

Study of Philanthropic Behaviour in Divine Economics Framework

SYED NISAR HUSSAIN HAMDANI, EATZAZ AHMAD, and MAHMOOD KHALID

1. INTRODUCTION

Unfortunately, religious behaviour has been viewed by economists in terms of “Islamic economics,” “Christian economics”, etc. [Iannaccone (1986)]. Hence there has been a dichotomy prevailing between religious economic frameworks and the conventional rational choice theory.¹ Whereas the conventional economists tried a variety of models to estimate the relationship between wages and time allocated to market labour supply but found that results mostly do not speak of the real world situation [Deaton (1980)]. The underlying reason was supposed to be faith and values which have strong effect on labour supply decisions [Pencavel (1986)]. The philanthropic behaviour relates to labour supply decisions directly through time allocated to voluntary services or indirectly through time allocated for earning and then donations out of these. It is observed that the variables of economic importance especially those relating to household resource allocation or labour supply decisions seem to be present in religious affiliation of individuals, their values and their perceptions about life before and after death as believed by the followers of divine religions which account for about two thirds of the world population.

1.2. Need of the Study

Everyday, we hear of poverty, illiteracy and diseases. The world population continues to grow at a rate that exceeds resources and infrastructure. Governments of developing countries are unable to fulfil the basic needs of masses. Since all the three divine religions lay emphasis on kindness, benevolence, and caring for others, philanthropy appears to be a great tradition among the followers of these religions.

Syed Nisar Hussain Hamdani is Professor of Economics at the University of Azad Jammu and Kashmir. Eatzaz Ahmad is Professor and Chairman, Department of Economics, Quaid-i-Azam University, Islamabad. Mahmood Khalid is an Officer at the State Bank of Pakistan, Islamabad.

¹ Iannaccone (1992, 1996).

Due to this, they usually allocate their time and resources for others well being as well. It points to some systematic difference in allocation of resources of persons with more religious orientation (such as true Muslim and true Jews, Budhs and Christians) as compared to those with less religious interest. People with Philanthropic attitudes exist in every society, but those who follow any Divine religion have more frequency towards that behaviour. Therefore to study such differences we need to see it in a comprehensive framework (not necessarily classified as a religious framework), which holds the micro foundations for micro as well as macro decisions such as resource allocation. For example labour supply decisions, Philanthropic behaviour, bequest, investment on children etc. In an earlier study, using the Divine Economic Framework [Hamdani (2004)], the author identifies some researchable issues that are neglected by the conventional economists at large. For example; Why (and of what type of) people allocate more resources for divine causes in the form of charity and voluntary work? how do these amounts vary across different groups? Do individuals and organisations actually consider the trade-off between time and money when they “produce” religious activities, services and/or commodities? Do the producers of different types of religious commodities finance their activities in systematically different ways?

In addition to these, another aspect that needs to be explored is that what type of organisations that are involved in philanthropic fundraising may receive more donations as compared to their counterparts? Does religiosity play any role in this regard? Discussing the motives to donate, the APPC [Asia Pacific Philanthropy Consortium (2002)] notes that “People do not give money to cause; they give to *people* with causes”. Further it also observes that, “while individual in each of the seven countries studied (of Asia) may differ in their motivation to give others, they share the need for a sense of connection which takes a personal form—knowing the organisation’s founder, trustees or staff; believing in the personal integrity of key organisational leaders.” The study in hand partly deals with these questions.

The ever increasing importance of divine religion in general and Islam in particular, requires from economists to analyse the mutual effects of religion and economics on each other. This would help understanding the actual consumer behaviour and make the subject of economics a more pragmatic discipline than merely a theoretic discourse. The following few pages are devoted to provide some provocative content towards this direction.

The paper is organised as follows: The next section presents a review of previous studies on the subject. It may be noted that this paper is confined to present the outline of an approach for studying philanthropic behaviour rather than testing any specific hypothesis. However, to see how far the new framework can capture the effects of the variables modeled in the divine economics framework, some empirical results are also discussed in Section 3. Section 4 presents concluding remarks.

