Complementary or Substitutes? The Relationship Between Monetary Donation and Volunteerism: A Case Study of Quaid-I-Azam University Islamabad

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Charitable organisations are always in a search of potential donors to donate money and volunteer time as well. For this purpose, they search for such potential donors who are willing to give time and money to help financially poor students. The previous literature has split into two aspects, whether monetary donation is a complement of volunteering time, or it is a substitute. The current study aims to clarify the relationship between the occurrence of monetary donation and time and to investigate whether certain demographic and some intrinsic factors variates with this relationship. Primary data has been collected from students of Quaid-i-Azam University Islamabad. For determining the relationship, a correlation test is applied which resulted in that occurrence of willingness to donate and volunteer is complementary (r=0.39). In addition, a multinomial logit is applied to ensure that a combination of gender, urban/rural, monthly income of the family, satisfaction level and religiosity trigger the complementarity between the occurrence of donation and volunteerism. If we tap such type of donors who are willing to give money and volunteer time, we can help many students who are suffering from financial hardship and are intended to leave their academic career incomplete.

Key words: *Education, Monetary donation, volunteerism, relationship*

1. Introduction:

Society in the developing world has two types of individuals i.e. rich and poor. There is an unequal distribution of resources in such a society. Rich people have more opportunities to have better health and educational facilities while poor people in the same society are more likely to be deprived of these facilities and get stuck in a vicious circle of poverty. (Thorbecke & Charumilind, 2002). Studying in higher educational institutions for a student from a poor background is a chance in which he/she could upgrade their economic and social life and family life as well (Tella, 2007). It is significantly different when their economic life is impacting their ability to achieve academic success. Without having sufficient economic resources to cover their dues and payments in higher learnings, the students experience a type of student's poverty (Browne, 2010). For the harmonious development of the society, it is the responsibility of every individual of society to contribute to the betterment of the poor segment.

Particularly, higher education institutions offer a very limited number of scholarships for poor students and most of them are left with no scholarship. It is very hard for poor students to survive in their academic career consequently, most of them leave their degree incomplete. To cover up this problem is to get rid of these obstacles such as scholarships and loanable funds which can be taken by the student for the time being. In this regard, QAU announces a variety of scholarships[1] i.e. QAU Alumni Scholarship, USAID Funded Merit & Need Based Scholarships, MORA Scholarship/District Zakat Committee's Scholarships, Pakistan Bait-ul-Mal Scholarship, Pakistan Bait-ul-Mal Scholarship, Punjab Education & Endowment Fund (PEEF), Baluchistan Endowment& Endowment Fund (BEEF), Professional Education Foundation/Edhi Foundation Karachi, KPK Chief Minister's Endowment Scholarship, District Zakat Committee's Scholarships and Other/Govt./Non-governmental Organisational & Donor Agencies/loanable schemes to help such students which are financially deprived. But there are very limited seats reserved and very limited funds and scholarships are available for poor students to avail. Most of the students don't have the access to these funds and they are left behind. These students are consequently excluded from university and have left their academic career incomplete.

The solution which is accessible and can be adopted is a kind of decentralised method i.e. philanthropic activities to help those financially poor students. This can be exercised as philanthropic contributions from willing individuals and distribute them among the needy students. This problem can be addressed by matching the donors and receivers of the financial aid. The donors who are willing to help will be informed where his/her donation is

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[1] https://qau.edu.pk/scholarship/

targeted. While the receiver will receive these donations with the platform of an organisation i.e. Roshni Trust[2].

Charities and trusts are mostly dependent on individual donors therefore, with these types of charities and trusts, the individual donor matters a lot. For efficient operation, they need both monetary donations and volunteer individuals as well. It is more preferable for them if the same individual gives both time and money to the organisation. Hence, they are always in search of such potential donors. The current study is also interested to find the relationship between donations and volunteerism and also to find the determinants which trigger this relationship.

2. Literature review:

The most debated literature in this context is to find the relationship between charitable giving and volunteerism, whether it is complementary or substitute. Most of the studies used the relationship between the amount of dollars (giving) and the hours of volunteering in fundraising activities.

A group of scholars believe that people have others regarding preferences are more likely to give time and money which lead to a conclusion that volunteering is a complement of monetary donations (Apinunmahakul, Barham, & Devlin, 2009; Brown & Lankford, 1992; Cappellari, Ghinetti, & Turati, 2011). All these studies examine the elasticities of giving gifts, labour volunteering and in addition, a tax price to explore the negative relationship between gift price and labour volunteering and factors affecting this behaviour which imply giving and volunteering activities are Marshallian complements. The models are constructed on the basis of a combination of public goods and consume privately frameworks concluding that they have the assumption of production of both public goods and individual happiness is the result of donating money and time are valid motivations.

