

Consumption Pattern of Pakistani households; Evidence from Pakistan Panel Household survey 2010

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Dedicated to

My parents

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A major research project like this is never the work of anyone alone. The contributions of many different people, in their different ways, have made this possible. Foremost, I would like to express my deepest gratitude to Allah Almighty who is the best guide for all humanity

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Abstract

The study investigates the consumption pattern of Pakistani households and also the impact of remittances on the consumption pattern. To observe the consumption pattern, we have used four consumption categories such as food, non-food, durables and utilities. Using the Pakistan Panel Household Survey PPHS (2010), we have estimated the budget shares of households for food, non-food, durables and utilities. The results show that most of the expenditures were allocated to non-productive activities. Furthermore the study finds that if there is an increase in total income of a household, its budget share for food decreases. And it also proves the Engels's law in case of Pakistan which states that as the income increases, the budget share of food items decreases. In other words if there is an increase in total expenditures, the spending on food decreases. And same is the case when a household receives remittances from abroad, its income increases and budget share of food decreases rather they prefer to spend more on durables or non-food items.

Key Words: Consumption Pattern, Budget shares, Remittances, Engel's curve

Chapter 1

Introduction

Consumption is an important part of our daily life. People allocate their money to fulfill their desires. They try to maximize their utility under living the budget constraint. The way, the members of a household, spend their money and buy different commodities, is called the consumption pattern of a households. . Consumption pattern of a household clearly indicates the living standard of that particular household. The main determinants of consumption pattern are income, household size, distribution of assets and income, number of employed persons in a household, regional characteristics, prices etc. (Siddique, 1982). All these factors affect the consumption pattern in one way or the other.

There is a big change in consumption pattern of developing countries like Pakistan, when there is an increase in income. With the increase in income of a household which is already rich one, this increase leads to increase the consumption of luxuries and poor households tend to increase their expenditures to fulfill their basic needs. So consumption pattern of households varies with the difference in income. The expenditures of both types of households decreases if there is a decrease in income

In 1857, Engels' law was proposed by Ernst Engel which states that if there is an increase in total expenditures, the spending /expenditures share of food items will decrease. A number of studies support this law of Engels'. There are significant fluctuations in consumption pattern of households, especially in developing countries. So it is quite necessary to analyze the

consumption pattern of households in developing countries particularly. Some of the studies prove the validity of Engel's law in case of Pakistani Households such as Ali (1981), Siddiqui (1982). Burney and Khan (1991)'s findings also confirm the validity of Engels's law in case of Pakistan. Their study concludes that the spending elasticities vary with the change in income and so there is a change in household consumption behavior with the change in income. There is a change in their consumption basket. Burney and Khan (1991) observe that the major changings in spending behavior of households were found in both urban and rural areas. They also confirm the economies of scale in many commodity groups. But the data used in the studies is very old and social economic and political conditions have changed. These changes may have influenced the consumption behavior of Pakistani population. Further, incorporating the impact of remittances on spending behavior makes our analysis more interesting. How the overall households allocate their budget shares to different categories of consumption and how their spending behavior changes with the change in income, is the basic agenda of this study.

As we have mentioned before the main determinant of a households consumption pattern is income level of a households. In our study, we have used the total expenditures instead of income to analyze the spending behavior of households. So it is assumed that total income is equal to total expenditures. In our sample, we have also included those households who are receiving remittances from abroad. This study has analyzed the difference in consumption behavior of two types of households, one which is receiving remittances and the other which is not receiving remittances.

Man is social by nature and cannot survive without intermingling with one another. So migration for the sake of earning from one country to another is not a new phenomenon. In developing countries like Pakistan, people migrate mostly for the sake of earning. It has become an

important factor as a source of income. There is a significant impact on social and economic welfare of remittances receiving households. It has numerous impacts on the lives of migrants as well as the families left behind (Rees, 1977). When households receive remittances, it increases the income level of households and also raises the standard of living of these households. It brings a change in the social status of remittance receiving households (Burkey, 1991). The consumption pattern of remittances receiving households is relatively better than the households who are not receiving any kind of remittances. The households who are receiving remittances spend less on food items and prefer to spend more on other categories of consumption (durables, non-food items etc).

As we are studying the impact of remittances in a portion of study, it is necessary to have a look on the remittance behavior of migrants. Here the question arise why do people remit? Do they want to enhance the living standard of their families left behind or some other motives behind it? Lucas and Stark (1985) answered these inquires and pointed out three main reasons that why do people remit. First one is that migrants want to inherit more. So, as much as they remit, their inheritance increases. Secondly they remit for the sake of investment or in other words for the saving purpose. And the third point is that migrants may have the intentions to return back to the country of origin and for future maintenance.

In case of Pakistan, Evidences show that people remit mostly for the sake of future investments when they return back to their home land and partly to increase the living standard of their families. They prefer to invest on education and housing. Migrants send a significant amount of remittances to Pakistan- on average 78% of their total earnings- and thereby increase income of households resulting in increased the living standard of households. Arif (1991)'s study finds that migrants send 75% of total earnings back to their home and unexpectedly, they had only

11% of their total earnings with them when they were finally returned back to their home. But the remittance-receiving families did not waste the whole money they received from abroad and they consumed a major part of it for investment purpose. Remittances play an important role to determine the consumption pattern of households (Khan *et al*, 2007). The importance of remittances at a household level can be seen from the fact that decline in remittances income of households may be an important factor for the rise in poverty in Pakistan during the nineties (Burney; 1988, and Kazi; 1988).

In our study, we find the difference in consumption pattern of a household which is not receiving remittances and the one who is receiving remittances. Adam (2010) finds that households who are receiving remittances, they spend less on food items and durables. They prefer to spend more on investment such as education, skills and housing. Those households who are not receiving remittances, they also differ in the consuming behavior. The difference also comes due to the regional characteristics. If a household belongs to rural area, its consumption pattern is different than that of a household residing in urban area. People living in rural areas tend to spend less on education, durables, housings etc. The reason behind this behavior can be the lack of facilities in nearby villages, lack of information, poor transportation etc. On the other hand they spend more on food items relatively. Nawaz (1982) examined the inter-regional differences in the level of consumption pattern due to increase in income level. He assumed that the prices are same in urban and rural areas; He finds that there is no substantial difference in the consumption pattern of households living in urban or rural areas.

A number of studies are there which analyzed the consumption pattern for both developed and under developed countries and some of them incorporated the impact of remittances on consumption pattern. The important studies relevant to this research are Ludlow (1987),

Hauthakker (1957), Tansel (1986), castaldo (2007), adam (2005) and adam (2010) which are international studies. Whereas in case of Pakistan, Burney and Khan (1991), Siddiqui (1982) Rahman (2007), Ali (1981). Cheema (1985) and Khan, A. (2012) analyzed the consumption pattern of households. But most of the studies are outdated and data used in these studies is too old to analyze the consumption behavior of households. Some studies differ in consumption categories or commodity groups. So changes in consumption pattern cannot be determined using these studies.

The present study focuses on consumption pattern mainly and then the impact of remittances on consumption pattern partly using the most recent data available from Pakistan Panel Household Survey (PPHS).

1.1 Motivation of the study

Many studies have examined the consumption pattern of households in Pakistan and explored the overall effect of remittances and migration on the economic growth. The macro level effects of remittances are studied but only a few focused on micro side. The available research (Amjad 1986; Burney 1988; Burki 1991; Ilahi and Jafarey 1998; Ahmed *et al* 2010) focused on different aspects of migration and remittance-receiving household. (Malik and Sarwar (1993) analyzed the consumption pattern of migrants and non- migrants using the Household Income and Expenditure Survey 1987-88. But these studies differ not only in their scope but also the data used in these studies is too old to compare the recent consumption pattern of a household as consumption is dynamic in nature and human needs change with the change in time. There is scant empirical research to differentiate the consumption behavior of those households who are receiving remittances and the ones who are not receiving remittances. Using the Pakistan Panel Household Survey (PPHS), we have explored the difference in consumption pattern between two types of households. How these households allocate their budget shares to different consumption categories and what are their priorities in consumption?

