Analysis of Consumption Pattern of Pakistan: A Regional Study

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CERTIFICATE

It is to certify that this thesis submitted by **Mr. Javed Iqbal** is accepted in its present form by the Department of Economics, Quaid-i-Azam University, Islamabad as satisfying for the requirement for partial fulfillment of the degree of Master of Philosophy in Economics.

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CHAPTER # 1

Introduction

The analysis of consumption behavior is indispensable since there are few aspects of economic policy that do not require the knowledge of household behavior. Moreover, the close interplay between the theoretical and empirical consideration together with the rapid expansion in the availability of different type of data have continued to make the analysis of consumer behavior an attractive area of research.

For some policy questions the importance of empirical evidence on consumer behavior is indisputable. Among these stand the optimality and impact of tax proposals, the effect of credit constraints, real interest rate changes and uncertainty on saving behavior and the appropriate choice of cost of living indices. However, the method of analysis in modern consumption theory and empirical research are applicable to a much wider set of problems.

More than one hundred years ago, Engel propounded an empirical law that with an increase in income the share of expenditure on food in total household expenditure tends to decrease, that on clothing, fuel and lighting remains constant and that on luxury goods increases. The most important factor determining the consumer behavior is level of income. However, certain other variables, such as distribution of income, level and distribution of assets, size of households, composition of households, number of earners in a household, prices , structural, geographical and climatic differences etc., also significantly effect the household consumption behavior.

The work of Ernest Engel (1857), the relationship between a household's expenditure on a particular good and income or total household expenditure as a proxy for permanent income, or what is known as Engel Curve is considered as the starting point for analysis of household budgets. Brown and Deaton (1972) and Blundell (1988) have surveyed a fair amount of literature produced at the international level. With reference to Pakistan there are several studies to date which deal with issues in consumption behavior in Pakistan [for a review see Ali (1985)]. Burney and Khan (1992) examined the consumption pattern in Pakistan by using

micro level data for the year 1984-85. However the most relevant studies, for our purpose, are the studies by Ahmad and Ludlow (1987) and Malik et al (1987). Ahmad and Ludlow (1987) estimated consumption parameters of linear expenditure system (LES) and elasticities for the four provinces of Pakistan and for urban and rural areas as well. They used household income and expenditure survey (HIES) 1979. Malik et al (1987) investigated the existence of difference in rural and urban consumption behavior and also analyzed the inter-temporal changes for the period 1963-64 to 1984-85 using all available HIES for six commodity groups. They adopted a methodology developed by Lee and Phillips (1971) to establish econometrically the differences in urban and rural consumption behavior. Whereas, Ahmad and Ludlow (1987) did not attempt to establish econometrically the difference in regional demand patterns, Malik et al (1987) did the job of establishing the differences or otherwise in the urban and rural consumption pattern but did not disaggregate the analysis to provincial level.

Ranis (1961), Aziz-ur-Rehman (1963), Bussink (1970), Khan (1970), Siddiqui (1982), Fayaz and Ahmad (1991), Iqbal and Jamal (1992), and A Batool and Ahmad (1999), have studied the consumption behavior of Pakistan. However these studies concentrated on per capita income or expenditure and household size only. In the present study variations in consumption of different items have been analyzed on the basis of characteristics of the household head province wise, we will have these attributes of a household head under consideration, viz. Grand total income of a household head, Household size, Education of the Household head, Industrial classification of the household head, Nature of the income of the house hold head, Employment Status of the household head, The Dependency ratio of the household head, Location of the household, and Gender/Sex of the household head.

In order to examine the effects of the characteristics of the household head on consumption behavior province wise, we have divided total consumption expenditure into seventeen (17) groups Viz. Cereals and Grains, Milk and Milk Products, Meat Fish and Poultry, Fruits and Vegetables, Sugar and Honey, Other Food items, Apparel Textile Footwear and Personal Effects, House-Hold Use Textile, Fuel and Lighting, House Rent and Housing Expenses, Furniture Fixture and other Durable Items, Transport Traveling and Communication,

Recreation and Entertainment, Educational and Professional Expenditure, Medical Expenses, Cleaning Laundry and Personal appearances, and Miscellaneous Expenditure.

This study is based on the micro level data of the Household Income and Expenditure Survey (HIES) for the year (2001-2002), compiled by the Statistics Division of the Government of Pakistan. This survey is based on a national sample, covered (14514) households.

The Ordinary Least Square (OLS) method is used and semi log model is fitted to the micro level data of (14514) households. The model treats the relative shares of each item group as a dependent variable while, log of income of the household, nature of income of the household, age of the household head, age square of the household head, dependency ratio of the household, family size of the household, education level of the household head, industrial classification of the household head, employment status of the household head, sex/gender of the household head and location of the household are used as independent/ explanatory variables. This is repeated for all the seventeen (17) commodity groups one by one.

The study is divided into five chapters. The organization is as follows. The review of literature is presented in chapter 2. The methodology is presented in chapter 3, all the testing procedures and estimation techniques are discussed in the same chapter and also the main features of data, formation of commodities groups and construction of variables and model are discussed in the same chapter 3. The results are discussed and explained in chapter 4. While the major conclusions of the study and some policy implications are discussed in chapter 5.

CHAPTER#2

Review of Literature

It is well known that consumption pattern under goes significant changes as economic factors and social factors changes or we can say that consumption pattern undergoes significant changes as socio-economic changes take place.

The most important factors determining the pattern of consumption behavior are the level of income, prices, household size, certain other variables/factors such as distribution of income, level and distribution of assets, age, sex , location and dependency ratio, number of earners in household and some structural, geographical and climatic differences etc. may also effect the behavior of the household consumption. However in most of the studies the focus is on the relationship of expenditure on different products to income and household size. It all depends on the nature and objectives of the study. In past the main objective of the studies is to analysis the consumption pattern for the sake of income elasticity of the different consumption items from time to time. The main objective of the most of the studies is to verify Engle's law.

The consumption pattern of household in Pakistan has been analyzed in a number of studies e.g. Bussink (1970), Siddiqui, (1982) Burney & Akhtar (1991), these studies not only differ in their scope but also the source of data and period of data. While most of the studies have used the cross section data reported in the various issues of household integrated economic survey (HIES), the analysis in some of them is based on single equation estimates. The main objective of these studies has been to estimate and analyze the nature of the relationship between income and expenditure on different commodities as summarized by Engle's law. Furthermore in order to examine the impact of urbanization on the household consumption pattern, these studies have obtained separate estimates for the urban and rural sector. In most of these studies the consumption pattern in urban sector is found to be considerably different from that of the rural sector: like Bussink (1970) Ahmad et al (1988) Ahmad and Ludhow

(1987) etc. Some of the studies have also tested for the existence of economies of scale in the consumption of certain commodities e.g. Siddiqui (1982) and Burney and Khan (1991).

Ranis (1961), Rehman (1963), and Khan (1963) Bussink (1970), Siddiqui, (1982) Burney & Akhtar (1991), Fayaz and Ahmad (1991), Iqbal and Jamal (1992), and A Batool and Ahmad (1999), have studied the consumption pattern of Pakistan. However these besides being now out of date as they pertain to the yearly sixties, eighties and nineties, ignored completely the effect of household size and use only per capita income as the explanatory variable, they also ignored other factors like socio-economic factors.

A number of studies have been undertaken to ascertain the effect of particular variables entering into the ceteris paribus assumption of the consumption, or saving, function. These studies have focused generally on three sets of variables: socio-economic characteristics of the household, particularly age and life cycle; financial characteristics; and attitudes and expectations. Focus on the ceteris paribus assumption does not necessarily abstract from the effect of income, for two principal reasons. First, most socio-economic as well as other variables are related to income.

Since most of these ceteris paribus studies are carried out either by cross tabulation or by some multivariate method such as analysis of variance or multiple regression, part of the effect attributed to the particular variable may actually be due to income, particularly when interactions and other non linear effects are present. Second, to the extent that the permanent income hypothesis is valid, even holding constant the effect of current income, means that these other variables act to some unknown extent as proxies for permanent income. Virtually every budget study presents breakdowns of expenditures and data on such characteristics as age, education, family size, etc. However, the isolation of the effects of these variables on total expenditure has received relatively little attention until recently. After the availability of the survey(s), which contain(s) information on these variables one such study, by Harold Watts, ascribes a central role to occupation and education in the determination of expenditures. Watts attempts to explain expenditures on the basis of a person's expected future income, which is related to a "cross section profile" holding occupation, education,

and age constant. Among other things, he finds that, at a given level of income, those with more education expect higher incomes and spend more.

An attempt by Morgan (1954) to isolate the effects of socio-economic factors on the consumption shows that the self-employed, including farmers, have very different consumption patterns from other families. In the case of family size, considerable attention has been given to the problem of allowing for variations in expenditures due to differences in family size, either by deflating by a family size variable or by including family size as a separate factor. The principal work in this area has been concerned with converting family size into an equivalent-adult unit basis. This problem goes back many years, and an extensive literature has grown up around it, with more recent emphasis on the incorporation of this adjustment within a multivariate framework.

Attention has also been given to the effect on spending of owning an incorporated business. Various studies in recent years have thrown considerable light on the spending habits of incorporated business families, as well as on aggregate spending trends in this area. Thus, both Margolis (1954) and Kravis (1957) show that such families have much larger than average negative savings at low incomes and much higher than average positive saving at high incomes than other families, and that the same is true of both farm and non-farm entrepreneurs. Kravis also shows that the self-employed exhibit much the same consumption pattern as that of other families; though another study by Klein (1960) suggests that the self-employed are more frequently home-owners and tend to spend less for rental costs and more for household operations than families of salaried professionals and officials.

Perhaps the main analytical work in recent years relating to socio-economic characteristics has been with age and the life-cycle. Although various early budget studies were concerned in part with the influence of the age in one or more of these prospects, it was primarily the (1935-36) Consumer Purchases Study with its extensive tabulation that served as a springboard for analysis of the influence of age factor on consumption. In that study, attempts were made to examine variations in income and in consumption not only by different age groups but by different family types, reflecting to a large extent different stage of the family life cycle.

The substantial variations observed in income and consumption by age and family composition led to further study of these variables in the postwar years. Many of these studies were carried out at the Survey Research centre of the University of Michigan, based on data collected in the Survey of Consumer Finances. Using these data, Fisher (1956) was able to develop much useful information on the role of age factor in consumer behavior. These studies provide empirical data on the different purchasing patterns of families in different age levels. Especially notable in the last category is the tendency for younger families to be heavy purchasers of durable goods even though they may have to dissave to do so, whereas older families with the necessary assets make relatively few durable goods purchases.

A number of studies of the effects of income change have been made. The findings of these studies are generally similar, but the interpretation of the findings has differed at times substantially. Morgan (1954) notes that the effect of income change varies with asset ownership, similar findings on the effect of income change on spending behavior were obtained by Mack (1948) in analyzing budget data of 600 farm families; and she suggests that the effect of changes in income is likely to differ for different expenditure categories. Brinegar (1953) finds that household behavior serves to amplify rather than to dampen the effects of income change upon purchases of goods and services. Thus following sharp income decrease milk purchases first declined, then rose above the earlier level, and finally leveled off.

In a fundamental test, Tobin (1959) showed by regression analysis that plans to buy, in addition to socio-economic variables, made an appreciable net contribution to explaining durable goods purchase where as this was not true of an attitudinal index. Similar results were obtained by Okun (1960). By means of a series of multiple regressions on the 1950 Consumer Expenditures data, Watts and Tobin (1958) find the pattern of consumption to be influenced by a number of "fundamental but unobserved measures of social, economic, biological, and environmental characteristics". In particular, households headed by people with more education exhibit a different consumption behavior, when income and other

relevant variables are held constant. Older households had invested less in durable goods. Occupational differences were pronounced, though erratic. Regional and city-size differences were also apparent.

Two different lines of approach have been used to ascertain the factors influencing the consumption of specific consumer products, reflecting the conceptual equality between purchases of goods by consumers and sales of these goods by retailers or manufacturers. One approach has tempted to explain static differences in product purchases of different households in terms of household characteristics, largely to the exclusion of prices and other market variables; while the other approach has tempted to explain temporal differences in aggregate sales in terms of market variables, largely to the exclusion of household characteristics. Paralleling the consumption function, the first approach has been characterized by the search for so-called Engle's curves- relationships between specific expenditures and income level, holding other relevant variables constant.

Empirical work on both approaches had its beginning about the mid-nineteenth century, with the work of Engle on household budgets and, some time later, with the work of a number of U.S and British statisticians on demand relationships (Stigler, 1954). With both approaches, the past two decades have witnessed numerous empirical studies of specific commodities- and, more recently, of services- which have added considerably to knowledge of the effect of different variables on purchases or sales. At the same time, this period has witnessed a growing emphasis on methodological improvements, and it is here that the principal developments in this area have taken place.

Turning to the use of household-budget data, Engle's law that the proportion of household expenditure on food declines as household income rises- has now been verified literally hundreds of times. For a partial list of studies, see the bibliography by Morgan (1958) and Islam (1966). There has also been an abortive tendency to mangle the principle by refuting its applicability with time-series data. Generally, most studies also provide strong support for what is known as Schwabe's Law, namely, that the percent of income spent for housing declines as income rises, although using permanent income concepts Reid (1958) alleges that

high-quality housing in reality is one of the main luxuries of consumers. Further support for both laws was obtained in a study by Houthakkar (1958) in which he derived Engle's curves for four (4) expenditure groups based on data from each of 40 surveys from 17 countries. It is interesting that the function used in this study, as in many others, was essentially the same as used by Engle in his original paper, namely, a log-log relationship between the specific expenditure and total expenditures.

Recent studies reflect a growing interest in ascertaining the determinants not only of food expenditures but of a wide range of household purchases, such as housing, clothing, house furnishing, and services. On clothing, see Brady (1956) and Hamburg (1960) on house furnishing, see Lippit (1959) on services, and see Ferber (1958) on housing, see Maisel and Winnick (1960).

In a paper Siddiqui (1982) test the validity of Engel's law with data on Pakistan. Consumption functions for urban and rural areas have been estimated separately. These functions are shown to be determined by total expenditure and household size. Engle's law is confirmed for some commodity groups but not for all. Following tests of urban-rural homogeneity and of stability of urban and rural consumption functions demand growth rates for different food and non-food items have been calculated, assuming different growth rates of total expenditure and household size.

In a study Burney and Akhtar (1990) aims to examine the pattern of households' expenditure on fuel consumption in Pakistan using the data of Household Income and Expenditure Survey (1984-85). Price and income elasticities have been estimated by applying the Extended Linear Expenditure System.

It is found that the expenditure pattern of the rural households is different from the urban households, with the rural households spending proportionally more on fuels. The estimates o the income elasticities imply that all fuels is a necessity for both urban and rural households.

The price elasticities of different fuels are found to be extremely low, implying that the consumption of fuels in Pakistan is highly price inelastic.

A paper by Hay and Sinha (1972) employs data from a single socio-economic group within the Indian population to throw some light on three related topics- the impact of urbanization on the demand for food, the nature of the income-elasticity of expenditure on food for this group, and the importance of particular socio-economic variables as determinants of the demand for food.

The income elasticity of demand for food has become liable to maltreatment in the process of development planning; all too often an estimate of this parameter is employed unquestioningly to evaluate the food requirements of developing countries, although it is well known that as incomes raise the income elasticity of demand for food falls. Like other characteristics of a developing system, the income elasticity of the demand for food is far from being a 'fixed' parameter. Firstly, as development proceeds, it is subject to change in a particular manner and direction. Secondly, the particular value of the income elasticity is subject to considerable variation within the country at a point in time thirdly, other variables than income exert significant pressure on behavior as evidenced by food expenditure patterns.

