

# Applying Contingent Valuation Method for Economic Valuation of *Awqaf* Wealth Management in Welfare Changes of Muslim Households in Sri Lanka: A Conceptual Framework

Sarabdeen Masahina<sup>a</sup> and A.C. Muhammadu Kijas<sup>b</sup>

<sup>a</sup> *International Islamic University Malaysia (IIUM), masahina50@hotmail.com*

<sup>b</sup> *International Islamic University Malaysia (IIUM)*

## Abstract

**Objective-** The main objective of this study is to estimate the Willingness to Pay of the Muslim households to contribute cash *waqf* as a strategy towards wealth management in Sri Lanka. *Waqf* is holding or confinement which is emphasised in Islam as *ibadah* as it can distribute the wealth among the Muslim society and would help to develop the Islamic vision of brotherhood.

**Method-** Contingent valuation method is used to estimate the Willingness to Pay of Muslim households to improve socio-economic status of the low income people through *waqf* wealth management in Sri Lanka. This study is developed based on Random Utility Theory.

**Result-** This paper identifies the appropriate methods to estimate the willingness to pay of Muslim households in Sri Lanka for *waqf* (*awqaf* is plural) institutions. Such evaluations are crucial for the Islamic financial system to function effectively in order to achieve the dignified objectives of socio-economic justice through proper distribution of wealth.

**Conclusion-** This paper presents a conceptual model of *waqf* institutions which would be useful for further empirical research in this area. The findings are not only appropriate and applicable to Sri Lanka but also to other Muslim and non-Muslim countries. This is a unique contribution to the Islamic economic literature. The knowledge obtained from this study hopes to propose cash *waqf* to manage the wealth in order to improve the socio-economic status of low income people in Sri Lanka.

*Key words* : *Awqaf, Contingent Valuation Method, Utility Theory, Willingness to Pay, Welfare Changes*

## Abstrak

**Tujuan** - Tujuan utama dari penelitian ini adalah untuk memperkirakan Kemauan Membayar rumah tangga Muslim untuk berkontribusi wakaf tunai sebagai strategi menuju pengelolaan kekayaan di Sri Lanka. Wakaf secara bahasa menahan (harta) yang ditekankan dalam Islam sebagai ibadah karena dapat mendistribusikan kekayaan di antara masyarakat Muslim dan akan membantu untuk mengembangkan visi Islam yaitu persaudaraan.

**Metode** - Metode penilaian Kontingensi digunakan untuk memperkirakan Kesiediaan membayar rumah tangga Muslim dalam meningkatkan status sosial - ekonomi masyarakat berpenghasilan rendah melalui pengelolaan kekayaan wakaf di Sri Lanka. Penelitian ini dikembangkan berdasarkan Teori Utilitas Acak.

**Hasil** - Paper ini mengidentifikasi metode yang tepat untuk memperkirakan kemauan membayar rumah tangga Muslim di Sri Lanka untuk wakaf lembaga. Evaluasi tersebut sangat penting untuk sistem keuangan Islam yang berfungsi secara efektif dalam rangka mencapai tujuan yang bermartabat keadilan sosial - ekonomi melalui distribusi kekayaan yang tepat.

**Kesimpulan** - Paper ini menyajikan model konseptual lembaga wakaf yang akan berguna untuk penelitian empiris lebih lanjut di daerah ini. Temuan ini tidak hanya tepat dan berlaku untuk Sri Lanka, tetapi juga ke negara-negara Muslim dan non-Muslim lainnya. Ini adalah kontribusi yang unik untuk literatur ekonomi Islam. Pengetahuan yang diperoleh dari studi ini adalah mengharapkan agar wakaf tunai diusulkan untuk mengelola kekayaan dalam rangka meningkatkan status sosial - ekonomi masyarakat berpenghasilan rendah di Sri Lanka.

