



Journal of Applied Economics and Business Studies (JAEBS)

Journal homepage: <https://pepri.edu.pk/jaebis>
ISSN (Print): 2523-2614
ISSN (Online) 2663-693X



An empirical analysis of altruistic consumer behaviour and economic welfare of households in Pakistan

Saira Saeed^{1*}, Abdul Saboor², & Gulnaz Hameed³

¹ PhD Scholar Economics, UAAR

² Professor, Dean Faculty of Social Sciences, UAAR

³ Assistant Professor, Faculty of Social Sciences, UAAR

ABSTRACT

The recent literature supports the fact that choices of individual are not always rational. They are bounded rational not just because of lack of complete information but due to involvement of individual personal attributes in decision making. This study is aimed at evaluating the effect of altruistic behaviour on the welfare of some selected households. Cluster-based sampling has been used with a sample size of 1000 household covering 36 major districts of Punjab. The analysis revealed that the traditional utility maximization model positively impacted charitable donations on household welfare. This study found a high tendency of altruistic consumer behaviour among households. Altruism on the model of an individual to individual connection can improve community welfare in the long run. In this regard, the benefits of giving charity should be widely demonstrated through a formal government system, which will help improve the social welfare of society. By Publicizing the services of charity for donor, the contribution will increase across all income groups. The government needs to develop specific policies that can use charity for community development. By mobilizing individuals' donations, the burden on the part of the government can be shared in terms of projects based on the social safety net.

Keywords

Altruistic behaviour, Economic welfare, Household, Pakistan

JEL

Classification

E70, I31, H31

1. Introduction

Richard Thaler Nobel Laureate 2016 played important role in development of behavioral economics. His first contribution was the validation of deviations from rational behavior in economic decision making and giving theory of mental accounting

* drabdul.saboor@uaar.edu.pk

to explain the cognitive operations used by economic individual to evaluate his/her economic activities. His second contribution is related to self-control problems which prevent an individual to take optimal decisions. Thaler explained the saving behavior of individual in context of planner-doer model. The work of Thaler's on limited cognition and self-control has major policy implications. The third contribution was explaining the importance of social preferences in making economic decisions. The social preferences were defined in term of dictator game. His work explained that people are more concerned about fairness both in consumer and labor market. Finally, his work on providing evidence of psychological aspects in economic decisions makes him eligible for Nobel Prize (Committee, 2017). He is considered as pioneer of behavioral finance, particularly explaining investor psychology while making investment decisions. This journey motivated to determine the social preferences of individuals and how it's going to create economic welfare for individual which was previously defined purely in context of rational decision making.

Recent empirical and theoretical literature has provided substantial evidence suggesting that fairness motives affect the behavior of many people. Most theoretical papers describe reciprocal altruism and equilibrium behavior by considering psychological game theory which usually gives different predictions with respect to the standard notions of equilibrium in games (Marco, 2010). Choices studied in behavioral game theory are not always rational and do not always represent the utility maximizing choice. Rushton, (1981) developed a scale to report self-reported altruism. This scale is used to analyze the altruistic behavior of an individual. It is not just limited to giving charity to others but it also include giving directions to some unknown individual, help in carrying belonging of some unknown person, holding door for someone, allowing someone to go in front of you in line, giving neighbor some valuable item of yours, helping a handicap to cross the road and giving seat to someone in bus who is standing. High scores clearly exhibit that individual ha high altruism. The theoretical analysis revealed that individual gifts to charity are interdependent. The individual contribution to charitable organizations is highly influenced by contributions from other individuals belonging to same group (Andreoni, 1998). The evidence is neither significant nor large. This means that standard models which ignore such kind of interdependence of preferences may not be misleading.

In case of Pakistan, the reports reveal that in Pakistan the total charity collection is equal to one percent of total GDP. And that is what reported by the people. Lot of charity goes to the people which is not properly reported or donor want to remain anonymous. It is observed that 98 percent of total Pakistani population takes part in charity abased activities as reported by Pakistan Center for Philanthropy (PCP). In a study conducted by PCP it was revealed that total \$2 billion which are equal to Rs. 240 billion are yearly donated by people of Pakistan. Pakistan is ranked amongst UK and Canada where total donations is 1.3 percent and 1.2 percent of total GDP respectively. It is believed that the main reason of such donations is based on religion. According to basic teaching of Islam

every well-established person is bound to give part of their wealth to poor in terms of Zakaat. The survey reported that Pakistanis prefer to give donations on their own because this gives them more satisfaction. It was suggested that, to have productive use of resources, the donations should be collected in a structured way. Out of sample selected two-third of individuals reported that they give donations to the needy by their own hand. While one-third prefer to give charities to the poor. The reported reason of not giving charity donations to charitable organization is lack of trust on charity based organizations. The other factors identified for donations in Pakistan are religion and feeling of sympathy for others. The lower middle class and middle class of Pakistan is directly linked to the needy so often prefer to give donations by their own hands. While the rich class is not directly linked to the poor's, so they prefer to give to the organizations.

The rationale of the study is to analyze how altruistic activities can bring economic wellbeing for an individual. By promoting such activities at national level, government would be able to solve the problems of local community at large. The social safety net provided by the government has few limitation which can be shared by the people who are willing to take responsibility of others. The current analysis will help to promote altruistic activities and develop literature in this respect which create space for theory of irrationality in economics.

2. Literature review

Pigou define Economic Welfare as “that part of social welfare which can be brought, directly or indirectly, into relation with the measuring-rod of money” and the phenomena latterly defined as “the economic welfare of a community consists in the balance of satisfactions from the use of the national dividend over the dissatisfactions involved in the making of it” (Hicks, 1975). The economic wellbeing is defined by different indicators. The major indicators of economic and social wellbeing are, Measure of Economic Welfare (MEW), Genuine Progress Indicator (GPI), Index of Economic Well-being (IEWB), Index of Social Health (ISH), Fraser Institute Index of Living Standards (ILS), Human Development Index (HDI), Quality of Life Index (QOL) and Index of Social Progress (ISP) (Sharpe, 1999). The economic wellbeing will be used to see whether altruism has any impact on it. There are few barriers in measuring economic welfare. Context factors which is embedded in policy factor while indicator factors which mainly depend on level of experience and expertise of the users of indicators and the institutional culture in which they operate (Bleys, 2015). The value of different measures of economic welfare can be increased by updating methodological framework, extending macroeconomic models to incorporate more welfare related items, improved communication and researcher skills of entrepreneurship. The measure of economic welfare should include health, social and environmental statistics to measure overall wellbeing of an individual.