2. ECONOMICS AND THE ECONOMICS OF RELIGION

There is a growing concern among economists to study economics that deals with the real-man who may have some religious or philanthropic motives for an economic activity instead of just conventional economic decision-making [Lancaster (1966); Becker (1976); Pencavel (1986)]. However, as Hamdani (2003b) states, “there seems to be a dichotomy between conventional economics and economics of religion including Islamic economics despite the fact that economics of religion can go hand in hand with rational choice theory or even ahead of it. Particularly, Islamic economics has great potential to serve as a rational theory rather than merely a theological interpretation as presently understood by the West. The basis of this claim is that the Islamic economics is based on divine revelations, hence is more capable of satisfying any ‘rationality’ criteria. However, there is a need to remove the dichotomy between the two alternative disciplines by using the framework and language that both can understand”. The study further notes that, “Economics of religion is gaining recognition day by day due to a strong relationship of religiosity with individual’s decision making. Yet a little work seems to be available on empirical aspects of economic behaviour (earning differentials such as Jews in America earn more than their counterparts; rates of saving, occupational choice, and levels of education under alternative religiosity conditions of individuals. Some apparently social behaviours, which do have strong economic impacts such as fertility, divorce, criminal activity, and drug use etc. have also been found to be significantly affected by religious orientation of the individuals” [For discussions in similar direction see Anderson (1988); Greeley (1991); and Iannaccone (1986, 1990)].²

It is also observed, for example, in the U.S. that philanthropic contributions to churches make up substantial part of the total givings in the U.S. indicating that people show reasonable concern to growth of institutions like churches or other religiously-based institutions. In Asia too, according to APPC (2002) the amounts donated to charitable causes are substantial. In Thailand, Philippines, and Indonesia, for example, the average amount givings per capita in terms of purchasing power parity (PPP) was equivalent to US\$1610, \$1385 and \$538, respectively. In Indonesia, more than 5000 small enterprises were developed through obligatory charity (*Zakat*) during 1980-84.³ Empirical evidence suggests that giving in various other forms prescribed in Islam like *Khums*, *Waqf*, *Sadaqah*, *Kuffarah*, *Nazar*, *Fitrah* etc. constitutes a notable part of resource allocation for poverty alleviation and other developmental activities. Distribution mechanism of these givings in Islam is such that it can ensure human uplift even in the remotest areas of any economy [see for example, Ariff (1991)].

²Especially, Iannoccone has contributed many studies in this direction.

³Ariff (1991), p. 72.

Studies are available that discuss religious behaviours as a function of expected “afterlife consumption”. Azzi and Ehrenberg’s (1975) model of religious participation observed that individuals’ average charity rates, voluntary activities and religious attendance vary over the life cycle depending on ages of individuals. Their time allocation to religion or economic activities is not always in any fixed fraction but varies with many factors (yet needed to be identified by economists). Many surveys indicate that people with high values of time contribute more “money” rather than own time for their religious satisfaction. Furthermore, higher philanthropic contributions are also found to be correlated with higher income [see for example NSGVP (2000)]. Iannaccone (1992) finds that richer congregations opt for time-saving, money-intensive practices: shorter services, more costly religious facilities, less reliance on own volunteered labour, and more reliance on purchased goods and services. Economic theory has not yet considered these facts as a subject of economics, but according to Iannaccone (1992), “the facts themselves refute the outdated notion that religion is *unimportant* and therefore *uninteresting*. Religion remains a force in personal, institutional, and political life of most people throughout the world”.

A recent literature survey in Hamdani (2004) shows that economics of religion is not a long aged subject. It began with household production model of church attendance and contributions by Azzi and Ehrenberg (1975). They modeled that individuals allocate their resources so as to maximise their overall utility derived from religious and secular commodities. Some work may be found with less clarity, why people perform religious activities or why they do other daily activities in a religious consciousness (religiosity). However, Azzi and Ehrenberg clearly emphasised the *hope of afterlife consumption* as the motive for religious behaviour. Iannaccone (1990) extended Azzi and Ehrenberg’s model to incorporate the accumulation of religious human capital. The extended model explains age-increasing patterns of religious participation as a consequence of experience effects and rational habit formation. The studies also found strong empirical ground for socio economic interrelationships among denominational mobility, religious intermarriage, and conversion ages. Greeley and Durkin (1991) modeled “faith” as a type of human capital. This model views religious choice as the consequence of expected utility maximisation.

Iannaccone (1988) views that household production approach provides a convenient starting point for the study of religious behaviour. The emphasis on the role of religious groups, clubs, sects, and specialised firms in the production of religious commodities (activities) has increased gradually in the literature. It was noted that religiously active members act as both producers and consumers of religious commodities, which are usually found to have collective benefits such as allocating money and time in charity and volunteering. He further notes that the concept of input substitution also applies to production of religious commodities

which require both time and money inputs. Hence there emerges a competition between production of religious and other household or commercial commodities. This signifies the study of economic decision making under different religious backgrounds. Iannaccone's pioneering study on the subject shows that ratio of these inputs is variable and the 'efficient method of production' will depend on the monetary value of the household's time. Higher the value of time, the more likely it is that the household will substitute time-saving, money-intensive forms of production for money-saving, time-intensive forms. He also empirically observes that the individual's time allocation behaviour seems to be affected by religious human capital, that is, person's accumulated stock of religious knowledge, affection, skills, experiences, and sensitivities.