*Kata Kunci* : *Wakaf, metode langsung, Utilitas Teori, Kemauan Membayar, Perubahan Kesejahteraan*

## 1. Introduction

Inequality of growth in wealth and poverty levels in numerous Muslim countries as well as in the global level remain high. Therefore, in responding to prevalence of poverty and inequality of growth in wealth, there is a need to re-consider wealth management more seriously and conceptually as well as practically within Islamic economics and practice, so that strategies towards wealth management can be developed as requisites by Islamic economics. Trend in inequality and poverty is growing fast in developed and developing countries. Income inequality might effect on health and social status. If so, inequality is harmful because it places people in a hierarchy which increases competition for status, causing stress and leading to poor health and other negative outcomes (Rowlingson, 2011).

A study conducted by Lynch, *et al.*, (1998) suggested that the loss of life from income inequality in the US in 1990 was equivalent of the combined loss of life due to lung cancer, diabetes, motor vehicle accidents, HIV infection, suicide and homicide. Although global supervisory organizations like the World Bank, the IMF, the WTO, and the United Nations System are giving more attention on issue of global income inequality and their management, they have not succeed in their effort to reduce the income inequality. In other words, the global financial supervisory organizations have failed to manage the wealth in proper manner. Their effort is worsening the situation of the member countries of these organizations.

According to Human Development Report (HDR, 1992), 20% of world population is enjoying 82.7% of Gross Domestic Product (GDP), and 80% of the world population is sharing 17.3% of total product in the world. Thus, it is pretty clear that the gap of distribution of wealth among rich and poor is huge. International public policy should consider a basic change in the policy orientation of the World Bank, the IMF, and the WTO so as to allow them to authorize government efforts to instruct directional push

and support domestic institutional innovations to reduce world income inequality. In this line, there is a need to re-consider wealth management more seriously and conceptually as well as practically within Islamic economics and practice, so that strategies towards wealth management can be developed as prerequisites by Islamic economics.

*Waqf* is a prerequisite helps to increase and capability of the voluntary sector in the Islamic society. In economic point of view, *waqf* improves the standard of living of the lower income group of the society directly and indirectly. McChesney (1991) stated that *Waqf* aims to establish a charitable scheme for the purpose of enhancement of the public services such as building of mosques, madrasah and improving the welfare of less privilege segments such as poor, insolvent, needy, orphans, widows and so on (Hassan & Shahid, 2010).

*Waqf* wealth management and development have been a tremendous concern for the Muslim scholars since long time ago. The establishment of the current *waqf* institutions in most countries especially in Bangladesh, Sri Lanka, India, Afghanistan and Maldives are not effective in maximising the available *waqf* resources in order to manage the wealth among rich and poor (Ghanim, 2009; Hassan & Shahid, 2010; Asmak & Wan, 2011). The phenomenon of corruption in the *waqf* management in Bangladesh can be discerned across history through misuse, mismanagement, looting, encroachment, and unlawful seizure upon *waqf* properties (Ghanim, 2009).

In case of Sri Lanka, proper attention is not given by the *waqf* institutions to increase the available *waqf* property. All the available *waqf* resources are in the form of properties which dedicated to mosque, madrasah and graveyard. At the same time, available parcels of lands are too expensive to be endowed by a single person. Thus, the amount of endowment from the people to *waqf* is very poor in Sri Lanka. This weakening situation of the institutions of *waqf* requests immediate attention and it should not be left to go further backward. For that reason, it makes sense to look and re-think the situation

mainly in respect touse and increase of the existing *waqf* assets. Therefore, it requires a professional way of managing the *waqf wealth* or assets.

The concept of cash *waqf* is one of the alternatives to the existing method for improving *waqf* institutions and manage their wealth effectively (Rahmana and Ahmad, 2011; Hassan and Shahid, 2010;Sadeq, 2002). Concept of cash *Waqf* is debatable even though it was practiced by the Ottaman courts during 15<sup>th</sup> and 16<sup>th</sup> century (Mandavillile, 1979). The following Table.1 presents the main concept of cash *Waqf* from four thoughts of schools:

Table.1 Concept of cash Waqf from four thought of School

Schools	Definition of <i>Waqf</i> property
Maliki	property moveable or immoveable property in perpetuity or on a temporary basis
Hanbali	<i>Waqf</i> of dirham is permissible, Mudarabah contract either the profit paid to charity
Hanafi	Movable property, 'urf' (money) of the nature
Shafii	be movable & immoveable property

Source: Summarized from Ibn Taymiyyah (1988), Mahommedan Low, A history of philanthropic foundations

According to Maliki School, any kind of property moveable or immoveable property can be created as *waqf* whether in perpetuity or on a temporary basis and can be created with time limits attached to it. Ibn Taymiyyah (1988) from Hanbali School, mentioned that *waqf* of dirham is permissible and profit can only be derived through the consumption of the dirham. It is also possible to serve as a Mudarabah contract where the profit paid to charity. The Hanafi School emphasized on movable property. As long as *waqf* is beneficial to society, it can be bequeathed even if there is no 'urf' (money) of the nature. Imam Zufer goes further by permitting cash *waqf* whether there is urf or not.

The thought of the Shafii School mentioned that the *Waqf* is not specifically restricted to any kind of commodity or property. *Waqf* can be movable & immoveable property. *Waqf* created should be perpetual. Movable property and cash *waqf* produce benefits without losing its corpus. Imam Shafii permits the moveable *waqf* based on its

general meaning of sadaqah jariyah. Thus, according to Shafi School, as long as the object put on *waqf* is beneficial or useful to society, it can be bequeathed. So the cash can be included in the *Waqf*. Therefore we can conclude that the four schools of thought (Maliki, Hanbali, Hanafi, and Shafii) show the green light to proceed on cash *waqf*.

According to a study conducted by Hasan and Abdullah (n.a.), cash *waqf* and *waqf* shares have become popular means used by the State Islamic Religious Councils in Malaysia to generate financial resources for the purpose of funding the investment of *waqf* properties. The idea of cash *waqf* would give the opportunity to the Muslim community to fulfill their *ibadah*. It would bring reward from *Allah s.w.t* as stated in (Surat At-Tauba 121, Ali-Imran 92). It brings an opportunity for the middle class people to contribute to *waqf* no matter how much they are contributing. It is a matter of willingness to pay for *waqf*. *Waqf* would contribute to distribute the wealth from rich to poor. The concept of cash *waqf* would help to avoid the wealth accumulation among a certain group as stated in the *Quran*. Those who accumulate the wealth without spending for the sake of *Allah s.w.t* would be punished as stated in *Quran (At-Tauba:34 and 35)*. “....And there are those Who hoard gold and silver And spend it not in the way of *Allah*: announce unto them A most grievous chastiment” (*At-Tauba:34*).

This study intends to estimate the willingness to pay of the Muslim households to make *waqf*'s role more efficient in wealth management in Sri Lanka. Through which, households' willingness to pay, the amount they are willing to pay and the category they would like to pay for the *waqf* will be estimated. The welfare changes of the households will be estimated by measuring willingness to pay from improved alternative hypothetical option. Further, this study would try to develop a theoretical framework on probability of WTP for the *waqf* wealth management.

This article is organized into six sections. Followed by the introduction, section II discusses about the concept of cash *waqf* under four schools of thought. Section III shows how the contingent valuation method is used as an instrument method in existing studies. Section IV presents the theoretical framework and the final section concludes the article.

## **2. Methodology**

Contingent valuation method (CVM) is one of the non-market valuation technique approaches. CVM is defined as to elicit the preference for public goods by asking people about their WTP to bear a financial contribution or impose in order to achieve some potential improvement upon the particular hypothetical options.

The respondents would be asked their choices to achieve some potential improvement upon the particular hypothetical option along with a cost to their household of the option while circumventing the absence of a real option for them (Mitchell and Carson, 1989; Bennett and Adamowicz, 2001). As a result of those changes, individuals might change their behaviours. The changes can be estimated by asking whether they are willing to pay for such changes and how much they are willing to pay for the changes (Mansfield et al., 2006). CVM is built based on random utility theory.

