To cite this document: Jafarzadeh Najar, M., Hooshmand, M., Lotfalipour, M.R., & Behname, M. (2019). Investigating the Possibility of Using Waqf and Interest-Free Bonds to Finance Public Spaces in the Surrounding Texture of Holy Shrine of Imam Reza .*Urban Economics and Management,* 7(1(25)), 23-40.
www.iueam.ir
Indexed in: ISC, EconLit, Econbiz, SID, EZB, GateWay-Bayern, RICeST, Magiran, Civilica, Google Scholar, Noormags, Ensani
ISSN: 2345-2870

Investigating the Possibility of Using Waqf and Interest-Free Bonds to Finance Public Spaces in the Surrounding Texture of Holy Shrine of Imam Reza

Morteza Jafarzadeh Najar
PhD Student of Economics, International Academic Department, Ferdowsi University of Mashhad, Mashhad, Iran
Mahmood Hooshmand*
Professor of Economics, Faculty of Economic and Administrative Sciences, Ferdowsi University of Mashhad, Mashhad, Iran
Mohammad Reza Lotfalipour
Professor of Economics, Faculty of Economic and Administrative Sciences, Ferdowsi University of Mashhad, Mashhad, Iran
Mahdi Behname
Assistant Professor of Economics, Faculty of Economic and Administrative Sciences, Ferdowsi University of Mashhad, Mashhad, Iran

Received: 2018/10/17 **Accepted: 2019/01/30**

Abstract: One of the most important and vital tissues in the country is the context around the Holy Shrine of Imam Reza. The main problem about this context is the lack of funding for public spaces. In the present study, the willingness of people to participate in the improvement of the worn out texture surrounding the Shrine of Imam Reza is estimated by purchasing waqf bonds and interest-free bonds, using the conditional valuation method. For this purpose, 240 pilgrims and adjacent persons were interviewed. In order to distinguish the factors influencing the decision on participation and the level of participation, two-stage method of Heckman and Tobit model were used. By eliminating incomplete answers, 57% of the people were willing to buy waqf bonds and, 48% of the people were willing to buy interest-free bonds. The results of the Hackit Model showed that the variables of "trust in local institutions" and "social awareness" influence significantly on respondents' decision to buy bonds. In addition, the "sense of belonging to the city" affects the degree of willingness to participate. In the case of interest-free bonds, the variable of social awareness has a significant effect on the decision of the respondents to participate in it. The variables of sense of belonging to the city and the neighborhood and the household's economic situation have an impact on the degree of willingness to participate. While the belief in interest-free bonds and the variables of trust in local institutions, both in the first stage (decision to pay) and in the second stage (willingness to pay), have a significant effect on respondents. The average willingness to participate was estimated at 7,450,000 Rials for interest-free bonds and it was 1,660,000 for waqf bonds.

Keywords: Waqf bonds, Interest-free bonds, Financing, Renovation and Improvement, Texture around the Holy Shrine, Public Spaces
JEL Classification: H81, G21, N65, L74

* Corresponding author: m-hoshmand@um.ac.ir

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

1- Introduction

Old centers of cities across the world have had a special economic significance. However, the expansion of these cities due to population growth and urbanization has led to a decline in the economic importance of these centers. With regard to the preservation and restoration of the old centers of the city with the aim of economic, social, cultural, historical and even political rehabilitation around the world has a special place. Today, experts and planners of urban planning have tried to find scientific solutions in this regard. It can be said that presence of urban old texture can be received in various forms, including the reduction or lack of conditions of survival and safety, as well as physical, social, economic and facilities disruptions. The importance of renovation and improvement of the old and worn-out texture of cities is the development of a living environment for humans that fit into socio-cultural and economic necessities. Nevertheless, the first issue that comes up to the renovation of old texture is how to provide financial resources for this. The financial resources are the motor of economic activities. Therefore, before starting any activity, it is necessary to estimate the financial resources required for the implementation of the activity or the project, and to study and review the financing methods for it (Jafarzadeh Najar & Jannati, 2011).

One of the most important and vital tissues in the country is the texture around the Holy Shrine of Imam Reza, where it embraces more than 20 million pilgrims annually. Unfortunately, after more than 20 years of start plan of renovation and improvement, has only improved by about 45% in the best state (Project Implementing Authority, 2017). Despite the efforts of the authorities and experts of the organization implementing the plan, it has not gained significant achievements due to some factors such as lack of financial resources.

Different financing methods such as private sector participation in the implementation of the project, partnership bonds, limited use of government resources, shareholder of the project, sales of meter, etc. have been used so far to finance the plan but most of these methods have been used for commercial and residential projects. Therefore, the most important financing problem of this texture is the lack of funding for construction of public spaces such as streets, passages, parking lots, gardens and green spaces, etc. One of the most appropriate ways of financing in this regard is to take advantage of the microfinance of the people, especially publication of bonds such as waqf and interest- free ones. In such a condition, the renovation and improvement of the texture will be accelerated and citizens will carry out this participate willingly and voluntarily, which will have a special impact on the sustainability of the behaviors. Regarding this importance, it has been attempted to survey the willingness of citizens and pilgrims' participation in waqf and interest- free method of financing in order to examine the level of willingness to pay and its effective factors. By providing the appropriate financing model, steps can be taken to reduce the existing costs in order to help build and expand public spaces.

2- Literature Review

a) Foreign Researches

Hassanain (2015) did a comparative study on the functioning of conventional and Islamic real estate investment funds.

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

The data in this study is based on various sources such as the Malaysian Bank and the Securities Commission and a comprehensive set of performance measurement, such as the Sharp and Alpha Indicators. The findings showed that real estate funds, either Islamic or conventional, have the potential to cover the risks of financial crisis and they are a good option for investors.

Musari (2016) acknowledges that many Islamic financing institutions are now at the forefront of many societies and provide opportunities for access to financial services for low-income and micro-projects.