Pollak and Wales (1969), estimate a complete system of demand equations making full use of the restrictions implied by economic theory. Their theoretical model is based on the Klein-Rubin linear expenditure system which was first estimated by Stone. They place primary emphasis on maximum likelihood estimates obtained using annual time series observations of prices and per capita consumption for the U.S economy in the period (1948-65). Several important conclusions emerged from their study. First, for their preferred stochastic formulation only the linear time trend and proportional habit formulation models are consistent with the underlying utility functions for the post war period. Second, the dynamic specification of the model is of crucial importance. Different dynamic specifications result in widely differing estimates, not only of the parameters which characterize the dynamic specification, but also of the marginal budget shares. Therefore, in the absence of a criterion

for choosing among the dynamic specifications, we can have little confidence in any of the estimated parameters. Third, the estimation technique is important. Fourth, the different assumptions made about the variance of the u's affect their parameter estimates only slightly.

Houthakkar (1957) a compares elasticities for food, clothing, and miscellaneous items with respect to total expenditure and family size, based on regression analysis of about 40 surveys from about 30 countries. The elasticities are found to be similar but not equal.
Bussink (1970) a set of coefficients is derived which can be used to project West Pakistan's private consumption in the medium and longer term. For ten urban and rural income groups separately, income, price and cross elasticities of demand have been calculated.

Thus, the methodology permits to trace the influence of changes in incomes, income distribution and prices and consumption. Most developed models concern themselves with aggregate income effects only, and assume constant income distribution and prices. This may be warranted as long as no structural shifts occur. Insofar as development implies structural shifts, there may be an inconsistency.

On the empirical side, developments since the early fifties have not been always taken the course which might have been expected. Taking for example the work of Stone (1963) as a starting point, certain topics stand out clearly as areas for further investigation. In particular, three might be mentioned: the extension of the analysis to a wider range of commodities, the treatment of the special problems associated with durable goods and application of the more sophisticated computational and econometric techniques which have since become available. Though work has been done in each of these areas, it is only in the analysis by Houthakkar and Taylor (1970) of a wide range of commodities in the United States that there exists an updating of the Stone (1954) methodology in this direction. However, this has not been the main direction of research in last fourty years.

Deaton (1978) seeks to make two points. The maximum likelihood estimators derived by Barten for a linearly dependent system of demand equations are also best linear unbiased estimators both with and without linear restrictions on the parameters. They are also identical

to the similar estimates in the linearly independent case and thus the linear dependency model is a sub case of the general multivariate classical regression model. Second, it is suggested that the rejections of the theoretical restrictions on the demand functions suffered by Barten and in similar work by Byron are due to the inappropriate use of asymptotically valid test criteria. Experiments similar to those quoted are carried out on U.K. data. On the criteria of Barten and Byron, these lead to a similar rejection of the symmetry hypothesis.

It is in the improvement of data collection techniques that perhaps the greatest strides of all are yet to be made. The sooner such strides are taken, the sooner a really firm basis will be reached for the analysis of household behavior.

Burney and Khan examines the household consumption patterns separately for the urban and the rural sectors in Pakistan by estimating the marginal expenditure shares and expenditure elasticities, for twelve broad commodity groups, using household level data for the year 1984-85 . At the sectoral level, the marginal expenditure shares are estimated both with and without the community effect'. Furthermore, by dividing households within each sector into different income groups, income-specific marginal expenditure shares and elasticities are also obtained. This level of disaggregating reveals much richer consumption patterns as compared to the ones based on grouped data.

The estimated marginal expenditure shares indicate that in examining the household consumption patterns one can safely assume that all the households in the sample face the same price structure. While the findings of the paper support the validity of Engel's Law, the estimates presented indicate that expenditure elasticities for different commodity groups vary with income and, in general, exhibit a cyclical pattern, which is explained in terms of quantitative as well as qualitative changes in the households' consumption basket. For a majority of commodity groups, both structural and behavioral differences in the consumption patterns are found to exist between the urban and the rural households. Furthermore, results also confirm the existence of economies of scale in the consumption pattern of majority of the commodity groups. The degrees of these economies of scale are not only different across commodities but also between sectors and across the income groups within each sector.

The structural differences between the consumption patterns of the urban and the rural households is taken as the difference in the intercepts, whereas differences in the slopes is considered to indicate behavioral differences, see Johnston (1986).

Furthermore, Crockett (1967) has found that total expenditure and household size are the most important factors in determining the consumption patterns. However since, the objective of this study is to examine the consumption behavior rather than consumption pattern, we focus on all the relevant variables. Besides total income and household size, other variables, like education, distribution of income and assets, the numbers of earners in a household, and the age and sex of the household members, are likely to affect the household's consumption behavior.

Ahmad and Batool (1999) study the consumption behavior and derived these result(s) the expenditure elasticities at mean income don't provide useful insight in household consumption pattern. The estimated elasticities are very sensitive to different level of income. Dairy, edible oil, sugar, fruits, tea, gas and clothing are necessities at all income levels, including mean group for both the sectors. A major difference in their findings is in the case of wheat, which appeared as an inferior good in urban sector for mean income group and for the richest class. It reflects the declining trend of the urban household for wheat consumption and substitution of rice for it. Housing, health and cereals for both the sectors are super luxury. Meat, education, transport, personal care and other non-food are luxuries for both sectors.

CHAPTER # 3

Model, Methodology and Data

In order to examine the effects of the characteristics of the household head on consumption behavior province wise, we have divided total consumption expenditure into seventeen (17) groups. These commodity groups contain those items which are homogeneous and have a significant share in consumption expenditure of a household.

Commodity groups are, Cereals and Grains, Milk and Milk Products, Meat Fish and Poultry, Fruits and Vegetables, Sugar and Honey, Other Food items, Apparel Textile Footwear and Personal Effects, House-Hold Use Textile, Fuel and Lighting, House Rent and Housing Expenses, Furniture Fixture and other Durable Items, Transport Traveling and communication, Recreation and Entertainment, Educational and Professional Expenditure, Medical Expenses, Cleaning Laundry and Personal appearances, And Miscellaneous Expenditure.

To analyze consumption behavior in Pakistan on the characteristics of the household head province wise we will consider with respect to following attributes of a household head, viz. income of a household head, Household size, Education of the Household head, Industrial classification of the household head, Nature of the income of the house hold head, Employment Status of the household head, The Dependency ratio of the household head, Location of the household, and Gender/Sex of the household head.

To analyze this we will use the following Model:

$C_{ij}=\alpha_0+ \alpha_1 \ln Y+ \alpha_2(Age) + \alpha_3 (Age)^2 + \alpha_4 Dr+ \alpha_5 Edu + \alpha_6 (Family\ size) + D_1 (Gender) + D_2 (Ind.\ Classification) + D_3 (Emp.\ Status) + D_4 (Nat.\ of\ Income) + D_5 (Location)$

But we have to drop family size due to high multicolinearity between Family size and Dependency ratio.

Where,

α 0 is contant.

α_1, α_2, α_3, α_4, α_5, are all coefficients.

C_{ij}= consumption on commodity "I'' by the household in jth income group.

Y_i= income of the ith household

Age= age of the household head.

Age^2= square of the age of the household head.

Dr. Dependency Ratio.

Edu = Education level of the household head (at-least metric)

D_1= Dummy variable for gender/sex. Whether the household head is male or female?

D_1= 1 if Male,

D_1= 0 if Female.

D_2= Dummy for industrial classification, i-e to which sector the household head belongs to. Here base category is those activities of the households, which are not adequately defined. Since, we have ten categories so we have to introduce nine dummies to avoid dummy variable trap.

D_3 = Dummy for employment status of the house hold head, here the base category is paid-employee. Total number of categories is five (5) so we have to introduce four (4) dummies.

D_4= Dummy for the nature of income of the household, i-e, whether he received his income monthly or yearly. Here base category is monthly income, and here we have only two categories i-e, yearly and monthly, so we have to introduce only one dummy.

D_4= 1, if he received his income monthly,

D_4= 0, if he received his income yearly.

D_5= Dummy for the location of the house hold head, i-e, whether
The household head lives in urban or rural area. Here we have
Only two categories namely rural and urban, here our base
Category is rural. Here we have to introduce only one dummy.

$D_5 = 1$, if the household head lives in rural area.

$D_5 = 0$, if the household head lives in urban area.

The Data

This study is based on the micro level data of the Household Income and Expenditure Survey (HIES) for the year 2001-2002, compiled by the Statistics Division of the Government of Pakistan. This survey is based on a national sample, covering (14514) households. As the objective of this study is to analyze the consumption behavior on the basis of the characteristics of the household head province wise the house holds are divided into seventeen (17) expenditure groups. We have also divided the grand yearly income of the household into seventeen (17) groups.

The distribution of the different commodity groups is reported below as:

1. Cereals and grains.
2. Milk and milk products.
3. Meat, fish and poultry.
4. Fruits and vegetables.
5. Sugar and honey.
6. Other food items.
7. Apparel, textiles, footwear and personal effects.
8. Household use textile.
9. Fuel and lighting.
10. House rent and housing expenses.
11. Furniture, fixture and other durable items.
12. Transport, traveling and communication.
13. Recreation and entertainment.
14. Educational and professional expenditure.
15. Medical expenses.
16. Cleaning, laundry and personal appearances.
17. Miscellaneous expenditure.

Province wise and location wise detail of the households is given in below Table.

Table 1.1

	Urban	Rural	Total
Punjab	2491	3750	6241
Sindh	1506	2168	3674
NWFP	820	1817	2637
Balochistan	602	1360	1962
Total	5419	9095	14514

For our analysis we have divided the variables into different groups, Viz. Family size, Employment status, Nature of income, Industrial classification, and Dependency ratio.

Adjustments made in Data

The data which we got from Household Income and Expenditure Survey (HIES) was in raw form. First of all we have to clean the data for our analysis. All though the data is very comprehensive but we have to make some adjustments in data. These adjustments include the following major ones,

1. We have converted all the grand expenditures of all the groups to relative shares. Because some of the values in grand total annual expenditure have very big values and some were very small.
2. The data available in this survey for transport traveling and communication was on monthly basis, which we have converted to annual.
3. We divided total expenditure into seventeen groups, to simplify the analysis.
4. The incomes of some households were monthly which we converted to annual.
5. The dropped observations that were outliers in income portion were only about 2.5% of the total data, which will not affect our analysis.

Precautionary Measures

As it is always a danger in cross-section data that we may have to face the problem of heteroskedasticity, so we take these precautionary measures to avoid this problem because in presence of heteroskedasticity the results are no longer efficient. Some of the precautionary measures are as under,

- We have converted all the grand expenditures of all the items into relative shares. We made these changes because in grand expenditure we have outliers (some values are extra-ordinary big while others are very low like zero). These outliers create problems of heteroskedasticity and inverse theoretical signs of the coefficients.
- In income portion we have the same problem as that in expenditure where some households have zero incomes while others have incomes will above one million (1000000), which creates the problem of heteroskedasticity. To encounter this problem we drop these outliers from our data set, so we have under consideration only those
- Households which have yearly income of above twenty thousands (20000) and below 1.5 million (1500000).
- In the next step we take the log of the yearly grand income, which will be very helpful in encountering the problem of heteroskedasticity.
- As there was multicolinearity between our two explanatory variables namely household size and dependency ratio, so before doing the analysis we drop one of these variables, which is family size.
- Our results shows that all these precautionary measures were quite effective up to great extant in avoiding the expected problems like that of heteroskedasticity and that of the inverse theoretical sign of the coefficients.

After doing all these adjusting and cleaning the data and all the precautionary measures we have used the usual Ordinary Least Squares (OLS) technique, which is quite easy to apply. The extensive use of SPSS and E-Views is made in analyzing the data.

The Tests

The following tests are applied for their respective purposes:

1. Wald-Test

We have applied Wald-Test to justify the bifurcation of data analysis into province wise. This test shows a significant difference in all the four provinces consumption behavior, which justifies our bifurcation.

2. Ramsey's Reset-Test

Ramsey's Reset-Test is usually used for the justification of the correctness of a specified model. We applied Ramsey's Reset Test to our original specified model. This test gives us six (6) competitive models by comparing which we reach the following conclusion,

- Comparing to model one in model 2^{nd} we have to drop a variable i-e, a category of industrial classification because it was insignificant and looking at the original data set the number of observations in this category was very small.
- Now in 3^{rd} model we dropped a variable i-e a category of the industrial classification, which was insignificant. Again looking at the original data set the available information for this observation was quite insufficient.
- In 4^{th} model we dropped a variable which again belongs to the industrial classification and which was also insignificant. Again when we look in the original data set the observations were very few.
- In 5^{th} model we drop a category again related to industrial classification and it was also insignificant. Again looking in original data set the information available for this category was inadequate.
- In 6^{th} model the variable (Age) was insignificant overall but still we will keep it in our model because it is an important determinant of the consumption behavior for at-least one of the major provinces.

All the categories, which we dropped in industrial classification, are emerged in a compound category namely others.

So after examining all of these six (6) competitive models we picked up 5th model because it is the fittest model among the competitors. And we used this model for our final analysis. And all the results are derived through this model.

White Test

White test is commonly used for the detection of heteroskedasticity. So we also applied this test to our model and the result shows that there is nothing of serious concerned. And all of our precautionary measures worked as was expected.

Hypothesis

There is variation in consumption expenditure due to difference in the characteristics of the household head like, Income, Nature of income, Employment status, Industrial classification, Education Level, Dependency ratio, Gender/Sex, Location. And consumption behavior for different group of items also varies province wise.

CHAPTER # 4

Discussion of Results

The Ordinary Least Square (OLS) method is used and semi log model is fitted to the micro level data of (14514) households. The model treats the relative shares of each item group as a dependent variable while, log of income of the household, nature of income of the household, age of the household head, age square of the household head, dependency ratio of the household, family size of the household, education level of the household head, industrial classification of the household head, employment status of the household head, sex/gender of the household head and location of the household are used as independent/ explanatory variables. This is repeated for all the seventeen (17) commodity groups one by one.

When we estimated our model given all the above-mentioned variables we found a sever problem of multicolinearity between dependency ratio and family size so we decided to drop the family size variable from our original model. We take total income and total expenditure and estimated the model but we find a severe problem of heteroskedasticity, then we decided to take the log of the total income and relative shares of all the expenditure on each item and also excluded the outliers from our data, which helped us in encountering the problem of heteroskedasticity.

In our model we have five (5) dummy variables for employment status, industrial classification, and gender/sex, nature of income and location of the household.

In order to estimate that whether all provinces differ in consumption behavior we applied Wald-test[1] upon coefficients of all the four provinces.

Nature of Income

[1] The Wald test computes the test statistic by estimating the unrestricted regression without imposing the coefficient restrictions specified by the null hypothesis. The Wald statistic measures how close the unrestricted estimates come to satisfying the restrictions under the null hypothesis. If the restrictions are in fact true, then the unrestricted estimates should come close to satisfying the restrictions.
(Note:- R2 of all the tables is between 0.40 to 0.46 which is quite satisfactory for cross sectional data).
(Significant means significant at 10 % or below 10% probability the t-value is 2 or above).