1.2 Objectives

So the overall objective of the study is to analyze the consumption pattern of households and particularly to see the impact of remittances on this pattern using the recent cross-sectional data set from PPHS 2010. The objectives are;

- To estimate the budget share of households and to check out how they are allocating their budget share to food, nonfood, durables and utilities;
- To analyze the consumption behavior of remittance- receiving and non-receiving households;
- To explore the difference in budget allocation to different consumption categories between remittance-receiving and not-receiving households; and
- To test the Engel's law in case of Pakistan using the recent data set PPHS¹ (2010)

¹ PPHS= Pakistan Panel household survey 2010 conducted by Pakistan Institute of Development Economics

1.3 Planning of the Study

Our study consists of seven chapters. The first chapter is introduction which introduces our topic, motivation and the objectives of the study. The second chapter is about theoretical framework of our research which explains the basic concepts related to our topic. The third chapter is literature review where we have reviewed the related studies. In fourth chapter we have discussed the data source and variables description. Methodology is described in chapter fifth which elaborates our model. The Results are discussed in chapter six. Then there is seventh and last chapter where we conclude our study and recommend some policy implications.

Chapter 2

Literature Review

2.1 Introduction

The literature review is quite helpful in order to analyze the consumption behavior of households and also to understand the impact of remittances on migrant sending households. In Macro perspective, particularly, aggregate moves are studied and an effort is made to answer the questions related to economic development, growth and labor market concerns. However in micro perspective, consumer behavior is studied to analyze the household's consumption pattern and the impact of remittances on household's consumption. Related to household behavior, there are many studies conducted nationally and internationally. But on national level, there is no studies which capture the impact of remittances on consumption pattern using the recent data.

So we divide our literature review in two sections. One section includes the literature review related to international level and the other section contains the studies which are found in case of Pakistan. Furthermore, there are sub-sections which include the literature review related to household's consumption behavior and impact of remittances on them.

2.2 At National Level

In developing countries like Pakistan, as the real income increases, consumption pattern of household's changes. According to Engel's law as the income of a household increases, budget share of food items decreases. The households prefer to spend more on other commodities rather than food items. Siddiqui (1982) estimated Engel's law in case of Pakistan using data from

Household Income and Expenditures Survey (HIES). The study concludes that Engel's law is valid in case of Pakistan. The share of expenditure on food decreases as income of household increases. The study finds the demand elasticities for necessities are lower while the demand elasticities for higher in the case of Pakistan.

To examine the consumption of food in rural area of district Nowshera, Begum *et al* (2010) conducted a study. They investigated the impact of different socio—economic factors food consumption in rural areas. They interviewed a small random sample of 66 households to collect the related data set. The results show that there is a positive relationship between household income and food consumption. As the size of household increases the expenditures on some specific food items increase.

If we take the case when there is increase in income which is due to remittance, then what will be the consumption pattern of households? What will be the difference between the remittance receiving households and those who are not receiving? Remittance are become a significant source of income for developing countries. Many evidences show that in developing countries, most of the time migration is done for the sake of earnings. So when a country receives remittances from abroad, it impact positively on the economy of that country. As Pakistan is a developing country, remittances are contributing a lot to the growth of economy. Burney (1988) conducted a study to investigate the impact of migrant's remittances from Middle East on the economy of Pakistan. He used times series data set for analysis from 1970 to 1986. He checked out the determinants of remittances from Middle east to Pakistan. He concludes that remittances to Pakistan have reduced the current account deficit and also increased the foreign exchange reserves in Pakistan. The study also finds the increase in the coefficient of remittances to 1.45. It also shows that private consumption was sensitive to expected inflation rate.

Remittances are helpful to enhance development and growth of a country. To analyze the benefits of remittances in case of Pakistan, Amjad (1986) conducted a study using data from International Labor Organization (ILO) survey phase 2 migration studies. In his study, he used time series data from 1975 to 1985 for total remittances, net income from abroad, balance of payment and per capita income in Pakistan. The study concludes that major part of remittances is being financed by remittance. In 1982-83 Pakistan received maximum remittances from Middle East. Almost 75% remittances were received from Middle East and it helped to balance the payments and repayment of debt-servicing. In that particular period aggregate consumption in Pakistan increased. The remittances also increased the small scale industries, housing, investment and businesses. Due to increase in remittance, the demand for durables was also increased. It positively affected the small scale industries in Pakistan.

The remittance behavior of migrants is an important component of their overall international financial flows. The empirical literature has analyzed the propensity to remit as a function of migrants' socio-economic characteristics. Betin *et al* (2009) estimated a remittance equation that detects the main determinants of remittance behavior while addressing endogeneity and reverse causality relationships between remittances, income consumption and savings. They used simultaneous equation model with double censoring, where immigrants' earnings, consumption and remittances are jointly determined. They conclude that endogeneity is indeed affecting both immigrants' pre transfer earnings and consumption as determinants of remittance behavior.

Adam (1988) analyzed the income distribution and other asset accumulation in rural areas of Pakistan. By dividing the remittances into two categories, internal and external, he used income decomposition techniques. Data was panel which was collected from 727 households. In asset accumulation model, five type assets were added which are as follows, irrigated, rain-fed,

livestock agricultural capital and non-farm assets. The agricultural capital was accumulated due to internal remittances while the accumulation of land was due to external remittances. His results show that income distribution is positively related with internal remittances while it is negatively related with external remittances. As internal remittances are earned by the lower income group so it does not make a big difference on income inequality and according to his results it was less than 3 percent. On the other hand external remittances have negative effect on income distribution as the people who migrate belong to upper-income group and they have afforded the migration cost from Pakistan to abroad. External remittances caused 12 to 14 percent income inequality. The author suggested that policy makers should take into account the positive effect of internal remittances so that the income inequality can be lessened.

In developing countries, it is become a trend to send people abroad by spending their assets. To accumulate more assets in future they have to sell some assets so that they can send their fellows abroad. So the main factor behind immigration is socio-economic uplifting. The families left behind expect from the migrants. In order to analyze the behavior of households who send their relatives abroad by spending their assets, Tahir *et al* (2011) evaluated the consumption pattern of those households in rural areas of Gujrat in Pakistan. They analyzed how assets are conveyed. For data collection two villages around Gujrat were surveyed and simple random sampling techniques were used. The study shows that people in those areas have sold their assets, ornaments and land to meet immigration costs and mostly are settled in European countries and Middle East countries. Furthermore, most of the immigrants stay in host countries for a specific period of time and after accumulating the targeted amount of money, they return back to home country and settle some business. The remittances sent back are not only used for housing , saving etc. but also to return loans they borrowed.

Irfan (1999) overviewed the profile of immigrants from 1947 to 1997. He observed that over the five decades immigration has affected the households positively and people have increased their consumption and are spending more durables. Further there is a reduction in poverty among the people who are receiving remittances from abroad.

To check the impact of remittances on Pakistan economy Batzen (2000) conducted a study. He used the primary data which was collected from the districts of Gujrat and Jehlum. Two functions of investment and saving for immigrants were included. The study investigates that how far remittances are helpful in capital formation and productive investment to increase employment in Pakistan. He finds that people who migrated were paid low in home country. And there is a positive impact of remittances on investment at small scale. Migrants who went to European countries invested more than the people who went to Middle East countries.

Arif (2010) conducted a study based on Household Survey on Overseas Migration and Remittances (HSOMR). The survey has information regarding the migrants in Saudi- Arabia. In this study the main objective was to examine the main social and economic impacts of remittances on the households who have sent their members (at least one) abroad. We see that there are many other related issues such as migration costs and the channels through which migrants send money back to home. The author considered these issues and explored that remittances are helpful in increasing the societal welfare of these remittance receiving households. The results also show that there is a reduction in poverty due to increase in remittances and an increase in household expenditures.