2.1. Philanthropic Giving and Voluntary Work in Divine Religions

Caring for others is a value prevalent among every human being from the beginning of life. History reveals existence of people at all times, belonging to different religions, sects, colour and places, who had been helping others at the times of need. Religions in general and Islam in particular lay much emphasis on charity and altruistic behaviour. Charity means any type of benefit whether economic, spiritual, moral or consolatory, given to others. Charity is not only confined to giving out material things to the needy, but in Islam, every act of goodness is charity (Qur'an 8:2). It also includes voluntary services, good advice, solace and healing touch of hand or even a smile (Qur'an 8:3). It is so practical, regular and organised in Islam that it is included in the five pillars of Islam as *Zakat* (Qur'an 3:92). Nadavi (1994, p. 352) rightly says, "Spending for others has been made a worship as offering prayers". Besides *Zakat* (the compulsory charity), optional charity includes; *Infaq* (spending benevolently), *Ihsan* (doing good) and *Sadaqa* (charitable deed) such as establishing of schools, hospitals, orphanage, mosque, water point or writing a book that guides people to straight path and so on [see Islamic Scholar (2002) and Alim (2002)]. Qur'an indicates a number of occasions where charity is desirable and teaches different methods by which one should help others while maintaining human dignity.⁴ A large number of traditions of the Holy Prophet (SAWA) also highlight the value of charity and voluntary work for both this life and the afterlife.

'What is credited to a believer of his actions and good deeds after his death is any useful knowledge he might have taught or spread, a God-fearing child he might have left behind, a copy of the Qur'an he might have left to a heir, a mosque he might have built, a house he might have dedicated to use by

⁴Some of the verses of the Holy Qur'an concerning charitable acts include: [2:43](#), [2:110](#), [2:177](#), [2:262-264](#), [2:271-274](#), [2:277](#), [3:92](#), [3:134](#), [4:39](#), [5:12](#), [5:55](#), [9:5](#), [9:18](#), [9:60](#), [9:71](#), [9:121](#), [21:73](#), [22:41](#), [22:78](#), [24:37](#), [27:3](#), [30:38-39](#), [31:4](#), [36:47](#), [41:7](#), [47:36-38](#), [51:19](#), [52:40](#), [57:7](#), [57:10-12](#), [63:10](#), [64:16-17](#), [73:20](#), [76:8](#), [92:18](#), [98:5](#), [107:7](#).

travelers, a stream he might have caused to run, a donation to charity he might have set aside when he was enjoying good health. All that catches up with him after his death'. (Ibn-e-Majah).

The Muslim is educated to believe that charity increases, rather than decreases, the over all personal benefits. *"The parable of those who spend their property in the way of Allah (SWT) is as the parable of a grain growing seven ears with a hundred grains in each ear. And Allah (SWT) multiplies for whom He pleases"* (Qur'an 2:261).

Qur'an further says (57.18): *"For those, men and women, who give in charity and loan to Allah, a Beautiful Loan, it shall be increased manifold (to their credit) and they shall have (besides) a liberal reward"*.

About volunteering, Sakr [in Islamic Scholar (2002)] mentions: "Volunteering is the lifeblood of any community. It is because of volunteers that communities are able to run organisations, social services, conferences, playgroups, drop-in centres, feed the hungry, shelter the homeless, open libraries, run schools, set up blood banks, and the list goes on. Paid employees only make up a small part of the social services network; without volunteers such endeavours would come to a standstill". It does not suffice for a Muslim to be good in worship, consume Islamically lawful goods and services, give charity, and take care of self as prescribed by Allah, but he/she is also required to allocate time for working voluntarily to improve the conditions of communities around and make the world a better place. A number of verses in the Holy Qur'an relate to this behaviour.

The other two divine religions have also strong tradition of philanthropy. For financial givings, Christians often use the term "stewardship". Similarly, Jews use "tzedakah" to refer to "acts of charity" which include charitable giving. Sometimes, the word Service is used for "contribution to the welfare of others or doing something voluntarily for someone else without expectation of receiving something in return. The word voluntarism literally means "...the voluntary participation (acting of one's own accord) in a certain action, or a system based on this." (*Webster's Dictionary*).

However, the concept of charity, especially the attitude toward poverty, changes with Judaism which emphasises *tzedakah*, or almsgiving as not only the obligation of the wealthy "giving to the poor", but also establishes the right of the poor to receive it. So Jewish charity is more of a duty than a voluntary action by the privileged ones. They consider poor as equally virtuous as the rich and their philanthropic behaviour is same to all those in need whether within community or strangers.