Table 4.1 nature of income (monthly/yearly) is significant for cereals and grains for three out of four provinces. It means that those households who receive their incomes on monthly basis spend less on cereals and grains as compared to those who receive their incomes on yearly basis. For milk and milk products those households in Punjab who receive their incomes on monthly basis spend less on this commodity as compared to those who receive their incomes on yearly basis. For meat, fish and poultry those households in NWFP and Sindh who receive their incomes on monthly basis spend more on this item as compared to those who receive it on yearly basis. For fruits and vegetables those households in Punjab who receive their incomes on monthly basis spend more while, in NWFP and Sindh those who receive incomes on yearly basis spend more on this item. For sugar and honey households in Sindh who receive incomes on monthly basis spend more while, in NWFP who receive income on yearly basis spend more on this item. For other food items in Punjab those households who receive incomes on monthly basis spend less on this item as compared to those who receive incomes on yearly basis. For apparel, textile, footwear and personal effects households in NWFP and Balochistan who receive incomes on monthly basis spend more as compared to those who receive incomes on yearly basis. For household use textile households in Balochistan who receive incomes on monthly basis spend more while, the coefficients for Punjab and Sindh are negligible. For fuel and lighting it does not matter whether the households receive incomes monthly or yearly for all the four provinces. For house rent and housing expenses households in Punjab, NWFP and Balochistan spend more on this item who receive incomes monthly as compared to those who receive income yearly. For furniture, fixture and other durable items those households who receive incomes monthly in Sindh they spend less, while those in Balochistan spend more on this item as compared to those who receive incomes yearly. For transport, traveling and communication those households in Punjab who receive their incomes monthly spend less on this item, while that of Sindh and Balochistan spend more on it as compared to those who receive incomes yearly. For recreation and entertainment those households who receive incomes monthly or yearly did not matter. For educational and professional expenditure those households in Balochistan who receive incomes monthly spend less as compared to those who receive incomes yearly. For medical expenses those households in Sindh who receive incomes monthly spend less on this item as compared to those who receive incomes yearly. For cleaning, laundry and

personal appearances those households in Sindh and Balochistan who receive incomes monthly they spend less on this item, while in NWFP those who receive their incomes monthly spend more on this item. For miscellaneous expenditure those households in Punjab and Balochistan who receive incomes monthly spend more on this item as compared to those who receive incomes yearly.

Nature of Income

Table # 4.1

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0060	0.0590	-0.0200	0.0040	-0.0050	0.307	-0.0270	0.0100
Relative Share of Milk & milk products	-0.0040	0.0440	0.0010	0.7110	-0.0020	0.351	-0.0050	0.3760
Relative Share of Meat, fish & poultry	0.0003	0.8410	0.0035	0.1520	0.0040	0.017	-0.0030	0.5550
Relative Share of Fruits & vegetables	0.0016	0.1120	0.0025	0.0750	-0.0020	0.164	-0.0020	0.4860
Relative Share of Sugar & honey	0.0000	0.5750	0.0025	0.0310	-0.0050	0.001	-0.0020	0.3600
Relative Share of Other food items	-0.0070	0.0350	0.0057	0.2830	0.0048	0.321	0.0065	0.3830
Relative Share of Apparel, textile, footwear & personal effects	-0.0020	0.4380	0.0016	0.6240	0.0049	0.064	0.0076	0.1160
Relative Share of Household Use textile	0.0000	0.0520	0.0000	0.3290	0.0003	0.42	0.0023	0.0120
Relative Share of Fuel & lighting	0.0019	0.5420	0.0026	0.5010	-0.0040	0.34	0.0030	0.6630
Relative Share of House rent & housing expenses	0.0041	0.1270	0.0031	0.5520	0.0061	0.06	0.0152	0.0340
Relative Share of Furniture, fixture and other durable items	0.0000	0.0200	-0.0010	0.0040	-0.0001	0.78	0.0016	0.0450
Relative Share of Transport, traveling and communication	-0.0070	0.1790	0.0100	0.1150	0.0055	0.274	0.0658	0.0000
Relative Share of Recreation & entertainment	0.0010	0.3090	0.0009	0.6060	-0.0010	0.435	-0.0020	0.2960
Relative Share of Educational & professional expenditure	0.0018	0.5340	0.0017	0.7290	0.0026	0.527	-0.0080	0.1550
Relative Share of Medical expenses	0.0007	0.7550	-0.0060	0.0730	0.0003	0.939	-0.0040	0.3090
Relative Share of Cleaning, laundry and personal appearances	-0.0010	0.6240	-0.0040	0.0330	0.0034	0.0100	-0.0060	0.0250
Relative Share of Miscellaneous expenditure	0.0098	0.0110	0.0060	0.3420	-0.0070	0.25	0.0220	0.0030

Income

Table 4.2 income is the most significant factor which influences consumption behavior. For cereals and grains income is a significant factor for all the four provinces with a negative relationship which shows that as income of the household increases consumption on this item decreases and it is true for all the four provinces. For milk and milk products as household income increases expenditure on this group increases and it is true for all the four provinces. There is a direct relationship between household income and expenditure on this item. For meat, fish and poultry household income is the most significant factor which influences consumption of this item. As family income increases consumption of meat, fish and poultry increases and it is true for all the four provinces. For fruits and vegetables household income is highly significant variable for this group in all the four provinces but the relationship is negative for three provinces, while for NWFP, the relationship between consumption on fruits and vegetables and income of the household is direct. For sugar and honey income is highly significant with a negative relationship for three provinces. For other food items income is a highly significant variable for all the four provinces with negative relationship. It means that as income level of a household increases its relative expenditure on other food items decreases. For apparel, textile, footwear and personal effects income is a highly significant factor for all the four provinces, but the relationship is not same for all, as for Punjab and Balochistan it is negative, while that of Sindh and NWFP is positive. For household use textile income is highly significant variable for all the four provinces with a positive relationship. It means that as the income of a household increases its relative expenditure share of household use textile increases.

For fuel and lighting income is a highly significant variable with a negative relationship for three provinces while, the relationship is positive for Balochistan. For house rent and housing expenses income is highly significant factor with a negative relationship for three provinces, while the relationship is positive for Balochistan. For furniture, fixture and other durable items income is significant only for Punjab with positive relationship. For transport, traveling and communication income is a significant variable with a positive relationship for all the four provinces. It means that as the income of a household increases its relative expenditure

share of transport, traveling and communication increases. For recreation and entertainment income is significant for Punjab and Sindh with a positive relationship. For educational and professional expenditure income is significant with positive relationship for Punjab and with negative relationship for NWFP. For medical expenses income is significant for Sindh, NWFP and Baluchistan with a negative relationship. For cleaning, laundry and personal appearances income is highly significant for Punjab, Sindh and NWFP with negative relationship. For miscellaneous expenditure income is highly significant in all the four provinces with a positive relationship.

Log of Income
Table # 4.2

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0140	0.0000	-0.0090	0.0000	-0.0080	0	-0.0010	0.6880
Relative Share of Milk & milk products	0.0250	0.0000	0.0122	0.0000	0.0154	0	0.0143	0.0000
Relative Share of Meat, fish & poultry	0.0031	0.0000	0.0027	0.0000	0.0028	0	0.0021	0.0220
Relative Share of Fruits & vegetables	-0.0020	0.0000	-0.0010	0.0000	0.0010	0.011	-0.0020	0.0000
Relative Share of Sugar & honey	-0.0010	0.0000	-0.0020	0.0000	0.0002	0.675	-0.0040	0.0000
Relative Share of Other food items	-0.0090	0.0000	-0.0090	0.0000	-0.0090	0	-0.0060	0.0000
Relative Share of Apparel, textile, footwear & personal effects	-0.0020	0.0170	0.0023	0.0050	0.0008	0.271	-0.0090	0.0000
Relative Share of Household Use textile	0.0003	0.0000	0.0002	0.0020	0.0002	0.027	0.0006	0.0010
Relative Share of Fuel & lighting	-0.0080	0.0000	-0.0100	0.0000	-0.0060	0	0.0067	0.0000
Relative Share of House rent & housing expenses	-0.0080	0.0000	-0.0100	0.0000	-0.0060	0	0.0067	0.0000
Relative Share of Furniture, fixture and other durable items	0.0001	0.0170	0.0001	0.3650	0.0000	0.415	0.0001	0.4510
Relative Share of Transport, traveling and communication	0.0072	0.0000	0.0088	0.0000	0.0039	0.007	0.0038	0.2910
Relative Share of Recreation & entertainment	0.0007	0.0090	0.0015	0.0000	0.0001	0.734	0.0003	0.5390
Relative Share of Educational & professional expenditure	0.0011	0.1570	0.0003	0.7780	-0.0020	0.14	0.0000	0.6770
Relative Share of Medical expenses	0.0002	0.7610	-0.0030	0.0000	-0.0020	0.112	-0.0060	0.0000
Relative Share of Cleaning, laundry and personal appearances	-0.0030	0.0000	-0.0020	0.0000	-0.0020	0.0000	0.0000	0.9740
Relative Share of Miscellaneous expenditure	0.0084	0.0000	0.0171	0.0000	0.0101	0	0.0042	0.0040

Age and Age^2

Table (4.3 & 4.4) age is a significant variable for most of the expenditure items and age square shows whether the impact of the age on expenditure of the commodity group is increasing or decreasing. For cereals and grains age is a significant factor and its expenditure increases with age. For milk and milk products age is a significant variable for Punjab and Balochistan with negative relationship. For meat, fish and poultry age is a significant factor in case of Sindh only.

For apparel, textile, footwear and personal effects age is significant factor in Punjab with a negative sign and in Balochistan it is significant with positive sign. In Punjab as the age of a household increases his expenditure on this group of items decreases while, in Balochistan as the age oh a household increases his expenditure on this group of items increases. For fuel and lighting age is significant for three provinces Punjab, Sindh and Balochistan with negative relationship. For house rent and housing expenses age is significant factor only in case of Sindh with a positive relationship. It means that with an increase in age households in Sindh increases its relative expenditure on house rent and housing expenses. For recreation and entertainment age is significant with a positive relationship for Punjab and Sindh provinces with small coefficient. For educational and professional expenditure age is a highly significant variable in all the four provinces with a positive relationship. It means that expenditure on educational and professional expenditure increases with an increase in age of the household members. Age square is significant in case of all the four provinces with small coefficients. For medical expenses age is significant factor for Sindh and NWFP with a negative relationship, while in Balochistan with a positive relationship. It means that with an increase in age households in Sindh and NWFP decreases its relative expenditure on medical expenses. For cleaning, laundry and personal appearances age is significant with a negative relationship only in case of Sindh. For miscellaneous items age is significant only in case of Balochistan with a positive relationship. It means that with an increase in age of a household head in Balochistan its relative expenditure on this group of item increases.

AGE

Table # 4.3

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffic ient	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0021	0.0000	-0.0010	0.0380	0.0013	0.01	-0.0020	0.0040
Relative Share of Milk & milk products	-0.0010	0.0000	0.0000	0.2090	0.0000	0.909	-0.0010	0.1230
Relative Share of Meat, fish & poultry	0.0000	0.0130	0.0004	0.0660	0.0000	0.049	0.0001	0.7390
Relative Share of Fruits & vegetables	0.0000	0.0010	-0.0001	0.4600	-0.0001	0.524	0.0000	0.0110
Relative Share of Sugar & honey	-0.0001	0.4080	0.0000	0.8370	0.0001	0.429	0.0000	0.4450
Relative Share of Other food items	0.0003	0.4000	0.0000	0.9100	0.0000	0.559	0.0000	0.4880
Relative Share of Apparel, textile, footwear & personal effects	-0.0010	0.0210	0.0004	0.1700	0.0001	0.81	0.0007	0.0340
Relative Share of Household Use textile	0.0000	0.7850	0.0000	0.3700	0.0000	0.706	0.0000	0.4900
Relative Share of Fuel & lighting	-0.0010	0.0000	-0.0010	0.0000	0.0000	0.31	-0.0010	0.0130
Relative Share of House rent & housing expenses	0.0000	0.3460	0.0008	0.0490	0.0000	0.321	0.0003	0.5210
Relative Share of Furniture, fixture and other durable items	0.0000	0.8470	0.0000	0.5210	0.0000	0.199	0.0000	0.8090
Relative Share of Transport, traveling and communication	-0.0010	0.1030	0.0000	0.4070	-0.0010	0.319	0.0015	0.2120
Relative Share of Recreation & entertainment	0.0000	0.0680	0.0000	0.0590	0.0000	0.808	0.0000	0.9790
Relative Share of Educational & professional expenditure	0.0024	0.0000	0.0027	0.0000	0.0015	0.001	0.0015	0.0000
Relative Share of Medical expenses	0.0000	0.9930	-0.0010	0.0250	-0.0010	0.106	0.0005	0.0680
Relative Share of Cleaning, laundry and personal appearances	-0.0001	0.6560	-0.0010	0.0010	0.0000	0.3490	0.0001	0.4690
Relative Share of Miscellaneous expenditure	0.0000	0.9740	0.0000	0.4520	-0.0010	0.383	0.0013	0.0070

AGE^2

Table # 4.4

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffic ient	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0000	0.0000	0.0000	0.0510	0.0000	0.066	0.0000	0.0030
Relative Share of Milk & milk products	0.0000	0.0000	0.0000	0.1790	0.0000	0.662	0.0000	0.3170
Relative Share of Meat, fish & poultry	0.0000	0.0250	0.0000	0.0410	0.0000	0.138	0.0000	0.5200
Relative Share of Fruits & vegetables	0.0000	0.0040	0.0000	0.7690	0.0000	0.652	0.0000	0.0500
Relative Share of Sugar & honey	0.0000	0.4490	0.0000	0.6360	0.0000	0.4	0.0000	0.2380
Relative Share of Other food items	0.0000	0.9180	0.0000	0.8690	0.0000	0.498	0.0000	0.3470
Relative Share of Apparel, textile, footwear & personal effects	0.0000	0.0530	0.0000	0.1330	0.0000	0.892	0.0000	0.2140
Relative Share of Household Use textile	0.0000	0.5210	0.0000	0.3000	0.0000	0.849	0.0000	0.6360
Relative Share of Fuel & lighting	0.0000	0.0000	0.0000	0.0000	0.0000	0.393	0.0000	0.0250
Relative Share of House rent & housing expenses	0.0000	0.6300	0.0000	0.0100	0.0000	0.484	0.0000	0.3550
Relative Share of Furniture, fixture and other durable items	0.0000	0.9780	0.0000	0.4930	0.0000	0.172	0.0000	0.8820
Relative Share of Transport, traveling and communication	0.0000	0.1050	0.0000	0.1480	0.0000	0.454	0.0000	0.2810
Relative Share of Recreation & entertainment	0.0000	0.0900	0.0000	0.0380	0.0000	0.932	0.0000	0.6610
Relative Share of Educational & professional expenditure	0.0000	0.0000	0.0000	0.0000	0.0000	0.001	0.0000	0.0000
Relative Share of Medical expenses	0.0000	0.7220	0.0000	0.0010	0.0000	0.014	0.0000	0.2590
Relative Share of Cleaning, laundry and personal appearances	0.0000	0.6460	0.0000	0.0120	0.0000	0.6530	0.0000	0.2660
Relative Share of Miscellaneous expenditure	0.0000	0.8940	0.0000	0.2440	0.0000	0.519	0.0000	0.0080

Dependency Ratio

Table 4.5 dependency ratio is one of the main factors which influence the expenditure pattern of the household. For cereals and grains dependency ratio is highly significant variable for all the four provinces with positive relationship. It means that with an increase in family members the dependency ratio increases as well as the expenditure on this group of items. For milk and milk products dependency ratio is significant for three provinces with negative relationship. It means that with an increase in dependency ratio expenditure on this group of items decreases. Dependency ratio is significant factor for all the four provinces for meat, fish and poultry for Sindh and Balochistan the relationship is negative. For Punjab and NWFP the relationship is positive with small coefficients. So in Sindh and Balochistan with an increase in dependency ratio households' decreases expenditure on this group of items. For other food items dependency ratio is highly significant factor for all the four provinces with negative relationship. It means that with an increase in dependency ratio expenditure of the households on other food items decreases. For apparel, textile, footwear and personal effects dependency ratio is significant for Punjab with negative relationship, while for the remaining three provinces the relationship is positive.

For fuel and lighting dependency ratio is significant variable for three out of four provinces. For all the three provinces the relationship is negative. It means that with an increase in dependency ratio households have to allocate a smaller proportion of their expenditures to this group of items. For house rent and housing expenses dependency ratio is significant with negative relationship for all the four provinces. With an increase in dependency ratio households have to allocate less proportion of their expenditures to this group of items because they have to allocate more proportion of their incomes to other group of items. For transport, traveling and communication dependency ratio is highly significant variable for all the four provinces with negative relationship. For educational and professional expenditure is highly significant variable for all the four provinces with positive relationship. With an increase in dependency ratio in other words in family member household have to allocate more of the expenditure proportion to educational and professional expenditure. For medical expenses dependency ratio is significant with negative relationship for Punjab and Sindh.

