HOUSEHOLD FOOD AND NON-FOOD CONSUMPTION BEHAVIOUR IN PAKISTAN

Dr. Nigar Zehra
Assistant Professor/ Research Economist
Applied Economics Research Centre
University of Karachi
Karachi- Pakistan
nigarzehra17@gmail.com

Sohail Javed
Lecturer/ Staff Economist
Applied Economics Research Centre
University of Karachi
Karachi- Pakistan

Dr. Ambreen Fatima
Associate Professor
Applied Economics Research Centre
University of Karachi
Karachi- Pakistan

Abstract

The main objective of the study is to identify the household consumption pattern in Pakistan. To fulfill the objective, the research incorporates microdata of household expenditure on twenty food and nonfood groups for the period 2018-19. Different socioeconomic and demographic variables are also used to explain household consumption behaviour. It is concluded that most of the expenditure share of food and non-food groups of commodities has increased due to an increase in per capita income, but at a decreasing rate. Household size, household age and employment by age and by gender have played a significant role in altering the consumption share of most of food and nonfood commodities. There are both provincial and regional disparities exist in consumption behavior. Housing is considered a normal or luxurious good, while education is inferior because the expenditure share of housing has increased as income has increased, and so on. It is suggested that the government should work to increase the awareness regarding the importance of education.

Key Words: Household, Food and Non-Food Consumption Behaviour, Provincial and Regional Disparity

JEL Codes: R1, R2

1. Introduction

Consumption plays a major role in households' daily routine. Households allocate their income to different food and nonfood commodities such as education, health, housing, clothing, etc., limited by their total budget. This method of spending money on different commodities is known as a household consumption pattern [Shahzadi (2010)]. Households' living standards can be better judged through their consumption patterns. All over the world, consumption patterns vary from basic main commodities to more diversified bundles of goods [Kearney (2010)]. According to Engel's law, as the household's income rises, it reduces the expenditure on food (increase by decreasing rate) and increases the expenditure on luxurious items while keeping constant the expenditures on fuel, lighting, and clothing [Siddiqui (1982)]. In Pakistan, several studies, for instance, Ali (1985), Burney and Khan (1991), and Shahzadi (2010), have validated Engel's law. Moreover, Shahzadi (2010) observed that richer households increase spending on luxury commodities as their income rises, while poor households increase spending to accomplish elementary needs. Furthermore, a decrease in income reduces the spending of households in both income groups.

Despite income, there are several other factors that are responsible for the alteration in consumption patterns, for instance; household employment, household size, regional and gender disparities, prices, asset distribution, etc., [Siddique, (1982) and Bhalotra (1998)]. Apart from these factors, according to Massell (1969), the prices of substitutes and complementary products also play an important role in determining consumption patterns. Historically, it is evident that the economic situation of Pakistan is different at the provincial or regional level, which indicates the difference in household consumption patterns at the provincial or regional level. Provinces are different in terms of developmental structure, temperature, and availability of food and other basic needs. Therefore, people of different provinces are varied in terms of taste and requirements for goods. Additionally, it is assumed that there is gender discrimination in the provision of basic necessities, for instance; education, food, and health facilities. Given the significance of the subject, the current study is designed to examine the household consumption pattern in Pakistan. The study examines whether there is provincial and regional diversity in the household consumption patterns of various food and non-food groups or not. Furthermore, the study also inspects how different socio-economic and demographic factors can cause changes in household consumption patterns.

There is dense literature on the topic, and the studies addressed various issues regarding the consumption behaviour of households in urban as well as rural areas of Pakistan. The majority of the studies used HIES data and applied AIDS and QUIADS techniques to identify the change in household consumption patterns. Furthermore, studies also estimated the demand elasticities of food and nonfood commodities, and expenditure elasticities by using the Engel curve methodology. Much of the research also explained the impact of several socioeconomic factors on household consumption. Bhalotra and Attfield (1998) identified a significant impact of age and gender on household consumption patterns in rural Pakistan.

