
Impact of *zakat* in alleviating rural poverty: A case study of Masjid Council for Community Advancement (MACCA) in Bangladesh

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Abstract - The Masjid Council for Community Advancement (MACCA) provided *zakat* to the rural poor in order to improve their living standard through accelerating income-generating activities. The prime objective of the study was to assess the impact of *zakat* on the living standard of the poor in terms of total household income, expenditure and saving. Primary data was collected from the households of Manikganj District of Bangladesh that received *zakat* under the Hasana program of MACCA. Using a simple random sampling technique 179 households were selected as the sample for this study. The weighted least square (WLS) technique was used for accessing the influence of the *zakat* fund on the total income, total expenditure, and total savings of the household. The study showed that the amount of *zakat* received by the beneficiaries did not have any significant influence in improving their income, expenditure and saving.

Keywords: MACCA, *zakat*, poverty, Bangladesh

1. Introduction

Poverty scenario of Bangladesh

A substantial section of the population of Bangladesh is not in a position to fulfill their basic needs such as food and shelter due to poverty. About 40% of the country's total population was in poverty and their per capita GDP was low, being estimated at about US\$621 (Bangladesh Economic Review 2009; 2010). Among the six divisions, the poverty rate was highest in the Barisal division and lowest in the Dhaka division (Bangladesh Economic Review 2009; 2010). The incidence of poverty is high in the rural population as compared to the urban population in Bangladesh. At the national level, rural and urban poverty were estimated at 43.8% and 28.4%, respectively (Bangladesh Economic Review 2009; 2010). There are innumerable reasons for such high poverty in Bangladesh. Sen (2003) identified several causes of poverty of rural households which were:

1. People living in the remote areas.
2. Unfavorable agricultural environment.
3. Lack of rural infrastructural facilities.
4. Illiteracy.
5. Lack of assets among the households.

Hassan and Khan (2007) observed several characteristics of poverty in Bangladesh such as:

- Rural people are more affected by poverty than urban people.
- Large families suffer more from poverty compared to small families.
- Poor people are generally landless and mostly work as agricultural laborers in the rural areas.
- Poor people lack infrastructural facilities and live in places where the probability of occurring natural hazards are high.
- Poor people utilize a major portion of their family income on food consumption.

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- Poor people have lack of physical and financial assets.
- Poor people have very limited access to public goods and services.

Such a situation is not desirable for any developing country. One of the major aims of the millennium development goals (MDGs) is to eradicate extreme poverty. In order to achieve this goal the government of Bangladesh (GOB) undertook several programs by implementing poverty alleviation projects with the assistance of donor agencies and NGOs. Consistent with the MDGs, the GOB had set a few major strategies in the Poverty Reduction Strategy Paper (PRSP) to fight poverty which were to:

1. Enhance pro-poor growth.
2. Encourage women empowerment.
3. Invest in human development.
4. Ensure social security.

Concept of Zakat system in Islam

Literally, zakat means blessing, purification, increase and goodness. It is so-called as it blesses the wealth from which it is taken and protects it from misfortunes. In the Islamic philosophy, the term zakat is defined as “a pre-determined portion of the wealth taken from the wealthy persons of the Muslim society which is allocated to the poor by the Islamic law”. Zakat is considered to be one of the fundamental principles of Islam which every eligible Muslim is bound to obey. Zakat, for the eligible Muslim, is due once a year. There are some salient features of zakat system which are:

- Full ownership: implies that the owner should be fully capable of disposing of the property without being an object of contest by others. As zakat is considered a kind of ownership as regards the receiver, the giver must purely own it. Thus, no zakat is due on property which is not fully possessed.
- Growth of wealth: can be categorized as real growth and assumed growth. Real growth of wealth is that which is caused by its producing offspring, or through gain realized from trade. Assumed growth implies the capacity of property, such as gold, silver and currencies, to increase when exploited in trade. However, no zakat is due on properties that are not liable to real or assumed growth.
- Minimum wealth requirement or nisab: zakat is not applicable for a person whose wealth is below the minimum standard set by Islamic law. Zakat is due upon a person only if he possesses the following amount of wealth: nisab for gold is 3 ounces or 100 grams; for silver it is 21 ounces or 700 grams; for cash, it is an equivalent of the value of the nisab in silver or gold; for merchandise and inventories it is the same situation as for cash.
- Stocks and shares are also considered the same as cash and inventories. However, tools, equipment, and machinery used in business are excluded from zakat deduction.
- Exceeding the basic needs: properties which are owned to meet one's basic requirements such as houses, work tools, machines for industry, means of transport, and furniture are excluded from zakat.