Ambrose et al. (2018) presented waqf-financing model for public goods and commodities in Malaysia. Using the data integration technique, their study results indicated that waqf fund returns could be used in 11 cases of federal government spending.

b) Iranian Researches

Shahabi (2004), in an article titled "The Fundamentals and Theoretical Framework of the Impact of Waqf on the Formation of Urban Spaces," examined the main and most important elements of the city and concluded that there is a close relationship between survival and endowment. Apart from the great religious, social and economic values of rich culture of waqf, its impact on the formation and production of public spaces and urban bodies is one of the important issues in urban research.

Hosseinabadi & Taqvayi (2012) did a research entitled "evaluation of financing methods in urban renovation projects, Case: Hamza Abad district located in 20th district of Tehran". Six methods have been evaluated for renovation of urban worn out fabrics using three indicators of participation, ease of implementation and economic efficiency of the project. In order to prioritize the methods based on each of these indicators, Friedman test and internal rate of return were used and data were analyzed using SPSS and CAMFAR software. According to the results of the analysis of the research data, the method of civic participation among the financial methods has the highest level of participation of residents, and in the next ranks, there are received bank facilities, project shareholder, meter sale method and participation bonds. The method of issuing bonds with the highest internal rate of return is the best way of financing. Meter sale method, BOT, Civic Participation, Loans Acceptance from Institutions and Banks and Shareholders of the Project are ranked next in terms of economic returns.

Moayedifar et al., (2013) have focused on prioritizing the financing methods in urban worn-out contexts (case: Isfahan city). Based on the AHP hierarchical analysis method, the relative weights of effective measures and relative weights of financing ratios to each of the criteria, and finally, the ranking of the financing methods used in the present study was obtained. According to the results, the most important criteria from the viewpoint of financial and investment experts were, higher returns, more private sector participation and additional funding ceiling with relative weights of 0.289 and 0.259, and 0.223.

Asgari et al., (2014) examined conventional methods of financing the construction of housing in Tehran's worn-out structures and exploring the appropriate methods of financing in the present and near future, with the participation of all involved groups (builders, credit providers,

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

policy makers and planners of worn-out structures). The results showed that the reference groups agree on the appropriateness of six methods of financing in the present and near future for the financing of housing renovation in worn out structures.

Jafarzadeh & Jannati (2011) examined the experiences of publishing nine stages of partnership bills over the past 15 years in the area around the Holy Shrine of Imam Reza (AS), in terms of challenges and threats with its benefits. The results showed that among the various methods, the method of participation bonds, with the nature of such plans, especially in the context of ownership of projects, is more consistent and it provides a framework for introducing projects to investors in the project. The project shareholder method and the participation of the owners are also the methods that can be used in the project. Among the different methods presented, the use of government credits and external sources due to administrative procedures and relevant laws is virtually impossible for worn-out structures.

Babaei-aghdam et al., (2015) in their research have evaluated the factors influencing public participation in the organization of urban worn-out structures with an emphasis on social capital in the Jajin neighborhood of Ardebil. Using the questionnaire instrument and SPSS software, they concluded that there was a significant relationship among economic variables, social variables and awareness with the level of participation of people.

3- Theoretical Background

Optimal Financing in Urban Spaces

Municipal finance has its own complexity. On the one hand, city custodians must provide their income from the city system and citizens; on the other hand, the source of income must be such that it does not jeopardize the city's movement towards sustainable urban development, and it should maintain the opportunity for life for the present and future generations (Ghorbani & Azimi, 2014). The issue of financing in cities in line with sustainable development or urban development strategy has often been discussed under the concept of sustainable income. In fact, the issues raised in optimal financing in urban public spaces are further addressed and reviewed by the issue of sustainable income.

Based on the definition of Hicks, sustainable earnings are maximum income available over a period of time, ensuring the creation of the same level of income in the future period, in the context of the economic system faces with resource constraints, labor, human capital and natural capital. From the perspective of neoclassical economists, sustainable income is the maximum amount of consumption expenditure in a period without reducing actual consumption expenditures in subsequent periods (MalekAfzali & Moazeni, 2016). It should be noted that in economic texts, the issue of sustainable incomes is independent of sustainable development and the condition for sustainable development in urban economics is a function of how to use natural resources of the city, protect urban ecosystems and resources such as water, air and urban green space. In other words, it can be said that the continued increase in incomes and the production of goods and services in the future should be such that the quality of the urban environment is preserved and the welfare of the people and citizens will not be reduced.

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

Municipality revenues are deemed sustainable if they have at least two characteristics of "sustainability and preservation of the quality of the environment and urban space.' Sustainability means that revenue items must be reliant on different times and can be programmed to achieve it. Those revenue items of municipalities that are affected by the economic conditions of the city, such as financial crises, severe economic fluctuations and changes in laws and regulations, and the lack of confidence in its future acquisition, can be considered as items with no sustainability characteristics. The second feature is sustained financing or sustainable revenues in terms of maintaining the city's environmental quality as a living phenomenon. Sustainable earnings are those incomes that do not affect the city's quality and livelihood conditions, or, in other words, the desirability and healthy earnings are important. Such an attitude to urban revenues is in fact the basic attitude that researchers have tried to emphasize in the national economy during the twentieth century. Obviously, preserving the quality of the city's bio-space, such as air, water, is in fact the bake of the Solow Theory (1974), which considers sustainable status a condition in which there is a good standard for intergenerational justice. Maintaining the physical spaces of the city and trying to preserve the city environment provide good conditions for prosperity and better life for the future (Sharzeie & Majed, 2011)

Islamic Fainancing

In general, Islamic financing can be divided into three categories of sales of goods and services, attracting capital and, finally, attracting popular donations. Perhaps the use of the term financing is not very appropriate and it is better to use the term earnings or sustainable income. Islamic financing instruments are divided into two sections: nonprofit and profit, and according to this, the endowments and borrowings are placed under non-profit instruments. In addition, Islamic contracts are divided into two general categories of trading and cooperative contracts: Dealings with fixed and stable profits, such as Morabehe bonds, leases, Salm, and Estesna, and cooperative contracts do not have definite profits, and include bonds of participation, Profit and loss sharing, leasing a farm and Sharecropping (Mahmoodi, 2016)

In the Islamic banking system, a part of savings deposits is considered as "savings deposits" of Qrz-al-Hassaneh or interest free deposits. These deposits consist of sums paid by the depositors to the bank and, in fact, they account for them and have the right to withdraw a certain amount of their account at any time (Akbariyan, 2003).