Ahmad *et al* (2010) also checked out the impact of remittances on economy and household welfare. Their results show that there is a positive relationship between remittances and Gross Domestic product and household consumption. In this study general equilibrium framework was used and micro econometric analysis was done. So if remittances are increased, the consumption will increase and in turn poverty will decrease. Migrants' remittances and resident Foreign Currency Accounts (FCA) represent a considerable part of Pakistan's current account inflows, and historically a large proportion of the trade and services account deficit was covered by these inflows. Hyder, Z. (2003) used the Johenson's model and cointegration technique to investigate the relationship between immigrants' remittances, premium and foreign currency account (FCA) in case of Pakistan for 1993-98. The results show that variables are cointegrated from 1993 to 1998 but there was not a significant relationship after April 1998. It might be due to nuclear test in Pakistan. The important determinant of exchange rate and trade policies was premium and it has also impact on foreign remittances. By reducing the time period of remittances transfers, banking system can be efficient otherwise workers use non proper channels to transfer the money which takes less time. For this purpose, the banks will be needed to compete with informal sectors.

To estimate the Pakistani household consumption pattern Malik and Sarwar (1993) used the Household Income and Expenditures Survey (HIES) from 1987 to 1988. They analyzed the data with and without remittances. Basically the objective of the study was to observe the difference in consumption pattern of households. The estimations show that the poor people have high marginal propensity to consume and same was with the people who receive internal remittances. But those households who are receiving international remittances, have low Marginal propensity to consume (MPC). The Marginal Propensity to consume of both the foreign remittances

receiving households and internal remittance receiving households was low than those who are living in rural areas and receiving no remittances. One point here should be clear that mostly the people living in rural areas work on fields and they do not receive remittances. They mostly use the self-produced commodities. Moreover MPC¹ was found low in case of NWFP but it was high in urban Punjab.

To explore the impact of remittances on consumption Pattern Arif (2004) checked out the linkages between consumption and poverty using PSEP survey 2000-01. Different areas of four provinces of Pakistan were included for analysis. The results show that the remittance- receiving households do not consider this income as permanent income so they prefer to invest some money in order to get benefits in future. Further the study explains that households tend to spend more on non- food items.

Niaz *et al* (2010) also studies the socio-economic conditions of households in Pakistan. They analyzed that the impact of foreign remittances on households in Pakistan. They concluded that there is a positive relationship between remittances and socio- economic conditions of recipient families' members by improving life. So remittances are helping the economies by increasing welfare of societies.

There are some motivations behind the remitting behavior of a migrant. If one expects to get something in return like investment which is made out of remittances, so the motivation factor is economic in nature. And if the motivation factor is economic then there is no reason not to believe that this may be spent in more productive consumption as education, housing etc. Nishat and bilgrahmi (1993) identified the behavior og immigrants and the determinants of remittances of remittances from gulf.

The data was collected from Overseas Pakistani Foundation (OPF). After data analysis the study concludes that remitting behavior is based on pure self- interest. There are motivation factors behind the remitting behavior of remitters. Moreover, the period of living abroad income, skills etc. have significant impact on remittances. Finally the author suggested that Government should take such steps that unskilled labor may move abroad easily so that the remittances can be increased. This step will also helpful in reducing the unemployment level. Kazi (1988) analyzed the impact of remittances on employment, wages and balance of payment using the data from 1975 to 1985. He used time series data for his analysis. The results show that employment positively related with skills, education and savings. Further the results also show that almost 33% immigrants who are college graduates returned back but those who have primary or middle education are returned only 15% to 20%. The amounts of remittances are negatively related with inflation rate. So the remittances may have a better effect on prices in Pakistan due to foreign remittances.

2.3 At International Level

The migration from a person from a household makes the households socially and economically strong. They can avail different type of opportunities which were not possible otherwise for example education, housing and health facilities. In case of Philippines, D. Tabuga (2007) examined the entire expenditure pattern so that could examine not only the investments made by remittances- receiving households but also a picture of their life style. In this study three kinds of techniques used at the most because the models were analyzed using three different methods namely OLS, QR and Censored Tobit analysis. The study finds that while there is some degree of conspicuous consumption, there are also evidences that households might be putting the extra income into better uses. Similar to finding of past research papers; remittances induce

households to spend more on education and housing. There is also some evidence that it influences the households to devote more budgets on durables. Again in case of Philippines there is another study conducted by Frank (2001). His analysis was based on the impact of remittances on Philippines economy from a specific area which is named as Pozorrubio. This area was famous for the highest remittances-receiving households. A simple error correction model was used to analyze the data. The study finds positive and negative impacts as well. The study shows that there was a positive impact on public goods and it also increased the consumption of households and the societal welfare but on the other hand due to instable government, there are negative impacts on migration and same on remittances.

Household consumption gets effected by increase in income and if there is an increase in remittances, households' income increases and there is an impact on their consumption pattern. For example in some cases, people prefer to invest on education. Some would like to invest on housing as preferences are different for different consumers or for households. In case of Columbia Sosa and Medina (2005) carried out a study in which he explored what are the potential effects of remittances on living standard of households. The study finds that there is a positive relationship between remittances and education. Further the results show that effects of remittances on living standards of beneficiary households, since because of them, they enjoy living standard of households several quintiles above what they would get without remittances. To investigate the consumption pattern and immigration level in case of Albanian household, Castaldo and Reilly (2007) conducted a comprehensive study. The analyzed that how consumption is being effected by remittances. Albania Living Standard Survey (ALS) was used to analyze the impact of internal and international remittances. The budget shares of households were estimated by dividing consumption into four different categories which are as follow, food,

non-food, durables and utilities. The study explains that there is not a big difference between the households who are receiving internal remittances and those who are not receiving. They are almost same. But the households who are receiving foreign remittances spend more on non-food items and durables and less on food items as compared to the households who are not receiving any kind of external remittances. The coefficients of internal remittances were statistically insignificant in the equation of budget share, whereas the coefficient of remittances from abroad was statistically significant in case of durables and non- food items. Estimations show that the budget share on food of those households who are not receiving international remittances is lower. Those households who are receiving international remittances spend 25% more on durables and almost 16% on utilities. It was also noticed that households who receive remittances spend more on food items too as compared to those who are receiving internal remittances or those who are not receiving any kind of remittances. There might be the reason that the remittance receiving households spend more on better quality food. The suggestion was that Albanian government should take such steps that transferring the remittances is possible easily through the proper channels so that remittances can be used in productive uses.

The determinants of internal remittances in case of Tunisia were examined by Benoit and Vencatachellum (2002). The data used in this study was primary and it was collected from 500 individuals working at domestic level in Tunis. The main property of data is that all female workers are included in sample. Tobit models were employed to estimate the determinants of remittances. Two kinds of remittances were included, one is compulsory remittances and other one is voluntary remittances. The compulsory remittances consisted on full wages and these remittances increased with the increase in female workers while the voluntary remittances were increased with the increase in numbers of brothers.

There is a link between education and remittances. Rodrigues and Horton investigated the link between education and remittances in case of Philippines. They came to know that there is a negative relationship between education and remittances. Because as the stay period of immigrants increases they prefer to unite their family in the host country rather to come back to home country. So the remittances will decrease. Directly there may be some positive effects but overall effect in the long run is negative.

