IIUM Journal of Economics and Management 16, no. 2 (2008): 139-163

RURAL DEVELOPMENT SCHEME OF ISLAMI BANK BANGLADESH LIMITED (IBBL): ASSESSMENT AND CHALLENGES

M. Mizanur Rahman[a], M. Jafrullah[b] and ANM Tawhidul Islam[c]

[a]Director (Research), [b]Director General and [c]Software Engineer, Islami Bank Training and Research Academy, Mohammadpur, Dhaka-1207, Bangladesh.

ABSTRACT

Islami Bank Bangladesh Limited (IBBL) launched a *shar¥c ah* based Microfinance program named Rural Development Scheme (RDS) in 1995, to uplift the overall socioeconomic plight of the rural poor. Presently, some 0.52 million group members of which 94 percent are female, are involved in this scheme. Before further expansion into new areas, an assessment of the achievement of the RDS and its impact on the livelihood of the rural people was required. To conduct this study, primary data were collected interviewing 1020 randomly selected RDS clients working across the country. The study analysed many facets of the RDS and concludes that it was generally a success. Household income and expenditure had increased significantly and clients had a positive opinion towards the microinvestment programme as it improved their standards of living. The study recommends that RDS activities be extended towards hardcore poor, especially for widows and divorcees. Monitoring and supervision should be strengthened, while more ethical and moral motivational programs have to be undertaken for both field supervisors and clients to reduce *shar¥c ah* violation. The programme can be replicated in other rural areas of Bangladesh in order to accelerate economic activities of the poor.

JEL Classification: G21, Z12

Keywords: *Shar¥c ah* based microfinance, Rural development, Bangladesh.

1. BACKGROUND

Microcredit is a well established poverty alleviating program which is being implemented to address different development activities in Bangladesh and across the world. Beside credit facilities, all these institutions also provide training for skills development and self employment for the poor. Unfortunately, these institutions provide interest based credit and the charged rate of interest is often exorbitantly high. Charges for institutional sources range from 15 to 22 percent, while those for the non-institutional sources range from 33 to 120 percent (Mahmood, 2006). Sometimes interest rates of non-institutional sources reach 120 to 140 percent. Mahmood (2006) also mentioned that the poor do not have any surplus production, hence accumulation of capital is very difficult and sometimes impossible for them. On the contrary, owing to the absence of access to productive assets, lack of skill, low-level literacy, malnutrition and absence of an organization of their own, the rural poor fall into the poverty trap (Jaim, 1986). Besides, there are hardly any credit facilitating institutions that care about the ethical development of the rural poor, although ethical standards have to be maintained not only in business but in all aspects of life.

Considering the above mentioned factors, the Islami Bank Bangladesh Limited (IBBL) launched a program named Rural Development Scheme (RDS) in 1995. The main objective of this scheme was to alleviate rural poverty by providing *shar¥c ah* based small and micro investment to the agricultural and rural sector for generating employment and raising the income of the rural poor. The scheme also provided welfare, moral and ethical services to the rural people of the country. Presently, the scheme is being implemented through 129 branches in 10,023 villages under 60 districts. Some 0.52 million group members of which 94 percent are female, are involved in this scheme. The Bank has a plan to double the activities of RDS within the next two years. This study was conducted expecting to provide insights for future policy and programs to be undertaken for the betterment of the microfinance scheme of the IBBL.

1.1 SALIENT FEATURES OF THE RURAL DEVELOPMENT SCHEME (RDS)

By adopting microcredit as a core component in their aid programs all the conventional microcredit programs hope to reduce poverty in

Bangladesh and also to raise the status of the country's women, who are the focus of many microcredit programs. These conventional microcredit programs in Bangladesh provide interest based credit which is strictly prohibited in Islam. The Islamic Microfinance of IBBL named Rural Development Scheme (RDS) has also developed following the Grameen Bank model, but the fundamental difference with the Grameen Bank is that RDS provides completely *shar¥c ah* based microfinance program.

In the study area, RDS practices *murŒbahah* and *bayc-mu'ajjal* modes of investment for financing clients. The clients can take investment against any off-farm or on-farm activities. In all cases the Branch must ensure strict adherence to the banking and *shar¥c ah* norms. For this investment, RDS adds a flat 10 per cent profit rate on the purchasing prices of the commodity and also provides a rebate of 2.5 per cent for timely payment. The conventional microcredit institutions charge between 15 to 22 per cent interest for income generation which is much higher compared to traditional banks (Fernando, 2006). The investment recovery rate of RDS is 99.57 per cent.

It may be mentioned here that RDS is one of the core wings of IBBL. It has its own *shar¥c ah* department and has a strong *shar¥c ah* board comprising renowned Islamic scholars of Bangladesh, which is headed by the *KhŒtib* of the Central Mosque of Bangladesh. There is also a national *shar¥c ah* board for all the Islamic banks functioning in Bangladesh. The RDS is also controlled by those *shar¥c ah* boards, so there is a system of monitoring *shar¥c ah* compliance.

