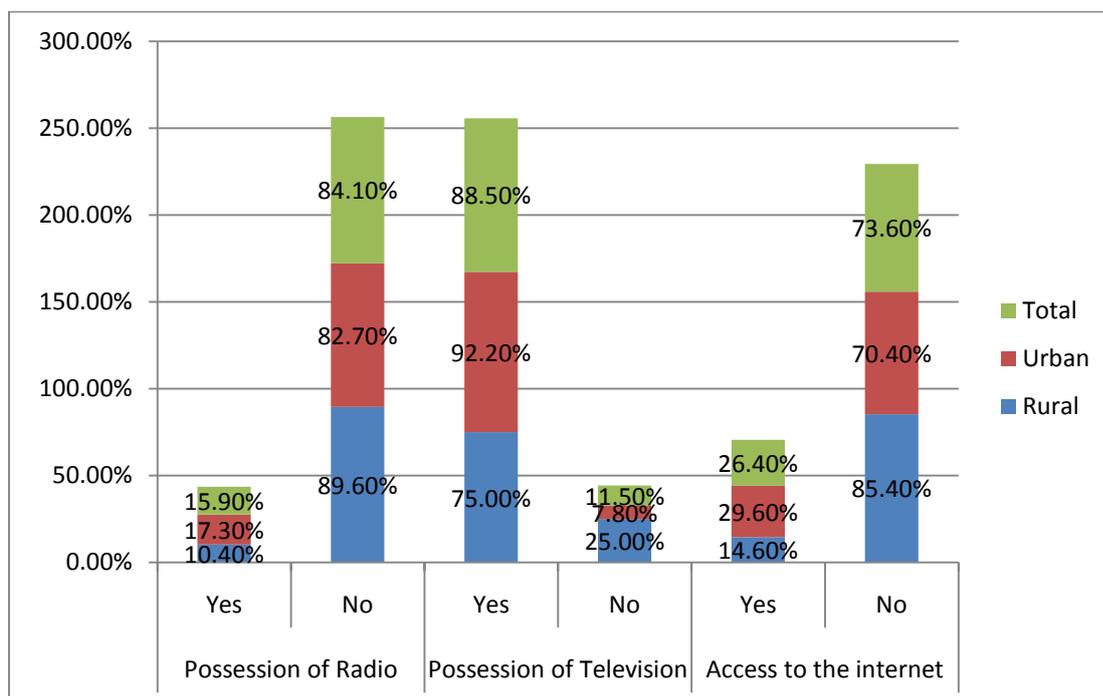
Radio is the oldest and effective source of information but fortunately or unfortunately, its usage decreased in Pakistani society as evident from figure 4.25, with the invention of TV along with cable system than can provide more than 100 national and international channels at a minimal monthly charges from 50 Rupees to 200 Rupees (0.40 Euro to 1.50 euro) to each housing units. Only 10.40 % rural households possessed radio while this proportion was 17.30 in urban household. TV is almost present in every household and 92.20 % urban households possessed TV whereas this proportion was 75 % in rural households.

Internet is the latest innovation in the information flow in the world. Every third household (29.60 %) in urban areas had access to the internet whereas in rural areas only 14.60 % households having access to the internet. There is need to explain the access to the internet in context of Pakistani society. Access to the internet should not be assumed the availability of the internet connection (DSL, WIFI) in the housing unit because only a small proportion of households had internet installation at home; however, they have access to internet through universities, colleges, libraries and internet club/café. I observed mushroom growth of internet club in Faisalabad and, at present, internet clubs are present in every corner of a city. They are providing services at a very nominal rate from 15 Rupees to 25 Rupees (0.10 Euro to 0.15 Euro) per hour with a very good DSL internet speed. So far, I discussed the positive

aspect of these internet clubs but unfortunately, these places became hub of pornographic material through internet. Majority of the people in these internet clubs used internet only to see porn websites, and at the same time, owners of internet clubs stored hundred hard core movies on the computers and regularly update for their users/customers. Various sex scandals in the small cabins of internet café/clubs were exposed (ARY, 2014; hollywoodkissingscene, 2013; Hot&SweetDesigirls070114, 2014). It is the indication of sexual frustration in Pakistani society in which sex outside marriage is forbidden, and late marriages are being practiced due to financial constraints.

According to PDHS 2012-13, six of 10 households have a television. Urban households are more likely to have a television (87 percent) than rural households (47 percent). Possession of a radio decreased from 32 percent in 2006-07 to 11 percent in 2012-13, while ownership of a television increased from 56 percent to 60 percent. Another indicator of household socioeconomic status is ownership of a computer and availability of an Internet connection. Thirteen percent of households in Pakistan own a computer, and 7 percent have access to an Internet connection. There are notable urban-rural variations in the proportions of households owning computers and having access to an Internet connection. For example, 29 percent of urban households and 5 percent of rural households own a computer. Similarly, 17 percent of urban households have access to an Internet connection, as compared with only 1 percent of rural households (NIPS & MI, 2013a).

**Figure 4.24 Percentage distribution of household source of information in Faisalabad, 2012**



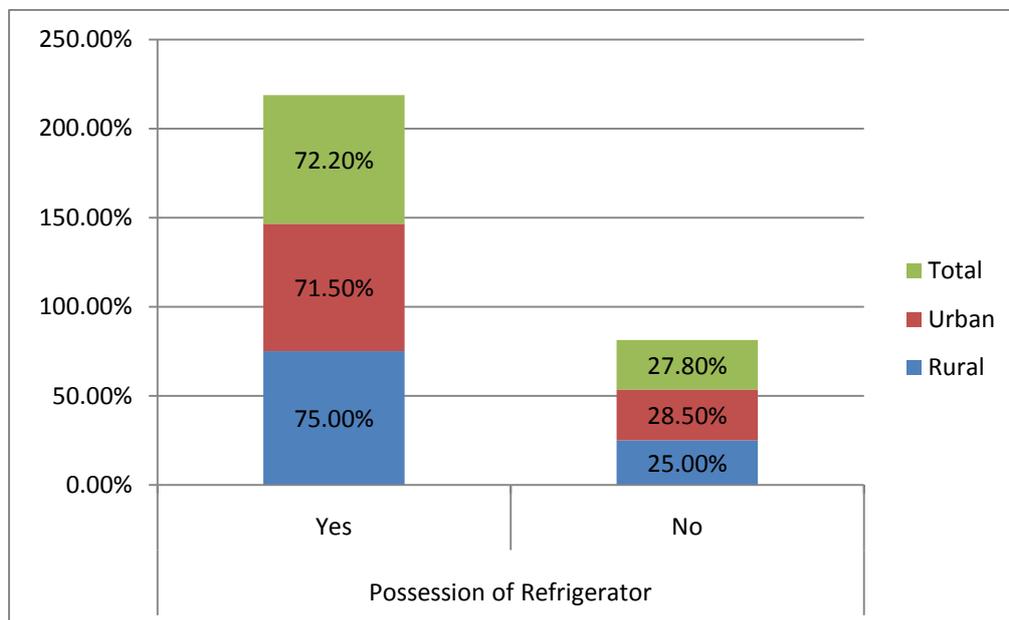
Source: Primary data collected through survey, 2012

#### **4.3.5.2 Households by possession of Refrigerator**

Figure 4.25 shows the percentage distribution of household by possession of refrigerator. 75.0% rural households and 71.50 urban household possessed refrigerators which has become necessity when temperature rises to 48 ° C in Faisalabad.

A refrigerator is available in 44 percent of households (70 percent of urban households and 30 percent of rural households).(NIPS & MI, 2013a)

**Figure 4.25 Percentage distribution of household possession of Refrigerator in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

### 4.3.6 Classification of household by Family Structure and size in rural and urban areas

#### 4.3.6.1 Households by Family Type

Figure 4.26 shows the percentage distribution of family type in Urban and Rural areas of Faisalabad. A wide contrast in family structure is evident in rural and urban areas. 61.20 % families were nuclear in urban areas while only 46.90 % families were nuclear in rural areas. **It is a clear indication that trend towards nuclear family system is increasing in urban areas of Pakistan.** Joint Family system was still dominant in rural areas where as nuclear families were dominant in urban areas. Moreover, 58.1 % families were nuclear in Faisalabad while remaining 41.90 % families were joint families in our case study- Faisalabad.

Due to many demographic, socio-economic and political reasons family members may disperse. Consequently, the size of the household could be reduced but not the size of the family. In Asian countries, most young people after their marriage live jointly with their parents and later move to another place whenever custom imposes or economic conditions

permit the new couple to do so. Families are becoming more dispersed. Young and older adults, spouses, and other relatives who might otherwise have shared a home are now more likely to live apart (Silva, 2003).

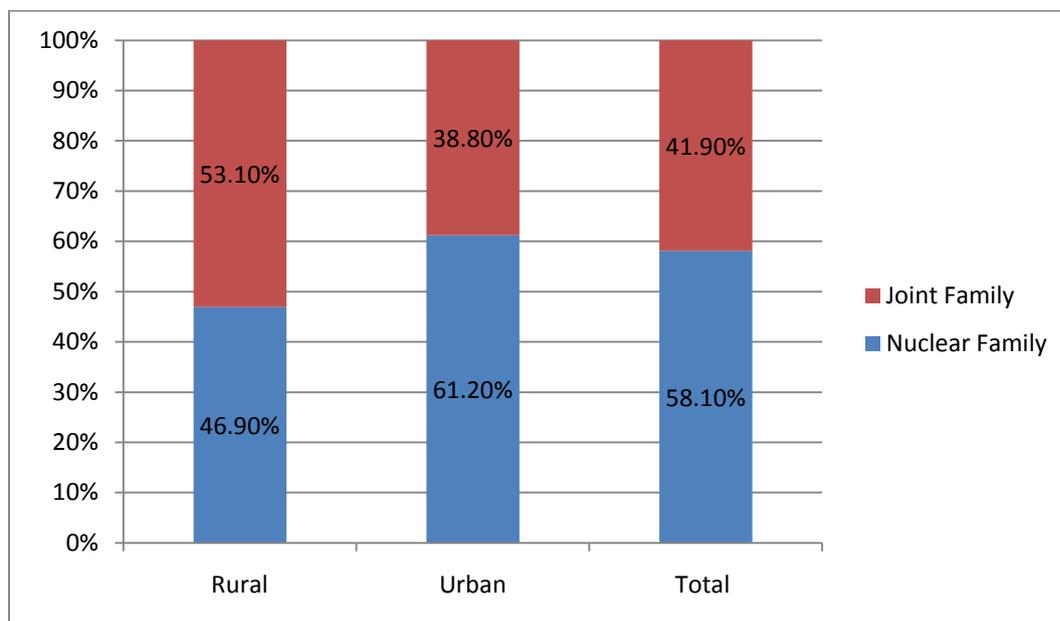
In upper class, joint family is needed for survival like as Hindu mahajan families. They depended on each other more than any other body in sub continent cultures. In modern rich families, trust has decreased .Their desires to live independent has increased and patience has also decreased. Life is harsh for poor in cities and it is very difficult for them to support whole joint family and it creates a situation in which joint family system starts to break.

Islam does not support joint family system. Supporters of joint families in subcontinent can be seen in minorities, and it is due to their dependence on each other and need for support too. human being by birth want independent life but joint family idea is all by learning or need to have support, and where support get weak or need of dependence become weak , Joint family starts to break. Enmity among brothers also rises due to breaking of joint families.

Extended family no longer exists due to physical, social and economic environments, particularly in the urban settings, creating the problems of caring for children, older persons and the sick. Other social problems such as housing, sanitation, and crime are on the increase. Family disruptions take place specifically due to adjustment problems and collapse of family values. The association of modernization, industrialization and urbanization processes and the declines in fertility rate is a positive sign for development (Silva, 2003).

According to the Human rights commission of Pakistan, 2131 people committed suicide in 2011. The reported cases were mostly from the working class where financial difficulties and loss of hope in the ability to provide basic necessities of life –food for large families ("State of human rights in 2011," 2012).

**Figure 4.26 Percentage distribution of households by Family Type in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

#### **4.3.6.2 Households by sex of head of household**

Figure 4.27 shows the percentage distribution of household by the sex of head of household in our studied area- Faisalabad. Male was the head of household in 89.80 % urban households and at the same time 88.80% rural households were headed by male. We found a very little contrast in headship of household when we moved from rural areas to urban areas due to the strong traditions in the society. In urban areas, female headed households are a little bit more than in rural areas.

Households in Pakistan are predominantly male-headed, with 89 percent of households being headed by a male and only 11 percent being headed by a female (an increase from 9 percent in 2006-07). The proportion of female-headed households is higher in rural (12 percent) than urban (10 percent) areas. This could be attributed to out-migration of the male population from rural to urban areas or even overseas for employment purposes. The increase in female-headed households is more evident in rural than urban areas. Female headship of households is a matter of concern for policymakers, particularly those dealing with poverty issues,

because it is usually financially difficult for a woman to manage a household alone (NIPS & MI, 2013a).

In many societies in Asia, the oldest male is designated as the head of household regardless of whether he is the primary source of economic support, the authority figure, or fulfills other tasks purportedly performed by household heads. In the mean time, female headed households have become a steadily growing phenomenon. The increase in female headed households could be due to variety of reasons including widowhood, migration, non-marital fertility and marital instability. In recent decades, an increasing number of women, particularly rural women, have become heads of households because men, the traditional heads of households, had left for work or other reasons. Moreover due to civil unrest, and displacement, a refugee situation exists in a number of countries in the region, often resulting in females taking over the task of running the household. The highest proportion of female-headed households in South Asia can be observed in Sri Lanka where the figure increased from 19 per cent in the 1990s to 20 percent in 2000. In Sri Lanka the increase is mainly due to the existing political unrest. Consequently a significant number of young widows have emerged as female heads of households (Silva, 2003).

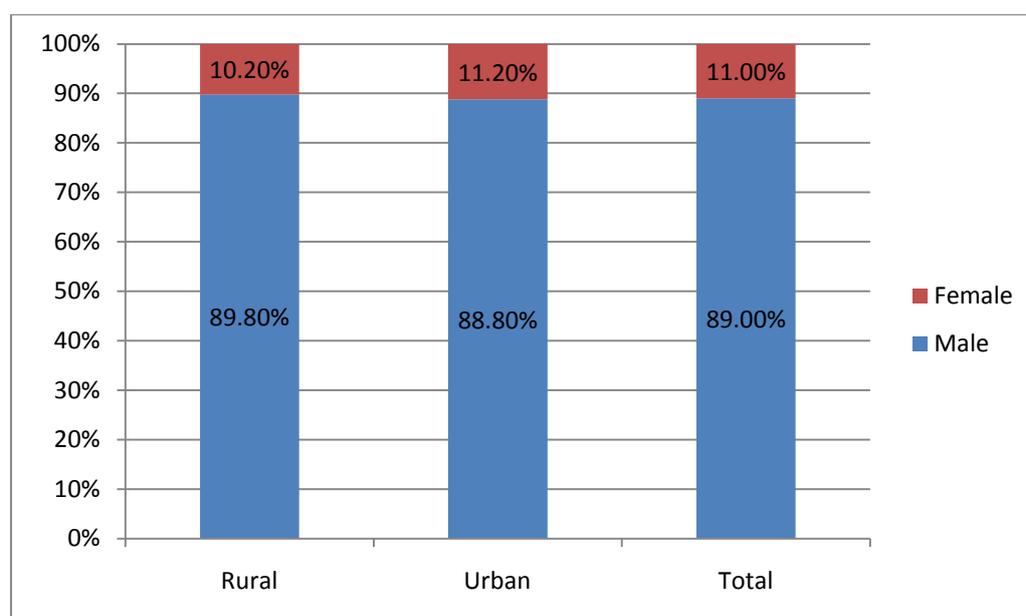
The phenomenon of female-headed households is on the increase in all the Arab countries. Such households include divorced women, widows, those separated from migrant husbands, women whose husbands abandoned them or disappeared, women whose husbands are imprisoned, women whose husbands are unemployed or unemployable and unmarried females who are the sole/main financial supporters of dependent/unemployed household members. In Egypt around one fifth of households were estimated to be female-headed by the mid 1990s (Badran, 2003).

Head of household is male in majority of families Pakistan. All important decisions are taken by male in family. It is due to dominant role of male in economic and social affairs in Punjabi society. In few families, head of household is female. There are many possibilities if head of household is female. One possibility is that husband or father is dead and there is no other male who is mature enough to run the affairs of family. So, all family matters are decided by female who plays role of head of household. Second possibility is that some females are dominants and has influence in family affairs so they become head of household.

The most important cause of majority of majority of male head of household is that male earns money and so it is his discretion in spending money. Although in some families both husband and wife earn money but again due to dominant role of male, wife has to follow instructions of her husband.

As stated earlier, majority of population in Pakistan is Muslim. It is not wrong to say that Islam has great influence in lives of individuals in Punjabi society. It is Islamic society and people seek guidance from religion in daily routine of life. Islam gives great importance to rights of women in society. Islam also emphasized on the rights of husband along with rights of wives. Islam instructed to woman to obey her husband again and again in its teachings. Due to influence of Islam in society of Punjab, Pakistan, women obey their husbands and in turn it facilitates the way for male to become head of household.

**Figure 4.27 Percentage distribution of household by head of household in Faisalabad, 2012**

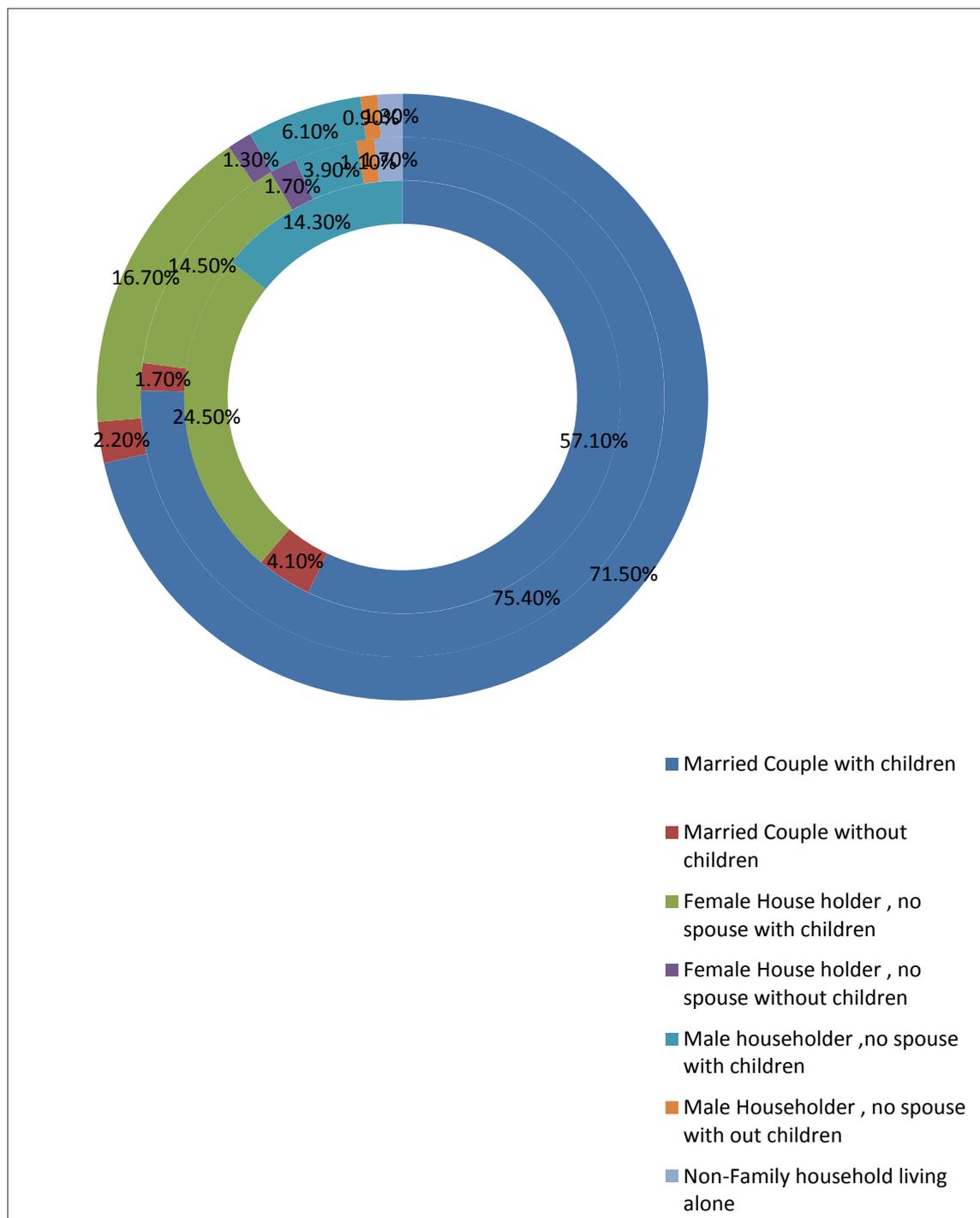


Source: Primary data collected through survey, 2012

#### **4.3.6.3 Households by composition of family**

Composition of household in Faisalabad, Pakistan is presenting an interesting picture which is entirely different from European and American households. 73.70 % households consisted of married couples and out of which 71.5 % households comprising of couples who were living with children and 2.2 % couples were without children. 75.40 % urban households comprised of married couples with children whereas this proportion was only 57.10 % in rural households. It was due to the fact that remaining 38.80 % were widows and divorced and out of which 24.50% Female householder with children and 14.30 % male householder ,no spouse without children in the studied area. It is also the result of urban transition in which husband moves to a city for employment purpose whereas his wife and children remain in the rural area because it is very difficult to shift whole family to a city due to the expensive accommodation. It may be the consequences of the gap between the ages of husband and wife because male always prefer to marry younger wife. The other reason may be the restrictions by customs on the remarriage of both male and female in Pakistani society. Moreover , remarriage of female is not considered good .There were only 3.90 % households comprising male householder ,no spouse with children while this ratio was 14.30 % in the rural households. Non Family household living alone were not present in the rural household whereas only 1.70 % households were non-family member in urban areas. (Figure 4.28)

**Figure 4.28 Percentage distribution of household by composition of Family in Faisalabad, 2012**



Inner Circle = Rural areas , Middle circle = Urban areas and outer circle =Total

Source: Primary data collected through survey, 2012

#### 4.3.6.4 *Households by size*

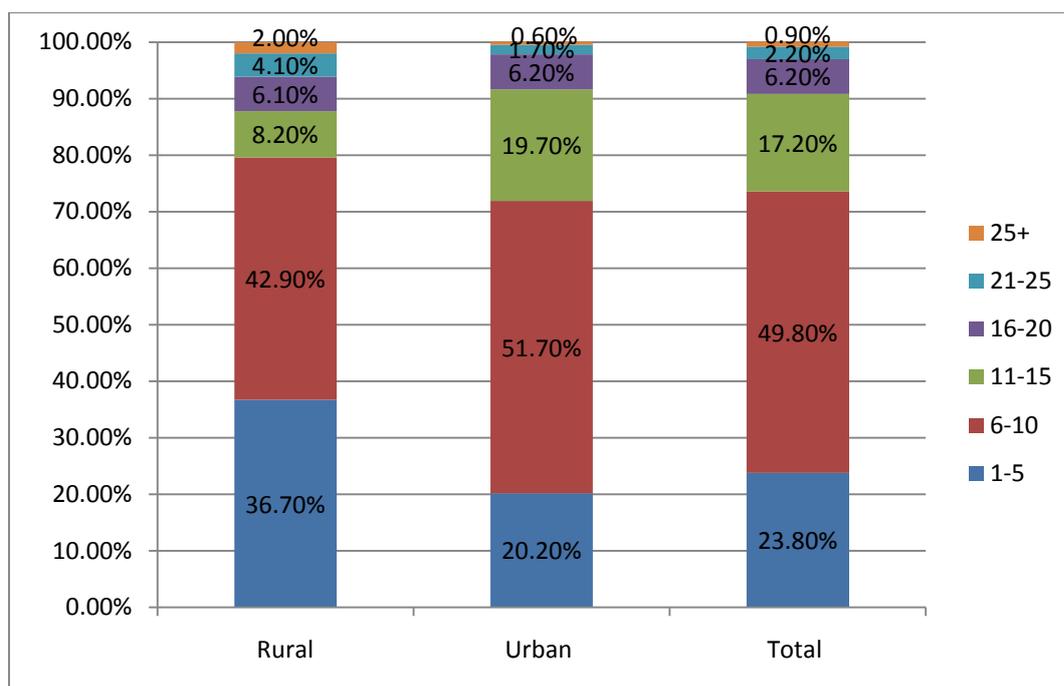
Majority of households in urban areas (51.70%) comprised of 6-10 persons whereas this proportion was 42.90 % in rural areas. 19.70% urban household comprised of 11-15 persons while this proportion was half in rural households (8.20%). It is the indication of congestion in the cities due to shortage of space and high land price. 4.10% rural household and 1.70% urban households possessed 21-25 persons. (Figure 4.29)

According to PDHS 2012-13, more than fifty percent of the households in Pakistan are composed of two to six members (53%) whereas 46% have more than six members and 24% have more than nine members (NIPS & MI, 2013a).

Average household size in the studied area- Faisalabad was 8.72 but it varied from cluster to cluster. It ranged from 6.04 (cluster 3 and cluster 8) to 10.85 in the cluster 1. Urban areas had average household size of 8.9 where as rural areas had average household size of 8.3.

According to PDHS 2012-13, households in Pakistan tend to be large because of the predominance of the extended and joint family system. Economic pressure can also force middle- and lower-income families to live with their in- laws and other relatives because they cannot afford to build or rent separate dwellings. The 2012-13 PDHS data show that the average household size observed in the survey is 6.8 persons, roughly similar to that in 2006-07. Average household size is slightly smaller in urban than in rural areas (6.6 persons and 6.9 persons, respectively). (NIPS & MI, 2013a)

**Figure 4.29 Percentage distribution of household by household size in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

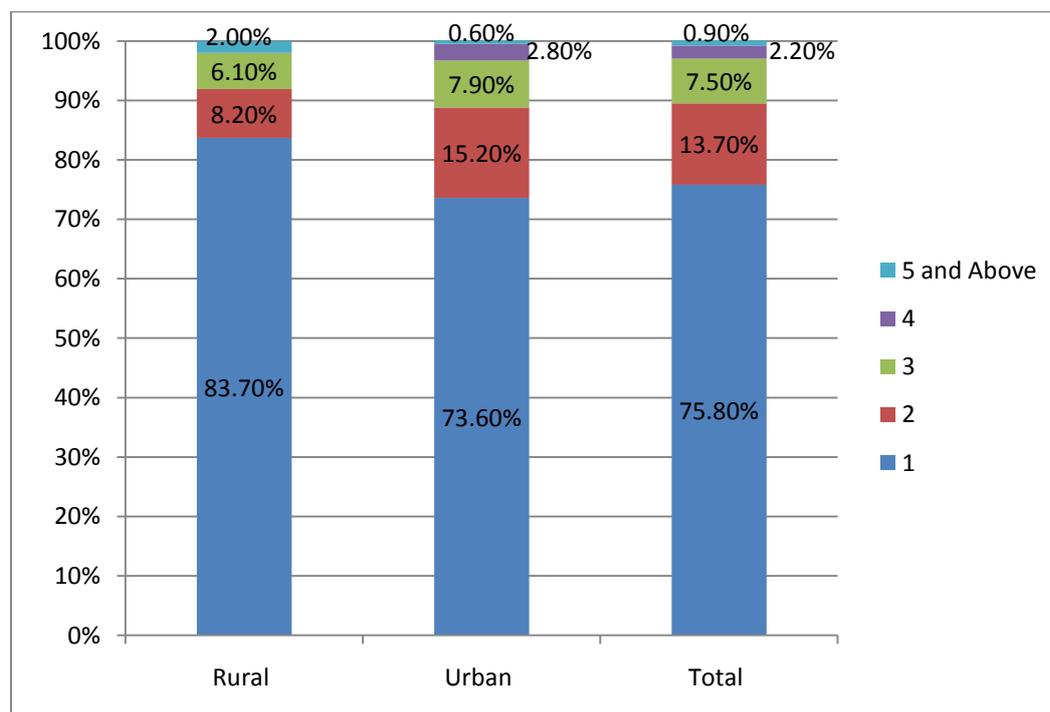


**Image 4.9 A true picture of a family from a low economic class in which addition of one child annually is a norm**

#### 4.3.6.5 Households by number of families

Figure 4.30 shows the percentage distribution of households by number of families in Faisalabad. Majority of households in rural areas (83.70%) and in urban areas (73.60 %) contained only one family in one household. In urban areas, 26.40 % household contained 2 to 5 families in one household while this proportion was 16.30 % in rural households.

**Figure 4.30 Percentage distributions of households by number of families per housing unit in Faisalabad, 2012**



Source: Primary data collected through survey, 2012

## 4.4 Exploratory Factor Analysis: Family Structure and Urban Transition

### 4.4.1 Introduction

Exploratory Factor Analysis served as a starting point for explaining family structure in context of urban transition. Moreover, it reduced the large set of variables into four latent factors that are controlling family structure and urban transition in Faisalabad.

Exploratory Factor Analysis is widely used to uncover the latent factor which can't be measured directly and at the same time, it is a tool in data reduction when a large number of variables are involved and interpretation is quite difficult as in our current research in which we wanted to see the family structure in the context of urban transition. We took items related

to the urban transition (composition of area, construction material of houses, facilities in both urban and rural areas) and Family structure (Family Type, Household size, Composition of household, head of household). Principal Component analysis was done to find out latent factor that explain the relationship between family structure and urban. As no theoretical literature was available that explain strong literature among the variables of urban transition and family structure, so in the absence of existing available literature, we were confident to use orthogonal rotation –varimax for the analysis but our interpretation of factors was based on the unrotated component matrix . As discussed earlier in 3.3.3 -Sample design, Sample size was 250 household, and questionnaire included items related to urban transition and family structure.

#### **4.4.2 Screening of variable /items**

We made a thorough analysis of all variables/items after collection of data through the designed questionnaire. We had to drop many items related to income , price of house , amount on the construction , current price of house , amount spent on the construction , rent amount , ratio of rent and income and ownership at one's name due to unavailability of responses from the respondents . Only few respondents responded to the above-mentioned items but they provided false information and tried to hide the fact as discussed in detail in 3.3.4- Field Problems.

Table 4.3 shows the list of items for factor analysis with codes. 21 items were used for final factor analysis after screening the R-matrix through eliminating those items which were highly correlated above than 0.8 (Total number of toilet with total number of rooms) , so we had to remove one item total number of toilet for eliminating the problem of multicollinearity in the data. We also had to remove the facility of toilet and electricity facility due to the unilateral same response and analysis did not complete in the presence of these two variables. Item 01 to Item 16 related to urban transition and from item 17 to item 21 fell in the category of family structure.

**Table 4.3 List of items for factor analysis: Family Structure and Urban Transition**

<b>Item Code</b>	<b>Item Label</b>
IT01	Composition of Area (Rural area and Urban area)
IT02	Total number of Floors in house
IT03	Main Material of the walls of House
IT04	Main Material of the floor of House
IT05	Main material of the roof of House
IT06	Total area of House( Square Meters )
IT07	Total Number of Rooms in household
1T08	Source of Drinking Water
IT09	Source of water for other household use
IT10	Source of fuel for cooking purpose
1T11	Means of Transport
IT 12	Possession of Radio
IT13	Possession of Television
1T14	Possession of Refrigerator
IT15	Access to internet
1T16	Type of ownership of house
1T17	Family Type
1T18	Number of families in household
1T19	Head of household
1T20	Size of household
IT21	Composition of Household

### 4.4.3 Preliminary Analysis

Table 4.4 shows the Pearson correlation coefficient between all pairs of the items. This correlation matrix is very useful to check the pattern of relationship. There is need to scan correlation between items at the first step for factor analysis. Any item that correlate greater than 0.8 should be removed because it would create problem in analysis due to singularity in the date. We already removed few items in the preliminary screening for avoiding such problem in the factor analysis and included only those items which were devoid of the extreme correlation for avoiding the problem of singularity in our analysis. It is evident from table that all items have neither very high and neither very low correlation.

Determinant of our data is 0 .001 which is greater than the necessary level of 0.00001. Therefore, multicollinearity is not a problem of our data. To sum up, all the 21 items in the analysis correlate fairly well and none of the correlation coefficients are particularly large.