Borrowing means cutting and cutting off, and giving loans that are given to another, subject to the return of the loan. Borrowing is considered as one of the Islamic contracts in the context of the transactions of jurisprudence deals and various definitions are expressed for it. Of which, they all refer to the meaning of the term borrowing, that is, a financial asset to another property or to guarantee the replacement of that property.

The use of interest-free to finance, whether in the Islamic banking system or individually by individuals, occurs when a borrower does not have the ability to repay profits. Therefore, if the borrower has an income for the borrower, because the borrower is not required to pay the rate of interest, all the proceeds from the

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

loan remain for him and, in general, he will improve the income situation of the group of society. Therefore, Qur'd-al-Hassaneh as one of the proper tools for implementing the general methodology of "prohibition of usury" can play an effective role in reducing inequality in income distribution in the non-recruiting economic system (Akbariyan, 2003).

Literally, waqf means stopping and the free disposal of its benefits. It seems that an economic definition can be considered for waqf. The economic definition of waqf can be defined as a change in the use of resources, from the current generation consumption, to a productive investment that generates services or income for future generations Hence, the development of waqf, as a private (non-governmental) institution in the Islamic economy, on the one hand, has led to an increase in savings and a reduction in consumption, and on the other hand, these savings can ultimately become capital. Due to its donation nature, Wagf institution also strengthens the social foundations and cooperative morale of the society, which itself will lead to the promotion of social capital and increase the efficiency of the whole economy (Bakhtiari, 2002).

To explain the economic dimension of the waqf, it can be redefined in another way: the transfer of cash (or other resources) from the consumption sector, and their investment in productive assets that benefits or income for future consumption for individuals or groups. With this definition, capital or assets are devoted in various ways for various purposes such as religious, therapeutic, productive activities, and other uses. An endowed capital or asset can be used in two ways: first, to provide services for the use of a group of people (such as the construction of a hospital, mosque, etc.), and the second as a productive capital (such as a production plan) for the production of goods in which the market is sold.

Based on these bases, the fundamentals and economic benefits of an endowment entity appear. On the one hand, the expansion of the endowment means increased reserves and reduced consumption (a phenomenon that has been under-emphasized in Islamic societies largely). In other words, these reserves can be converted into capital that can produce social services and goods. In addition, the development of waqf, which unites with the promotion of altruism and the nation's culture, will strengthen the foundations of society and the collective feeling of the growth of social capital and will have a profound effect on the production of the entire economy (Fazeliyan et al., 2008).

Some authors have emphasized on the role of Waqf in urbanization and shaping the cultural, social, and economic structure of Iranian cities as one of the space-generating forces, facialists and the physical environment of cities. Reimon believes that Waqf is a significant topic in shaping the city's space organization. Waqf, based on the ascetic intention to allocate public funds for religious, charitable or social purposes, is permanent, non-marketable, and saleable capital that is used solely to perform good deeds. He identified two types of waqf in the Arab-Islamic lands: first, the general waqf; all the income of the endowments is spent entirely on charity with generous public works. The second is the one in which he initially paid some of the income of the endowment between the benefactor and after him to the successors appointed by him in the document and then at the last stage for the charity (Shahabi, 2004).

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

Although waqf has focused on a particular direction over time, and the donator has been guided along the same path, the study of experiences in the waqf field shows that, in a few cases, the focus has been on the city, and the facilities and needs of the urban community has been targeted in such a way that the removal of these endowments from the cities gives them another identity. With a quick look at the physical and body texture of Iranian cities, many urban elements that play a major role in the performance and urban life, it can be seen that the waqf element has had a significant role. Many of the infrastructure and superstructure facilities in the biological complexes were created by the people without the governments having a duty to create them.

Therefore, in addition to being socially and economically important in daily life and urban activities, waqf has been of great importance in the formation and development of urban public spaces (Mahdinejad & Moghimi, 2017). In such a way that cities were integrated not only socially, culturally, and economically, but rather in terms of structure, a kind of continuity and spatial unity between different regions and neighborhoods of the city. If public spaces, where are formed in almost all of Iran's cities by devotion, are left to be a collection of dwellings, commercial centers and, in general, private spaces that are civic, dissimilar, discrete, and irrelevant. The public spaces are the connecting factors the elements of the city forming each other.

Participation

Participation means the use of personal resources in order to participate in a collective action (Mohseni & Jarallahi, 2012). Participation is collective, conscious, and voluntary action that involves citizens interfering in public affairs, at different levels of administrative and political decision-making, and casting votes in the fund until direct assistance to meet social needs, as well as people's involvement in the functioning of organizations whose work life depend on it. In addition to the concept of participation influences people's engagement in religious and non-religious organizations, associations and movements of all kinds that social life, but not directly related to the distribution of power, and movements that affect private life, but it includes movements affecting private life, but not directly related to economic goals (Shool, 2017).

4- Research Methodology

This study is carried out in two statistical population of Mashhad citizens, residents and owners around Holy Shrine and pilgrims and tourists of this city. In order to select the samples, simple random sampling method is used. For the sample size, the Cochran rule will be used.

$$n = \frac{N.(Z_{\frac{\alpha}{2}})^2.p.q}{(N-1)e^2 + (Z_{\frac{\alpha}{2}})^2.p.q}$$

In this formula, n is the sample size, N is the total population, $Z\propto/_2$ is the confidence coefficient used to determine the sample size, P the ratio of success (the hypothesis is correct), q the ratio of the failure, and e is the estimated sample error.