However, the conventional economic theory has the assumption that giving and volunteering are the substitutes. Those people who have time will mostly donate time and those who have money will donate money (Meier, 2006). Here, in this case, time is a limited resource with an opportunity cost; people have different preferences, and they have to select one from both charitable giving and volunteering.

Jones (2006) has examined determinants of charitable giving and volunteerism separately. He also observed the most contributing factors which are mutually affected by donations and volunteering, suggesting that they distinct procedure to contributing charity and the relationship is possibly substitutes.

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[2]is a charitable trust for assisting the students of QAU and is run by Dr Anwar Shah, Assistant Professor, School of Economics. For more details about the trust visit www.brotherhood.org.pk

Furthermore, most of the scholars have assessed the relationship between donation and volunteerism in terms of the amount of dollars and time spent on volunteering activities. I will assess this relationship from a new angle in terms of occurrence of donations and volunteerism in the context of students. I will focus on the demographic features that charitable organisations determine the potential volunteers and donors rather than personal attitudes, behaviour, and individualities.

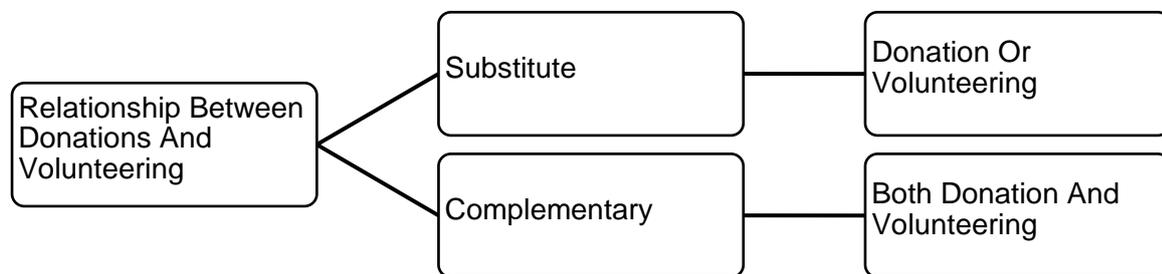## 3. Conceptual Framework and Hypothesis:

Figure 1: Conceptual Framework for the Current Study

The above figure 1 shows the conceptual framework of the current study. As we can see that there are two possible behaviours of individuals while giving time and money. For some people it is a substitute while for others it is complementary. If in case the behaviour is a substitute the individual has to give one of them and either he/she will donate money or volunteer time. On the other hand, if the individual behaviour is complementary, he/she will donate money as well as volunteer time.
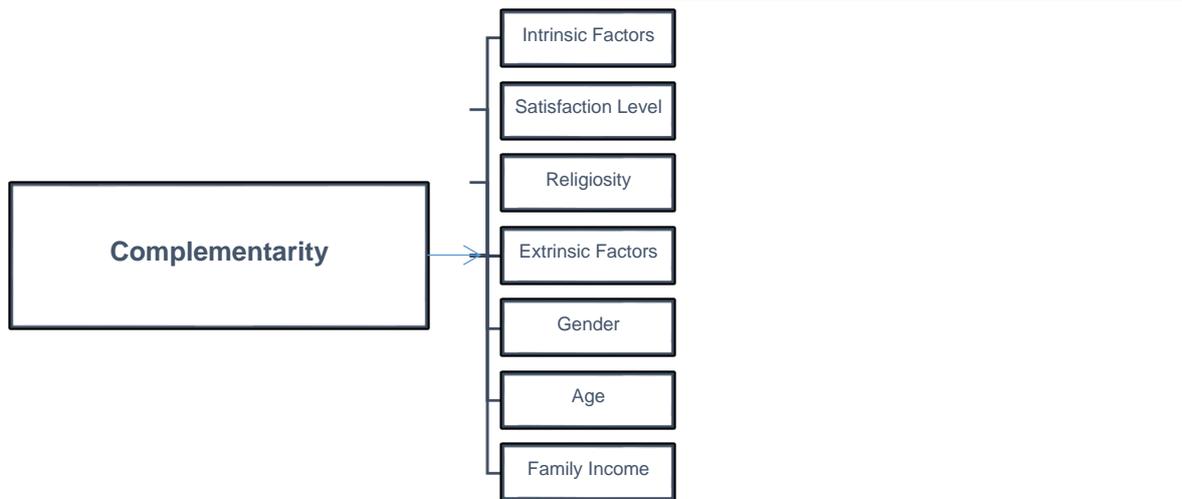
Figure 2: Determinants of Complementarity

In addition, the complementarity depends further on a few other factors which trigger this complementarity. There are two types of factors which affect the complementarity of an individual i.e., intrinsic, and extrinsic factors. In the current study, intrinsic factors are satisfaction level and religiosity while extrinsic factors are gender, age and family income. Refer to figure 2.