The research reveals that subjective wellbeing is positively and significantly correlated with social activities. The inverse causality prevails which means that satisfaction in life induces more social behavior in an individual. The phenomena can be estimated through standard OLS and Ordered Probit Estimates (Becchetti, 2013). The basic model still remains same but the preference of individual should be reported more realistically. The only significant difference prevails is the difference in type of motivation which vary from individual to individual. The phenomena also vary across different cultures and age group because of different set of norms. The paradox of happiness reveals that the quality of genuine relational life that is more important as compare to income while estimating subjective wellbeing. In economics, the relational goods have positive impact on life satisfaction. The relational ties, voluntary activity and number of people whom respondent can rely are positively and significantly related to life satisfaction (Becchetti, 2015). The direct causality hypothesis if supported in different cultures, support that high quality of relationship should bring higher subjective wellbeing. In short, individual donate time and money in order to have strong relationships and without having strong relations, economic stability is not possible because economic vitality depend on quality of interpersonal relationships.

There are different approaches through which charitable giving can be studied. The first approach is giving as individual economic decision. In this approach the supply of donations is determined in traditional utility maximization framework subject to budget constraint. The second approach is giving as strategic interaction. In this approach the role of donors, fund raising organizations, government and charitable foundations is significant. The third approach is giving as social exchange. In this scenario presence of overt request is necessary which may come from a friend, a colleague, and a door to door solicitor, a call from fund raising organization, a media campaign, and any natural disaster. The very recent approach is giving as response to empathic, moral, or cultural urges (Andreoni, 2013). The analysis of all approaches will help to identify the social and economic wellbeing of a particular household.

The economic gain is primary motive as explained by basic economic theories. An empirically grounded theory can be used to explain other motives like altruism and organizational identifications (Simon, 2018). According to that theory one can assume that human motives change over time. The main reason is that individuals don't form their preferences in isolation but they are response of public events happening around them. The basic economic theory need to be altered to explain the motives other than economic welfare which determine the choice set of an individual. At organizational level, altruism induces loyalty which brings positive impact on performance of organization. Not only in organizational setup but in all kind of networks, altruism play significant role in developing social capital. In a fixed network, individual also care about wellbeing of their neighbors. People prefer to help their poor friends if they find them in any kind of financial crisis. In this context, Nash equilibrium can be explained by a concave function. Bourles, (2017) established existence of unique equilibrium

consumption and equilibrium transfers. The whole analysis helped to state that a positive shock for an individual is going to benefit everyone around him. Any kind of small change in income depends on individual current financial status. Surprisingly the analysis also revealed that expansion of the altruism network may increase consumption inequality. In Japan, a study was conducted to analyze the relationship of altruism with consumption of staple food like rice. The analysis found the altruism and other attitudes have a significant influence on food consumption (Ujiie, 2011). These findings suggest that a pipeline to provide public goods via daily food consumption might exist.

Altruism promotes the efficient working of markets and allows them to function regardless of imperfect information. This revealed that altruism is real and help to promote social integration. Altruism increases as much as the social complexities of society increase. For the betterment of society, the world demand social man over economic man (Kennett, 1980). It's not just the society which gets benefited by altruism but there are other benefits as well like mental, psychological, emotional, and even physical. Analyzing in respect, positive impact of altruism is consistent across each segment. Particularly taking about improved health, altruism improve mental health for both male and female but addition to that, female also experience improved physical health as a result of altruistic activities (Fechter, 2016). Community connection increases if societies promote altruism which play significant role in community development. There is a direct and positive relationship between the amount of time an individual spends volunteering and the resulting increase in well-being. Volunteering increase positive effects on wellbeing of an individual and decrease negative effects like depression and stress. The volunteer behavior is more dominant in low income group. While explaining behavior of individual, certain imperfections may come in that way (Povey, 2014). There are lots of reasons for these imperfections. The main imperfection is punishment system which weakens the ability of altruistic preferences.

The purchase of product in international market has major impact on welfare of country from which those products belong. The employment opportunity increase for the product whose purchase is high. The altruism can explain such behavior in term of consumer ethnocentrism, cognitive moral development and pro-social behavior. The consumer ethnocentrism varies based on region of origin and pro-social behavior varies based on methods of acquisition and region of origin (Powers, 2006). Social capital is the set of relationship an individual have, including his/her friends, family, neighbors and co-workers. Altruism and social capital may not exhibit strong association but surprisingly revealed that altruism cause an increase in social capital (Theurer, 2010). In multivariate analysis altruistic behavior has statistically significant association with happiness and life satisfaction. The hedonic and eudemonic benefits of altruistic behavior appear to be shaped by the more general dimensions of social capital. When an individual prefer A over B the phenomena is explained by Hedonic principle in economics. But current stream of research focus demographic, social and psychological aspects of A and B before giving explanation of behavior of A (Unger, 1981). This

direct to a new fertile area of research in behavioral economics in which connection between a certain type of behavior and wellbeing is explored. Like why poor and rich behave differently can have reason other than what explained by commodity specific and income specific statistical contrivances.