Table 4.4 Correlation matrix<sup>a</sup> : Family Structure and Urban Transition

	IT01	IT02	IT03	IT04	IT05	IT06	IT07	IT08	IT09	IT10	IT11	IT12	IT13	IT14	IT15	IT16	IT17	IT18	IT19	IT20	IT21
IT01	1.000	.152	.057	-.059	-.390	-.284	-.070	-.067	-.292	-.660	.089	-.075	-.128	.100	-.105	.236	-.114	.092	-.022	.056	-.063
IT 02	.152	1.000	-.027	.138	-.331	.156	.550	.133	.041	-.291	-.247	-.303	-.192	-.302	-.321	-.244	-.005	.304	-.136	.288	-.122
IT03	.057	-.027	1.000	.073	.156	-.071	-.103	-.023	.067	.116	.108	.052	.228	.195	.074	.041	-.102	-.008	.083	-.054	-.004
IT04	-.059	.138	.073	1.000	.251	.260	.257	.181	.155	.191	-.044	-.160	.189	.086	-.159	-.186	-.027	.042	.064	.030	.097
IT05	-.390	-.331	.156	.251	1.000	-.154	-.318	-.158	.273	.620	.240	.080	.308	.330	.288	-.203	.082	-.111	.139	-.088	.243
IT06	-.284	.156	-.071	.260	-.154	1.000	.722	.267	.133	.045	-.462	-.252	-.036	-.251	-.329	-.147	.139	.005	-.070	.100	-.024
IT07	-.070	.550	-.103	.257	-.318	.722	1.000	.318	.080	-.190	-.405	-.346	-.173	-.427	-.565	-.176	.068	.225	-.132	.239	-.069
IT08	-.067	.133	-.023	.181	-.158	.267	.318	1.000	.203	-.084	-.091	-.133	-.113	-.108	-.337	-.246	.068	.041	-.020	.009	-.050
IT09	-.292	.041	.067	.155	.273	.133	.080	.203	1.000	.380	.037	-.193	.122	.149	.019	-.304	.007	-.027	.048	-.072	.068
IT10	-.660	-.291	.116	.191	.620	.045	-.190	-.084	.380	1.000	.155	.162	.283	.199	.245	-.250	.032	-.068	.080	-.101	.115
IT11	.089	-.247	.108	-.044	.240	-.462	-.405	-.091	.037	.155	1.000	.227	.176	.456	.228	.079	-.082	-.015	.128	-.106	.137
IT12	-.075	-.303	.052	-.160	.080	-.252	-.346	-.133	-.193	.162	.227	1.000	.102	.153	.331	.056	-.019	-.057	.034	.046	.004
IT13	-.128	-.192	.228	.189	.308	-.036	-.173	-.113	.122	.283	.176	.102	1.000	.363	.135	.033	.038	-.062	.131	-.171	.335
IT14	.100	-.302	.195	.086	.330	-.251	-.427	-.108	.149	.199	.456	.153	.363	1.000	.357	-.040	-.050	-.009	.148	-.021	.182
IT15	-.105	-.321	.074	-.159	.288	-.329	-.565	-.337	.019	.245	.228	.331	.135	.357	1.000	-.035	.038	-.011	.056	-.001	.118
IT16	.236	-.244	.041	-.186	-.203	-.147	-.176	-.246	-.304	-.250	.079	.056	.033	-.040	-.035	1.000	-.111	-.193	.009	-.236	-.105
IT17	-.114	-.005	-.102	-.027	.082	.139	.068	.068	.007	.032	-.082	-.019	.038	-.050	.038	-.111	1.000	-.264	-.032	.228	.071
IT 18	.092	.304	-.008	.042	-.111	.005	.225	.041	-.027	-.068	-.015	-.057	-.062	-.009	-.011	-.193	-.264	1.000	-.079	.538	.077
IT19	-.022	-.136	.083	.064	.139	-.070	-.132	-.020	.048	.080	.128	.034	.131	.148	.056	.009	-.032	-.079	1.000	-.139	.238
IT20	.056	.288	-.054	.030	-.088	.100	.239	.009	-.072	-.101	-.106	.046	-.171	-.021	-.001	-.236	.228	.538	-.139	1.000	.040
IT21	-.063	-.122	-.004	.097	.243	-.024	-.069	-.050	.068	.115	.137	.004	.335	.182	.118	-.105	.071	.077	.238	.040	1.000

a. Determinant = .001

#### 4.4.4 Sample Adequacy and suitability for factor analysis

Table 4.5 shows the Kaiser-Meyer-Olkin measure of sampling and Bartlett's test of Sphericity.

KMO value is very important for determining the sample adequacy of data for factor analysis. The KMO statistics ranges from 0 to 1. A value of 0 indicates that the sum of partial correlations is large relative to sum of correlations, indicating diffusion in the pattern of correlation, so in this case, Factor analysis is inappropriate for this kind of data. Whereas, a value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis can capitulate distinct and reliable factors. Kaiser recommends a value greater than 0.5 are acceptable for factor analysis (Field, 2005, 2013).

For our data, KMO value was 0.667 which fell in the range of acceptable by Kaiser Recommendations, so we were confident that factor analysis is appropriate for our data set.

Bartlett's measures tests the null hypothesis that the original matrix is an identity matrix. There is need of some relationship between variables for conducting factor analysis. In case , if R matrix is an identity matrix then all correlations should be zero. Therefore, there is need this test to be significant (i.e. have a significance level less than 0.05). A significant test is the indication of the fact that the R-matrix is not an identity matrix and there are some relationships between the variables.(Field, 2005, 2013) For our data, Bartlett's test is highly significant ( $p < 0.001$ ), and therefore factor analysis is appropriate.

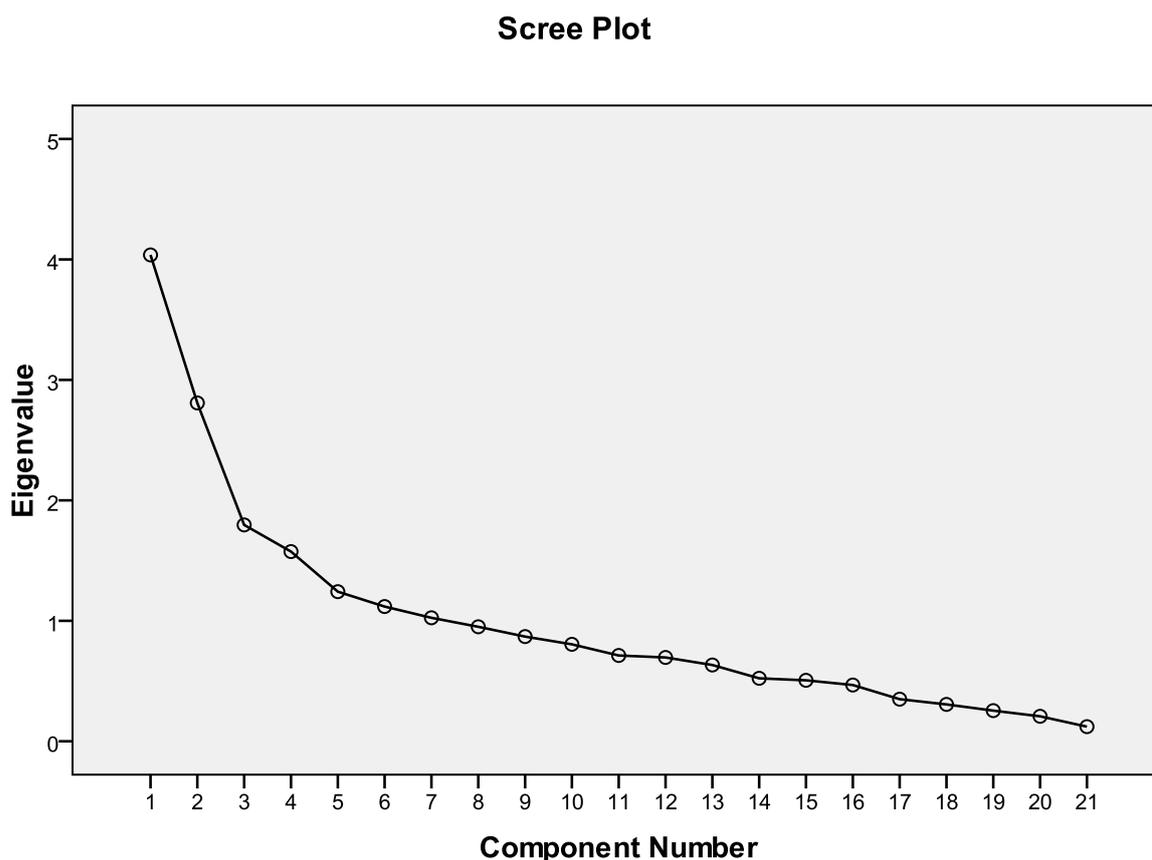
**Table 4.5 KMO and Bartlett's Test : Family Structure and Urban Transition**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.667
Bartlett's Test of Sphericity	Approx. Chi-Square	1448.404
	df	210
	Sig.	.000

#### 4.4.5 Number of Factors to be retained

Figure 4.31 shows the scree plot which is helpful for deciding the number of factors to be retained for factor analysis if Kaiser criteria (eigenvalue greater than One) does not fit. Scree plot of our data suggested clear cut 4 factors while Kaiser criteria suggested 7 factors. We conducted analysis both on 7 and 4 factors but seven factor solution did not give a clear picture and on some factors there was only one or two variables so it was not a good solution. After that, we conducted 5 factors and three factors solution but they could not provide a clear cut factor solution so we finally decided four factor solutions as suggested by scree Plot.

**Figure 4.31 Scree Plot : Family Structure and Urban Transition**



#### 4.4.6 Results

Table 4.6 shows the eigenvalues associated with each linear component before extraction, after extraction and after rotation. Before extraction, 21 linear components (factors) are

identified with in our data set. The eigenvalues associated with each factor represent the variance correlated by that particularly linear component. It also shows the eigenvalue in terms of percentage of variance explained.

Factor 1 explains 19.226 % of total variance and Factor 2 explains 13.374 % of the total variance. It is evident from the results that first few factors explain relatively large amounts of variance (First four factors explain 48.60 % of the total variance) while, subsequent factor explain small amount of variance.

There are seven factors having eigenvalues above than 1. Number of factor to be retained is the most crucial decision taken by research based on the eigen value above 1 (Kaiser's criterion) or on the basis of scree plot. On Kaiser criteria , we had 7 factors while through observing scree plot we had 4 factors , we ran analysis on Kaiser criteria (7 factors ) , then on the basis of Scree plot ( 3 factors ,4 factors and 5 factors) and finally we decided to choose four factors solution for extraction after observing all analysis.

The eigenvalues associated with four extracted factors are displayed in the columns labeled as Extractions sums of Squared Loadings. These values are same values as the values before extraction and it does not include discarded factors. The final portion of table shows the rotated sums of squared loadings. It shows the eigenvalues of the factors after rotation. Rotation has the effect of optimizing the factor structure and the relative importance of the extracted factors is equalized. Before rotation , Factor 1 accounted for more variance (19.22 %) as compared to subsequent factors [Factor 2 (13.37%) , Factor 3 (8.55% ) and Factor 4 (7.49%) ] , whereas , after extraction first factor accounts for only 15.36 and while remaining factors are equalized and their values increase to 12.6% , 11.2 % and 9.379 for factor 2, 3 and 4 respectively.

**Table 4.6 Total Variance Explained: Family Structure and Urban Transition**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.037	19.226	19.226	4.037	19.226	19.226	3.226	15.362	15.362
2	2.809	13.374	32.600	2.809	13.374	32.600	2.654	12.640	28.002
3	1.796	8.552	41.152	1.796	8.552	41.152	2.367	11.270	39.272
4	1.575	7.498	48.650	1.575	7.498	48.650	1.970	9.379	48.650
5	1.242	5.914	54.565						
6	1.118	5.325	59.890						
7	1.025	4.880	64.770						
8	.950	4.526	69.296						
9	.869	4.138	73.434						
10	.805	3.832	77.266						
11	.712	3.391	80.657						
12	.696	3.313	83.970						
13	.633	3.015	86.984						
14	.523	2.488	89.473						
15	.506	2.409	91.882						
16	.467	2.224	94.106						
17	.349	1.663	95.769						
18	.306	1.456	97.225						
19	.254	1.211	98.436						
20	.207	.986	99.423						
21	.121	.577	100.000						

Extraction Method: Principal Component Analysis.

Table 4.7 shows the communalities before and after extraction. Principal component analysis works on the initial assumption that all variance is common; therefore, before extraction the communalities are all 1. (Field, 2005, 2013) The communalities in the column labeled as “Extraction” reflect the common variance in the data structure. 71.8 % of the variance associated with ITO1 (Composition of area) is common or shared variance.

Item 03 (20.7%), Item 17 (17.5%) and Item 22(23.6%) showed minimum common variance whereas composition of area (71.8%), Household size (71.4%) and total number of rooms in household showed maximum common variance. Moreover, remaining items shared variance above 50% except item 04 (44.1%), Item 08(26.8), item 09(38.2%), item 12 (36.0%) and item 13 (41.7%). However remaining items have shared variance above 50 % except IT04, ITO8, IT09, IT12, and IT13.

**Table 4.7 Communalities: Family Structure and Urban Transition**

		Initial	Extraction
IT01	Composition of Area (Rural/Urban ) status	1.000	.718
IT02	Total Number of Floors in House	1.000	.556
IT03	Main Material of walls of the House	1.000	.207
IT04	Main Material of floor of the house	1.000	.441
IT05	Main Material of roof of the House	1.000	.642
IT06	Total area of House (Square meter)	1.000	.615
IT07	Total number of rooms in house	1.000	.794
1T08	Source of Drinking water	1.000	.268
IT09	Source of water for other household use	1.000	.382
IT10	Source of Fuel for cooking purpose	1.000	.747
1T11	Means of Transport	1.000	.448
IT 12	Possession of Radio	1.000	.360
IT13	Possession of Television	1.000	.417
1T14	Possession of Refrigerator	1.000	.558
IT15	Access to the internet	1.000	.573
1T16	Type of Ownership of House	1.000	.499
1T17	Family Type	1.000	.175
1T18	Number of Families in house	1.000	.671
1T19	Head of Household	1.000	.195
1T20	Size of Household	1.000	.714
IT21	Composition of Household	1.000	.236

Extraction Method: Principal Component Analysis.

Table 4.8 shows the component matrix before rotation. This matrix contains the loading of each variable onto each Factor. Following are four distinct factors from the unrotated component matrix of PCA:

### **Factor 1 (Standard of Living)**

Every variable describing the size of the housing unit and of the household are negatively correlated to Factor 1, on the opposite side, we find positive correlation of variables describing the relative affluence of the household according to access to westernized consumption items. Larger households are often poorer than smaller ones. In brief, Factor 1 relates to standard of living. It shows how much money they have to spend on their standard of living.

Eleven variables/items were loaded on factor 1. Out of eleven variables/items , 7 variables access to the internet (0.632) , possession of refrigerator (0.615) ,main material of roof of the house (0.612) , means of transport (0.571) , possession of television (0.451) , possession of radio (0.432) and composition of household(0.268) have positive factor loading and 4 variables/items (Total number of rooms in house(-0.812) ,total number of floors in house (-0.649) , Total area of house (-0.548) and source of drinking water (-0.369) have negative loadings . To sum up, factor 1 basically covers the variables/items which combine to form one latent factor standard of living that operates in relation of family structure and urban transition in Faisalabad, Pakistan.

**Table 4.8 Component Matrix<sup>a</sup> : Family Structure and Urban Transition**

	Component			
	1	2	3	4
Total number of rooms in house	<b>-.812</b>	.353	.009	.102
Total Number of Floors in House	<b>-.649</b>	.066	.349	.092
Access to the internet	<b>.632</b>	-.087	.196	-.358
Possession of Refrigerator	<b>.615</b>	.053	.323	.270
Main Material of roof of the House	<b>.612</b>	.514	.031	-.051
Means of Transport	<b>.571</b>	-.144	.245	.202
Total area of House (Square meter)	<b>-.548</b>	.507	-.242	-.002
Possession of Television	<b>.451</b>	.286	.042	.359
Possession of Radio	<b>.432</b>	-.199	.072	-.358
Source of Drinking water	<b>-.369</b>	.302	-.054	.196
composition of Household	<b>.268</b>	.246	.246	.208
Composition of Area	-.170	<b>-.663</b>	.275	.417
Source of Fuel for cooking purpose	.501	<b>.657</b>	-.090	-.236
Source of water for other household use	.096	<b>.601</b>	-.001	.108
Type of Ownership of House	.104	<b>-.557</b>	-.368	.207
Main Material of floor of the house	-.088	<b>.509</b>	.114	.402
Number of Families in house	-.252	.032	<b>.776</b>	-.064
Size of Household	-.297	.067	<b>.690</b>	-.382
Main Material of walls of the House	.228	.066	.119	<b>.369</b>
Family Type	-.044	.189	-.129	<b>-.348</b>
Head of Household	.260	.088	-.029	<b>.345</b>

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

### **Factor 2 (Urban-Rural Divide in Housing Conditions)**

This factor represents the real distinction in housing and living conditions between urban and rural households, ie, no renters in rural areas, limited availability of natural gas in rural areas, no tap water in rural areas , etc.

Five variables/items are loaded on the factor 2. Out of these five variables, 3 variables (Source of fuel for cooking purposed (0.657) ,Main material of the roof of the house and source of water for other household use (0.601) and main material of floor of the house(0.509) have positive factor loadings . Composition of area (-0.663) and type of ownership (-0.557) have negative loadings on this factor.

### **Factor 3 (Household size)**

The items that load high on factor 3 seem to relate to size of household and number of families. Increase in the number of families results into the increase in household size.

Only two items are loaded on the factor 3. Number families in household (.776) and size of household (.690) are loaded on this factor. Therefore, the third factor is basically related to household size and number of families in a household that is another hidden factor that operate in relationship of family structure and housing conditions in the rural and the urban areas of studied area-faisalabad.

### **Factor 4 (Family structure)**

Factor 4 is the compliment of factor 3 and further explains head of household and family type of that household. Family type (-0.348) and head of household (.345) along with main material of walls of house (0.369) are loaded on the fourth factor. Family type is negatively loaded in this factor that means there is a little bit more chance of female to become head of household in the nuclear family where as male is a head of household in majority of joint families. Punjabi society is a male dominated society so it is obvious that male tries to suppress females in the presence of other family members in a joint family and it is not the cause in a nuclear family in which only couple are present so male does not shy in transferring headship to females. At the same time in a nuclear family , Female has to head the family affairs in the absence of husband due to absence of elder male whereas elder males are present in joint families to monitor family affairs. Moreover, it also shows that

family structure is negatively correlated to the composition of area (rural/urban); more nuclear families are present in the urban areas than in rural areas as we have already observed in the earlier empirical findings.

## **Section II**

### **4.5 Perceptions of respondents towards family**

#### **4.5.1 Introduction**

Family is a basic social institute and it is the centre of discussion for centuries. Family system is changing with changes in societies. Changes in society are due to advancement in technology and media has its important role in shaping societies and family structure particularly. Variety of views regarding family composition, benefits and problems of each family system are present in society. This section is an attempt to discuss all issues relevant to families in Faisalabad, Pakistan on the basis of primary data based survey (see chapter 3-Methodology) .

Despite available statistical data for studying social phenomena in a geographical entity, importance of perceptions can't be denied. This section deals with the perceptions of respondents from the studied area-Faisalabad towards changes in family structure and family itself in the rural and urban areas. We used Likert scale (5 point scale) for finding responses from the respondents and they showed their degree of agreement and disagreement with the given statements. Scaling ranged from strongly disagree (1) to strongly agree (5). We designed questionnaire in such a way that its first portion covered some basic information (Area, Gender, Age , Education Level , Marital status , family type , economic class , migration status ) of the respondents , second portions were the statements related to family structure changes (item 1 to item 12) and changes in family (item 13 to item 38) .(Appendix II) . As stated in chapter 3-Methodoly, the sample size was 200.

This section cover all the above-mentioned three aspects under the heading , characteristics of respondents , perceptions towards changes in family structure and perceptions towards changes in family structure. We utilized cross-tabulation, Exploratory Factor Analysis (PCA with varimax rotation) for finding latent factor as well as reducing variables and our

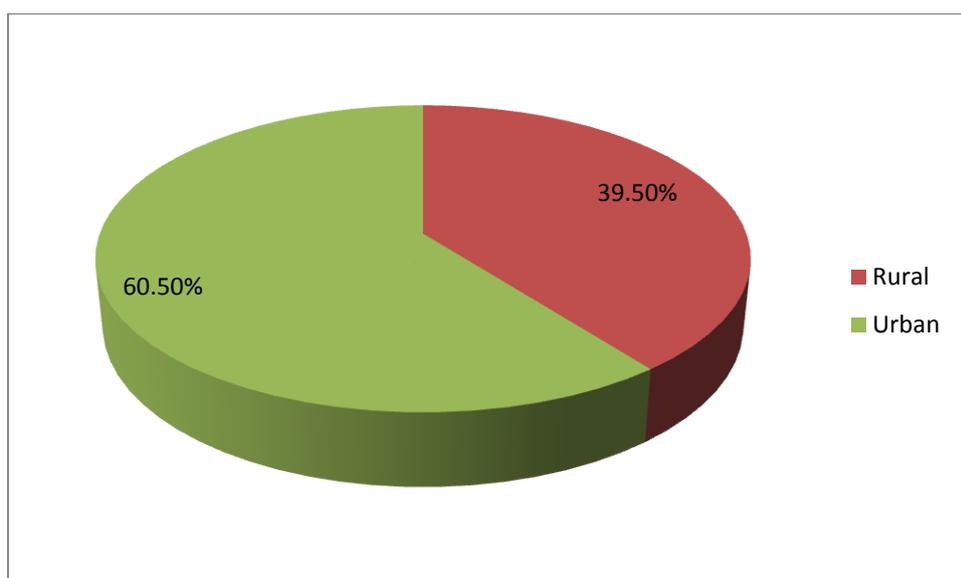
interpretations of factors are based on the unrotated component matrix solution. Binomial Logistic regression model was also utilized to find the probability of finding different family structure in rural/urban status and in different socio-economic setup.

#### 4.5.2 Characteristics of respondents

60.5 % respondents were from the urban areas whereas 39.5% belonged to the rural areas. As far as gender of respondents is concerned, 51.5% respondents were male and the remaining 48.5 % were female. Our sample contained respondents from all education level and it ranged from illiterate (5.5%) to Master (39.5%), it is evident from the figure that we had 94.5 % literate respondents. Age group of respondents ranged from 19 to 60. 40.5% respondents were less than 26 years (Figures 4.32, 4.33, 4.34 and 4.35).

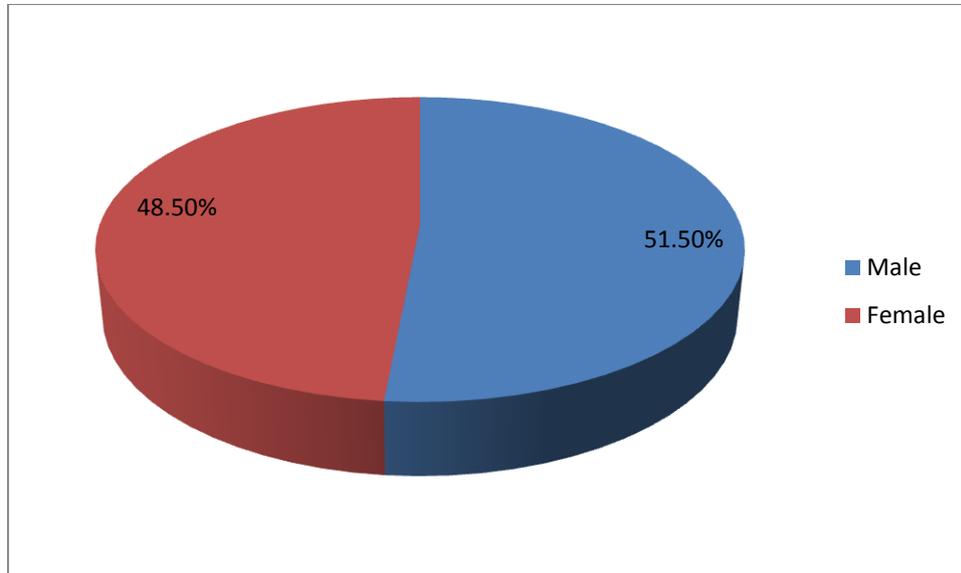
51.0 % respondents were single and 48.0 % respondents were married, whereas 0.5 % respondents were divorced and widow. 49.5 % respondents were from the nuclear family while 50.5 % respondents were from the joint family. Majority of the respondents belonged to middle economic class (87.5%) , 6.0 % and 6.5 % respondents were from lower economic class and upper economic class respectively. 93.0% respondents were living in the owned houses and only 7.0 % respondents were living in the rented houses. 31.5 % respondents were migrants (Figure 4.36 to figure 4.40).

**Figure 4.32 Percentage distribution of the respondents by composition of area**



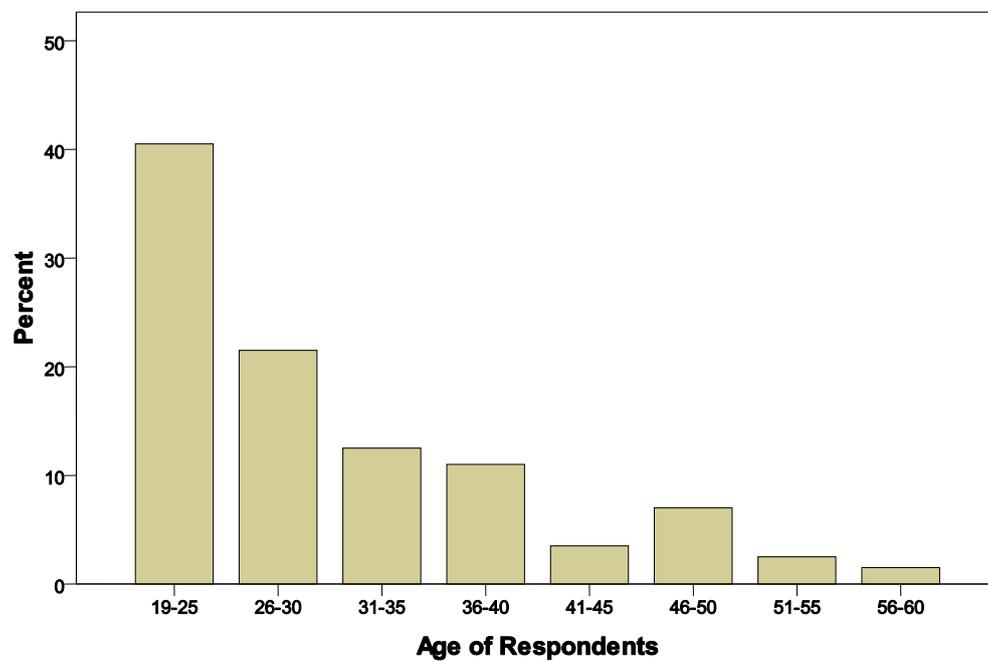
Source : Data collected through survey , 2012

**Figure 4.33 Percentage distribution of the respondents by Gender**



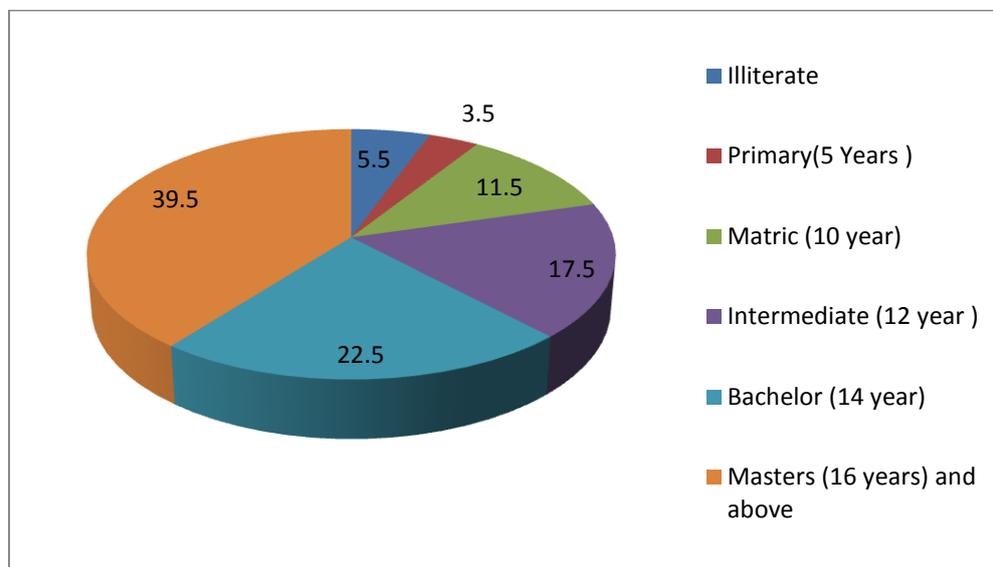
Source : Data collected through survey , 2012

**Figure 4.34 Percentage distribution of the respondents by Age of Respondents**



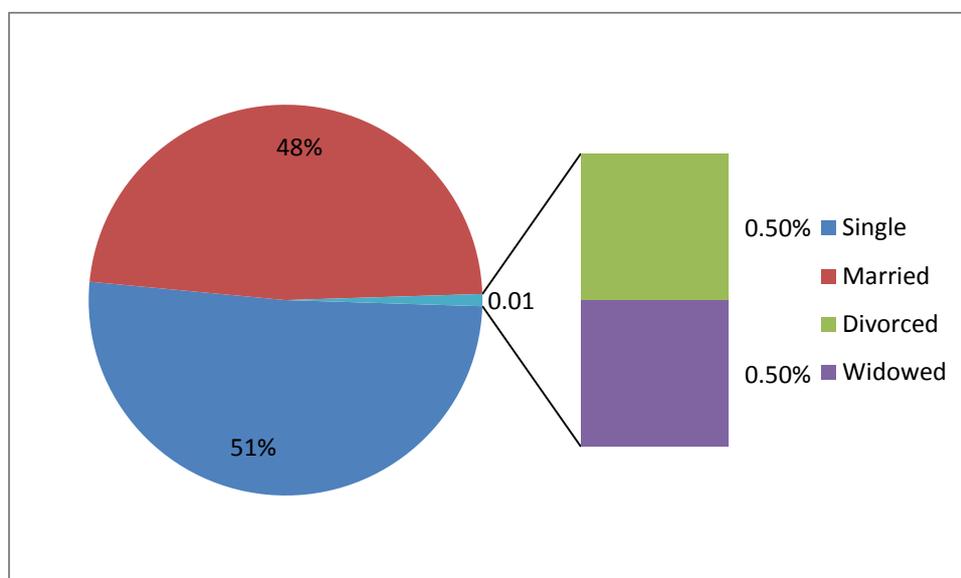
Source : Data collected through survey , 2012

**Figure 4.35 Percentage distribution of the respondents by Education level**

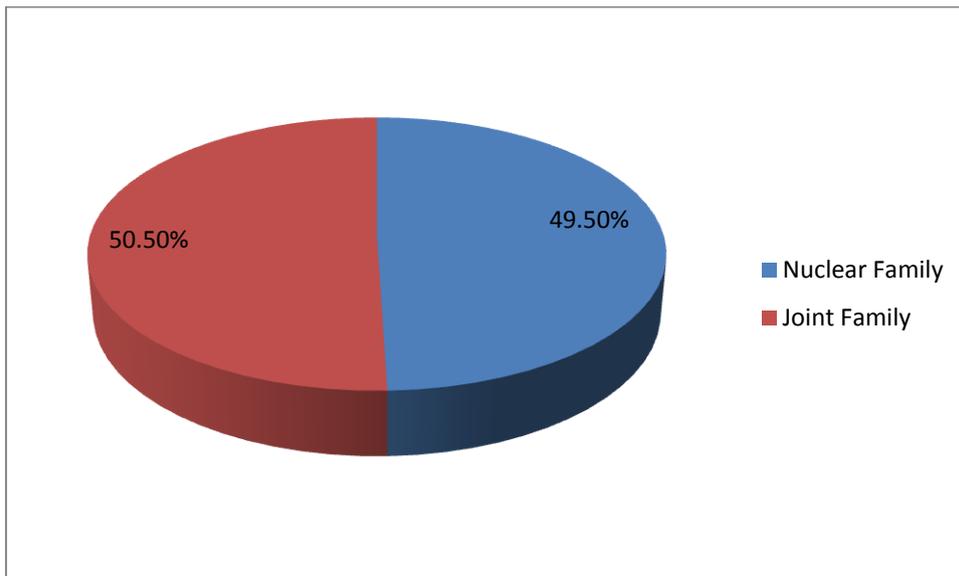


Source : Data collected through survey , 2012

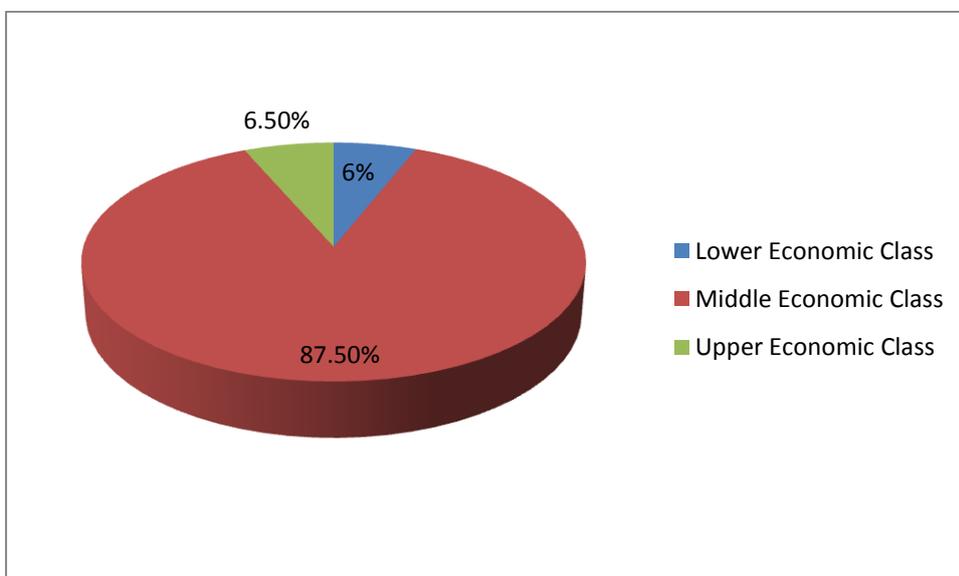
**Figure 4.36 Percentage distribution of the respondents by marital Status**