In this study, the sample size is 240 people who are from the population of Mashhad residents and owners around Holy Shrine, pilgrims and tourists of this city.

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

The main question of the research is whether it is possible to use the publication of Waqf and interest free bonds in financing public spaces in the field of direct and indirect interference of the area or not.

This question has been examined in the form of three sub-questions that are;

1) Is there willingness for citizens and pilgrims to participate in these methods?

2) How much is the willingness to pay citizens and pilgrims to provide public spaces within the framework of Islamic methods?

3) What are the social-economic factors affecting the willingness of citizens and pilgrims?

The Conditional Valuation Method will be used to determine the willingness to pay citizens and pilgrims in the form of certain financing methods for the welfare of the public spaces in the context of the holy shrine. Direct approach to estimate the rate of willingness to pay is called a conditional valuation method, which is usually done using a questionnaire. Descriptive statistics were used to analyze the data obtained from field survey based on completed questionnaires. The CVM method is based on the simple ideas that if you want to know how much you want to pay people for some public goods around them, one can easily ask people. The conditional term is used because one has to put himself in the position of a hypothetical market.

The steps taken in this study to measure the willingness of people to finance the worn out texture around the Holy Shrine are as follows:

1. Identify the variables that may affect the participation or non-participation of individuals

2. Determine the proposed amounts for waqf and interest-free bonds in the conditional valuation questionnaire based on expert opinions

3. Identify respondents to be considered, including the sampling process used to select respondents

4. Design and implementation of the questionnaire through personal interviews

In this study, the validity of the questionnaire was reviewed by experts in the field of urban economics and was approved after the proposed amendments. The reliability of the questionnaire was measured by Cronbach's alpha test. This method shows the internal coordination of the measurement tool in a questionnaire that is designed as a Likert scale and answers are multi-choice. Cronbach's alpha in this study is 0.76, which confirms the reliability of the questionnaire.

Analysis of the results of individualized responses collected to estimate the values of groups affected by environmental change.

The usual method is to make a suggestion and increase the proposal so that we can get a negative answer. In some studies, a number of observations are eliminated due to non-participation (for example, unwilling to pay observations), and this leads to bias in the results, while these observations have similar conditions for participation. From econometric perspective, such models have two types of errors. First, the error due to the non-randomness of the sample and the second error of the same assumption of the variables that determine the individual's decision to participate and those that affect the level of participation after the initial decision.

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

In other words, the decision to participate in the improvement of the eroded tissue takes place in two stages: the first stage of decision making for participation or non-participation, and the second stage of participation. The effective factors on initial decision-making can be different from the factors affecting the second stage. One-step in knowing the decision is not identifying the factors that make it impossible to pay. For this reason, Tobit considered both sets of observations and, on the one hand, studied factors affecting participation and, on the other hand, it examines effective factors on the levels of participation. Heckman proposed a two-stage estimation of the Tobit model to solve the problem of the second error.

Assuming that Y^* is the dependent limited variable, and Y^*_i is the amount of willingness to pay by i-th individual with the features and characteristics of X_i, in which β: $K\times1$ the vector of the parameters to be estimated X_i: the vector of independent variables ($N\times K$), including socioeconomic and environmental variables. N: The total observation that contains N_0 is less than L and N_1 is more than zero. Ui: error term $u_i \sim N(0,\sigma^2)$ and L: The threshold of censorship is that the dependent variables are visible at the top and visible in less than that.

With a lower limit level such as L, where L can have different values for each of the observations, if the values are greater than L with Y, the Tobit econometric model structure is expressed as follows:

(1)

$$\begin{aligned} Y_i^* &= \beta' X_i + U_i && i = 1,\ldots, N \\ Y_i &= \beta' X_i + U_i && Y_i^* > L \\ Y_i &= L && Y_i^* \le L \end{aligned}$$

The dependent variation of Y_i, which is a random variable, has the following probability distribution:

$$P(Y_i > L) = 1 - P(Y_i = L) = F(\beta' X_i) \quad (2)$$

$$P(Y_i = L) = P(U_i < \beta' X_i) = 1 - F(\beta' X_i) \quad (3)$$

In which P represents the probability distribution and F (.) The densities function of error term.

In this study, the willingness to pay for public spaces will be considered as a dependent variable. In this case, the willingness to pay zero is zero and the willingness to pay more than zero is considered equal to the observed value.

Given that the variable Y is a random variable, the fractional component is also a random variable cut off. The probability distribution function for a random variable is calculated as follows:

$$F(Y_i - \beta' X_i) = F(U_i) = P(Y_i > L) = F(Y_i | Y_i > L) \quad (4)$$

Assuming that u_i is normal, equation (4) will be in the following form:

$$F(Y_i - \beta' X_i) = F(U_i) = (2\pi\sigma^2)^{-1/2} \mathrm{Exp}\left[-\frac{(Y_i - \beta' X_i)^2}{2\sigma^2} \right] \quad (5)$$

Where σ^2 is the variance of the error term and π is the constant value.

By definition, the likelihood function is obtained from the Multiplication of probability distribution functions of both sets of observations:

$$L = \prod_0 (1 - F(.)) \prod_1 (2\pi\sigma^2)^{-1/2} \mathrm{Exp}\left[-\frac{(Y_i - \beta' X_i)^2}{2\sigma^2} \right] \quad (6)$$

In the above relation $\prod_1$, $\prod_0$ are the Multiplication of observation for which Y_i is smaller and larger than the lower limit L, respectively. The logarithmic form of the above relation, which estimates the compatibility of the Tobit pattern, is as follows:

$$\log L = \sum_0 \log(1 - F(.)) \sum_1 \log(2\pi^2\sigma^2)^{-1/2} - \sum_i \frac{1}{2\sigma^2} (Y_i - \beta X_i)^2 \quad (7)$$

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

Where $\sum_{1}$, $\sum_{0}$ the observation on N_0 is less than L and N_1 is greater than L, respectively. In the maximum likelihood method, the parameters β and σ are estimated by maximizing the relation (7) relative to each of them.

$$\beta_{ML} = (Z_1'Z_1)^{-1}Z_1'Y_1 - \sigma(Z_1'Z_1)^{-1}Z_0'\gamma_0 \qquad (8)$$

$$\beta_{ML} = \beta_{ols} - \sigma(Z_1'Z_1)^{-1}Z_0'\gamma_0 \qquad (9)$$

Where Z_1: K × N_1 matrix of X_i for Y greater than L, Z_0: K × N_0 matrix of X_i for Y smaller than L, Y_1: 1 × N_1 vector of Y for observations larger than zero And γ_0: is obtained from the opposite relation and for the observations of Y_i less than L is obtained.