The amount of money which is kept to meet the basic requirements is also exempted from zakat.

- The lapse of a full year: a property is not counted for zakat until after the lapse of a full lunar year from the day it reaches the nisab; however, this condition does not apply to fruit and other crops.
- Public wealth, endowments and charitable properties: zakat is not due on public wealth since it is common property. Likewise, zakat is not due on endowments and money dedicated to charitable purposes, such as charitable associations and funds, so long as they do not belong to a specific owner.

Masjid Council for Community Advancement (MACCA)

The Masjid Council for Community Advancement (MACCA) is a faith-based development, humanitarian and campaigning organization in Bangladesh. It has been working in the country for the purpose of achieving the goals of reducing poverty, inequality, extremism, and establishing social justice. MACCA is led by the chairman under whom four directors are appointed to operate all the programs of MACCA. A technical advisory team is also appointed to provide the necessary technical advice and support to the chairman. Registered with the Registrar of Joint Stock Companies of the Government of the People's Republic of Bangladesh under the Societies Act, MACCA started its interventions in 1999. Soon after, MACCA obtained registration from the Directorate of Social Welfare and NGO Affairs Bureau. The Head Office of MACCA is located in Dhaka, Bangladesh and there are two regional offices in the Manikganj and Faridpur districts. Currently, MACCA operates its program in the seventeen districts of Bangladesh. These programs are being operated with the support of GOB and donor agencies like the World Bank and USAID. A wide range of programs have been undertaken by the MACCA, including:

- Development program: mosque-based program; income-generating program; gender equity and women empowerment program; AIDS/HIV prevention program; integrated development education and livelihood (IDEAL) village project.
- Complementary partnership for development: development education program for faith leaders; water and sanitation project; pure drinking water supply project.
- Humanitarian and emergency program: children's development program and free Friday clinic.
- Research, advocacy and campaigning program: support for election commission; promotion of interfaith cooperation; center for research on society and development.

Hasana program of MACCA

The Hasana approach is a zakat-based integrated development program. The concept evolved from the noble virtue of fellow-feeling where each individual must think of his neighbors. The Hasana model supports a group-based participatory approach. A “Hasana group” consists of 20–30 people from the same locality, each representing a hardcore poor family. The prime goal of the Hasana program is to ensure sustainable employment

opportunities for the poor and to enhance their capability in pursuing income generating activities (IGAs). The vision of the program is to solve community problems through community leadership and preferably through community resources. Poor and hardcore poor families are the target group of this project. A few criteria must be met to be an eligible member of a Hasana group:

1. People having an income of less than 100 taka per day.
2. Households having persistent food insecurity.
3. Households having no sustainable job opportunities.
4. Households having no arable land excepting the homestead or no arable land.

The Hasana program is being implemented in the three Upazillas (lowest administrative unit) namely Chandirchar, Partilli-Chartilli and Nobogram under the Manikganj district among the 1045 poor households, which comprises 29 Hasana groups. The Hasana program has various development components like health, sanitation, education, income generation, capacity building, and leadership building. Resourceful community people contribute to financial support of the project in the form of *zakat*. MACCA follows several strategies to implement its programs:

- Establishing a community-based development group known as a Hasana group involving poor and hardcore poor.
- Transferring ownership of capital in the form of *zakat* among the groups for pursuing IGAs.
- Providing training facilities to the group members through the Hasana program for operating IGAs efficiently.
- Ensuring effective community ownership in capital formation, program implementation, and monitoring.

Outline of Problem

The prime objective of the GOB is to alleviate poverty. Therefore, the government has emphasized rural financing as poverty is higher among the rural population than their urban counterpart. It goes without saying that no significant development is feasible in Bangladesh without the overall economic development of the rural people. Although the GOB made attempts to provide financial support to the rural poor through commercial banking activities it could not achieve the desired outcomes due to poor cliental service and the requirement for collateral.