Source : Data collected through survey , 2012

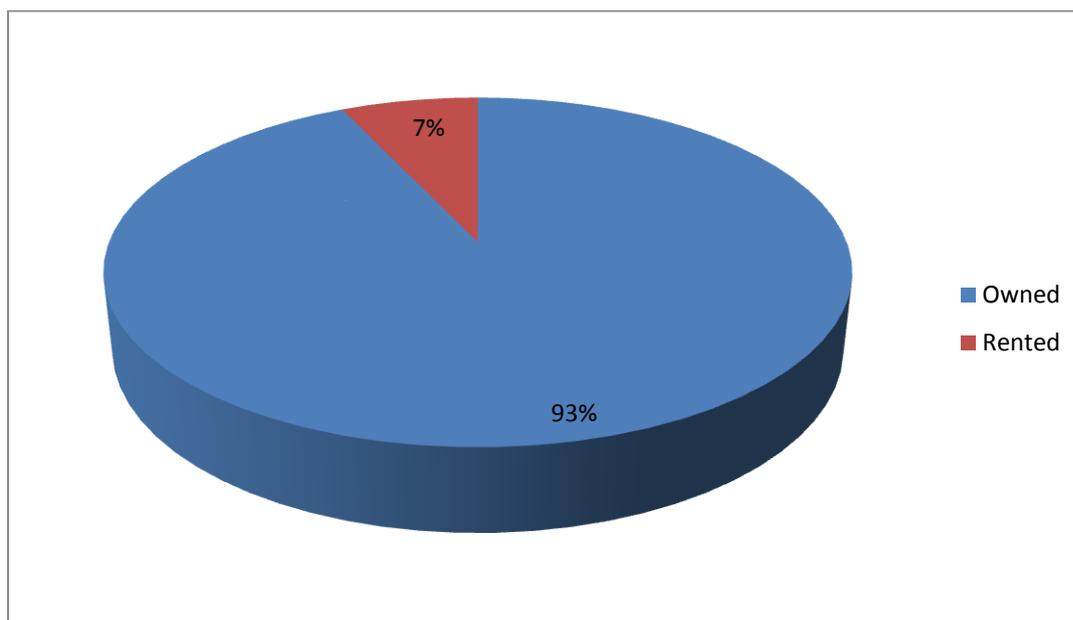
**Figure 4.37 Percentage distribution of the respondents by Family Type**

Source : Data collected through survey , 2012

**Figure 4.38 Percentage distribution of the respondents by Economic class**

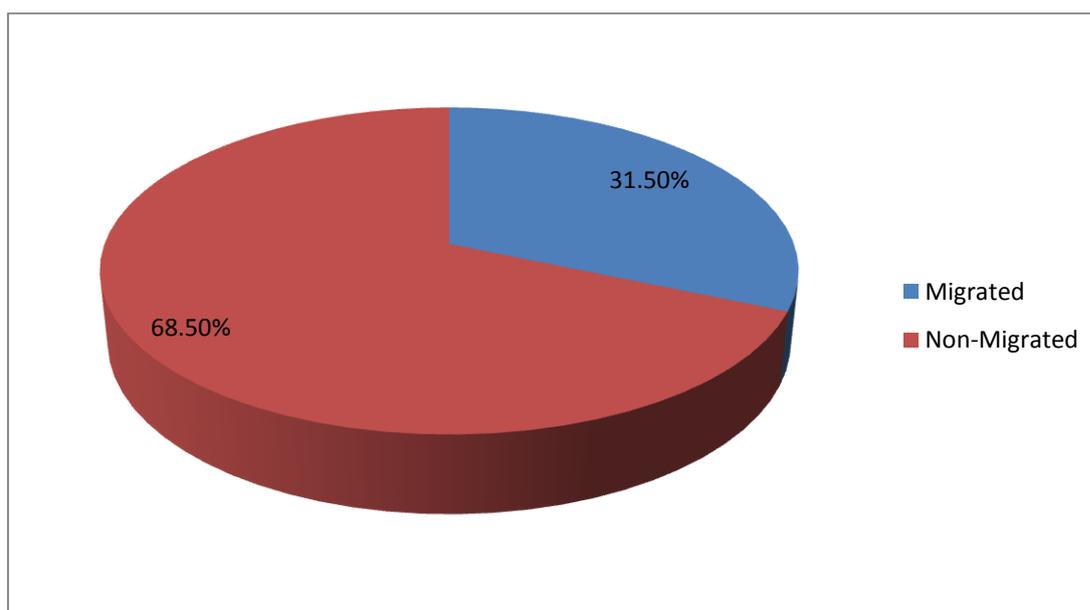
Source : Data collected through survey , 2012

**Figure 4.39 Percentage distribution of the respondents by ownership of house**



Source : Data collected through survey , 2012

**Figure 4.40 Percentage distribution of the respondents by Migration status**



Source : Data collected through survey , 2012

### 4.5.3 Perceptions towards changes in family structure

One of the major debates in society regarding family is family structure/composition. Joint Family system is the traditional family system in Pakistan. In Past, Majority of families were joint families and fewer families were nuclear families. With the passage of time, many changes are taking place in the Pakistani society. These changes were due to influence of western culture, Indian culture, migration, fertility changes, globalization and changes in literacy rate. So, Traditional Joint Family system of Pakistan has undergone a process of change and turns into nuclear family system due to changes in society.

Table 4.9 shows the percentage distribution of the perceptions towards changes in the family structure in Faisalabad. All the items were designed in such a way that higher the agreement, higher the trend towards the nuclear family system. These items deal with the question why joint family system is breaking in the Pakistani society? Responses average is above 3.49 with one exception of item 10 (A couple feels more security in a nuclear family than in a joint family) in which average is 3.09. Security is the only factor which compels people to live in joint family while all other factors preference to nuclear family (3.49), Family size (3.86) liberty in using family planning methods (3.65) , freedom of couple (4.01) , divorces in joint family (3.39) , migration to cities(3.76) , small houses in the cities(3.78) , better education facilities in nuclear family(3.91) , women freedom in nuclear family system(4.04) and intolerance (3.90) were in favour of nuclear family system and explained the reasons of breaking joint family system and the trend towards nuclear family system is increasing .

One of the major debates in society regarding family is family structure/composition. Joint Family system is the traditional family system in Pakistani society. So, Traditional Joint Family system of Pakistan has undergone a process of change and turns into nuclear family system due to changes in society. Majority of the respondents (59%) preferred to live in the nuclear family system both in rural (62%) and urban areas (57%). The point is 50% of respondents are living in joint a family system that means some discontent among them. There is a slight difference in opinion of respondents of rural areas and urban areas regarding trends towards nuclear family system. This shows how quickly changes are taking place in Punjabi society that both rural and urban areas have same perception. This is the indication that there is a change in the family structure in Pakistan and majority had tilt towards nuclear family system.

72 % respondents are agreed that large family size is present in Joint families. Many factors are responsible for large family size in joint families. One important factor is joint responsibility. In a Joint Family, All couples earn money and give money to head of household. Head of household distribute money among all members according to their needs. There is a great variation in the incomes of the couples. One couple may earn ten times than other couple in Joint family but there is equal distribution of money to all members of families irrespective of their income. The only way to get maximum share is to produce children. There is burden of children on all members of families and there is joint responsibility. In nuclear family, couple has to bear all expenses of children and there is no other person to share expenditures.

Second important reason is that it is very difficult to convince a Joint family couple to use family Planning methods because there are many other persons which influence the decision making of couple. In Nuclear Family, A couple is free to decide everything including family size. It was also proved in our survey that 63% respondents were agreed to this statement that it is easier to convince to nuclear family couple to use family planning methods than Joint family couples. There is less privacy in Joint families. Joint family couple feels shy in discussing family planning in the presence of other members of family. In nuclear family, couple is free to discuss and decide to use family planning methods.

There is less privacy in Joint families than in nuclear families. A nuclear family couple is free in decision making and leading independent life. Majority of respondents (76.5%) in rural (64.5%)and urban areas (84.30%) was agreed that a nuclear family couple has more freedom than Joint family couple. There is no doubt that Joint Family is traditional family system in Pakistan but with the changes in society trend towards Nuclear family system is increasing. One major problem in Joint family system is that there are many restrictions on the couple. There is less freedom and in some cases no freedom in deciding family decision. A couple cannot decide anything without permission of other members of family. Due to restrictions in Joint Family system, there is rising trend towards Nuclear family system.

Joint/Nuclear family dichotomy into a larger framework is opposing communities (gemeinschaft: relations are based on a relatively homogenous culture and tend to be intimate, informal, cooperative, and imbued with a sense of moral obligation to the group. These relationships are typical of hunter-gatherer, horticultural, and other relatively small preindustrial societies.) and society (gesellschaft: relations are more formal, goal-oriented,

heterogeneous, and based on individual self-interest, competition, and complex division of labor. These relationships are typical of agrarian and industrial societies.) According to the classification by Ferdinand Tönnies (1912). The joint family system belongs to traditional communities tied by kinship, the nuclear family system is self-supporting in the framework of the modern society and its regulations. This transition is the translation of modernization into the family system (Crossman, 2014b; Tönnies, 1912).

In Joint family system, there are many chances of quarrels and violence because every person has its own way of living and thinking and clash can occur on minor things. Due to different personalities and attitude, chances of quarrel are more in Joint families. 63.5 % respondents (3.67 average score on likert scale) were agreed that more quarrels/domestic violence is in Joint families than in nuclear families. It is also due to lack of patience, selfish attitude and different personality. Quarrels in joint families change the mind of person and he prefers to live in nuclear family system.

As stated earlier that marriage is compulsory for couples to live together in an Islamic country like Pakistan. Sexual relationship outside marriage is not allowed in the state laws and according to the teaching of Islam. There is strict punishment for illegal sexual relations. Islam is in favour of good relationship of husband and wife and allows divorce on genuine grounds. Divorce is not considered good in any society including pakistani society. There is mixture of views regarding divorce and family structure. There is no doubt that it is not considered good in society but divorces are present in both Nuclear Family system and Joint Family system. 50 % respondents were agreed that there are more chances of divorces in a joint family system whereas 25% respondents were disagreed to it, one interesting thing an equal proportion of respondents (25%) were undecided on this issue. All previous discussion indicates that there is less chances of divorce in a nuclear family.

68% respondents were agreed that migration to the cities is one of the major causes of increasing nuclear family system in the cities. This is the main perception that provides strong evidence that urban transition is responsible for changing family structure in Faisalabad, Pakistan but at the same time as indicated by zaninetti (2011) that the linkage between urban transition and changing fertility pattern is neither a direct simple cause-effect relation, neither an unrelated side-effect of the economic transition from agriculture to industry and service, but an important part of a system of changes triggered by economic

transition that spreads to habitat and families alike. Housing constraints being part of the explanation of reduced fertility (on average) among urban couples.

This evidence has been further proved when 69.5 % respondents admitted that small houses in cities are responsible for increasing nuclear family system. Zaninetti (2011) in discussing effects of urbanization on the fertility, explained that it is not a problem to increase the size of house with increasing in the family size in a village but the condition is reversed in a city excluding slums in which, it is very difficult to increase the size of house with the increase in family size due to expensive urban land.

As discussed earlier that there is joint responsibility and competition of producing children in Joint Families .Condition is reversed in Nuclear family system. Fewer resources are available in a joint family due to irresponsible attitudes of couples. A child in nuclear family has more opportunity to get education than a child in a Joint family system. 72 % respondents were agreed that more education facilities can be provided in a nuclear family than a joint family. This can be considered as a poster-child of the Malthusian argument for fertility control.

There is no doubt that trends towards Joint Family system is decreasing but majority of respondents (43.0%) were disagreed to the statement that there is more security in a nuclear system than in a joint family system. Same perception was seen in the rural (41.8%) and urban areas (44.3%). There is economic security in joint families. For example, if a couple is unemployed due to some reason others members of family support that couple. In nuclear family, there is not such kind of economic security in a nuclear family system. That means that social capital is strongly related to kinship in the pakistani society. That's an intrinsic characteristic of the traditional joint family system.(Todd, 2011) A nuclear family couple becomes worried in case of job loss. In case of health problem, a joint family couple is in benefit because other members of family are ready to help but nuclear family couples has to manage everything themselves. Male in joint family system can go abroad or other city for job or education after leaving his wife at home because other members of family are present to care his wife and children but in nuclear family, there is no person to care. Moreover, recent terrorist activities, rising rape cases, kidnapping, and thefts accelerated the security concerns of couples so they felt security in a joint family system as compared to a nuclear family system.

The most important debate in society is regarding the equality of status of men and women in the family's affairs. It is an admitted fact that woman has less autonomy in all affairs of life

in subcontinent. Therefore, women prefer to in that family system in which they can enjoy more freedoms and rights. Majority of respondents (79.5) were agreed that a woman has more rights and freedoms in a joint family system but a vast gap was seen in the opinion of rural respondents (81.0%) and urban respondents (42%) in this regard.

We can't deny the importance of tolerance in every society and its importance increases in a family where more tolerance is required to maintain relationship. Individualism results into the breaking of relation in a family. 70% respondents were agreed that intolerance is the cause of increasing nuclear family system. We observed a contrast of opinion regarding intolerance in the rural (64.50) and urban areas (73.60%). As a nation, Pakistanis are probably among the more intolerant populations of the world nowadays, and this intolerance is caused by bigotry and tradition (rising talibanization of the Pakistani society). Rising self-awareness causes individuals to be less tolerant to their kins in petty domestic affairs. In more holistic and authoritarian patriarchy, individuals are forced to swallow their pride and behave with more tolerance to their kins as they submit to the ruling joint family patriarch.

**Table 4.9 Percentage distribution of the perceptions towards changes in the Family structure in Faisalabad, 2012**

<b>Item</b>	<b>Statement</b>	<b>Strongly Disagree (1) (%)</b>	<b>Disagree (2) (%)</b>	<b>Neither Disagree nor agree (3) (%)</b>	<b>Agree (4) (%)</b>	<b>Strongly Agree (5) (%)</b>	<b>Response Average</b>
1	I prefer to live in a Nuclear family.	10	17.5	13.5	31.5	27.5	3.49
2	The Family size is large in a joint family system	4.5	9.5	14.0	39.5	32.5	3.86
3	It is easy to convince a nuclear family couple to use family planning methods.	6.5	14.0	16.5	34.5	28.5	3.65
4	A couple has more freedom in a Nuclear family	5.5	8.0	10	33.5	43.0	4.01
5	There are more chances of domestic violence / quarrels in a joint family than in a nuclear family.	10.5	8.0	18.0	31.5	32.0	3.67
6	There are more chances of divorces in a joint family than in a nuclear family.	11	14	25	25.5	24.5	3.39
7	Migration to cities is the major cause of increasing nuclear families in the city.	3.5	11.0	17.5	42.0	26.0	3.76
8	Small houses in cities are responsible for increasing nuclear families.	5.0	10.0	15.5	41.0	28.5	3.78
9	Nuclear families can provide better education facilities to the children as compared to joint families.	5.5	10.5	12.0	31.5	40.5	3.91
10	A couple feels more security in a nuclear family than in a joint family	12.0	31.0	16.5	17.5	23.0	3.09
11	A Woman has more rights and freedoms in a nuclear Family system	3.0	9.5	8.0	40.0	39.5	4.04
12	Intolerance is the cause of increasing nuclear family system.	3.0	7.0	20.0	37.0	33.0	3.90

Source: Data collected through survey, 2012

#### ***4.5.3.1 Exploratory Factor Analysis – changes in family structure***

Principal component Analysis with varimax rotation was performed through SPSS on the 12 items/statements which described the changes in the family structure from a joint family system to a nuclear family system. It reduced the large set of variables into four latent factors that are controlling changes in family structure. Moreover, our interpretations of factors are based on unrotated component matrix.

#### ***4.5.3.2 Screening of variable /items***

We made a thorough analysis of all variables/items after collection of data through the designed questionnaire. Table 4.11 shows the list of items for factor analysis with codes. 12 items were used for final factor analysis after screening the R-matrix after confirming that none of correlation was more than 0.8.

**Table 4.10 List of items for factor analysis- changes in family structure**

<b>Item Code</b>	<b>Item Label</b>
IT01	I prefer to live in a Nuclear family.
IT02	The Family size is large in a joint family system
IT03	It is easy to convince a nuclear family couple to use family planning methods.
IT04	A couple has more freedom in a Nuclear family
IT05	There are more chances of domestic violence / quarrels in a joint family than in a nuclear family.
IT06	There are more chances of divorces in a joint family than in a nuclear family.
IT07	Migration to cities is the major cause of increasing nuclear families in the city.
IT08	Small houses in cities are responsible for increasing nuclear families.
IT09	Nuclear families can provide better education facilities to the children as compared to joint families.
IT10	A couple feels more security in a nuclear family than in a joint family
IT11	A Woman has more rights and freedoms in a nuclear Family system
IT 12	Intolerance is the cause of increasing nuclear family system.

#### **4.5.3.3 Preliminary Analysis**

Table 4.12 shows the Pearson correlation coefficient between all pairs of the items. It is evident from the table that all items have neither very high and neither very low correlation. Determinant of our data is 0 .144 which is greater than the necessary level of 0.00001. Therefore, multicollinearity is not a problem of our data. To sum up, all the 12 items in the analysis correlate fairly well and none of the correlation coefficients are particularly large.

**Table 4.11 Correlation Matrix<sup>a</sup> : changes in family structure**

	IT01	IT02	IT03	IT04	IT05	IT06	IT07	IT08	IT09	IT10	IT11	IT12
IT01	1.000	.094	.137	.158	.196	.332	-.002	.138	.293	.341	.184	.047
IT02	.094	1.000	.227	.195	.146	.111	.086	.226	.055	.113	.110	.110
IT03	.137	.227	1.000	.329	.309	.234	.136	.187	.112	.006	.115	.111
IT04	.158	.195	.329	1.000	.373	.236	.086	.237	.346	.072	.305	.121
IT05	.196	.146	.309	.373	1.000	.340	.128	.161	.224	.064	.192	.144
IT06	.332	.111	.234	.236	.340	1.000	.253	.212	.181	.174	.261	-.027
IT07	-.002	.086	.136	.086	.128	.253	1.000	.440	.226	.062	.109	.110
IT08	.138	.226	.187	.237	.161	.212	.440	1.000	.315	.143	.159	.211
IT09	.293	.055	.112	.346	.224	.181	.226	.315	1.000	.209	.129	.134
IT10	.341	.113	.006	.072	.064	.174	.062	.143	.209	1.000	.356	.144
IT11	.184	.110	.115	.305	.192	.261	.109	.159	.129	.356	1.000	.277
IT12	.047	.110	.111	.121	.144	-.027	.110	.211	.134	.144	.277	1.000

a. Determinant = .144

#### 4.5.3.4 Sample Adequacy and suitability for factor analysis

Table 4.13 shows the Kaiser-Meyer-Olkin measure of sampling and Barlett's test of Sphericity. For our data, KMO value was 0.714 which fell in the range of acceptable by Kaiser Recommendations, so we were confident that factor analysis is appropriate for our data set. At the same time, Barlett's test is highly significant ( $p < 0.001$ ), and therefore factor analysis is appropriate.

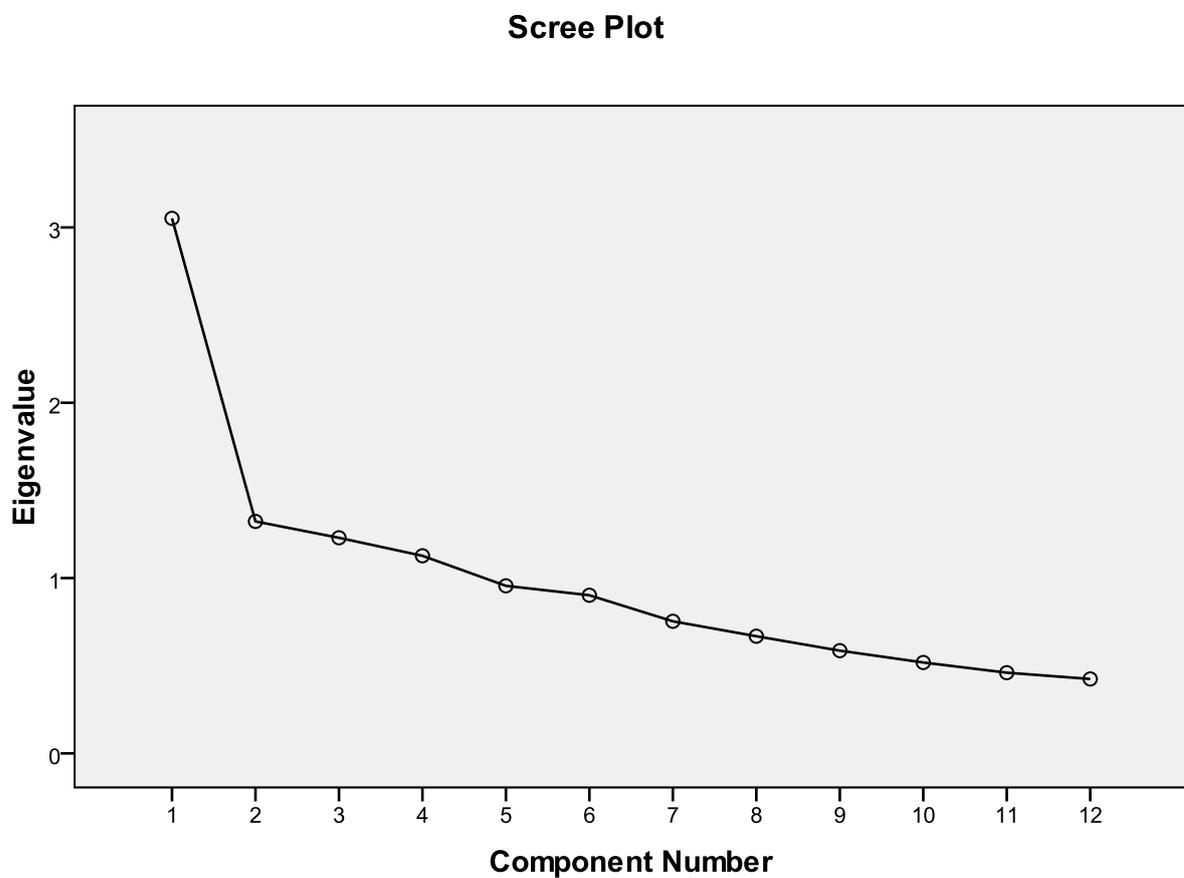
**Table 4.12 KMO and Bartlett's Test: changes in family structure**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.714
Bartlett's Test of Sphericity	Approx. Chi-Square
	376.133
	df
	66
	Sig.
	.000

#### 4.5.3.5 Number of Factors to be retained

Figure 4.41 shows the scree plot which is helpful for deciding the number of factors to be retained for factor analysis if Kaiser Criteria (eigenvalue greater than one) does not fit but it was not the problem in this analysis because both Kaiser Criteria and Scree plot suggested four factors.

**Figure 4.41 Scree Plot: changes in family structure**



#### 4.5.3.6 Results

Table 4.13 shows the eigenvalues associated with each linear component before extraction, after extraction and after rotation. Before extraction, 12 linear components (factors) were identified with in our data set. The eigenvalues associated with each factor represents the variance explained by that particularly linear component. It also shows the eigenvalue in terms of percentage of variance explained.

Factor 1 explains 25.43 % of total variance and Factor 2 correlates 11.025 % of the total variance. It is evident from the results that first few factors correlate relatively large amounts of variance (First four factors explain 56.097 % of the total variance) while, subsequent factor explain small amount of variance.

There are 4 factors having eigenvalues above than 1. The eigenvalues associated with four extracted factors are displayed in the columns labeled as Extractions sums of Squared Loadings. These values are same values as the values before extraction and it does not include discarded factors. The final portion of table shows the rotated sums of squared loadings. It shows the eigenvalues of the factors after rotation. Rotation has the effect of optimizing the factor structure and the relative importance of the extracted factors is equalized. Before rotation , Factor 1 accounted for more variance (25.43 %) as compared to subsequent factors [Factor 2 (11.025%) , Factor 3 (10.248% ) and Factor 4 (9.32%) ] , whereas , after extraction first factor accounts for only 16.2 and while remaining factors are equalized and their values increase to 14.88% , 13.64 % and 11.37 for factor 2, 3 and 4 respectively.

**Table 4.13 Total Variance Explained : changes in family structure**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.052	25.431	25.431	3.052	25.431	25.431	1.944	16.203	16.203
2	1.323	11.025	36.456	1.323	11.025	36.456	1.786	14.880	31.083
3	1.230	10.248	46.704	1.230	10.248	46.704	1.637	13.643	44.726
4	1.127	9.392	56.097	1.127	9.392	56.097	1.364	11.370	56.097
5	.956	7.964	64.060						
6	.902	7.517	71.577						
7	.753	6.279	77.856						
8	.668	5.569	83.425						
9	.586	4.883	88.308						
10	.518	4.320	92.628						
11	.460	3.835	96.464						
12	.424	3.536	100.000						

Extraction Method: Principal Component Analysis.

Table 4.14 shows the communalities before and after extraction. All the communalities after extraction were above 40% except item 02 (29.0%). Item 7 and Item 8 had maximum communalities where as item 01, item 10 and item 12 had commonality above 60.0%.

**Table 4.14 Communalities- changes in family structure**

Item	Statement	Initial	Extraction
1	I prefer to live in a Nuclear family.	1.000	.615
2	The Family size is large in a joint family system	1.000	.290
3	It is easy to convince a nuclear family couple to use family planning methods.	1.000	.543
4	A couple has more freedom in a Nuclear family	1.000	.528
5	There are more chances of domestic violence / quarrels in a joint family than in a nuclear family.	1.000	.521
6	There are more chances of divorces in a joint family than in a nuclear family.	1.000	.553
7	Migration to cities is the major cause of increasing nuclear families in the city.	1.000	.721
8	Small houses in cities are responsible for increasing nuclear families.	1.000	.671
9	Nuclear families can provide better education facilities to the children as compared to joint families.	1.000	.415
10	A couple feels more security in a nuclear family than in a joint family	1.000	.664
11	A Woman has more rights and freedoms in a nuclear Family system	1.000	.559
12	Intolerance is the cause of increasing nuclear family system.	1.000	.652

Extraction Method: Principal Component Analysis.

Table 4.15 shows the component matrix before rotation. This matrix contains the loading of each variable onto each Factor.

**Table 4.15 Component Matrix<sup>a</sup> : changes in family structure**

	Component			
	1	2	3	4
A couple has more freedom in a Nuclear family	<b>.614</b>	-.175	-.297	.179
There are more chances of divorces in a joint family than in a nuclear family.	<b>.579</b>	.049	-.250	-.391
Small houses in cities are responsible for increasing nuclear families.	<b>.576</b>	-.282	.490	-.140
There are more chances of domestic violence / quarrels in a joint family than in a nuclear family.	<b>.574</b>	-.184	-.395	.044
Nuclear families can provide better education facilities to the children as compared to joint families.	<b>.557</b>	.058	.150	-.280
A Woman has more rights and freedoms in a nuclear Family system	<b>.531</b>	.378	.072	.360
It is easy to convince a nuclear family couple to use family planning methods.	<b>.485</b>	-.390	-.358	.165
The Family size is large in a joint family system	<b>.373</b>	-.207	-.033	.328
A couple feels more security in a nuclear family than in a joint family	.418	<b>.671</b>	.195	.025
I prefer to live in a Nuclear family.	.488	<b>.493</b>	-.221	-.290
Migration to cities is the major cause of increasing nuclear families in the city.	.425	-.372	<b>.534</b>	-.343
Intolerance is the cause of increasing nuclear family system.	.345	.050	.392	<b>.613</b>

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Following are four distinct factors in the unrotated solution:

### **Factor 1 (Consensus)**

According to the table 4.16- unrotated output; Factor 1 is the "consensus" neo-variable. The agreement level between respondents is astounding. The "consensus" praises the emerging nuclear family system and points out the disadvantages of the traditional joint-family systems. Beliefs are essential in society, because beliefs create motives of action. This result makes a convincing case for explaining the current erosion of the joint family system, and the importance of urbanization in the family transition to the nuclear family model. Another important result is the linkage it reveals with fertility transition and the Malthusian preference for reduced family size. In short, Factor 1 summarizes the modernization of the Pakistani society in Faisalabad.

Four items were loaded on factor 1. These items were related to freedoms of couples in leading their lives so they preferred to live in that family system in which they can get maximum liberty. This is the major reason of breaking joint family system and rising nuclear family system in the studied area.

Factors 2-3-4 are relevant to understand several contradictions and the lack of consensus about the 4 last questions. Their explicative power is weak (eigenvalue close to 1), opposite to Factor 1, the "consensus" factor that summarizes most of the survey.

### **Factor 2 (Preference for nuclear family system)**

Factor 2 seems strongly linked with the preference for nuclear family. It confirms factor 1.

### **Factor 3 (Migration)**

Factor 3 seems related to the importance of migration to the city in the changing family system. Factor 3 highlights opposite answers to factor 2 that could be the result of the diversity of ethnic-cultural background of migrants. Migrants originating from tribal areas being more likely embedded in stronger joint-family ties than their Punjabi counterparts.

Factor 3 contradicts the consensus apparent in factors 1 and 2, displaying some minority dissensus about family values

Third hidden factor for controlling changes in the family structure is migration. Migration towards city is the major cause of increasing nuclear family system. Second item concerns with the small size of housing unit which results into the increasing nuclear family system.

The technological treadmill is the basic factor of the economic transition toward economic development. Mechanization brings rising productivity in agriculture. As soil is available in fixed amount, the technological treadmill inevitably leads to rural unemployment in expanding populations, and triggers rural to urban migration (Zaninetti, 2011). Majority of population is attached to agriculture in Punjab. Machines are now used in agriculture. Due to involvement of machines in agriculture, less labour is required in villages. Industries are established in big cities of Punjab, like Lahore, Faisalabad, and Multan etc. There is unemployment in villages and people migrate to big cities in order to get job. It is cause of breaking joint family system because it is not possible to move whole family. Only couples with their children migrate to cities. There is problem of accommodation in cities so there is trend towards Nuclear family system. Urbanization and Industrialization has direct effect on the family structure.

#### **Factor 4 (Intolerance)**

Factor 4 seems related to the negative side-effect of rising individualism. It is a minor contradiction to factor 1 consensus.

Intolerance results into breaking of relationship and therefore, it is the major factor that is responsible for changes in family structure. Women empowerment is also related to the tolerance of other family members so it is an admitted fact that women would prefer that family system in which they are full empowered. Intolerance in a joint family system results into a creation of a nuclear family system.

#### **4.5.4 Perceptions towards changes in Family**

As far as we analyzed the results of two surveys in which we tried to find out the role of urban transition in changing family structure in Faisalabad (Survey I) and factors for increasing nuclear family system in Faisalabad (survey II) but our quest to know what changes are taking place in the family in the current scenario of rising urbanization, globalization, media influence, terrorism and talbanization in the Pakistanis society , so we designed a third survey which covered the aspects related to the changes that are taking place

in the family. It is an attempt to uncover changes in the families of Faisalabad, Pakistan through perceptions of individuals.

We included 26 items related to changes in the family in our questionnaire related to perceptions towards family for getting responses from the respondents from Faisalabad. Each item was actually a change in a family. We measured their responses on liker scale ranged from strongly disagree (01) to strongly agree (5). Higher the average score of responses is the indication of the agreement to that change/item in the family. Table shows the percentage distribution and average of responses related to changes in the family. We explained each change briefly and concisely in the forthcoming paragraphs for the better understanding/comprehension of the changes in families of Pakistan

#### ***4.5.4.1 Spousal Violence***

43.0 % respondents (average response of 3.22 on likert scale) were agreed that spousal violence (beating, verbal and physical torture) is common and practiced. Only 28.5 % respondent denied it so spousal violence is being practiced in majority of the families and there is dire need to reduce spousal violence through empowering women.(Table 4.16)

Following are the articles of constitutions related to the protection of women in the Pakistan society:

[“There shall be no discrimination on the basis of sex alone.”

“No citizen otherwise qualified for appointment in the service of Pakistan shall be discriminated against in respect of any such appointment on the ground only of ... sex ...”

“Steps shall be taken to ensure full participation of women in all spheres of national life.”

“The state shall protect the marriage, the family, the mother ...”

“The state shall ... [ensure] that ... women are not employed in vocations unsuited to their sex....”] (Constitution of Pakistan -Articles 25, 27, 35, 37)

Unfortunately, above-mentioned articles are written only in the constitution of Pakistan but not applicable in the Pakistani society. According to the Human rights commission of Pakistan, domestic violence showed a marked increase in the first six months of 2011 as compared to the previous year, according to the monitoring cell of Aurat Foundation, with 4,448 cases reported. Abduction and kidnapping remained the most common crimes (1,137 cases), with murder (799 cases), rape and murder (396 cases) being the second and third most commonly reported crimes. The figures for the Punjab were higher than those for Sindh,

which was a change from last year, but the figures may be a result of what is reported and what remains silenced due to cultural pressures.

According to media monitoring by HRCP, there were reports of at least 366 women who suffered some form of domestic violence in 2011. Of these, nearly all victims were married women with only two of them unmarried, five widows, and two divorced women, and the perpetrators were mostly husbands or other close relatives. The families were nearly all of them from the working class with only one victim being a female doctor. The reasons given for the violence were domestic dispute and the suspicion of illicit relations. Amongst the worst hit were 38 women who suffered from acid attacks, 47 were set on fire, 81 suffered attempted murder, 98 were tortured, 10 women had their heads shaved as part of public humiliation, and nine women had their nose or other parts of the body amputated as punishment ("State of human rights in 2011," 2012).



