

## ASSESSING THE ENVIRONMENTAL IMPACT OF HOUSEHOLD CONSUMPTION: A CASE STUDY OF SOUTH PUNJAB DISTRICTS

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### ABSTRACT

*The Basic aim of this study is to investigate the impact of household material on the environment. For this purpose, we analyzed the collected data for objective formulating policy and recommendation. In a cross sectional study, we had collected data from three different districts, to meet the objective of the study. We surveyed 180 people from different districts to diagnose the environmental impact from January 2016 to June 2016. Chi square test to be used for analysis of data to find out the responsible factor of environment. The data were analyzed in SPSS 21 software. The mean of these respondents were 30 years. 35% male and 25% female belong to the district Layyah, 45% female and 15% male belong to the district Rajanpur, 38% male and 22% female belongs to district Muzaffargarh. 34.33% people belong to urban area and 22.33% people belong to rural area. P-Value for the each factor, we have found a gender ( $p=0.00256$ ), Age ( $p=0.00167$ ), Area ( $p=0.00236$ ), Student ( $p=0.01763$ ), Job status ( $p=0.0001$ ), Salary ( $p=0.1165$ ).*

**Keywords:** Household, environment, impact, responsible

### INTRODUCTION

Direction of change is very important to understand the consumption of household material. Basic approach to studying the Environmental impact of household consumption is based on the combination of output and input analysis. In many countries statistical analysis has been used to analyse the consumption of household material in order to identify the factor which influence at environment. These analyses indicate the income, education level, area, and job status to determine the consumption of household material percentage. The supposition behind the international declaration and policy efforts on livable consumption is that have some degree of bridling over the environmental dominance and their choices. It is hope that the consumer can express their preferences for a clean environment through purchasing a right thing, if they have much information about the impact of consumption choices. Now a day such types of information are generally not available in contributing market failure. Sustainability of level of consumption and the consumption of the basket of goods and services are very important. Conscious public policies and choices can make a lower aggregate impact, like few items have more impact and more items have low impact. In a last couple of year most are the researcher do effort to focus on a wide range question related to the basic ideas.

A comparative case study was held between a contract group and the inhabitants on the bases of their consumption patterns. Attitude and social behavior were observed empirically in this study. Differences between car free and traffic areas shows a significant change in Environmental attributes like 50% less CO<sub>2</sub> emissions, air traffic and Environmental pollution alternative patterns of consumption were also discovered in this research along with the basic impacts of household consumption on its environment Hass et al.,

(2005). Individual behavior as well as groups response towards any environment have direct relationship. Human Behavior can be modified in positive way to support Environmental problems. For this Purpose Special measure should be taken on individual to higher tries (Stern, 2000). Regional energy expenditure can be measured and further compared through input analysis for the assessment of urban energy consumption. Melbourne city, the place of study, is rich in manufacturing and heavy industry sector. 50 Methods and regional approaches demonstrate the differences between primary energy and required energy required to full supply chain expenditure (Baynes and Lenzen 2011). Harmful materials are released in the environment with the increased usage of engineering nanoparticles. These engineered nanoparticles are equally consumed in industries as well as household. These engineering nanoparticles are used to compare with natural elements usually: but the difference between both should must be estimated as nanoparticles are not Environment friendly when they are actually used (Brend and Bucheli 2007).