Commercial banks in the developing countries fail to cater for the credit needs of the poor because of the perceived high risks and high transaction costs associated with small loans and saving deposits (Coleman 2006). As a tool of poverty alleviation, the microcredit system was evolved in Bangladesh, which needed no collateral. One of the major objectives of microcredit program is that the program must reach the poor and the loan must bring net benefits to them and uplift their socio-economic condition. In fact, microcredit programs have failed to eradicate poverty completely among the rural poor in Bangladesh. Hassan and Khan (2007) mentioned that the microfinance program failed to meet the social needs and could not stop social inequalities. Evidence from Bangladesh shows that the microfinance program had a positive role in poverty

alleviation but the magnitude of the microcredit impact on the living standard (in terms of income) of the poor households was small (Mahmud 2010; Mahmud et al. 2007). The *zakat* system as a way of Islamic financing can be used as one of the strong weapons to combat poverty; it has been ignored by Western and Muslim thinkers (Hassan and Khan 2007). Following Islamic philosophy, to obtain *zakat* is a right of the poor from the rich of the society. This *zakat* system is based on highly ethical foundations. The main purpose of giving *zakat* is to attain the mercy of Almighty Allah. Therefore, it can be assumed that the risk of misuse of *zakat* money is much less than for any other financing system. Every year a huge amount of money is collected as “*zakat*”, which can be used for poverty alleviation programs. PRSP has increased external debt burdens and dependency on the donor countries while *zakat* funds can increase the potential of taxation of the government though improvement of productivity, employment and output (Hassan and Khan 2007). Nevertheless, in the PRSP, the GOB ignored the opportunities of utilizing *zakat* money as a poverty alleviation tool. Based on Islamic philosophy, MACCA has been implementing a poverty alleviation program by providing this *zakat* money to poor households. The poor have limited capital and a low level of skills to pursue income-generating activities. MACCA provides *zakat* (as one of the tools of poverty alleviation) along with training facilities to the rural poor in order to improve their living standard in terms of income, consumption, savings, and social awareness. MACCA supports the group-based development program for alleviating poverty. Through the Hasana Program, MACCA provided a huge amount of money as *zakat* among the poorest of the poor. This financial assistance is provided to the poor without collateral and at a zero interest rate. It can be hypothesized that by investing this *zakat* money in IGAs, the poor households would be capable of graduating from the vicious circle of poverty. So, the question arises as to whether this *zakat* money reaches the poor in improving their living standard. This study made a comprehensive effort to assess the *zakat* activities of MACCA as one of the tools of poverty alleviation. This study placed an emphasis on quantifying the impact of *zakat* on the living standard of MACCA beneficiaries in terms of household income, expenditure, and savings using an econometric technique.

2. Literature review

Role of rural finance in poverty alleviation

Rahman (2003) conducted a survey on the farmers of Bangladesh. The author examined factors determining the use of pesticides and farmers’ awareness of beneficial and harmful effects of pesticides. The author observed that, among the socio-economic variables, land ownership and agricultural credit were positively related with pesticide usage and further stated that increased access to agricultural credit would open up opportunities for diversifying crop production and increasing cropping intensity. The study showed that farmers’ awareness of the harmful effects of pesticides was not very strong. Awareness training for farmers on the harmful effects and proper handling and management of pesticides was suggested.

Zeller et al. (1998) conducted a study in Malawi to analyze the credit programs for the production of crops like tobacco

and hybrid maize. They observed that in the context of Malawi, households with small farm sizes and low risk-bearing ability were able to adopt capital-intensive crops, such as hybrid maize and tobacco, if policies improved their access to credit, and input and output markets. According to them, participation in the agricultural credit program substantially raised the cropping share for hybrid maize and tobacco. They observed that membership in the credit programs had sizable effects on crop income. Therefore, they concluded that an expansion of the existing credit programs could have beneficial effects on agricultural production and rural incomes. They also added that participation in the agricultural credit program was lower for households living in areas with higher variations in rainfall.

Ahmed (1984) examined whether lack of adequate finance was the constraint for the growth and extension of small-scale cottage industries (SCIs) in Bangladesh. The author found that inadequacy of credit was a critical constraint for the growth and sustained development of the rural SCIs. The author also indicated that rural entrepreneurs faced problems in accessing formal and informal credit markets due to stringent collateral requirements, complexities of official formalities and high monetary and non-monetary costs.