Helping those in need and self-sacrifice for the greater good is a key theme of the Christ's teachings. However, Christians believe that fulfilling the needs of the poor is the responsibility of the entire community, not just the wealthy.

Voluntarism, altruism, charity and philanthropy are sometimes equated with social work, social welfare and social justice or even a situation that describes the

organised system of social services and institutions that have been designed to provide assistance to the needy.

2.2. Islamic Economics and Philanthropic Behaviour Analysis

Despite the fact that Qur'anic approach to economic behaviour is very different then that of the conventional economics, yet Islamic economics did not present any formal model of labour supply, time allocation and philanthropic behaviour till recently. However the starting point of the present work i.e. 'the concept of two lives...life here and life hereafter', has been widely discussed in many earlier studies [Zaman (1991); Naqvi (1981); Nadavi (1994); Ahmad (1980)]. Under Islamic thinking, life on earth is only one (small) part of the whole life.⁵ An un-ending life starts after death.⁶ As earlier divine religions, Islam maintains that in afterlife, people will be held accountable for their decisions and deeds performed during the life on earth; there, they will be given reward (may be called highest utility) or punishment (severe dis-utility) depending on how they acquired and used the resources during life on earth.⁷ Such belief structure help in developing an economic behaviour different from that known in conventional books on economics, pointing out that Islamic normative is different from conventional normative economics. This claim can be verified from the Qur'anic context of spiritual and material endeavours, purpose and status of man on earth, concept of ownership in Islam and distribution of income etc. Especially, the existence of givings in shape of *zakat*, *khums*, *sadaqah*, *waqf*, *nazr*, etc. indicates the Islamic normative, that is quite different from its counterpart. Despite a bulk of studies recognising this type of difference in conventional and Islamic economics, very little work seems to be available on philanthropy that has a recognisable place in Islamic consumer behaviour. As pointed out in Hamdani (2002);

“Muslim economists mostly see themselves as investigating things in aggregate context of the Islamic tradition and their research has mostly been confined to theory, with little attempts to verifying the theory with the real data. Furthermore no significant work is found on the impact of Islamic traditions, rituals and practices on economic behaviour of individuals.

Although not supported with empirical work, Khan (1992) highlights the significance of Islamic consumer theory and its empirical relevance as follows: “In countries which have Muslim and Non-Muslim communities like Malaysia and

⁵The Qur'an 3:14-15 9:25, 9:38, 846, 22:56, 28:60, 21:64, 43:35, 18:16-17.

⁶The concept of two lives, in fact is like two phases. The first phase is transitional which begins with the present life on this earth. All of its material conveniences and pleasures will come to an end on an appointed day. From here starts the second phase, the life hereafter which is eternal and endless in terms of life and its pleasure and possessions. This concept of two lives is important to understand in order to explore economic teachings of the Qur'an [Nadavi (1994), p. 19].

⁷For detailed discussion on this subject, [see Muntaziri (1987); Chapra (2000); Maudoodi (1978); Naqvi (1981); Nasr (2001); Nehjul Bilaghaha (1974); Qazilbash (1993); Tabataba (1999) and Yousfi (1957)].

Indonesia, we can take comparable groups, one of Muslim community and the other a Non-Muslim community and do a comparative study of consumer behaviour in the communities to determine the extent to which the religion of Islam has affected; (i) propensity to consume/save, (ii) sharing income with others, (iii) composition of consumption basket, and (iv) equity/inequality of distribution of consumption in the community etc. These findings can go a long way in developing a theory of consumer behaviour in Islamic perspective". (p. 181). We have yet to see any such empirical effort from Islamic economists to which Khan directed long ago. This neglect shows lack of interest of most Muslim economists towards studying important behavioural phenomena, which might be, expected to bring out valuable findings and insights for theoretical and material development in the Muslim societies in Islamic economic perspective.⁸

3. PROGRESS OF RESEARCH IN DIVINE ECONOMICS

The framework of Divine Economics emerged from the faith-based formulation of consumer behaviour first presented in Hamdani (2002). Based on the formulation, Hamdani and Ahmad (2002) presented a number of economic propositions including those concerning with philanthropic behaviour that are testable with consumer behaviour data of societies living under any of the divine religions. It was advanced further in Hamdani and Ahmad (2002b and 2002c).^{9,10} The former discusses economic behaviour including philanthropy in human resource management perspective and explains that those individuals are better human resources for any organisation whose daily time allocation pattern displays, among other economic activities, due share of charity and voluntary work. The later discusses time allocation behaviour of individuals having varying levels of religious orientation (called religiosity). One may find some other recent publication in the same direction such as Hamdani (2003a) that deals with charity, poverty and religion interrelationships, and Hamdani (2003b) that elaborate some of the above-mentioned studies.