3.1 Hypothesis:

The current study has the following hypotheses:

H1: The relationship between occurrence of monetary donation and volunteerism is a substitute.

H2: Satisfaction level has no impact on complementarity.

H3: Religiosity has no impact on complementarity.

H4: Income of family has no impact on complementarity.

4. Data and Methodology:

4.1 Data collection:

The current study is based on primary data, and for this purpose a questionnaire is designed. For the detailed questionnaire, refer to appendix A. The unit of analysis is individual students. The data is collected from two departments of QAU. Convenient

sampling is carried out because these two departments were easily accessible. There are 277 observations in which 26 observations were not usable. 251 observations are used in the regression.

4.2 Survey Instruments:

The questionnaire used in the survey is retrieved from Schelegelmilch, *et al* (1997), Liwin and Pahu (2010), Liwin *et al* (2013) and Awaan and Hamid (2014) researches and modified for our required hypothesis. The first section of the questionnaire consists of demographic characteristics while the second section is about willingness and religiosity and the last section is about satisfaction level.

4.3 Data analysis:

To find the answer for the research objectives of the study, descriptive analyses and regression analyses of the data are used. For the descriptive analyses and sample, tests are used. The data set is analysed by first simple correlation to check the relationship of monetary donation and volunteerism and then multinomial regression is used to quantify the determinants. This method is preferred because our dependent variable is multinomial. Stata (econometric software) is used for the quantitative analysis of the data.

4.4. Dependent Variable:

4.4.1   Relationship between Donations and Volunteerism:

For finding the relationship between donations and volunteerism we applied a multinomial logit which will combine the two aforementioned variables "willingness to donate and willingness to volunteer" respectively. In order to investigate this relationship, we assume that one exists. This variable will be coded with 4 different responses. "0" for one did not donate or volunteer, "1" represent that volunteered but didn't donate, "2" for one donated but did not volunteer and "3" for both donated and volunteered. A multinomial regression will be run for this variable against the aforementioned variables.

4.5. Independent Variables:

4.5.1 Gender:

This is a binomial variable of the possible response, male and female. To get the response in numeric we coded "1" for male and "0" for female.

4.5.2 Age:

The first dependent variable was asked in number of years. It was asked in the demographic section of the questionnaire. I got not many different responses to this question. The reason is that the data set was collected from the students which had a negligible difference in their ages and which we assume to be insignificant in this study.

4.5.3 Income of the Family:

The study used income of the family as a proxy of personal income because we assume that student did not have personal income and family often donate out of the pooled household income. We have asked different questions to extract the family income variable. We asked about the income of the family as well as expenditure of the family to encounter the blindly filled questionnaire. We also asked the family status whether he/she is poor, average or rich. We have chosen the income's question to extract this variable. The question was constructed as *"what is your monthly income of the family?"* we have coded this question as "1" for whose income is from 30 thousand to 50 thousand, "2" for 51 thousand to 70 thousand and "3" for 71 thousand and above.

4.5.4 Satisfaction level:

 The last independent variable is a student's satisfaction level. This variable is again the average of four variables i.e. economic, educational, spiritual, and moral satisfaction. The question was constructed as "*On the scale of 1-5 how satisfied are you relative to your close friends from the below conditions (economic, educational, spiritual, and moral), where 1 means very dissatisfied and 5 means very satisfied?"*.

4.5.1   Average Religiosity:

The average religiosity is extracted from taking the average of different responses to different question and then rounding the figure in between 1 and 5. The questions are *("How do you rank yourself relative to your close friends on a religiosity scale from 1 to 5 where 1 means low level of religiosity and 5 means high level of religiosity?", "How often do you pray for your parents?", "How often do you pray for yourself?", "How often do you pray for Pakistan?")* We assume that if a person prays more, they will be more religious. The responses are coded from 1 up to 5. 1 means a minimum level of religiosity and 5 means a maximum level of religiosity.