More educated and highly skilled immigrants might not return back to their homeland rather they will prefer to unify their family in the host country while the low skilled immigrants would return back after some specific period of time. Fiani (2006) conducted a study in this perspective. He estimated the relationship between workers' skill and the level of remittances. He made some assumptions for this purpose. First of all he assumed that there is a possible relationship among the immigrants' utility, the consumption of these workers and the amount of remittances. The study concludes that those migrants feel good by sending money to their close ones. It gives them more utility rather than holding the money. Further he concludes that there is a positive relationship between the earnings of migrant's family. Ayas and Ozcan (2004) estimated the determinants of remittances in case of Turkey. The research finds growths rates, the incomes of origin country and host country impact the amount or inflow of remittances. Buch and Kuckulenz (2004) find that there are demographic factors which influence the level of remittances. As much as females are employed in these countries, there is a relationship between the employment of female workers and the remittances.

Two approaches were used by Badawi (1992) to develop a model for remittances. The main determinant of remittances was related to demographic characteristics. The first approach explained that the level of remittances was not only determined by government policies but the

other factors as income and family size etc. Whereas according to second approach the remittances level is determined by the economic environment in both home and the host country. In case of Egypt, Sakka and McNabb analyzed the determinants of remittances. For this purpose, time period was from 1967 to 1991. The study finds that workers wage in host country, the economic conditions in home country, and prices in origin country also affect the level of remittances. So if the prices are high in the home country, it can also influence the level of remittances. As much people tend to migrate out of the country, the remittances will also increase.

Adams. R and Cuecuecha (2010) examine the consumption pattern of Guatemala. The research paper refines and extends the debate concerning how remittances are spent or used and their impact on economic development by using the results of a large, nationally- representative household budget survey in Guatemala. The paper finds that people who are receiving remittances spend less on food and more on durables compared to the households who are not receiving remittances. The study also indicates that remittances also increase the level of physical and human investment. Adam J.R and Page (2005) analyze the impact of remittances and migration in developing countries on poverty. The study concludes that remittances are significantly helpful in reducing the level of poverty in developing countries.

Cox and Ureta (2003) examine the effect of remittances from abroad on households' schooling decisions using data for El Salvador. The Households which are receiving remittances invest more on the schooling. So remittances have a positive impact on schooling as well. So review of literature is quite helpful in order to build concepts related to our topic at national level and as well as at international level.

Chapter 3

Theoretical Framework

3.1 Introduction

This chapter presents the theoretical framework for this study. The aim of the study is to analyze the consumption pattern of households in Pakistan and also to analyze the impact of remittances on consumption pattern. So in this chapter we have briefly discussed the consumption function, Engel's curve theory, nature of consumption and the relationship between remittances and consumption of households.

3.2 Consumption Function

Consumption function is used to analyze the consumer spending in an economy. It was introduced by Keynes in his famous book "The General Theory of Employment, Money and Interest". To calculate the amount of total consumption in an economy, this function is employed. It is created of autonomous consumption that is not influenced by current income and elicited consumption that is effected by the economy's income level.

According to Keynesian law of consumption function

$$C = \alpha + by^d$$

Where c = *consumption of a household*

α = autonomous consumption

$b = MPC^2$ and $y^d =$ disposable income

Basically the consumption function represents the mathematical relationship between income and spending of a consumer. Consumers always try to maximize their utility using the limited resources or income. They always have to face a budget constraint and cannot go beyond that level. So the aim of the present study is to analyze the consumption behavior of households. In order to analyze the spending behavior of consumers, we have taken the household as a unit of analysis. The households spend their income on different things but how they allocate their budget to different consumption categories and what is the share of budget for these different categories, is the main objective of the study.

In our analysis we have taken total expenditures equal to total income. The relationship between income and consumption can be best interpreted by Engel's law. The consumption pattern of households is observed using one year cross sectional data. So it is assumed that prices are fixed or in other words we can say that all households are facing the same prices. So using this assumption we can write the following equation

$$EX_i = \alpha + \beta_i I_i + \varepsilon_i$$

Where EX_i is expenditures on i^{th} good and I_i is total income of a household. This equation represents the Engel's curve.

² Marginal Propensity to consume

3.3 Utility Maximization problem

A consumer always wants to maximize his/her utility under living the budget constraint. So he/she allocates his total budget in such a way that the utility attained is maximized.

It can be written as

$$U = u(q_j) \dots \dots \dots (1)$$

Where utility is the function of q_1, q_2, \dots, q_j which are the quantities of j^{th} goods.

While maximizing his/her utility a consumer has to spend according to the available resources

So this is the budget constraint

$$\sum_{i=0}^n p_i q_i \leq x_i \dots \dots \dots (2)$$

To analyze the consumption behavior on household level, we have used the working-Leser specification, comprises of a popular form of household utility maximization which relates budget share linearly to the logarithm of total households expenditures. Working-Leser model is consistent with household utility maximization problem. In a general form the model is as follows

$$S_{ij} = \alpha_j + \beta_i \ln X_i + e_{ij} \dots (3)$$

Where

$$i = 1, 2, \dots, n$$

S_{ij} = Budget share of j consumption categories in i^{th} households

$\ln X_i$ = log of total expenditures

e_{ij} = residual term

We have extended the model by including more variables such as demographic variables, dummy variable for remittances and regional difference (urban/rural)

3.4 Engel's Law

To analyze the relationship between consumption and budget shares of households, Engel Curve is quite helpful. In this way, it can be helpful in order to improve the policies of Government to raise the living standard of households and the welfare of society in a country. And especially, it describes the relationship between food expenditures and the total expenditures of a household. As food expenditures are the compulsory expenditures in a consumer basket, it is helpful in determining the poverty line and the status of households. Engels curve explains the household's behavior that how they behave when there is an increase in income level. And how their preferences change with the increase in income? Households tend to fulfill their basic need when they have low income. They spend more on food items and gradually they change their consumption pattern with the increase in income. Hauthakker (1957) examined the consumption and income relationships for almost 30 countries. Banks et al (1997) analyzed the Engels curve using micro data. Caglayan and Astar (2012) also examined the Engels law in case of Turkish households. They calculated the income elasticities from Engel curve using the household survey of turkey. All of the studies mentioned above support the existence of Engel's law in respective areas.

3.5 Consumption Categories

We can categorize the consumption on the basis of commodities which are the main part of it. Basically there are four main categories which almost cover all the consumption pattern of a household. The categories are as food items, non-food items, utilities and durables. Food items consist of all those products which are purchased or non- purchased goods such as gifts, or self-produced goods, and also the food which is eaten outside the home. Non- food items include entertainment, personal care, home decoration etc. Whereas durables include T.V, appliances, vehicles and utilities are water, electricity, telephone and fuel etc. We have considered the expenditures of all these consumption categories to analyze the shares of total expenditures to these sub- categories.

3.6 Nature of consumption

Consumption is dynamic in nature and there is a continuous change in it with the change in needs. Consumers have their choices and preferences to spend over a particular commodity. It is assumed that a consumer can make best choices based on his taste, preferences and income.

A consumer has a restricted budget line and he has to maximize the utility using the limited budget. So it is assumed that consumer is rational. Same is the case with households. A household wants to maximize its utility using the available limited resources. So if a household is receiving money from abroad, its consumption behavior will be different from the household which is not receiving remittances. In other words the households which have no migrant, their consumption pattern will be different.

In present study, we want to analyze to analyze the welfare of society or the standard of living, it is necessary to observe the consumption pattern of households. The amount of consumption budget clearly indicates the living standard of a household. During the 20th century, the level of consumption has increased at a high rate. The benefits of increased consumption are felt all over the world. Societal welfare is increased. Consumption contributes a lot to the human development when it enhances the living standard of people without harming the well-being of others. But if we look on the other side of picture, the increased consumption creates inequalities.

Due to economic development, there is an increase in industrialization and this advancement is resulted in substantial improvement in living standard of households. With the development in the living standard of society, people try to enhance the quality of life to its maximum point. They are always in search of best alternatives to increase their utility level. They prefer to spend their income on high quality goods. Their spending on appliances also increases if there is an increase in income which leads to an increase of energy consumption. So there is a significant change in energy consumption, particularly in urban areas. It also increases the electricity consumption which is due to increase in electricity appliances or durables.