However, there is still an empty space in the literature regarding the identification of regional and provincial disparities in consumption expenditure by controlling the age, gender, and employment status of households in Pakistan using PSLM-HIES data for the period 2018-19. Therefore, the research fills the gap by examining whether, if there is any disparity, it is because of gender biases or due to any other factor. As in many things, variations in the level of consumption may reveal changes in needs as compared to any favoritism in terms of gender in the intra-household allocation of resources (commodities). According to Bhalotra and Attfield (1998), gender discrimination in consumption patterns is related to age; the differences can occur at some ages and disappear at others. The research also controls the employment status by age and by gender of individuals and investigates and demonstrates whether employment status affects the consumption share or not.

After the above introduction section, the paper is organized into five sections. Section 2 presents the relevant literature on the issue, Section 3 enlightens the data and methodology of the study, Section 4 provides the empirical results; and the last section, Section 5, illuminates the conclusion of the study.

2. Literature Review

The research on the pattern of consumer expenditure is quite ancient. However, the leading research regarding household consumption patterns has been undertaken by [Stigler (1954)]. The author provided a historical overview of the research done by other authors, in which he mentioned the observation of [Engle (1857)]. Engle, in his study, hypothesized a law that provides the groundwork for future research. On the basis of 153 Belgian households, he examined a pattern of household's budget allocations. The study concluded that a poor family allocates the highest share of their expenditure on food, while as their income rises; the share on food becomes smaller. This research plays a significant role in existing microeconomics.

Afterward, several researchers worked on the issue; the present study only details the recent national and international literature. For instance, in 2007, Shamim and Ahmad studied the pattern of household's consumption in urban and rural areas of Pakistan for the year, 2001-2002. The study included analyses of 18 groups of different commodities and concluded that household size and total expenditure have a significant impact on the consumption of food and nonfood commodities. Further, the study also pointed out that housing, health, dairy products, and grains seemed as luxury items in urban regions, whereas electricity, entertainment, fruits, poultry, and other durables appeared as luxury items in rural areas. Shahzadi in 2010 examined 2010 PPHS data to identify the household allocation of budget share on four commodity groups which were food and non-food products, utilities, and other durable commodities. The results revealed that majority of the expenditure share spend on nonproductive activities. Furthermore, total income of household has negative impact on share of budget. Correspondingly, remittance inflow raised household income, which decreased their expenditure on foodstuffs, though expenditure on durable as well as nonfood products increased.

In 2012, Yousaf and Khalil analyzed HIES data for the year 2005-06 to identify milk demand for people, living in Karachi. On the bases of Almost Ideal Demand System (AIDS) it was found that household spending and demographic composition according to age were significant determinants of milk consumption and all the products included in milk category are necessities. Further in 2012 Amir and Bilal identified the pattern of change in consumption with income increases. The study investigated consumption of eleven food and non-food commodities for different income group. Using OLS technique separately for each commodity, it was concluded that richer class raises their expenditure on luxurious items as income rises while the poor increases their expenditure on necessities.

Mottaleb and Mishra (2016) examined the factors responsible to change the preferences for different types of rice in Bangladesh. Using fixed effect approach for HIES data of 2000, 2005 and 2010 it was demonstrated that rice price, total food expenditure and share of rice expenditure have significant impact on total consumption of rice and on the preferences of rice type. Further it was also noticed that rich, educated and households living in urban areas consume fine quality rice instead of low quality.

In 2017 Ullah, et al, examined the demand elasticities of certain food commodities using HIES panel data as well as employed Quadratic Almost Ideal Demand System (QUAIDS). It is revealed that price elasticity of demand is inelastic for food commodities and they are normal goods due to positive expenditure or income elasticity. On the bases of cross price elasticity it was found that most of the food commodities are substitute of one another.

Haider and Zaidi (2017) examined the variations in the pattern of household consumption for Pakistan grounded on eleven food groups. The examination was done on the seven rounds of Household Income Expenditure Survey (HIES) dataset from 2000-01 to 2013-14. Furthermore, the research also analyzed the changes in consumption as well as calorie bundles, differences in the response of households with respect to price change and income change. On the bases of Quadratic Almost Ideal Demand System (QUAIDS) it was revealed that there is a difference in the pattern of food consumption across regions as well as among provinces.