Beside financial activities, this scheme has a special plan to contribute to the moral and ethical development of its clients. Keeping this idea in mind, field supervisors organize a weekly meeting involving all the clients where moral and ethical development related religious issues- on the basis of Qur'Œn and Sunnah- are elaborately discussed. Clients are also urged to practice all religious rituals, which are also monitored through their weekly meetings. Some of the religious activities that are emphasised are given in section 3.1.9.

1.2 LITERATURE REVIEW OF MICROFINANCE IMPACT STUDIES

Previous impact assessment studies of microcredit programs in Bangladesh have been narrow in their focus. Chowdhury and Bhuiya (2004) examined the impact of credit programs on the Bangladeshi borrowers under the Bangladesh Rural Advance Comission (BRAC)

program and found a positive impact on human well-being, survival rate and schooling of children. Khandaker (2003) conducted a study on the micro-credit borrowers of Grameen Bank, BRAC and Bangladesh Rural Development Board (BRDB). He found that households that were poor in landholding and formal education tend to avail more microfinance help to reduce extreme poverty than moderate poverty. The welfare impact was also positive for all households receiving credit. Zaman (2001) assessed (for BRAC borrowers in Bangladesh) the impact of microcredit on poverty alleviation and women empowerment and found positive impact on income, decision making ability and in reducing gender disparity. Ahmed *et al*. (2000) examined the impact of BRAC's Integrated Rural Development Program (IRDP) on gender equity. They found that the prevalence of mobility was low among BRAC members' households compared to non-members.

Khandaker (2000) assessed the impact of microcredit on saving and found that microcredit increased voluntary saving and the saving was more pronounced in cases of women than men. Mosley and Hulme (1998) conducted a study on 13 microfinancing institutions in seven developing countries (Bangladesh, India, Srilanka, Indonesia, Bolivia, Malawi and Kenya). They reported that income and assets of the borrowers had increased due to microfinance and also found that higher income households had experienced higher impact of microcredit than the households living below the poverty line. Pitt and Khandaker (1996) assessed the impact of microcredit borrowers of BRAC, BRDB and Grameen Bank and observed positive impact of the program on women employment, total per capita weekly expenditure and women's non-land assets. They also observed that credit programs could change villagers' attitudes and other behaviour. Microcredit of the partner organizations of PKSF (2005) was also found to have strong positive impact on the clients' income and livelihoods.

However, all of these studies simply assessed the impact of interest based microcredit programs and did not consider *shar¥c ah* (Islami rules and regulations) compliance for investment. Besides, most of the reviewed studies have covered particular areas or zones of the country. The present study assessed a fully *shar¥c ah* based business oriented microfinance undertaken by the clients of RDS functioning across the country. Unlike other microcredit programs, this scheme (RDS) also has incorporated ethical and moral development activities in its microcredit program.

Another point is that the size of rural households in Bangladesh is generally large and they have a low level of literacy. Rural development is hampered due to lack of credit, lack of training, weak infrastructure and poor transport systems. The weak resource base, coupled with a faster growing population, is aggravating the poverty level of the country. Determination of the factors that are most relevant in explaining poverty alleviation will have important implications for refining microfinance policy. This will also help to locate more appropriate clients for this microfinance. The other objective was to examine the linkage between income and expenditure and clients' socio-economic factors. This study also provided useful information to formulate future policy for RDS of Islami Bank Bangladesh Limited.