5. Results:

5.1 Demographic overview of the sample:

We can see in table 1, a total of 277 respondents were given a questionnaire in which a total of 251 responses were extracted from the questionnaire to use for analysis. There were 47.4% female respondents while 52.6% were male respondents in the sample; the age of the respondents mostly lay between 19 and 23 which makes about 82.1% of the total sample, while less than 18 constituted 9.1% of the total sample. On the second number 36.6% of respondent's family income was in between 51 to 90 thousand per month and in last 23%, respondents were from a poor background family which made less than 51 thousand Rs per month.

Table 1 Descriptive Statistics of the Data:

Variables	Obs	Mean	St.dev	Min	Max
		Over all data			
Age	251	20.84	2.097261	17	34
Gender	251	0.525	.500326	0	1
Day Scholar	251	0.482	.5006768	0	1
Average family income	251	9604.02	6829.1	0	40000
Family Size	251	6.689	2.28539	3	18
Satisfaction level	251	3.657	.93922	1	5
Religiosity	251	2.880	.5381	2	5
Self-finance	251	.37450	.4849	0	1

5.2 Reliability Test:

To confirm the validity of the questionnaire, the Cronbach's Alpha has been checked. *The religiosity factors* (Cronbach's Alpha =0.6022), *self-satisfaction level regarding other friends* (Cronbach's Alpha =0.815). See Table 2.

Table 2: Reliability Statistics

Constructs	Cronbach's Alpha	No of items
Religiosity	0.605	8
Satisfaction Level	0.815	4

5.2. Correlation test:

A simple correlation test was conducted on the respondent's "occurrence of willingness to donate and willingness to volunteer" to clarify the relationship of donation and volunteerism of the students. The result of the analyses is highly correlated (r=0.39) (p<0.001) which means that a strong complementary relationship is found between the willingness to donate and the willingness to volunteer.

The correlation test which I ran supported the complementary relationship between donation and volunteerism, which matched with the findings of Apinunmahakul et al. (2009), Cappellari et al. (2011), Yao (2015). This support demonstrates that those who want to give to charity will donate both time and money to support a good cause.

In the last section, a model is constructed to investigate the potential relationship between the independent variables and the outcome variable i.e.a willingness to monetary donation and volunteerism. The study used a multinomial logit regression with the dependent variable "*donatevolunteer*" which had the possible outcomes of "0" for neither volunteer nor donate, "1" for volunteer but not donate, "2" for donate but not volunteer and "3" donate and volunteer both, which is based on 2 by 2 occurrence of volunteering and donating. We had the numerical assessment from the least contribution to the most contribution, specifically based on my own judgment.

5.3 Results:

Gender, family income of students, satisfaction level and religiosity were shown to have a significant impact on the complementarity between willingness to donate and volunteer on some aspects are 0.05 level of significance, which refers to table 3 for the multinomial logit regression.

Particularly, the relative probability for both willingness to volunteer over willingness to donate and volunteer are 85% for male as compared to female (p<0.5).

The average monthly income of the student's family also demonstrated a positive contribution to the complementarity of willingness to donate and volunteer as the relative probability of the only volunteer was 89% higher (p<0.067) for the higher income level; on the other hand relative probability for only donating was 50% higher (p<0.01) for the relatively higher income level, while assessing the complementarity of both donating and volunteering was 80% higher (p<0.001) for those students who belong to the relatively high-income background.

The family home (urban/rural) only affected the relative probability over nothing. As a rural area's students were more likely to volunteer over nothing than urban areas (p<0.025).

The satisfaction level also affected the complementarity between a student's donation and volunteerism. The relative probability of both donation and volunteerism was for relatively high satisfied students were just 35% higher than the less satisfied students on average (p<0.067).

Religiosity significantly affected the complementarity of student's willingness to donate and volunteer. The relative probability of both donation and volunteerism over just donating was 64% higher (p< 0.064) for relatively more religious students.

Table 3: Result of Multinomial Logit:

Independent Variables	Volunteer (1)	Donate (2)	Both (3)
Gender	0.816	0.232	0.85**
	(0.78)	(0.32)	(0.37)
Age	-0.114	0.026	0.067
	(0.19)	(0.075)	(0.081)
Day scholar	0.688	0.47	0.545
	(0.72)	(0.32)	(0.36)
Family home inurban/rural	1.401**	0.172	0.136
	(0.62)	(0.32)	(0.36)
Monthly income of family	0.891*	0.500***	0.800***
	(0.48)	(0.20)	(0.240)
Satisfaction level	0.256	0.267	0.353*
	(0.36)	(0.16)	(0.19)
Religiosity	-22.6	-0.070	0.643*
	(0.64)	(0.30)	(0.34)

Source: Authors own calculations standard errors are in parentheses, whereas, ***, **, * indicates significance level of marginal effects at 1%, 5% & 10% level of significance, respectively.