As Tobit has shown, the expected values of Y are obtained from the following equation:

$$E(Y_i) = X_i\beta\Phi(I) + \sigma\varphi(I).....I = 1,2,..., N \qquad (10)$$

This relation is defined for observations greater than L as follows:

$$E(Y_i \mid Y_i > L) = X_i\beta + \sigma\frac{\varphi(I)}{\Phi(I)} \qquad (11)$$

McDonald and Moffit have shown that the effect of a change in a variable, such as X_j, is obtained on the expected value of the dependent variable from the following equation:

$$\frac{\partial E(Y_i)}{\partial X_j} = \beta_j\Phi(I) \qquad (12)$$

Where β_j is the coefficient of the variable X_j and $\Phi(I)$ is the probability that the observations are less than L in total observations greater than L. The total effects reflected in relation (12) are as follows:

$$\frac{\partial E(Y_i)}{\partial X_j} = \Phi(I)\left(\frac{\partial E(Y_i \mid Y_i > L)}{\partial X_j}\right) + E((Y_i \mid Y_i > L).\left(\frac{\partial\Phi(I)}{\partial X_j}\right) \qquad (13)$$

McDonald & Moffit believe that the first component to the right of the effect of the change in X_j on the surface of the variable Y for observations greater than L is multiplied by the probability that these categories of observations are enclosed in the sum of observations above L and the second component to the right of the effect of the change in X_j expresses the probability of joining observations less than L to sum of observations above L in the mean of observations above L. In Equation (13), partial derivatives are defined as:

$$\frac{\partial\Phi(I)}{\partial X_j} = \Phi(I)\frac{\beta_j}{\sigma} \qquad (14)$$

$$\frac{\partial E(Y_i \mid Y_i > L)}{\partial X_j} = \beta_j\left[1 - (I.\varphi(I)/\Phi(I)) - (\varphi(I)^2/\Phi(I)^2)\right] \qquad (15)$$

Equation (14) shows that using estimated parameters of the Tobit model (β and σ) it is possible to obtain the effect of the change in each of the variables on the change in the probability that a view less than L will be greater than L to be checked. Equation (15) also shows that by modifying the estimated parameters of the Tobit model, one can calculate the effect of the change in each of the independent variables on the level of the dependent variable for observations that are above the censorship level.

The Tobit model utilizes both groups of citizens and pilgrims (citizens and pilgrims willing to pay and the opposite group), eliminates the first type error (non-randomness of the sample). However, the probability of a second type error (the lack of a distinction between the factors affecting the willingness to pay and the factors affecting the willingness to pay) remains valid, as the distinction between the two groups of factors affecting the willingness to pay and the factors affecting the amount there is no willingness to pay.

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

Hackman Two-Step Estimation Method: Hackman has proposed a two-stage method to estimate Tobit model and to solve the second problem. Hackman two-step method is based on the assumption that a set of variables can affect the decision to participate in the desired activity, and another set of variables can measure the amount of activity to be performed after making a decision initially affected. Therefore, two different sets of variables can be entered in the Toboit model. In Hackman method, to determine the effective factors on each of the two sets of variables mentioned above, the Tobit model is broken up into two Probit and a linear regression models. Factors that can influence citizens' decision to act (paying) for public spaces in the Samen district are included as independent variables in the Probit model and factors that can affect the willingness of citizens and pilgrims to pay for public spaces in the area Samen are effective in the set of independent variables of linear regression.

The dependent variable in the Probit Model consists of a two-term variable with values of 1 and zero. That is, the dependent variable is a vector of zero and one, in which the number one is the decision to perform the activity and zero is the notion of the decision not to perform that activity. This variable is constructed from the dependent variable in the Tobit Model**.** For this purpose, for Yi whose value is greater than zero, the number 1 is set and for the Yi whose value is zero, it remains the same zero. So, the independent variable of the Probit Model is constructed for all observations. According to the above explanations, the two patterns of the Tobite models are shown as follows:

Probit Model (16)

$$Z_i = B'X_i + V_i \qquad i= 1,2,3,\ldots,N$$

$$Z_i = 1 \qquad \text{if} \qquad Y_i^* > 0$$

$$Z_i = 0 \qquad \text{if} \qquad Y_i^* \le 0$$

Linear Regression Model (17)

$$Y_i = B'X_i + \sigma\lambda_i + e_i \qquad i= 1,2,3,\ldots,N$$

In the above, B and σ are parameters. λ_i is Inverse Mills Ratio, and e_i, V_i are error terms. In the first step of the two-stage Hackman method, the Probit Model is estimated using the maximum likelihood method. At this stage, the role of effective factors on the decision of citizens to pay for the public spaces of Samen district and the amount of influence each is determined by calculating the change in the probability of entering the payment activity for the public spaces of the Samen district.