3.7 Consumption and Remittances

There is a positive relationship between remittances and consumption of households. Empirical studies show that if there is an increase in total income of a households, their spending increase overall. Pakistan has a long history of overseas migration. Migrants send home remittances. At present Pakistan receives almost US\$ 13 billion annually as worker's remittances. In case of Pakistan Malik and Sarwar (1993) analyzed the difference in consumption pattern of households.

Their study shows that with the increase in income due to remittances make the people to spend more. The households who receive remittances from abroad, they normally tend to spend more on durables, housing and investment purposes.

Chapter 4

Data and Methodology

4.1 Data Source and Characteristics

We have used Pakistan Panel Household Survey (PPHS) 2010 to examine the consumption pattern of households and also to analyze the effects of remittances on consumption pattern. The survey is done by Pakistan Institute of Development Economics (PIDE). It contains broad information regarding several aspects related to the living standard of the people of Pakistan and has acquired data at the individual, household and community level. It is a good source of information to grasp the dynamics in consumption pattern of households.

There is also detailed information about household expenditures on different types of commodities, as well as a module on the private transfers received by households including migrant remittances. The total sample size of PPHS (2010) is 4142 households.

The dependent variables of interest for the empirical analysis are the budget shares for four broad categories of expenditure items defined as food, non-food, durables and utilities which cover all the expenditure categories. The spending on food items include the products which are purchased, produced and consumed or received as gifts. In non-food items, we have included clothing, entertainment, transport and other services. The durables consist of vehicles, electronics, furniture etc. The last category utilities include water, electricity, telephone and fuels.

The detail of these four categories is in table 1.

Table 1: Description of expenditure categories

Categories	Category Characterizations
Food items	Procured products, non-purchased products(such as self-produced or gifts), food eaten outside the home
Non-food items	Personal care, Clothing, entertainment, different other products and services, home improvements
durables	Electrical appliances, T.V, vehicles (motor cycle, car, tractor etc.)
utilities	Water, gas, telephone, fuels for home use

The independent set of variables include, place of residence, urban or rural entered to the model as a dummy variable, remittance-receiving and non-receiving households (dummy variable). The household size was also constructed from data. The age of head of household and his/her gender are the main demographic variables used in our analysis. The log of total expenditures was also taken. The other demographic variables are also constructed to analyze the data. Castaldo (2008), Adams (2005) and Hoyos (2004) also used the similar variables in their research related to our topic.

Table: 2 Descriptions of Variables

The description of variables used in our analysis is as follows

Variables	Variable's Definition
Budget share of Food items	The ratio of total expenditures on food to the total expenditures of the household.
Budget share of non-food items	The ratio of total expenditures on non-food to the total expenditures of the household.
Budget share of durables	The ratio of total expenditures on non-food to the total expenditures of the household.
Budget share of utilities	The ratio of total expenditures on non-food to the total expenditures of the household.
Household Size	Number of individuals living in a household
Log of total expenditures	The log of total household expenditures (annual)
Age (years)	The age of the head of the households in years
Sex	= 1 if male, otherwise =0
Region	= 1 if urban, otherwise =0
Remittances	=1 if a household receives remittances, otherwise =0

4.2 Construction of Variables

4.2.1 Budget shares for different consumption categories

- Budget share for food items

$$\text{food share} = \frac{c_f}{EXP_t}$$

- Budget share for non-food items

$$\text{Non – food share} = \frac{c_{non-f}}{EXP_t}$$

- Budget share for durables

$$\text{Durables share} = \frac{c_d}{EXP_t}$$

- Budget share for utilities

$$\text{Utilities share} = \frac{c_u}{EXP_t}$$

4.2.2 Total Expenditures

After calculating the expenditures on four different consumption categories such as total expenditures of food items, non-food items, durables and utilities, we added them all and got total expenditures of a household. The expenditures of these four consumption categories were calculated as

$$\text{Total Expenditures} = \sum_{i=1}^n p_i q_i$$

p_i = price of i^{th} commodities

q_i = quantity of i^{th} commodities

4.2.3 Household size

A family living together under one roof and sharing common meals is named as household. The number of family members in a household is the household size. In our analysis, we have used household as a unit of analysis. The relationship between household size and consumption pattern of households is positive. This relationship shows that with the increase in household size, the expenditures of a household also increase. Many studies have used household size as a main determinant of consumption pattern. Castaldo (2007), Siddiqui (1982), Burney and Ashfaq (1991) and Malik and Sarwar (1993) find positive relationship between the household size and its consumption pattern.

4.2.4 Age and gender composition

The variable 'household head age' is also included as an independent variable in our study. This variable is given the survey. To check the impact of different ages on budget shares of different consumption categories used in our analysis. Demographic variables like gender and household head' age play a vital role in determining the consumption behavior of a household. Radivojevic and Vasic (2012) find that the age of household head impacts significantly on the consumption pattern of households. Radivojevic and Vasic (2012) finds that there is an increase in expenditures with the increase in household head's age. His study finds that the health expenditures show a positive relationship with the age of household's head specifically.

4.2.5 Dependency ratio

We have calculated the dependency ratio using the data from Pakistan Panel household survey (PPHS). The most commonly used formula given by World Bank was employed which is as follows

$$\textit{Dependency ratio} = \frac{\textit{Age less than 15+age above 65}}{\textit{number of people 15 to 64}}$$

We have calculated dependency ratio to include it in our analysis as an independent variable but in our final estimation, we have dropped this variables later due to its insignificant impact on budget shares of different categories.

4.2.6 Region of Residence

We have used dummy variable to describe the urban/rural differences. If household is from urban area it is =1, otherwise its=0. The consumption pattern of households in urban and rural areas is different. They have different eating habits and standard of living. In rural area, folks use mostly domestically produced goods. While in urban areas, there is easy access to schools, colleges, and other facilities. Empirical analysis shows that people living in urban areas spend more than the people living in rural areas.

4.2.7 Sample Size

The sample size of our analysis is based on 4119 households. The rural households are 67 percent of total sample size and urban households are 32 percent. The distribution of sample population by region is given in table 3.

Table 3: Distribution of sample population by region

Region	total	percentage
Rural	2774	67.35%
Urban	1345	32.65%
Total	4119	100%

Source: PPHS 2010

4.3 Methodology

We have estimated the budget shares for different categories (as mentioned above) of households in Pakistan. How the households allocate their income and whether they spend more on food items or non-food items when there is an increase in their income. An Engel function can be described as how the budget shares vary with the change in income of households. Alternatively how the expenditure of a household changes as there is a change in their income resources? (Dewbel 2006). Different functional forms of this model have been proposed in the literature of economics (see Deaton 1980). Working-Leser specification (Working, 1943, Leser, 1963) comprises of a popular form of household utility-maximization which relates budget shares linearly to the logarithm of total household expenditure. The main property of this functional form is that it fulfills the property of additivity³. Through this functional form, we can relate budget shares to the logarithm of total expenditures. We analyze the difference in budget shares of different goods from households who are receiving remittances and those who are not

$$^3 \sum \frac{C_i}{EXP} = 1$$

receiving. Adam (2005) and Zarat Hoyos (2004) also used the same type of functional form to analyze the consumption pattern of Guatemala and Mexico respectively. Castaldo (2007) also did the same type of analysis while using the working-Leser model in his study of consumption pattern of Albanian Households. We extend the working-Leser model (1963) by including more variables in this model in a simplified form.