Altruism is declared to be rational, if it's captured by quasi-concave utility functions for individuals (Andreoni & Miller, 2002). All individuals are heterogeneous. The percentage of fairness adopted by individual is not fixed for each individual. For that reason, fairness should be analyzed at individual level. Because of individual heterogeneity, a single model would fail to predict aggregate behavior of individuals. In order to capture all choices of individuals and aggregating these choices will help to understand altruism for both individuals and markets. It is claimed that non-economic behavior is beyond economic analysis. As economist it is believed that individual behavior is consistent with self-interest. In this self-interest is defined as choices that are complete, reflexive and transitive hence utility function can be used to explain behavior. What variables are included in that self-interest are explained by people itself, by their actions and choices (Andreoni & Miller, 1998). This means that unselfish behavior can be captured by model of self-interested agents but self-interested agents are not always money maximizing. Those unselfish acts can be described and predicted with the standard neoclassical model of choice. The basic economics model assumption is that people are self-interested. This means that some choices of individual following underlying preference ordering like complete, reflexive and transitive. But this failed to explain what economic variable operate in whole framework. People from their actions; define those variables which formulate their utility function. This means that unselfish behavior can be explained by self-interested framework but that self-interested framework is not always money maximizing. The unselfish actions of an individual can be explained by neo-classical model of choice (Andreoni, 2008).

During last part of 20th century, there came a fundamental paradigm shift in social sciences. In the previous literature, the altruism and true generosity was not intellectually acceptable. This kind of behavior can be explained with comparison to selfish consumer in economics. The recent development in literature creates lot of room for existence of true generosity and explained that it is an important characteristic of human being. Such kind of behavior is fundamentally opposite to the basic ideas of utility theory which take selfishness as central motivation for consumer behavior. The point is that generosity conflict with basic economic theory and it is different at each level due to number of factors. The present utility maximization models fail to provide explanation of human behavior at these different levels. Secondly, the preferences are endogenous which are highly responsive to social and economic circumstances around them. This means that the final consumption output cannot incorporate the true picture of human welfare. Thirdly, social norms are the major determinants of human behavior, which means that human behavior has certain kind of flexibility which is not incorporated in basic economic models (Karacuka, 2012). Thus neoclassical model of

choices is recommended explaining the concept of altruism and true generosity. The individual who have higher education level usually provide unpaid assistance and emotional support. However the financial support is not associated with higher education level. The people belonging to older age group are less likely to give emotional support and unpaid assistance but no significant association was found with financial support (Fujiwara, 2009). People who have some association with broken families are more likely to provide financial assistance. The gender and employment level don't have any significant association with having empathy for others.

The dictator game has been analyzed for altruistic behavior using large random sample size in case of Netherlands. In the whole survey six percent of respondent has donated money. The analysis revealed that generosity increase with age, education, income, trust and pro-social value orientation (Rene, 2007). The pro-social behavior has been analyzed to understand behavior of students in dictator and ultimatum games. One student sample has been used which has reciprocity and lower level of trust. Prisoner's dilemma games can be analyzed in the current context. Four different sections have been used for analysis. Among them, one group exhibit higher pro-social behavior and was an outlier. Women showed more cooperation in prisoner's dilemma but lower trust in trust game. Men and women both behaved same in dictator and ultimatum games (Chaudhry, 2011). But phenomena were observed in experimental environment that need to be analyzed in realistic environment.

People gain utility from the act of giving, they also gain more utility by increasing its supply. The impure altruism model leads to predictions that are intuitive (Andreoni, 1990). The redistribution to more altruistic people from less altruistic people will increase total provision, which may lead to desired effect of giving subsidies. The altruism decline with income and when altruism is considered, the effect of policy sometime got reversed. The conventional view of charitable giving may be inaccurate but the importance of developing interdependence of preferences and empirical models that incorporate impure altruism is still there. Charitable giving is perennial topic in current economic research. It is very challenging task to determine the motives of giving, the operations of charitable institutions for policy analyst to measure benefits of charity and for experimenters to explore market of charitable giving. Over the period of time the government become more reliant to private institutions for providing public goods and donations to charity has become increasingly sophisticated at raising money (Andreoni, 2007). The demanders of charity will become essential for calculating the social costs and benefits of charitable institutions. It is revealed that altruistic preferences come from culture (Andreoni, 2007). They are seems to be acquired through psychological development and socialization using children as mode of transmission. The third argument is that people are innately wired to care. The MRI images studied by many scientists revealed that human brain has isolated centers involved in altruism. The phenomena are not just limited to experimental boundaries but it's valid outside experimental boundaries in real term.

The analysis of determinants of charitable giving in a study based on Netherlands revealed that richer, religious and female respondents are more likely to give. No significant impact of perceptual and attitudinal factors was found. The donations in term of money, in-kind and time are not significantly influenced by altruism, warm glow, prestige and reciprocity, and government policies. The only major motivator found was family which implies that if current generation has habit of giving, that would result in giving habit of future generation as well (Nu, 2015). Some people believe that either people give more because it is cheap to give or individual has large income. But charity is sensitive to temporary or permanent changes in variables. Researchers used classical model of charitable giving to determine benefits of it based on public and private characteristics. The empirical analysis revealed that private benefits are the primary motive for giving. The classical model mislead when data is interpreted because empirical analysis give limited evidence to support the common belief that donors give because they care about the nonprofit's output (Vesterlund, 2006).

3. Methodology

Public economics has remained active to develop a comprehensive literature on justifying charitable giving's in the framework of economic theory. In 1970s, the first policy study was published on given topic by Martin Feldstein. Currently charitable giving's has been discussed under different areas of economics including, economic theory, game theory, applied econometrics, experimental and behavioral economics. The economic theory is trying to identify how charitable giving is influencing of associated with economic variables. The form of preferences in case of charitable giving is critical. It is assumed that charity has same model as public goods but it is observed that despite income level, people prefer to give charity which means that motives other than charitable output are involved in decision regarding giving charity. A comprehensive research on theoretical, experimental and behavioral aspect of giving is being done to identify the motives of charitable giving's.