⁸The available work of most of Muslim economists is said to be subject to sectarian bias. About Qur'an and Muhammad (SAWA), they could verify and realise the facts in a manner as described in only Sunnite/Ahle Hadith literature, as they mostly quote the opinions of Abu Yousaf, Imam Taimia, Shatibi, Ibne Khuldoon, Ghazali, Shah Waliullah etc., and ignored the interpretations of economic principles by the Imams in progeny of the Holy Prophet upon which salutation is made essential in everyday prayers, also called the Imams from Ahle Bayt, among others Ali (AS), Imam Baqar (AS), Imam Jaffer Sadiq (AS) and Imam Reza (AS) who have unraveled the secrets of Islamic economic system in the light of the teachings of the Holy Prophet (SAWA). Similarly they ignore even great Shiite philosophers like Baqir-al-Sadr. Whereas the goal to achieve true knowledge of divine economics can hardly be achieved ignoring these valuable sources of knowledge regardless of their sectarian affiliation.

⁹Paper presented at Asia and Southeast Asia Econometric Society Meeting, December 2002, Lahore University of Management Sciences, Lahore.

¹⁰"Optimising Human Resources in Islamic Management", paper presented at 2nd Congress on Islamic Management, IA University Tehran, May 2002.

All these studies attempted to establish, that there exists a “divine economics” that needs to be discovered to represent the rationality conditions on one hand and the divine religions on the other. These studies tried to develop alternative approach to analyse the consumer behaviour, such as allocation of time and financial resources under varying religiosity considerations yet in a rational choice framework. The studies highlighted the role of religious beliefs and practices in economic decisions making process.

3.1. The Economic Rationality of Personal Philanthropy

As AKDN (2000) notes, “... the place of philanthropy within contemporary, industrialising societies gives rise to overlapping as well as contradictory understanding of ‘philanthropy’ and its associated terms. It is understood in many ways: as ‘goodwill to fellowmen; especially active effort to promote human welfare’¹¹, as ‘voluntary action for the public good’, ‘Voluntary acts of compassion and acts of community’ etc. In another definition it can be stated as, “The goal of philanthropic activity is to make things better for others, and consequently, oneself. So far as this is true, the philanthropic sector can be described as a greenhouse in which altruistic activity is cultivated”. Where altruism is defined as ‘behaviour directed towards the benefit of others at some cost to the self where no extrinsic or intrinsic benefit is the primary intent of the behaviour’ [quoted in Ariff (1991), p. 8]. Philanthropy is a value without which, many researchers believe, societies cannot grow, prosper and survive.¹² Sometimes, it is distinguished from ‘charity’ which is said to be a short term or an immediate relief as compared to philanthropy that is sort of social investment for long term initiative towards building human and social capital.¹³

There are many economic implications and many socio-economic benefits e.g. of philanthropy such as the redistribution of wealth so that everybody can become more prosperous and the quality of life can be improved for all, both rich and poor. It minimises the evils of accumulation of wealth in few hands and enables the deprived people to sustain life through availability of funds thus spared. It enables the communities to have access to such public goods or opportunities of life which could not be provided by governments due to their resource constraints. In terms of a public good, a striking feature of Islamic charity is that it is not subject to the free-riders problem. Because inversely, Islam promises increasing reward for a charitable public good if more number of people can benefit from it [Akhtar (1995)].

¹¹Merriam Webster’s Collegiate Dictionary.

¹²Altruism is characterised by activity motivated by the interests of others, or due to self-interest. However, according to some economists, that activity motivated by altruism may actually be a hindrance to markets, because it introduces inefficiencies.

¹³ For details on meanings of philanthropy, [see AKDN (2000), p. 2].

Schwartz (1970) defines “a philanthropic transfer of wealth to be a voluntarily generated, one-way flow of resources from a donor to a donee; the flow is one-way in the sense that it is based upon no donor expectation that an economic quid pro quo (in the usual sense of that term) will reward his act”.

The economic rationality behind the philanthropic acts is their characteristic that each act gives some utility to the individual; otherwise it would not have been undertaken. The underlying assumption is that individuals’ utility functions are interrelated and are not disjoint.