A modified form of working- Leser model is used in our analysis which can be written as

$$S_{ij} = \alpha + \beta_j \ln EXP + \gamma_i Z_i + \epsilon_{ij} \quad (4)$$

Where

$$S_{ij} = \frac{C_i}{EXP_i}$$

And

$$i = 1, 2, 3 \dots n$$

$$j = 1, 2, 3, 4$$

Where S_{ij} = budget share of good j in households i (we have taken the ratio of household expenditures on good j to total household expenditures). It is worth to mention here that j represents four consumption categories (food, non-food, utilities and durables).

The above equation (1) is equal to Engel's function which is a simple form of it. While comparing the household expenditures one must take into account the demographic variables related to those households. Demographic variables like household size, sex, age, locational factors and dependency ratio affect the consumption behavior of a household. The differences in consumption pattern of households may be due to differences in demographic characteristics. So including the variables in equation (4), we introduce Z_i which denotes the j^{th} household

characters, which we have mentioned before. Now including the social and demographic variables the equation can be written as follows

$$S_{ij} = \alpha + \beta_i \ln EXP + \mu_1 HS + \mu_2 AGE + \mu_3 UR + \varepsilon_{ij} \quad (5)$$

Where S_{ij} = budget share of j^{th} household for i^{th} consumption category

$\ln EXP$ = log of household expenditures

HS = household size

AGE = Age of household head

UR = dummy variable for urban or rural difference

ε_{ij} = is error term

In our analysis, we have also investigated the impact of remittances on consumption pattern of households who are receiving remittances. Due to some data limitations, we have introduced dummy variable in our equation (5) for remittances. So the equation (6) is as follows

$$S_{ij} = \alpha + \beta_i \ln EXP + \gamma_1 D_{REM} + \mu_1 HS + \mu_2 AGE + \mu_4 UR + \varepsilon_{ij} \quad (6)$$

In equation (6), we have included dummy variable for remittance receiving households. So the variable D_{REM} , represents whether a household receives remittances or not. If that particular household receives remittances then it is equal to =1, otherwise =0.

As we have to analyze the budget share of different consumption categories which are food, non-food, utilities and durables. For this purpose, we have disaggregated the analysis into four

categories and this can be written in an equation form. For food consumption, how much budget share is allocated by households, is estimated using the equation (6a)

$$S_{i\ food} = \alpha + \beta_i \ln EXP + \gamma_1 D_{REM} + \mu_1 HS + \mu_2 AGE + \mu_3 UR + \varepsilon_{ij} \quad (6a)$$

For non-food consumption, budget share is estimated using the equation (6b)

$$S_{i\ non-food} = \alpha + \beta_i \ln EXP + \gamma_1 D_{REM} + \mu_1 HS + \mu_2 AGE + \mu_3 UR + \varepsilon_{ij} \quad (6b)$$

To analyze the budget shares for durables and utilities, the equations 6c and 6d are estimated respectively

$$S_{i\ durables} = \alpha + \beta_i \ln EXP + \gamma_1 D_{REM} + \mu_1 HS + \mu_2 AGE + \mu_3 UR + \varepsilon_{ij} \quad (6c)$$

And

$$S_{i\ utilities} = \alpha + \beta_i \ln EXP + \gamma_1 D_{REM} + \mu_1 HS + \mu_2 AGE + 3UR + \varepsilon_{ij} \quad (6d)$$

The above equations were estimated in two different ways. Firstly, the dummy variables were not included while estimating the model. And then the models were again estimated while including the dummy variables. Castaldo (2010) and Adam (2005) also applied the same approach. The above four categories of consumption were estimated to examine the behavior of households towards spending.

Lastly we estimated expenditure elasticities for four different consumption categories, such as food, non-food, utilities and durables, using the elasticity formula which is as follows

$$\varepsilon_i = 1 + \beta_i/S_i$$

Where $i = \text{food items, non - food items, utilities, durables}$

The Ordinary Least Square (OLS) technique was applied.

Chapter 5

Results and Discussion

5.1 Introduction

This chapter presents the results of the study and the interpretation of these results as well. First of all descriptive analysis of all variables is mentioned. Then results are interpreted in four different parts. The purpose of separate interpretation of the four dependent variables food, non-food, durables and utilities is to throw light on all these four categories one by one so that one can understand them properly.

5.2 Descriptive statistics of the variables

Table 4 presents the summary statistics of our analysis. 0.6599 is the average budget share of food items of households which explains the household spending on food items. Similarly the budget shares of non-food, durables and utilities are 0.2343, 0.0154 and 0.1001 respectively which show the allocation of household budget shares to different consumption categories. On average households spend less on durables and mainly they prefer to spend on food items and then on non-food items. The average age of household head is almost 47 years. The mean value of male headed households is 0.9560 which shows that mostly the households are headed by males and only a few households are headed by females.

Table 4 : Descriptive analysis of variables

Variables	Mean	S. Deviation	Minimum	Maximum
Budget share of food	.6519	.2051	.0000291	1
Budget share of non-food	.2343	.14482	0	.9996
Budget share of durables	.0154	.05120	0	.84263
Budget share of utilities	.1001	.08099	0	.71154
Log of total expenditures	11.740	.7610	0	16.539
Household size	7.510	3.9325	1	43
Age ⁴	47.97	14.900	1	105
Sex ⁵	.9560	.2049	0	1
Region ⁶	.3158	.4647	0	1

Source: computed by author

⁴ Households head'age

⁵ Household head if male=1 otherwise= 0

⁶ Urban=1, rural =0

5.3 Share of food items in total expenditures

One of the most important and the basic necessity for life sustainability is food. No one can deny from this fact that food is essential for the existence of human being. For a healthy life proper diet is necessary. If food is not available in a country, it affects the health of its people which ultimately leads to decline in economic growth and development of that country. In our analysis we have estimated the share of food spending out of total expenditures of a household.

The size of household impacts the food consumption, and then there are many other factors which influence the food spending. Some impact positively and some keeps the consumers away from spending meaning they impact negatively. In our analysis we have taken log of total expenditures, household size, share of male or female in households, age of the head of household, remittances and regional characteristics which all impact the spending on food items or in other words the share of food is affected by all these factors (Table 5). Now one by one we observe the relationship of these factors with the share of food spending.

Table 5**OLS estimations of budget share for food items**

Variables	coefficients	Standard error	P> t
Constant	1.88395	.490811	0.000
Log of total expenditures	-.1126739	.0044061	0.000
Household size	.00642	.0008433	0.000
Age	-.0005802	.0001983	0.003
Region	-.038312	.0065197	0.000
Remittances	-.1025173	.0108809	0.000
R ²	0.1709		
Number of obs.	4052		

Source: computed by author

First of all we see that there is a negative relationship between share of food expenditures and the log of total expenditures which means if there is an increase in total expenditures, the spending on food items decline and vice versa. On the basis of our results it can be figured out that if there is 1% increase in total expenditures, the budget share for food items decreases by 11.26%. In our analysis we have taken total expenditure instead of income due to some data issues. One thing is worth mentioning here that prices are considered to be fixed. This results also support the Engel's curve's theory in case of Pakistan. According to Engel's law if there is an increase in total expenditures, the budget share for food declines. Consumers prefer to spend the extra

income on some other consumption categories which vary according to their taste and preferences. Siddiqui (1982) finds the same relationship between the expenditures on food and the total expenditures and it also supports the Engel's curve in case of Pakistan.

The relationship between household size and budget share for food is positive which implies that if there is an increase in the number of household members, its spending on food increases and vice versa. So budget share for food items increases with the increase in household size. Data (PPHS) shows that average household size in case of Pakistan is almost 7. Household size is one of the main determinants of consumption pattern and it significantly impacts the budget share for food items. Castaldo (2007), adam (2005), Burney (1991) and Khan (2010) also find the same relationship between these two variables. Then we find a negative relationship between the age of household head and budget share of food. The consumption of food decreases with the increasing age and main reason behind this result is health related. With the increase in age, normally people have stomach problem and other diseases, so their food consumption decreases and spending on non-food items (medicine etc.) increases. Castaldo (2007) includes age variable in analysis and finds the same relationship between the two. In our analysis we have included dummy variable for urban and rural areas, where zero is for urban areas and one for rural. The results show that people living in urban areas are likely to consume less on food items than their counterparts. After comparing the average budget share for food items with urban households' budget share for food, we find that urban households spend 0.38 less than the households in rural areas. Burney and Khan (1991) conducted a related study where they studied the consumption behavior of urban and rural households specifically and found that households living in urban areas spend less on food and more on other consumption categories while the households in rural areas prefer to spend more on food.