This method was first proposed by Ciriacy-Wantrup (1947) and first applied by Davis (1963) to estimate the benefits linked with the outdoor recreation in Maine. This method has been used commonly for valuing the recreational benefits (Bishop and Herberline, 1979), air quality visibility and aesthetic environmental preferences (Smith & Osborne, 1996), cost-benefit (Loehman et al., 1979; Krupnick et al., 1993; Cai et al., 2010), environmental impact assessment of environmental policies (Mitchall and Carson, 1989; Cummings et al., 1986; Wang et al., 2006), health economic analysis (Thompson et al., 1984; Johannesson and Jonson, 1991; Johannesson et al., 1996), transportation safety (Jones-Lee et al., 1995) and the cultural economics (Hansen, 1997; Thomson et al., 2002).

### 3. Results and Discussions

#### 3.1. Proposed alternative options

Hicksian compensating surplus (CS) measures welfare changes in income that would make an individual indifferent between the initial (status quo *waqf*) and proposed situation (improved *waqf*) assuming the individual has the right to choose the initial utility level. This change in income reflects the individual's WTP to obtain an improvement of *waqf* in order to distribute the wealth from rich to poor. WTP is extra money paid by the households to improve *waqf assets* in Sri Lanka.

CVM provides a means of estimating how much these *waqf* services are worth in monetary terms (Foster et al. 1998). In this study, a survey is proposed to estimate the social value of the services provided by the *waqf* in Sri Lanka.

For the purposes of the survey, the *waqf* services are classified into four attributes: 1) housing *waqf* which provides emergency short term accommodation, counseling and support services for homeless people; 2) social services *waqf* which work to improve the lives of particularly needy groups of people such as farmers, fisher men, street boutiques, disabled people like the blind and the deaf, and children from troubled backgrounds; 3) health and medical study and research *waqf*, which provides the assistance to produce doctors required by the society and provide assistance to the medical students to involve in researches in the field of medicine; and 4) religious *waqf*, which funds for the mosques, madrasah, graveyard maintenance, religious education, and cultural activities.

The purpose of the study is to estimate how much people would be willing to pay extra for the *waqf* in socio-economic development and poverty alleviation. The willingness to pay is determined by creating a hypothetical scenario or option in which the *waqf* is facing the prospect of inefficient *waqf* resource management as a result of lack of funding. Increasing the membership fees (Santha fees) as a payment vehicle could be one of the ways to solve the lack of funding. The extra membership fee will be

imposed once a year from each Muslim household in Sri Lanka. The amount which may include in the questionnaire will be determined from the field survey and focus group discussions. The amount of WTP (the extra membership fees) multiplied by the households will become the welfare changes of the society. For instance, in Kinniya municipal council, the total number of household is 10,625. Each household is willing to pay the minimum amount of Rs100 per year as cash *waqf*:  $100 \times 10,625 = \text{Rs } 1062500$  will be total amount of cash *waqf* per year from a single city. This amount is called social welfare change.

The current study is trying to apply this method in Islamic economics generally, on *waqf* specifically. It is a unique contribution to the literature. The advantage of this proposed cash *waqf* is easy to implement and it does not require sophisticated knowledge. The researchers suggest that the level of education of the governance of *waqf* management in majority of the developing countries; especially in Sri Lanka, India, Bangladesh, Afghanistan is low. For that reason, the management of the *waqf* is unable to maximize the available resources. This method of cash *waqf* is practicable even though, the *waqf* government body has low level of knowledge on managing the *waqf* resources efficiently. This method can be easily practiced in the Muslim minority countries, especially in Sri Lanka.

### *3.2. Theoretical framework and model specification of contingent valuation method for improvement of waqf in Sri Lanka*

A common theoretical framework: the random utility model (RUM) is being used by the contingent valuation method (CVM) to value the non-market goods (Thurstone, 1927; McFadden, 1974). The stated preference methods such as CVM and CE are built based on hypothetical scenarios and ask the respondents to value the non-market goods. The respondent's problem in this framework is to maximize their utility level by choosing the most preferred combination between the market and the non-market good and

services subject to budget constraint and the price of goods. The utility level depends on respondent's income, socio-economic characteristics and consumption of market and non-market goods. *Waqf* improvement is being treated as non-market service in this study.