Household trash can be basically classified into five type's i.e. glass bottles, aluminum yard waste, plastic bottles and newspaper, the length of recycling and accesses recycling have direct impact percentage analyzed material. But on the other hand unit cost has indirect effects on recycling of these materials (Jenkins and Matinez 2003). Socio-economic variables are thought to be strongest predictors of energy consumption. Not only social and economic but technical and structural factors also have impact on household energy consumption. These also have revolutionaries this area as things become efficient and renewable as compared to inefficient and non renewable before. Adaptation rates accessibility of energy, basic expenditure and saving benefits have been determinants of improved technology in this era (Reddy and Balachanda 2006). Household income and expenditure are relevant with the study of risk of poor nutrition. Abnormal intake of diet might be positively or negatively correlated with income, food poverty, and deficiencies or excessiveness. Food chart is always differentiated on the basis of demographic variable like urban to rural, high income to low income, age groups or gender basis as well. Household factors will vary when there is change in intake of food items. Similarly, wastes and garbage an element varies with the changing intake elements (Myembe 2011). Environmental impact assessment (EIA) is effect of a proposed subject, program or plan on the environment. Procedure and methodological foundation of (EIA) is established in 1970, by national Environmental policy Act (NEPA) in the USA. At international level bilateral aid and lending bank have (EIA) procedures that apply to acquiring and beneficiary countries. Most of the developing countries are formalizing (EIA) through the legislation (Ogola, 2007). Main purpose of this study to investigate the factors determining charcoal consumption in Zambia. These factors are very important in facilitating and smooth policy formulation in the area of health, energy planning and environment. Data were collected during the dry and rainy season, Heckman and biprobit models were used to analyze the factors affecting the likelihood of consuming charcoal and demand of charcoal respectively (Myembe, 2011).

Researcher tells us the consumption pattern in rural area of a district Nowshehra. Main objective of this study to investigate the influence of the socio economic factor and consumption pattern of the Khyber Pakhtunkhwa (KPK) province of Pakistan. An ordinary least square method was used to analyze the data. Majority of the food commodities had a positive response, total monthly income and household size (Begum, 2010). Investigates the consumptions pattern of Pakistan household and also the impact of remittances on the consumption pattern. For observing the consumption pattern researcher used four categories of food, durables and utilities, food, non-food. According to the Pakistan household Survey (PHHS) in 2010 estimated budget shares of household for durable utilities, non-food, and food. In this result shows the most of the expenditure were allocated for the non-productive

activities Bukhari et al., (2014). Consumption is stable and major component of growth domestic product (GDP), which has been focus of attention by the many economists. Researcher trying to develop the Behavioral Consumption Function (BCF) of the household area of a Wah cantt by using simple questionnaire method. Main Objective of this study to empirically test not only the validity Rational Expectations Permanent Income Hypothesis (REIPH) theory which is presented by HALL (1978) for the income level (Lorenda, 2010). The previous 15 years have been a period of emotional change for strong waste administration. Two clear national patterns in strong waste administration rose amid this period. Both were the after effect of nearby endeavors to diminish the amounts of waste being land filled (Goldstein, 1997).

### **Sustainable Consumption**

Manageable utilization is an example of utilization that dependably fulfill the essential needs, suggestion people the freedom to acknowledge themselves, and solid to over the entire globe without the trading off earth conveying limit. In the world most of the industrial countries consumption pattern are not sustainable because they are require to many resources, also cause of too many exhalations, their procedure and social impact in the developing countries are not acceptable because consumption is not enough to meet the basic need and allow a humans a freedom from want (Rajan, 1998). Lifestyle may be defined as the way of living. In this many variables likes transportation may have digastrics impact on external enviournment. Life style and life pattern are also different from family to family. Thus the enviournment can be affected in different dimensions. A luxuries life style may not be so harmful for the people inward but external boundaries may get worse. Need is to take good care of the knowledge regarding relevancy of indivisoul efforts on the whole external boundaries (Christensen, 1997). Enviournmental impact and environmental intent are required to be distinguished. Enviournment also have its behaviors, by the way use of attitudinal variables of indivisoul, one can't judge varying nature of Enviournmental behavior. Seven interpretable values are taken for this study but Enviournmental behavior requires to list of more variable to check on its variance (Poortinga et al., 2004).

Municipal waste and generation and final energy consumption have direct impact of household patterns. Consumer behavior is thought to be the basic determinant of one's living pattern and influences over external enviournment. Three major ways for sustainable consumption have been observed. Public sectors also have to play certain role for the control of raising consumer awareness making sustainable consumption and greening markets. Some essential elements were sorted to designs sustainable consumption policies like significance of collective action, social science impact on consumption adaptability and flexibility of instruments. A single policy line should be adopted to convey a sign message in the whole process line. (Terlau and Darya 2015).