For cleaning, laundry and personal appearances dependency ratio is significant for Sindh and NWFP with negative relationship, while for Punjab and Balochistan the relationship is positive with small coefficients. For miscellaneous items dependency ratio is significant with negative relationship for Punjab and Sindh, while for NWFP and Balochistan the relationship is positive and significant.

DEPENDENCY RATIO

Table # 4.5

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffic ient	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0034	0.0000	0.0061	0.0000	0.0032	0	0.0033	0.0000
Relative Share of Milk & milk products	-0.0010	0.0000	0.0000	0.2540	-0.0018	0	-0.0020	0.0000
Relative Share of Meat, fish & poultry	0.0000	0.0240	-0.0010	0.0000	0.0000	0.015	-0.0010	0.0370
Relative Share of Fruits & vegetables	0.0000	0.0180	0.0000	0.0170	0.0000	0.002	0.0000	0.0020
Relative Share of Sugar & honey	0.0000	0.8270	0.0000	0.6320	0.0002	0.344	0.0001	0.4230
Relative Share of Other food items	-0.0010	0.0000	-0.0030	0.0000	-0.0030	0	-0.0040	0.0000
Relative Share of Apparel, textile, footwear & personal effects	-0.0010	0.0210	0.0005	0.0930	0.0007	0.015	0.0013	0.0000
Relative Share of Household Use textile	0.0000	0.4520	0.0000	0.1290	-0.0001	0.22	0.0000	0.0090
Relative Share of Fuel & lighting	-0.0020	0.0000	0.0000	0.2890	-0.0010	0.025	-0.0010	0.0010
Relative Share of House rent & housing expenses	-0.0010	0.0010	-0.0010	0.0030	-0.0010	0.057	-0.0010	0.0220
Relative Share of Furniture, fixture and other durable items	0.0000	0.5540	0.0000	0.5480	0.0000	0.439	0.0000	0.3630
Relative Share of Transport, traveling and communication	-0.0050	0.0000	-0.0040	0.0000	-0.0020	0	-0.0020	0.0490
Relative Share of Recreation & entertainment	0.0000	0.0600	0.0000	0.0350	0.0000	0.091	-0.0001	0.2840
Relative Share of Educational & professional expenditure	0.0066	0.0000	0.0043	0.0000	0.0036	0	0.0031	0.0000
Relative Share of Medical expenses	-0.0020	0.0000	-0.0010	0.0000	-0.0010	0.143	-0.0001	0.7810
Relative Share of Cleaning, laundry and personal appearances	0.0000	0.0310	-0.0010	0.0010	-0.0010	0.0000	0.0000	0.0180
Relative Share of Miscellaneous expenditure	-0.0010	0.1810	-0.0030	0.0000	0.0008	0.268	0.0018	0.0000

Education

Table 4.6 education is one of the important factors which determine the expenditure of different commodities. For cereals and grains education is highly significant variable with negative relationship for all the four provinces. This is due to two factors i) mostly the incomes of the educated households are high ii) they balance their diet. For milk and milk products education is significant factor for three provinces Punjab, Sindh and NWFP with negative relationship. As educated people have high incomes and multiple choices so their relative share of milk and milk product is less than their illiterate counterparts. For meat, fish and poultry education is significant variable for Punjab and NWFP with positive relationship. It means that educated households spend more on this group of items as compared to their illiterate counterparts. For fruits and vegetables educations is significant with negative relationship for three out provinces Sindh, NWFP and Balochistan. For sugar and honey education is highly significant variable for all the four provinces with negative relationship. It due to the fact that educated households know the side effects of the excessive use of both sugar and honey. For other food items education is significant variable for all of the four provinces with negative relationship. It is due to two factors i) educated households have higher incomes ii) they spend more on other items so their expenditure on food items decreases. For apparel, textile, footwear and personal effects education is significant with positive relationship for all the four provinces. It means that with high incomes households tends to spend more on these items and it is true for all the four provinces.

For household use textile education is significant factor for all the four provinces. It means that educated households who usually have high incomes spend more on this group of items as compared to their illiterate counterparts. For fuel and lighting education of the household is a significant variable for three provinces with a positive relationship for Punjab and for NWFP and Balochistan with a negative relationship. For furniture, fixture and other durable items education is significant variable for three provinces Punjab, NWFP and Balochistan with positive relationship. For transport, traveling and communication education is highly significant variable with positive relationship for all

the four provinces. It means that with high incomes educated households spends more on this group of items as compared to their illiterate counterparts. For recreation and entertainment education is highly significant variable with positive relationship for all the four provinces. It is due to the fact that educated households have time and money to spend on recreation and entertainment. For educational and professional expenditure education is a significant variable with positive relationship for all the four provinces. For medical expenses education is significant only in case of Sindh with negative relationship. For cleaning, laundry and personal appearances education is a significant variable for all the four provinces with positive relationship. It means that educated households spend more on cleaning, laundry and personal appearances. For miscellaneous items education is significant for all the four provinces with positive relationship.

EDUCATION

Table # 4.6

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0120	0.0000	-0.0100	0.0000	-0.0140	0	-0.0090	0.0000
Relative Share of Milk & milk products	-0.0040	0.0000	-0.0040	0.0000	-0.0042	0	-0.0010	0.3610
Relative Share of Meat, fish & poultry	0.0022	0.0000	0.0002	0.5970	0.0022	0	0.0000	0.8040
Relative Share of Fruits & vegetables	0.0002	0.3320	-0.0010	0.0000	-0.0010	0.002	-0.0010	0.0000
Relative Share of Sugar & honey	-0.0020	0.0000	-0.0010	0.0000	-0.0030	0	-0.0020	0.0000
Relative Share of Other food items	-0.0060	0.0000	-0.0060	0.0000	-0.0080	0	-0.0050	0.0000
Relative Share of Apparel, textile, footwear & personal effects	0.0015	0.0160	0.0025	0.0000	0.0010	0.098	0.0029	0.0000
Relative Share of Household Use textile	0.0001	0.0050	0.0001	0.1100	0.0003	0.001	0.0003	0.0380
Relative Share of Fuel & lighting	0.0011	0.1000	0.0000	0.7740	-0.0020	0.019	-0.0040	0.0000
Relative Share of House rent & housing expenses	0.0009	0.1050	-0.0010	0.4900	0.0000	0.851	-0.0010	0.1680
Relative Share of Furniture, fixture and other durable items	0.0001	0.0080	0.0000	0.5350	0.0001	0.085	0.0004	0.0010
Relative Share of Transport, traveling and communication	0.0226	0.0000	0.0080	0.0000	0.0134	0	0.0182	0.0000
Relative Share of Recreation & entertainment	0.0022	0.0000	0.0020	0.0000	0.0018	0	0.0024	0.0000
Relative Share of Educational & professional expenditure	0.0122	0.0000	0.0165	0.0000	0.0186	0	0.0154	0.0000
Relative Share of Medical expenses	0.0000	0.5830	-0.0020	0.0000	0.0001	0.946	0.0004	0.4850
Relative Share of Cleaning, laundry and personal appearances	0.0008	0.0000	0.0015	0.0000	0.0008	0.006	0.0000	0.2880
Relative Share of Miscellaneous expenditure	0.0026	0.0010	0.0030	0.0010	0.0076	0	0.0029	0.0030

Agriculture

Table 4.7 here our base category is those activities of the household which are not adequately defined. Those households who are related to agriculture spend more on cereals and grains as compared to those households who are related to inadequately defined activities of the households and it is true for three provinces Punjab, Sindh and NWFP. Agriculture related households spend more on this group because their incomes are low and this item is at their disposal. For milk and milk products agriculture industry related households of Punjab spend less on this item, while that of Balochistan spend more on this item. It is due to income differences. Agriculture related households of Punjab and Sindh spend less on meat, fish and poultry as compared to their counterparts related to inadequately defined activities. Agriculture industry related households of NWFP spend more on fruits and vegetables as compared to their counterparts who are related to inadequately defined activities.

Agriculture industry related households of Sindh spend more on sugar and honey as compared to their other counterparts who are related to inadequately defined activities in Sindh. Agriculture industry related households of Punjab spends more on apparel, textile, footwear and personal effects as compared to those households who are related to inadequately defined activities related household. Agriculture industry related households of Punjab and Balochistan spend less on fuel and lighting as compared to inadequately defined activities related households. Agriculture industry related households of Balochistan spend less on furniture, fixture and other durable items as compared to inadequately defined activities related households. Agriculture industry related household of Sindh and Balochistan spend less on educational and professional expenditure as compared to inadequately defined activities related households. Agriculture industry related households of Sindh spend more on medical expenses, while that of NWFP spend less on this item as compared to inadequately defined activities related households. Agriculture industry related households of Sindh and NWFP spend less on cleaning, laundry and personal appearances as compared to inadequately defined activities related households. Agriculture industry related households of Punjab spend

more, while that of Sindh spend less on miscellaneous items as compared to inadequately defined activities related counterparts.

INDUSTRIAL CLASSIFICATION

AGRICULTURE

Table # 4.7

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0120	0.0000	0.0106	0.0210	0.0078	0.025	-0.0010	0.8420
Relative Share of Milk & milk products	-0.0040	0.0210	0.0019	0.3130	0.0021	0.308	0.0079	0.0030
Relative Share of Meat, fish & poultry	-0.0030	0.0180	-0.0030	0.0820	0.0018	0.176	0.0034	0.1200
Relative Share of Fruits & vegetables	0.0000	0.9630	0.0003	0.7710	0.0019	0.084	0.0001	0.9090
Relative Share of Sugar & honey	0.0011	0.1330	0.0039	0.0000	0.0019	0.137	0.0010	0.2810
Relative Share of Other food items	-0.0040	0.1690	0.0051	0.1590	-0.0010	0.717	0.0019	0.5920
Relative Share of Apparel, textile, footwear & personal effects	0.0087	0.0010	0.0001	0.9600	0.0018	0.376	-0.0020	0.2980
Relative Share of Household Use textile	0.0000	0.2920	-0.0001	0.6800	0.0000	0.587	-0.0001	0.8570
Relative Share of Fuel & lighting	-0.0100	0.0000	-0.0030	0.2840	-0.0040	0.184	-0.0070	0.0320
Relative Share of House rent & housing expenses	-0.0030	0.2610	-0.0030	0.4720	0.0016	0.544	-0.0030	0.3580
Relative Share of Furniture, fixture and other durable items	0.0001	0.4730	0.0000	0.0110	0.0000	0.424	-0.0010	0.0460
Relative Share of Transport, traveling and communication	-0.0030	0.4550	0.0004	0.9320	-0.0010	0.78	0.0136	0.1160
Relative Share of Recreation & entertainment	-0.0010	0.4840	-0.0010	0.2040	0.0003	0.805	0.0009	0.3340
Relative Share of Educational & professional expenditure	-0.0030	0.1650	-0.0090	0.0040	-0.0040	0.281	-0.0060	0.0340
Relative Share of Medical expenses	0.0004	0.8200	0.0095	0.0000	-0.0050	0.089	0.0013	0.5030
Relative Share of Cleaning, laundry and personal appearances	-0.0010	0.1130	-0.0020	0.0750	-0.0030	0.011	0.0011	0.4440
Relative Share of Miscellaneous expenditure	0.0065	0.0490	-0.0100	0.0230	-0.0030	0.601	0.0026	0.4610

Communication industry

Table 4.8 here base category is inadequately defined activities of the households. Communication industry related households of all the four provinces spends less on cereals and grains as compared to those households who are related to inadequately defined activities. It is due to the fact that communication industry related households have high incomes. Communication industry related households of Sindh spend more on fruits and vegetables as compared to inadequately defined activities related households. Communication industry related households of Punjab and NWFP spend less on sugar and honey as compared to inadequately defined activities related counterparts. Communication industry related households of Sindh spend more on other food items as compared to inadequately defined activities related counterparts.

Communication industry related households of Sindh spend more on apparel, textile, footwear and personal effects as compared to their counterparts who are related to inadequately defined activities. Communication industry related households in Balochistan spend more on house rent and housing expenses as compared to inadequately defined activities related households. For furniture, fixture and other durable items households in Punjab and Sindh spend more as compared to inadequately defined activities related households. Communication industry related households of Punjab and Sindh spend more on transport traveling and communication as compared to their counter parts who are related to inadequately defined activities. For recreation and entertainment results are significant with positive relationship for three provinces Punjab, NWFP and Balochistan. Communication industry related households of Punjab spend more on miscellaneous expenditure as compared to those households who are related to inadequately defined activities.

COMMUNICATION INDUSTRY

Table # 4.8

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0060	0.0280	-0.0070	0.1670	-0.0010	0.712	-0.0120	0.0300
Relative Share of Milk & milk products	-0.0010	0.6030	0.0007	0.7360	-0.0010	0.798	0.0044	0.1280
Relative Share of Meat, fish & poultry	0.0000	0.7840	0.0025	0.1600	0.0020	0.167	0.0008	0.7370
Relative Share of Fruits & vegetables	-0.0010	0.1360	0.0022	0.0350	0.0000	0.836	-0.0010	0.2230
Relative Share of Sugar & honey	-0.0010	0.0740	-0.0010	0.2950	-0.0020	0.085	0.0000	0.9140
Relative Share of Other food items	-0.0040	0.1690	0.0051	0.1590	-0.0010	0.717	0.0019	0.5920
Relative Share of Apparel, textile, footwear & personal effects	0.0042	0.1220	0.0047	0.0500	0.0035	0.124	-0.0040	0.1060
Relative Share of Household Use textile	0.0000	0.8930	0.0002	0.2350	0.0000	0.558	0.0005	0.3020
Relative Share of Fuel & lighting	-0.0020	0.3970	-0.0040	0.1960	-0.0049	0.149	-0.0020	0.6380
Relative Share of House rent & housing expenses	0.0021	0.4050	0.0036	0.3460	0.0013	0.649	0.0067	0.0710
Relative Share of Furniture, fixture and other durable items	0.0003	0.0620	0.0000	0.0480	0.0002	0.261	0.0002	0.5900
Relative Share of Transport, traveling and communication	0.0092	0.0440	0.0095	0.0390	-0.0030	0.527	0.0109	0.2350
Relative Share of Recreation & entertainment	0.0018	0.0420	0.0000	0.9060	0.0023	0.046	0.0024	0.0190
Relative Share of Educational & professional expenditure	-0.0010	0.6110	-0.0050	0.1540	0.0017	0.647	-0.0010	0.7190
Relative Share of Medical expenses	0.0020	0.2960	-0.0010	0.6860	-0.0020	0.566	0.0012	0.5670
Relative Share of Cleaning, laundry and personal appearances	0.0001	0.9240	0.0011	0.4120	0.0000	0.752	0.0021	0.1480
Relative Share of Miscellaneous expenditure	0.0070	0.0510	-0.0040	0.3580	0.0077	0.17	0.0046	0.2290

CONSTRUCTION INDUSTRY

Table 4.9 base category is inadequately defined activities. Construction industry related households of Sindh spend more on cereals and grains, while that of Balochistan spend less on this group of items as compared to those households who are related to inadequately defined activities. For milk and milk products those households who are related to construction industry in Sindh spend less as compared to those households who are related to inadequately defined activities. For meat, fish and poultry the results are significant with negative relationship only for Punjab. It means that construction industry related households in Punjab spend less on meat, fish and poultry as compared to those households who are related to inadequately defined activities.

Construction industry related households of Sindh spend less on transport, traveling and communication, while that of Balochistan spend more on this group of items as compared to those households who are related to inadequately defined activities. Construction industry related households of Balochistan spend more on medical expenses as compared to those households who are related to inadequately defined activities. For cleaning, laundry and personal appearances results are significant for Sindh with positive relationship and for NWFP with a negative relationship. It means that those households in Sindh who are related to inadequately defined activities spend more while, which of NWFP spend less. Construction industry related households of Sindh spend less on miscellaneous items, while that of Balochistan spend more on this group of items as compared to those households who are related to inadequately defined activities.