The indirect utility function under the random utility modal can be illustrated into two elements as, observable ( $V_{ij}$ ) which for simplicity can be seen as a function of income  $Y$  and of the output of *waqf* institution,  $C$  and unobservable ( $\epsilon_{ij}$ ) components on individual choice (Verbeek, 2004; Mogas et al., 2006). In other ward, assume utility for an option  $i$  depends on income ( $Y$ ) and output of *waqf* contribution ( $C$ ).

$$U_{ij} = (Y_{ij}, C_j) + (\epsilon_{ij}, C_j) \quad (1)$$

In CVM, there are two alternatives; status quo and the proposed alternative in the choice set. The choice can be explained by the random utility theory in a binary choice model. The respondents have to choose between two alternatives; an improved state,  $i$ , and the status quo,  $j$ .

Utilizing utility function for two alternatives from equation (2), the probabilities of an individual choosing alternative  $i$ , or  $j$  are;

$$\begin{aligned} P_{(i)} &= \Pr ( \epsilon_i - \epsilon_j \leq \epsilon_j - \epsilon_i ), \\ P_{(j)} &= \Pr ( \epsilon_j - \epsilon_i \leq \epsilon_i - \epsilon_j ). \end{aligned} \quad (2)$$

Assuming, the each random term is Type I Extreme Value distributed. The difference between the random terms is logistically distributed.

$$= \quad (3)$$

The equation (3) expresses a binary logit model estimated on the difference between attributes of the alternatives.

### 3.3. Empirical model of CVM

For the CVM, the Binary Logit Model will be used in this study to estimate the WTP of the respondents to improve the *Waqf* wealth management in Sri Lanka. The Maximum Likelihood (ML) method will be employed to estimate the parameters in logistic regression model. The likelihood ratio index will be measured as an indicator of goodness of fit for the logistic regression model. As such, the model assesses the relationship between various factors and the households' willingness to pay for improved *Waqf* management. The dependent variable is designed as a dichotomous dummy because of assuming whether the respondent is willing to pay or not. The model is presented in the Eq.(4).

$$\text{Log}P_i/(1 - P_i) = Z_i = \beta_0 + \beta_i X_i + e \quad (4)$$

Where,

$P_i = 1$  if the respondent is willing to pay for improved *Waqf* management

$P_i = 0$  for otherwise

$X_i =$  Independent variables

$\beta_0 =$  Constant term

$\beta_i =$  Coefficient of independent variables

$e =$  The error or disturbance term

$i = 1, 2, 3, \dots, n$

Results from the Logit equations will be used to demonstrate the relationship between socio-economic variable and mean WTP. Mean WTP will be calculated by assuming no negative values for *Waqf* wealth management in Sri Lanka by using the equation suggested by Hanemann [12]. It is illustrated in Eq.(5).

$$E(WTP) = \left( \frac{1}{\beta_1} \right)^* \ln(1 + \exp^{\beta_0}) \quad (5)$$

### 3.4. Proposed alternative options and payment vehicle

The service attributes and levels that it takes for the two proposed alternative options are as follows:

- Housing *Waqf* per year (%): 2 levels; Baseline (0%) improved options ( 25%)
- Social Service *Waqf* per year (%): 2 levels; Base line (0%) and improved options (50% improvement)
- Health and Medical Research *Waqf* per year (0%): 2 levels; Base line (0%) and improved options (30% improvement)
- Religious *Waqf* per year (%): Base Line (0%) and improved options (80% improvement)
- Membership Fees (in Rupees): Base Line (0%)

The respondent has the option to agree or not to agree with the proposed alternative options. The preference towards the proposed option over the baseline scenario will be pointed out, if the respondent agrees. Otherwise the baseline scenario will be selected for not to agree the proposed scenario. Thus, the respondents require comparing alternative choice set with the same baseline plan one at a time.