It can likewise be destabilized in light of the fact that; it depends on asset exploiter or cause antagonistic reactions, for example, soil destruction and Stalinization. In our perspectives vision, reasonable utilization alludes to measures to accomplish an all the more genuinely impartial dispersion of utilization around the globe and decrease to the general natural effect. All measure that decreases the impression of a man considers a maintainable utilization, so such sort of a definition would be a wide to be valuable. So we drive the definition from a reasonable edge work for investigating the effect which is identified with the family unit utilization.

Sustainability refers to the social, economical anvournmental dimensions. Enviournmental sustainability reduces the negative impact on nature enviournment and making to do a responsible decision. Researchers are interested to work on these issues. In this paper author

highlight the exhausted review of the Environmental sustainability consumption pattern, historical development and sustainability of environment have been discussed to improve the quality of Environmental and consumption pattern (Rupam, 2014).

### **Environmental Assessors Methods**

Many methods have been used in order to provide the insight creation of Environmental damage, which is caused by the human activity. Method of Material Flow Analysis (MFA) provides the information about the material equipment for a certain process in a society and has been applied at the household level. Substance Flow Analysis (SFA), always focus on the specific elements and compound of concern, such as lead. Life Cycle Assessment (LCA) describes the disbursement and resources that use associated with the individual product and services. Economically input and output analysis can be use in a similar manners but describing more aggregate product groups.

### **Evaluation of the Socio-Economic and Institutional Context**

Utilization choices are eventually a matter of individual, gathering or authoritative decision, however, utilization examples and levels are inserted into the present bug catching network of monetary. Approaches inside this class depend on the understanding that natural issues we are confronting now begin from exercises and standards that are profoundly established in our general public. Numerous endeavors to address the unsustainable examples of utilization frequently conflict with existing establishments and therefore require a frameworks approach social and social standards and organizations.

## **MATERIAL AND METHOD**

In this research paper we had gathered information from 180 individuals, 60 samples were taken from District Muzaffargarh, 60 samples were taken from District Layyah, and 60 samples were taken from area Rajanpur. Eye to eye strategies were utilizing to satisfy the inquiry is interest. This study was arranged out in January 2016, and studied in June, 2016. In this we use to accommodation testing strategy to gather the information and required data.

Our principle variable of interest is Household material influence on Environment. We had made three classifications, (CAT-I) has a place with first area Layyah, (CAT-II) has a place with the second region Rajanpur, (CAT-III) have a place with region Muzaffargarh. In (CAT-I) we have gathered reaction of first locale with their tehsil and their percentages, and in addition in (CAT-II) we have gathered information from second region with their percentages, in a third and last class (CAT-III) we had gathered information from third region and their percentages are given in that section. In second last column we had find out the value of chi square test, which tells us the independence of homogeneity of a variable's, and P-value value tells us the significance of the result, if P value is less then alpha we reject our hypothesis and our result will become significant.

## **STATISTICAL TOOLS AND SOFTWARE**

For a data analysis we are use the term applied statistics, in applied statistics we will be able to apply different types of technique to find out the results, which is to be very helpful in final results findings. Thus for a results findings we had used SPSS 21 version. After getting the data from respondents the most important work is to carry out the suitable statistical analysis for a valid result. In this we use Chi-Square test to check the independence of homogeneity, percentages; P-value is also found out to check the factor significance.