To explain individual preferences for charitable giving's current study considers an individual i having an income m_i who have consumption of private good x_i and donate g_i to charity. For n individual, let's assume \mathbf{G} as the total contribution to charity. In case of pure altruism (Andreoni, 1989) in which an individual gain utility from final output of charity then \mathbf{G} is a public good. so the first model which defined utility as function of altruism assumed preferences as

$$U_i = u_i(x_i, \mathbf{G})$$

But such a model may lead to meaningless conclusions like may be only a part of total population contributes to charity as discussed by Varian (1986) and Andreoni (1988). So any model which is based on empirical findings, need to experience higher utility from their charities as compare to others that is

$$U_i = u_i(x_i, \mathbf{G}, g_i)$$

Where utility is increasing in third argument in which it is assumed that only warm glow component of utility is going to have significant impact on an individual giving decision. This impure altruism was given by Andreoni in 1990 in his theory of warm glow giving. Many studies in the past, has giving strong evidence regarding existence of warm-glow. Different laboratory experiments have shown response to manipulations giving support for existence of basic concept of “joy of giving”. A study in this respect has shown that 57 percent of subject has given share of their income to charity. Although the contribution was not that much high neither it increased the overall contribution by any significant amount still the study has given strong evidence in support of warm glow (Crumpler & Grossman, 2008).

The main analysis of the study is based on analyzing the possible connection between altruism and economic status of household. The simple regression model is used to predict the relationship between two variables. To make the analysis more specific different income proxies has been used to predict the accurate relationship between the two variables.

3.1 Relation between income of household and altruism

The first regression is based on predicting the relationship between economic status of household and altruism by taking income of household as proxy of economic status. The regression would take functional form of log-linear in which log of yearly income (2017-18) would be taken as dependent variable while the behavior of given donation as proxy of altruism is taken as independent variable along with a set of controlled variables. The model estimated to predict the relation between altruism and net income is as follows.

$$\begin{aligned} \text{Log}(Inc) = & \alpha(\text{Donor}) + \beta_1(\text{HHsize}) + \beta_2(\text{Employed in HH}) \\ & + \beta_3(\text{Literate in HH}) + \varepsilon \end{aligned}$$

Where, Log(Inc) (yearly income 2017-18) is taken as dependent variable. The Independent variables include possibility of being Donor which take one if the person is charity donor and zero otherwise. The set of controlled variables include HHsize (household size), Employed in HH (total number of employed individual in household) and Literate in HH (total number of literate individual in household). The proposed hypothesis claims that there is positive relationship between income and altruism. For set of controlled variables, it is assumed that higher household size would lead to negative pressure on economic welfare of household, while more number of employed and literate members in household will lead to positive impact on welfare of household.

3.2 Relation Between Expenditure of Household and Altruism

The second regression is based on predicting the relationship between economic status of household and altruistic behavior of an individual by taking expenditure of household as proxy of economic status. The regression would take functional form of log-linear in which log of yearly expenditure (2017-18) would be taken as dependent

variable while the behavior of given donation as proxy of altruistic behavior is taken as independent variable. The model estimated to predict the relation between altruism and net income is as follows.

$$\begin{aligned} \text{Log(Exp)} = & \alpha(\text{Donor}) + \beta_1(\text{HHsize}) + \beta_2(\text{Employeed in HH}) \\ & + \beta_3(\text{Literate in HH}) + \varepsilon \end{aligned}$$

Where, Log(Exp) (yearly Expenditure 2017-18) is taken as dependent variable. The Independent variables include possibility of being Donor which take one if the person is charity donor and zero otherwise. The set of controlled variables include HHsize (household size), Employed in HH (total number of employed individual in household) and Literate in HH (total number of literate individual in household). The proposed hypothesis claims that there is positive relationship between expenditure and altruism. For set of controlled variables, it is assumed that higher household size would lead to negative pressure on economic welfare of household, while more number of employed and literate members in household will lead to positive impact on welfare of household.

3.3 Instrumentation of data collection and sampling method

The questionnaire has been developed to test the desired relationship between the variables. The questionnaire was designed to incorporate all the necessary information required for analysis. The first part of questionnaire is based on income profile of household in which income for period 2007-08 and 2017-18 has been asked. Same for the expenditure profile of household. The households overall expenditure of health was incorporated in separate section. The next section was developed to incorporate altruistic behavior of respondent. The question regarding altruism, general perception of respondents regarding generosity and identification of passive donor has been incorporated. The probability sampling was used to cover the province of Punjab which comprised of 36 major districts. Based on previous literature and statistical analysis a sample of 1000 respondents was finalized based on cluster base sampling. The population proportion of 36 major districts of Punjab was used to identify sample size for each district. (sample detail attached at Appendix-II) The Multiple Indicator Cluster Survey 2014 published by Bureau of Statistics Punjab, (2014) has been used to identify population proportion in each district. (Questionnaire attached at Appendix –I)

4. Results

The analysis of the study is based on analyzing the possible connection between altruism and economic status of household. The simple regression model is used to predict the relationship between two variables. To make the analysis more specific different income proxies like household income and household expenditure has been used to predict the accurate relationship between the two variables.

4.1 Descriptive statistics income profile

The mean monthly salary of households for the period 2007-08 is 24965. The deviation is huge like the minimum monthly salary is 2000 while maximum is 400000. The rent from property is 21414 on average at monthly basis. However earning from saving account, remittance from abroad and financial assistance from government is not major source of income. At maximum 15 respondents reported that they receive remittance from abroad. The mean monthly salary reported for the period of 2017-18 is 50865. The deviation is again highest. The minimum amount of salary per month is 5000 while maximum is 1500000. The rent from property on monthly basis is reported 36297 on average. The income from other sources like earning from saving account, remittance from abroad and financial assistance from government is on maximum availed by 41 respondents. The mean yearly income of household reported for the period 2017-18 is 672979.

Table 1: Descriptive Statistics Income Profile

Descriptive statistics	(2007-08)		(2017-18)	
	Mean	Std. Dev.	Mean	Std. Dev.
Income profile				
Salary/Main Business (Monthly Income)	24965	32129	50865	81768
Rent from any Property (Monthly income)	21414	27336	36297	50857
Earning from saving account (Yearly)	260000	473127	34259	42647
Remittance from abroad (Yearly)	2553333	242343	339365	440795
Financial Assistance from government (Yearly)	13600	13575	18936	17153
Others	56000	97020	149228	236927
Total income of Household in Base year	320018	403250	672979	1125589

4.2 Descriptive statistics expenditure profile

The mean monthly expenditure for food consumption reported by household in 2007-08 is 10576. The items included under food are spices, sugar, grains, cereals, oil, fats, tea, milk, baked and fried products. The mean yearly expenditure for non-food items like travelling, clothing, health, housing, education, taxes, furniture, utility bills and Loan installments is 72235. The selected durable items owned by household worth 16169 on average. The durable items include refrigerator, freezer, AC, Air cooler, Geyser, Washing machine, car, motor cycle, laptop and mobile phone. The total yearly expenditure of household for the period 2007-08 is 213485 on average.