**Image 4.10 Azim Mai : One of many victims of acid attacks**

Source : ("State of human rights in 2011," 2012)

Spousal violence is further proved in the Pakistani society through PDHS 2012-13. According to its findings, less than half of women (43%) and one-third of men admit that a husband is justified in beating his wife if she argues with him, neglects the children, refuses to have sex with him, goes out without telling him, neglects the in-laws, or burns the food. Women are most likely to agree that wife beating is justified if a woman argues with her husband (34%). Men are more likely to agree that wife beating is justified if the wife goes out without telling him (20%).

Almost 40% of ever-married women have suffered from spousal abuse at some point in their life, whether physical and/or emotional. One-third of ever-married women have ever experienced physical violence since age 15. One in five women experienced physical violence in the past 12 months. Women in the poorest households (25%) are more likely to experience recent physical violence than wealthier women (11%). The most common perpetrator of physical violence is the current husband (79%) (NIPS & MI, 2013a).

#### ***4.5.4.2 Rising Talibanisation and terrorism impacts on family***

55.5 % respondents (average response of 3.55 on likert scale) were agreed that rising talibanisation is creating the fears in the members of family whereas 78.5 % respondents (average response of 3.21 on likert scale) admitted that terrorism is affecting families. (Table 4.16)

Pakistan has not good relationship with India. Pakistan has fought three wars with India on Kashmir issue. Armed conflicts also have bad impacts on families. Many deaths occur due to these armed conflicts. Family composition changes due to these deaths during wars. It results into single parent in case of death of one partner. Children of that family lead a miserable life. Many psychological disorders occur in the members of families which are affected due to war.

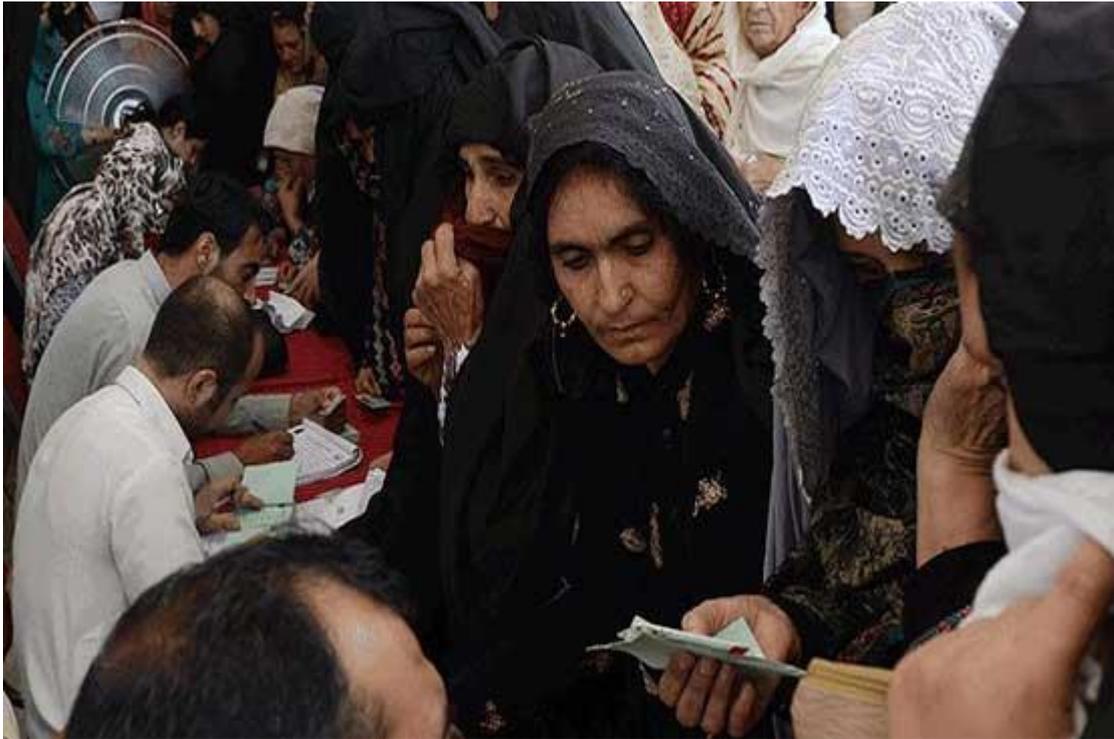
Talbanization in Pakistan and Afghanistan is also result of broken families due to war between Afghanistan and Russia .Parents of thousands of children died. There was no person to look after these children. They took shelter in madrasa (religious school) where they got food and other necessities. They brought up in madrasa where they did not see institute of family. They did not see the love of mother and father. They did not see female sex in madrassas and did not imagine their feelings. These children were trained in madrasas and became Taliban. Taliban were very strict to freedom of women because they did not see woman as mother, sister and wife in madrissas.

Family system is very important in society because it is an institute of socialization. Values are transmitted from old generation to new generation. Talibans are the products of breaking family system on large scale during wars between Afghanistan and Russia.

Families of Pakistan are also victim of terrorism. Suicide attacks are frequently practiced in various areas of Pakistan. Due to these attacks, thousands of families are affected. Each suicide attack changes composition of hundreds of families. Pakistan has played an important role in war against terrorism after 9/11 incidence.

Terrorism is rising in Pakistan. It is also affecting family life. Pakistan has played a key role to control terrorism. Pakistan Army has started operation against Taliban in Kalam and wazeristan in 2009 .It saved thousands of families from the atrocities of Taliban. International cooperation is required to protect families from effects of terrorism. Families had to migrate due to army operation and it also has effects on the families.

Recently, on june 15 2014 , the Pakistan army began an air offensive against alleged Tehreek-e-Taliban Pakistan (TTP) strongholds in the north Waziristan. It affected 0.9 millions people in the north-waziristan and they had to leave their houses and all household possession and now living in the miserable conditions in the camps, and seeking aids from the government of Pakistan. Thousands of families from Pakistan are being affected from talbanization in Pakistan ("Registration of 895,423 North Waziristan IDPs completed," 2014).



**Image 4.11 Registration of victim families from the recent Pakistan army operation against Tehreek Taliban of Pakistan (TTP) in North Waziristan**

Source : ("Registration of 895,423 North Waziristan IDPs completed," 2014)

#### ***4.5.4.3 Participation of women in Politics***

54.5 % respondents (average response of 3.50 on likert scale) were agreed that women are actively participating in the politics whereas 57.5 % respondents (average response of 3.60) on likert scale) were agreed that women are casting their votes regularly in general elections. It is a positive change in the family. (Table 4.16)

According to human right commission of Pakistan, women constituted 23% (77 women) of the National Assembly (340 members) . Out of these 77 women member of parliament, 60 were elected on the basis of reserved seats whereas remaining 17 were elected through popular vote. Out of the 3339 questions raised in the assembly in the third year , more than half (1685) were asked by women ("State of human rights in 2011," 2012).

#### **4.5.4.4 Increasing Divorce Rate**

63.5 % respondents ((average response of 3.73 on likert scale) were agreed that divorce rate is increasing in Pakistan. It is not a good change as we already discussed in detail in 4.6.3. (Table 4.16)

#### **4.5.4.5 Increasing Age at marriage**

74.0 % respondents (average response of 4.03 on likert scale) were agreed that age at marriage is increasing. Increasing age at marriage will result into low fertility which in turn is necessary for successful demographic transition in Pakistan. (Table 4.16)

Early marriages were practiced in past. It resulted into large family size. Now, trend has changed, and late marriages are being practiced in urban areas of Pakistan. Late marriages are practiced due to the rising literacy rate and awareness. Early marriages are still practices in some rural parts of Pakistan while in urban areas late marriages are being practiced.

The results of the PDHS suggest that the median age of first marriage in Pakistan is increasing slowly over time. The median age of marriage is now 19.1 years, that is, half of women marry before 19.1 year and half marry later. This is still very young age for marriage. For women age 25-29, the median age at first marriage is 20.3 years compared to 18.5 years among women age 45-49. Despite the increasing age among younger women, 40 percent of all women in Pakistan marry before the age of 18 and 13 percent marry before age 15.(NIPS & MI, 2008)

Thirty-five percent of women age 25-49 were married by age 18 and more than half (54%) were married by age 20. There is evidence that age at first marriage among women in Pakistan is rising. The median age at first marriage increased from 19.1 years in 2006-07 to 19.5 years in 2012-13. The median age at first marriage among Pakistani men age 30-49 is 24.7 years.(NIPS & MI, 2013a)

PDHS 2012-13 further shows the regional difference of age at first marriage in Pakistan. According to its findings, urban women (age 25-49) tend to marry two years later than rural women, and women from ICT Islamabad marry about five years later than women from Gilgit Baltistan. Among the other provinces, the median age at first marriage for women in Punjab is one year later than that in Sindh, Khyber Pakhtunkhwa, and Balochistan. There

seems to be a stronger shift toward later marriage among urban women in Pakistan. There has been an increase in the median age at marriage among urban women age 25-49 over the past six years (from 19.7 years in 2006-07 to 20.7 years in 2012-13). In contrast, there has been no change among rural women (18.8 years in both 2006-07 and 2012-13) (NIPS & MI, 2013a).

#### ***4.5.4.6 Endogamy and Persistent caste system***

77.5 % respondents (average response of 4.05 on likert scale) were agreed that caste system is still dominant and marriages are being practiced within families and the caste. (Table 4.20) This aspect needs improvement for grooming individual thinking which is only possible in open society without any caste restrictions.

There are no organized or legal sanctions against inter-caste marriages but endogamy is still practiced and people are still stick to it in Pakistan. They are not ready to leave to the tradition values and prefer to do marriage within extended family/group/caste. In Past, there was no trend of exogamy. Marriages are within families and castes. But now, condition is changing in Pakistani society and exogamy is also practiced in literate family.

The most important reason is that in case of non availability of proper match in extended family, exogamy is practiced. Although it is not considered good in society but it is practiced due to its advantages. Many clashes are also present in families and parents do not like that their children become victim of these clashes and they prefer to arrange marriages outside families and castes. Cousin marriage with a preference for cross-mariage according to Todd (2011) is the most frequent marriage in endogamy.

#### ***4.5.4.7 Decreasing Family size***

75.5 % respondents (average response of 3.97 on likert scale) were agreed that desire to have fewer children is increasing (Table 4.16). It is the most important change in the family that is necessary for a successful demographic transition in Pakistan.

PDHS 2012-13 confirms our hypothesis through declaring its findings that Pakistani women and men want, on average, four children. Women's and men's ideal family size is highest in Balochistan (6.1 for women and 7.1 for men) and lowest in ICT Islamabad (3.2 for women and 2.5 for men) (NIPS & MI, 2013a).

Total fertility rate (TFR) has declined in Pakistan from 4.1 (PDHS 2006-07) to 3.8 (PDHS 2012-13) whereas it was 5.4 in PDHS 1990-91. First two surveys are based on the births per woman for the three years prior to the survey whereas it is six years prior to the survey (NIPS & MI, 2013a).

#### ***4.5.4.8 Impacts of Media on Family***

86.0 % respondents (average response of 4.27 on likert scale) were agreed that electronic media (Television, Cable) is responsible for changes in the family (Table 4.16).

Access to information through the media is essential to increase people's knowledge and awareness of what takes place around them.

According to PDHS 2012-13, television is by far the most widely accessed medium; 47 percent of women watch television at least once a week, while only 4 percent read a newspaper and 3 percent listen to the radio at least once a week. Less than 1 percent of women are exposed to all three media sources once a week. More than half (51 percent) of women have no exposure to any of the mass media on a weekly basis. Although differences by age group are not large, there is a wide gap in media exposure by urban-rural residence. For example, 8 percent of urban women read a newspaper once a week, as compared with only 2 percent of rural women. Similarly, 71 percent of urban women watch television at least once a week, as compared with 35 percent of rural women. Women living in ICT Islamabad are much more likely than women in other provinces/regions to be exposed to the mass media. In addition, women in Khyber Pakhtunkhwa, Gilgit Baltistan, and Balochistan are less exposed to the media than women in Sindh and Punjab. Media exposure is positively related to educational level and economic status. Regular exposure to mass media is the highest among the women with a secondary or higher education and those in the highest wealth quintile. Whereas , men in urban areas are more likely to have exposure to media than men in rural areas .Men residing in ICT Islamabad are more likely to be exposed to media than those in other regions (NIPS & MI, 2013a).

Media is also an important factor for changes in families in Pakistan. In Past years, people did not watch television. They were not aware of the development in the rest of world. Now, media has played a pivotal role in creating awareness. Now, people become aware of culture of whole world through media and adopting the norms and values from other culture. Media

is also playing a positive role through increasing the awareness of rights of women, family planning and HIV awareness.

Indian culture through various Indian channels like star plus are inflicting into the new generation of Pakistan. Pakistani housewives see their drama with great interest. These dramas discuss the quarrels and fights between mother in laws and daughter in laws. They try to follow it in their real life that results into the breaking of joint family system and in some extreme cases it results into divorce.

#### ***4.5.4.9 Increasing Monogamy***

58.5 % respondents (average response of 3.49 on likert scale) were agreed that Polygamy is decreasing whereas Monogamy is increasing (Table 4.16)

Polygamy is accepted in Pakistan but it is rare. At Present, monogamy is dominant in Pakistani society. Islam is Polygamous religion and allows four marriages to men but with some restrictions. Now, there is tradition to have only one marriage in Pakistani society. Second marriage is not allowed and condemned in the society. It is not considered good. It does not mean that there is no polygamy in Pakistan. People practiced it because of the fact that Islam has given them right to do so and it is not illegal.

Islam allows more than one wife is criticized in the western world. Muslims defended it logically that it is necessary in an Islamic society where sex outside marriage is forbidden and there is strict punishment for those who commit it. Men and women do not have same psychology and physiology. We cannot treat them as same just for fun, during menses (periods), woman do not like sexual intercourse then man should be on leave. As well as pregnancy will be hurdle to enjoy sex for poor male so he should have only option for a second wife. Polygamy is expensive but it is still being practiced in poor families. During my survey, I found a household in a slum area in which a person with two wives was living in one room housing unit.

4% of currently married women and 3% of currently married men are in polygamous unions. Polygamous unions for married women decreased from 7% in 2006-07 to 4% in 2012-13(NIPS & MI, 2013a).

#### ***4.5.4.10 Male dominated society***

85.0 % respondents (average response of 4.31 on likert scale) were agreed that head of family should be male (Table 4.16).

Pakistani society is male dominant society but dominance of male varies with region to region and family to family. Both in rural areas and urban areas male is dominant in patriarchy families, with a strict hierarchy among family adult males because of the fact that society force male to be dominant on wife. But in nuclear family, there is no person to criticize so male changes attitudes and gives importance to opinion of females.

#### ***4.5.4.11 Remarriage of widow and divorced women***

51.0 % respondents (average response of 3.23 on likert scale) were agreed that remarriage of widow and divorced women is considered bad. It shows the inferior status of women in the male dominated society of Pakistan (Table 4.16).

#### ***4.5.4.12 Increasing participation of women in family affairs***

82.0 % respondents (average response of 4.13 on likert scale) were agreed that women are actively participating in the family affairs (Table 4.16).

According to PDHS 2012-13, all Pakistani women don't have power to make decisions in household affairs. Women are most likely to have the final or joint say on decisions regarding their own healthcare (52%) and visits to her family or relatives (50%), while they are less likely to participate in decisions about major household purchases (47%). More than one-third (39%) do not participate in any of the three decisions asked about in the PDHS; 38% report that they participate in all three decisions.

Women's decision making varies by region. Just 18% of women in Balochistan participate in all three decisions, compared to more than 40% of women in Punjab (44%) and ICT Islamabad (45%). Older women age 40-44 (56%) are more likely to participate in all three decisions, compared to younger women age 15-19 (10%) (NIPS & MI, 2013a).

There is no doubt in it that there is increase in the participation of women in family affairs but it does not consider as that it is universal as indicated in the findings of PDHS 2012-13.

#### ***4.5.4.13 Increasing ratio of working women***

77.0 % respondents (average response of 3.74 on likert scale) were agreed that women should do jobs for supporting their family. (Table 4.20) Women can actively contribute in their family affairs through supporting family through doing jobs.

Pakistan has an agro-based economy; therefore, rural women are more likely to be employed than urban women (30 percent versus 19 percent). Substantial variations are found across regions. The proportion of women who are currently employed ranges from 4 percent in Gilgit Baltistan to 31 percent in Punjab (NIPS & MI, 2013a).

Exploitation of working women is indicated in the PDHS 2012-13 and according to its findings; only 29% of married women age 15-49 interviewed in the PDHS are currently employed, compared to 98% of married men age 15-49. The large majority (71%) of these working women earn cash, while 15% are not paid. The majority of men (87%) earn cash, while 1% are not paid at all. Half of women who are currently employed and earning cash made independent decisions on how to spend their earnings. Seven in ten women reported earning less than their husband. Less than 10% of women earn more or the same amount than their husband (NIPS & MI, 2013a).

Women economic participation is also affecting family structure in Pakistan. Late marriages, small family size, woman autonomy in affairs of family, equal status of woman to man and increasing female headed household are due to women economic participation.

In past years, there was less number of women who did jobs. Now, conditions are changed due to rising literacy level and awareness in Pakistani society due to influence of media and Globalization. Women are participating in all spheres of life in Pakistan. Women constitute the 52% of the population of Pakistan. If 52 % population of Pakistan don't participate for the development of country it will be very difficult for Pakistan to make progress. Head of household in majority of the families is male in Pakistan. Male is dominant in society of Pakistan. Pakistani society is also hindrance in the participation of women in economic activities.

There are some recent threats to women economic participation due to rising talbanization in Pakistan. Talibans and extremists are against working women. Women have fears due to rising talbanization in the northern areas of Pakistan. Punjab is still safe from the effect of

talbanization and women are encouraged to work. Government is making effort to stop talbinanization and encourage women to participate in economic affairs of country.

#### ***4.5.4.14 Increasing divorce rate due to mobile phone***

58.8 % respondents (average response of 3.61 on likert scale) were agreed that mobile phone is the cause of divorce (Table 4.16).

South Asian husbands including Pakistan are possessive and can't bear any influence/relation of other men in their husband wife relationship. Moreover, all relations between a man and a woman is considered sexual and treated as negative out of wedlock. Mobile phone has increased the communication but at the same time it remained one of the causes of divorce in a Pakistani society. Husbands try to trace calls of their wives mobile and any misconception results into divorce due to lack of trust. Any wrong call is treated as a call from a boy friend in the eyes of a literate husband and even literate husband.

#### ***4.5.4.15 Increasing sex outside marriage/without wedlock***

65.5 % respondents (average response of 3.79 on likert scale) were agreed that sex outside marriage is being practiced and continuously on the increase (Table 4.16).

Increasing sex outside marriage is the recent development in the Pakistani society. Sex outside marriage is forbidden in Islam and against the state law but majority of respondents agreed that sex outside marriage is practiced so we would not rule out this change in the family that is continuously increasing in Pakistani society due to influence of western culture , porn movies, late marriages , depression , sexual frustration , increasing monogamous and forgetting Islamic practices.

#### ***4.5.4.16 Increasing love marriages***

70.0 % respondents (average response of 3.85 on likert scale) were agreed that love marriages are increasing. It is a positive change in the family (Table 4.16).

Generally it is really a difficult task for people to make their choice of marriage as successful. The traditional and culture passionate Pakistani people, particularly residing in rural areas will never accept the love marriage system and most cases they will break the relationship

between them and the pairs. Moreover, the married pairs will be locked in jail, as they wed-locked with the opposition of their parents and other relatives .Furthermore, in some other cases, young couple is alienated because of marrying someone without the approval and acceptance of their parents and relatives.

Love marriage in Pakistan is really very difficult to happen, as people here will stick with the tradition and culture. It is really a tough situation to marry the person of your choice in Pakistan. Though the commandment and law grants the women to join her hands with her choice of person, the parents and relatives of both bride and groom will never accept the wedding. Moreover, people will consider their marriage as the dishonor to their family and religious customs. At cases, the girl will be killed by her people and at some cases her partner will also be murdered.

#### ***4.5.4.17 Persistent less Woman autonomy in mobility***

32.0 % respondents (average response of 2.76 on likert scale) were agreed that women don't need to take permission for going to market, doctor and friend's (only female, male friend is out of question in Pakistani society home.) It is only item that has low average response of 2.76 on likert scale and majority of respondents (52.0%) were disagreed to it so there is always need of taking permission from a male member before leaving house. Women autonomy in mobility still needs improvement (Table 4.16)

#### ***4.5.4.18 Increasing use of Family Planning methods***

72.5 % respondents (average response of 3.79 on likert scale) were agreed that there is increase in use of family planning methods. (Table 4.16)

Islam is the dominant religion in Pakistan. Islam has dominant role on the life of people. Majority of Ulemas (Religious scholars) preach that Islam has forbidden family planning methods. All efforts of government and international organizations are failed because religious people are not ready to use family planning methods. There is also ignorance of family planning methods. They have a fear in their mind that these are harmful for health so they don't like to use them.

As we discussed earlier in 4.6.3 that increasing nuclear family results into the increasing use of the family planning methods due to the fact that it is easy to convince a nuclear family couple to use family planning methods as compared to a joint family system.

According to the findings of PDHS 2012-13, knowledge of family planning method has increased and now 99% of ever-married women and 99% of ever-married men know at least one modern method of family planning method. The most common methods among ever-married women are injectables (95%) , contraceptive pills (95%) and female sterilization (91%) whereas among ever-married men , the most commonly know methods are condom(89%) , contraceptive pill (85%) and injectables (82%) .Usage of modern family planning method varies by residence and region One third of married women from urban areas use modern methods whereas this proportion was only 23% in the rural areas.(NIPS & MI, 2013a) As indicated by PDHS that use of family planning method depends on residence and regions so it is a validated point that family type and household size through residence and rural /urban status through region control the usage of family planning method so urban transition and family structure has a decisive role in the successful demographic transition in Pakistan.

PDHS 2012-13 also confirms our hypothesis/statement that there is increase in use of family planning method through giving its finding : Use of modern family planning methods has increased from 9% in 1990-91 to 26% in 2012-13. The use of female sterilization, condoms, and withdrawal increased slightly since 2006-07.

#### ***4.5.4.19 Increasing awareness of HIV(AIDS)***

65.5 % respondents ((average response of 3.7” on likert scale) were agreed that HIV (AIDS) awareness is increasing. It’s really a positive change that is observing in the families of Pakistan (Table 4.16).

People were ignorant of HIV virus in the past and continued to practiced used blades at barber shop, infected syringes at clinics, sex without condom, anal sex and sex with prostitutes but awareness of HIV has totally changed their attitudes. HIV awareness has increased due to rising literacy rate and role of media.

According to PDHS 2012-13, knowledge of HIV is not yet universal in Pakistan . Only 42% of ever married women and 69% of ever-married men have heard about AIDS (NIPS & MI, 2013a).

#### ***4.5.4.20 Increasing authority of wife***

48.5 % respondents (average response of 3.43 on likert scale) were agreed that authority of husband is decreasing and authority of wife is increasing but at the same the 30.5 respondents remained neutral in giving their views. (Table 4.16)

Increasing authority of wife is a positive change in the families of Pakistan and in literate family; all decisions are being taken with consent of both husband and wife. In male dominated society like Pakistan, it is a very good change in the family.

#### ***4.5.4.21 Decreasing desire of son***

50.1 % respondents (average response of 3.21 on likert scale) were agreed that desire of son is decreasing (Table 4.16). It is a positive change but desire of son is still present in large proportion of population.

As discussed earlier in the previous discussions that desire of son is also major factor of large family size in Pakistan. Selective abortion in extreme cases in which couple has intense desire of son, is practiced. Abortion is illegal and it is also against Islam but it does not mean that it is not practiced. It is practiced secretly in private clinics.

#### ***4.5.4.22 Equality of son and daughter is increasing***

70.0 % respondents (average response of 3.89 on likert scale) were agreed that both daughter and son are equal (Table 4.16). It's really a very good and positive change in the family because son gained importance over daughter in the past.

#### ***4.5.4.23 Increasing custom of dowry***

65.5 % respondents (average response of 3.80 on likert scale) were agreed that custom of dowry is increasing. (Table 4.16) It is a negative change that is taking place in the families of Pakistan due to rising materialism and many girls could not get married because their parents

could not afford dowry. Dowry has become social evil in the Pakistani society and there is need to change the attitude towards this bad custom.

#### ***4.5.4.24 Decreasing cousin marriages***

62.5 % respondents (average response of 3.61 on likert scale) were agreed that the trend towards cousin marriages is decreasing in Faisalabad. (Table 4.16) It is very good change in the family because cousin marriages keep hereditary diseases within family. Moreover, it results into divorces in case of clash within family.

Pakistan has one of the highest reported rates of consanguineous marriages in the region. (NIPS & MI, 2008) According to PDHS 2012-13, Pakistan has a high rate of marriages between cousins. Half of all marriages occur between first cousins. First-cousin marriages are lower in urban areas (38%) compared to rural areas (54%). First-cousin marriages range from 53% in Sindh to 40% in ICT Islamabad and Gilgit Baltistan (NIPS & MI, 2013a).

**Table 4.16 Perceptions Towards changes in the Family in Faisalabad, 2012**

Item	Statement	Strongly Disagree (1) (%)	Disagree (2) (%)	Neither Disagree nor agree (3) (%)	Agree (4) (%)	Strongly Agree (5) (%)	Response Average
1	Spousal violence (beating, torture (verbal and physical) of wives) is common and practiced.	8	20.5	28.5	28	15	3.22
2	Rising Talibanisation is creating the fears in the members of the family.	4.5	11.5	28.5	35.5	20	3.55
3	Terrorism is affecting families.	1	8.5	11.5	40.5	38.5	4.07
4	Women are actively participating in politics.	3.5	17.5	24.5	35	19.5	3.50
5	Women are casting their vote regularly in general election.	3	12.5	27	36.5	21	3.60
6	Divorce rate is increasing.	3.5	15	18	32	31.5	3.73
7	Age at marriage is increasing.	1	8	17	35.5	38.5	4.03
8	Caste system is still dominant and marriages are practiced within the families and the caste.	2	5	15	44	33.5	4.05
9	Desire to have fewer children is increasing.	1.5	11.5	11.5	39.5	36.0	3.97
10	Electronic Media (Television, Cable) is responsible for the changes in a family.	3.5	3	7.5	35	51	4.27
11	Polygamy (More than one marriage) is decreasing while Monogamy (One Marriage) is increasing.	6.5	16	19	39.5	19	3.49
12	Head of household should be male.	2.5	5	7.5	29.5	55.5	4.31
13	Remarriage of widow and divorced women is considered bad.	15.5	16	16.5	34.5	17.5	3.23

**Table 4.16 Perceptions Towards changes in the Family in Faisalabad , 2012 (Continued )**

Item	Statement	Strongly Disagree (1) (%)	Disagree (2) (%)	Neither Disagree nor agree (3) (%)	Agree (4) (%)	Strongly Agree (5) (%)	Response Average
14	Women are more actively participating in the family affairs.	2	6.5	9.5	40.5	41.5	4.13
15	Women should do jobs for supporting their family.	7.5	12	11	38.5	38.51	3.74
16	Mobile phone is the cause of divorce.	6.5	11	24.5	31.5	26.5	3.61
17	Sex outside marriage is being practiced and continuously on the increase.	7	4.5	22.5	34.5	31	3.79
18	Love marriages are increasing.	2.5	9.5	18	41	29	3.85
19	Women do not need to take permission for going to market, doctor and friend's home.	15.5	36.5	16	20.5	11.5	2.76
20	There is an increase in the use of family planning methods.	3.5	6	18	53	19.5	3.79
21	HIV (AIDS) awareness is increasing.	3	11	20.5	41.5	24	3.73
22	Authority of husband is decreasing while authority of wife is increasing.	2	19	30.5	31	17.5	3.43
23	Desire of son is decreasing.	15.5	20	13	31.5	20	3.21
24	Both daughter and son are equal.	1	15.5	13.5	33.5	36.5	3.89
25	Custom of dowry is increasing.	3.0	13	18.5	32	33.5	3.80
26	Trend towards Cousin Marriages is decreasing.	3.5	18	16	39	23.5	3.61

Source: Primary Data collected through Survey, 2012

#### **4.5.5 Exploratory Factor Analysis – changes in family**

Principal component Analysis with varimax rotation was performed through SPSS on the 26 items/statements which described the changes in the family .Our interpretations of factors are based on the unrotated component matrix. It reduced the large set of variables into eight latent factors that are controlling changes in family.

##### ***4.5.5.1 Screening of variable /items***

We made a thorough analysis of all variables/items after collection of data through the designed questionnaire. Table 4.17 shows the list of items for factor analysis with codes. 26 items were used for final factor analysis after screening the R-matrix after confirming that none of correlation was more than 0.8.

**Table 4.17 List of items for factor analysis: changes in family**

<b>Item Code</b>	<b>Item Label</b>
IT01	Spousal violence (beating, torture (verbal and physical) of wives) is common and practiced.
IT02	Rising Talibanisation is creating the fears in the members of the family.
IT03	Terrorism is affecting families.
IT04	Women are actively participating in politics.
IT05	Women are casting their vote regularly in general election.
IT06	Divorce rate is increasing.
IT07	Age at marriage is increasing.
IT08	Caste system is still dominant and marriages are practiced within the families and the caste.
IT09	Desire to have fewer children is increasing.
IT10	Electronic Media (Television, Cable) is responsible for the changes in a family.
IT11	Polygamy (More than one marriage) is decreasing while Monogamy (One Marriage) is increasing.
IT 12	Head of household should be male.
IT13	Remarriage of widow and divorced women is considered bad.
IT14	Women are more actively participating in the family affairs.
IT15	Women should do jobs for supporting their family.
IT16	Mobile phone is the cause of divorce.
IT17	Sex outside marriage is being practiced and continuously on the increase.
IT18	Love marriages are increasing.
IT19	Women do not need to take permission for going to market, doctor and friend's home.
IT20	There is an increase in the use of family planning methods.
IT21	HIV (AIDS) awareness is increasing.
IT22	Authority of husband is decreasing while authority of wife is increasing.
IT23	Desire of son is decreasing.
IT24	Both daughter and son are equal.
IT25	Custom of dowry is increasing.
IT26	Trend towards Cousin Marriages is decreasing.

#### ***4.5.5.2 Preliminary Analysis***

Table 4.18 shows the Pearson correlation coefficient between all pairs of the items. It is evident from the table that all items have neither very high and neither very low correlation. Determinant of our data is 0 .005 which is greater than the necessary level of 0.00001. Therefore, multicollinearity is not a problem of our data. To sum up, all the 26 items in the analysis correlate fairly well and none of the correlation coefficients are particularly large.