Schwartz (1970) attempts to integrate personal philanthropic activity into traditional utility theory, and to determine the effects income and price have on tax-deductible giving. In his words, “we recognise that charitable contributions might be an expression of truly philanthropic sentiments; on the other hand, a donor might be more interested in the goodwill, a charitable act can gain for himself than in the benefits it might bring to others. Recognition of charity’s philanthropic orientation suggests several insights into consumer theory. Economic man is no longer recognised as living in social isolation, where (as traditional presentation of utility theory might suggest) income allocation decisions are made with reference to solely personal needs and wants”. According to Schwartz (1970), if preferences of individual A and B are interrelated, these can be expressed as under;

$$U^A = U^A(C^A, C^B, \dots)$$

$$U^B = U^B(C^B),$$

Where U^A and U^B are, respectively, A’s and B’s utility, and where C^A and C^B are goods consumed by these individuals. If price for giving is assumed to be one, then in a two person’s economy B’s consumption can be derived as:

$$C^B = (Y^A + Y^B) - C^A$$

Where Y^A is A’s income before donations, and Y^B is B’s income net of donations. In the two-person model, D^{AB} , A’s donation to B thus appears as

$$D^{AB} = Y^A - C^A = C^B - Y^B \text{ and } D^{AB} \geq 0$$

The equations above [Schwartz (1970)], indicate that A has a philanthropic attitude towards B and A’s utility is not isolated from B’s welfare as it also includes a term C^B . It is obvious from this interpretation, that A enjoys a greater level of satisfaction when B is better off, therefore, A being rational consumer would enhance B’s welfare via a philanthropic allocation of resources in order to maximise his own utility. A latest interpretation of philanthropy as a rational economic act emerges from the recently developed framework ‘Divine Economics’ [see Hamdani (2002, 2004)]. Under this framework, Hamdani and Ahmad (2002) put forward a

proposition based on the idea that each market agent under any divine religion is rational and attempts to serve his/her self-interest as follows:

“Among religious people, others’ welfare is an argument in their own utility function. Hence other things constant, less religious person will serve his/her self-interest in each market in less altruistic manner and a more religious person will serve his/her self-interest in each market in a less selfish manner”.

Since the Divine economics is an outcome of faith-based formulation of consumer behaviour, under this framework, the problem of consumer is to choose the amounts of time (scarce resource) to maximise satisfaction from accomplishment of goals related to both body and soul, subject to current asset and total time endowment (24 hours per day). With this formulation of economic problem, it becomes easier to study different economic and even apparently non-economic behaviours of individual within the domain of economics.

The individual under divine economics framework believes in two lives, life here and life hereafter, his resource allocation pattern is assumed to display this belief. For example, he is likely to allocate (a) some time for ‘self’ in order to derive utility from leisure and money income, (b) some time to voluntarism to serve ‘others’ in order to earn good will of God.¹⁴

To model the behaviour of consumer who is maximising her lifetime utility through allocation of scarce time (24 hours a day), the faith-based formulation requires a new definition of the life-cycle or the planning horizon consumer faces. Hamdani (2003a) states;

“Belief in an afterlife gives rise to an entirely different perception about planning horizon of a consumer i.e. the consumer considers that the life on earth is not the full life cycle but she also includes life after death in the cycle. Hence the lifetime utility becomes sum of utilities of life on earth and expected utility during the period after death.”¹⁵ The economic outcome of such type of human perception has yet received little attention from economists. Obviously, the belief in life after death may give rise to a different resource allocation behaviour of consumer”.

3.2. Implications

The new definition of the life cycle that covers two distinct lives has several implications:

- (1) The perception that there will be an afterlife where one is accountable for his/her deeds performed during the first phase of the life cycle i.e. life on earth, will alter the entire resource allocation pattern of individuals.

¹⁴It is so done because they believe that God has promised to give back manifolds (eternal) utility in the life hereafter and in this world too.

¹⁵This period is divided into three distinguished parts having some typical effect on the individual’s decisions during his life on earth; (1) from death to day of judgment called ‘Barzakh’ or purgatory, and (2) the Day of Judgment, and (3) from day of judgment to infinity.

- (2) The preaching's of the Holy Bible or the Holy Qur'an shall not go unnoticed by the followers. They are likely to display a different behaviour with and without the religious injunctions such as:

““And be steadfast in your prayer and pay charity; whatever good you send forth for your future, you shall find it with Allah, for Allah is well aware of what you do.” (Qur'an 2:110).

The individual of faith-based model is rational that she chooses activities or commodities (good or bad) which maximise her total satisfaction in perspective of life here and life hereafter from alternative use of available time (24 hours per day) and other economic constraints. Regardless of what religion she follows, she is expected to possess some religious and normative particularities.¹⁶ This is required by faith to succeed in the current life or at least in life hereafter. Therefore, she is likely to display a behaviour systematically different from conventionally assumed individual. For example, she likely substitute some part of personal consumption (C) to philanthropic donations (D) and part of his market time (M) and personal leisure time (P) to religious activities (R) and voluntary activities (V). With this background, the utility function under of the Divine Economics Framework appears to be of the form,¹⁷

$$U_1 = f\{M, L, H, V, R\}$$

which is maximised subject to total time resources of individual i.e. 24 hours a day. where

U_1 = individual's satisfaction from daily activities (working, sleeping, enjoying, volunteering or praying).