The relationship between remittances and budget share for food items is negative which shows that people who receive remittances are likely to spend less on food than those households who do not receive remittances. So the households prefer to spend their remittances on non-food items or durables. We have also calculated elasticity for the budget share of food items and that is 0.82 which shows that food is less elastic item and the elasticity is less than one which explains that food items fall in the category of necessities. It explains that people spend on food items either they have low incomes or high level income, though the food quality changes with the difference in income.

5.4 Share of non-food items

In non-food items we have included personal care, entertainment, home decorations, services, clothing and shoes etc. A part of total spending also goes to non-food items and what factors determine budget share for non-food items is reported in table 6. There is a positive relationship between total expenditures and budget share of non-food items. If there is an increase in total expenditures, the budget share allocated for non-food items will also increase or in other words spending on non-food stuff will increase with the increase in expenditures and vice versa.

Then the relationship between budget share on non-food items and household size is also positive which indicates that if there is an increase in household size, they need more to spend on non-food items. While comparing the budget share for food items and for non-food items, we find that when there is an increase in household size its spending on food-items increases more than the spending on non-food item. There is not any impact of the age of households head on budget share for non-food items and it is insignificant.

Then regional difference is significant in case of spending on non-food items. Households, which are located in urban areas, tend to spend more on non-food items than the households in rural areas. Urban households spend less on food but they spend more on non-food items as compared to rural households.

Table 6

OLS estimations of budget share for non-food items

Variables	coefficients	standard error	P> t
Constant	.1900288	.0372128	0.000
Log of total expenditures	.0033856	.0033407	0.311
Household size	.0014026	.0006394	0.028
Age	0.000152	.000151	0.314
Region	.0427328	.0049432	0.000
Remittances	.0672843	.0082478	0.000
R ²	0.0429		
Number of obs.	4052		

Source: computed by author

Khan and Khalid (2010)' study also shows that people residing in rural areas spend more on food items as compared to the people living in urban areas. The households in urban areas spend more on housing, durables, education and entertainment while the rural households spend on clothing, shoes and other non-food items. So the existing literature supports our results. Burney and Khan (1991) analyzed the consumption pattern of urban and rural households using data for different commodities. They found that there are both behavioral and structural differences between the both urban and rural households' spending. There is a positive relationship between the remittances and budget share for non-food items. If there is an increase in remittances, people prefer to spend more on non-food items such as clothing, shoes , entertainment and other things

While estimating the elasticity of spending on non-food items we find that it is 1.01 which is greater than unity. So it indicates that non-food items are elastic items. People tend to spend more on non-food items when they have an increase in income and if there is a decrease in income, people spend less on non-food items.

5.5 Share of Durables

As we are using four different consumption categories in our analysis which cover total consumption of households. One of these consumption categories is durables. In durables we have included the spending on electrical appliances, T.V, vehicles (motor cycle, car, tractor etc.). If there is an increase in the income of households, its spending on durables increases. Households prefer to spend their increased income to facilitate themselves by increasing their consumption on household appliances and vehicles and this spending on durables vary with difference in total income/expenditures.

In the table 7 given below we observe that there is a positive relationship between the log of total expenditures and the budget share for durables. This relationship shows that if there is an increase in total expenditures, spending on durables also increases.

If a household is receiving remittances from abroad, it's spending on durables increases. Our results confirm the positive relationship between remittances and the budget share of durables. Similarly Castaldo (2007's study show that external remittances increase the households' budget shares of expenditure on durable goods and utilities, and decrease their budget shares of spending on food. Internal remittances, on the other hand, exert no independent impact on spending patterns of Albanian households,

Table 7**OLS estimations of budget share for durables items**

Variables	coefficients	Standard error	P> t
Constant	-.012838	.013012	0.000
Log of total expenditures	.01237	.001168	0.000
Household size	.0000849	.0002236	0.704
Age	.0001484	.0000525	0.005
Region	.00727	.001708	0.000
Remittances	1.3800	1.2200	0.000
R ²	0.0673		
Number of obs.	4052		

Source: computed by author

The relationship between household size and durables is positive; if there is an increase in household size, the budget share for durables increases. After the fulfillment of basic necessities, people prefer to spend more on durables. The households in urban areas spend more on durables as compared to households in rural areas. After estimating the elasticity for budget share of durables, we find that it is 1.8 which is more elastic than other categories. It explains that with an increase in income, people tend to spend more on durables and it falls in the category of luxurious items.

5.6 Share of Utilities

In utilities expenditures as water, electricity, gas, telephone, fuels for home use are included. Although the log of total expenditures has a positive association with the share of utilities in total household budget, the relationship is not statistically significant.

Table 8

OLS estimations of budget share for utilities items

Variables	coefficients	Standard error	P> t
Constant	0.0686742	0.209471	0.001
Log of total expenditures	0.0025973	0.0018805	0.167
Household size	-0.0006525	0.0003599	0.070
Age	.0002703	.0000852	0.002
Region	0.019577	0.0027825	0.000
Remittances	0.0147838	0.0209471	0.001
R ²	0.0172		
Number of obs.	4052		

Source: computed by author

The household size has a negative and significant impact on budget share of utilities. So there is a negative relationship between them. If the size of a households increase, the overall spending on water, fuel etc. does not increases as such.

If we have a look on regional difference, the results show that households living in urban areas have to spend more on utilities as compared to the rural households. Those households which are receiving remittances, they spend more on utilities than not-receiving households. It is actually because of the different consumption pattern of the former. As they spend more on durables, they also prefer to use more electricity appliances such as ACs, T.V and other electric goods of this kind. The elasticity computation of the budget share for utilities shows that it is less elastic category.

Chapter 6

Summary and Conclusion

The main objective of the study is to analyze the consumption pattern of Pakistani households using the survey data from Pakistan Panel Household Survey (PPHS) 2010. We also estimate the budget shares for four consumption categories and the validity of Engel's law in case of Pakistan. The budget allocation for different consumption categories is also observed to analyze the priorities of consumers.

The demographics characteristics of households are given in detail and these characteristics are almost same in nature as are in other developing countries. The average household size of the sample households is 7. The relationship between household size and budget share for food is positive which implies that if there is an increase in number of household members, its spending on food items increases. Our results show that almost 95% of households are headed by male member and the age of the head of household is negatively related to food-consumption.

We have estimated the budget shares for different consumption categories which are as food, non-food, durables and utilities. In earlier studies, results are reported using few consumption goods such as some from food items; six or seven eatables are included to analyze their demand. The overall analysis of consumption pattern gives us insight for policy or recommendations that how can government enhance the living standard of households? The estimated relationship between budget share of food items and the log of total expenditures is negative while the log of total expenditures is positively related with non-food items, utilities and durables. The results show that with an increase in income/expenditures (as we have used expenditure to replace

income) the budget share for food item decreases. This result also confirms the validity of Engel's law in case of Pakistan.

If there is 1% increase in total expenditures, the spending on food decreases by 11.26% but spending on other consumption categories increases. We have also incorporated the effect of remittances on all these consumption categories. Those households which are receiving remittances spend less on food-item and prefer to spend more on durables and non-food items. Khan (2010)'s study supports this result by concluding that foreign remittance-receiving households improve their food intake, clothing etc. and also enhance their spending on durables

Consumption pattern also differs across regions (urban and rural). The household in urban area spend less on food-items, they prefer to spend on other consumption categories as our results suggest. Rural households are likely to spend less on utilities (gas, electricity, etc.) while urban households tend to spend more on utilities relatively.