CONSTRUCTION INDUSTRY

Table # 4.9

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffic ient	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0053	0.1460	0.0169	0.0080	0.0061	0.231	-0.0110	0.0760
Relative Share of Milk & milk products	-0.0020	0.3710	-0.0070	0.0050	-0.0020	0.54	-0.0010	0.6570
Relative Share of Meat, fish & poultry	-0.0040	0.0260	-0.0030	0.1930	0.0022	0.245	0.0015	0.5950
Relative Share of Fruits & vegetables	0.0000	0.7770	0.0018	0.1700	0.0016	0.31	0.0009	0.5240
Relative Share of Sugar & honey	0.0000	0.8140	0.0000	0.7120	0.0000	0.821	0.0018	0.1310
Relative Share of Other food items	-0.0010	0.8840	0.0043	0.3860	0.0026	0.645	0.0002	0.9650
Relative Share of Apparel, textile, footwear & personal effects	0.0039	0.2720	0.0044	0.1520	0.0000	0.901	-0.0010	0.7600
Relative Share of Household Use textile	0.0000	0.3640	-0.0001	0.6650	0.0005	0.273	0.0007	0.2160
Relative Share of Fuel & lighting	-0.0020	0.5040	0.0019	0.6040	-0.0059	0.187	-0.0020	0.6330
Relative Share of House rent & housing expenses	0.0000	0.9200	-0.0060	0.2470	-0.0010	0.881	-0.0010	0.8580
Relative Share of Furniture, fixture and other durable items	0.0000	0.8970	0.0000	0.2490	-0.0001	0.814	0.0003	0.5230
Relative Share of Transport, traveling and communication	-0.0060	0.3130	-0.0110	0.0570	-0.0040	0.456	0.0180	0.0940
Relative Share of Recreation & entertainment	-0.0010	0.6570	0.0001	0.9250	0.0002	0.897	0.0007	0.5710
Relative Share of Educational & professional expenditure	-0.0020	0.6420	-0.0050	0.2320	-0.0040	0.36	-0.0040	0.2670
Relative Share of Medical expenses	0.0040	0.1090	-0.0020	0.4990	-0.0040	0.357	0.0057	0.0160
Relative Share of Cleaning, laundry and personal appearances	-0.0020	0.1400	0.0056	0.0010	-0.0030	0.043	0.0004	0.7940
Relative Share of Miscellaneous expenditure	0.0012	0.8020	-0.0110	0.0620	0.0071	0.34	0.0079	0.0750

ELECTRICITY, POWER AND GAS INDUSTRY

Table 4.10 base category is inadequately defined activities. Electricity, power and gas industry related households of Punjab spend less on cereals and grains as compared to those households who are related to inadequately defined activities. For milk and milk products the results are significant for NWFP only with positive relationship. It means that electricity, power and gas industry related households spend more on milk and milk products as compared to those households who are related to inadequately defined activities. Electricity, power and gas industry related households of NWFP spend more on other food items as compared to those households who are related to inadequately defined activities. Electricity, power and gas industry related households of Punjab spend less on fuel and lighting as compared to those households who are related to inadequately defined activities.

For housing and housing expenses the results are significant only for Punjab with positive relationship. It means that electricity, Power and gas industry related households spend more on house rent and housing expenses as compared to those households who are related to inadequately defined activities. Electricity, power and gas industry related households of NWFP spend less on transport, traveling and communication as compared to those households who are related to inadequately defined activities. For recreation and entertainment the results are significant for Punjab and Sindh with positive relationship. It means that electricity, power and gas industry related households on Punjab and Sindh spend more on recreation and entertainment as compared to those households who are related to inadequately defined activities. Electricity, power and gas industry related households of Punjab spend less on cleaning, laundry and personal appearances as compared to those households who are related to inadequately defined activities.

ELECTRICITY, POWER AND GAS INDUSTRY

Table # 4.10

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffic ient	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0160	0.0740	-0.0030	0.8210	-0.0110	0.353	0.0071	0.6860
Relative Share of Milk & milk products	-0.0070	0.2630	-0.0020	0.7330	-0.0140	0.059	0.0061	0.5180
Relative Share of Meat, fish & poultry	0.0050	0.2210	-0.0040	0.3780	-0.0061	0.184	-0.0030	0.7420
Relative Share of Fruits & vegetables	0.0005	0.8600	-0.0020	0.3460	0.0057	0.134	-0.0040	0.3620
Relative Share of Sugar & honey	-0.0030	0.2850	-0.0020	0.4140	0.0056	0.211	0.0007	0.8430
Relative Share of Other food items	-0.0040	0.6450	0.0130	0.1460	0.0220	0.098	0.0035	0.7780
Relative Share of Apparel, textile, footwear & personal effects	0.0056	0.5170	0.0046	0.4050	0.0031	0.674	-0.0130	0.1200
Relative Share of Household Use textile	-0.0010	0.3890	0.0001	0.7950	0.0000	0.693	-0.0011	0.4870
Relative Share of Fuel & lighting	-0.0180	0.0540	0.0046	0.4750	-0.0127	0.232	-0.0050	0.6680
Relative Share of House rent & housing expenses	0.0160	0.0450	-0.0130	0.1290	0.0039	0.664	0.0099	0.4170
Relative Share of Furniture, fixture and other durable items	0.0001	0.7860	-0.0010	0.1480	-0.0002	0.66	-0.0007	0.6370
Relative Share of Transport, traveling and communication	0.0208	0.1540	-0.0090	0.3900	-0.0340	0.016	0.0112	0.7100
Relative Share of Recreation & entertainment	0.0086	0.0020	0.0061	0.0330	-0.0030	0.461	0.0023	0.5060
Relative Share of Educational & professional expenditure	0.0124	0.1450	0.0076	0.3430	0.0095	0.407	0.0032	0.7250
Relative Share of Medical expenses	-0.0050	0.4580	-0.0030	0.5980	-0.0005	0.962	-0.0045	0.4980
Relative Share of Cleaning, laundry and personal appearances	-0.0070	0.0290	0.0015	0.6400	0.0012	0.751	0.0024	0.6110
Relative Share of Miscellaneous expenditure	0.0119	0.2960	-0.0090	0.4050	-0.0030	0.864	-0.0050	0.6800

MINING INDUSTRY

Table 4.11 base category is inadequately defined activities. Mining industry related households of Punjab spend more on cereals and grains as compared to those households who are related to inadequately defined activities. For milk and milk products the results are significant only for Balochistan with positive relationship. It means that those house are related to mining industry spend more on milk and milk products as compared to those households who are related to inadequately defined activities. Mining industry households of Sindh spend less on meat, fish and poultry as compared to those households who are related to inadequately defined activities. For fruits and vegetables the result is significant with negative relationship for Balochistan. It means that mining industry related households in Balochistan spend less on fruits and vegetables as compared to those households who are related to inadequately defined activities. For sugar and honey the result is significant only in case of Balochistan with a positive relationship. It means that mining industry related households in Balochistan spend more on sugar and honey as compared to those households who are related to inadequately defined activities.

Mining industry related households of Balochistan spend more on apparel, textile, footwear and personal effects as compared to those households who are related to inadequately defined activities. For fuel and lighting the results are highly significant for Balochistan only with negative relationship. It means that mining industry related households in Balochistan spend less on fuel and lighting as compared to those households who are related to inadequately defined activities. For educational and professional expenditure the coefficients are negative for all the four provinces but are significant only in case of Punjab. It means that mining industry related households in Punjab spend less on educational and professional expenditure as compared to those households who are related to inadequately defined activities. For medical expenses group of items only in case of Balochistan the results are significant with positive relationship. It means that mining industry related households in Balochistan spend more on medical expenses as compared to those households who are related to inadequately

defined activities. For cleaning, laundry and personal appearances the results are significant for NWFP with positive relationship and for Balochistan with negative relationship. It means that mining industry related households in Balochistan spend less and that of NWFP spend more on cleaning, laundry and personal appearances as compared to those households who are related to inadequately defined activities.

MINNING INDUSTRY

Table # 4.11

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffici ent	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0418	0.0170	0.0000	0.9990	0.0346	0.406	-0.0250	0.1450
Relative Share of Milk & milk products	0.0060	0.6130	-0.0010	0.9010	-0.0210	0.399	0.0187	0.0420
Relative Share of Meat, fish & poultry	0.0022	0.7870	-0.0160	0.0530	0.0035	0.824	-0.0030	0.6880
Relative Share of Fruits & vegetables	0.0029	0.6090	-0.0040	0.4040	0.0010	0.939	-0.0090	0.0160
Relative Share of Sugar & honey	-0.0030	0.4940	-0.0010	0.8950	0.0053	0.727	0.0061	0.0610
Relative Share of Other food items	0.0078	0.6650	0.0175	0.3370	-0.0100	0.832	0.0199	0.1040
Relative Share of Apparel, textile, footwear & personal effects	0.0103	0.5400	-0.0010	0.9290	0.0149	0.547	0.0179	0.0260
Relative Share of Household Use textile	0.0011	0.4440	-0.0005	0.6420	0.0056	0.13	0.0003	0.8500
Relative Share of Fuel & lighting	0.0002	0.9930	-0.0100	0.4580	0.0029	0.936	-0.0430	0.0000
Relative Share of House rent & housing expenses	-0.0120	0.4450	-0.0090	0.6130	-0.0180	0.546	-0.0020	0.8470
Relative Share of Furniture, fixture and other durable items	0.0015	0.1680	-0.0010	0.5270	-0.0005	0.788	-0.0010	0.4450
Relative Share of Transport, traveling and communication	0.0440	0.1210	0.0018	0.9350	0.0118	0.804	0.0176	0.5480
Relative Share of Recreation & entertainment	0.0003	0.9510	-0.0070	0.2090	-0.0070	0.59	0.0045	0.1720
Relative Share of Educational & professional expenditure	-0.0330	0.0460	-0.0120	0.4580	-0.0330	0.395	-0.0020	0.8050
Relative Share of Medical expenses	0.0009	0.9400	0.0079	0.5170	0.0073	0.8210	0.0111	0.0840
Relative Share of Cleaning, laundry and personal appearances	-0.0010	0.9300	0.0021	0.7460	0.0360	0.004	-0.0120	0.0120
Relative Share of Miscellaneous expenditure	-0.0260	0.2340	0.0347	0.1050	-0.0210	0.724	0.0195	0.1080

GENDER/SEX

Table 4.12 base category is male. By gender we main gender of the household head. Those households in Punjab whose head is male spend more on cereals and grains as compared to those households whose head is female. For milk and milk products the results are significant only in case of NWFP with negative relationship. It means that households headed by females in NWFP spend more on milk and milk products as compared to their male counterparts. Those households in Balochistan whose head is female spend more on fruits and vegetables as compared to their male counterparts. For sugar and honey the results are insignificant for all the four provinces. For other food items the result is significant with positive relationship only in case of Sindh. It means that households headed by males in Sindh spend more on other food items as compared to their female counterparts. For apparel, textile, footwear and personal effects the results are highly significant with positive relationship only in case of Punjab. . It means that households headed by males in Punjab spend more on apparel, textile, footwear and personal effects as compared to their female counterparts. For household use textile the results are significant with negative relationship only in case of Sindh. It means that households headed by females in Sindh spend more on household use textile as compared to their male counterparts.

For fuel and lighting the results are significant in case of Punjab and NWFP with negative relationship. It means that households headed by females in Punjab and NWFP spend more on fuel and lighting as compared to their male counterparts. For house rent and housing expense the results are significant only in case of Balochistan with a positive relationship. It means that households headed by males in Balochistan spend more on house rent and housing expenses as compared to their female counterparts. For the items group transport, traveling and communication the results are significant only in case of NWFP with positive relationship. It means those households headed by male in NWFP spend more on transport, traveling and communication as compared to their female counterparts. For educational and professional expenditure the results are significant only in case of Punjab with negative relationship. It means that households headed by females

in Punjab spend more on educational and professional expenditure as compared to their male counterparts. For medical expenses group of items the results are significant for Sindh and NWFP with negative relationship. It means that households headed by females in Sindh and NWFP spend more on medical expenses as compared to their male counterparts. For miscellaneous group of items the results are significant for Punjab and Sindh with negative relationship, while for NWFP the relationship is positive. It means that households headed by males in Punjab and Sindh spend less and that of NWFP spend more on miscellaneous group of items as compared to their female counterparts.

GENDER/SEX

Table # 4.12

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffici ent	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0358	0.0000	0.0330	0.2160	0.0098	0.311	0.0386	0.2140
Relative Share of Milk & milk products	-0.0020	0.6740	-0.0030	0.7500	-0.0220	0	-0.0240	0.1430
Relative Share of Meat, fish & poultry	-0.0010	0.7130	0.0091	0.3410	-0.0028	0.443	-0.0020	0.8630
Relative Share of Fruits & vegetables	-0.0001	0.9780	0.0012	0.8350	-0.0030	0.323	-0.0140	0.0390
Relative Share of Sugar & honey	0.0030	0.1900	0.0025	0.5860	-0.0001	0.986	0.0027	0.6440
Relative Share of Other food items	0.0031	0.7040	0.0446	0.0330	0.0141	0.18	0.0012	0.9550
Relative Share of Apparel, textile, footwear & personal effects	0.0299	0.0000	0.0047	0.7150	-0.0070	0.207	-0.0230	0.1100
Relative Share of Household Use textile	-0.0010	0.1090	-0.0026	0.0170	0.0008	0.376	0.0027	0.3230
Relative Share of Fuel & lighting	-0.0210	0.0080	0.0082	0.5840	-0.0260	0.002	-0.0060	0.7660
Relative Share of House rent & housing expenses	-0.0080	0.2700	0.0042	0.8370	0.0108	0.129	0.0376	0.0780
Relative Share of Furniture, fixture and other durable items	0.0006	0.2490	0.0004	0.7010	-0.0002	0.688	0.0014	0.5540
Relative Share of Transport, traveling and communication	0.0083	0.5190	0.0152	0.5400	0.0221	0.046	-0.0400	0.4470
Relative Share of Recreation & entertainment	0.0000	0.8660	-0.0016	0.8090	0.0024	0.397	0.0010	0.8690
Relative Share of Educational & professional expenditure	-0.0130	0.0810	-0.0069	0.7140	0.0054	0.552	0.0004	0.9800
Relative Share of Medical expenses	-0.0020	0.6820	-0.0420	0.0030	-0.0125	0.0960	-0.0090	0.4390
Relative Share of Cleaning, laundry and personal appearances	0.0030	0.2840	0.0000	0.9960	0.0040	0.168	0.0102	0.2270
Relative Share of Miscellaneous expenditure	-0.0250	0.0120	-0.0510	0.0360	0.0261	0.065	-0.0170	0.4430

EMPLOYMENT STATUS

EMPLOYER

Table 4.13 base category is paid employees. For cereals and grains those households who are employer spend less on cereals and grains as compared to their counterparts who are paid employees and this is true for all the four provinces. It is due to the fact that employers have high income and hence they spend less proportion of there income on cereals and grains. Employers of Punjab spend more on meat, fish and poultry as compared to their counterparts who are paid employees. For fruits and vegetables the results are significant for NWFP with positive relationship and for Balochistan with negative relationship. It means that households in NWFP who are employers spend more and that of Balochistan spend less on fruits and vegetables. For sugar and honey group of items the results are significant only in case of Balochistan with negative relationship. It means that households in Balochistan who are employers spend less on sugar and honey. For other food items the results are significant only on case of NWFP with negative relationship. It means that households in NWFP employer households spend less on other food items as compared to their counter parts who are paid employees.