Table 4.18 Correlation Matrix: changes in family

	IT01	IT02	IT03	IT04	IT05	IT06	IT07	IT08	IT09	IT10	IT11	IT12	IT13	IT14	IT15	IT16	IT17	IT18	IT19	IT20	IT21	IT22	IT23	IT24	IT25	IT26
IT01	1.000	.314	.196	.140	-.135	.084	-.018	.084	.088	.085	-.111	.026	.111	.002	.061	.241	.105	.066	-.023	.214	.115	.223	-.105	.003	-.009	.276
IT02	.314	1.000	.385	.190	-.045	.011	.025	-.048	.168	.117	.011	.045	.001	.177	-.015	.264	.127	.082	-.146	.124	.239	.204	-.026	.184	.099	.227
IT03	.196	.385	1.000	.086	-.102	.116	.093	.066	.178	.071	-.111	.110	-.028	.055	-.082	.184	.104	.107	-.056	.094	.164	.055	-.060	.169	.156	.131
IT04	.140	.190	.086	1.000	.269	-.021	.091	.021	.141	.048	-.071	.036	.054	.048	-.088	.226	-.001	.033	-.106	-.020	.181	.024	.218	-.071	.145	.035
IT05	-.135	-.045	-.102	.269	1.000	-.007	-.005	-.091	.026	-.145	.161	-.120	.004	-.013	.206	.140	-.112	-.030	.121	-.045	.037	.052	.318	-.034	-.021	.071
IT06	.084	.011	.116	-.021	-.007	1.000	.341	.189	.244	.265	-.033	.037	.059	-.049	.217	.106	.139	.138	-.137	.164	.092	.208	.132	.083	.131	.011
IT07	-.018	.025	.093	.091	-.005	.341	1.000	-.001	.232	.218	.134	.075	.145	-.030	.039	.113	.259	.004	.009	.060	.007	.087	-.085	.054	.113	.027
IT08	.084	-.048	.066	.021	-.091	.189	-.001	1.000	.171	.093	-.113	.033	.085	.084	-.049	-.072	.094	.017	-.056	.005	.012	.030	.094	-.005	.095	-.057
IT09	.088	.168	.178	.141	.026	.244	.232	.171	1.000	.157	-.088	.132	.208	.214	.092	.221	.223	.241	-.082	.250	.258	.192	-.084	.138	.222	.063
IT10	.085	.117	.071	.048	-.145	.265	.218	.093	.157	1.000	-.085	.328	.069	.271	.031	.141	.253	.318	-.159	.084	.222	.131	-.045	.197	.204	.187
IT11	-.111	.011	-.111	-.071	.161	-.033	.134	-.113	-.088	-.085	1.000	-.073	.169	.024	.196	-.197	-.180	-.185	.141	.217	-.064	-.024	.057	.007	-.136	-.096
IT12	.026	.045	.110	.036	-.120	.037	.075	.033	.132	.328	-.073	1.000	-.030	.291	.021	.118	.173	.236	-.171	-.034	.136	.082	-.139	.259	.177	.080
IT13	.111	.001	-.028	.054	.004	.059	.145	.085	.208	.069	.169	-.030	1.000	.067	.089	-.014	.123	.264	.065	.317	-.075	-.051	.040	-.124	-.133	.035
IT14	.002	.177	.055	.048	-.013	-.049	-.030	.084	.214	.271	.024	.291	.067	1.000	.168	.226	.197	.253	-.044	.052	.170	.256	-.144	.118	.102	.147
IT15	.061	-.015	-.082	-.088	.206	.217	.039	-.049	.092	.031	.196	.021	.089	.168	1.000	-.073	.010	.103	.185	.376	.072	.139	-.027	-.055	-.096	-.024
IT16	.241	.264	.184	.226	.140	.106	.113	-.072	.221	.141	-.197	.118	-.014	.226	-.073	1.000	.363	.207	-.115	.020	.165	.179	.069	.137	.265	.261
IT17	.105	.127	.104	-.001	-.112	.139	.259	.094	.223	.253	-.180	.173	.123	.197	.010	.363	1.000	.220	-.087	.182	.238	.155	-.097	.065	.212	.130
IT18	.066	.082	.107	.033	-.030	.138	.004	.017	.241	.318	-.185	.236	.264	.253	.103	.207	.220	1.000	-.060	.251	.134	.165	-.055	.123	.203	.116
IT19	-.023	-.146	-.056	-.106	.121	-.137	.009	-.056	-.082	-.159	.141	-.171	.065	-.044	.185	-.115	-.087	-.060	1.000	.075	-.062	-.062	-.006	-.131	-.108	.075
IT20	.214	.124	.094	-.020	-.045	.164	.060	.005	.250	.084	.217	-.034	.317	.052	.376	.020	.182	.251	.075	1.000	.176	.026	.018	-.008	.036	.134
IT21	.115	.239	.164	.181	.037	.092	.007	.012	.258	.222	-.064	.136	-.075	.170	.072	.165	.238	.134	-.062	.176	1.000	.054	.022	.228	.081	.215
IT22	.223	.204	.055	.024	.052	.208	.087	.030	.192	.131	-.024	.082	-.051	.256	.139	.179	.155	.165	-.062	.026	.054	1.000	.029	.216	.166	.184
IT23	-.105	-.026	-.060	.218	.318	.132	-.085	.094	-.084	-.045	.057	-.139	.040	-.144	-.027	.069	-.097	-.055	-.006	.018	.022	.029	1.000	-.111	.036	-.093
IT24	.003	.184	.169	-.071	-.034	.083	.054	-.005	.138	.197	.007	.259	-.124	.118	-.055	.137	.065	.123	-.131	-.008	.228	.216	-.111	1.000	.383	.184
IT25	-.009	.099	.156	.145	-.021	.131	.113	.095	.222	.204	-.136	.177	-.133	.102	-.096	.265	.212	.203	-.108	.036	.081	.166	.036	.383	1.000	.229
IT26	.276	.227	.131	.035	.071	.011	.027	-.057	.063	.187	-.096	.080	.035	.147	-.024	.261	.130	.116	.075	.134	.215	.184	-.093	.184	.229	1.000

a. Determinant = .005

#### 4.5.5.3 *Sample Adequacy and suitability for factor analysis*

Table 4.19 shows the Kaiser-Meyer-Olkin measure of sampling and Bartlett's test of Sphericity. For our data, KMO value was 0.617 which fell in the range of acceptable by Kaiser Recommendations, so we were confident that factor analysis is appropriate for our data set. At the same time, Bartlett's test is highly significant ( $p < 0.001$ ), and therefore factor analysis is appropriate.

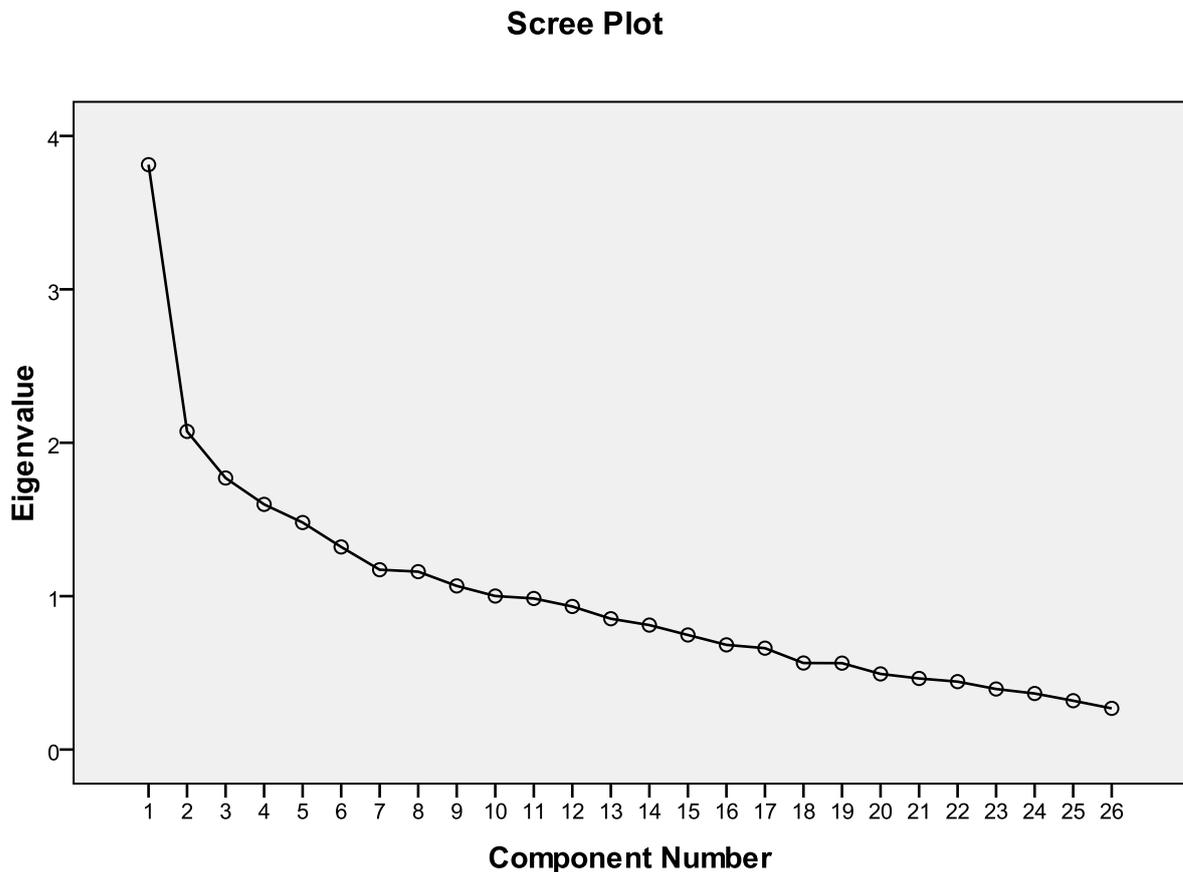
**Table 4.19 KMO and Bartlett's Test: changes in family**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.617
Bartlett's Test of Sphericity	Approx. Chi-Square	990.451
	df	325
	Sig.	.000

#### 4.5.5.4 *Number of Factors to be Retained*

Figure 4.42 shows the scree plot which is helpful for deciding the number of factors to be retained for factor analysis if Kaiser criteria (eigenvalue greater than One) does not fit as in the present data, Kaiser criteria suggested 10 factors but scree plot suggested eight factors. We did analysis on both 10 and 8 factors solutions, later solution seemed to be more suitable and gave clear cut 8 factors so we made final analysis on 8 factors solution as indicated by scree plot.

**Figure 4.42 Scree Plot : Changes in Family**



#### **4.5.5.5 Results**

Table 4.20 shows the eigenvalues associated with each linear component before extraction, after extraction and after rotation. Before extraction, 26 linear components (factors) were identified with in our data set. The eigenvalues associated with each factor represent the variance explained by that particularly linear component. It also shows the eigenvalue in terms of percentage of variance explained.

Factor 1 explains 14.66 % of total variance and Factor 2 explains 7.97 % of the total variance. It is evident from the results that first few factors explain relatively large amounts of variance. First eight factors explain 55.33 % of the total variance.

There are 10 factors having eigenvalues above than 1 .The eigenvalues associated with the eight extracted factors are displayed in the columns labeled as Extractions sums of Squared Loadings. These values are same values as the values before extraction and it does not include discarded factors. The final portion of table shows the rotated sums of squared loadings. It shows the eigenvalues of the factors after rotation. Rotation has the effect of optimizing the factor structure and the relative importance of the extracted factors is equalized. Before rotation, Factor 1 accounted for more variance (15.66 %) as compared to subsequent factors [Factor 2 (7.97%), Factor 3 (6.80%) and Factor 4 (6.14%)], whereas, after extraction first factor accounts for only 9.015 and while remaining factors are equalized and their values increase to 9.01%, 7.63 % and 7.03 for factor 2, 3 and 4 respectively and the trend continues till factor 8.

Table 4.21 shows the communalities before and after extraction. All the communalities after extraction were above 40.0% except item 21 (35.5%). Item 07(75.6%) had maximum communalities.

**Table 4.20 Total Variance Explained: changes in family**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.813	14.665	14.665	3.813	14.665	14.665	2.344	9.015	9.015
2	2.074	7.977	22.642	2.074	7.977	22.642	1.984	7.632	16.646
3	1.770	6.809	29.450	1.770	6.809	29.450	1.829	7.034	23.680
4	1.598	6.147	35.597	1.598	6.147	35.597	1.812	6.968	30.648
5	1.480	5.692	41.289	1.480	5.692	41.289	1.697	6.526	37.174
6	1.321	5.080	46.370	1.321	5.080	46.370	1.692	6.508	43.682
7	1.172	4.509	50.879	1.172	4.509	50.879	1.589	6.113	49.794
8	1.160	4.461	55.339	1.160	4.461	55.339	1.442	5.545	55.339
9	1.067	4.102	59.442						
10	1.001	3.849	63.291						
11	.985	3.788	67.079						
12	.933	3.587	70.666						
13	.853	3.280	73.946						
14	.811	3.120	77.066						
15	.747	2.873	79.939						
16	.682	2.625	82.563						
17	.661	2.542	85.105						
18	.564	2.169	87.275						
19	.563	2.166	89.441						
20	.493	1.896	91.337						
21	.463	1.782	93.119						
22	.443	1.702	94.821						
23	.395	1.518	96.339						
24	.365	1.405	97.744						
25	.318	1.224	98.968						
26	.268	1.032	100.000						

Extraction Method: Principal Component Analysis.

**Table 4.21 Communalities: changes in family**

		Initial	Extraction
IT01	Spousal violence (beating, torture (verbal and physical) of wives) is common and practiced.	1.000	.625
IT02	Rising Talibanisation is creating the fears in the members of the family.	1.000	.632
IT03	Terrorism is affecting families.	1.000	.476
IT04	Women are actively participating in politics.	1.000	.618
IT05	Women are casting their vote regularly in general election.	1.000	.697
IT06	Divorce rate is increasing.	1.000	.696
IT07	Age at marriage is increasing.	1.000	.756
IT08	Caste system is still dominant and marriages are practiced within the families and the caste.	1.000	.504
IT09	Desire to have fewer children is increasing.	1.000	.412
IT10	Electronic Media (Television, Cable) is responsible for the changes in a family.	1.000	.439
IT11	Polygamy is decreasing while Monogamy is increasing.	1.000	.651
IT12	Head of household should be male.	1.000	.502
IT13	Remarriage of widow and divorced women is considered bad.	1.000	.586
IT14	Women are more actively participating in the family affairs.	1.000	.555
IT15	Women should do jobs for supporting their family.	1.000	.625
IT16	Mobile phone is the cause of divorce.	1.000	.612
IT17	Sex outside marriage is being practiced and continuously on the increase.	1.000	.507
IT18	Love marriages are increasing.	1.000	.510
IT19	Women do not need to take permission for going to market, doctor and friend's home.	1.000	.409
IT20	There is an increase in the use of family planning methods.	1.000	.589
IT21	HIV (AIDS) awareness is increasing.	1.000	.355
IT22	Authority of husband is decreasing while authority of wife is increasing.	1.000	.511
IT23	Desire of son is decreasing.	1.000	.590
IT24	Both daughter and son are equal.	1.000	.579
IT25	Custom of dowry is increasing.	1.000	.452
IT26	Trend towards Cousin Marriages is decreasing.	1.000	.499

Extraction Method: Principal Component Analysis.

**Table 4.22 Component Matrix<sup>a</sup>: changes in family**

	Component							
	1	2	3	4	5	6	7	8
Electronic Media (Television, Cable) is responsible for the changes in a family.	<b>.547</b>	-.016	-.297	.175	.104	-.071	-.020	.067
Desire to have fewer children is increasing.	<b>.546</b>	.227	-.024	.177	-.110	-.023	-.025	.129
Mobile phone is the cause of divorce.	<b>.546</b>	-.147	.370	.025	-.008	-.162	-.228	-.277
Sex outside marriage is being practiced and continuously on the increase.	<b>.539</b>	.033	-.158	.083	-.139	-.150	-.281	-.251
Love marriages are increasing.	<b>.506</b>	.155	-.197	.017	.070	-.423	.058	-.062
Custom of dowry is increasing.	<b>.479</b>	-.271	.054	.254	.186	.150	-.049	-.151
Rising Talibanisation is creating the fears in the members of the family.	<b>.467</b>	-.091	.338	-.377	-.150	.188	.026	.302
HIV (AIDS) awareness is increasing.	<b>.461</b>	.002	.179	-.101	.102	-.012	.046	.296
Women are more actively participating in the family affairs.	<b>.446</b>	.042	-.139	-.157	.394	-.358	.113	.119
Authority of husband is decreasing while authority of wife is increasing.	<b>.425</b>	.049	.101	-.019	.219	.198	.357	-.321
Trend towards Cousin Marriages is decreasing.	<b>.423</b>	-.057	.215	-.364	.108	.050	-.089	-.340
Both daughter and son are equal.	<b>.419</b>	-.284	-.086	-.022	.387	.381	.050	.132
Head of household should be male.	<b>.417</b>	-.208	-.328	.047	.298	-.161	-.034	.244
Terrorism is affecting families.	<b>.403</b>	-.158	.137	-.190	-.302	.277	-.014	.257
Women should do jobs for supporting their family.	.090	<b>.646</b>	-.056	-.118	.310	.082	.275	-.068
There is an increase in the use of family planning methods.	.302	<b>.640</b>	-.048	-.233	-.132	.028	.054	.106
Remarriage of widow and divorced women is considered bad.	.131	<b>.562</b>	-.111	-.006	-.284	-.322	-.214	.107
Polygamy is decreasing while Monogamy is increasing.	-.209	<b>.489</b>	.030	-.094	.299	.321	-.177	.367
Women are casting their vote regularly in general election.	-.083	.269	<b>.618</b>	.241	.405	-.092	-.040	-.062
Women are actively participating in politics.	.217	-.032	<b>.595</b>	.231	-.104	-.248	-.144	.264
Desire of son is decreasing.	-.107	.145	<b>.519</b>	.468	.001	-.082	.245	.054
Divorce rate is increasing.	.359	.285	-.108	<b>.470</b>	-.167	.396	.218	-.145
Spousal violence (beating, torture (verbal and physical) of wives) is common and practiced.	.362	.066	.198	-.430	<b>-.433</b>	.062	.211	-.174
Age at marriage is increasing.	.284	.240	-.133	.356	-.108	<b>.393</b>	-.550	-.074
Caste system is still dominant and marriages are practiced within the families and the caste.	.143	.016	-.156	.332	-.336	-.076	<b>.477</b>	.049
Women do not need to take permission for going to market, doctor and friend's home.	-.235	.347	.066	-.258	.148	.019	-.140	<b>-.348</b>

Extraction Method: Principal Component Analysis.

a. 8 components extracted.

Table 4.22 shows unrotated component matrix and following eight factors were extracted:

### **Factor 1 (Modernization and westernization)**

According to the unrotated output (table 4.26), factor 1 displays also a strong consensus among respondents, who seem to be aware of the current change of behavior and support some westernization of sort.

Eleven items were loaded on factor 1 and all items were positively loaded. These are related to a latent factor that is modernization of family through influence of western thoughts and urban transition. Cities are the places where ideas are communicated more rapidly to urban dwellers than rural residents.

Modernization through urban transition and western thoughts has a influence in bringing changes in family in Faisalabad, Pakistan. Active participation of women in the family affairs (0.446) , increasing authority of wife (0.425) , equality of both son and daughter (0.419) , Love marriages (0.506 ) , sex outside marriage (0.539) , HIV awareness (0.461) , Mobile Phone –cause of divorce (0.546 ) , decreasing consanguinity (0.506) , fears from talbanization (0.467) and terrorism (0.403), small family size (0.546) and influence of media (0.547) are the outcome of modernization of family, urban transition and westernization influence on the family of Faisalabad, Pakistan.

Custom of dowry (0.479) is although an ancient tradition in the Indian culture but it has intensified in the modern materialistic society in Pakistan. Moreover, Pakistan society is still male dominated society (0.417) and effect of modernization is very slow as far as headship of household is concerned.

### **Factor 2 (Women empowerment in Family)**

According to table 4.26, this factor is related to the status of women in the Pakistani family and the society at large. Women empowerment in the family is positively correlated with this factor.

Four items were loaded on factor 2 and all items were loaded positively. Women support in family (0.646), increase use of family planning method (0.640) , remarriage of divorced and widowed women (0.562) , and polygamy/monogamy (0.489) are strongly related to the women empowerment in the family affairs in the studied area.

To sum up, we are confident to say that women empowerment in the family is the second latent factor that operate in changes in family structure under the influence of urban transition in Pakistan.

### **Factor 3 Women empowerment in the society (outside the family circle)**

In the unrotated output (table 4.26), factor 3 complements factor 2 to describe women empowerment in the society at large (outside the family circle).

Three items are positively loaded on the factor 3. Women casting vote regularly (0.618), active participation of women in politics (.595) and decreasing desire of son (0.519) are related to the empowerment of women in the society.

With eigenvalues below 1.5, factors 4 to 8 are of limited interest for interpretation in the unrotated output of PCA.

### **Factor 4**

In the unrotated output, factor 4 is redundant with factor 1, with the additional emphasis on couple dysfunctions (divorce). It is a non-consensual "detail".

### **Factor 5**

In the unrotated output (table 4.26), factor 5 is a non-consensual result highlighting the rise of spousal violence against women, opposed to higher order vectors (2 and 3) about women empowerment and the consensus factor 1 about westernization of the Pakistani family.

### **Factor 6**

In the unrotated output (table 4.26), factor 6 puts simply the emphasis on the elevation of age at marriage.

### **Factor 7**

In the unrotated output, this factor highlights the persisting influence of the Indian caste system in the Punjabi society despite its long time conversion to Islam.

One of the major changes in family is the changing status of a woman. Woman status can be determined through the equality of son and daughter (.607) , Custom of dowry (.416) , final say in the family affairs (.392) and permission to allow remarriage of widows and divorced (-.691)

## **Factor 8**

In the unrotated output, factor 8 single out the issue of women mobility within the city. Gender segregation in muslim societies results in a strict separation of space between a male dominated street scene and a female dominated house. This segregated use of public space forces women to bury themselves under the islamic veil to escape sexual harassment. This custom is reinforced by talibanization and rape. This is a major cause of distrust (reciprocal) between the West and the Middle East.

## **4.6 Binomial Logistic Regression**

We ran two binomial logistic regressions based on two different surveys to predict the probability of finding family type (Nuclear and joint) at place of residence (Binomial Logistic Regression I ) and in different socio-economic set up along with demographic indicators (Binomial Logistic Regression II ).

### **4.6.1 Binomial Logistic Regression I**

We ran logistic regression by using SPSS 17 on the data of first survey in which sample size was 250 households. The purpose of running logistic regression is to see the probability of finding different family structure in rural-urban set up.

Family type is dichotomous dependent variable. We dichotomized nuclear family as 0 and joint family as 1. Independent variable is composition of area (Rural=0, Urban =1).

Table 4.23 shows the estimates of logistic regression coefficient ( $\beta$ ) and relative odds calculated for place of residence. Place of residence has strong and positive net impact on the family type in Faisalabad. For one unit change in place of residence, the log odds of nuclear

family (versus joint family) increases by 0.580. When we move from rural to urban area, there is probability of 1.786 times more nuclear families in urban areas than in rural areas.

**Table 4.23 Logistic Regression estimate of family type on composition of area (rural/urban) in Faisalabad**

Independent variable	Coefficient of $\beta$	Significance	Odds Ratio Exp ( $\beta$ )
Place of Residence			
Rural (Ref)	-		
Urban	0.580	.074	1.786

#### 4.6.2 Binomial Logistic Regression II

We ran logistic regression by using SPSS 17 on the data of Second survey in which sample size was 200 respondents. The purpose of running logistic regression is to see the probability of finding different family structure in different socio-economic set up and demographic indicators.

One of the main goals of logistic regression is to separate effects. One question is basically to determine if the urban/rural divide is related or not to social factors (education, economic class, etc.). Introducing the urban/rural factor in model II helps to understand whether social factors are prominent or not, according to the urban/rural variable significance level in model II.

Family type is dichotomous dependent variable. We dichotomized nuclear family as 0 and joint family as 1. Gender, Education level, Economic class, ownership of house and migrant status are independent/predictor variables. We also included rural/urban as an independent variable to control the significance level.

Table 4.28 gives the estimates of logistic regression coefficient ( $\beta$ ) and relative odds calculated for each category for corresponding independent variables of the model on family type. It appears from table that gender has strong and positive net significant impact (.000) on

the family type. For one unit change in gender, the log odds of nuclear family (versus joint family) increases by 1.794. Females are approximately 6 times more than males likely to live in a nuclear family system. Conversely, this may involve that joint families include frequently non-married male members, particularly elders (A typical example of joint family system in Faisalabad is that parents with married eldest brothers and unmarried brother and sisters both adults and minors. In some families, uncles and divorced aunts are also included in it.) It shows that females are conscious of their rights and want to live in family setup in which they feel comfortable and more empowered. Our empirical findings also proved that nuclear family system is a dominant model in the Faisalabad city.

We also observe as the education level of respondent increase from illiterate to Primary education (5 years of schooling ), there is 16.908 times more chance to live in a nuclear family system. Majority of illiterate respondents were living in a joint family system and literacy plays an important role in changing family cities in Faisalabad. First level from illiterate to Primary is more significant (.038) as compared to upper levels of education. For one unit change in education level from illiterate to primary, the log odds of nuclear family (versus joint family) increases by 2.828. We are not wrong to say that other levels of educations are insignificant.

Economic class has positive and significant impact on the family type in Faisalabad. As we move from lower economic class to upper economic class, there is significant increase in nuclear family system. Upper economic class has significance level .044. Residents from Upper economic class are 5.141 times more likely to live in a nuclear family system than residents of lower economic class. Moreover, residents from middle economic class are 3.267 more likely to live in a nuclear family system than residents from lower economic class but it has non significant impact.

Table 4.24 shows that place of residence has no significance (.327) on the family type when it was included in the model II to control its significance with social factor. We found that Rural/urban factor do not have any significant impact on family type. If this significance level is below 0.1 or so, there is a limited confidence that urbanites are more likely to live in nuclear families than rural people independently to other social factors like education, social class, etc. On the other hand, significance level over 0.1 as in our case in logistic regression model II means that social factors are determinant in explaining the contrast between urban and rural families.

More ownership of house has no significant impact on the family type. Owned or rented households have no concern with family type.

However, migration status of respondent has significant impact (.008) on the family type. Coefficient of  $\beta$  value is negative. Migrants are more likely to live in a nuclear family than non-migrant. For one unit change in migration factor from non-migrant to migrant, the log odds of nuclear family (versus joint family) decrease by -.994. We can say that non-migrants are 0.370 times lesser likely than migrants to live in a nuclear family system. As we already discuss in detail that it is impossible for a migrant to move his whole joint family to a city due to expensive land, housing shortages and limited resources. It's an obvious and proved fact in our empirical findings that nuclear family system is a dominant model in the city Faisalabad and suitable for industrial society.

**Table 4.24 Logistic Regression estimate of family type on socio-economic and demographic indicators in Faisalabad**

<b>Independent variable</b>	<b>Coefficient of <math>\beta</math></b>	<b>Significance</b>	<b>Odds Ratio Exp (<math>\beta</math>)</b>
<b>Gender</b>			
Male (Ref)	--		
Female	1.794	.000 *	6.016
<b>Place of Residence</b>			
Rural (Ref)	--		
Urban	-.361	.327	.697
<b>Education Level</b>			
Illiterate (Ref)	--		
Primary (5 years)	2.828	.038 *	16.908
Matric (10 years)	.290	.745	1.336
Intermediate (12 Years)	.858	.138	2.360
Bachelor (14 Years )	.173	.710	1.189
Master (16 years and plus)	-.28	.950	.972
<b>Economic Class</b>			
Lower Economic class(Ref)	--	.	
Middle Economic class	.819	.441	2.267
Upper Economic class	1.637	.044 *	5.141
<b>Ownership of House</b>			
Owned (Ref)	--		
Rented	.474	.505	1.606
<b>Migration</b>			
Migrant (Ref)	--		
Non-migrant	-.994	.008 *	.370

\* high confidence

## 4.7 Conclusion

This chapter brings light on the major empirical results which are based on the three surveys which we conducted in Faisalabad from December 2011 to February 2012.

Following are the major findings of the first survey - family structure and urban transition (N=250, out of which 50 from rural areas [2 clusters] and 200 from urban areas [8 clusters]):

- 87.60 % questionnaires were successfully completed while the percentage of successful completion of questionnaires from rural areas was 92 % which was a little bit more than urban areas in which success percentage was 86.50 %. 88.8 % households belonged to religion Islam and remaining 11.3 % belonged to Christianity. As our case study is from Punjab so 69.60 % of the total households spoke Punjabi while 26.30 % spoke Urdu and remaining 4.2 % household spoke Pashto.
- Mud and Brick were the main material used for the construction of walls in rural and urban areas. 100 % households in rural areas used bricks for construction of walls while in urban areas this proportion was 98.50 % due to the inclusion of slum area cluster 2 in which 8 % households used mud for construction of walls.
- Wood, cement+iron , and concrete were used to construct roof. There was a wide contrast in the construction material in rural and urban area. In Urban areas, 71.50% household used concrete for construction of roof whereas this proportion was only 6.0 % in rural areas. 76.0% households in rural areas utilized Cement and Iron while this proportion was only 21.50% in urban areas. 18.0% households in rural areas and 7.0 % households in urban areas utilized wood.
- We found 50.0 % cemented floor households in the urban areas and 44.0 % in rural areas while mud was utilized in 20.0% households in the rural areas and 3.0% households in urban areas.
- Majority of households (80.6%) were owned and 19.4% were rented. All rented households were present in the urban areas while all households in rural areas were owned by occupants.
- We observed great diversity of households in terms of size of housing unit and it ranged from 18.97 square meters to 1517 square meters. Mean value was 164.95

while median was 88.53 in our sample. More than half of households (53.20 %) possessed housing units that had area less than 100 square meters. In urban areas, 61.5 % had housing unit less than 100 square meter while in rural areas only 20.0 % households fell in this category. Housing units were small in urban areas as compared to rural areas due to lack of space and high price of land in cities.

- More than half households (54.80 %) had single floor house in total while this proportion was 76.0 % in rural areas and 49.50 % in urban areas. There was not a single household having three floors house in rural areas while in urban areas 3.0 % households possessed three floor houses. Urban areas had 47.50 % households that possessed two floors houses while this proportion was only 24.0 % in rural areas.
- There was not a single household consisting of one room in rural areas while 12.20 % urban household had only one room. The difference between rural and urban areas is evident in category 4-6 rooms in which 46.90 % household in rural areas fell in it whereas this proportion was only 33.3 % in urban areas. It may be due to shortage of land in urban areas and large family size along with joint family system in the rural areas.
- The number of persons per housing unit increased from 6.7 in 1981 to 7.2 in 1998, it reached to 8.72 in 2012
- Toilet facility was present in both rural and urban surveyed areas. Only 0.5 % household in the slum areas of urban locality lack toilet facility due to extreme poverty in such household otherwise open sewerage system.
- One fourth households (26.20 %) in the surveyed areas used ground water drained through pumping for drinking purpose but at the same time we found this proportion was 46.0 % in rural areas and 20.80 % in urban areas. The main reason for this contrast is the contamination of water in the urban land due to the establishment of industry.
- . There was not water supply by government in rural areas so 96.0 % households in rural areas used ground water for household uses
- Electricity is available in all surveyed clusters but only 2.0 % households in rural areas did not have electricity due to abject poverty conditions and were living without electricity
- Wood is the common source of fuel for cooking in rural areas of Faisalabad and 72.0 % household were using wood for cooking and remaining 28.0 % were using gas

cylinder. In Urban areas, there was supply of natural Gas (Sui Gas) in major urban areas so 86.70 % were using it for cooking purpose and it is the cheapest source of fuel.

- Motor Cycle or Motor Bike is the most common mean of transport in Faisalabad. 47.9% in the rural areas and 34.60 % in urban areas had motor cycle, and bicycle is the mean of transport for poor people in Pakistan and rich people feel ashamed in cycling. Cycle was utilized as a mean of transport by 27.10 % rural households and 16.20 % urban households.
- Only 10.40 % rural households possessed radio while this proportion was 17.30 in urban household. TV is almost present in every household and 92.20 % urban households possessed TV whereas this proportion was 75 % in rural households.
- Internet is the latest innovation in the information flow in the world. Every third household (29.60 %) in urban areas had access to the internet whereas in rural areas only 14.60 % households having access to the internet.
- 75.0% rural households and 71.50 urban household possessed refrigerators which has become necessity when temperature rises to 48 ° C in Faisalabad.
- . 61.20 % families were nuclear in urban areas while only 46.90 % families were nuclear in rural areas.
- Male was the head of household in 89.80 % urban households and at the same time 88.80% rural households were headed by male
- 75.40 % urban households comprised of married couples with children whereas this proportion was only 57.10 % in rural households.
- Average household size in the studied area- Faisalabad was 8.72 but it varied from cluster to cluster .It ranged from 6.04 (cluster 3 and cluster 8) to 10.85 in the cluster 1. Urban areas had average household size of 8.9 where as rural areas had household size of 8.3.
- Majority of households in rural areas (83.70%) and in urban areas (73.60 %) contained only one family in one household. In urban areas, 26.40 % household contained 2 to 5 families in one household while this proportion was 16.30 % in rural households.

### Exploratory Factor Analysis: Family structure and urban Transition

Four latent factors that operate in family structure and urban transition in Faisalabad were extracted through Principal Component Analysis with varimax rotation but we interpreted results on the basis of unrotated component matrix. Standard of living is the first factor that is operating in the relation of family structure and urban transition. Second factor represents the real distinction in housing and living conditions between urban and rural households, i.e. no renters in rural areas, limited availability of natural gas in rural areas, no tap water in rural areas, etc. Third factor relates to Household size and fourth factor relates to family structure.

#### **Following are the findings of second survey –changes in family structure (N=200):**

- 60.5 % respondents were from the urban areas whereas 39.5% belonged to the rural areas. As far as gender of respondents is concerned, 51.5% respondents were male and the remaining 48.5 % were female. Our sample contained respondents from all education level and it ranged from illiterate (5.5%) to Master (39.5%), it is evident from the figure that we had 94.5 % literate respondents. Age group of respondents ranged from 19 to 60. 40.5% respondents were less than 26 years.
- 51.0 % respondents were single and 48.0 % respondents were married, whereas 0.5 % respondents were divorced and widow. 49.5 % respondents were from the nuclear family while 50.5 % respondents were from the joint family. Majority of the respondents belonged to middle economic class (87.5%) , 6.0 % and 6.5 % respondents were from lower economic class and upper economic class respectively. 93.0% respondents were living in the owned houses and only 7.0 % respondents were living in the rented houses. 31.5 % respondents were migrants.
- All the items were designed in such a way that higher the agreement, higher the trend towards the nuclear family system. These items deal with the question why nuclear family system is increasing in the Faisalabad? Responses average is above 3.49 with one exception of item 10 (A couple feels more security in a nuclear family than in a joint family) in which average is 3.09. Security is the only factor which compels people to live in joint family while all other factors preference to nuclear family (3.49), Family size (3.86) liberty in using family planning methods (3.65) , freedom of couple (4.01) , divorces in joint family (3.39) , migration to cities(3.76) , small houses in the cities(3.78) , better education facilities in nuclear family(3.91) , women

freedom in nuclear family system(4.04) and intolerance (3.90) were in favour of nuclear family system and explained the reasons of breaking joint family system .Family system in Faisalabad has adopting elements of western values.

#### Exploratory Factor Analysis: Changes in family structure

Four latent factors responsible for changes in family structure in Faisalabad were extracted through Principal Component Analysis with varimax rotation .We interpreted results on the basis of unrotated component matrix. Factor 1 is the "consensus" neo-variable. The agreement level between respondents is astounding. The "consensus" praises the emerging nuclear family system and points out the disadvantages of the traditional joint-family systems. Beliefs are essential in society, because beliefs create motives of action. This result makes a convincing case for explaining the current erosion of the joint family system, and the importance of urbanization in the family transition to the nuclear family model. Another important result is the linkage it reveals with fertility transition and the Malthusian preference for reduced family size. In short, Factor 1 summarizes the modernization of the Pakistani society in Faisalabad.