The elasticity estimations for four different consumption categories show that expenditure elasticity for food items is inelastic, and expenditure elasticity for utilities and non-food items is less elastic while the expenditure elasticity for durables is more elastic.

6.1 Recommendation and Policy Implications

From our results we infer that the following suggestions can contribute to enhance the welfare of households. The income level of households should be increased in order to raise the living standard of households so they can enjoy better quality of life. One point is worth mentioning here that with the increase in income the demand for goods increases which leads to increase in investment and ultimately to economic development.

In our results we find that the average household size is 7. And with the increase in households' size, the living standard of households decreases so the reduction in household size is required in order to enhance the living standard of households. The population growth should be controlled in order to reduce the household's size. The increasing population is also alarming for economic growth. As it is obvious that if the household size is large, they will have to compromise on low quality goods which affects their health. Further, we see that with the increase in income people prefer to spend a better life. So if overall income of households is increased by all means whether it is through subsidizing low income households or some other proper way, they will be having access to better life. So it is suggested that the inequality level should be minimized between the high and low income groups.

Remittances play a vital role to uplift the economic growth of a country by increasing the income level of remittance-receiving households. Which leads them to increase consumption and ultimately increased demand for goods and services enhances the investment. So Government should take such steps which can attract more remittances by making the process easier, profitable and convenient.

6.2 Limitations and Further Research

In our study we intended to include the internal and international level remittances separately which due to data limitation could not incorporate. So it can be a gateway for new researchers to explore the effect of these both sections on consumption pattern of household. Moreover further socio-economic variable can be included to check their impact on households' consumption pattern.

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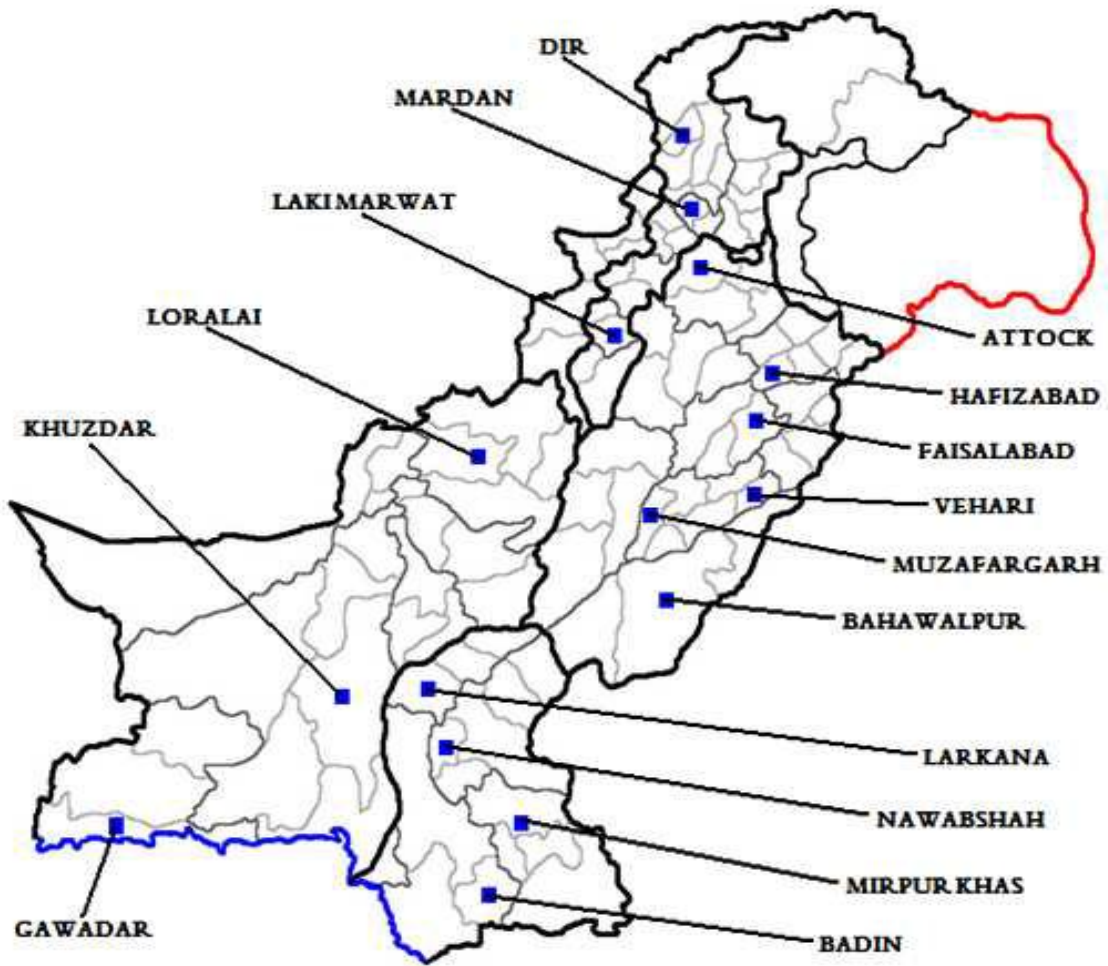
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Appendix A

Table 9: Provinces and Districts list included in PPHS-10

Province	Districts	Province	Districts
Punjab	Attock	Sindh	Larkana
	Faisalabad	KPK	Dir
	Vehari		Lakki Marwat
	Bahawalpur		Mardan
	Hafizabad	Baluchistan	Loralai
Sindh	Nawab Shah		Gawadar
	Mirpur Khas		Khuszdar

Figure: 1 Survey coverage map for selected districts



A.1 List of food items

We have included the total expenditures of food items in our analysis. Assuming that prices are fixed, we multiplied the quantity of good with the price and then added all the expenditures on all 49 food items for households. The good items which we have included in our analysis are listed below.

Table 10

Household's food items

Serial no.	Food item	Serial no.	Food item
1	Atta	13	Vegetable oil
2	Wheat grain(not used as atta)	14	Dalda
3	Maida	15	Ghee
4	Maize flour	16	Fresh milk
5	Basmati Rice	17	Yogurt
6	Other rice	18	Lassi
7	Other grains	19	Cheese
8	Chick Peas dal	20	Butter
9	Masoor dal	21	Milk powder
10	Mung dal	22	Other milk products
11	Mash dal	23	Baby formula
12	Other dal	24	Sugar

Continued

Serial no.	Food item	Serial no.	Food item
25	Gur	38	Canned food
26	Mutton	39	Biscuits and cakes
27	Beef	40	Spices
28	Chicken	41	Tea
29	Egg	42	Bread
30	Other poultry birds	43	other baked products
31	Fish	44	Soft drink
32	Onion	45	Kerosene
33	Potatoes	46	Charcoal
34	Sag	47	Firewood
35	Other vegetables	48	Dung cakes
36	Bananas	49	Match box
37	Other fruits		

Source: (PPHS 10)

Table 11

List of non-food items

Serial no.	Non-food items	Serial no.	Non-food items
1	Soap/Cosmetics	9	Planting trees
2	Clothes/Shoes	10	Cinema/Sports etc.
3	Education/Books	11	other expenses
4	Travelling	12	Medical care/medicines
5	Pan/cigarettes	14	Servant wages
6	Fodder expenses		

Table 12

List of Durables

Serial no.	Items
1	Urban Property
2	Permit/ visa
3	Purchase/repair of furniture
4	Construction/ repair of dwelling
5	Purchase/repair of agricultural tools and implements
6	household appliances

Table13

List of utilities

Serial no.	Items
1	Electricity
2	Gas-cylinder
3	Telephone
4	Taxes
5	Water bills