Employer headed households in Punjab spend more on apparel, textile, footwear and personal effects as compared to their counterparts who are paid employees. Employer headed households in Sindh spend more on household use textile as compared to their counterparts who are paid employees. Employer headed households in Balochistan spend more on house rent and housing expenses group of items as compared to their counterparts who are paid employees. For transport, traveling and communication the results are significant in case of Sindh and Balochistan with positive relationship. It means that households in Sindh and Balochistan who are employers spend more on transport, traveling and communication as compared to their counterparts who are paid employees. Employer headed households in Sindh spend more on recreation and entertainment. It means that households in Sindh who are employers spend more on recreation and entertainment as compared to their paid employees' counterparts. Employer headed households of Punjab spend less on cleaning, laundry and personal

appearances as compared to those counterparts who are paid employees. For miscellaneous group of items the results are significant for Punjab and Sindh with positive relationship. It means that households headed by employer in Punjab and Sindh spend more on miscellaneous items as compared to their counterparts who are paid employees.

EMPLOYER

Table # 4.13

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0240	0.0010	-0.0450	0.0010	-0.0260	0.052	-0.0370	0.0360
Relative Share of Milk & milk products	-0.0040	0.4000	0.0060	0.2630	0.0018	0.828	-0.0010	0.9050
Relative Share of Meat, fish & poultry	0.0088	0.0070	0.0034	0.4720	0.0070	0.161	-0.0010	0.9090
Relative Share of Fruits & vegetables	0.0007	0.7510	0.0000	0.9930	0.0080	0.055	-0.0080	0.0530
Relative Share of Sugar & honey	-0.0020	0.2770	-0.0010	0.6530	-0.0040	0.404	-0.0071	0.0310
Relative Share of Other food items	-0.0110	0.1450	-0.0020	0.8290	-0.0320	0.026	-0.0063	0.6090
Relative Share of Apparel, textile, footwear & personal effects	0.0309	0.0000	-0.0066	0.3040	0.0005	0.948	0.0064	0.4300
Relative Share of Household Use textile	0.0000	0.8560	0.0011	0.0540	0.0005	0.654	-0.0020	0.2960
Relative Share of Fuel & lighting	-0.0070	0.3400	-0.0100	0.1960	0.0066	0.57	0.0003	0.9790
Relative Share of House rent & housing expenses	-0.0010	0.8420	-0.0040	0.7120	0.0046	0.638	0.0532	0.0000
Relative Share of Furniture, fixture and other durable items	0.0000	0.7740	0.0004	0.4510	0.0003	0.608	-0.0001	0.9130
Relative Share of Transport, traveling and communication	-0.0050	0.6750	0.0394	0.0010	0.0198	0.196	0.0793	0.0080
Relative Share of Recreation & entertainment	-0.0020	0.3740	0.0093	0.0050	0.0057	0.147	0.0000	0.9930
Relative Share of Educational & professional expenditure	0.0041	0.5430	0.0096	0.3030	0.0058	0.641	0.0029	0.7500
Relative Share of Medical expenses	-0.0050	0.2850	-0.0110	0.1020	0.0084	0.4180	-0.0026	0.6940
Relative Share of Cleaning, laundry and personal appearances	-0.0040	0.0800	0.0032	0.3770	-0.0010	0.868	0.0043	0.3730
Relative Share of Miscellaneous expenditure	0.0165	0.0680	0.0462	0.0000	0.0139	0.477	-0.0030	0.8020

UN-EMPLOYED

Table 4.14 base category is paid employees. Households whose heads are unemployed in NWFP and Balochistan spend less on cereals and grains. It means that unemployed headed households in NWFP and Balochistan spend less on cereals and grains as compared to those household whose heads are paid employees. For meat, fish and poultry results are significant for Sindh and NWFP with positive relationship. It means that unemployed headed households in NWFP and Sindh spend more on meat, fish and poultry as compared to those household who are paid employees. Unemployed households of Sindh spend more on fruits and vegetables as compared to those households whose heads are paid employees. For sugar and honey the results are significant with negative relationship for NWFP and Balochistan. It means that unemployed headed households in NWFP and Balochistan spend less on sugar and honey as compared to those household whose heads are paid employees. For other food items the results are significant only in case of Punjab with negative relationship. It means that unemployed headed households in Punjab spend less on other food items as compared to those household heads who are paid employees. Unemployed households in NWFP spend more on apparel, textile, footwear and personal effects as compared to those household whose heads are paid employees.

For household use textile the results are significant with a small coefficient for Sindh with negative relationship and for Balochistan with positive relationship. It means that unemployed headed households in Sindh spend less and that of Balochistan spend more on household use textile as compared to those household heads who are paid employees. Unemployed households of Balochistan spend more on house rent and housing expenses group of items as compared to those households whose heads are paid employees. For furniture, fixture and other durable items the results are significant with negative relationship for Punjab and Sindh and with positive relationship for Balochistan. For transport, traveling and communication the results are significant for Punjab with negative and for Balochistan with positive relationship. Unemployed households in Punjab and Balochistan spend less on educational and professional expenditure as compared to those households whose heads are paid employees. For medical expenses

the results are significant with negative relationship for Sindh, NWFP and Balochistan. It means that households headed by unemployed in Sindh, NWFP and Balochistan spend less on medical expenses as compared to those households whose heads are paid employees. For cleaning, laundry and personal appearances he results are significant with negative relationship for Punjab and Balochistan and with positive relationship for NWFP. For miscellaneous group of items the results are significant with positive relationship for Punjab and Balochistan.

UN-EMPLOYED

Table # 4.14

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffici ent	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0040	0.3260	-0.0030	0.6770	-0.0120	0.021	-0.0230	0.0380
Relative Share of Milk & milk products	0.0010	0.8040	0.0049	0.1210	0.0041	0.195	0.0036	0.5550
Relative Share of Meat, fish & poultry	-0.0001	0.9740	0.0048	0.0830	0.0060	0.002	-0.0010	0.8120
Relative Share of Fruits & vegetables	0.0000	0.7400	0.0037	0.0220	0.0017	0.304	0.0000	0.9530
Relative Share of Sugar & honey	0.0002	0.8830	0.0007	0.5920	-0.0040	0.041	-0.0038	0.0730
Relative Share of Other food items	-0.0100	0.0110	0.0093	0.1270	-0.0056	0.33	-0.0008	0.9160
Relative Share of Apparel, textile, footwear & personal effects	0.0044	0.2140	0.0049	0.1910	0.0067	0.033	0.0072	0.1690
Relative Share of Household Use textile	0.0000	0.1260	-0.0005	0.0910	0.0000	0.938	0.0029	0.0030
Relative Share of Fuel & lighting	0.0039	0.2880	0.0037	0.4050	0.0022	0.638	0.0037	0.6180
Relative Share of House rent & housing expenses	0.0003	0.9190	0.0003	0.9570	0.0014	0.709	0.0146	0.0600
Relative Share of Furniture, fixture and other durable items	-0.0010	0.0010	-0.0010	0.0030	-0.0001	0.738	0.0021	0.0180
Relative Share of Transport, traveling and communication	-0.0130	0.0300	-0.0030	0.6450	0.0078	0.192	0.0681	0.0000
Relative Share of Recreation & entertainment	-0.0010	0.2120	0.0007	0.7300	-0.0010	0.696	-0.0010	0.5370
Relative Share of Educational & professional expenditure	-0.0090	0.0140	-0.0083	0.1290	-0.0050	0.284	-0.0130	0.0260
Relative Share of Medical expenses	0.0034	0.1800	-0.0200	0.0000	-0.0076	0.0630	-0.0085	0.0430
Relative Share of Cleaning, laundry and personal appearances	-0.0020	0.0850	-0.0020	0.3310	0.0040	0.011	-0.0070	0.0260
Relative Share of Miscellaneous expenditure	0.0141	0.0020	0.0017	0.8140	0.0091	0.237	0.0251	0.0020

SELF-EMPLOYED

Table 4.15 base category is paid employees. For cereals and grains the coefficients are negatively significant in case of Punjab and NWFP. It means that paid employees headed households in Punjab and NWFP spend less on cereals and grains as compared to those households whose heads are self employed. Self-employed households of Balochistan spend more on milk and milk products as compared to those households whose heads are paid employees. For meat, fish and poultry the results are significant for all the four provinces, for Punjab, Sindh and NWFP with positive relationship, while for Balochistan with a negative relationship. Self-employed households of Punjab spend more on fruits and vegetables as compared to those households whose heads are paid employees. Self employed households in Sindh spend less on sugar and honey as compared to those households whose heads are paid employees.

Self-employed households of Punjab and NWFP spend less on other food items and of Balochistan spend more on other food items as compared to those households whose heads are paid employees. For apparel, textile, footwear and personal effects results are significant with positive relationship for Punjab, Sindh and NWFP. Self-employed households of Sindh spend less on house rent and housing expenses group of items as compared to those households whose heads are paid employees. Self-employed households of Punjab spend less on transport, traveling and communication group of items and of Balochistan spend more on this group of items as compared to those households whose heads are paid employees. Self-employed households of Sindh spend less on educational and professional expenditure group of items as compared to those households whose heads are paid employees. For medical expenses results are only significant with negative relationship in case of Sindh. For miscellaneous group of items the results are significant for Punjab, Sindh and Balochistan with positive relationship, while for NWFP the results are insignificant. It means that self employed households in Punjab, Sindh and Balochistan spend more and that of Balochistan spend less as compared to those households whose heads are paid employees.

SELF-EMPLOYED

Table # 4.15

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffici ent	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0060	0.0130	-0.0020	0.7370	-0.0080	0.033	-0.0080	0.1370
Relative Share of Milk & milk products	-0.0020	0.1670	0.0025	0.1670	0.0010	0.66	0.0053	0.0740
Relative Share of Meat, fish & poultry	0.0026	0.0120	0.0071	0.0000	0.0045	0.002	-0.0050	0.0330
Relative Share of Fruits & vegetables	0.0020	0.0050	0.0013	0.1700	0.0007	0.536	0.0006	0.6010
Relative Share of Sugar & honey	-0.0010	0.3900	-0.0020	0.0240	0.0000	0.835	-0.0008	0.4150
Relative Share of Other food items	-0.0070	0.0020	0.0024	0.4940	-0.0077	0.065	0.0076	0.0510
Relative Share of Apparel, textile, footwear & personal effects	0.0050	0.0180	0.0071	0.0010	0.0047	0.041	-0.0030	0.2150
Relative Share of Household Use textile	0.0000	0.9600	-0.0001	0.4870	-0.0002	0.585	0.0006	0.1790
Relative Share of Fuel & lighting	0.0014	0.5470	-0.0010	0.8090	0.0023	0.486	-0.0060	0.1320
Relative Share of House rent & housing expenses	-0.0020	0.2050	-0.0060	0.0890	0.0019	0.491	0.0005	0.8940
Relative Share of Furniture, fixture and other durable items	0.0000	0.2190	0.0000	0.4180	0.0000	0.864	0.0001	0.8120
Relative Share of Transport, traveling and communication	-0.0070	0.0690	0.0008	0.8540	0.0028	0.519	0.0520	0.0000
Relative Share of Recreation & entertainment	0.0001	0.8520	-0.0003	0.8190	0.0007	0.523	0.0007	0.5310
Relative Share of Educational & professional expenditure	-0.0010	0.8090	-0.0088	0.0060	-0.0020	0.536	0.0002	0.9380
Relative Share of Medical expenses	0.0009	0.5350	-0.0150	0.0000	-0.0003	0.9310	-0.0028	0.1670
Relative Share of Cleaning, laundry and personal appearances	-0.0010	0.2130	0.0021	0.1000	0.0018	0.114	0.0016	0.2910
Relative Share of Miscellaneous expenditure	0.0075	0.0070	0.0115	0.0060	0.0012	0.836	0.0084	0.0300

OTHER-EMPLOYED

Table 4.16 base category is paid employees. Other employed households in Sindh and Balochistan spend more on cereals and grains as compared to those households whose heads are paid employees. Other-employed households of Balochistan spend more on milk and milk products as compared to those households whose heads are paid

employees. Other employed households of Punjab and Balochistan spend less on meat, fish and poultry as compared to those households whose heads are paid employees. For fruits and vegetables the results are significant for Sindh with positive relationship and for NWFP with negative relationship. Other employed households in Balochistan spend less on sugar and honey as compared to those households whose heads are paid employees. Other-employed households of Punjab spend less on other food items as compared to those households whose heads are paid employees. For apparel, textile and personal effects the results are significant for Punjab with positive relationship and for Balochistan with negative relationship. For household use textile the results are significant for Sindh only with negative relationship. For fuel and lighting the results are significant only in case of Balochistan with negative relationship.

Other-employed households of Balochistan spend more on house rent and housing expenses group of items as compared to those households whose heads are paid employees. Other employed households in Punjab and Sindh spend less on furniture, fixture and other durable items as compared to those households whose heads are paid employees. And same is true for transport, traveling and communication group of items. For educational and professional expenditure the results are significant for Punjab, Sindh and Balochistan with negative relationship. It means that other employed households in Punjab, Sindh and Balochistan spend less on educational and professional expenditure as compared to those households whose heads are paid employees. For medical expenses group of items the results are highly significant with negative relationship in case on Sindh and Balochistan. For cleaning, laundry and personal appearances the results are significant only in case of Balochistan with negative relationship. For miscellaneous expenditure group of items the results are significant with positive relationship in case of Punjab. It means that other employed households in Punjab spend more on miscellaneous expenditure as compared to those households whose heads are paid employees.

OTHER-EMPLOYED

Table # 4.16

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffici ent	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	0.0031	0.4680	0.0231	0.0030	0.0061	0.338	0.0595	0.0000
Relative Share of Milk & milk products	-0.0020	0.4890	0.0049	0.1270	0.0011	0.775	0.0319	0.0000
Relative Share of Meat, fish & poultry	-0.0040	0.0620	0.0000	0.9400	0.0000	0.985	-0.0170	0.0010
Relative Share of Fruits & vegetables	0.0004	0.7540	0.0048	0.0030	-0.0040	0.035	-0.0010	0.7880
Relative Share of Sugar & honey	0.0014	0.2680	-0.0010	0.3610	0.0021	0.364	-0.0046	0.0470
Relative Share of Other food items	-0.0150	0.0010	0.0068	0.2730	0.0003	0.965	-0.0065	0.4590
Relative Share of Apparel, textile, footwear & personal effects	0.0153	0.0000	0.0037	0.3360	0.0060	0.111	-0.0110	0.0620
Relative Share of Household Use textile	0.0000	0.2110	-0.0007	0.0290	-0.0005	0.368	0.0003	0.7440
Relative Share of Fuel & lighting	-0.0010	0.8230	0.0048	0.2850	0.0022	0.695	-0.0230	0.0040
Relative Share of House rent & housing expenses	0.0001	0.9810	-0.0010	0.9160	0.0002	0.971	0.0154	0.0680
Relative Share of Furniture, fixture and other durable items	-0.0010	0.0040	-0.0010	0.0260	-0.0002	0.464	0.0001	0.8840
Relative Share of Transport, traveling and communication	-0.0210	0.0030	-0.0150	0.0350	-0.0100	0.191	0.0222	0.2900
Relative Share of Recreation & entertainment	-0.0020	0.2120	-0.0001	0.9670	-0.0010	0.5	-0.0030	0.2550
Relative Share of Educational & professional expenditure	-0.0070	0.0960	-0.0107	0.0540	-0.0060	0.332	-0.0160	0.0150
Relative Share of Medical expenses	0.0032	0.2860	-0.0250	0.0000	-0.0069	0.1620	-0.0163	0.0000
Relative Share of Cleaning, laundry and personal appearances	-0.0020	0.1400	0.0000	0.8850	0.0027	0.162	-0.0080	0.0200
Relative Share of Miscellaneous expenditure	0.0102	0.0610	-0.0090	0.2380	-0.0019	0.841	-0.0020	0.8380

LOCATION

Table 4.17 base category is rural area. By location we mean whether the under consideration household is residing in rural or urban area. For cereals and grains the results are highly significant for all the four provinces with negative relationship. It

means that urban households spend less on this group of items as compared to their rural counterparts and it is due to comparatively high incomes in urban aria. For milk and milk products the results are significant with positive relationship in case of Sindh and Balochistan. Urban households of Punjab and Sindh spend more on meat, fish and poultry as compared to their rural counterparts. For fruits and vegetables the results are significant for Punjab and Balochistan with negative relationship and for Sindh with positive relationship. Urban households in all provinces spend less on sugar and honey as compared to their rural counterparts.