Moreover in 2018, Jalil and Khan examined the household consumption pattern for seventeen food groups. Authors utilized HIES data for the period 2000 to 2015 and on the bases of QUAIDS it is revealed that there is a significant change in the consumption pattern during the past fifteen years. Household expenditure shares have switched to dairy products as well as vegetables and fruits from cereal food products. It is also noticed that due the variation in the taste and preferences among provinces, income elasticities are also different at province level. Further it is adhered that all the food commodities are necessities except chillies and mangoes.

Kostakis et al, (2020) characterized the relationship among food consumption and socio demographic features (Age, level of education, marital status, employment status and region)

for numerous groups of individuals living in Greece for the period 2016. This is achieved by taking the magnitude of food bought in groups on a micro-economic level. The study estimated different models for instance; (1) quantile regression models, (2) expanded generalized linear models, (3) quadratic almost ideal demand system models and (4) Deaton's approach (1988). It is revealed that socio demographic features of households' significantly affect the quantity of food consumption. Aged, more educated and richer people spend more on food, as they select high quality and expensive food. Moreover, it is also found that price and income elasticities are inelastic for most of the food commodities except meat.

Kharisma et al in 2021 determined consequences of income, price of commodity and socio demographic elements on consumption of food for poor households living in urban as well as rural areas of Province, West Java. The study used Linear Approximated Almost Ideal Demand System (LA/AIDS) and concluded that poor households of West Java food are altered their food consumption in response to commodities' own price, price of other commodities, number of household members, education of the head of household, income, household location and work nature of household's head. The own-price elasticity revealed that the price escalation to each commodity group has no impact on the consumption of general food group. While, the cross price elasticity of food groups presented more complementary.

Hina and Abbas (2021) identified the socio economic factors of food demand at national and provincial level for Pakistan. The study analyzed 2015-16 HICS data and applied Almost Ideal Demand System (AIDS) model. It is revealed that household size, head literacy, profession, income and the commodity prices has significant influence on changes in food consumption pattern.

3. Data, Methodology and Model

This section explains the data and methodology used in the paper.

a. Data

The paper incorporates microdata on household expenditure on twenty food and nonfood groups. The data is collected from the Pakistan Social and Living Standard Measurement (PSLM) and the Household Integrated Economic Survey (HIES) for the period 2018-19. The data is based on 27194 households divided into urban and rural regions in four provinces of Pakistan. The reason for this segregation is the difference in taste and income of people living in urban and rural areas of Pakistan across the four different provinces, which further creates a change in their consumption patterns. Food commodity groups include milk, meat, fruits and vegetables, rice, cooking oil, tea, tobacco, wheat, pulses, sugar, and other food commodities. Nonfood commodity groups include housing, health, education, footwear, fuel, cloth, recreation, durable commodities, and personal used commodity groups. Further, the study also collected data of household total expenditure, household size, and status of employment by age and by gender from the same source. The study used total expenditure as a proxy for total household income because, firstly, the data on total income of households

usually suffer from measurement errors, and secondly, total expenditures of households better reflect the changes in permanent income.

b. Methodology and Model Specification

To identify the consumption pattern of households, living in rural and urban areas of Pakistan, the study uses the Ordinary Least Square Method for twenty food and non-food groups separately. Many researchers have used the same methodology for the same purpose, including Shahzadi (2010). In this view, the study estimates twenty models using the expenditure share of each commodity as the dependent variable. The following equation exhibits the quadratic functional form of the Engel equation.

$$E_i = \alpha + \beta_0 lny_i + \beta_1 (lny)_i^2 + B_2 HS_i + B_3 \sum_{q=1}^{4} Age + B_4 \sum_{j=1}^{8} GAge + B_5 \sum_{m=1}^{8} EmGA + \beta_6 UR_i + \beta_7 P_i + \varepsilon_i \quad 1$$