Table 2: Descriptive Statistics Expenditure Profile

Descriptive statistics	(2007-08)		(2017-18)	
	Mean	Std. Dev.	Mean	Std. Dev.
Expenditure profile				
Food consumed by household (monthly)	10576	13402	20015	19823
Non-Food Items consumed by household (yearly)	72235	107016	147267	177914
Selected Durable items hold by household	16169	30840	60489	78416
Total Expenditure of Household	213485	232803	458568	618069

The mean monthly expenditure for food consumption reported by household in 2017-18 is 20015. The items included under food are spices, sugar, grains, cereals, oil, fats, tea, milk, baked and fried products. The mean yearly expenditure for non-food items like travelling, clothing, health, housing, education, taxes, furniture, utility bills and Loan installments is 147267. The increase is mainly due to high prices of electricity and utility bills. The cost of schooling also increases during last decade. The selected durable items owned by household worth 60489 on average. The highest increase is mainly because of the fact that Pakistan has experienced highest rate of inflation during last decade resulting in significant increase prices of electronic items. The durable items include refrigerator, freezer, AC, Air cooler, Geysers, Washing machine, car, motor cycle, laptop and mobile phone. The total yearly expenditure of household for the period 2017-18 is 458568 on average.

4.3 Relation between income of household and altruism

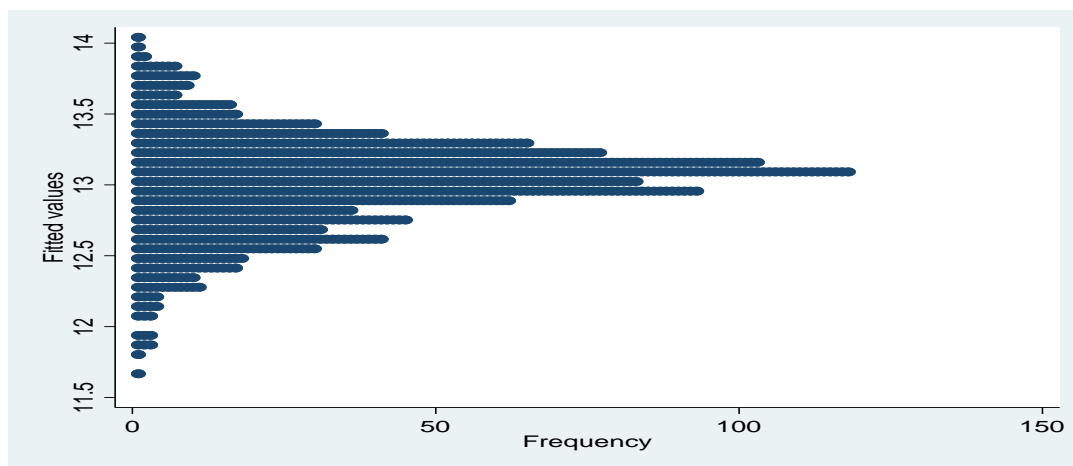
Table 3: Log-Linear Regression results (Income)

Number of Observations		1000
F (4,995)		54.12
Prob > F		0.0000
R-squared		0.1787
Adj. R-squared		0.1754
Root MSE		0.72588
Log income 2017T	Coefficient	t- value
Donor Charity	0.1973308***	3.14
Household size	-0.0964194***	-6.36
No. of Employed in HH	0.1259648***	5.64
No. of Literate in HH	0.1655475***	11.52
Constant	12.48966***	144.81

Notes: (***) significant at 1% level, (**) 5% level, and (*) 10% level.

The log-linear regression having log of yearly income (2017-18) as the dependent variable while the behavior of given donation as proxy of altruism is taken as an independent variable along with a set of controlled variables revealed that the coefficient of donor charity is 0.19 which is positive and highly significant considering t-stats and p-value. The coefficient of household size is negative and highly significant which means that higher household size lead to negative impact on income of household. The coefficient of number of employed in a household and number of literate in a household are positive and significant. On basis of this it can be stated that more employed and educated individuals will lead to positive impact of economic welfare of household.

Figure 1: Dot Plot Income of Household



The dot plot of income of household is given in graph below revealed that the dependent variable is normally distributed. This is in line with the assumption of basic linear regression model which require that the variable should be distributed normally.

4.4 Relation between expenditure of household and altruism

The regression is based on predicting the relationship between economic status of household and altruistic behavior of an individual by taking expenditure of household as proxy of economic status. The log-linear regression is used in which log of yearly expenditure (2017-18) has been taken as dependent variable while the behavior of given donation as proxy of altruistic behavior is taken as independent variable. The set of controlled variables include Household size (household size), Employed in Household (total number of employed individual in household) and Literate in Household (total number of literate individual in household). The coefficient of donor charity is 0.139 which is positive and highly significant considering t-stats and p-value. The coefficient of household size is negative and highly significant which means that higher household size lead to negative impact on income of household. The coefficient of number of employed in a household and number of literate in a household are positive and significant. On basis of the results it can be stated that altruism has positive impact on expenditure (taken as proxy of economic welfare) of household.