Table 1(Part-I). Descriptive Statistics

Factors	Level	CAT-I (N) % Layyah District	CAT-II (N) % Rajanpur District	CAT-III (N) % Muzaffargarh District	Chi Square	P value
Gender	Male	35(0.583)	45(0.75)	38(0.633)	0.1123	0.00256
	Female	25(0.417)	15(0.25)	22(0.367)		
Age	15-20 Year	24(0.4)	34(0.567)	29(0.483)	4.1347	0.00167
	20-25 Year	20(0.33)	14(0.233)	21(0.35)		
	25-30 Year	14(0.233)	6(0.1)	12(0.2)		
	30 & Above	2(0.033)	6(0.1)	8(0.13)		
Area	Urban	35(0.5833)	25(0.417)	43(0.717)	2.136	0.00236
	Rural	15(0.25)	35(0.5833)	17(0.2833)		
Student	BA/Bs.c/BS	28(0.467)	31(0.5167)	19(0.3167)	0.183	0.01763
	M.A/Ms.c	21(0.35)	20(0.333)	14(0.233)		
	M phil/Ph.D	11(0.1833)	9(0.15)	27(0.45)		
Job Status	Employed	17(0.2833)	8(0.133)	43(0.717)	0.472	0.0001
	Not Employed	43(0.7167)	52(0.867)	17(0.2833)		
Salary	<7000	34(0.567)	28(0.467)	34(0.567)	6.481	0.1165
	7000-15000	12(0.2)	12(0.2)	16(0.267)		
	15000-30,000	14(0.233)	20(0.33)	10(0.167)		
Use of Electricity	Yes	56(0.933)	45(0.75)	59(0.9833)	6.934	0.00367
	No	4(0.067)	15(0.25)	1(0.0167)		
Primary Sources (Government Provider)	Wapda	56(0.933)	45(0.75)	59(0.983)	0.334	0.00293
Secondary Source (Private Source)	UPS	1(0.0167)	0(0.00)	0(0.00)	0.167	0.00276
	Solar System	3(0.05)	15(0.25)	1(0.0167)		
	Generator	0(0.00)	0(0.00)	0(0.00)		
	Any other	0(0.00)	0(0.00)	0(0.00)		
	No	6(0.1)	6(0.1)	3(0.05)		
	Other	3(0.05)	4(0.067)	4(0.067)		

**Table 1(Part-II). Descriptive Statistics**

Factors	Level	CAT-I (N) % Layyah District	CAT-II (N) % Rajanpur District	CAT-III (N) % Muzaffargarh District	Chi Square	P value
Use of Natural Gas	Yes	43(0.7167)	36(0.6)	45(0.75)	0.142	0.00498
	No	17(0.283)	24(0.4)	15(0.25)		
Primary Sources (Government Provider)	Cylinder	10(0.1867)	8(0.133)	3(0.05)	0.113	0.00237
	Gas Connection	43(0.7167)	36(0.6)	45(0.75)		
Secondary Source (Private Source)	Biogas	2(0.033)	4(0.067)	4(0.067)	0.653	0.00173
	Straw/Shrubs Grass	3(0.05)	5(0.833)	5(0.083)		
	Animal Dung Cakes	2(0.033)	6(0.1)	3(0.05)		
	Agriculture Crop Reduce	0(0.00)	1(0.017)	0(0.00)		
	Solid Fuel for Cooking	0(0.00)	0(0.00)			
	Other	0(0.00)	0(0.0)			
Water use for drinking	Yes	59(0.9833)	60(1.00)	57(0.95)	0.227	0.00289
	No	1(0.17)	0(0.00)	3(0.05)		
Primary Sources (Government Provider)	Wasa	1(0.17)	0(0.00)	0(0.00)	0.489	0.00616
	Government water project	59(0.9833)	60(1.00)	57(0.95)		
Secondary Source (Private Source)	Mineral Water	0(0.00)	0(0.00)	0(0.0)	0.293	0.009816
Deficiency of water can save from the Enviournmental waste effect	Yes	56(0.93)	54(0.90)	50(0.833)	0.371	0.00417
	No	3(0.05)	4(0.67)	8(0.133)		
	Other	1(0.17)	2(0.033)	2(0.033)		
Noise Effect on Enviournment	Yes	48(0.8)	52(0.87)	48(0.8)	0.119	0.00917
	No	10(0.167)	4(0.067)	8(0.133)		
	Other	2(0.033)	4(0.67)	4(0.067)		
Less Usage of household material can be effect on enviournment	Yes	50(0.833)	48(0.80)	58(0.97)	0.286	0.00713
	No	10(0.167)	12(0.2)	2(0.033)		
	Other	0(0.00)	0(0.00)	0(0.00)		