Where q=Age Groups, j= Gender by Age and m=Employment by Age by gender groups, E shows the household expenditure share on each food and nonfood commodity, lny is the log of total household expenditure (income), and the use of its square in the model explains the rate at which the consumption share changes as income changes or how the change in income changes the nature of commodities for households. As the level of income rises, goods become a necessity from luxury. Equation 1 exhibits the Engel equation with some modifications. Some demographic factors are also added to explain that household expenditure share in total income also depends on household size (HS). As the household size increase, the expenditure share also increases due to increase in dependency. Furthermore, the study examines four age groups[1] that are 0 to 4, 5 to 14, 15 to 59 and 60 plus. Different age groups are included to examine the fact that consumption needs and requirements are different at different ages. Similarly, the inclusion of the gender by age (GAge) factor is important as there could be gender differences in consumption patterns at a particular age. For instance, in 1987, Das Gupta highlighted that in India, girls between the ages of 0 and 2 were severely affected due to the shocks in their family income. EmGA represents the number of employed households by gender in different age groups. The study includes UR and P as regional and provincial dummies to differentiate the consumption patterns of households living in different regions and provinces of Pakistan. While Ɛ represents the impact of other unobservable factors on household consumption patterns.

4. Empirical Results

The results of equation 1 for the commodities that exist in twenty food and non-food groups are presented in tables 1 to 4 (appendix). The results exhibit that the expenditure share on most of the food commodities, for instance, milk, sugar, rice, edible oil, tea, tobacco and wheat, increased by 4.6, 2.6, 2.2, 5.5, 0.2, 2.4 and 12.6 percent with a decreasing rate as the per capita income (log of total expenditure) increased by 1 percent. It is concluded that at a low level of income, people consider these food commodities as normal goods, but as the income rises continuously, the rate of increase in consumption share decreases and by the

[1] 0 age means children under 1 year, 15 years age and older are considered adult

passage of time, they start decreasing their consumption of these food items, considering these commodities as inferior goods and start consuming other goods that differ according to their taste. Shahzadi (2010) also explained that as per capita income increases, the consumption share of food commodities starts decreasing. However, the expenditure share on pulses has a negligible effect of increase in income. Furthermore, the results depict that the expenditure share on meat, fruits, and vegetables and on other food items with a 1% increase in income has shown a minor decrease, and this decay in share is increasing at a sluggish pace. This pattern of change in food expenditure adheres to Engels law that food consumptions is amplified as income increases, but at a decreasing rate or decreases as income increases.

Furthermore, the household expenditure share on fuel, cloth, health, footwear, personal and recreational activities also increases by 12.3%, 6.4%, 2.7%, 1.4%, 0.7%, and 1%, respectively, as the per capita income (log of total expenditure) increases by 1%. However, the rate of increase in the expenditure share of this group of commodities is decreasing as income increases. The result depicts that these commodities remain normal goods at a certain level of income, and after that, they become inferior. Moreover, the expenditure share on housing keeps on increasing by 2.7% at a constant rate due to a 1% increase in per capita income. It shows that in Pakistan, people are investing more in housing as their income rises; it is considered a normal or superior good. The study highlighted that in Pakistan, education is still considered an inferior good. As per capita income increased by 1%, the expenditure shares on education reduced by 4.7% at an increasing rate. It might be because the majority of Pakistan's population lives in rural areas and spend less on education. Similarly, on durables, the expenditure shares also decreased by 29% at an increasing rate.

Apart from the significant income effect on household consumption expenditure share, it is illustrated that the age group also plays a significant role in determining the expenditure share of almost all commodity groups. It means that as the age of a person increases, the consumption requirement for food, clothing, and other commodities also increases. However, the consumption share of pulses and health doesn't change significantly as age changes; it might be because, in Pakistan, people spend less on health as they don't have enough money to spend on it, Zehra et al, (2022). The study finds no gender disparity by age in consumption of most of the commodities except for a few, like wheat; food items included in other food group, personal goods, housing, and recreation activities. It might be because the requirements for wheat and items from other food groups are different among males and females by age. Similarly, both males and females have separate personal items to be used. Bhalotra and Attfield (1998) also identified the same results: there is no gender disparity in the consumption of most food products. Furthermore, with the inclusion of the employment factor in age-gender, it is observed that employment has a significant impact on the consumption of most food commodities, ensuring that on average, workers need more food. Bhalotra and Attfield (1998) also found that employment has increased food expenditures. Similarly, employment also increases the consumption share of most of the commodities included in the non-food group; for instance, workers need higher consumption of tobacco, fuel, and other commodities, as shown in tables 1 to 4 (appendix). One more important