Rao (2003) conducted a study on microfinance institutions in India and Bangladesh. The author mentioned that microcredit programs can be viewed as an important component of rural development strategies for generating employment, microenterprise development, and in reducing poverty. According to the author, the microcredit program had mainly targeted the rural poor women because they were found to have minimum access to economic resources. The author also reported that the microcredit program had improved the social, economic, legal and political status of the rural poor women.

Pitt (2000) conducted a study on the group-based credit program in Bangladesh. The author examined the effects of the credit program on agricultural contracts and supply of agricultural labor. The author stated that microcredit programs had increased own-cultivation through sharecropping for male members. According to the author, the female credit effect was larger than for their male counterparts in increasing share-cropping. The author observed that the credit program had increased self-employment for both male and female borrowers.

Mahmud et al. (2010) conducted a study on the marginal and landless borrowers of the Agricultural Intensification and Diversification Project (ADIP) in Bangladesh, who took loans for fishery activities. The prime goal of the study was to measure the impact of the microcredit program on the households' total expenditure. The author found that the microcredit program failed to have a significant influence on the households' expenditure. The author also stated that the households' income, borrowers' education, training, distance of the rural market from the borrowers' dwelling place, expenditure on food items, and investment on fishery activities were the key factors in determining households' expenditure.

Hashemi et al. (1996) studied the microcredit program of Grameen Bank and BRAC in Bangladesh. They examined

the effect of the microcredit program on women's empowerment. They found that the BRAC and Grameen Bank programs had increased their economic security, purchasing ability, mobility, ability of taking household decisions, contribution to family support, and political/legal awareness.

Mosley and Hulme (1998) conducted a study on the microfinance institutions of developing countries, namely Bangladesh, India, Sri Lanka, Indonesia, Bolivia, Malawi and Kenya. They reported that the income and assets of the borrowers had increased due to microfinance, and found that higher income households had experienced, on average, a higher program impact than the households living below the poverty line.

Selvaraj et al. (1998) measured the effect of agricultural credit on resource allocation decisions and productivity in two regions of the Tamil Nadu state in India. They found that formal credit had positive effects on the adoption of high yielding varieties (HYVs) and labor use.

Mahmud (2006) measured the effect of the microcredit program on living standards in terms of income, expenditure, and compulsory savings for the landless and marginal borrowers of Bangladesh, who took loans for agricultural production activities. The author mentioned that the microcredit program had a positive role in improving their living standard in terms of household income, food consumption, and saving. The author also stated that the magnitude of the impact on living standards (in terms of income, saving, and food expenditure) of the borrowers was small.

Based on the above studies, it can be observed that most of the previous studies focused on the agricultural credit program and microfinance. The studies showed that rural financing had a positive impact on poverty alleviation, but that the agricultural credit and microfinance program failed to alleviate poverty completely for the rural society. However, very few studies were conducted in Bangladesh to assess the zakat system as a tool of poverty alleviation. In this study, the initiative was taken to assess the impact of the zakat system in alleviating rural poverty in terms of household income, consumption, and saving.

Empirical evidence of measuring impact of rural financial program

Several impact studies were conducted by various authors in assessing the impact of rural finance on the living standards of the borrowers in terms of income, consumption, saving, empowerment of women etc. Various econometric methods, such as ordinary least square (OLS), weighted least square (WLS), and simultaneous equation systems such as two stage least square (TSLS) and weighted least square technique (WTSLS) were used by researchers to evaluate this impact. Mosley and Hume (1998) assessed the impact of the microcredit program on household income and assets using the OLS technique. Mahmud et al. (2010) used the WLS technique to assess the impact of fishery credit in Bangladesh on household consumption. Duong and Izumida (2002) conducted a study in Vietnam to evaluate the impact of credit on household production using the WLS technique. Mahmud (2006) used the WTSLS

technique to assess the impact of credit on borrowers' income, expenditure and saving. Mosely and Rock (2004) used both the OLS and TSLS techniques to assess the impact on microcredit in the African context and they found that microcredit had a positive role in alleviating poverty and increasing the risk management ability of the households. Perceptions of the rural borrowers' about the rural financial projects were also evaluated using a Logit model. Mahmud et al. (2007) used the Logit model to assess the opinion of the borrowers about their economic well-being. The Logit model was also used by Latif (1994) to assess the opinions of microcredit borrowers on their contraceptive use. In fact, the WLS technique is more appropriate than OLS in solving the heteroscedasticity problem (Mahmud et al. 2010; Mahmud 2010). The two stage least square (TSLS) is an appropriate technique when some of the right-hand side variables are correlated with the error term (Mahmud 2006). In this study, WLS was selected to assess the impact of *zakat* on the living standard of the beneficiaries (in terms of households' income, expenditure and saving) in order to solve the heteroscedasticity problem, which the OLS technique failed to solve.