### 3.5. Questionnaire as a tool of survey

The household respondents will be given the information on the current situation of *waqf* institutions, the weakness of *waqf*, insufficient funding and the policies to improve the *waqf* institutions in Sri Lanka. Then, the CVM questions will be presented to the respondents. Then, the improved option plan will be presented. The respondents will be clearly told that if they decide to vote for the improved plan, they have to pay the increased annual household membership fee directly to the *waqf* management from their pocket for the certain period, for example for ten years. Respondents who will select the improved plan will be further asked to reveal their maximum monthly WTP to obtain the

improvement of the waqf institutions. Suppose the new improved management option shown below as in Table 1 is the only possible alternative to the current *waqf* management plan. The household will be asked, whether they prefer to choose current *waqf* management option or the improved *waqf* management.

Table 2 An Illustration of an alternative management option

Attributes	Base line ( Status Quo)	Alternative ManagementOption 1
Housing <i>Waqf</i> per year	0%	25%
Social Service <i>Waqf</i> per year	0%	50%
Health & Research <i>Waqf</i> per year	0%	30%
Religious <i>Waqf</i> per year	0 %	80%
Membership Fees (Rupees)	0%	How much are you Willing to pay?

The questionnaire has seven components. In part one, the impact of *waqf* from the Islamic perspective will be described to the respondent. In part two, the respondents will be asked whether they have paid any types of *waqf* for last two years. Then they will be explained the current situation of *waqf* institutions in Sri Lanka, and part four is about the impacts of *waqf* on socio-economic status. Part five explains, using the show cards, the policies to be implemented as a remedy for improving the socio-economic status through *waqf* institutions. The purpose of showing the show cards is to motivate the respondents to pay for *waqf*. The households who will select the current management project will not be asked any WTP question. Only the households who select the improved project will be further asked to reveal their WTP to obtain the improvement of *waqf* institutions in Sri Lanka, in part six. Then, the respondents' socio-economic information such as their occupation, level of education, monthly household consumption, and number of children will be gathered in the last part of the questionnaire.

#### 4. Conclusion

In theory, the economic impacts of Waqf can positively affect major economic variables such as consumption, poverty eradication, economic growth and distribution of

income. This paper presents a review of the literature on the importance of Waqf institutions and ensuring the efficiency of Waqf wealth management through good governance practices. Some recent studies in the context of a modern Muslim country revealed many short comings of the Waqf institutions, especially in terms of efficiency of waqf funds or assets and also a lack of proper governance mechanisms. Owing to the dearth of empirical studies on the wealth management of Waqf institutions, the paper proposes a comprehensive framework for studying efficiency of waqf institutions in Sri Lanka using the Stated Preference Method (SPM).

SPM is a method to elicit the preference for public goods and services by asking people about their WTP to bear a financial impose in order to achieve some potential improvement upon the particular hypothetical option. CVM method is one of the SPM techniques which utilized in this study to estimate the WTP. The advantage of this proposed cash *waqf* is easy to implement and it does not require sophisticated knowledge. This method of *waqf* is easily practiced in the Muslim minority countries, especially in Sri Lanka where the *waqf* government body has got low level of knowledge towards governing *waqf* resources. In addition, the undertaking of an empirical study on waqf wealth management will contribute towards a proper understanding of the governance mechanisms and issues on the complex economics and management of Waqf. The developed conceptual model in this paper and future empirical findings using this model will hopefully contribute towards the sustainability of Waqf institutions and the enhancement of the dignified socio-economic objectives of waqf.

### References

- Abul Hasan M. Sadeq. (2002). *Waqf*, perpetual charity and poverty alleviation. International Journal of Social Economics. Vol. 29 Iss: 1 pp. 135-151.
- Abul Hassan, Mohammad Abdus Shahid. (2010). Management and Development of the *Waqf* Assets. Seventh International Conference – The Tawhidi Epistemology: Zakat and *Waqf* Economy, Bangi , 310.