finding is that there is a positive link between employment and the expenditure share of education; it means that employed people better understand the value of education, and they better understand the value of education and spend more on it. It is also supported by Zehra et al (2022) that employment in the nonagricultural sector increases household spending on education. Moreover, the study highlighted the fact that as household size increases, the household consumption share of most food and non-food commodities also increases significantly, except for a few commodities, for instance, meat, fruits and vegetables, housing, education, and other food items and durables. Households cut their expenditure share on the mentioned commodities to spend more on basic food and nonfood items like wheat, oil, clothing, health, etc. The significant coefficient of regional and provincial dummies explained that there is regional and provincial heterogeneity in the consumption patterns of almost all commodity groups. It may be because in rural areas people spend more on food items, clothing, and shoes as compared to other nonfood items like education, health, and other utilities, while urban households spend less on food and more on other utilities. The results also matched the literature, as Sohail et al, (1993) highlighted the fact that household consumption patterns are not only diverse between rural and urban regions but also different between all provinces of Pakistan. Adnan et al (2017) explained that urban consumers have a more diversified diet than rural consumers, and urban consumers consume better-quality food than rural consumers.

5. Conclusion

The purpose of the study is to investigate the household consumption pattern in Pakistan. The study investigates the PSLM-HIES data for the year 2018-19 to examine the expenditure share of twenty food and non-food groups. On the basis of the regression results, it is concluded that the household consumption share of most food and nonfood items has first increased as income rose and then decreased. It is illustrated that people do not spend more on education as income rises, while they prefer to spend more on housing. It is noticed that factors like household size, household age and employment by age and by gender have played a significant role in altering the consumption share of most food and nonfood commodities. However, it is found that there is no gender disparity exists in most of the commodities except for a few items. The results established that there are regional and provincial disparities in the household consumption pattern of Pakistan. In light of the above results, it is suggested that the government should arrange such programs that provide awareness regarding the importance of education, especially in rural areas.

References

Ali, M. S. (1985) Household Consumption and Saving Behavior in Pakistan: An Application of the Extended Linear Expenditure System. The Pakistan Development Review 23–37.

Amir, H., and K. Bilal, (2012), Consumption pattern of different commodities in Pakistan, International Journal of Academic Research in Business and Social Sciences, 2(8): 395.

Bhalotra, S. and C. Attfield (1998) Intrahousehold Resource Allocation in Rural Pakistan: A Semiparametric Analysis. Journal of Applied Econometrics 463–480.

Burney, N. A. and A. A. Khan (1991) Household Consumption Patterns in Pakistan: An Urban-Rural Comparison Using Micro Data. The Pakistan Development Review 145–171.

Das Gupta P. (1987), Comments on Suzanne M. Bianchi and Nancy Rytina's 'The Decline in Occupational Sex Segregation During the 1970s: Census and CPS Comparisons.' Demography, 24:291–95. [PubMed] [Google Scholar]

Jalil, A., and H. Khan, (2018), Consumption patterns and demand elasticities of selected horticulture products in Pakistan, Working paper, 4

Haider, A., and M. Zaidi, (2017), Food consumption patterns and nutrition disparity in Pakistan,Paper presented in 34th Annual Conference of Pakistan Society of Development Economists.

Hina, H., and Abbas, S. T. (2021), Demand projections and consumption pattern analysis at provincial level in Pakistan, Pakistan Journal of Applied Economics 31 (1), 1-30

Kearney, J. (2010) Food Consumption Trends and Drivers. Philosophical Transactions of the Royal Society of London 2793–2807

Kharisma, B., Hasanah, A., Soemitro Remi, S. and Zakia, I. (2021), *The pattern of poor household food consumption: The case of West Java Province*, Economía Agraria y Recursos Naturales, 21(2), 07-27.

Kostakis,I., Paparas, D., Saiti,A. and Papadaki,S. (2020), Food Consumption within Greek Households: Further Evidence from a National Representative Sample, Food Consumption within Greek Households: Further Evidence from a National Representative Sample," Economies, MDPI, vol. 8(1), pages 1-18

Malik, Sohail J. and Nadeem Sarwar (1993) Some Tests for Differences in Consumption Patterns: The Impact of Remittances Using Household Income and Expenditure Survey 1987-1988. The Pakistan Development Review32:4, 699–711.