M = time allocated to wage/market activities like job in government or private organisation, running own enterprise or farm, working part time, managing household, working casually as commission agent, consultant etc.

L = time allocated to leisure.

H = time allocated to collective/active leisure or home production like sharing with family, gardening and cooking, coaching to children, watching TV along with family etc.

V = time allocated to voluntary work for benefit of human being.

If the money value of the market activities M is converted into commodities, we can write this utility function as

$$U_2 = f\{C, D, L, V, H, R\}$$

¹⁶These may be crudely measured by a scale between zero and 100.

¹⁷[see for example Hamdani (2003b)].

where C is vector of commodities used by the individual for his own/family needs and D is vector of commodities used for satisfying needs of other human being, a commandment of all divine religions (D may be called charitable donations and includes other philanthropic behaviour oriented commodities).¹⁸

To reduce the number of variables yet maintaining the difference between conventional analysis and the present one, we may define leisure as the sum of active leisure or home time H and passive leisure S (pure rest and sleep time) such that

$$L = H + S \text{ }^{19}$$

In this case, the utility function appears to be

$$U_3 = f\{C, D, L, V, R\}$$

3.3. Demand Function for Philanthropic Donations

If this utility function for period t is strictly quasi-concave, linear-homogeneous in non-committed quantities, quasi linear-homogeneous in gross quantities and multi-stage budget approach is followed, the demand functions for philanthropic donations can be derived in three stages that looks like:

$$D_j^* = D_j^\circ + F_j^D(W_j, W_j + P_j, W_j + Q_j) \left(\frac{1+r}{1+\delta} \right)^{j-t} \frac{(H_t + A_t) - (H_t^\circ + B_{nt}^\circ + D_{nt}^\circ)}{\sum_{j=t}^n (1+\delta)^{t-j} + \beta + \gamma}$$

This formulation give us relationship between planned philanthropic contributions and a number of socio economic and demographic variables like assets (A), wages (W), expense on religious activities (P), expense on voluntary activities (Q), rate of interest (r), subjective discount rate (δ), financial human capital of a human resource (H), and the present value of assets at time of death which may be divided into bequests and donations. The above framework is general enough to be applicable for all divine religions.²⁰

4. SOME EMPIRICAL FINDINGS

This section provides summary of some of the results estimated using the Divine Economics Framework [Hamdani (2004)] for 302 Pakistani households. The Sample was selected and analysed using all standard state of the art Statistical techniques. Using the conventional practice of converting a theoretical model

¹⁸These are; Zakat, Khums, Sadaqah, Nazr, Kaffara, etc. in Islam; zsedka.

¹⁹Leisure has two forms; (a) passive leisure that is rest and sleep, and (b) active leisure that is watching TV, sharing with family, or gardening etc.

²⁰A detailed econometric derivation of the model is available in Hamdani (2004), Chapter 4 and Appendix 4A.

containing non-linear and subjective variables a formal Econometric model was developed to establish the statistically significant relationship between key variables affecting the donations/Philanthropic Behaviour. The study identified a large number of variables that might identify one's religiosity affect on her economic behaviour and vice-versa.

Since the purpose here is only to provide insights for a divine-religions-oriented economic research particularly with reference to philanthropic behaviour, the statistics like *t*-ratios, magnitude of coefficients and their significance level is not reported. The key findings are as under;

- Donations are significantly affected by age.
- Time allocation to volunteering is significantly influenced by age.
- The results show that the respondents who are married within their own grand families tend to allocate more time to volunteering at the cost of leisure and religious activities, while they work longer hours in order to finance the increase in donations.²¹
- The effect of increase in the household size on donations is negative. This indicates that donations are 'normal good' because, holding all other things constant, an increase in the number of persons in the household makes household poorer in terms of per capita resources and therefore, the expenditure on all the normal goods decreases.
- It is observed that donations and time allocated to religious activities are complements of each other as both are increased when wage rate increases. We further infer that consumption, leisure and volunteering put together are substitutes with donations and time allocated to religious activities put together. This is a pure Islamic followers' phenomenon, where donations and religious activities are increasing functions of wage rate: i.e. with more income people spend more on donations and religious activities, for the welfare of other Muslim fellows and for promotion of religion.
- The individuals with higher income of household other than their own earnings tend to allocate significantly less amount of money on donations. Since the effect of increase in wage rate on donations is positive, this result means that people tend to spend earned income on donations, while they are more selfish when it comes to spending other incomes on donations (may be due to the considerations of the partner whose income is utilised by the individual).