For other food items the results are significant in case of Punjab, Sindh and Balochistan with negative relationship. Urban households of Balochistan spend less on apparel, textile, footwear and personal effects as compared to their rural counterparts. For household use textile results are highly significant for Sindh with small and positive coefficient. Urban households in all the four provinces spend more on fuel and lighting group of items as compared to their rural counterparts. It implies that due to high incomes the consumption of fuel and lighting increases. Same is true for house rent and housing expenses group of items. It is due to high rents and property prices which are very high in urban aria. Urban households in Balochistan spend less on furniture, fixture and other durable items as compared to their rural counterparts. Urban households in Punjab, Sindh and NWFP spend more on transport, traveling and communication as compared to their rural counterparts, while for Balochistan reverse is the case. Urban households in all the four provinces spend more on recreation and entertainment as compared to their rural counterparts. It is due to two factors i) high urban income and ii) facilities. Same is true for educational and professional expenses group of items. For medical expenses the results are significant for Sindh and Balochistan with negative relationship. It means that in Sindh and Balochistan urban households spend less on medical expenses as compared to their rural counterparts. Urban households in NWFP and Balochistan spend more on cleaning, laundry and personal appearances as compared to their rural counterparts. For miscellaneous expenditure group of items the results are only significant in case on Punjab and Balochistan with negative relationship. It means that urban households in

Punjab and Balochistan spend less on miscellaneous expenditure group of items as compared to their rural counterparts.

LOCATION

Table # 4.17

Items Group	PUNJAB		SINDH		N.W.F.P		BALOCHISTAN	
	Coeffici ent	Signific ance	Coeffici ent	Signific ance	Coeffici ent	Signifi cance	Coefficient	Significance
Relative Share of Cereals & Grains	-0.0330	0.0000	-0.0750	0.0000	-0.0420	0	-0.0270	0.0000
Relative Share of Milk & milk products	0.0010	0.6470	0.0037	0.0100	0.0010	0.569	0.0056	0.0080
Relative Share of Meat, fish & poultry	0.0044	0.0000	0.0135	0.0000	0.0012	0.287	0.0000	0.8130
Relative Share of Fruits & vegetables	-0.0020	0.0000	0.0028	0.0000	-0.0010	0.418	-0.0020	0.0090
Relative Share of Sugar & honey	-0.0060	0.0000	-0.0090	0.0000	-0.0070	0	-0.0064	0.0000
Relative Share of Other food items	-0.0170	0.0000	-0.0140	0.0000	-0.0044	0.184	-0.0092	0.0010
Relative Share of Apparel, textile, footwear & personal effects	-0.0020	0.2150	-0.0027	0.1180	-0.0030	0.147	-0.0170	0.0000
Relative Share of Household Use textile	0.0000	0.1680	0.0006	0.0000	-0.0002	0.395	0.0000	0.3370
Relative Share of Fuel & lighting	0.0147	0.0000	0.0125	0.0000	0.0084	0.001	0.0100	0.0000
Relative Share of House rent & housing expenses	0.0243	0.0000	0.0354	0.0000	0.0212	0	0.0372	0.0000
Relative Share of Furniture, fixture and other durable items	-0.0001	0.5900	-0.0001	0.5770	0.0002	0.155	-0.0013	0.0000
Relative Share of Transport, traveling and communication	0.0118	0.0000	0.0308	0.0000	0.0075	0.031	-0.0240	0.0000
Relative Share of Recreation & entertainment	0.0040	0.0000	0.0069	0.0000	0.0035	0	0.0032	0.0000
Relative Share of Educational & professional expenditure	0.0186	0.0000	0.0271	0.0000	0.0141	0	0.0169	0.0000
Relative Share of Medical expenses	0.0000	0.9850	-0.0060	0.0010	-0.0026	0.2740	-0.0067	0.0000
Relative Share of Cleaning, laundry and personal appearances	0.0004	0.6080	0.0000	0.8760	0.0063	0	0.0041	0.0000
Relative Share of Miscellaneous expenditure	-0.0060	0.0270	0.0040	0.2170	0.0039	0.378	-0.0060	0.0230

CHAPTER #5

Conclusions, Policy Implications & Limitations of the Study

The study aimed at analyzing the household consumption behavior of Pakistan on the basis of the household head characteristics province-wise. Consumption behavior of Punjab, Sindh, NWFP and Baluchistan are analyzed for 17 groups of items with these attributes of a household head under consideration, viz. Grand total income of a household head, Household size, Education of the Household head, Industrial classification of the household head, Nature of the income of the house hold head, Employment Status of the household head, Dependency ratio of the household head, Location of the household, and Gender/Sex of the household head.

The study of the chosen variables reveals many interesting features of consumption behavior for all the four provinces. We will discuss them one by one in detail for all the commodities province-wise.

Punjab

1. Nature of Income, those households who receive their incomes monthly spend less on cereals and grains, milk and milk products, other food items, transport, traveling and communication, while they spend more on fruits and vegetables, house rent and housing expenses and miscellaneous expenditure.
2. Income, as income of a household increases its decreases the consumption of cereals and grains, fruits and vegetables, sugar and honey, other food items, apparel, textile, footwear and personal effects, fuel and lighting, house rent and housing expenses and cleaning, laundry and personal appearances. And increases expenditure on milk and milk products, meat, fish and poultry, household use textile, furniture, fixture and other durable items, transport traveling and communication, recreation and entertainment, educational and professional expenditure and miscellaneous expenditure.

3. Age and Age Square, expenditure increases with age on cereals and grains, recreation and entertainment and educational and professional expenses. And decreases on apparel, textile, footwear and personal effects and fuel and lighting.
4. Dependency Ratio, as the dependency ratio of a household increases its expenditure increases on, cereals and grains, meat, fish and poultry and educational and professional expenditure. It decreases on milk and milk products, other food items, apparel, textile, footwear and personal effects, fuel and lighting, house rent and housing expenses, transport traveling and communication, medical expenses and miscellaneous expenditure.
5. Education, expenditure decreases on these items with an increase in education level of a household namely, cereal and grains, milk and milk products, sugar and honey and other food items. It increases on meat, fish and poultry, apparel, textile, footwear and personal effects, household use textile, fuel and lighting, furniture, fixture and other durable items, transport, traveling and communication, recreation and entertainment, educational and professional expenditure, cleaning, laundry and personal appearances and miscellaneous expenditure.
6. Agriculture, agriculture related households spend more on as compared to inadequately defined activities, cereals and grains, apparel, textile, footwear and personal effects and miscellaneous expenditure, and spend less on milk and milk products, meat, fish and poultry and fuel and lighting.
7. Communication, communication industry related households spend more as compared to inadequately defined activities on, furniture, fixture and other durable items, transport, traveling and communication, recreation and entertainment and miscellaneous items, and spend less on cereals and grains and sugar and honey.
8. Construction industry, construction industry related households spend less as compared to inadequately defined activities on, meat, fish and poultry.
9. Electricity, Power and Gas, electricity, power and gas industry related households spend more as compared to inadequately defined activities on, house rent and housing expenses and recreation and entertainment, and less on, cereals and grains.

10. Mining Industry, mining industry related households spend more as compared to inadequately defined activities on, cereals and grains, and less on, educational and professional.
11. Gender/Sex, households headed by male spend more on, cereals and grains, apparel, textile, footwear and personal effects. And less on, fuel and lighting, educational and professional expenditure and miscellaneous expenditure.
12. Employer, those households whose head is employer spend more as compared to paid employees on, meat, fish and poultry, apparel, textile, footwear and personal effects and miscellaneous expenditure, and less on, cereals and grains and cleaning, laundry and personal appearances.
13. Un-Employed, those households whose head is un-employed spend more as compared to paid employees on, miscellaneous expenditure, and spend less on, other food items, furniture, fixture and other durable items, transport, traveling and communication, educational and professional expenditure and cleaning, laundry and personal appearances.
14. Self-Employed, those households whose head is self-employed spend more as compared to paid employees on, meat, fish and poultry, fruits and vegetables, apparel, textile, footwear and personal effects and miscellaneous expenditure, and spend less on, cereals and grains, other food items, transport and traveling and communication.
15. Other-Employed, those households whose head is other employed spend more as compared to paid employees on, apparel, textile, footwear and personal effects and miscellaneous expenditure, and spend less on, meat, fish and poultry, other food items, fixture and other durable items, transport, traveling and communication and educational and professional expenditure.
16. Location, urban households spend more on, meat, fish and poultry, fuel and lighting, house rent and housing expenses, transport, traveling and communication, recreation and entertainment and educational and professional expenditure, and spend less on, cereals and grains, fruits and vegetables, sugar and honey, other food items and miscellaneous expenditure.

SINDH

1. Nature of Income, those households who receive their incomes monthly spend more on, meat, fish and poultry, sugar and honey and transport, traveling and communication, and spend less on, cereals and grains, fruits, and vegetables, fixture and other durable items, medical expenses, cleaning and laundry and personal appearances.
2. Income, as income of a household increases it decreases the consumption of, cereals and grains, fruits and vegetables, sugar and honey, other food items, fuel and lighting, house rent and housing expenses, medical expenses and cleaning, laundry and personal appearances, and increases the consumption of, milk and milk products, meat, fish and poultry, apparel, textile, footwear and personal effects, household use textile, transport, traveling and communication and miscellaneous expenditure.
3. Age and Age Square, expenditure increases with age on cereals and grains, meat, fish and poultry, house rent and housing expenses and educational and professional expenditure, and decreases on, fuel and lighting, medical expenses and cleaning and laundry and personal appearances.
4. Dependency Ratio, as the dependency ratio of a household increases its expenditure increases on, cereals and grains, apparel, textile, footwear and personal effects and educational and professional expenditure, and decreases on, meat, fish and poultry, other food items, house rent and housing expenses, transport, traveling and communication, medical expenses, cleaning and laundry and personal appearances and miscellaneous expenditure.
5. Education, expenditure decreases on these items with an increase in education level of a household namely, cereal and grains, milk and milk products, sugar and honey, fruits and vegetables, other food items and medical expense, and increases on, on meat, fish and poultry, apparel, textile, footwear and personal effects, household use textile, fuel and lighting, furniture, fixture and other durable items, transport, traveling and communication, recreation and entertainment, educational and professional expenditure, cleaning, laundry and personal appearances and miscellaneous expenditure.

6. Agriculture, agriculture related households spend more as compared to inadequately defined activities on, cereals and grains, sugar and honey and medical expenses, and spend less on, meat, fish and poultry, educational and professional expense, cleaning and laundry and personal appearances and miscellaneous expenditure.
7. Communication, communication industry related households spend more as compared to inadequately defined activities on, fruits and vegetables, other food items, apparel, textile, footwear and personal effects, fixture and other durable items and transport, traveling and communication, and less on, cereals and grains.
8. Construction industry, construction industry related households spend more as compared to inadequately defined activities on, cereals and grains and cleaning and laundry and personal appearances, and spend less on, milk and milk products, transport, traveling and communication, educational and professional expenditure and miscellaneous expenditure.
9. Electricity, Power and Gas, electricity, power and gas industry related households spend more as compared to inadequately defined activities on, recreation and entertainment.
10. Mining Industry, mining industry related households spend less as compared to inadequately defined activities on, meat, fish and poultry.
11. Gender/Sex, households headed by male spend more on, other food items. And spend less on, household use textile, medical expenses and miscellaneous expenditure.
12. Employer, those households whose head is employer spend more as compared to paid employees on, household use textile, transport, traveling and communication, recreation and entertainment and miscellaneous expenditure, and less on, cereals and grains.
13. Un-Employed, those households whose head is un-employed spend more as compared to paid employees on, meat, fish and poultry and fruits and vegetables and, and less on, cereals and grains, household use textile, furniture, fixture and other durable items and medical expenses.
14. Self-Employed, those households whose head is self-employed spend more as compared to paid employees on, meat, fish and poultry, apparel, textile, footwear and personal effects and miscellaneous expenditure, and less on, sugar and honey, house

rent and housing expenses, educational and professional expenditure and medical expenses.

15. Other-Employed, those households whose head is other employed spend more as compared to paid employees on, cereals and grains and fruits and vegetables, and less on, household use textile, furniture, fixture and other durable items, educational and professional expenditure and medical expenses.
16. Location, urban households spend more on, milk and milk products, fruits and vegetables, meat, fish and poultry, household use textile, fuel and lighting, house rent and housing expenses, transport, traveling and communication, recreation and entertainment and educational and professional expenditure. And spend less on, cereals and grains, sugar and honey, other food items and medical expenses.

NWFP

1. Nature of Income, those households who receive their incomes monthly spend more on, meat, fish and poultry, apparel, textile, footwear and personal effects, house rent and housing expenses, and cleaning, laundry and personal appearances, and spend less on, fruits and vegetables and sugar and honey.
2. Income, as income of a household increases it decreases the consumption of, cereals and grains, other food items, fuel and lighting, house rent and housing expenses, educational and professional expenditure, medical expenses and cleaning, laundry and personal appearances, and increases the consumption of, milk and milk products, meat, fish and poultry, fruits and vegetables, apparel, textile, footwear and personal effects, household use textile, transport, traveling and communication and miscellaneous expenditure.
3. Age and Age Square, expenditure increases with age on, cereals and grains and educational and professional expenditure, and decreases with age on, medical expenses.
4. Dependency Ratio, as the dependency ratio of a household increases its expenditure increases on, cereals and grains, apparel, textile, footwear and personal effects, educational and professional expenditure and miscellaneous expenditure, and

decreases on, milk and milk products, other food items, fuel and lighting, house rent and housing expenses and cleaning, laundry and personal appearances.

5. Education, expenditure decreases on these items with an increase in education level of a household namely, cereal and grains, milk and milk products, meat, fish and poultry, sugar and honey, fruits and vegetables, other food items and fuel and lighting, and increases on, on meat, fish and poultry, apparel, textile, footwear and personal effects, household use textile, furniture, fixture and other durable items, transport, traveling and communication, recreation and entertainment, educational and professional expenditure, cleaning, laundry and personal appearances and miscellaneous expenditure.
6. Agriculture, agriculture related households spend more as compared to inadequately defined activities on, cereals and grains and fruits and vegetables, and spend less on, medical expenses and cleaning, laundry and personal appearances.
7. Communication, communication industry related households spend less as compared to inadequately defined activities on, cereals and grains and sugar and honey, and spend more on, recreation and entertainment.
8. Construction industry, construction industry related households spend less as compared to inadequately defined activities on, cleaning, laundry and personal appearances.
9. Electricity, Power and Gas, electricity, power and gas industry related households spend more as compared to inadequately defined activities on, milk and milk products and other food items, and less on, transport, traveling and communication.
10. Mining Industry, mining industry related households spend more as compared to inadequately defined activities on, cleaning, laundry and personal appearances.
11. Gender/Sex, households headed by male spend more on, transport, traveling and communication and miscellaneous expenditure, and spend less on, milk and milk products, fuel and lighting and medical expenses.
12. Employer, those households whose head is employer spends more as compared to paid employees on, fruits and vegetables, and less on, cereals and grains other food items.

13. Un-Employed, those households whose head is un-employed spend more as compared to paid employees on, meat, fish and poultry, apparel, textile, footwear and personal effects, cleaning, laundry and personal appearances, and less on, cereals and grains, sugar and honey and medical expenses.
14. Self-Employed, those households whose head is self-employed spend more as compared to paid employees on, meat, fish and poultry and apparel, textile, footwear and personal effects, and less on, cereals and grains and other food items.
15. Other-Employed, those households whose head is other employed spend less as compared to paid employees on, fruits and vegetables.
16. Location, urban households spend more on, fuel and lighting, house rent and housing expenses, transport, traveling and communication, recreation and entertainment, educational and professional expenditure and cleaning, laundry and personal appearances, and spend less on, cereals and grains and sugar and honey.