Mottaleb, K. A., & Mishra, A. K. (2016). Rice consumption and grain-type preference by household: A Bangladesh case. Journal of Agricultural & Applied Economics, 48(3), 298–319. https://doi.org/10.1017/aae.2016.18

Shahzadi, A., (2010), Consumption pattern of Pakistani households; Evidence from Pakistan panel household survey-2010, MPhil dissertation, Pakistan Institute of Development Economics.

Siddiqui, R. (1982) An Analysis of Consumption Pattern in Pakistan. The Pakistan Development Review 21:4, 275–296.

Shamim and Ahmad (2007), "Understanding household consumption patterns in Pakistan", Journal of Retailing and Consumer services, 14, 150:164

Stigler, G. J. (1954) The Early History of Empirical Studies of Consumer Behaviour. Journal of Political Economy 95–113.

Ullah, M. Z.,H. Fatima, L. Almas, M.K. Vestal, and N. Akhter, (2017), Estimating demand elasticities for aggregate food groups using QUAIDS and Pooled HIES Data, Transylvanian Review,25(17):1-18.

Yousaf, S., and Khalil, A.H. (2012). Analysis of consumption and demand elasticities for food products in Balochistan. International Journal of Asian Social Science, 2(7), 1103– 1122.

Zehra, N., & Fatima, A. (2022). Food price volatility and household welfare: A case study of major cities of Pakistan. *Business Review*, *17*(1), 85-105. Retrieved from 10.54784/1990-6587.1459

Appendix

Table 1: Estimation Results of Food Groups

	Share of Expenditure on Milk		Share of Expenditure on Meat		Share of Expenditure on Fruit and Vegitable		Share of Expenditure on Sugar		Share of Expenditure on rice		Share of Expenditure on Oil	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.
Constant	-0.030	0.000	-0.001	0.696	0.002	0.038	-0.010	0.000	-0.011	0.000	-0.190	0.000
Log Total Expenditure	0.046	0.000	-0.009	0.000	-0.003	0.000	0.026	0.000	0.022	0.000	0.055	0.000
(Log Total Expenditure)^2	-0.005	0.000	0.002	0.000	0.001	0.000	-0.004	0.000	-0.003	0.000	-0.009	0.000
Household Size	0.008	0.000	-0.007	0.000	-0.007	0.000	0.011	0.000	0.016	0.000	0.03	0.000
KPK	-0.016	0.000	0.005	0.000	0.001	0.000	0.008	0.000	0.000	0.532	0.002	0.000
Punjab												
Sindh	-0.012	0.000	0.004	0.000	-0.002	0.000	0.006	0.000	0.014	0.000	0.001	0.004
Balochistan	-0.036	0.000	0.025	0.001	-0.003	0.000	0.008	0.000	0.003	0.000	0.009	0.000
Rural												
Urban	-0.19	0.000	-0.001	0.000	-0.001	0.000	-0.004	0.000	-0.003	0.000	0.000	0.000
Controlling group												
Age group	Yes		Yes		Yes		Yes		Yes		Yes	
Gender by Age	No		No		No		No		No		No	
Employment by age by gender	Yes		No		No		Yes		Yes		Yes	
R^2	0.0408		0.159		0.144		0.337		0.227		0.505	
F	668.677	0.000	183.491	0.000	163.049	0.000	493.578	0.000	284.486	0.000	989.682	0.000

Source: Author's Calculation

Age group= Yes if most of the age groups are significant

Gender by Age= Yes if most of the Gender by Age groups are significant

Employment by age by gender= Yes if most of the Employment by Age by Gender groups are significant