In addition, the inverse Mills ratio variable that is,

$$\lambda_i = \frac{\phi(\beta' x_i / \sigma)}{\Phi(\beta_x' / \sigma)}$$

Using estimated parameters of the Probit Model is constructed for all $Y_i>0$ observations. In the second step of the two-step Hackman method, the regression model is used to estimate observations that Y_i is greater than zero. In this stage, the inverse Mills ratio variable is added to the set of independent variables in the regression model. If the coefficient of this variable is statistically greater than zero, the deletion of zero observations from the set of observations will lead to the bias of the estimated parameters of the pattern, and if the coefficient of this variable is statistically zero, deletion of the zero observations, although leading to the variation of the parameters; but it will result in the loss of performance. In addition, as shown by Green, the presence of an invers Mills ratio in the linear

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

regression model eliminates the existence of the heterogeneity variance of the original model t and allows the use of the OLS estimator. Therefore, by two steps in estimating Tobit model parameters, factors that affect payment decision for public spaces can be distinguished from factors affecting the payment rate for public spaces in Samen district. As a result, the role and amount of each are better in dual groups.

In estimating the Tobit Model, R^2 cannot be a reliable criterion for good results. Therefore, the statistic used in this model is r^2, that is, the square is the correlation coefficient between the actual values and the predicted values of Y_i.

The more r^2 closer to one, the result will be better. Some variables in the two-stage Hackman model include personal factors (age, income, education, residence, etc.), economic factors and beliefs (belief in waqf and charity, social factors such as social trust, social awareness and information, and related questions according to the visionary and the benefactors of urban management, and through the collection of questionnaires and interviews with individuals.

Definition of Variables

The dependent variable in the first model is participation or non-participation, which is zero and one. In the second model, the dependent variable is the amount that the respondent is willing to buy the waqf bonds.

The explanatory variables in both models are:

Individual features: age, gender, education, marriage

Economic features: income, expenditure, residential ownership

Social characteristics: household size, social consciousness variable using Trumsu questionnaire (TSIS), social trust variable (trust in urban and local institutions)

Attitudinal Characteristics: Sense of belonging variables using Brew, Beatty, Watt (2004), belief variable using belief in waqf and heavenly reward questionnaire

5- Results

In order to estimate the willingness to buy waqf bond to improve the worn out texture around Holy Shrine, two groups of pilgrim and adjacent people were interviewed. Out of 257 questionnaires, 17 questionnaires were removed due to lack of understanding of the questions and incompleteness and the statistical analyzes of the variables were done with 240 questionnaires.

According to descriptive studies, 37% of respondents were female and 63% were male. The average age of respondents is 40, their average education was bachelor, the average number of households was 4.

43% of the respondents (103 respondents) did not want to participate in the purchase of bonds. 67% of those who did not want to participate had objectionable opinions and believed that municipality and Astan Qods were responsible for the improvement of Holy Shrine as they had sufficient income. Real zero responses are also affected by the lack of prioritization of buying these bonds (11.6%) from the responsive view and the dominant motive for income constraints (18.4%). Reasons for respondents' unwillingness to participate in Table 1 are presented.

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

Table1. Reasons of unwillingness to buy waqf bonds

Response status	Reasons of unwillingness to buy	Number	Percentage
The objectionable zero response	Improvement of the worn out tissue is the responsibility of the government, municipality or Astan Quds.	41	39%
	They do not trust the municipality and other city authorities.	29	28%
The Real Zero Response	There are other priorities for giving and spending.	12	12%
	Due to poor economic conditions and low income, they cannot participate.	19	18%
Unreason Zero response	They did not explain why they did not respond to the proposed amounts.	2	2%
Sum		103	100%

Of the valid responses, 137 respondents (57%) were willing to buy bonds. The reasons for the willingness of people to buy waqf bond showed that the motivation of the largest number of respondents for waqf, belief in waqf as a means for the forerunner, the satisfaction of Imam Reza and serving pilgrims by improving the surroundings of the shrine (Table 2).

Table2. Reasons of willingness to buy waqf bonds

Reasons of willingness to buy waqf bonds	Number	Percentage
God's Satisfaction and the Second Reward	69	50
Serving Imam Reza pilgrims	36	27
Helping to improve the environment around the Shrine and ease of travel	32	23
Total	**137**	**100**

As discussed in the previous sections, Hackman two-stage method has been used to explain the effective factors on people's participation in the financing of worn out tissue. In this section, we first examine the results of the first phase, which illustrates what influences on how people contribute or not, and then, in the second phase, Hackman examines the factors that influence the level of participation of individuals (the rate of willingness to pay).

In Table 3, the estimated effect of the Probit Model for the variables under consideration is shown. The results of model estimation show that the variables belief in waqf, trust in institutions, economic status and social awareness at the level of 0.01 and with confidence of 99%, belonging and information in the level of 0.05 and have a positive and significant effect on willingness to buy waqf bonds with 95% confidence.

Table3. Results of estimating the Probit Model for the willingness to buy waqf bonds

Variable	Coefficient	Z statistic	P statistic	
X1 Belief In Waqf	0.11	5.80	0.000	Coefficient of determination = 0.40
X2 Trust in Institutions	0.13	4.70	0.000	Maximum Likelihood Statistics = -97.80
X3 Information	0.04	1.99	0.047	
X4 Economic Situation	0.31	6.23	0.000	P statistic= 0.000
X5 Feeling of Belonging	0.05	2.26	0.024	
X8 Social Awareness	0.13	3.39	0.001	
X10 Age	0.01	1.46	0.015	
X12 Education	0.17	1.74	0.082	

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

The level of education at the level of 0.10 can be said to be effective and the variables of age, gender, marital status and household size have not had a significant effect on the willingness to buy bonds.

The results of the second stage estimation of the Hackman method by conventional least squares method are presented in Table 4. The significance of the inverse desire ratio is that the effective factors on the decision to desire to pay are not identical with the determinants of the rate of willingness to pay and in fact confirm the use of the Hackman two-step approach in this study. In addition, the presence of inverse desire ratio in the linear regression model eliminates the existence of heterogeneity of the initial model variance and makes it possible to use the linear pattern.

The variables of belief in waqf and feeling of belonging to the city at the level of 0.01 and confidence of 0.99 and economic condition with confidence of 0.95 and at the level of 0.05 have a significant effect on the amount of willingness to pay (the stage of action after the decision). Variables such as social trust, information, age, gender, and education do not have a significant effect on the rate of willingness to pay.