BALOCHISTAN

1. Nature of Income, those households who receive their incomes monthly spend more on, apparel, textile, footwear and personal effects, household use textile, furniture, fixture and other durable items, house rent and housing expenses, transport, traveling and communication and miscellaneous expenditure, and less on, cereals and grains, educational and professional expenditure and cleaning, laundry and personal appearances.
2. Income, as income of a household increases it decreases the consumption of, cereals and grains, fruits and vegetables, other food items, apparel textile, footwear and personal effects and medical expenses, and increases the consumption of, milk and milk products, meat, fish and poultry, household use textile, fuel and lighting, house rent and housing expenses, transport, traveling and communication and miscellaneous expenditure.
3. Age and Age Square, expenditure increases with age on, cereals and grains, apparel textile, footwear and personal effects, educational and professional expenditure,

medical expenses and miscellaneous expenditure, and decreases on, milk and milk products.

4. Dependency Ratio, as the dependency ratio of a household increases his expenditure increases on, cereals and grains, apparel textile, footwear and personal effects, educational and professional expenditure and miscellaneous expenditure, and decreases on, milk and milk products, meat, fish and poultry, fuel and lighting, house rent and housing expenses and transport, traveling and communication.
5. Education, expenditure decreases on these items with an increase in education level of a household namely, cereal and grains, meat, fish and poultry, sugar and honey, fruits and vegetables, other food items and fuel and lighting, and increases on, apparel, textile, footwear and personal effects, household use textile, furniture, fixture and other durable items, transport, traveling and communication, recreation and entertainment, educational and professional expenditure, cleaning, laundry and personal appearances and miscellaneous expenditure.
6. Agriculture, agriculture related households spend more as compared to inadequately define activities on, milk and milk products, and spend less on, fuel and lighting, furniture, fixture and other durable items and educational and professional expenditure.
7. Communication, communication industry related households spend less as compared to inadequately define activities on, cereals and grains, and spend more on, house rent and housing expense, recreation and entertainment.
8. Construction industry, construction industry related households spend less as compared to inadequately define activities on, cereals and grains, and spend more on, transport, traveling and communication, medical expenses and miscellaneous expenditure.
9. Electricity, Power and Gas, electricity, power and gas industry related households' results are insignificant.
10. Mining Industry, mining industry related households spend more as compared to inadequately define activities on, milk and milk products, sugar and honey, apparel, textile, footwear and personal effects and medical expenses, and spend less on, fruits and vegetables, fuel and lighting and cleaning, laundry and personal effects.

11. Gender/Sex, households headed by male spend more on, fruits and vegetables and house rent and housing expenses.
12. Employer, those households whose head is employer spends more as compared to paid employees on, house rent and housing expenses and transport, traveling and communication, and less on, cereals and grains, fruits and vegetables, sugar and honey.
13. Un-Employed, those households whose head is un-employed spend more as compared to paid employees on, household use textile, house rent and housing expenses, transport, traveling and communication, cleaning, laundry and personal appearances and miscellaneous expenditure, and less on, cereals and grains, sugar and honey, furniture, fixture and other durable items, educational and professional expenditure, cleaning, laundry and personal effects and medical expenses.
14. Self-Employed, those households whose head is self-employed spend more as compared to paid employees on, other food items and transport, traveling and communication and miscellaneous expenditure, and less on, meat, fish and poultry.
15. Other-Employed, those households whose head is other employed spend more as compared to paid employees on, cereals and grains, milk and milk products, house rent and housing expenses, and spend less on, sugar and honey, apparel, textile, footwear and personal effects, fuel and lighting, educational and professional expenditure, medical expenses and cleaning, laundry and personal appearances.
16. Location, urban households spend more on, milk and milk products, fuel and lighting, house rent and housing expenses, recreation and entertainment, educational and professional expenditure and cleaning, laundry and personal appearances. And spend less on, cereals and grains, fruits and vegetables, sugar and honey and other food items, apparel, textile, footwear and personal effects, furniture, fixture and other durable items, transport, traveling and communication, medical expenses and miscellaneous expenditure.

SUMMARY TABLE

Positive Effect	Negative Effect
PUNJAB 1. Cereals and Grains (age and age square, dependency ratio, agriculture, mining, gender) 2. Milk and Milk products (income) 3. Meat, Fish and poultry (income, dependency ratio, education, employer, self employed) 4. Fruits and Vegetables (Nat. of income, self employed, location) 5. Sugar and Honey (location) 6. Other Food Items (education, location) 7. Apparel, Textile, Footwear and personal effects (education, agriculture, gender, employer, self employed, other employed) 8. Household Use Textile (income, education) 9. Fuel and Lighting (education) 10. House Rent and Housing Expenses (Nat. of income) 11. Furniture, Fixture and other Durable Items (income, education, communication) 12. Transport, Traveling and Communication (Nat. of income, income, education, communication) 13. Recreation and Entertainment (income, age and age square, education, communication, elec. Power and gas) 14. Educational and Professional Expenditure (income, age and age square, dep. ratio, education) 15. Medical Expenses (none) 16. Cleaning, Laundry and Personal appearances (education) 17. Miscellaneous expenditure (income, education, agri., commu., employer, unemployed, selfemployed, other employed, location)	1. Cereals and Grains (Nat. of income, income, education, communication industry, Elec., power and gas, employer, self employed, location) 2. Milk and Milk products (Nat. of income, dependency ratio, education, agriculture,) 3. Meat, Fish and poultry (agriculture, construction, other employed, location) 4. Fruits and Vegetables (income) 5. Sugar and Honey (income, education, communication) 6. Other Food Items (Nat. of income, income, dependency ratio, unemployed, self employed, other employed) 7. Apparel, Textile, Footwear and personal effects (income, age and age square, dep. ratio) 8. Household Use Textile (none) 9. Fuel and Lighting (age and age square, dep. ratio, agri., gender, location) 10. House Rent and Housing Expenses (income, dep. ratio) 11. Furniture, Fixture and other Durable Items (unemployed, other employed) 12. Transport, Traveling and Communication (dep. ratio, unemployed, self employed, other employed, location) 13. Recreation and Entertainment (location) 14. Educational and Professional Expenditure (mining, gender, unemployed, other employed, location) 15. Medical Expenses (dep. ratio) 16. Cleaning, Laundry and Personal appearances (income, employer, unemployed) 17. Miscellaneous expenditure (dep. ratio, gender,
Sindh 1. Cereals and Grains (age and age square, dep. ratio, agri., con., other employed, location) 2. Milk and Milk products (income) 3. Meat, Fish and poultry (Nat. of income, income, age, Edu., unemployed, self employed) 4. Fruits and Vegetables (comm., unemployed, other employed) 5. Sugar and Honey (Nat. of income, agri., location) 6. Other Food Items (commu., gender, location) 7. Apparel, Textile, Footwear and personal effects (income, dep., ratio, Edu., commu., self employed) 8. Household Use Textile (income, Edu., employer) 9. Fuel and Lighting (Edu.) 10. House Rent and Housing Expenses (age) 11. Furniture, Fixture and other Durable Items (Edu., commu.) 12. Transport, Traveling and Communication (Nat. of income, income, Edu., commu., employer) 13. Recreation and Entertainment (Edu., elec., power and gas, employer) 14. Educational and Professional Expenditure (age, dep. ratio, Edu.) 15. Medical Expenses (agri., location) 16. Cleaning, Laundry and Personal appearances (Edu., con.) 17. Miscellaneous expenditure (income, Edu., employer, self employed)	1. Cereals and Grains (Nat. of income, income, Edu., commu., employer, unemployed) 2. Milk and Milk products (Edu., con., location) 3. Meat, Fish and poultry (dep. ratio, agri., mining, location) 4. Fruits and Vegetables (Nat. of income, income, Edu., location) 5. Sugar and Honey (income, Edu., self employed) 6. Other Food Items (income, dep. ratio, Edu.) 7. Apparel, Textile, Footwear and personal effects (none) 8. Household Use Textile (gender, unemployed, location) 9. Fuel and Lighting (income, age, location) 10. House Rent and Housing Expenses (income, dep. ratio, self employed, location) 11. Furniture, Fixture and other Durable Items (Nat. of income, unemployed, other employed) 12. Transport, Traveling and Communication (dep. ratio, con., location) 13. Recreation and Entertainment (location) 14. Educational and Professional Expenditure (agri., con., self employed, other employed, location) 15. Medical Expenses (Nat. of income, income, Edu., gender, unemployed, self employed, other employed) 16. Cleaning, Laundry and Personal appearances (Nat. of income, income, age, dep. ratio, agri.) 17. Miscellaneous expenditure (dep. ratio, agri., con., gender)

Positive Effect	Negative Effect
NWFP 1. Cereals and Grains (age, dep. ratio, agri., location) 2. Milk and Milk products (income, Edu., elec., power and gas) 3. Meat, Fish and poultry (Nat. of income, income) 4. Fruits and Vegetables (income, agri., employer) 5. Sugar and Honey (location) 6. Other Food Items (elec., power and gas) 7. Apparel, Textile, Footwear and personal effects (Nat. of income, income, Edu., unemployed, self employed) 8. Household Use Textile (income, Edu.) 9. Fuel and Lighting (none) 10. House Rent and Housing Expenses (Nat. of income) 11. Furniture, Fixture and other Durable Items (Edu.) 12. Transport, Traveling and Communication (Edu.) 13. Recreation and Entertainment (Edu., Commu.) 14. Educational and Professional Expenditure (age, dep. ratio, Edu.) 15. Medical Expenses (none) 16. Cleaning, Laundry and Personal appearances (Nat. of income, Edu., mining, unemployed) 17. Miscellaneous expenditure (income, dep. ratio, Edu., gender)	1. Cereals and Grains (income, Edu., commu., employer, unemployed, self employed) 2. Milk and Milk products (dep. ratio, gender) 3. Meat, Fish and poultry (Edu., unemployed, self employed) 4. Fruits and Vegetables (Nat. of income, Edu., other employed) 5. Sugar and Honey (Nat. of income, Edu., unemployed) 6. Other Food Items (Edu., employer, self employed) 7. Apparel, Textile, Footwear and personal effects (none) 8. Household Use Textile (none) 9. Fuel and Lighting (income, dep. ratio, Edu., gender, location) 10. House Rent and Housing Expenses (income, dep. ratio, location) 11. Furniture, Fixture and other Durable Items (none) 12. Transport, Traveling and Communication (elec., power and gas) 13. Recreation and Entertainment (location) 14. Educational and Professional Expenditure (income, location) 15. Medical Expenses (income, age, gender, unemployed) 16. Cleaning, Laundry and Personal appearances (income, dep. ratio, agri., con., location) 17. Miscellaneous expenditure (none)
Balochistan 1. Cereals and Grains (age, dep. ratio, other employed, location) 2. Milk and Milk products (income, agri., mining, other employed) 3. Meat, Fish and poultry (income) 4. Fruits and Vegetables (gender, location) 5. Sugar and Honey (mining, location) 6. Other Food Items (self employed, location) 7. Apparel, Textile, Footwear and personal effects (Nat. of income, age, dep. ratio, Edu., mining, location) 8. Household Use Textile (Nat. of income, income, Edu., unemployed) 9. Fuel and Lighting (income) 10. House Rent and Housing Expenses (Nat. of income, commu., gender, employer, unemployed, other employed) 11. Furniture, Fixture and other Durable Items (Nat. of income, Edu., location) 12. Transport, Traveling and Communication (Nat. of income, Edu., income, con., Employer, unemployed, self employed, location) 13. Recreation and Entertainment (Edu., Commu.) 14. Educational and Professional Expenditure (age, Edu.) 15. Medical Expenses (age, con., mining, location) 16. Cleaning, Laundry and Personal appearances (Edu., unemployed) 17. Miscellaneous expenditure (Nat. of income, income, age, dep. ratio, Edu., con., unemployed, self employed, location)	1. Cereals and Grains (Nat. of income, income, commu., con., employer, unemployed) 2. Milk and Milk products (age, dep. ratio, location) 3. Meat, Fish and poultry (dep. ratio, Edu., employer, self employed) 4. Fruits and Vegetables (income, mining, employer) 5. Sugar and Honey (Edu., employer, unemployed, other employed) 6. Other Food Items (income, Edu.) 7. Apparel, Textile, Footwear and personal effects (income, other employed) 8. Household Use Textile (none) 9. Fuel and Lighting (dep. ratio, Edu., agri., mining, other employed) 10. House Rent and Housing Expenses (dep. ratio, location) 11. Furniture, Fixture and other Durable Items (agri., unemployed) 12. Transport, Traveling and Communication (dep. ratio) 13. Recreation and Entertainment (location) 14. Educational and Professional Expenditure (Nat. of income, agri., unemployed, other employed, location) 15. Medical Expenses (income, other employed) 16. Cleaning, Laundry and Personal appearances (Nat. of income, mining, other employed, location) 17. Miscellaneous expenditure (none)

Policy Implications

Measures of what consumers do and of why they do those things are needed. The reason for attempting to understand household consumption behavior to make measurement possible over and above the scientific desire for pursuit of truth and useful information which can be used in policy matters and as well as in further research.

To summarize, better understanding of the consumer behavior is needed for use in forecasting and policy analysis. The parameters available are unsatisfactory because current understanding of consumption behavior leaves much to be desired. This understanding fails the test of the marketplace because the theory available is imperfect, the means of converting theoretical constructs to observable (quantifiable) behavior is lacking, and the empirical analyses have concentrated on price, quantity, income, and population to the exclusion of the many other variables that affect demand.

The analysis of consumer behavior is important as it provides information on consumer's responsiveness to changes in income, prices, household size, and number of earners, tastes, cultural, geographical, climatic and structural factors. All these information are necessary for any kind of economic policy.

It is evident that empirical investigation of consumption behavior is necessary for the economic policy matters. In narrow sense this study can provide the empirical basis for forecasting and planning of the composition of demand bundle, for the design of optimal tax structure, understanding the preferences and consumption patterns of the different households related to different sectors of the economy and different location and so on. In wide sense the study can serve as a model to be used in other areas of economic research like, portfolio consumption, producers' behavior and in general where allocation aspect are dominating and a relatively well-developed theory is available.

This study shows the differences in tastes and preferences of the residents of the four provinces and also urban and rural which can be used as a tool in assessing the poverty

pattern of the four provinces. Industry wise analysis shows that communication, electricity, power and gas related households have high incomes and that of mining, construction and others have low incomes. This fact is evident from the consumption pattern of the related industry household. This can help policy makers in tax structure and poverty evaluation programs. One other important factor which is evident from our analysis that education is the key to better life and it is evident from the consumption pattern of the educated households. So, this is a feature of the study, which can contribute in future policy matters. The study highlights all the aspects of the household consumption pattern for example, province wise, urban/rural, gender, industry wise and employment wise. All these information are necessary for any kind of an effective economic policy.

Limitations of the Study

We will now discuss some of the limitations related to data and estimation, which we have faced in conducting this study and which may be kept in mind for future research in this area.

There are some technical problems in the data, which has been obtained from the Federal Bureau of Statistics (FBS), Statistics Division.

- Although the data is comprehensive but it misses some information like other sources of income and savings.
- It reports zero incomes for some of the households, which appears to be unreliable.
- There is a problem in joint grouping of the following commodity groups:
  - i) Milk and milk products.
  - ii) Fruits and vegetables.
  - iii) Meat, fish and poultry.

If we regrouped these commodities separately, we may have some different results. As vegetables and fruits are totally different, meat, fish and poultry also have different pattern of consumption for different commodity groups.

Relating to estimation issues, we suggest the following:

- Country level analysis could be included along with province wise analysis for a more extensive comparison.
- For further comprehensive analysis, district level estimation and analysis of the consumption pattern may be carried out.
- More detail of the industrial classification and employment status could be included.
- For education level, more of the categories could be included rather than just educated and uneducated. For example up to Matric, Bachelors, Masters, Diploma, Professional education, others.
- Double log model could be used to compute elasticities for further empirical estimation.

We consider the above as being the limitations of our study as well as suggestions for future work in this area of research.

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