3. Conceptual framework for alleviation poverty

The beneficiaries under this study were poor. Due to poverty they could not start IGAs despite having adequate skills; they had very limited access to formal financial institutions. The *zakat* system may provide a unique opportunity for them to pursue IGAs properly as it requires no collateral and interest. The *zakat* fund would increase investment and the risk-bearing ability of the rural poor. This increased income would ultimately increase their purchasing ability leading to a better quality of life. This system would also accelerate employment-generation opportunities for poor households in the rural areas. The conceptual framework of poverty alleviation under the *zakat* program is shown in Figure 1.

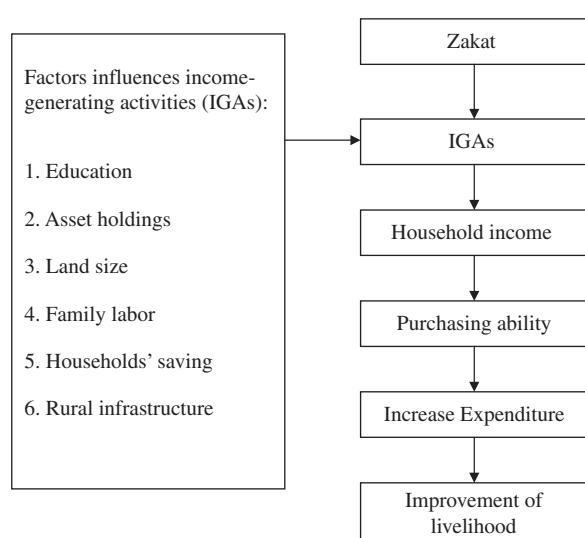


Figure 1. Conceptual framework of poverty alleviation under *Zakat* program.

Besides *zakat*, there are other factors which are related to the well-being of the beneficiaries. The education level of the beneficiaries would assist them in improving the skills of operating IGAs. The savings activities of the households should also be considered carefully. Household investment activities and decisions of selecting IGAs depend to a great extent on the saving behavior of the households. Factors like household assets would increase the ability of the beneficiaries to invest in IGAs. The household assets of the beneficiary can be considered as crucial in determining their income since the risk management, investment and negotiation capability depend to a large extent on their asset-base. Family size plays a vital role in supplying agricultural labor for the production activities since hired labor is expensive. Lack of rural infrastructural facilities is one of the major obstacles for the rural development of Bangladesh. Initiatives to establish rural infrastructure (such as rural markets, roads, cold-storage, banks) under the *zakat* program would assist the poor in accelerating their IGAs.

4. Methodology

Data was collected from the beneficiaries of MACCA. The lists of households were collected from the local office of MACCA in the Manikganj district. Based on the list, and using simple random sampling, 179 households were selected as the sample for this study. The following criteria were used in selecting the sample:

1. Households engaged in agricultural activities.
2. Households that are permanent residents of the village.
3. Households having less than 100 decimals of land.
4. Households who joined the *zakat* program in 2009.
5. Recipients' age to be between 18 and 55 years.
6. Households who received *zakat* for the first time in 2009 and have used it for 12 months.
7. Household maximum monthly income not exceeding 5000 taka.

The survey was conducted in August 2010 using questionnaires with the beneficiaries of the Hasana program. The beneficiaries were asked to provide information on various socioeconomic aspects such as demographic profile; economic activities; household assets; *zakat* management; training activities; opinion about the *zakat* program; and any problems with participation in the *zakat* program. In this study, the weighted least square (WLS) technique was used to assess the impact of *zakat* on households' income, expenditure and saving.