Table 4: Log-Linear Regression results (Expenditure)

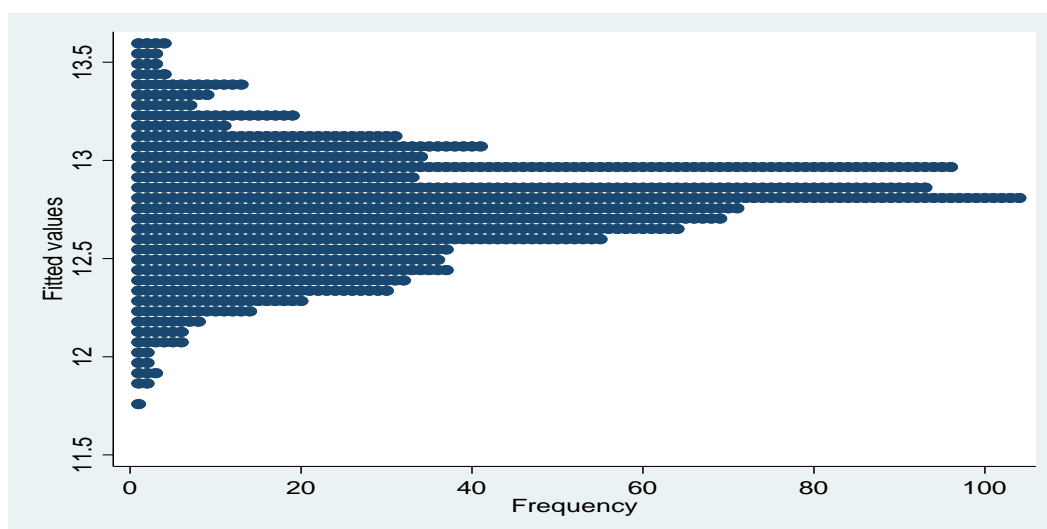
Number of Observations		1000
F (4,995)		51.66
Prob > F		0.0000
R-squared		0.1720
Adj. R-squared		0.1686
Root MSE		0.63816
Log expense 2017T	Coefficient	t- value

Donor Charity	0.1395278**	2.53
Household size	-0.0504473***	-3.78
No. of Employed in HH	0.08163***	4.16
No. of Literate in HH	0.1421246***	11.25
Constant	12.19507***	160.83

Notes: (***) significant at 1% level, (**) 5% level, and (*) 10% level.

The dot plot of income of household is given in graph below clearly revealed that the dependent variable is normally distributed. This is in line with the assumption of basic linear regression model which require that the variable should be distributed normally.

Figure 2: Dot Plot Expenditure of Household



5. Conclusion

The final regression based on log linear regression tried to explore the relationship between altruism and economic welfare by taking income and expenditure as proxies of economic status of an individual. The analysis revealed that Welfare level of a household like income and expenditure have positive relation with altruism. So it can be claimed that Altruistic behavior induce economic welfare. The other controlled variables like household size has negative impact on economic welfare of household but more number of educated and employed individuals increase economic status of household. On the basis of this it can be suggested that the Benefits of altruism should be communicated at national level so that the behavior can be adopted at national level in order to share the burden of the government.

The analysis gives major policy implication for developing countries especially countries like Pakistan who face major debt crisis. Altruism on model of individual to

individual connection can improve community welfare in long run. In this regards, the benefits of giving charity should be widely demonstrated through formal government system which in return will help to improve social welfare of society. By Publicizing, the benefits of charity for donor, contribution will increase across all income groups. Government need to develop certain policies which can use charity for community development. By mobilizing the donations of individuals, the burden on part of government can be shared in terms of projects based on welfare of general public.

References

- Andreoni, J. (1998). Toward a Theory of Charitable Fund-Raising. *Journal of Political Economy*, 28.
- Andreoni, J. (1989). Giving with Impure Altruism: Application to Charity and Ricardian Equivalence. *The Journal of Political Economy*, 1447-1458.
- Andreoni, J. (1990). Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving. *The Economic Journal*, 464-477.
- Andreoni, J. (2007). Giving gifts to groups: How altruism depends on the number of recipients. *Journal of Public Economics*, 1731-1749.
- Brent Bleys, A. (2015). Barriers and opportunities for alternative measures of economic welfare. *Ecological Economics*, 162-172.
- Crumpler, H., & J.Grossman, P. (2008). An experimental test of warm glow giving. *Journal of Public Economics*.
- Fechter, L. (2016). Altruism and Well-Being. *Western Oregon University Honors Senior Theses/Projects*, 62.
- Fujiwara, T. (2009). Is Altruistic Behavior Associated with Major Depression Onset? *PLoS ONE*.
- James Andreoni, W. T. (2007). Altruism in Experiments. *New Palgrave Dictionary of Economics*, .
- James Andreoni, J. M. (2002). Giving According to GARP: An Experimental Test of the Consistency of Preferences for Altruism. *Econometrica*, 737-753.
- James Andreoni, J. M. (1998). An Econometric Analysis of Charitable giving with independent preferences. *Economic Inquiry*, 410-428.
- Kennett, D. A. (1980). Altruism and Economic Behavior: II: Private Charity and Public Policy. *The American Journal of Economics and Sociology*, 337-353.
- Kristine Theurer, A. W. (2010). Altruistic behaviour and social capital as predictors of well-being among older Canadians. *Ageing and Society*, 157 - 181.
- Leonardo Becchetti, L. B. (2015). Human Values, Civil Economy and Subjective Well Being . *World Happiness Report*.
- Leonardo Becchetti, L. C. (2013). Sociability, Altruism and Subjective Well-Being. *Center for Economic and International Studies*, 43.
- Mehmet Karacuka, A. Z. (2012). The empirical evidence against neoclassical utility theory: a review of the literature. *International Journal Pluralism and Economics Education*, 366-414.
- Nu, N. N. (2015). Economics of Charitable Giving: Understanding the Motivation of Donation Behavior. *Institute of Social Studies The Hague The Netherlands*.
- Povey, R. (2014). The Limits to Altruism - A Survey. *Hertford College, Oxford University*.
- Renaud Bourles, Y. B.-R. (2017). Altruism In Networks. *Econometrica*, 675-689.
- Rene, B. (2007). Measuring Altruistic Behavior in Surveys: The All-or-Nothing Dictator Game. *Survey Research Methods*, 139-144.
- Sharpe, A. (1999). A Survey of Indicators of Economic and Social Well-being. *Centre for the Study of Living Standards*, 72.
- Simon, H. A. (2018). Altruism and Economics. *American Economic Association*, 156-161.
- Thomas L. Powers, R. A. (2006). Altruism and Consumer Purchase Behaviour. *Journal of International Consumer Marketing*, 13.
- Theodore Suranyi-Unger, J. (1981). Consumer Behavior and Consumer Well-Being: An Economist's Digest. *Journal of Consumer Research*, 132-143.