Factors 2-3-4 are relevant to understand several contradictions and the lack of consensus about the 4 last questions. Their explicative power is weak (eigenvalue close to 1), opposite to Factor 1, the "consensus" factor that summarizes most of the survey.

Factor 2 seems strongly linked with the preference for nuclear family. It confirms factor 1. Factor 3 seems related to the importance of migration to the city in the changing family system. Factor 3 highlights opposite answers to factor 2 that could be the result of the diversity of ethnic-cultural background of migrants. Migrants originating from tribal areas being more likely embedded in stronger joint-family ties than their Punjabi counterparts. Factor 3 contradicts the consensus apparent in factors 1 and 2, displaying some minority dissensus about family values. Factor 4 seems related to the negative side-effect of rising individualism. It is a minor contradiction to factor 1 consensus.

#### **Following are the major finding of third survey-changes in family:**

- Spousal violence like beating, verbal and physical torture (average response of 3.22 on likert scale) is common and practiced.

- Rising talibanisation is creating the fears in the members of family (average response of 3.55 on likert scale) and terrorism is affecting families (average response of 3.21 on likert scale).
- Women are actively participating in the politics (average response of 3.50 on likert scale) and casting their vote regularly in general elections (average response of 3.60). It is a positive change in the family.
- Divorce rate is increasing in Pakistan (average response of 3.73 on likert scale).
- 74.0 % respondents (average response of 4.03 on likert scale) were agreed that age at marriage is increasing.
- 77.5 % respondents (average response of 4.05 on likert scale) were agreed that caste system is still dominant and marriages are being practiced within families and the caste.
- 75.5 % respondents (average response of 3.97 on likert scale) were agreed that desire to have fewer children is increasing.
- 86.0 % respondents (average response of 4.27 on likert scale) were agreed that electronic media (Television, Cable) is responsible for changes in the family.
- 58.5 % respondents (average response of 3.49 on likert scale) were agreed that Polygamy is decreasing whereas Monogamy is increasing.
- 85.0 % respondents (average response of 4.31 on likert scale) were agreed that head of family should be male.
- 51.0 % respondents ((average response of 3.23 on likert scale) were agreed that remarriage of widow and divorced women is considered bad.
- 82.0 % respondents (average response of 4.13 on likert scale) were agreed that women are actively participating in the family affairs
- 77.0 % respondents (average response of 3.74 on likert scale) were agreed that women should do jobs for supporting their family.
- 58.8 % respondents (average response of 3.61 on likert scale) were agreed that mobile phone is the cause of divorce.
- 65.5 % respondents (average response of 3.79 on likert scale) were agreed that sex outside marriage is being practiced and continuously on the increase.
- 70.0 % respondents (average response of 3.85 on likert scale) were agreed that love marriages are increasing.

- 32.0 % respondents (average response of 2.76 on likert scale) were agreed that women don't need to take permission for going to market, doctor and friend's (only female, male friend is out of question in Pakistani society home).
- 72.5 % respondents ((average response of 3.79 on likert scale) were agreed that there is increase in use of family planning methods.
- 65.5 % respondents ((average response of 3.7" on likert scale) were agreed that HIV (AIDS) awareness is increasing.
- 48.5 % respondents (average response of 3.43 on likert scale) were agreed that authority of husband is decreasing and authority of wife is increasing but at the same the 30.5 respondents remained neutral in giving their views.
- 50.1 % respondents (average response of 3.21 on likert scale) were agreed that desire of son is decreasing.
- 70.0 % respondents (average response of 3.89 on likert scale) were agreed that both daughter and son are equal.
- 65.5 % respondents (average response of 3.80 on likert scale) were agreed that custom of dowry is increasing.
- 62.5 % respondents (average response of 3.61 on likert scale) were agreed that the trend towards cousin marriages is decreasing in Faisalabad.

#### Exploratory Factor Analysis: Changes in Family

Eight latent factors for changes in families of Faisalabad were extracted through Principal Component Analysis with varimax rotation but we interpreted results on the basis of unrotated component matrix. Modernization and westernization is the major latent factor that is bringing changes in the families of Faisalabad. Second factor relates to women empowerment in family and third factor relates to women empowerment in society (outside family circle). With eigenvalues below 1.5, factors 4 to 8 are of limited interest for interpretation in the unrotated output of PCA

**Following are the major findings of binomial logistic regression models:**

### **Binomial Logistic Regression Model I**

- According to Binomial logistic regression model I, rural/urban status has significant impact on the family type but its significance level is only .074 which has low confidence. When we move from rural to urban area, there is probability of 1.786 times more nuclear families in urban areas than in rural areas.

### **Binomial Logistic Regression Model II**

- According to Binomial logistic regression model II , gender , economic class , education level and migrant status have significant impacts on the family type where as rural/urban status and ownership have no significant impact on the family type.
- Place of residence has no significance (.327) on the family type when it was included in the model II to control its significance with social factor.
- Migration status of respondent has significant impact (.008) on the family type. Non-migrants are 0.370 times lesser likely than migrants to live in a nuclear family system.
- Upper economic class has significance level .044. Residents from Upper economic class are 5.141 times more likely to live in a nuclear family system than residents of lower economic class.
- As the education level of respondent increase from illiterate to Primary education (5 years of schooling ) , there is 16.908 times more chance to live in a nuclear family system. First level from illiterate to Primary is more significant (.038) as compared to upper levels of education.
- Gender has strong and positive net significant impact (.000) on the family type. Females are approximately 6 times more than males likely to live in a nuclear family system

## Conclusion

Pakistan is a large country therefore it was not possible to extend the domain of our research to whole Pakistan due to time constraints and limited resources and we selected Faisalabad city as a case study for in-depth analysis. It is necessary to see the issue in the general context as it existed in the whole Pakistan with great in-depth focus on the case study –Faisalabad. We uncovered the urban transition and Family structure at macro level - all districts of Pakistan in which analysis were based on the available secondary data of census, UNO estimates, Pakistan demographic and health surveys and our estimations. Furthermore, we analyzed it at micro –level through conducting three surveys in Faisalabad from December 2011 to February 2012.

Censuses were not conducted at regular intervals in Pakistan .Government of Pakistan did not conduct census since 1998 and it seemed to be unrealistic to discuss issues on the basis of 1998 census data in 2014 particularly in a fast growing population context. We had to estimate current population of Pakistan at district level.

Rapid population growth is the most crucial problem in the Pakistani society and is a hindrance in the economic development of Pakistan. Pakistan with population of 195 millions in 2014 became the sixth most populous country in the world, the fourth in Asia and the second in south Asia following India .Its Population will rise to 363 million in 2050 , it is only a model output , not a forecast and it will become the 5<sup>th</sup> most populous country after crossing Indonesia. Its current rate of natural increase is 2.3% per year which is not only high in the regional context (India: 1.5, Bangladesh: 1.5, Sri Lanka: 1.2) but also high when compared with the less developed countries (1.4) and the least developed countries (2.5).

Punjab is the most populous province of Pakistan. It is located in the upper Indus plain, which offers fertile agricultural plains. It contains 55.6 % (107 million in 2014) of the total population of Pakistan. Its rapid population growth rate was the effect of demographic transition and migration particularly during partition of Indian (1947) and separation of East Pakistan (Bangladesh) in 1971. Migrant trends were towards fertile plains and major cities of Punjab – Lahore, Faisalabad, and Rawalpindi etc.

Influence of religion Islam , desire of son, early marriages , illiteracy , uneducated mothers , Joint/Extended Family system , unwanted pregnancies , poverty , polygamy , social status of women , unawareness of family planning methods , Role of media for early puberty , decreasing death rate and rural families are the major causes of rapid population growth rate in Pakistan. Family has direct influence in controlling all indicated causes of rapid population growth rate in Pakistan so all family planning policies should not rule out the importance of family.

High concentration of Population is present in Punjab along the rivers- Indus, Jhelum, Ravi, Sutlej and Chenab. Upper Indus Plain and Lower Indus Plain are the zones of the major concentration of Population. Our case study Faisalabad lies in upper Indus plain.

Pakistan has a unique position in the demographic transition. Pakistan has passed rapidly the first stage of the demographic transition with the transfer of advanced medical facilities from the advanced countries whereas Pakistan is lagging in passing through the second stage of demographic transition and is still in the early phase of second stage in which birth rate begins to decline. Recent Pakistan and Demographic and Health Survey 2012-2013 also indicated that total fertility rate in Pakistan is not decreasing as rapidly as expected and it is still at 3.8, contrary to its expectation at 3.2.

Pakistani society is showing resistance in using family planning methods for diminishing the family size due to the religion influence. Ulemas (religious scholars ) preach in their sermons that limiting family size through using family planning method is a great sin and those who will commit this sin will be burnt in the hell . Developed nations transferred the advanced medical facilities for reducing mortality in Pakistan but these nations could not reduce the fertility rate that is being monitored by socio-cultural and socio-economic factors rather than medical factors due to the religion influence and other related factors.

Pakistan is still passing through the second stage of demographic transition theory and it is very crucial stage for the successful demographic transition in all developing countries including Pakistan. It already took 35 years in this stage and its natural increase in population has not declined as expected by international donors, experts and national policy makers. Many factors are responsible for the slow pace in this stage. Influence of the religion on a family is the major cause of high fertility and it is augmented through early marriages, desire of son, unawareness of family planning methods, Joint family system. Fears of the deaths of

children in their grandparent generation in 1960s and 1970s are still present in the minds of parents so they continue to increase their family size.

Pakistan may take long time to pass the process of demographic transition due to the attitude of Pakistani families towards limiting family size. Family institution in Pakistan has played a vital role in lengthen this phase through early marriages, joint family system, influence of religion and low status of women. For the successful demographic transition in Pakistan, there is dire need to acquire cooperation of Pakistani Ulemas, increasing the literacy level, creating the awareness of family planning, and providing the unmet need of family planning methods.

As Pakistan is still in the early phase of second stage of demographic transition and we cannot precise the time for the successful demographic transition in Pakistan due to a great resistance from the family institute of Pakistan regarding limiting family size, so we cannot forecast any timeframe regarding into the end of demographic transition because social change in the societies like Pakistani society is very slow and can take several generations.

Urbanization is not a new story in Pakistan. Six to eight million Muslims crossed the new border and entered into Pakistan during partition in 1947 and majority of them settled in the cities of eastern Pakistani provinces of Punjab and Sindh. The second big migration flow towards cities occurred in 1965 and 1971 during the wars between India and Pakistan. In the 1990s, the Afghan insurgency resulted into further migration to the urban centers in Pakistan. Four million Afghans crossed Durand line (border between Pakistan and Afghanistan) and arrived in the North-Western Pakistan (Khyber Pakhtwankhawa) in 1992 and they settled in the city Peshawar and Quetta.

After 9/11 incidence in 2001, Pakistan emerged as a front line state in war against terrorism. One of the consequences of war against terrorism in the northern-western parts of Pakistan was the displacement of population towards urban centers and it further added millions to the urban population in Pakistan.

At present, Urbanization in Pakistan continues to be fuelled by war, insecurity, and economic necessity. Pakistan military operation against Taliban in the rural north-west Pakistan has induced many people to flee to cities. Most of them are civilian but at the same time militants including Pakistani Taliban are also on the move towards cities. Urban transition in Pakistan is not a outcome of wars, insecurity, terrorism, international conflicts, soviet invasion and war against to curb terrorism in Afghanistan but this is only one aspect which accelerate the

process of urban transition through adding millions in the urban population. Urban population in Pakistan has increased due to the natural increase and rural- urban migration but now, natural increase has significant role in the expansion of cities in Pakistan.

At the time of its independence, urbanization rate was only 17.8 % and it rose to 32.5 % in 1998 census that means every third person was living in the city. In 2013, urban population was estimated 35 %. (PRB, 2013) and it will rise to 50 % in 2025 according to United Nations population division estimates. Pakistan is urbanizing at annual rate of 3% which is considered to be the highest in South Asia. However, Pakistan is lagging the world average of developing countries, estimated 46.5% in 2011. The second most urbanized province was Punjab where 31.3 % population lived in cities/towns. Urban transition is bringing many changes in the family structure and family itself in Pakistan.

### **Case Study- Faisalabad**

Our case study -Faisalabad is the third largest city in terms of population in Pakistan. It emerged as an industrial city in Punjab, Pakistan. It is also called Manchester of Pakistan due to the establishment of large cotton textile industry. Faisalabad city previously known as Lyallpur was established as a Mandi (Market) Town in 1805 as a part of a programmer of colonization of west Punjab. Lyallpur was named after Sir James Lyall, the then Lt. Governor of the Punjab 1887-1892. Lyallpur was renamed as Faisalabad after the name of late King Faisal of Saudi Arabia in recognition of his outstanding services to Islam and the Muslim Umma on 1st September, 1977.

According to the census report 1998, the population of Faisalabad district touched the figure of 5.430 million. The total in- migrants in Faisalabad were 679,676 and out of these total immigrants, 315, 658 migrants came from the rural areas and 364,018 from the urban areas. Its current estimated population is 8.010 million in 2014. So we can say that the population of Faisalabad has increased rapidly since the creation of Pakistan in 1947.

Faisalabad was the first planned city of Pakistan. It emerged as an industrial city in Pakistan and its industrialization was the major cause of rapid population growth, People from surrounding districts and other provinces moved to this city due to employment opportunities in the industrial sector. Mechanization of farming also accelerated the process of migration towards this industrialized city. Its fertile plain is suitable for agriculture and raw material for cotton textile industry was abundantly available locally. Major roads were constructed to

join it with other cities of Pakistan. Furthermore, these roads played a major role in attracting people from surrounding areas. These roads also contributed a lot in bringing raw material from the surrounding areas for cotton textile industry in Faisalabad.

As a consequence of its rapid population growth its population density continued to increase gradually with time from 264.5 persons per square kilometres in 1951 to 1367.8 persons per square kilometres (district average) in 2014. There is more congestion in the city area than rural areas of the district. It resulted into the expansion of residential areas on the surrounding fertile agricultural land.

As we have already discussed the demographic transition in Pakistan, Position of Faisalabad city is similar to the rest of Pakistan particularly Punjab. Being an industrial city, Faisalabad remained a place of attraction for migrants from the surrounding areas and resulted into rapid population increase while its natural increases showed a same pattern as in the rest of Punjab. We cannot say it similar to the whole Pakistan owing to the diversity in Pakistan which varies in Balochistan and Khyber Pakhtunkhawa.

Natural increase was 2.20 in 1999 and it continued to decline till 2010 and touched the lowest figure of 1.90 and it is the lowest in last decade. It also indicates that fertility has declined gradually since 1999 but the rate of decline remained imperceptible owing to the influence of religion on families, unawareness of family planning method, desire of son, requirement of labour force from poor families, and illiterate workers. Mortality remained constant after 2005 and a little rise and fall was seen in it. With an average annual natural growth rate of +2%, that means the migration balance exceed is +0.46% per year on average, In consequence, in-migration contributes to 1/5th of the total population growth, and 4/5th comes from the natural balance.

Natural increase varies from areas to areas in Faisalabad due to different socio-economic condition. In poor residential areas, Crude birth rate (CBR) is high and at the same time crude death rate (CDR) is also high. Due to unavailability of data, we could not point out different spatial patterns of fertility and mortality in Faisalabad city. In forthcoming years, we will try to see this aspect through primary data collection.

Age and sex composition of Faisalabad district shows that the population of Faisalabad is still young. 40.8% population is under 15 and 60% population is below 25. Population in reproductive age (15-49) is 46.9% which indicates no decline in the fertility in the near

future. Increasing age at marriage can contribute in declining fertility as our empirical findings showed that there is increasing age of marriage in Faisalabad. We can observe a slight decline in fertility from the age group 0-4 whose proportion is less than age group 5-9. It is the first major change in the age and sex pyramid of Faisalabad since 1951.

According to 1998 census, the urban Population in Faisalabad was 2.318 million or 42.5 percent of the total population of the district which grew at an average rate of 3.7 % during 1981-98 and also had no change since 1972. Population congestion was present only in the centre of the city in 1992 and less populated regions adjoined the thickly populated centre of city. There is gradual expansion in densely populated areas in Faisalabad city. Increasing concentration of urban population resulted into the high price of houses, rising rent, increasing small areas houses, increasing nuclear families, poor sanitation conditions, rising street crimes and terrorism in the city.

It is very difficult to differentiate family and household in Faisalabad because there is no concept of households without marriage and ties of kinship. Mostly households are family household with an exception of a small proportion the male households (boys hostels, male workers living together) and the female households (girls hostel). Mixed household (male and female) without marriage is not only acceptable but also illegal in Pakistani society. Sex outside marriage is strictly forbidden both by state law, teachings of Islam, and traditions in the Pakistani society. Unfortunately, all census of Pakistan did not collect the data of family type.

Average household size in Faisalabad district increased to 7.2 in 1998 from 6.7 in 1981 and rose to 8.7 according to our empirical findings. The persons per room decreased to 3.1 in 1998 from 3.2 in 1980 owing to the increasing rooms per housing units from 2.1 (1981) to 2.3 (1998). It has further declined to only 1.96 persons per room in 2012 according to our empirical findings. Rooms per housing unit have increased from 2.1 in 1981 to 4.24 in 2012.

Percentage of one room housing unit declined to 30.1% in 1998 from 43.1% in 1981 while housing units with 2-4 rooms increased from 52.9% in 1981 to 62.4% in 1998 and we also observed increase in housing units with 5 rooms and above in our empirical findings.

Sex ratio was 108.6% in Faisalabad district according to the census of 1998. We observed a gradual increase in sex ratio with the rise in age groups 0-19 from 104.3 (0-4) to 106.9 (15-19). A sudden decline in sex ratio was seen in the age group 20-24 in which it was only

102.6. It might be result of outmigration of students to Lahore, Islamabad, Karachi for higher education because there was only one agriculture university was present in 1998 .It might be the result of international migration of young labor towards middle east countries, European countries and America. After this decline, it continued to increase up to 123.6 in age group 70-74 with minor fluctuation of rise and fall. It is the indication of male migration in search of job towards the Faisalabad city during 1950 to 1990. Sex ratio remained high in the population of above 75 and it was 115.5. This unnaturally high sex-ratio might result from unequal access to health between men and women.

According to the census of 1998, 59.1 % of that population (15 years and above) was married while 34.6% was unmarried. Only 5.9 % people were widowed and 0.4% (divorced). The percentage share of never married male (39.8%) was much higher than the female (28.9%) and situation becomes reverse in married proportion in which female percentage (62.5) was more than male percentage (55.9). This is consistent with the sex-ratio in a city full of migrant male labor from the countryside .It is the indication of early marriages of females due to several factors in the Pakistani society. The proportion of never married females has drastically increased from 22.6% in 1981 to 28.9% in 1998. It is the consequence of increasing age at marriage. This is the indication of decline fertility level in Faisalabad district

### **Verification of Hypothesis on the basis of empirical findings**

We conducted three surveys from December 2011 February 2012 in Faisalabad for verifying our hypothesis. First survey (N=250) related to the housing conditions and family structure, second survey dealt (N=200) with perceptions of individuals towards changes in the family structure and third survey (N=250) uncovered the changes in family due to urban transition.

Mostly hypothesis (Hypothesis II, IV, VII, VIII, XI, XII, XIV, XV, XVI, XVIII and XIX ) related to westernizing life style in Faisalabad are verified and is the indication that population of Faisalabad is “westernizing” its life style. The change to smaller family is due to economic constraint in poor families and due to choice in upper economic class. Hypothesis IX , X , are XIII are related to talbanization and terrorism which is against the western life style and resisting the westernization of family in Faisalabad.

Women empowerment in Faisalabad is limited to the family, not to the broader social arena. It means that male dominated society is not ready to give all rights to women outside the family like in westerns women in Europe. There are restrictions on mobility of women and they need permission from a male member in a family to do a job. Women are empowering in family affairs. Housing constraint is stronger in the city than in the countryside and it results into increasing nuclear family size and larger household size in the city.

In-migration from western regions (bordering Aghanistan) is influencing family life in Faisalabad through transferring traditions and values of their traditions like veil of women, polygamy, less empowered women, large family size, spousal violence and low status of women, etc.

***Hypothesis I: Urban Transition is bringing changes in housing and living conditions of households in Faisalabad.***

Our first constructed hypothesis is related to the impact of urban transition on the housing and living conditions of household in Faisalabad. Majority of household (71.50%) used concrete for construction of roof whereas this proportion was only 6.0 % in rural areas. Mad was a used for cluster more in rural areas (20%) than in urban areas (3.0%, these are from slum area) .

All rented households (19.4%) were present in the urban areas while all households in rural areas were owned by occupants. Housing units were small in urban areas as compared to rural areas due to lack of space and high price of land in cities. Multi stories building are present in the urban areas while majority of building (76.0 %) in rural areas had only one floor.

There was not a single household consisting of one room in rural areas while 12.20 % urban household had only one room. Both urban areas and rural areas had almost equal proportion of households 36.50 % and 36.70% respectively having 2-3 rooms. So we can say that every second household having rooms 1-3 in urban areas while every third rural household fell in this category. The difference between rural and urban areas is evident in category 4-6 rooms in which 46.90 % household in rural areas fell in it whereas this proportion was only 33.3 % in urban areas. It may be due to shortage of land in urban areas and large family size along with joint family system in the rural areas. As we found in the later discussion as we move from rural to urban areas, the nuclear family system continues to increase due to several

factors which were discussed in the perceptions of respondents. There is a slight difference in the remaining categories between the rural and the urban areas. Urban areas had average household size of 8.9 where as rural areas had average household size of 8.3.

Toilet facility was present in both rural and urban surveyed areas. 0.5 % household lack toilet facility in the slum areas of urban locality due to extreme poverty in those household. Open sewerage system. (Open sewerage system means that wastages flow through open places and not through pipes) was only present in rural and slum areas.

There is also contrast in the sources of water in rural and urban areas and sources of fuel. No natural gas supply is present in the rural areas and rural areas are devoid of government water supply. Electricity is available in all surveyed clusters but only 2.0 % households in rural areas did not have electricity due to abject poverty conditions and were living without electricity.

TV is almost present in every household and 92.20 % urban households possessed TV whereas this proportion was 75 % in rural households. Internet is the latest innovation in the information flow in the world. Every third household (29.60 %) in urban areas had access to the internet whereas in rural areas only 14.60 % households having access to the internet.

To sum up, we found a wide contrast in housing and living conditions of households in rural and urban areas of Faisalabad and it validates out hypothesis that Urban Transition is bringing changes in housing and living conditions of households in Faisalabad.

**Hypothesis II: *Nuclear Family system is increasing in the urban areas of Faisalabad.***

Our second hypothesis was related to the impact of urban transition on family structure. We found a wide contrast in family structure between the rural and urban areas of Faisalabad. 61.20 % families were nuclear in urban areas while only 46.90 % families were nuclear in rural areas. It is a clear indication that trend towards nuclear family system is increasing in urban areas of Faisalabad. Joint Family system was still dominant in rural areas where as nuclear families were dominant in urban areas. Housing constraint, migration, education and choice (reduced social control) are the major reasons of this contrast.

To sum up , our second hypothesis that trend towards nuclear family system is in increasing in the urban areas of Faisalabad has been verified by our empirical results so we are confident to say that urban transition is responsible for changes in the family structure in Faisalabad.

**Hypothesis III: *Pakistan society is a male dominated society.***

Our third hypothesis is related to the impact of urban transition on the headship of household and we found that male was head of household in both rural (88.80%) and urban areas (89.80%) of Faisalabad. We also found a very little contrast in headship of household when we moved from rural areas to urban areas due to the strong traditions in the society. It is the indication that Pakistan society is still a male dominated society and urban transition has a negligible impact on it. Male dominated society like Pakistan is responsible for unilateral decisions in deciding family size and low status of women in Pakistan.

85.0 % respondents (average response of 4.31 on likert scale) were agreed that head of family should be male. (Finding of Survey III)

To sum up, Pakistani society is a male dominated society in which headship of households belongs to a male in both rural and urban areas.

**Hypothesis IV: *Urban transition is changing the composition of family in Faisalabad.***

Our fourth hypothesis is related to the impact of urban transition on the composition of a family. We did not have a any concise idea of what kind of impact of urban transition on the composition of a family but we were confident that urban transition is responsible for changes in the composition of a family and it was proved from our empirical finding that more married couples with children were present in the urban areas than in the rural areas and it proves our hypothesis that urban transition is impacting on the family composition.

73.70 % households consisted of married couples and out of which 71.5 % households comprising of couples who were living with children and 2.2 % couples were without children. 75.40 % urban households comprised of married couples with children whereas this proportion was only 57.10 % in rural households. It was due to the fact that remaining 38.80 % were widows and divorced and out of which 24.50% Female householder with children and 14.30 % male householder, no spouse without children in the studied area. It is the result of urban transition in which husband moves to a city for employment purpose whereas his wife and children remain in the rural area because it is very difficult to shift whole family to a city due to the expensive accommodation.

To sum up, our empirical findings not only validated our hypothesis but also showed a direction of change through which urban transition is impacting family composition.

**Hypothesis V: *Mostly households in Faisalabad are family households.***

Our fifth hypothesis is related to the distinction of family and household in Pakistan. As we discussed earlier, there is no place for extra-marital affairs in the state laws and Islamic teaching, so non family households don't exist in Pakistan.

Non Family household living alone were not present in the rural household whereas only 1.70 % households were non-family member in urban areas of Faisalabad. These nonfamily households are either male member household or female member household. There is no concept of living together opposite sexes in one household without marriage in Islam. These households are either students or workers who are living in the cities.

To sum up, it is proved from our empirical finding that all households in Pakistan are family household except a small proportion of students and workers in the cities but there is segregation of sex in constitution of non-family household due to state laws traditions and Islamic teachings.

**Hypothesis VI: *Household size is larger in rural areas than in urban areas in Faisalabad.***

There is a general conception in the minds that household size is larger in rural areas than in urban areas so we constructed this statement as our hypothesis to be verified through empirical findings.

Average household size in the studied area was 8.72 but it varied from cluster to cluster .It ranged from 6.04 (cluster 3 and cluster 8) to 10.85 in the cluster 1. Urban areas had average household size of 8.9 where as rural areas had household size of 8.3.

Majority of households in rural areas (83.70%) and in urban areas (73.60 %) contained only one family in one household. In urban areas, 26.40 % household contained 2 to 5 families in one household while this proportion was 16.30 % in rural households. This is the major cause of large household size in urban areas and is the indication of high density of population in the urban areas of Pakistan so housing constraint is the major explanatory factor.

Our empirical findings rejected the hypothesis that household size is larger in rural areas than urban areas in Faisalabad. Moreover, household size should not be confused with family size because later is smaller in cities than in village due to increasing nuclear family , increasing education level , increasing awareness of family planning methods , westernization of family values, shortage of housing and limited resources.

**Hypothesis VII: *Trend towards a nuclear family system is increasing in Faisalabad.***

This hypothesis is complement of hypothesis II.

Majority of respondents were agreed that they prefer to live in a nuclear family system(3.49), family size is larger in joint family (3.86), Convincing a nuclear family couple to use family planning method is easy as compared to a joint family couple (3.65), more freedom of a couple in a nuclear family (4.01), More chances of divorce in a joint family than in a nuclear family (3.39), Increasing nuclear families in cities due to migration (3.76) and small houses (3.78), better education facilities in a nuclear family (3.91), More security in a nuclear family(3.09), women having more rights and freedoms in a nuclear family system (4.04) and increasing nuclear family due to intolerance (3.90).

Average score for all items/statements is above three and validate our hypothesis that trend towards a nuclear family system is increasing in Faisalabad.

**Hypothesis VIII: *Urban Transition is responsible for increasing nuclear family system in Faisalabad.***

This hypothesis is compliment of hypothesis II and hypothesis VII.

The hypothesis that urban transition is responsible for increasing nuclear family system is validated through our empirical findings in which majority of respondents were agreed that migration towards cities (3.76) and small houses in cities (3.78) are responsible for increasing nuclear family system in Faisalabad.

There is no doubt in validating our hypothesis on the basis of our empirical findings that urban transition is responsible for increasing nuclear family system in Faisalabad.

**Hypothesis IX: *Spousal violence is still common and being practiced in Pakistani society.***

Majority of the respondents (average response of 3.22 on likert scale) admitted that spousal violence is still common and practices in the Pakistani society. It is also evident from the annual report (2011) of human rights commission of Pakistan in which it was cleared mentioned that domestic violence showed a marked increase in the last six months of 2011. It may be the influence of in-migrant of afghan border and talbanization on the family.

So we are confident in validating this hypothesis on the basis of our empirical findings and reports of human rights commission of Pakistan.

**Hypothesis X: *Talbanization and terrorism are affecting families in Faisalabad.***

According to our empirical findings, majority of respondents (average response of 3.55 on likert scale) were agreed that rising talibanisation is creating the fears in the members of family whereas 78.5 % respondents (average response of 3.21 on likert scale) admitted that terrorism is affecting families.

There is no doubt in it that families in Pakistan are the victim of talbanization and terrorist activities. Recent shifting of approximate one million people to the safest place during the north-waziristan operation by pakistani army against Taliban is the recent example of effect of talbanization on the families. Their houses are being destroyed and whole city has been demolished by military operation.

So, we are confident in validating this hypothesis on the basis of our empirical findings and the existing miserable conditions of internally displaced families and victims of terrorist attacks.

**Hypothesis XI: *Women participation in politics is improving in Faisalabad.***

This hypothesis is related to the empowerment of women in politics in Faisalabad and it is the compliment of hypothesis XVII that deals with women empowerment in family affairs and in society, which in turn determine the social status of a woman in Faisalabad.

Two items in our questionnaire were included in the survey to verify the hypothesis of women participation in politics in Faisalabad. Majority of the respondents (average response of 3.50 on likert scale) were agreed that women are actively participating in the politics.

Moreover, Majority of respondents (average response of 3.60) on likert scale) were also agreed that women are casting their votes regularly in general elections.

It is a positive change in the family and responsible for gradual empowerment of women in the politics. As stated earlier in the discussion that women constituted 23% of the National Assembly and women are actively participating in assembly through raising questions in parliament and almost half of the questions were put by women. ("State of human rights in 2011," 2012)

To sum up, we are confident in validating the hypothesis that women participation in politics is improving in Faisalabad. Moreover, we also admit that women participation in Pakistan is

not as in other liberal and secular countries but we observed an improvement in the empowerment of women in politics due to westernization and modernization of family.

**Hypothesis XII: *Age at marriage is increasing in Faisalabad.***

74.0 % respondents (average response of 4.03 on likert scale) admitted that age at marriage is increasing and it is further supported by the recent Pakistan Demographic and Health Survey 2012-13 in which it stated that there was an increase in the median age at marriage among urban women age 25-49 over the past six years (from 19.7 years in 2006-07 to 20.7 years in 2012-13).

From our empirical findings and results of PDHS 2012-13 , we are confident in validating hypothesis that age at marriage is increasing in Faisalabad, Pakistan but at the same time , we have to accept that median age at marriage (20.7 years ) is still very young.

**Hypothesis XIII: *Pakistani society is still an endogamous society.***

77.5 % respondents (average response of 4.05 on likert scale) were agreed that caste system is still dominant and marriages are being practiced within families and the caste.

Our empirical findings and the existing literature confirm the Pakistani society is still an endogamous society.

**Hypothesis XIV: *Desire for a large family size is decreasing in Faisalabad.***

75.5 % respondents (average response of 3.97 on likert scale) were agreed that desire to have fewer children is increasing.

So, we are confident in validating hypothesis that desire for a large family system is decreasing in Faisalabad.

**Hypothesis XV: *Electronic Media is responsible for changes in the family in Faisalabad.***

86.0 % respondents (average response of 4.27 on likert scale) were agreed that electronic media (Television, Cable) is responsible for changes in the family.

With the highest average response of 4.27 on likert scale, we are confident to validate the hypothesis that electronic Media is responsible for changes in the families in Faisalabad.

**Hypothesis XVI: *Pakistani society is predominately a monogamous society.***

58.5 % respondents (average response of 3.49 on likert scale) were agreed that Polygamy is decreasing whereas Monogamy is increasing.

According to the finding of PDHS 2012-13, 4% of currently married women and 3% of currently married men are in polygamous unions. Polygamous unions for married women decreased from 7% in 2006-07 to 4% in 2012-13.

So, we are confident to validate the hypothesis that Pakistani society is predominately a monogamous society.

**Hypothesis XVII: *Women are empowering in Faisalabad.***

We included 10 items in questionnaire to determine women empowerment in Faisalabad. These items also determine social status of a woman in Faisalabad.

The important factor to determine the social status of a woman in society is its equality of right with a man in conjugal relationship. According to the constitution of Pakistan and instructions of Islam, Man is authorized to do four marriages at a same time. It shows the inferior status of women. Our empirical findings proved that Polygamy is decreasing whereas Monogamy is increasing (average response of 3.49 on likert scale) and it is further proved from the Pakistan demographic and Health surveys that polygamous union for married women decreased from 7% in 2006-07 to 4% in 2012-2013. It is the result of women empowerment because Pakistani women are not ready to accept second spouse of their husbands.

Majority of the respondents had consensus on that head of household should be male in Faisalabad (average response of 4.31 on likert scale). At the same time remarriage of widow and divorced women is considered bad. (Average response of 3.23 on likert scale). It is the indication of lower social status of a woman in Faisalabad.

82.0 % respondents (average response of 4.13 on likert scale) were agreed that women are actively participating in the family affairs. There is no doubt in it that there is increase in the participation of women in family affairs but it does not consider as that it is universal as indicated in the findings of PDHS 2012-13.