Table4. Step 2: The results of estimating the linear regression model for the rate of willingness to buy waqf securities

Variable	Coefficient	t statistic	prob
Belief in Waqf	0.17	2.60	**0.01**
Trust in Institutions	0.09	1.36	0.18
Information	0.04	0.98	0.33
Economic Situation	0.35	-2.47	0.002
Sense of Belonging	0.10	2.79	0.001
Social Awareness	0.11	-1.66	0.10
Age	0.03	1.57	0.12
Inverse Mills Ratio	-1.73	1.67	0.09
R2=0.325			Prob=0.000

Using the estimated characteristics of the linear regression model and the mean of independent variables in the model, the average willingness to buy the wafers to improve the environment around the shrine for each respondent was 1,660,000 Rials.

The results of interviewing the willingness of interviewees to participate in Qard al-Hasan[1] (interest-free) indicate that 52 percent (114) did not want to participate in Qard al-Hasan.

The variables of belief in Qard al-Hasan, trust in institutions and social consciousness at the level of 0.01 and with 99% confidence have a positive and significant effect on the willingness to buy. Education, economic status, age, gender, marital status, sense of belonging and information and household size did not have a significant effect on the willingness to buy a loan (Table 5).

1- It is extended by a lender to a borrower on the basis of benevolence. Al-qard, from a shari'a point of view, is a non commutative contract, as it involves a facility granted only for the sake of tabarru' (donation).

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

Table5. Results of estimating the Probit Model for the willingness to participate in Qard al-Hasan

Variable	Coefficient	Z statistic	P statistic
X11 Viewpoint to Qard al-Hasan	0.61	5.64	0.000
X2 Trusting Local and Social Institutions	0.66	7.3	0.000
X3 Information	0.07	0.37	0.715
X4 Economic situation	0.05	1.43	0.154
X5 Sense of belonging	0.01	0.78	0.43
X8 Social Awareness	0.13	3.39	0.001
X10 Age	0.03	1.38	0.074
X12 Education	0.145	1.55	0.120
Fixed Value	3.19	0.83	0.000

The results of the second stage estimation of the Hackman method by conventional least squares method are presented in Table 6.

The significance of reverse the desire ratio is that the factors affecting the decision to desire to pay are not identical with the determinants of the rate of willingness to pay and in fact confirm the use of Hackman two-step method in this study. In addition, the presence reverse desire ratio in the linear regression model eliminates the existence of heterogeneity of the initial model variance and makes it possible to use the linear pattern. Economic status, social trust and sense of belonging to the city at the level of 0.01 and confidence of 0.99 and view towards Qard al-Hasan with confidence of 0.95 and at the level of 0.05 have a significant effect on the amount of willingness to pay (step action after decision). Variables such as information, age, gender, and education do not have a significant effect on the amount of willingness to pay.

Table6. Second step, the results of estimating the linear regression model for the rate of willingness to buy Qard al-Hasan securities

Variable	Coefficient	T statisic	prob
X11 The view towards Qard al-Hasan	0.19	1.78	0.06
X2 Trust in local and social institutions	0.26	1.36	0.02
X3 Information	0.04	1.23	0.22
X4 Economic Status	0.13	-3.47	0.00
X5 Sense of Belonging	0.67	2.79	0.00
X8 Social Awareness	0.11	-1.66	0.10
X10 Age	0.03	1.57	0.24
Inverse Mills Ratio	-1.73	1.67	0.041
R2=0.325			Prob=0.000

Using the estimated characteristics of the linear regression model and the mean of independent variables in the model, the average willingness to participate in the loan for improving the environment around the shrine for each respondent was 7,450,000 Rials.

6- Conclusion and Discussion

The results showed that of 240 valid respondents, 43% of respondents were reluctant to engage in buying waqf bonds, and 57% of respondents tended to buy waqf bonds.

The results of model estimation show that the belief in waqf variable, with a confidence of 99%, affected the decision

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

on participation as well as the level of participation. The economic situation is effective with 99% on participation decision and with 95% confidence in the level of participation. However, the sense of belonging to the city of Mashhad, with a confidence of 99% on the participation rate and 95% confidence, influenced the decision to participate. The average willingness to buy waqf to improve the environment around Holy Shrine for each respondent was 1,660.00 Rials.

Moreover, the result show that out of 239 valid respondents, 52 percent of respondents were reluctant to participate in purchasing interest free bonds, and 48 percent of respondents tended to buy the interest free bonds.

The results of the model estimation show that the variable of belief in interest free, with 99% confidence, affects both the decision on participation and the level of participation. The economic situation is effective with 99 percent confident on the participation decision and 95 percent confidence on the level of participation. Nevertheless, the sense of belonging to the city of Mashhad, with a confidence of 99% on the participation rate and 95% confidence, influenced the decision to participate.

Belief in interest free, trust in institutions, and social awareness with 99% confidence have a positive and significant effect on the willingness to buy interest free bonds. The variables of education level, age, gender, marital status and household size did not have a significant effect on the willingness to buy and the willingness to pay. The average willingness to buy interest-free bonds (Qard al-Hasan securities) for each respondent was 7,450,000 Rials.

According to the results of this study, there is the capacity to utilize the interest-free and waqf bonds for financing the worn-out texture surrounding the Holy Shrine of Imam Reza.