6. Conclusion and Discussion:

Most studies have conducted for American and European countries on factors of donation and volunteerism, but a student's behaviours were not tested in this regard. This study analysed the student's behaviours in the context of donations and volunteerism. This study provides some key factors for individual students affecting their behaviour of monetary giving and volunteerism. There were 251 respondents involved in this survey from using convenient sampling. The study can be generalised in a sense that Quaid-I-Azam University, Islamabad attracts the students from all regions of the country and is known as a Mini-

Pakistan. The study explores the nature of the giving whether it is complementary or substitutes.

The main finding of the study is very important and consistent to previous literature that willingness to monetary donations and volunteerism is complementary to each other. The individual students will give both time and money, not only time and not just money. Hence to help more students the charitable organisation has to find such students who are very passionate about the cause. This result is matched with the previous literature [(Apinunmahakul et al., 2009; Brown & Lankford, 1992; Cappellari, 2011)]. In addition, there are some factors which trigger this complementary behaviour of the students. The most important extrinsic factors are gender, the family income of the student which is highly significant and plays a vital role in complementarity; intrinsic factors are satisfaction level and religiosity which play a role in this behaviour.

6.1 Limitation and policy implication:

The limitation of the study is that the data is collected from only two departments because of time constraint. One can take a large sample to get a better understanding and results. Another limitation is that we have calculated the relationship through occurrence of monetary donation and volunteerism; one can elaborate further by converting time into a money unit to get more accurate results.

Policy implications are that the government needs to focus on this serious issue on a macro level to help those students who are facing financial problems. Another major policy is for the charitable organisation to tap these determinants to find potential donors and volunteers to contribute to this cause.

Appendix A:

Giving and Wellbeing:
Helping Students through Students

Assalam-o-Alaikum,

You might be aware that lack of financial resources is one of the main hurdles in getting higher education for students of QAU. Roshni Trust, which is a registered charitable trust for students of QAU, aims to remove this hurdle by linking those who are willing to help with those who are seeking help in your department under the slogan of "**Helping Students Through Students**" Since, 2014, Roshni Trust has helped more than 100 students. For further details, feel free to contact me via email or phone.

Wass'alam,

Yasir Jehan,   MPhil Scholar, Economics (yasikhan09@gmail.com 0332 733 3556)

Class   : BS   /MSc   /MPhil   /PhD
Gender: M / F   **Age:_____**

Monthly expenditure of family	Below 30k	30k-50k	50k-70k	70k-90k	90k-110k	110k-130k	More than130k
Average monthly income of family	Below 30k	30k-50k	50k-70k	70k-90k	90k-110k	110k-130k	More than130k

Q1. What is the frequency of your financial support from your family /friends?

Very Regular   1ÿ   2ÿ   3ÿ   4ÿ   5ÿ Very irregular

Q2. How many of your close friends are facing financial problems:

None/a few/some/almost all

Q3. I am willing to help those students of QAU who are facing financial problems?

YES/ NO

In case of **YES** how much do you want to donate per semester: Rs /1000/2000/5000/ other (plz write)…………….

In case of **NO** please tick one: I am poor myself/I am already helping someone/I do not want to help any.

Q3.a: Do you want to donate time for the collection of funds? **YES/NO**

Please give us details for collecting your donations or donating your time.

NAME…………………………………………..Email/Phone………………

Q4. I am facing financial problem myself and would like support from Roshni Trust.

YES/NO

In case of **YES**, Please give your details:

Name: ………………………………………………………

Email:……………………………………Contact   No.(Optional):
……………………………….…

Q5.On the scale of 1-5 how much satisfy you are **relative to your close friends** from below conditions, where 1 means very dissatisfied and 5 means very satisfied. (Just write number)

A	Educational condition		C	Spiritual condition	
B	Economic condition		D	Moral condition	

Q6.How do you rank yourself **relative to your close friends** on a religiosity scale from 1 to 5 where 1 means low level of religiosity and 5 means high level of religiosity?................? .(just write number)

6.a You are known in family as	**1**. A strong practicing Muslim **2.** An average Practicing Muslim **3**. Somehow Practicing Muslim **4**. A weak practicing Muslim
6.b You are known in friends as	**1**. A strong practicing Muslim **2.** An average Practicing Muslim **3**. Somehow Practicing Muslim **4**. A weak practicing Muslim

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