Majority of the respondents (average response of 3.74 on likert scale) were agreed that women should do jobs for supporting their family. Women can actively contribute in their family affairs through supporting family through doing jobs. As we discussed earlier in 4.4.4.13 that rising talbanization and extremism in Pakistani society are basic threats towards the empowerment of women in economic affairs. These threats are limited to the northern areas of Pakistan while in Faisalabad (Punjab) is still safe from the talbanization.

There are some restrictions on the mobility of women in Faisalabad and their mobility is monitored by male members of a society. Women have persistent less autonomy in mobility and majority of them (52.0 %) need permission to go to market, doctor, and at friend's home (Only females). There is always need of taking permission from a male member before leaving house.

48.5 % respondents (average response of 3.43 on likert scale) were agreed that authority of husband is decreasing and authority of wife is increasing but at the same the 30.5 respondents remained neutral in giving their views. It is a good change in the improving empowerment of women in family affairs in Faisalabad. Decreasing desire of son (average response of 3.21 on likert scale) and equality of son and daughter (average response of 3.89 on likert scale) are the positives changes in the families that contribute in the ameliorating social status of women in a male dominated society in Faisalabad but at the same time, increasing custom of dowry (average response of 3.80 on likert scale) shows the low status of a woman.

Religious minded persons are stricter to their wives than liberal men. I am shocked to see the comments of a religious personality Junain Jamshed (Previously he was a pop singer) during TV interview, in which he criticized the mobility of a woman and uttered following words:

*“His wife was very pretty in her youth and he did not teach his wife how to drive a car because of the fear that she might leave him”*

*“If any man is watching...I want to tell him that the biggest favour you can do yourself is to not teach your wife how to drive a car or a motorcycle...because if a woman makes it a habit to stay out of the house, she cannot remain at home” (Janjua, 2014)*

It's really difficult task to verify the hypothesis that women are empowering in Faisalabad. Our empirical findings showed a significant improvement in the empowerment of women in family affairs like equality of rights of husband and wife, decreasing polygamy, active

participation in family affairs and decreasing desire of son but we also observed that male headed households were in abundance and remarriage of woman is considered bad.

We did not see women empowerment in society outside family, as they needed permission from a male member (Father, brother, husband and son) in a family for leaving home. They can't go to a doctor without the permission. Their less autonomy in mobility results into their miseries and low social status.

To sum up, we are confident that women are empowering in Faisalabad but their empowerment is more significant in the family affairs than in the society. Trend of empowering women has started in the Faisalabad but we should admit that women are not as empowered as in western countries. However, it is the first evolutionary step towards empowerments of women in Faisalabad through the impact of westernization of family due to impact of urban transition.

***Hypothesis XVIII: Cousin Marriages are decreasing in Faisalabad.***

62.5 % respondents (average response of 3.61 on likert scale) were agreed that the trend towards cousin marriages is decreasing in Faisalabad.

According to PDHS 2012-13, Pakistan has a high rate of marriages between cousins. Half of all marriages occur between first cousins. First-cousin marriages are lower in urban areas (38%) compared to rural areas (54%).

Cousin marriages are still practiced but the trend of cousin marriages is decreasing in Faisalabad so we are confident in validating this hypothesis.

***Hypothesis XIX: Love marriages are increasing in Faisalabad.***

70.0 % respondents (average response of 3.85 on likert scale) were agreed that love marriages are increasing. It is a positive change in the family.

There is no doubt in it that Pakistani society is against love marriages but with influence of westernization and modernization of families, parents begin to accept love marriages of their children. So, we can validate the hypothesis that love marriages are increasing in Faisalabad, Pakistan.

## **Findings of Exploratory Factor Analysis:**

We did Principal Component Analysis on three different surveys for seeing the role of urban transition in bringing changes in the housing conditions, household, family structure and family itself. The French tradition of Factor Analysis avoid using rotation, and interprets the initial unrotated output with the addition of the contribution score (CS) of initial variables to factor calculation so our interpretations are based on the unrotated components matrix solution.

### **First Principal Component Analysis- Family structure and urban Transition**

Following four factors were extracted that shows impact of urban transition on family structure and housing conditions:

#### **Factor 1 (Standard of Living )**

Every variable describing the size of the housing unit and of the household are negatively correlated to Factor 1, on the opposite side, we find positive correlation of variables describing the relative affluence of the household according to access to westernized consumption items. Larger households are often poorer than smaller ones. In brief, Factor 1 relates to standard of living and it depends on the amount of money for spending on standard of living.

#### **Factor 2 (Urban -Rural Divide in Housing Conditions)**

This factor represents the real distinction in housing and living conditions between urban and rural households, ie, no renters in rural areas, limited availability of natural gas in rural areas, no tap water in rural areas, etc.

#### **Factor 3 (Household size)**

The items that load high on factor 3 seem to relate to size of household and number of families. Increase in the number of families results into the increase in household size.

#### **Factor 4 (Family structure)**

Factor 4 is the compliment of factor 3 and further explains head of household and family type of that household.

## **Second Principal Component Analysis- Changes in Family structure**

Principal component Analysis with varimax rotation was performed through SPSS on the 12 items/statements which described the changes in the family structure from a joint family system to a nuclear family system. It reduced the large set of variables into four latent factors that are controlling changes in family structure. Moreover, our interpretations of factors are based on unrotated component matrix

Following four latent factors that control changes in the family structure in Faisalabad, Pakistan were extracted:

### **Factor 1 (Consensus)**

According to the table 4.16- unrotated output; Factor 1 is the "consensus" neo-variable. The agreement level between respondents is astounding. The "consensus" praises the emerging nuclear family system and points out the disadvantages of the traditional joint-family systems. Beliefs are essential in society, because beliefs create motives of action. This result makes a convincing case for explaining the current erosion of the joint family system, and the importance of urbanization in the family transition to the nuclear family model. Another important result is the linkage it reveals with fertility transition and the Malthusian preference for reduced family size. In short, Factor 1 summarizes the modernization of the Pakistani society in Faisalabad.

Factors 2-3-4 are relevant to understand several contradictions and the lack of consensus about the 4 last questions. Their explicative power is weak (eigenvalue close to 1), opposite to Factor 1, the "consensus" factor that summarizes most of the survey.

### **Factor 2 (Preference for nuclear family system)**

Factor 2 seems strongly linked with the preference for nuclear family. It confirms factor 1.

### **Factor 3 (Migration)**

Factor 3 seems related to the importance of migration to the city in the changing family system. Factor 3 highlights opposite answers to factor 2 that could be the result of the diversity of ethnic-cultural background of migrants. Migrants originating from tribal areas being more likely embedded in stronger joint-family ties than their Punjabi counterparts.

Factor 3 contradicts the consensus apparent in factors 1 and 2, displaying some minority dissensus about family values.

#### **Factor 4 (Intolerance)**

Factor 4 seems related to the negative side-effect of rising individualism. It is a minor contradiction to factor 1 consensus

#### **Third Principal Component Analysis- Changes in Family**

Principal component Analysis with varimax rotation was performed through SPSS on the 26 items/statements which described the changes in the family .Our interpretations of factors are based on the unrotated component matrix. It reduced the large set of variables into eight latent factors that are controlling changes in family but with eigenvalues below 1.5, factors 4 to 8 are of limited interest for interpreting the unrotated output of this PCA so our interpretation are limited to first three factors.

Following eight latent factors are extracted which are operating in the changes in the families of Pakistani society:

#### **Factor 1 (Modernization and westernization)**

According to the unrotated output (table 4.26), factor 1 displays also a strong consensus among respondents, who seem to be aware of the current change of behavior and support some westernization of sort.

Eleven items were loaded on factor 1 and all items were positively loaded. These are related to a latent factor that is modernization of family through influence of western thoughts and urban transition. Cities are the places where ideas are communicated more rapidly to urban dwellers than rural residents.

#### **Factor 2 (Women empowerment in Family)**

According to table 4.26, this factor is related to the status of women in the Pakistani family and the society at large. Women empowerment in the family is positively correlated with this factor.

#### **Factor 3 Women empowerment in the society (outside the family circle)**

In the unrotated output (Table 4.26), factor 3 complements factor 2 to describe women empowerment in the society at large (outside the family circle).

With eigenvalues below 1.5, factors 4 to 8 are of limited interest for interpretation in the unrotated output of PCA.

**Factor 4**

In the unrotated output, factor 4 is redundant with factor 1, with the additional emphasis on couple dysfunctions (divorce). It is a non-consensual "detail".

**Factor 5**

In the unrotated output (table 4.26), factor 5 is a non-consensual result highlighting the rise of spousal violence against women, opposed to higher order vectors (2 and 3) about women empowerment and the consensus factor 1 about westernization of the Pakistani family.

**Factor 6**

In the unrotated output (table 4.26), factor 6 puts simply the emphasis on the elevation of age at marriage.

**Factor 7**

In the unrotated output, this factor highlights the persisting influence of the Indian caste system in the Pundjabi society despite its long time conversion to Islam

**Factor 8**

In the unrotated output, factor 8 single out the issue of women mobility within the city. Gender segregation in muslim societies results in a strict separation of space between a male dominated street scene and a female dominated house. This segregated use of public space forces women to bury themselves under the islamic veil to escape sexual harassment. This custom is reinforced by talibalization and rape. This is a major cause of distrust (reciprocal) between the West and the Middle East.

**Binomial Logistic Regression:**

We ran two binomial logistic regressions to see the probability of finding different family structure rural/urban status and in different socio-economic set up.

According to Binomial logistic regression model I, rural/urban status has significant impact on the family type but its significance level is only .074 which has low confidence. When we move from rural to urban area, there is probability of 1.786 times more nuclear families in urban areas than in rural areas.

According to Binomial logistic regression model II, gender, economic class, education level and migrant status have significant impacts on the family type where as rural/urban status and ownership have no significant impact on the family type. Place of residence has no significance (.327) on the family type when it was included in the model II to control its

significance with social factors. It proves that social factors are determinant in explaining the contrast between urban and rural families. Migration status of respondent has significant impact (.008) on the family type. Non-migrants are 0.370 times lesser likely than migrants to live in a nuclear family system.

Upper economic class has significance level .044. Residents from Upper economic class are 5.141 times more likely to live in a nuclear family system than residents of lower economic class. As the education level of respondent increase from illiterate to Primary education (5 years of schooling); there is 16.908 times more chance to live in a nuclear family system. First level from illiterate to Primary is more significant (.038) as compared to upper levels of education. Gender has strong and positive net significant impact (.000) on the family type. Females are approximately 6 times more than males likely to live in a nuclear family system.

**To sum up, urban transition is an important phenomenon in Pakistan, especially in Faisalabad. It involves major changes in housing and living condition of families, it generates housing and economic constraints, it attracts migrant families and increases the diversity of the Punjabi population, but urban transition is not the cause of the general shift from joint-family to nuclear-family in the Pakistani society at large. The main drivers are individual, cultural and social ones, independently of the place of residence.**

### **Filling the knowledge gap and addition to the existing Knowledge:**

Our present research not only fills the knowledge gap on the relationship of urban transition and family structure in Pakistan but also add to the existing knowledge. As we have seen in available existing literature related to our topic, researches were conducted on family and urbanization separately and not a single research relates urban transition with family structure. Data related to family structure is missing in all census of Pakistan. Few researches that discuss family type were conducted in remote past [(Hashmi,1965) , (Baqai ,1967) , (Khan, 1971) , (Karim, 1974), (Iqbal,1998) and Mahmood and Ashraf (2005) ] None of these researches relate family structure with urban transition. Pakistani society is changing from rural society to urban society. In the last 30 years, Pakistani society has changed a lot due to rapid urban growth. We did not find a single research that update the current scenario of urban transition and family structure in Pakistan. Our research fills this gap and depicts a

current picture of Pakistani family structure and urban transition along with empowerment of women in the rising Talibanization and terrorism. Impacts of urban transition on family structure in Pakistan is missing in the existing literature and our research adds knowledge in the existing knowledge through finding current dominant pattern of family type in urban areas, factors of changing family structure, discovering latent factors affecting family structure and family itself along with prediction of different family structure in rural/urban status and different socio-economic setup.

### **Limitations:**

Following are major limitations of our study:

1. First limitation is related to the unavailability of latest secondary data at district level due to absence of census since 1998 and updated map of Pakistan.
2. Second limitation is related to the designing of questionnaire. It was really a big task to design a good structured questionnaire to get relevant data from the studied area.
3. Third limitation is related to the sampling technique and sample size for three different surveys. We could not generalize finding of first hand data from one city – Faisalabad to whole Pakistan.
4. Fourth limitation is related to data collection from the field in the worst law and order situation due to rising Talibanization and terrorism.
5. Fifth limitation is also related to the data collection phase in which respondents were not ready to give information regarding their source of income , price of house , amount of rent , ownership, purchasing price of house , the amount spent on the construction of house and the current price of house.
6. Sixth limitation is related to the analysis of data. It was really a difficult task to decide the appropriate method of exploratory factor analysis, number of factors to be retained, interpretations of factors on rotate or unrotated component matrix, labeling suitable title to latent factor.

### **Overcoming Limitations**

We took following strategies /steps to overcome above-mentioned limitations:

- We tried our best to overcome the first limitation through estimating current population at district level on the basis of current population growth rate with a minor

decline in order to match total population of Pakistan with current estimates of UNO and Population reference bureau. We did not have average value of average annual population growth rate at district level from 1981 to 1988 .Our estimates of population would suffer from a minor inaccuracy due to unavailable averages of population growth rate at district level but this inaccuracy would be no more than few thousands at districts level and we were confident that these estimated truly represent the current situation of population at district level and will be very useful not only for us but other researchers and policy makers who are interested to use it in the absence of latest census data which is always a problem in developing country like Pakistan. We updated boundaries of districts of Pakistan through using software ArcGIS through getting information of newly created districts from various sources like survey of Pakistan and district government of the concerned districts.

- In the absence of relevant secondary data related to our research – Urban transition and family structure in Pakistan, we had to collect primary data through surveys from our case study-Faisalabad. First task was to design and plan a survey. One survey could not fulfill our objectives of study so we decided to conduct three surveys and designing the structured questionnaires to get useful data from the field survey was really a difficult task. We consulted all standardized questionnaires of Demographic and Health Surveys by Macro-International, USA. We did not find a single questionnaire that could fulfill our study goals but it gave us various ideas for designing a good standardized questionnaire. We made two major questionnaires. First questionnaire dealt with housing conditions and family structure whereas second questionnaire dealt with perceptions of individuals towards changes in family structure and family itself. First survey was based on the first questionnaire whereas second and third survey was based on the second major questionnaire which was designed in such a way that its first portion consisted of information of respondents that was common in both survey whereas remaining questionnaire discussed two different aspects –changes in family structure and change in family which was the base of second and third survey with common independent variables. This technique not only saved the time and energy but also improved the quality of data because it was really a difficult task to find a respondent to talk about his/her family which is considered a private affair in all societies. We also pre-tested questionnaire for its viability and functionality in the field and made minor modifications in it.

- After designing the questionnaire, the difficult task was to decide sample size and sampling technique for collection of data. We could not use same sampling methodology and sample size due to different nature of surveys so we had to adopt an appropriate technique to make our sample representative and justifiable. It is a validated fact that a sample never become the 100% true representation of the population but we tried our best to make it representative sample of the population that is impossible in the researches where area was so vast and resources were limited, and time constraints was also a hindrance. We had many option for first survey 1 – Housing conditions and family structure .First option was to conduct survey in only one randomly selected area of Faisalabad and through following this option, we would lose other localities like rural areas, slums, middle/upper/lower economic class residential colonies, and government residences. So second option was to selected randomly both rural and urban residential area but again it missed all details as in option 1. Third option was to select surveyed clusters on the basis of rural/urban status, slum, government colony, geographical location, and upper/medium/lower economic class residential colonies. Third option seemed to be more practical and could represent all parts of our case study-Faisalabad, so we finally decided to take third option. As far sample size, we finalized sample size of 250 household selected every second household from each selected 10 clusters.

We also had many options regarding sampling techniques and sample size for the second and the third survey. Through considering nature of survey, we decided to pick respondents randomly from every part of city and from every community. It helped us to get variety of respondents from rural/urban areas, different economic classes, different education levels, different family types, different gender, different age groups and different marital status. We decided sample size 200 individuals which is sufficient for exploratory factor analysis.

- Regarding third limitation, as an individual researcher I was not allowed enough time and resources for expanding my inquiries beyond the limits of one city. What I did is already an accomplishment; this "limitation" is not a problem.
- I tried to overcome the fourth limitation regarding fears from talbanization and terrorism through confidence building of the respondents. I contacted the most known

and influential personality of that area and he accompanied me to build confidence of the respondents in case of need. I also utilized my parent university's card in which I am employed as a lecturer in Geography for gaining confidence of respondents. I tried all my best to make these surveys successful in the current bad law and order situation of Pakistan.

- I tried my best to overcome fifth limitation but people were not ready to disclose information regarding their income, price of house, amount on the construction, ownership status, amount of rent, and source of credit and migration status. It affected a lot our current findings because we had to drop these variables due to a large proportion of missing values so we could not discuss these important aspects related to urban transition and family structure. However, we tried to compensate this deficiency through including secondary data wherever it was available from the various sources but it is a fact that our findings lack information regarding the above mentioned indicators which are very useful for interpretation in relation to urban transition and family structure.
- Fifth and last limitation was related to the choice of exploratory factor analysis. We had many options like PCA (Principal component Analysis), PAF (Principal Axis Factoring) ML Maximum likelihood (ML). We ran all three analysis and finally decided PCA which gave clean factors. After making choice of method of EFA, the choice of rotation was a difficult task. As we had no existing prior theory regarding correlation of factors so we were confident to use orthogonal rotation –varimax. Number of factor to be retained was also a big task on the researchers because computer could not decide things so we retained number of factors in each data set through considering Kaiser Criteria and scree plot. Interpretation of factors on the rotated or unrotated solutions was another difficulty decision in analysis and after seeing pros and cons of each method along with observations of items loaded on each factor on both rotated and unrotated solution , we finally decided interpretation on the unrotated solution for avoiding any confusion in the minds of reader and it was also for the sake of convenience for the reader so he/she can easily understand the findings without confusing in rotated and unrotated component solutions . Labeling and interpretation of factors was very technical and difficult task, so we tried to make them more understandable, concise and comprehensive but at the same time we could not rule out the chances of error.

## **Future Prospects to ameliorate current research work**

We will try to overcome these limitations in our future research but some limitations like bad law and order situation and concealing information regarding income, ownership status etc. are not in our control. However, We can ameliorate our future surveys regarding urban transition and family structure through better planning and resources.

We built well designed questionnaires but there is always a space for perfection so in the forthcoming research work we will ameliorate them through using the gained experience through this study.

As this is the first step in seeing urban transition and family structure in Pakistan, we will design new surveys and will construct strong theory related to urban transition and family structure through using EFA (Exploratory Factor Analysis) and CFA (Confirmatory Factor analysis) in the forthcoming years.

Current focus of our surveys was only one city –Faisalabad. We will extend our research work to the other cities of Pakistan for making it more representative of population of Pakistan. We can also extend its sphere to Indian cities as well as other developing countries. It will be really valuable if this research work will be extended to developed countries like France and USA etc. It will only be possible through prestigious guidance of Prof. Dr. Jean Marc Zaninetti and the prestigious panel, particularly Prof Dr Philippe Cadene having a vast research work on India, in the forthcoming years. We will try to get some funding to achieve this task. I would like to get benefit from the expertise and experience of Prof. Dr. Jean Marc Zaninetti for amelioration and extension of this research work in the forthcoming years.



## Appendices

### Appendix I Questionnaire 1 - Housing conditions and Family Structure

No .	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Date
Address :										
Colony:										
Geographical Coordinates: Latitudes: Longitude:										
Questionnaire completion	1. Successfully Completed 2. Partially completed 3. Refused 4. No person present in house									

#### Section I

101. Area : 0. Rural 1. Urban	102. Religion: 1. Islam 2. Christianity 3. Other Please specify _____	103. Language : 1. Punjabi 2. Urdu 3. Pashto 4. Other Plz specify	
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Serial Number	Question Filter	Code	Comments
104	Number of Floor	1. 1 2. 2 3. 3 4. 4 and above	Write exact number of floor here
105	Main material of roof 1. Concrete 2. Cement +iron 3. Wood Other plz specify	106. Main material of walls 1. Brick 2. Mud 3. Wood Other	107. Main material of floor 1. Cemented 2. Brick 3. Marble 4. Tile 5. Mud 6. other plz specify
108	Number of Rooms	1 1 2 2 3 3 4 4 5 5 and above	Write exact number of rooms here

109	How old is construction?		
110	Area of House	Marlas	Square meter
111	Covered area	Exact	Percentage
112	Toilet Facility	0. Yes 1. No	
113	Number of Toilet in house	1. one 2. two 3. Three and above	
114	Source of drinking water	1. Public Tap 2. Ground water 3. Water from pumps near canal 4. Mineral water 5. Other Plz specify	
115	Sources of water for other household use	1. Public Tap 2. Ground water(Pumps) 3. other plz specify	
116	Source of energy : Electricity	0. Yes 1. No	
117	Sources of fuel for cooking	1. Electricity 2. Natural gas 3. Gas cylinder 4. Wood 5. Other plz specify	
118	Means of transport	1. Car 2. Motor cycle 3. Bicycle 4. Public Transport	
119	Does your house have : 1. Radio 2. Television 3. Refrigerator 4. Access to internet	Yes(0) No (1)	
120	Is there any economic activity in house ?	0. Yes 1. No	if yes indicate kind of work here

121	Ownership of house:	0. Owned 1. Rented	If rented go to question 127
122	Is this house at your own name?	0. Yes 1. No	

123	Your house is : 0. Purchased 1. Self made	If purchased: Year of purchase :  Price at time of purchasing : Current estimated Price: If self made : Amount on construction:	
124	Credit for Purchase : 0. Yes 1. No		
125	Source of credit		
126	Installment amount		
127	Amount of rent :		
128	When did you come to this house?		
129	Are you migrated?	0. Yes 1. No	
130	From which area you migrated?		
131	What is distance from ancient home?	Distance (in Kilometer)	
132	Reason of migration		

## Section II

Serial Number	Question Filter	Code	Comments
201	Family Type	0. Nuclear 1. Joint	If family is Nuclear go to question 203
202	How many families are living in this house?	1. One 2. Two 3. Three 4. Four and above	
203	Head of Household	0. Male 1. Female	
204	Size of household		(Indicate number of persons living in household)
205	Characteristics of Household	1 Married couple with children 2 Married couple without children 3. Female house holder, no spouse with children 4. Female house holder, no spouse without children 5. Male house holder, no spouse with children 6. Male house holder, no spouse without children 7. Non-family house holds living alone 8. Non-Family house holds with two or more person	

## APPENDIX II

### Appendix II Questionnaire N° 2 –Perceptions towards changes in Family structure and in family it self

Sr. No	Question	Code	Response Code
V01	Address: Name of colony or village name		
V02	Area :	0. Rural 1. Urban	
V03	Gender :	0. Male 1. Female	
V04	Age		
V05	What is your education qualification?	1. Illiterate 2. Primary (5 year) 3. Matric (10 year) 4. Intermediate (12 year ) 5. Bachelor (14 year) 6. Masters (16 years) and above	
V06	Marital status	1. Single 2. Married 3. Divorced 4. Widow	
V07	In which family type you are living.	0. Nuclear Family 1. Joint Family	
V08	Economic Class	1.Lower economic class 2.Middle economic class 3. Upper economic class	
V09	Ownership of house in which you are living	0. Owned 1. Rented	
V10	Are you migrated?	0. Yes 1. No	
V11	Is your family migrated from a village?	0.Yes 1.No	

**For each question below, circle the number to the right  
that best fits your opinion on the importance of the issue.  
Use the scale above to match your opinion.**

Item	Statement	Scale of Importance				
		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	I prefer to live in a Nuclear family.	1	2	3	4	5
2	The Family size is large in a joint family system	1	2	3	4	5
3	It is easy to convince a nuclear family couple to use family planning methods.	1	2	3	4	5
4	A couple has more freedom in a Nuclear family	1	2	3	4	5
5	There are more chances of domestic violence / quarrels in a joint family than in a nuclear family.	1	2	3	4	5
6	There are more chances of divorces in a joint family than in a nuclear family.	1	2	3	4	5
7	Migration to cities is the major cause of increasing nuclear families in the city.	1	2	3	4	5
8	Small houses in cities are responsible for increasing nuclear families.	1	2	3	4	5
9	Nuclear families can provide better education facilities to the children as compared to joint families.	1	2	3	4	5
10	A couple feels more security in a nuclear family than in a joint family	1	2	3	4	5
11	A Woman has more rights and freedoms in a nuclear Family system	1	2	3	4	5
12	Intolerance is the cause of increasing nuclear family system.	1	2	3	4	5
13	Spousal violence (beating, torture (verbal and physical) of wives) is common and practiced.	1	2	3	4	5

**For each question below, circle the number to the right  
that best fits your opinion on the importance of the issue.  
Use the scale above to match your opinion.**

Item	Statement	Scale of Importance				
		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
14	Rising Talibanisation is creating the fears in the members of the family.	1	2	3	4	5
15	Terrorism is affecting families.	1	2	3	4	5
16	Women are actively participating in politics.	1	2	3	4	5
17	Women are casting their vote regularly in general election.	1	2	3	4	5
18	Divorce rate is increasing.	1	2	3	4	5
19	Age at marriage is increasing.	1	2	3	4	5
20	Caste system is still dominant and marriages are practiced within the families and the caste.	1	2	3	4	5
21	Desire to have fewer children is increasing.	1	2	3	4	5
22	Electronic Media (Television, Cable) is responsible for the changes in a family.	1	2	3	4	5
23	Polygamy (More than one marriage) is decreasing while Monogamy (One Marriage) is increasing.	1	2	3	4	5
24	Head of household should be male.	1	2	3	4	5
25	Remarriage of widow and divorced women is considered bad.	1	2	3	4	5

**For each question below, circle the number to the right  
that best fits your opinion on the importance of the issue.  
Use the scale above to match your opinion.**

Item	Statement	Scale of Importance				
		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
26	Women are more actively participating in the family affairs.	1	2	3	4	5
27	Women should do jobs for supporting their family.	1	2	3	4	5
28	Mobile phone is the cause of divorce.	1	2	3	4	5
29	Sex outside marriage is being practiced and continuously on the increase.	1	2	3	4	5
30	Love marriages are increasing.	1	2	3	4	5
31	Women do not need to take permission for going to market, doctor and friend's home.	1	2	3	4	5
32	There is an increase in the use of family planning methods.	1	2	3	4	5
33	HIV (AIDS) awareness is increasing.	1	2	3	4	5
34	Authority of husband is decreasing while authority of wife is increasing.	1	2	3	4	5
35	Desire of son is decreasing.	1	2	3	4	5
36	Both daughter and son are equal.	1	2	3	4	5
37	Custom of dowry is increasing.	1	2	3	4	5
38	Trend towards Cousin Marriages is decreasing.	1	2	3	4	5

## Annexure I: Paper presented in Conference

The 12<sup>th</sup> Annual Population Research Conference  
**Pakistani Youth: The Ultimate resource**  
 November 22-24, 2011, University of the Punjab, Lahore, Pakistan

### Changing Family structure and Urban Transition effects on Youth in Punjab, Pakistan

Kashif Mahmood <sup>1&2\*</sup>

Dr. Jean Marc Zaninetti <sup>3\*</sup>

1. Doctoral Student, Centre d'études pour le développement des territoires et l'environnement (CEDETE), Université d'Orléans, France.  
 Email : kashif.mahmood@etu.univ-orleans.fr
2. Lecturer in Geography , Government College University Faisalabad , Pakistan
3. Professor of Geography, Centre d'études pour le développement des territoires et l'environnement(CEDETE), Université d'Orléans, France  
 Email : jean-marc.zaninetti@univ-orleans.fr



## Changing Family structure and Urban Transition effects on Youth in Punjab, Pakistan

Kashif Mahmood <sup>1,2\*</sup> Dr. Jean Marc Zaninetti <sup>3\*</sup>

1. Doctoral Student, Centre d'études pour le développement des territoires et l'environnement (CEDETE), Université d'Orléans, France.  
Email : kashif.mahmood@etu.univ-orleans.fr
2. Lecturer in Geography , Government College University Faisalabad , Pakistan
3. Professor of Geography, Centre d'études pour le développement des territoires et l'environnement(CEDETE), Université d'Orléans, France  
Email : jean-marc.zaninetti@univ-orleans.fr

### Abstract

Family is a basic social institution. Agriculture provided the economic base for to bulk of the society in past times. Now, the Pakistani society is changing to an industrial and urban base. Families are affected by these social changes. Any change in the family affects its members but young persons are more affected due to their dependency on parents or elder brothers/sisters. Domestic violence and breaking couples have unfavourable effects on the Pakistani youth. Youth may become victim of social evils: drug abuse and alienation due to depression, which in extreme cases results into suicide. Young adults (age 15 -24) are now estimated 21% of the total population of Pakistan in 2010 [World 17.4%, South Asian countries 19.5%], (UN, 2010). Their share of Pakistani population is still expanding, at the difference of global trends of decreasing youth relative share. This fact is susceptible to contribute a lot to the economic development of Pakistan. Millennium Development goals cannot be achieved without the participation of youth. Importance of family cannot be denied in order to solve the problems of youth at grass-root level. The present study is based on both primary data and secondary data. Primary data was collected through Survey and Focus Group Discussion (FGD). The study area is both rural and urban areas of Punjab. A structured questionnaire was designed to collect data. The sample size is 1000 families. 600 families (20 families from different 30 different cities) and 400 families (100 families from 4 selected villages) are taken from widely dispersed rural and urban areas of Punjab to make it geographical representative. Random sampling technique was utilized. Data was analyzed through Statistical Package for Social Sciences (SPSS). A descriptive statistics technique – Cross Tabulation was utilized to compare variable.

**Key words:** Family, Pakistani society, Social change, Youth, Domestic violence, economic development, Urban Transition, and Millennium Development goals

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## Introduction

Family is an important social institution. Sociologists, Anthropologists, Demographers, Economists and Geographers have their interests in family issues. It is the basic social institution in every society in the world, even in a period of transition with all the social changes that this entails. In preindustrial society, the majority of the active population was working in agricultural sector. The extended family system was dominant worldwide. The extended family fulfilled multiple functions such as production, health, welfare and education. Industrialization began in the mid 18th century, leading to urbanization. As population moved from rural to urban areas, the extended family system was gradually replaced by the nuclear family system, which ultimately became the dominant model. The nuclear family is more appropriate to the urban and industrial society.

Nowadays, the Pakistani society is also moving from agricultural economic base to an industrial base. It is also moving at the same time from a rural society to an urban society. According to the latest revision of the World Urbanization Prospect (U.N.), Pakistan is now 36% urban. Its urbanization rate has changed from 20 % in 1955 to 30 % in 1990, and 36 % in 2010. Pakistan is still lagging behind most countries, the World average is now over 50%, but 36% is above the regional average of Southern Asian countries. A lot of changes are taking place in the Pakistani society due to the advancement of technology, urbanization and media expansion. Many new T.V channels are appearing in whole world through satellite. National Geographic Channel is one example. Cultural diffusion is on the rise. Old traditions are breaking due to the Globalization and mixing of different culture. New ideas are coming day by day. It is the age of the rapid information flow. All these things create a social change that is bringing many changes in Family structure. There is dire need to address all aspects which are relevant to families and urban transition. Impacts of family structure change and urban transition on Pakistani youth is one of the important aspects.

Youth can play an important role in achieving the Millennium Development goals (Gleixner et al , 2005 ). Family has become one of the topics that generate intense debate and discussion in relation to youth. Changes in Family structure of Pakistan have deep impacts on the youth. Family is a primary group and any change in it affects its members and the youth is more affected due to their dependency. Domestic violence and divorces in families are one of the major sources of mental disturbance of youth. Young people are in the phase of

making their career and they lose their concentration in case of disturbances in families. It is very important to study impacts of family structure change on Pakistan youth because of the fact that Pakistani families has changed a lot last thirty years.

Family is an important institute in the society. United Nation is also giving great importance to study family issues. Many studies on families were conducted in USA and Europe (Todd, 2011) .They tried to find the solution of problems in society through studying family. They find that family plays an important role in solving many social problems in the society so there is need to conduct research on family in all societies of world. Population policy makers require knowledge of family composition and there is dire need to conduct research on families.

Various factors are responsible for changing family structure. It is actually a social change. It becomes more interesting to see phenomena of social change in relation with family, urban transition and youth. It is very important that social researchers (Sociologists, Geographers, Demographers and Economists) should study the family and urban transition in modern time. There is need to find out impacts of these changes along with urban transition on youth problems and give solution for minimizing bad effects of these changes.

## **Review of Relevant Literature**

### **Studies on changing Family structures in the entire World**

Clarke (1972) argued that the social and economic ties of the family weakened in modern societies but affection, child affinity and religion were the stronger lasting bonds in it. Relaxation in divorce legislation inevitably leads to an increase in the number of divorces. Jahangir (1985) discussed the influence of education, income, family structure, residence, and duration of marriage on the marital relationship in the families of developing countries.

Nossier (2003) described various factors that affect the family structure in North Africa. Waite & Lehrer (2003) described the benefits of marriage in the United States. Longevity is one of the most important benefits of marriage. Marriage is responsible for the good physical and mental health of a couple. It is also responsible for economic progress of the families .Their work proved the importance of marriage in the society. Women in the Developing countries experienced the well-documented increased health risks in childbearing

age. A great proportion of women die during the pregnancy complications in the rural areas of Bangladesh. (Menken et al 2003).