Table 2: Estimation Results of Food Groups

	Share of Expenditure on Tea		Share of Expenditure on Tobacco		Share of Expenditure on Other food		Share of Expenditure on Wheat		Share of Expenditure on Pulses	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.
Constant	-0.006	0.000	-0.006	0.000	0.058	0.000	-0.046	0.000	-0.001	0.000
Log Total Expenditure	0.002	0.000	0.024	0.000	-0.009	0.000	0.126	0.000	0.002	0.000
(Log Total Expenditure)^2	-0.033	0.000	-0.004	0.000	0.002	0.000	-0.021	0.000	0	0.000
Household Size	0.012	0.000	0.011	0.000	-0.011	0.000	0.083	0.000	0.001	0.000
KPK	0.004	0.000	-0.004	0.000	0.009	0.000	0.012	0.000	0.003	0.000
Punjab										
Sindh	0.005	0.000	0.004	0.000	0.015	0.000	0.001	0.188	-0.001	0.000
Balochistan	0.010	0.000	0.004	0.000	0.000	0.559	0.025	0.000	0.002	0.000
Rural										
Urban	-0.001	0.000	-0.001	0.000	0.006	0.000	-0.004	0.000	0	0.106
Controlling group										
Age group	Yes		Yes		Yes		Yes		No	
Gender by Age	No		No		Yes		Yes		No	
Employment by age by gender	No		Yes		Yes		Yes		Yes	
R^2	0.442		0.115		0.213		0.603		0.265	
F	769.336	0.000	126.621	0.000	262.395	0.000	1476.36	0.000	350.533	0.000

Source: Author's Calculation

Table 3: Estimation Results of Non-Food Groups

Mean	Share of Expenditure on Cloth		Share of Expenditure on Personal		Share of Expenditure on Fuel		Share of Expenditure on Foot wear		Share of Expenditure on Housing		Share of Expenditure on Health	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.
Constant	-0.024	0.000	-0.005	0.000	-0.015	0.000	-0.005	0.000	0.050	0.000	0.000	0.940
Log Total Expenditure	0.064	0.000	0.007	0.000	0.123	0.000	0.014	0.000	0.016	0.000	0.027	0.000
(Log Total Expenditure)^2	-0.024	0.000	-0.001	0.000	-0.019	0.000	-0.002	0.000	0	0.000	-0.004	0.000
Household Size	0.042	0.000	0.005	0.000	0.015	0.000	0.007	0.000	-0.075	0.000	0.008	0.000
KPK	-0.015	0.000	-0.001	0.000	0.016	0.000	0	0.093	-0.003	0.009	0.013	0.000
Punjab												
Sindh	-0.009	0.000	-0.001	0.000	-0.029	0.000	-0.001	0.000	0.01	0.000	-0.006	0.000
Balochistan	-0.005	0.000	-0.002	0.000	0.001	0.473	-0.001	0.000	0.016	0.000	-0.008	0.000
Rural												
Urban	-0.004	0.000	0.001	0.000	0.001	0.345	-0.001	0.000	0.073	0.000	-0.005	0.000
Controlling group												
Age group	yes		Yes		Yes		Yes		Yes		No	
Gender by Age	No		Yes		No		No		Yes		No	
Employment by age by gender	No		Yes		Yes		Yes		No		No	
R^2	0.384		0.144		0.306		0.299		0.367		0.114	
F	604.817	0.000	163.864	0.000	428.388	0.000	414.072	0.000	562.795	0.000	124.586	0.000

Source: Author's Calculation

Table 4: Estimation Results of Non- Food Groups

	Share of Expenditure on Education		Share of Expenditure on Recreation		Share of Expenditure on Durable	
	B	Sig.	B	Sig.	B	Sig.
Constant	0.000	0.869	-0.008	0.000	0.783	0.000
Log Total Expenditure	-0.047	0.000	0.01	0.000	-0.292	0.000
(Log Total Expenditure)^2	0.009	0.000	-0.001	0.000	0.028	0.000
Household Size	-0.028	0.000	0.002	0.000	-0.002	0.000
KPK	-0.005	0.000	-0.003	0.000	0.007	0.000
Punjab						
Sindh	-0.004	0.000	-0.007	0.000	-0.002	0.046
Balochistan	-0.015	0.000	-0.01	0.000	0.004	0.000
Rural						
Urban	0.009	0.000	0.001	0.000	-0.005	0.000
Controlling group						
Age group	Yes		Yes		Yes	
Gender by Age	No		Yes		No	
Employment by age by gender	Yes		Yes		No	
R^2	0.275		0.041		0.024	
F	368.421	0.000	141.165	0.000	21.162	0.000

Source: Author's Calculation