**Table 1(Part-III). Descriptive Statistics**

Factors	Level	CAT-I (N) % Layyah District	CAT-II (N) % Rajanpur District	CAT-III (N) % Muzaffargarh District	Chi Square	P value
Consumption of food and agriculture is important factor of environment	Yes	54(0.9)	56(0.933)	57(0.95)	0.589	0.007814
	No	4(0.067)	1(0.0167)	2(0.033)		
	Other	2(0.033)	3(0.05)	1(0.0167)		
Fossils energy carries for heating transportation	Yes	51(0.85)	52(0.87)	48(0.8)	0.973	0.009916
	No	6(0.1)	4(0.067)	6(0.1)		
	Other	3(0.05)	4(0.067)	6(0.1)		
Consumption and production of household material effect on environment	Yes	58(0.971)	53(0.883)	52(0.867)	0.754	0.1764
	No	1(0.017)	6(0.1)	5(0.833)		
	Other	1(0.017)	1(0.017)	3(0.05)		
Recycling activities can be save us from the Environmental effect	Yes	51(0.85)	50(0.833)	53(0.883)	0.982	0.000
	No	6(0.1)	6(0.1)	3(0.05)		
	Other	3(0.05)	4(0.067)	4(0.067)		
Government intervention and encouraging the household in more organic products	Yes	54(0.9)	57(0.95)	59(0.983)	0.734	0.1165
	No	6(0.1)	3(0.05)	1(0.0167)		
Lifestyle and increasing role of technology have impact on environment	Yes	48(0.8)	60(1.0)	58(0.97)	0.916	0.1963
	No	12(0.2)	0(0)	2(0.033)		
Inefficient using natural resources can effect on environment	Yes	42(0.7)	43(0.717)	52(0.87)	0.9143	0.9173
	No	18(0.3)	17(0.283)	8(0.133)		
Climate change is happening due to consumption of household material	Yes	45(0.75)	56(0.933)	57(0.95)	0.563	0.00267
	No	15(0.25)	4(0.07)	3(0.05)		

## **DISCUSSION**

Essential point of this exploration to discover the impact component of environment, which is caused by household consumption in various regions of south Punjab districts. For this reason we have gathered information from 180 people to discover the real causes behind the environmental sway, lackness of appropriate execution in environmental approach. Urban and rural areas are the principal part of the study, to discover the reaction as proportion, percentages. Applied measurements techniques have been utilized to discover the outcomes, of understudies.

## **RESULTS**

From these outcomes we have found that environmental impact is an essential part of this study. We have found that, Noise, Minimum deficiency of water, fossils, huge warming transportation and government mediation encouraging can be protected us from the environment. Detail of above factors given below. Use of electricity in district Layyah is 0.93%, 0.75% people use in Rajanpur and 0.98% people belongs to a district Muzaffargarh. Primary source ratio is too much higher than the secondary source of electricity. Solar system is also using in rural area now a days as a secondary source. In a use of natural gas district Layyah condition is much better than the other districts, percentages in Layyah districts is 0.71%, and 0.60% districts from Rajanpur, 0.75% people belongs to the districts Muzaffargarh. Secondary source biogas, straw shrubs, animal dung cakes, is also using in rural areas of the districts. Urban area people are mostly using water as a primary source of government project, district Rajanpur people ratio is much higher than the other districts. No one from any districts use a mineral water as a secondary source. In a response of districts Layyah 0.93% people are said that deficiency of minimum water can be safe from environmental effect. District Rajanpur percentage is too much higher than the other districts of in regarding noise effect. Muzaffargarh response in regarding less usage of household consumption material can be effect from environmental and their percentages are 0.97% and 0.95% people from districts Muzaffargarh are said that the consumption pattern of food and agriculture is important factor of environment. In a district Rajanpur response of fossils energy carries for heating transportation is 0.81%. Consumption and production of household material ratio in district Layyah is much higher than the other districts, and their percentages are 0.97%. Recycling activity can be save from environmental effect and districts Muzaffargarh response is 0.83% among the all other districts. Government intervention and encouraging regarding the household in more organic product and their ratio are 0.98%.



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