- Adamowicz, V., J. Louviere and M. Williams.(1994). Combining Revealed and Stated Preference Methods for Valuing Environmental Amenities, *Journal of Environmental Economics and Management*, 26:271-292.
- Alberini, A. And Krupnik, A. (2000). Cost-of-illness and WTP estimates of the benefits of improved air quality: Evidence from Taiwan. *Land Economics*. Vol.76. PP. 34-48.
- Alberini, A., Cooper, M.T.F., Krupnick, A., Shaw, J., Liu, D. and Harrington, W. (1997). Valuing health effects of air pollution in developing countries: The case of Taiwan. *Journal of Environmental Economics and Management*, 34, 107-126.
- Alberini, A., Scasny, M. and Kohlova, M.B. (2005). The Value of Statistical Life in the Czech Republic: Evidence from a Contingent Valuation Study. *Paper presented at EAERE annual meeting*.
- Asmak, Ab Rahmana, and Wan Marhaini Wan Ahmad. (2011). The Concept of *Waqf* and its Application in an Islamic Insurance Product: The Malaysian Experience, *Arab Law Quarterly* 25, 203-219.
- Bennett, J. and Adamowicz, V. (2001). Some fundamentals of environmental choice modelling, in J. Bennett and R. Blamey (ed.). *The choice modelling approach to environmental valuation*. Edward Elgar Publishing, Cheltenham.
- Bishop, R.C and Herberlein, T. A. (1979). Measuring values of extra-market goods: are indirect measures biased? *American Journal of Agricultural Economics*. Vol.61, PP. 926-930.
- Cai, B., Cameron, T. A and Gerdes, G.R. (2010). Distributional Preferences and the Incidence of Costs and Benefits in Climate Change Policy. *Environmental Resource Economics*. Vol. 46. PP. 429-458.
- Chapra, M.U. (1992). *Islam and Economic Challenges*, Leicester. The Islamic Foundation. PP-270-271.
- Ciriacy- Wantrup S.V.(1947). Capital returns from soil conservation practices. *Journal of Farm Economics*. Vol. 29. PP. 1181-1196.
- Cropper, M., Mitiku, H., Julian, L., Christine, P. and Dale, W. (2000). The value of preventing Malaria in Tambien, Ethiopia. *World Bank Policy Research Working Paper*. 2273. World Bank.
- Cropper, M., Mitiku, H., Julian, L., Christine, P. and Dale, W. (2000). The value of preventing Malaria in Tambien, Ethiopia. *World Bank Policy Research Working Paper*. 2273. World Bank. Cummings, R.G., Brookshire, D.S and Schulze, W.D. editors. 1986. *Valuing environmental goods: A state of the arts assessment of the contingent valuation method*. Totowa, NJ:Rowman and Allanheld.
- Davis, R.(1963). The value of outdoor recreation: An economic study of the marine woods. *PhD Thesis*. Harvard University.
- Dickie, M., Fisher, A. And Gerking, S.(1987). Market transactions and hypothetical demand data: A comparative study. *Journal of the American Statistical Association*. Vol.82. PP. 69-75.