Silva (2003) discussed various determinants for changes in family structure in Southern Asia. He proved that emerging feature in the modern family system is the changing attitude towards the value of children. In traditional societies, where child labour was an economic source to the family, more children were preferred to the fewer. But as the economic contribution from the children in a family decreased, because of the move away from agriculture, the need for large numbers of children decreased. Improvements in health care and child survival also contributed. The emphasis was on the quality of life rather than the quantity of children, a new concept added to family values. The reduction of the family size could be attributed partly to the economic difficulties, low levels of income, the high cost of living, the costs of education of children and the desire to maintain a better standard of living, which is best achieved within the more affordable smaller size family. Consequently, the nuclear family with its parents and children became the model of society and soon ruled out the traditional, extended family usually formed of three generations.

Badran (2003), Bernard (2003) , Bigombe and Khadiagala (2003) , Cliquet (2003) , El-Haddad (2003) , Jelin and Díaz-Muñoz (2003) , Nossier (2003) , Quah (2003 ) and Silva (2003) submitted their reports to United Nations in which they discussed in detail the major trends that affects families. Their work covers Central America & Caribbean, Europe, sub-saharan Africa, Gulf countries, Arab Countries, South America, North Africa, Central and eastern Europe, East and South-East Asia and South Asia.

Hagewen & Morgan (2005) discussed the trends in ideal family size in United States. NELSON (2006) explored how single mothers incorporate into the family life. He demonstrated that single mothers are willing to share this protected realm of family life with a new man (a fiancé or cohabiting boyfriend) as they pursue the goal of what has been called the “Standard North American Family. Todd (2011) described the family structure in detail and proved its relation with local development. He analysed concepts regarding family structure.

### **Studies on the family structure and urban Transition in Pakistan**

Baqai (1967) studied changes in Pakistani family and analyzed families of the middle class in Lahore. Iqbal (1998) studied family structure in depth and analysed effects of urbanisation on the family structure of Pakistan. He verified various hypothesis regarding urbanization and family structure. Zahir (2001) proved that norms of larger family size were quite consistent. Son preference was common. Unwanted pregnancy is also seen in those women who have three or more children.

Mahmood & Shirazi (2001) indicated that the joint family system along with religion and customs are the most important cause of the rapid population growth rate in Pakistan. Mahmood & Ashraf (2005) made a qualitative analysis of the family structure in upper and middle class of Faisalabad city. Mahmood (2007) found that the rising nuclear family system in the cities (due to industrialization and urbanization) is the cause of various crimes in bigger cities of Pakistan because family control is losing on young people and they are involved in various crimes.

### **Studies on youth and Family**

Gauthier et al (2004) made an interesting comparison in the developed countries and discussed the important question regarding the relationship of children and parents with special emphasis on the role of father. Parents are devoting more time to their children at present. Sobotka (2004) explained the relationship of the child bearing with low fertility in the European countries.

Purkayastha (2000) described the phenomenon of domestic violence in the South Asian Muslim population living in the United States. Purkayastha (2000) examined domestic violence experiences among South Asian youth in the United States. Ackerson et al (2007) found that Domestic violence is associated with higher odds of smoking and chewing tobacco in India

Kumpher and Alvarado (2003) proved that strong families and effective parents are critical for the prevention of youth problems. Griffin, et al (2000) examined the parenting factors that effect on the adolescent behaviors in the urban minority youth and to what extent this relationship can be moderated by the family structure.

Sultana (2003) suggested that majority of the married youth are desirous of having first birth soon after the marriage regardless the place of residence, level of education attainment and socio-economic background. Father literacy and age at marriage emerged significantly and associated with the family building intentions of young people in Pakistan. Gorman-Smith, et al (1998) evaluated relation of patterns of family problems and pattern of delinquent behavior in the adolescent youth in the minority of inner city.

Gustman & Steinmeier (1979) analyzed the separate influence of labour market and the family on the school enrolment and labour supply decision of teenagers and young adults. Carlson & Corcoran (2001) examined the effect of various family structures on behavioral and cognitive outcome for children aged 7 to 10. Bachman's book (1970) entitled youth in transition: the impact of family background and intelligence on work is marvelous contribution in this domain. Yusuf (2008) discussed in detail concept of radicalization in relation to youth in Pakistan and its implication for US policy in Pakistan.

Durrant (1998) assessed the participation of youth in the work and schooling activities in Pakistan. He tried to find out household and community impacts on the youth. Arif and Chaudhry (2008) examined youth employment in the context of demographic transition in Pakistan. They proved the benefits of demographic transition in terms of rising share of youth in the total population in the local market. They argued for youth employment policy for Pakistan to get benefit of ongoing demographic transition because Youth are a source of development and a high priority may be given for preparing them with appropriate skills needed for their adjustment in the labour market.

## **Methodology**

Family is a basic social institute and is changing with changes in society. It is also an important source of socialization and any change in the family has a link with culture. Family is changing due to multitude factors and there is dire need to see its impacts on youth in relation to urban transition. Following are the main objectives of study:

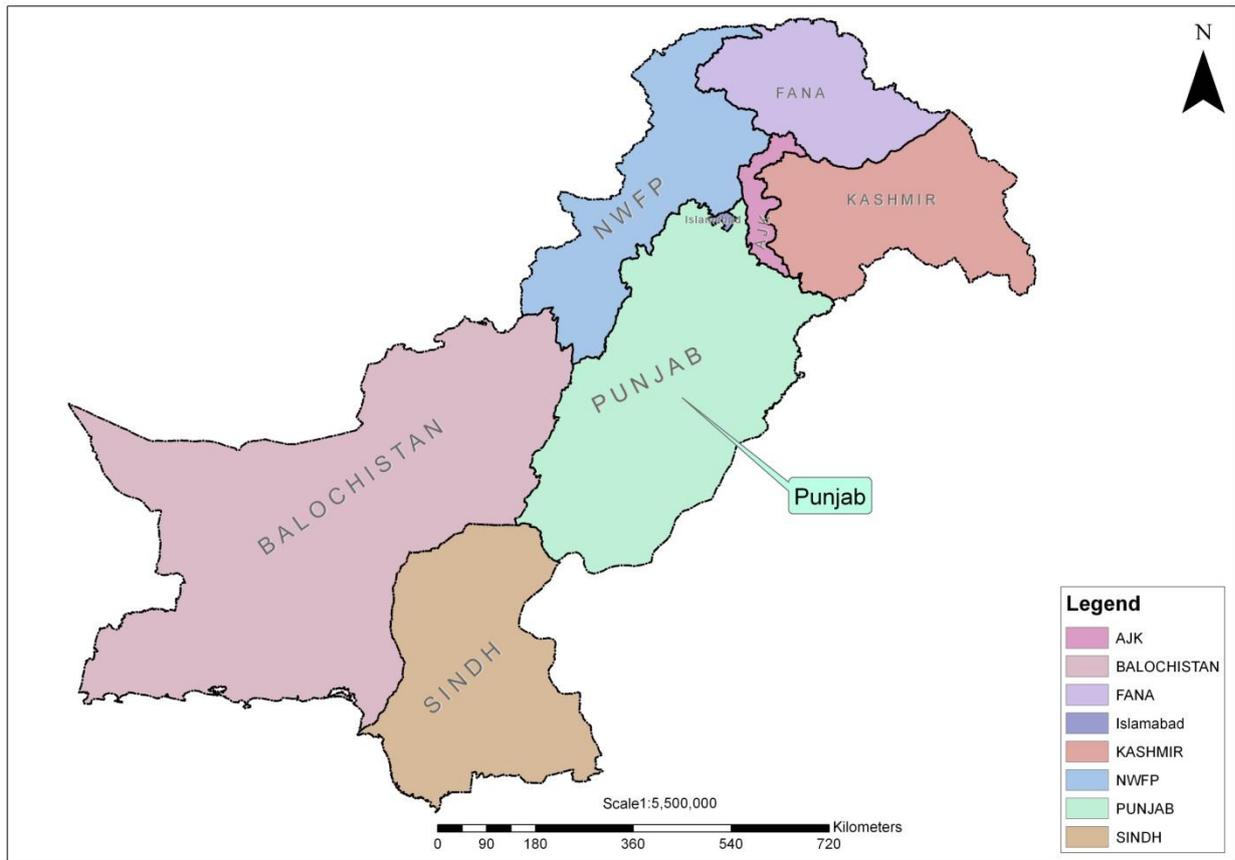
- To find how changing family structure affects on youth in Punjab
- To find impacts of urban transition on youth in relation to family structure
- To suggest suitable recommendations to reduce unfavourable effects of changing family structure and urban transition on youth.

There is dire need of reviewing literature and developing theoretical frame work to fulfil the above-mentioned objectives. Research journals, on line research work, publications of United Nations Organization and various national and International Publication were consulted to form theoretical frame work.

Our study was conducted in Punjab, Pakistan. Punjab is the province of Pakistan. (Figure 1). Punjab is selected because it is the largest province in terms of population and there is a large diversity of cultures within it. Its name means land of five rivers (Chenab, Jhelum, Indus, Bias and Ravi). Inside Pakistan, Punjab is the most populous province (56% of the national total). According to the latest census (1998), Punjab was falling shortly behind the national average urbanization rate. 31.2% of the province's population was living in urban areas at this time (National average of 32.5%). In 1947, Punjab was divided into two parts: Indian Punjab and Pakistani Punjab. It consists of 34 districts. (Figure 2).

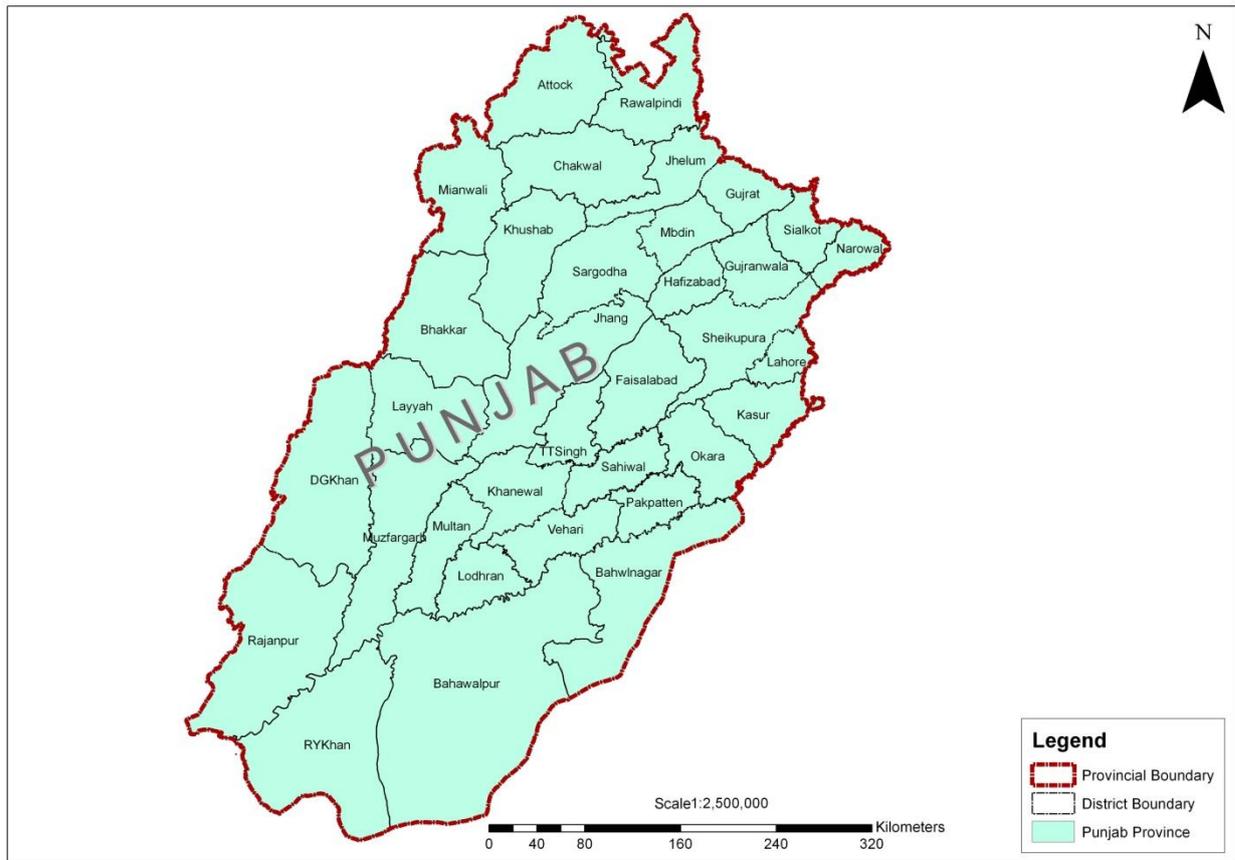
Our research is based on both secondary and primary data. Secondary data was collected from Population Census Organization of Pakistan, Pakistan Demography and Health Survey and other publications of Government and International Organizations. Primary data was collected through Survey, Observation, Interviews and Focus Group Discussion. Survey to get primary data was conducted from 15<sup>th</sup> January,2009 to 15<sup>th</sup> March,2009. During this period, detailed interviews with respondents were also conducted to get their views regarding impacts of changing family structure and urban transition on Pakistani youth. Structured questionnaire was designed to collect information regarding family structure changes, role of urban transition and changing family structure on Pakistani youth, problems and benefits of youth in each family system and in rural and urban areas. Close ended and open-ended questions were included to get enriched answers from the population. Structured questionnaire was designed to collect data pertaining to the personal information of the respondents.

**Figure 1. Provinces of Pakistan**



Source: Survey of Pakistan

**Figure 2. Districts of Punjab**



Source : Survey of Pakistan

Study Area-Punjab is very large both in terms of area and population so it was very difficult to cover full population due to time constraints and requirement of the study. Primary Data was collected from the rural and the urban areas of Punjab through survey. The sample size is 1000. This is not a large sample size as compared to the population of Punjab but a careful sampling had been made to make it geographically representative by collecting information from the dispersed rural and urban areas of Punjab. 600 questionnaires were filled from the urban areas and remaining 400 questionnaires from the rural areas. However, 600 questionnaires were filled from 30 dispersed urban localities in Punjab in order to make this sample more representative of the total population of Punjab. 20 questionnaires from 30 different locations of urban areas of Punjab in order to make this study the most appropriate representative of Population of Punjab. In addition, 400 questionnaires were filled from four villages (One hundred from each village.) selected in Punjab to represent its rural population.

Focus Group Discussion (FGD) is a technique which is used to collect qualitative view regarding issues. Focus Group is a group interview or discussion (i.e., qualitative approach)

to access memories, feelings and perceptions concerning a specific focused topic. 8 to 10 persons are participating in a discussion and a moderator ( anchor person ) is present among group to keep the discussion on track and get information and comments from the participants.

In the first phase of research, 1000 questionnaires were filled from the above-mentioned areas in order to know the current trends in family structure and society. In the second phase, qualitative views were collected through in-depth interviews from respondents from the above-mentioned areas. In a third phase, Qualitative research methods like Focus Group Discussions (FGD) were also conducted to collect qualitative views regarding perceptions of individual about family structure and urban transition impacts on Pakistani youth. In the fourth and last phase data was analysed through SPSS (Statistical Package for Social Sciences). A descriptive statistical technique -Cross tabulation was utilized to compare variable.

## **Results /Discussion**

Pakistan is in the second stage of demographic transition in which young population has great proportion of the total population of a country. Therefore, demographic transition has crucial role in the economic development of country by bringing large number of youth in the working-age population. Pakistan should get benefit of its youth by utilizing them in a constructive way.

A key element in demographic transition consists of an often substantial but always temporary rise in the growth of youth population, age 15-24, accompanied by its rising share in the total population. (Arif and chaudry, 2008). It is evident from table 1 that there is a gradual in the proportion of youth (age 15-24) in Pakistan. According to the existing population projections, its young adult population will continue to expand for several years because children under 15 years is still estimated 35% of the total population in 2010 (WPP ,2010). This figure is down from a maximum of 44% in 1990. As the young adult relative share is downward oriented worldwide since 1985, it is now peaking in Pakistan. The absolute number of young adults aged 15-24 will expand up to 2035, but they will more likely represent a smaller share of the total population in the incoming years. As the demographic pressure on education needs decreases, an expanding workforce could be a golden chance for Pakistan to utilize its youth in proper way through investing more on their education per capita. Youth can play a major role in the economic development of Pakistan

Youth can also play an important role in achieving the Millennium development goals in Pakistan. MDG No. 1 is to eradicate extreme poverty and hunger can be achieved through engagement of youth in poverty reduction strategies and youth vigilance in combating corruption. The second Millennium development goal is for achievement of universal primary education can be achievable with help of youth. They can perform role of teacher for increasing primary education. They also can motivate parents to send their children to schools. Empowering young women in Pakistan will be helpful for achieving the third millennium development goal of promoting gender equality and empowering women. Importance of youth in the remaining millennium development goals cannot be denied.

It will be impossible to achieve the millennium development goals without the participation of youth. Family is basic institute for monitoring all the activities of youth. Being a primary social control group, family has more control on its members. Therefore family can play an important role in achieving the millennium development goals through the motivation of youth.

Table 2 shows the composition of respondents. 60 % and 40 % respondents are from the urban areas and the rural areas. 43.5 % respondents are male while 56.5 % are females. 10.7, 74.5 and 14.8 % respondents belong to the Upper economic class, Middle economic class and lower economic class respectively. Respondents are taken from the all age groups (16 to 65 years). Respondents are also from all education level.

Family structure is changing rapidly from the Joint family system to the Nuclear family system in both rural and urban areas due to multitude factors like role of media, urbanization, industrialization and globalization. It is evident from table 3 that nuclear family system is increasing by 24.3 % in urban areas and 13.94 % in rural areas in one generation. Rural – Urban migration is responsible for changes in family structure. It is not possible for migrant person to bring the whole joint family to cities due to lack of space and economic reasons. Therefore, nuclear family system is increasing in urban areas.

*“There is privacy in nuclear family system. There are fewer chances of quarrels with mother in law. Proper education facilities can be provided in nuclear family system. More attention can be given to female education. But in nuclear families, children are deprived from affection of grandparents. If somebody is ill no other person is present to look after.”*(Female, in FGD, from rural area)

*“Media is playing an important role in breaking joint families. Young generation is inclined towards nuclear family system.”*(Male, in FGD, from urban area)

*“Nuclear family system is increasing in urban areas because people in urban areas feel more independence in nuclear family system.”*(Male, in FGD, from urban area)

Households in Pakistan are predominantly male-headed, with 92 percent of households being headed by a male and only 9 percent being headed by a female. The proportion of female-headed households is about the same in rural (9 percent) and urban areas (8 percent). This could be attributed to out-migration of the male population from rural areas to urban areas or even overseas for employment purposes. Female headship of households is of concern to policymakers, particularly those dealing with poverty issues, because it is usually financially difficult for a woman to manage a household alone. Households in Pakistan tend to be large because of the predominance of the extended and joint family system. Economic pressure can also force middle- and lower-income families to live with their in-laws and other relatives because they cannot afford to build or rent separate dwellings. (NIPS 2008) It was proved that boys from single-parents families had behavior problem. Eating dinner together in family resulted into less aggression in youth. (Griffen et al , 2000).

As stated earlier, Family is a basic social institute. Minor change in it effects it's all members. Youth is more affected than other elder in family. Changing family structure has both positive and negative impacts on Pakistani youth. Table 4 shows that majority of the respondents (73.8 % in rural areas and 71.2% in urban areas) agreed that chances of domestic violence is more in joint families. Therefore, when children move from joint family to nuclear family, they are in advantage of getting rid of the domestic violence that is more frequent in the joint families. Domestic violence in the family results into the various problems of Pakistani youth. Depression is one of the major problems. After becoming depressed as a result of domestic violence, young people may start to take drugs. Pakistani youth is more vulnerable in becoming drug addicts. Domestic violence also effects on the mental health of young people and they become psychological patient. In extreme cases, it may result into the suicide.

*“Chances of quarrels and divorces are rising in joint family system. There is less freedom and work load may increase if other family members are not cooperative.”*(Female, in FGD, from rural area)

Separation of parents has also bad impacts on Pakistani youth. Single parent family children may become victim of various psychological problems. It has negative impact on the personality development of Pakistani youth. Although divorce is not considered good in Pakistani society yet it is not unavoidable. Divorce in nuclear family has drastic effect on children because there is no other family member to look after them but in the joint family there are other members of them family to care them. Divorce is equally present in both urban and rural areas. It is rising in urban areas due to economic depression in cities of Pakistan due to rising Talibanisation and war against terrorism.

A majority of respondents (78.8 % in rural areas and 74 % in urban areas) agreed to the statement that a child has better facilities of education in nuclear families. Family size is small in the nuclear families due to easy access to contraceptive and individual responsibility of caring children while in the joint family condition is reversed. It does not mean that a child who is living in the joint family has no chance of getting education. It is related to economic level of that family. Child may have better education facilities in the rich joint families but it is very difficult to provide better education facilities in the poor joint families.

Sense of security in family has also bad impact on youth. If sense of insecurity is present in parents, it will obvious be transfer to their children. lack of confidence, devoid of motivation and frustration are common impacts on youth of insecure families. Majority of respondents (75.3 % in rural areas and 77.5% in urban areas) agreed that there is more security in the joint family system. Therefore nuclear family children are in disadvantage and there are more chances of getting victim of abovementioned problems in the nuclear families. Male is considered more dominant in Joint family system. (Table 4)

Table 5 and 6 compare perceptions of respondents regarding personality aspects of youth in nuclear and joint families. They consider that children are more independent in nuclear families while children are more selfish in joint families.

## **Policy Recommendations**

There is dire need to take appropriate steps to minimize the undesirable effects of the family structure change and urban transition. We are suggesting following recommendations:

### **At family Level**

In urban areas, parents are much busy in the material pursuits and do not have time for their children. Children feel alone and may become victim of alienation especially in nuclear families. Parents should give maximum time to their children.

- Parents should try to understand the psychological and the emotional problems of youth.
- They should not force youth in choosing their career. Youth should be allowed to choose their career according to their own choice.
- More concentration should be given on the education of young people. A proper atmosphere of education is the right of the youth.
- It is the duty of family to teach ethical values to the youth in current scenario of social change.
- Relation between the parents and the children should be friendly so young people can easily share their ideas, problems and feelings.
- Parents should not impose the decision on youth.
- Youth should be allowed to choose their life partner according to their own choice. In this way, chances of divorces and domestic violence would be decreased in Pakistani families.
- Generation gap should not be the hindrance in using the latest technology. Youth should be allowed to use all the latest facilities like internet, Computer and other latest technology in the family.
- It is the responsibility of family to provide the opportunities to the youth for gaining the exposure and raising the confidence level.
- Family is the best place for motivation of youth to participate in achieving the millennium development goals.

### **At community Level**

- It is the responsibility of all communities in society to encourage youth at all level.
- Opportunities of participation of youth in all important events should be provided

### **At National Level**

Government should provide better education facilities for youth.

- Special incentives should be given to families for sending their children to colleges and universities.
- Government should provide employment to youth.
- Participation of youth in politics should be encouraged. Special quota for youth should be introduced in future parliament.
- Government should make a long term strategy for getting maximum benefit from its youth that constitutes 21.6 % of total population of Pakistan.
- Government should provide equal education facilities to youth in rural areas.
- Government should provide scholarships to young innovative persons to fulfill their dreams.

### **At International Level**

- International organizations should make long term strategy for solving problems of youth in current scenario of changing family structure and urban transition in developing countries.
- UNO should concentrate on family in Pakistan for successful achieving the Millennium development goals because family is the only institute in Pakistan that can motivate youth to participate.

### **Conclusion**

The study describe here is to investigate family structure and urban transition impacts on youth in Punjab, Pakistan. Study was conducted in Punjab, Pakistan. It is based on both primary and secondary data. A structured questionnaire was designed for seeing changes in family structure and its impacts on rural and urban areas. The study revealed that proportion of youth (age 15-24 years) was 21.6% in 2010 and it will continue to increase for many forth coming years because Pakistan is in second stage of demographic transition in which young population has large proportion. Youth can play an important role in achieving millennium development goals through getting motivation from the family in Pakistan. Domestic violence along with separation of parents is the major source of psychological problems of youth. Chances of domestic violence are more in joint families. Youth is more independent in nuclear families, but also more selfish in joint families. There is need of encouragement of Pakistani youth at family, community, national and international level.

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**Table 1. Percentage of youth population in Pakistan**

Year	Total Population(Million)	Percentage of Children Population age 0-14	Percentage of youth Population age 15-24
1981	84.254	44.5	19.2
1998	132.352	42.4	18.9
2005*	156.695	39.2	20.7
2006*	160.203	38.6	21.0
2007*	163.728	38.0	21.2
2008*	167.271	37.4	21.4
2009*	170.834	36.7	21.5
2010*	174.654	36.1	21.6

Source: Population Census Organization of Pakistan

\* Estimated

Pakistan Demography Survey, FBS

US Census Bureau

**Table 2. Composition of Respondents**

<b>Composition of Area of Respondents</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Rural	400	40.0	40.0	40.0
Urban	600	60.0	60.0	100.0
<b>Total</b>	<b>1000</b>	<b>100.0</b>	<b>100.0</b>	
<b>Gender of Respondents</b>				
Male	435	43.5	43.5	43.5
Female	565	56.5	56.5	100.0
<b>Total</b>	<b>1000</b>	<b>100.0</b>	<b>100.0</b>	
<b>Economic class of Respondent</b>				
Upper economic class	107	10.7	10.7	10.7
Middle economic class	745	74.5	74.5	85.2
Lower economic class	148	14.8	14.8	100.0
<b>Total</b>	<b>1000</b>	<b>100.0</b>	<b>100.0</b>	
<b>Education Level of Respondents</b>				
Illiterate	69	6.9	6.9	6.9
Primary	117	11.7	11.7	18.6
Matric	183	18.3	18.3	36.9
Intermediate	165	16.5	16.5	53.4
Bachelor	183	18.3	18.3	71.7
Master	281	28.1	28.1	99.8
M.PHIL	2	.2	.2	100.0
<b>Total</b>	<b>1000</b>	<b>100.0</b>	<b>100.0</b>	
<b>Age of Respondents</b>				
16-20	15	1.5	1.5	1.5
21-25	134	13.4	13.4	14.9
26-30	193	19.3	19.3	34.2
31-35	152	15.2	15.2	49.4
36-40	178	17.8	17.8	67.2
41-45	104	10.4	10.4	77.6
46-50	104	10.4	10.4	88.0
51-55	55	5.5	5.5	93.5
56-60	38	3.8	3.8	97.3
60 +	27	2.7	2.7	100.0
<b>Total</b>	<b>1000</b>	<b>100.0</b>	<b>100.0</b>	

Source : Primary data collected through survey 2009

**Table 3. Family structure change in Punjab , Pakistan**

	Family structure in Old Generation				Family structure in Present Generation				Percentage Increase	
	Nuclear		Joint		Nuclear		Joint		Nuclear	Joint
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	%		
Rural	208	52	192	48	237	59.3	163	40.8	13.9423077	-15.1042
Urban	300	50	300	50	373	62.2	227	37.8	24.3333333	-24.3333

Source: Primary data collected through survey 2009

**Table 4 The Comparison of Domestic violence, Divorce rate, education facilities, insecurity of couple and dominance of man in Nuclear Family and Joint Family**

		Composition of Area of Respondents		Family structure of Respondents	
		Rural	Urban	Nuclear	Joint
Chances of domestic violence and quarrel is more in Joint Family than Nuclear Family	Yes	295 (73.8%)	427 (71.2%)	456 74.8%	266 68.2%
	No	105 26.3%	173 28.8%	154 25.2%	124 31.8%
More chances of Divorces are in Nuclear Families	Yes	155 38.8%	255 42.5%	219 35.9%	191 49.0%
	No	182 45.5%	252 42.0%	290 47.5%	144 36.9%
	Don't Know	63 15.8%	93 15.5%	101 16.6%	55 14.1%
More Education Facilities can be provided in Nuclear Families than Joint Families	Yes	315 78.8%	444 74.0%	483 79.2%	276 70.8%
	No	85 21.3%	156 26.0%	127 20.8%	114 29.2%
Male is considered more powerful than female	In Nuclear Family	110 27.5%	171 28.5%	169 27.7%	112 28.7%
	In Joint Family	290 72.5%	429 71.5%	441 72.3%	278 71.3%
A couple is feelings more secure in joint family than in Nuclear Families	Yes	301 75.3%	465 77.5%	453 74.3%	313 80.3%
	No	99 24.8%	135 22.5%	157 25.7%	77 19.7%

Source: Primary data collected through survey 2009

**Table 5. Personality aspects of youth in Nuclear Families**

			Youth in Nuclear Families are :					Total
			Prosperous	Independent	Happy	Sad	Selfish	
Composition of Area of Respondents	Rural	Count	51	157	77	92	23	400
		% within Composition of Area of Respondents	12.8%	39.3%	19.3%	23.0%	5.8%	100.0%
	Urban	Count	73	219	159	98	51	600
		% within Composition of Area of Respondents	12.2%	36.5%	26.5%	16.3%	8.5%	100.0%
Total		Count	124	376	236	190	74	1000
		% within Composition of Area of Respondents	12.4%	37.6%	23.6%	19.0%	7.4%	100.0%

Source: Primary data collected through survey 2009

**Table 6. Personality aspects of youth in Joint Families**

			Youth in Joint Families are:					Total
			Prosperous	Independent	Happy	Sad	Selfish	
Composition of Area of Respondents	Rural	Count	89	28	142	84	57	400
		% within Composition of Area of Respondents	22.3%	7.0%	35.5%	21.0%	14.3%	100.0%
	Urban	Count	113	45	232	122	88	600
		% within Composition of Area of Respondents	18.8%	7.5%	38.7%	20.3%	14.7%	100.0%
Total		Count	202	73	374	206	145	1000
		% within Composition of Area of Respondents	20.2%	7.3%	37.4%	20.6%	14.5%	100.0%

Source: Primary data collected through survey 2009

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## Kashif MAHMOOD

### Transition urbaine et structures familiales au Pakistan, le cas de Faisalabad

#### Résumé

Selon les Nations Unies, la moitié de la population du Pakistan résidera dans une ville à l'horizon 2030, un taux à comparer à celui de 40% qui est attendu pour l'Inde. Notre thèse décrit les changements des structures familiales qui surviennent dans le cadre de cette transition urbaine au Pakistan. La famille peut jouer un rôle important dans la réussite des processus de transition urbaine et démographique et la maîtrise de la fécondité. Nous avons mené trois enquêtes de terrain à Faisalabad entre Décembre 2011 et Février 2012 et analysé les résultats au moyen de tabulations croisées, d'une analyse factorielle exploratoire et de modèles logistiques binomiaux. Le niveau de vie, les conditions de vie et de logement, la taille des ménages et les structures familiales sont les quatre déterminants sous-jacents associés aux structures familiales et à la transition urbaine. On observe un consensus qui fait la louange de la famille nucléaire. Les migrations contribuent également à l'expansion du système de la famille nucléaire. L'occidentalisation des familles et la promotion du rôle des femmes au sein de la famille et dans la société sont des changements observables à Faisalabad en raison de la transition urbaine. Les femmes sont beaucoup plus nombreuses que les hommes à vivre au sein d'une famille nucléaire. De même, les classes supérieures sont aussi beaucoup plus nombreuses à former des familles nucléaires que les classes populaires. Une personne éduquée a beaucoup plus de chances de vivre dans une famille nucléaire qu'un illettré. Les non-migrants sont légèrement moins nombreux à former des familles nucléaires que les migrants. Il y a une plus forte probabilité de rencontrer une famille nucléaire dans une zone urbaine que dans une zone rurale. Cependant, le lieu de résidence n'est pas un facteur déterminant dans les types familiaux lorsqu'il est croisé avec les facteurs sociaux. Ces derniers sont déterminants pour expliquer le contraste observé entre les familles rurales et les familles urbaines.

**Mots clés :** Structure familiale, Transition urbaine, Promotion du rôle des femmes, Migration, Transition démographique, Maîtrise de la fécondité, Occidentalisation, Pakistan, Faisalabad

### Urban Transition and Family structure in Pakistan: A case study of Faisalabad

#### Abstract

According to estimates of UNO, by 2030, cities are likely to house about 50 % of Pakistan's population as compared to 40% for India. Our thesis shows a fascinating picture of changing Pakistani family structure with urban transition in Pakistan. Family can play an important role in successful completion of urban, demographic and fertility transition. We conducted three surveys from December, 2011 to February, 2012 in Faisalabad and analyzed data by cross tabulation, exploratory factor analysis and binomial logistic regression. Standard of living, Urban-Rural divide in housing conditions, household size and family structure are four latent factors which operate in relation to family structure and urban transition. There is a consensus praising the nuclear family system and preference for nuclear family system. Migrations contribute also the expanding nuclear family system. Westernization of family, women empowerment in family and society are three major latent changes in Faisalabad owing to urban transition. Females are much more than males likely to live in a nuclear family system. Upper economic class is also much more likely to live in a nuclear family system than lower economic class. There is much more chance to live in a nuclear family system as education level increases from illiterate to literate. Non-migrants are slightly less likely than migrants to live in a nuclear family system. There is a higher probability to meet nuclear families in urban areas than in rural areas. However, the place of residence has no significance on the family type in relation with social factors. Social factors are determinant in explaining the contrast between urban and rural families.

**Keywords:** Family structure, Urban Transition, Women empowerment, Migration, Demographic Transition, Fertility Transition, Westernization, Pakistan, Faisalabad

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