²¹The first and foremost deserving persons to receive any charitable donations in terms of voluntary services are the relatives of the voluntary person. This is because of the social norms as well as Islamic teachings. Islam emphasises on '*sila-e-rehmi*', among its meanings; one is to ignore others' faults, misbehaviours, oversee other's shortcomings and remain integrated with one's family and relatives. In case of marriage within the family, spouse, especially the male spouse will be more likely to pay much attention to family.

- The presence of a dish antenna at home has significant effect on donations. With dish antenna people have more exposure to what happens around the world, especially in the country and their level of awareness to the poverty, lack of basic facilities and other indicators of deprivation in the community, rises. In Pakistan, (at the time of survey) without dish antennas people's exposure is limited to the state run channels, which unfortunately seldom expose the public to miseries in society.
- The study finds notable effect of religiosity on the money and time allocation decision of households. The role of the number of daily prayers in resource allocation notable. Donations are negatively affected if more time is allocated to prayer. This may be due to the self satisfaction gained through prayer-like activities leaving no interest for other good activities like charity or that more religious people allocate more time to all activities (leisure, volunteering and religion) other than work. As a consequence they also end up having fewer resources left for donations.²²
- It was concluded from the study that being religious does not necessarily promote altruism. Not all religious obligations are to Allah; obligations to other human beings (e.g. *haqooq-ul-ibad in Islam*) are also a significant aspect of being religious. The results show that Islam promotes altruism among those who have stronger belief in performing their obligations to other human beings. Those who are concerned with worship-like activities only, are likely to behave more selfish in their resource allocation.
- The general form of education and religious education interact in such a way that they do not compete; they rather reinforce the role of each other in influencing resource allocation.
- It is observed that education and religiosity also reinforce each other in inducing monetary donations as well as volunteering. The increase in volunteering occurs at the cost of time allocated to leisure and work.
- The interaction of other household income and the education level of respondent have positive regression coefficients in equations for donations. This means that education promotes altruism and the tendency to be selfish among rich households is weakened due to enlightenment that comes with education.
- The results indicate that the respondents who expect to live longer (longer expected remaining life according to self-perception) and are at the same time more religious, tend to allocate more resources to donations and volunteering.
- In this study, no significant relationship was found between philanthropic donations and a few apparently most important variables such as

²²However, this relation was statistically insignificant.

households' relative poverty status in community, parents' volunteering history and major community problems (which necessitate donations in a community).

5. SUMMARY AND CONCLUDING REMARKS

The present paper is an extension of earlier work in Divine Economics, a framework for the study of religion and economics in each other's perspective [Hamdani (2002); Hamdani and Ahmad (2002a, 2002b); Hamdani (2003a, 2003b)]. The paper discusses the methodology derived from Divine Economics for analysis of philanthropic contributions among the followers of any of the Divine religion i.e. Islam, Judaism and Christianity. Hence the paper contributes towards the long felt need to analyse consumer behaviour in societies having higher degree of religious consciousness that have been ignored by conventional economic models which assume religion as a private matter of individuals and does not, therefore, fall in purview of economics. It is concluded that role of religious beliefs, practices and convictions (religiosity variables) turn out to be as important as certain economic, personal characteristics, household characteristics and demographic variables in determining the resource allocation behaviour of households. Since, it is perhaps, the most difficult to quantify or measure the level of one's faith and practice, the Divine Economics a way for measuring at least relative religiousness of individuals by constructing some 'religiosity scales'.

Because in real world, many of the important heterogeneous variables which have yet received little attention from economists, may be found in faith, attitudes and values of individuals, the studies in Divine Economics including the present paper may help bringing the discussion of faith into mainstream of rational choice economics. The faith model highlighted in the present paper also points the economist to explore why despite the use of the robust econometric models like AIDS, Translog, Rotardam, results of studies on consumer behaviour were surprisingly away from the real world situation. The paper also is a step forward move Islamic economics from macro topics like interest-free banking, saving, investment etc. to day-to-day individual's behaviour.

Apart from providing analytical procedure for determining philanthropy, the econometric model applied in the present paper is general enough that enables economists to determine the effects of religiosity on many other aspects of individual behaviour such as time-intensive or money-intensive activities of individuals, earning and savings, occupational choice etc. A deeper analysis may also enable economists to study the individuals' economic rationality behind choice of any religious and philanthropic act or even choice of a particular religion or sect.

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