A. The household income model can be specified as:

$$Y = A_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \mu \quad (1)$$

where, Y = Income of the household in 2009 (taka)
 X_1 = Number of family members in the household
 X_2 = Education of the *zakat* recipients (number of years of schooling)
 X_3 = Total land size of the household (decimals)
 X_4 = Total saving of household in 2009 (taka)
 X_5 = Amount of *zakat* received by household in 2009
 X_6 = Number of family members involved in other IGA program in 2009
 X_7 = Number of training received by *zakat* recipient in 2009

A_0 is the constant for equation one
 μ is the error term for the equation one

B. Household total expenditure model can be specified as:

$$C = B_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu \quad (2)$$

where, C = Household total expenditure in 2009 (taka)
 X_1 = Amount of zakat received by households in 2009 (taka)
 X_2 = Households' total income in 2009 (taka)
 X_3 = Education of the zakat recipients (number of years of schooling)
 X_4 = Number of family members involvement in other IGA program in 2009
 X_5 = Total saving of household in 2009 (taka)
 B_0 is the constant for equation two
 μ is the error term for the equation two

C. Households' total saving model can be specified as:

$$S = C_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \mu \quad (3)$$

where, S = Household total saving in 2009 (taka)
 X_1 = Total income of household in 2009 (taka)
 X_2 = Total expenditure of the zakat recipients in 2009 (taka)
 X_3 = Amount of zakat received by households in 2009 (taka)
 X_4 = Distance of rural bank from beneficiaries' home (kilometer)
 X_5 = Education of the zakat recipients (number of years of schooling)
 X_6 = Distance of rural market from the house of zakat recipient (kilometer)
 X_7 = Distance of MACCA's branch office from the house of zakat recipient (kilometer)
 X_8 = Number of training received by the zakat recipient in 2009
 C_0 is the constant for equation three
 μ is the error term for the equation three

5. Results and discussion

This study focused on the impact of zakat on the living standard of beneficiaries of MACCA. In this study, three

important aspects of living standards (i.e. income, expenditure, and saving) were analyzed. Not only zakat, but also other important factors related to the living standards of the household were considered. Socio-economic variables like income, saving, expenditure, family size, education, family members' involvement in other IGA programs, training, and rural infrastructural facilities were considered. The estimated results of the impact of zakat on the household income, expenditure and saving are presented in Table 2, Table 3 and Table 4, respectively.

Factors of household income

Education is one of the key factors for improving living standard of the rural poor. Proper education assists people in sound planning and proper monitoring of the IGAs. The beneficiaries of this study had a low level of education. Therefore, they had to face big obstacles in decision-making activities and in adopting modern technology, this resulting in lower production and income. MACCA took the initiative to improve their educational status through non-formal educational activities. It can be hypothesized that educated beneficiaries would be more capable in pursuing IGAs and would earn more than a less-educated participant. This study confirms that beneficiaries' education was positively and significantly related to the dependent variable (Table 1).

Saving assists the poor to increase the capability of their investment activities as it increases risk-bearing ability and bargaining power. Beneficiaries under this study were poor and had a small amount of savings. Due to inadequate savings they faced obstacles in investing in the income-generating activities which led them to have lower economic benefits. MACCA took the initiative to motivate beneficiaries through awareness-building programs to save a portion of their income to handle adverse economic situations. It was assumed that beneficiaries' saving ability would be increased by taking part in the zakat program. This study showed that saving was positively and significantly related to the household income (Table 1). This result indicates that the income of the household increases as saving increases.

Agricultural land is scarce in Bangladesh and it is also very expensive for poor households. In the context of rural

Table 1. Factors of households' income.

Variables	Co-efficient	t-value	Level of Significance
Constant	-6344.479	0.090838	0.9277
Number of family member	7144.039	3.350615	0.0010
Number of years of schooling of the zakat-recipient	4879.351	2.085774	0.0385
Land size (decimals)	326.8485	2.734717	0.0069
Household's saving (taka)	0.942713	10.17471	0.0000
Amount of zakat received (taka)	2.549190	0.413384	0.6798
Family members in other program (number)	7208.235	1.422772	0.1566
Number of training received	5309.099	1.144451	0.2540
R-squared: 0.668332			
Durbin-Watson: 1.922984			

Source: Survey 2010.