- Theresa Thompson Chaudhry, M. S. (2011). Norms of Cooperation, Trust, Altruism, and Fairness: Evidence from Lab Experiments on Pakistani Students. *The Lahore Journal of Economics*, 347-375.
- Ujiie, K. (2011). The Effect of Altruism on Consumer Behavior in Japan: an Analysis on Rice Consumption using Scanner Data. *EAAE 2011 Congress Change and Uncertainty: Challenges for Agriculture, Food and Natural Resources*, 10.
- Vesterlund, L. (2006). Why Do People Give? *The Nonprofit Sector - A Research Handbook* .

APPENDIX –I



Dear Participant,

My name is Saira Saeed. I am a student of PhD Economics (HEC Indigenous Scholar) at university of Arid Agriculture Rawalpindi. Here is my final thesis to finish the degree; my area of research is regarding behavioral economics. The purpose of the research is to figure out the empirical connections between altruism and economic welfare of individual donor. Therefore, I would like to invite you to participate in this research study by fulfilling the survey.

All of your responses are only used for research purpose. Moreover, you do not need to provide your name for anonymous and confidential information. Please complete the questionnaires honestly and as best as you can. It will take maximum 30-40 minutes.

Thank you so much for providing useful information and, even, supporting me to finish an important part of this project.

If you have any questions or feedbacks about this project, please ask me via the following contact information.

Sincerely yours,

Saira Saeed

The Empirical Connections of Altruistic Consumer Behavior to Economic Welfare:

Empirical Evidence from Punjab, Pakistan

Personal information regarding household

ID code	Relation with Head	Age	Marital Status	Gender (Male=1) (Else=0)	Employment	Education (Highest)
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
Relation with head		Employment			Marital Status	
Head =1		Working – Paid Employed = 1			Married =1	
Spouse = 2		Working – Self Employed = 2			Widowed =2	
Son/Daughter = 3		Not Working – Temporary leave = 3			Divorced = 3	
Grand Son =4		Not Working – Looking for Work = 4			Separated = 4	
Father/Mother = 5		Not Working – Retired = 5			Never married = 5	
Brother/Sister = 6		Not Working – Disabled = 6			Nikkah (no rukhsati) = 6	
Other = 7		Not Working – Other = 7			Other = 7	

Income Profile of household

Source of Income (collective*)	Base Year 2007-08	Current Year 2017-18
Salary/Main Business (Monthly Income)		
Rent from any property (Monthly income)		
Earning from saving account (Yearly)		
Remittance from abroad (Yearly)		
Financial Assistance from government (Yearly)		
Other (like receivables from others)		

***if more than one person is involved in economic activity then enter aggregate income of all members of household**

Expenditure profile of household

Main heads of expenditure	Base year 2007-08	Current year 2017-18
---------------------------	-------------------	----------------------

Food (monthly) Spices, Sugar and juices, Pulses grains and Cereals, Edible oil and fats, Tea and coffee, Baked and fried products		
Non- food (yearly) <ul style="list-style-type: none"> • Travelling • Clothing&Footwear • Personal effect and health • Housing • Education • Utility bill • Maintenance charges • Loan installments 		
Selected durable consumption items (mark) <ul style="list-style-type: none"> • Refrigerator • Freezer • Air Cooler • Air Conditioner • Geyser • Washing Machine • Car • Motor Cycle • Laptop • Others 		

According to your expenditure pattern, which head take larger portion of your income?

- 1) Food
- 2) Luxury activities (like going for dinner, shopping and movies)
- 3) Luxury items (like purchasing car, laptop and mobiles)
- 4) Utility bills and house maintenance
- 5) Children education

Health profile of household

Household member name	Health issue faced during last 6 months	Duration till full recovery	Cost incurred

Economic Welfare of Respondent

Monetary status

Questions	YES	NO
Do you or your spouse have any saving or current account?		
Did you applied for any credit during last year?		
Bank/ Lender approved your application easily?		
Do you experience any financial hardship such as a job loss, drop in income, health emergency, divorce, or loss of your home?		
Did you sustain that hard time?		
Over the past 12 months have you or your household <i>received</i> any financial assistance from your family or a friend to cover expenses after a financial hardship?		
Over the past 12 months have you or your household <i>provided</i> any financial assistance to a friend or family member to cover expenses after a financial hardship?		
Do you have more than one source of income?		

Perception for future financial status

	5	4	3	2	1
Do you prefer doing government job?					
Do you prefer doing business rather than job?					
Did you opt for any business?(if you are a government employee)					
Did you faced any constraint doing business?(related to previous question)					
Did that constraint altered your motivation level? (connected to previous question)					
Do you have a behaviour of taking new initiatives in life?(related to income generating activities)					
Do you have defined plan to expand your income in future?					
Do you think the decision making should be decentralized in a household?					
Do you have decentralized decision making in your house?					
Do you think you are managing your financial requirements efficiently?					
Do you prefer to have your own house if you can afford?					

Do you have retirement plan?					
Do you think you will have sufficient amount at your retirement?					
Do you think you have enough saving?					
If you were to lose your main source of income (e.g. job, government benefits), could you cover your expenses for 3 months?					

(5 = Yes, 4 = May be Yes, 3 = don't Know, 2 = May be No, 1 = No)

Perception about relative financial status

	Better off	Same	Worse off
Compared to 12 months ago, would you say that you (and your family living with you) are better off, the same, or worse off financially?			
Think of your friends and social circle around you. Would you say you (and your family living with you) are better, the same, or worse off financially than they are?			
Think of rest of world. Would you say you (and your family living with you) are better, the same, or worse off financially than they are?			
Think of your parents when they were your age. Would you say you (and your family living with you) are better, the same, or worse off financially than they were?			
Think about the next generation of your family (e.g. your children, nieces, nephews, etc.). When they are your age, do you think that they will be better off, the same, or worse off financially than you are today?			
Think of strong financial status. Would you say you (and your family living with you) are better, the same, or worse off if you have strong financial status which may lack peace of mind?			
Think of living welfare oriented life. Would you say you (and your family living with you) are better, the same, or worse off if you have peaceful life rather than higher financial status?			