- Green, A., Berg, S., Loehman, E., Shaw, M., Fahienn, R., Hedinger, R., Arroyo, A. and De, V.(1978). An interdisciplinary study of the health, social and environmental economics of sulphur dioxide pollution in Florida. *Interdisciplinary Centre for Aeronomy and Other Atmospheric Sciences: University of Florida, Gainesville, Florida, USA.*
- Hanemann, M.W. (1984). Welfare evaluations in contingent valuation experiments with discrete responses. *American Journal of Agricultural Economics*, 66, 332-341.
- Hansen, T.B. (1997). The willingness-to pay for the Royal Theatre in Copenhagen as a public good. *Journal of Cultural Economics*. Vol. 21. PP.1-28.
- Human Development Report 1992
- Ibn.Taymiyyah, Ahmad. (1988). *Al-Fatwa*. Riyadh: Dar'Alam Al Kutub, 1991, Vol.32, P.234.
- Ibrahim, Ghanim.(2009). *Features of the historical formation of the waqf management* (معالم التكوين التاريخي لنظام الوقف), *WaqfJournal*, Experimental Issue, November, p. 66
- Johannesson, M. and Jonsson, B.(1991). Willingness to pay for antihypertensive therapy- results of a Swedish pilot study. *Journal of Health Economics*. Vol.10. PP. 461-474.
- Johannesson, M., Johansson, P.O and O' Conor, R.(1996). The value of private safety versus the value of private safety. *Journal of Risk and Uncertainty*. Vol.13. PP. 263-275.
- Jones-Lee, M. W., Loomes, M.G. and Philips, P. (1995). Valuing the prevention of non-fatal road injuries: contingent valuation versus standard gambles. *Oxford Economic Papers*. Vol. 47. PP. 676-695.
- Loehman, E.T. and De, V.H.(1964). Application of stochastic choice modelling to policy analysis of public goods: A case study of air quality improvement. *Review of Economic Statistics*. Vol. 64. PP. 474-480.
- Loehman, E.T., Berg, S.V., Arroyo, A.A., Hedinger, R.A., Schwartz, J.M., Shaw, M.E., Fahien, V.H., Fische, R.P., Rio, D.E., Rossley, W.F. and Green, A.E.S.(1979). Distributional analysis of regional benefits and costs of air quality control. *Journal of Environmental Management*. Vol. 6. PP. 222-243.
- Lynch, J., *et al.*(1998). Income inequality and mortality in metropolitan areas of the United States. *American Journal of Public Health*, Vol. 88, pp. 1074–1080.
- Mandaville, Jon E.. (1979). Usurious Piety: The case *Waqf* Controversy in the Ottoman Empire. *International Journal of middle East Studies*, Vol.10, PP. 289-308.
- McFadden, D. (1974). Conditional logit analysis of qualitative choice behaviour. In: Zarembka, P. (Ed.), *Frontiers in Econometrics*. Academic Press, New York. PP.105-142.
- Mitchell, R.C and Carson, R.T. (1989). Using surveys to value public goods: The Contingent Valuation Method. *Resources for the Future*. Washington D.C.

- Mogas, J., Riera, P. and Bennett, J. (2006). A comparison of contingent valuation and choice modelling with second-order interactions. *Journal of Forest Economics*. Vol. 12. No.1. PP.5-30.
- Siddiqi, Muhammad Nejatullah. (1991). *Role of voluntary sector in Islam: A conceptual Framework*. Singapore, Institute Southeast Asia Studies. P6.
- Ostiz, R.A., Markandya, A. and Hunt, A. (2004). Willingness to Pay for Reduction in Immediate Risk of Mortality Related to Air Pollution in Sao Paulo, Brazil. <http://www.oecd.org/dataoecd/2/7/37585517.pdf>
- Smith, V.K. and Osborne, L. (1996). Do contingent valuation estimate pas a “scope” test? A meta analysis. *Journal of Environmental Economics and Management*. Vol. 31. PP. 287-301.
- Thompson, E., Berger, M., Blomquist, G. and Allen, S. (2002). Valuing the arts: A contingent valuation approach. *Journal of Cultural Economics*. Vol. 26. PP. 87-113.
- Thompson, M.S., Read, J.L., Lian, M. (1984). Feasibility of willingness-to-pay measurement in chronic arthritis. *Medical Decision Making*. Vol. 4. PP. 195-215.
- Thurstone, L. (1927). A comparative judgment. *Psychological Review*. Vol.34. PP.273-286.
- Verbeek, M. (2004). A guide to modern econometrics. 2nd ed. *John Wiley and Sons, Hoboken*.
- Wang, X.J., Zhang, W., Li, Y., Yang, K.Z and Bai, M. (2006). Air Quality Improvement Estimation and Assessment Using Contingent Valuation Method, A case Study in Beijing. *Environmental Monitoring and Assessment*. Vol. 120. PP. 153-168
- Wang, H, Whittington. D. (2005). Willingness to Pay for Air Quality Improvement in Sofia, Bulgaria. *Ecological Economics* 55 ( 2005) 143–154.
- Wilkinson and Pickett. (2009). <http://www.equalitytrust.org.uk/why/evidence/frequently-asked-questions#oecd>