Bangladesh, poor people have very limited or no land of their own. Households under the *zakat* program had small pieces of land. Possession of assets like agricultural land provides the poor with the opportunity to increase their agricultural productivity and income. Moreover, ownership of agricultural land assists the poor in increasing their bargaining power, risk-bearing ability, and increases employment opportunities. It can be hypothesized that households who were had more agricultural land would be economically well-off compared to households who possess small pieces of land. This study reveals that the land size of the household was positively and significantly related to the household income (Table 1). This implies that, as land size increases, the agricultural production and income would increase yielding higher living standards for the beneficiaries.

Family size is related to household sources of income and working ability. In rural Bangladesh, poverty holds back most of the household involvement in IGAs. Moreover, farming activities as well as non-farm activities in rural areas are poorly mechanized. It is not cost-effective for the poor households to hire labor to perform economic activities. Thus, poor households have to depend on the family supplied labor, which is cheap and easy to utilize. It can be hypothesized that a large household with more working members would be in a more advantageous position than a small family in the case of earnings. This study shows that family size was positively and significantly related to the dependent variable (Table 1). It indicates that household income increases as family size increases.

Factors of household total expenditure

MACCA provided *zakat* to the poor to improve their living standard in terms of household expenditure. This study showed that *zakat* money failed to have a significant influence on total household expenditure (see Table 2). However, the three factors of education of the beneficiaries, household saving, and income played an important role in determining household expenditure.

In the rural areas of Bangladesh, people have a low level of income due to poverty and lack of opportunities to involve themselves in the IGAs. Lack of income for a household can be considered as one of the major obstacles of low level of consumption. Therefore, it is important to increase

household income to improve living standards through financial, educational and infrastructural development in the rural areas. MACCA made the effort to provide *zakat* money to the rural poor and created facilities for them to pursue IGA opportunities in order to accelerate household income. It was expected that the increase in income would increase their purchasing capacity and, eventually, the poor would spend more. The results shown in Table 2 reveal that household income had a significant and positive effect on the total expenditure of the household.

Education (years of schooling) is a factor that is related to human knowledge. It is generally believed that an educated person is more skilled in analyzing socio-economic activities; he is more aware of healthcare facilities, and more efficient in overcoming any adverse situation compared to a less educated person. MACCA provided non-formal education to the beneficiaries on various socio-economic aspects related to their living standard, such as healthcare, production and marketing conditions of the rural areas, legal and educational rights, and social responsibilities. It was expected that this provision of educational facilities to the beneficiaries would increase their living standard (in terms of household total expenditure). This study confirmed that education of the *zakat* recipients was positively and significantly related to the total expenditure of the household (see Table 2).

The rural people in Bangladesh have very limited opportunities to operate multiple IGAs at a time. Due to low income, they cannot cover their consumption expenses properly. Very often, they need to depend on their saving for covering the consumption expenses. In fact, they have a small amount of savings, or no savings, with which to handle risks and to cover consumption expenses. An absence of efficient government social security programs for the rural poor is a major obstacle for their saving activities. In Bangladesh, there exist almost no insurance policies for the rural poor to cover their risk and uncertainty. Moreover, adopting an insurance policy is also very expensive for the rural poor. The beneficiaries of this study were poor. Thus, they had to cut down their unproductive consumption expenses for increasing their saving. The study confirmed that saving was negatively and significantly related to the total expenditure of the household. It indicates that household total expenditure decreases as the saving increases (Table 2).

Table 2. Factors of households' total expenditure.

Variables	Co-efficient	t-value	Level of Significance
Constant	14734.78	0.345220	0.7303
Amount of <i>Zakat</i> (taka)	1.217136	0.298018	0.7660
Household income (taka)	0.484659	3.696287	0.0003
Education (year of schooling)	4661.989	2.215369	0.0280
No. of family members in other IGA	1699.3645	0.493455	0.6223
Household saving (taka)	-0.579245	-2.889488	0.0044
R-squared: 0.636631			
Durbin-Watson: 1.907995			

Source: Survey 2010.

Table 3. Factors of households' saving.

Variables	Co-efficient	t-value	Level of Significance
Constant	-4886.402	-0.236074	0.8137
Total income of household (taka)	0.040529	1.838599	0.0677
Total expenditure of household (taka)	-0.096111	-2.382019	0.0183
Amount of zakat received (taka)	0.954904	0.604538	0.5463
Distance of rural bank (km)	-2091.318	-1.868420	0.0634
Education (years of schooling)	1203.636	1.446966	0.1497
Distance of rural market (km)	-767.5276	-0.474389	0.6358
Distance of MACCA's branch office (km)	-1345.324	-0.886331	0.3767
Number of training received	387.6822	0.110118	0.9124
R-square: 0.088757			
Durbin-watson: 1.762855			

Source: Survey 2010.