Altruistic behavior of respondent

Please answer the following question about your charity/ altruistic activities for the last 12 months.

A profile of reflection on altruism

		5	4	3	2	1
1	It is always peaceful to help others					
2	In kind help is better than in cash					
3	Helping others may shake their ego					
4	Donation play key role in welfare of society					
5	Practicing charity enhance your welfare level					
6	We can practice charity by offering gifts					
7	I consider it important to help the poor and the needy					
8	I often feel concern for people who are less fortunate materially than me					
9	I am often touched by what other people go through					
10	The world/ society/country demands responsible citizens					

(5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

Time use profile

	Base year 2007-08	Current year 2017-18
Sleeping hours (daily)		
Work time (daily)		
Leisure and pleasure (daily)		
Transport (daily)		
Time with parents (weekly)		
Visiting friends (weekly)		
Visit to hospital (weekly)		
Helping others (weekly)		
Time consumed in non-economic activities like cleaning (weekly)		

Analysis of general perception

	5	4	3	2	1
Giving is better than taking					
Most of people prefer to get their own benefit					
Time is an important source of wealth and happiness					
The size of our basket of good is going to be increased.					
It has become difficult to meet our needs					
In present economic situation, helping others has become difficult					
Life has become a luxury for us					
Our forefathers were happier than us.					
Our behavior is related to our expenditure					
Those who help other always lead a happy life					
Some people are habitual of weeping their economic distress.					
A desire to help others is a blessing					
Facilitating others in any respect gives satisfaction.					
People need to care about wellbeing of other as they care about themselves.					
Tragedies motive us to be kind to others.					
Being optimistic is a family trait.					
Respect can be earned by helping others					
Tax benefits help to promote charity					
People earn local prestige by giving more donations					
Facilitating others bring peace of mind					
Charity can improve community development					
Charity based development projects are good for economy					
Giving to charity organizations is not secure					

(5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

Charity taking household profile

		5	4	3	2	1
1	I prefer to work for my own welfare rather than that of others.					
2	Social safety net helps to improve condition of poor.					
3	The initial help in any form help individual to stand on his/her own feet.					
4	Prolonged dependence on charity is bad.					
5	To help others it's important that you (helper) don't need it first.					
6	Only those who have financial stability in their lives, help others.					
7	To avoid misuse of charity, monitoring is necessary.					
8	If someone helps you, you need to help someone else so that chain of help continue.					
9	Desire to help others is dominating in those who once receive it.					
10	Societies grow if people help each other without expecting reward.					

(5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

Inter-Generational Welfare Profile

Relation	Education	Employment	Tangible property (worth today)		Bank Account (yes / no)
			Land Holding Agri.land	House, building, plaza, shops	
Parents					
Father					
Mother					
Grand Parents (From father side)					
Grand father					
Grand mother					

3.1 Do you prefer donation anonymous?

1. Yes
2. No

3.2 The reason why you choose for your donation to appear anonymous?

1. I don't want to be recognized
2. I don't want any others to know I gave less
3. I don't want any others to know I gave more
4. I don't want any others to know my amount donation
5. Other reasons: ...

3.3 Please specify your charity performance in the last 12 months, in case of donation performance. In which form you usually donate:

1. Direct cash
2. Bank wire transfer
3. Text mobile phone message
4. Property or goods

3.4 How often you have given money to a charity?

1. Once in the past year
2. Once a month
3. Every 2 – 3 months
4. Once or twice a week

- 5. Every 2 – 3 weeks
- 3.5 explain which form of in kind donation you opt for in last 12 months?
 - 1. Household goods
 - 2. Used clothing
 - 3. Food
 - 4. Used furniture
 - 5. Medicines
 - 6. Book, journal
 - 7. Other
- 3.6 Which charity sectors did you choose to support? *Multiple responses*
 - 1. Medical
 - 2. Children and teenagers
 - 3. Hospital
 - 4. Religious
 - 5. Disables
 - 6. Environment Protection
 - 7. Education and Scholarship
 - 8. Disaster
 - 9. Others
- 3.7 Did you choose a particular charity organization to donate or volunteer?
 - 1. Yes (please give name:.....)
 - 2. No
- 3.8 Would you take require any financial assistance from government?
 - 1. Yes (suggest amount).....(monthly)
 - 2. no
- 3.9 Do you think Benazir income support program is giving sufficient among?
 - 1. yes
 - 2. No (suggest amount)..... (monthly)
- 3.10 Did you faced any severe health issue in last 12 months
 - 1. Yes (if yes, kindly give detail:.....)
 - 2. No

Thank you for your time.

Enumerator Detail

Name:.....
District:
District code:.....
Tehsil:.....
Tehsil code:
Household code:.....
Rural/ Urban:
Date:.....
Starting Time: **Ending Time:**.....

APPENDIX -II

District	Tehsil	Sample Size	
Bahawalpur	Bahawalpur	34	107
	Bahawalnagar	28	
	Rahim Yar Khan	45	
DG Khan	DG Khan	24	90
	Layyah	16	
	Muzaffargarh	34	
	Rajanpur	16	
Multan	Multan	48	121
	Khanewal	29	
	Lodhran	17	
	Vehari	27	
Faisalabad	Faisalabad	71	127
	Chiniot	13	
	Jhang	23	
	TT Singh	20	
Gujrawala	Gujrawala	41	145
	Gujrat	27	
	Hafizabad	11	
	Mandi Bahauddin	15	
	Narowal	17	
	Sialkot	34	
Lahore	Lahore	94	172
	Kasur	30	
	Nankana Sahib	15	
	Sheikhupura	33	
	Sahiwal	22	
Sahiwal	Sahiwal	22	69
	Pakpattan	19	
	Okara	28	
	Rawalpindi	50	
Rawalpindi	Rawalpindi	50	95
	Attock	18	
	Chakwal	15	
	Jhelum	12	
Sargodha	Sargodha	34	74
	Bhakkar	14	
	Khushab	12	
	Mianwali	14	
	Total	1000	1000