Nearly half of the pilgrims and adherents of Holy Shrine have been willing to buy waqf bonds and more than half of the pilgrims and adherents of Holy Shrine have been willing to buy interest-free bonds. The majority of those who responded positively were those who were familiar with interest free bonds, as well as the problems of worn out tissues, and they were interested in serving the pilgrims of Imam Reza. In addition, the greater the belief in their impact, the probability of participation and the rate of willingness to pay for individuals has also increased. Therefore, it is possible to increase the willingness to participate by familiarizing the people with the subject of waqf and its effects in the urban and social environment. In addition, lack of trust of urban and local institutions has been a factor in the lack of participation of individuals. Creating trust in urban management among people in their contribution to improving the urban environment is an essential step. Economic status and income level of people have a significant positive effect on their participation. Therefore, to use financing capacities with Qrz-al-Hassaneh and Waqf, it is better to pay more attention to middle-income and high-income groups. The sense of belonging to the city and the environment is another variable that has shown a significant effect on the participation of the people. Stimulating the sense of belonging to the living environment for the inhabitants and the sense of spiritual

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

belonging to the pilgrims can increase their participation rate.

* This paper is based on the thesis of Dr. Morteza Jafarzadeh Najjar entitled "Determining and Providing Appropriate Financing Model in the Context of the Imam Reza holy Shrine Emphasizing on Financing Public Spaces and Residential Use."

7- Reference

Akbariyan, R. (2003). An analysis of the concepts of interest and deposit in economics and the theory of Islamic economics. Third Islamic Biennial Conference. (In Persian).

Asgari, N., Zamanzadeh, S., & Chavoshi, K. (2014). Methods of Financing Housing Renovation in Urban Old Structures (Case: Tehran City). *Journal of Urban Economics and Management, 3*(9), 87-103. (In Persian).

Babayieghdam, F., Voysirad, F., Yarihesar, A., & Heydari, V. (2015). Evaluating the Effective Factors on Public Participation in Organizing Urban Texture Emphasizing on Social Capital (Case of Jajin, Ardabil). *Journal of Urban Structure and Functional Studies, 3*(9), 65-90. (In Persian).

Bakhtiyari, S. (2002). Endowment and its role in economic and social development. Journal of Eternal Legacy, 10(39-40). (In Persian).

Brew, C., Beatty, B., & Watt, A. (2004). Measuring students' sense of connectedness with school. In Paper presented at the Australian Association for Research in Education Annual Conference, Melbourne.

Esmaeilzadeh, H., Salehpoor, Sh., & Esmaeilzadeh, Y. (2014). Effective Factors on Participation in Organizing Urban Textured Tissues (Case: Southern Dolatkhah Area). Journal of Geography, 12(43), 127-141. (In Persian).

Fazaliyan, S.M., kaqvand, M., & Esmaeili, H. (2008). Providing a Waqf Financing Model Using the Publication of Islamic Debt Consolidation. Rasekhoon. (In Persian).

Ghorbani, R., & Azimi, M. (2014). Investigating the Impact of Municipality's Income Structure on Urban Development Using Correlation Coefficient and Factor Analysis, Mashhad Case Study. *Quarterly Journal of Urban Planning and Research, 5*(18), 125-132. (In Persian).

Hassanain, K. M. (2015). Integrating Zakah, Awqaf and IMF for Poverty Alleviation: Three Models of Islamıc Micro Finance. *Journal of Economic and Social Thought, 2*(3), 193-211.

Hosseinabadi, M., & Taghvayi, A. (2012). Evaluation of financing methods in urban renewal projects, case study: Hamzeh Abad neighborhood located in Tehran district 20. *Quarterly Journal of Urban Management, 10*(29), 235-246. (In Persian).

Jafarzadeh, M., & Jannati, M. (2011). Financing through the publication of bonds; Opportunities and Threats. Case study of the renovation and improvement of the textured tissue around the Holy Shrine of Imam Reza (AS). First Conference on Urban Economics of Iran. (In Persian).

Khaksari, A. (2004). Economic revival of city centers and old textures. Seven Cities Journal, 5(15), 125-133. (In Persian).

Klijn, E. H., & Teisman, G. R. (2003). Institutional and strategic barriers to public—private partnership: An analysis of Dutch cases. Public money and Management, 23(3), 137-146.

Mahdinejad, J., & Moghimi, M. (2017). The Impact of Waqf on the Formation of Schools in Iran during the Islamic Period. *Quarterly journal of the world, 7*(1), 49-57. (In Persian).

Mahmoodi, Sh. (2016). Investigating the financing of urban projects through lease SUKUK and related experiences. First International Conference on Urban Economics (with Resistance Economy Approach, Action and Implementation), Tehran. (In Persian).

MalekAfzali, A.A., & Moazeni, K. (2016). Ranking of sources for collecting

[DOR: 20.1001.1.23452870.1397.7.25.2.4]

sustainable revenues of the municipality of Tehran. First International Conference on Urban Economics (with Resistance Economy Approach, Action and Implementation), Tehran. (In Persian).

Moayedfar, R., Sameti, M., & Oloomi, S. (2013). Prioritization of Financing Methods in Urban Factors: (Case: Isfahan City). Quarterly Journal of Urban and Regional Studies and Research. (In Persian).

Mohseni, M., & Jarollahi, O. (2102). Social participation in Iran. Tehran: Aaron. (In Persian).

Musari, K. (2016). Economic Sustainability for Islamic Nanofinance through Waqf-Sukuk Linkage Program: Case Study in Indonesia. *International Journal of Islamic Economics and Finance Studies, 30*(70), 1-21.

Pencavel, J. (2013). 24. Worker cooperatives and democratic governance. Handbook of Economic Organization: Integrating Economic and Organization Theory, 462.

Shahabi, M. (2004). Theoretical Basis of the Impact of Waqf in the Formation of Urban Spaces. *Quarterly Journal of Geographic Research, 19*(1), 135-150. (In Persian).

Sharzeie, Gh., & Majed, V. (2011). Sustainable city financing; how to finance sustainable urban development. *Journal of Urban Management, 9*(special issue), 299-3016. (In Persian).

Shhol, A., Montazeri, M., Jaleh, M. (2017). The relationship between the motivation of public service managers and their assessment of citizenship participation with the mediating role of citizenship participation. *Social Sciences Journal of Islamic Azad University, Shoushtar Branch, 4*(11), 135-158. (In Persian).

[DOR: 20.1001.1.23452870.1397.7.25.2.4]