Factors of total household saving

In the context rural Bangladesh, most of the poor households have limited or no savings at all. The low level of household income creates an obstacle to invest properly in the IGAs, yielding lower returns and saving. Saving assists the rural poor in increasing their investment and risk-bearing ability. But, due to lack of income, they cannot save. Thus, MACCA made the effort to enhance IGAs for the rural poor through the zakat program. It was expected that household income would increase due to taking part in the zakat program and this increased amount of income would in turn increase household savings. The study confirmed that the household income was positively and significantly related to the saving. It indicates that household saving would increase as income increases (see Table 3).

Government and NGOs development activities in the rural areas provided more opportunities to spend more on consumption purposes (such as healthcare and educational activities). Rural people have become more aware of their healthcare, children's education, telecommunications, use of electricity and social nobilities. Moreover, the price of goods and services (such as food, land, clothing, and daily amenities) has increased in the rural areas. Thus, rural people have to spend more for their consumption. As they are poor, but there is an increase in consumption, they have to cut down on savings as their current income is inadequate to cover their consumption expenses. This study showed that household consumption was significantly and negatively related with the household savings, and indicates that saving decreases as consumption increases.

A rural bank can play a significant role in the rural economy through enhancing economic transactions among the rural people. The bank provides a loan facility to the rural poor for pursuing their IGAs. It also assists the poor household in enhancing their savings by receiving deposits from the rural clients. Moreover, a bank provides various services to the clients. For instance, banks issue financial certificates in favour of the clients, provide necessary suggestions about future investment activities, and assist in establishing networks between different organizations and the clients. However, in the rural areas of Bangladesh, bank branches are very limited compared with the demand. Usually, rural

bank branches are located at the Upazilla level; thus, it is difficult for the rural poor to obtain bank services due to the long distance from their villages. It is important to establish bank branches as close as possible to the villages so that the rural people (especially rural women) have easy access to banks and may avail themselves of banking services promptly. This study showed that the distance of a rural bank from the houses of the beneficiaries under study was negatively and significantly related to the dependent variable. It indicates that household saving would decrease as the distance from the rural bank increases.

6. Conclusion

MACCA took the initiative to provide zakat money to the rural poor for alleviating poverty. However, the amount of money provided to them as zakat failed to have a significant influence on household income, expenditure, and saving. The inadequate size of the zakat fund, lack of training facilities for perusing IGAs, lack of proper motoring by MACCA staff, and diversion of money to non-productive activities by the households may be the major causes behind such failure. However, factors like households' income and savings, education of the beneficiaries, land size of the household, and family size were identified as influential factors in terms of their living standard. Policy makers should focus on the following for reducing rural poverty:

- Emphasis should be given to providing educational facilities among the beneficiaries, and the necessary educational inputs, such as books and pencils, must be provided free of cost. The government and MACCA should jointly set up night schools to provide adult education. Motivational and awareness programs must be strengthened in the rural areas to encourage rural people to send their family members (focusing on children and women) to school. Stipend facilities should be extended for meritorious students. It is also important to focus on appointing experienced and qualified teachers.
- Proper steps need to be taken to increase rural employment opportunities. The government and NGOs should work together to establish more

small-scale agro-based industries in rural areas. It is important to establish an adequate number of training centers in the rural areas so that knowledge about modern technology can be disseminated promptly among target the groups.

- Focus should be placed on land reform activities. Necessary laws need to be enacted to prevent land fragmentation. Beneficiaries should be encouraged to follow community-based farming systems. Reserved government lands should be made available to poor households on a long-term lease for them to pursue agricultural activities. Farmers should be encouraged to use more organic fertilizers than chemical fertilizers in order to conserve soil fertility.
- Emphasis should also be placed on accelerating rural saving activities among the beneficiaries, making savings compulsory. The government should take steps to establish more rural banks. Motivational programs need to be launched in the rural areas to create awareness about saving, and various types of saving schemes can be introduced for the poor at very cheap rates.

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