2. METHODOLOGY

2.1 CONCEPTUAL FRAMEWORK

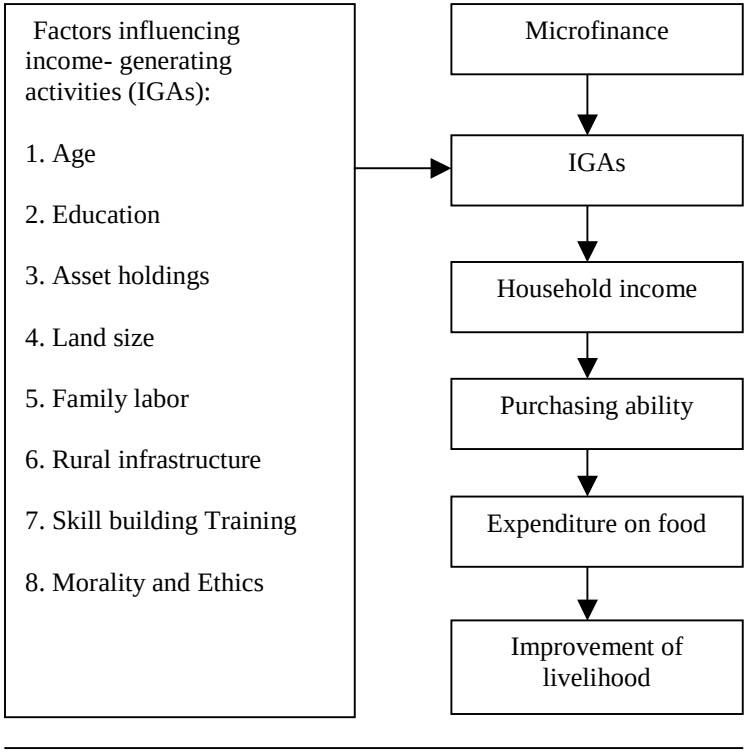
In this study, it is observed that the beneficiaries are mainly rural poor having very limited access to education, institutional credit as well as having low command over productive resources. Due to their inability to meet the collateral requirement, the rural poor cannot start up productive activities even though they may have the adequate skills for pursuing income-generating activities. Because of their low level of income, they cannot even fulfill their consumption needs properly and ultimately they have to lead a lower quality of life. In such circumstances, microcredit programs may support the poor in reducing their poverty by creating both direct and indirect benefits.

Under microcredit programs, borrowers can have access to finance without providing collateral from the microcredit providers. The amount of finance they receive from the providers increases their financial ability to invest more into income generating activities. Microcredit programs also provide opportunity to generate employment for the poor in the locality. By participating in income generating activities under microcredit programs, poor people may have more earnings from the activities that directly add to their income. This increased income would ultimately increase their purchasing ability. More purchasing ability would enable them to spend more on food, thus, leading them to a higher quality of living. The conceptual framework of microcredit programs in alleviating poverty is shown in Figure 1.

Besides income, there are other factors that are related to the well-being of borrowers. One example is the need to enhance human

capital. So, microcredit programs provide training and non-formal education to borrowers, hoping that training and educational facilities will enhance their level of skills in performing income-generating activities. Therefore, borrowers' age, education and experience need to be considered carefully in choosing participants in the program because decision-making ability may largely be influenced by such factors. Factors like household assets will increase the ability of the borrowers to invest in income generating activities and also help in increasing income earnings for them. In addition, it is difficult for the poor households to hire labour for operating income generating activities. Thus, they largely depend on family labour for pursuing income-generating activities. Due to microcredit programs, they have the opportunity to utilize their manpower for productive purposes. Inadequacy of rural infrastructure is another major obstacle for

FIGURE 1
Conceptual Framework of Microcredit Program in Poverty Alleviation



proper utilization will increase the ability of the rural poor in pursuing their income generating activities. Training and non-formal education of borrowers can also enhance their level of skills in performing income generating activities. Therefore, the RDS program provides training and non-formal education to the clients.

Ethics and moral development is an important factor for developing human capital, which is deeply related to the wellbeing of the clients. As RDS investment is collateral free, clients with good ethics and moral values would indirectly proxy as collateral to get their investment back and also to invest the borrowed money to the proper income generating activities.

2.1 MODEL SPECIFICATION

Available literature shows that different techniques such as descriptive analysis, ordinary least square (OLS), weighted least square (WLS), linear programming (LP), and simultaneous equation systems (SES) have been used by researchers in order to estimate the effect of microcredit on the various outcomes such as income, consumption and saving etc. Khandaker (2000) estimated a conditional demand equation to assess the effect of microcredit on the economic outcomes like saving. The researcher used OLS estimation technique, using log in both sides, for this study which is as follows:

$$Y_{ij} = \alpha_0 + \beta_i \sum_{j=1}^{n} X_{ij} + \delta I_{ij} + \varepsilon_{ij} \qquad (1)$$

where I is the amount of credit taken by the borrower, Y is the household income, X_{ij} is a vector of exogenous characteristics such as age and head of household level of education, b and d unknown parameters and e is the error term.

2.2.1 HOUSEHOLD INCOME MODEL

In this study, OLS was used to assess the effect of microcredit on the dependent variables such as income, saving, and expenditure. The models were specified as:

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \delta I + \beta_5 X_5 + \beta_6 X_6 + \mu \qquad (2)$$

where Y is the change in household annual income, I is the amount of investment taken by the borrowers in 2006, X_1 is total land size, X_2 is the dummy for the borrower's age (above 40 years of age is 1 and 0 otherwise), X_3 is the dummy for education (up to 5 years of schooling is 1 and 0 otherwise), X_4 is the number of family members engaged in income generating activities, X_5 is the distance of branch from the clients places (up to 10 km is 1 and 11 to 16 km is 0) and X_6 is ethics and moral values of the clients as defined in Section 2.2.4. b and $ä$ are the coefficients, $á_0$ is the constant and m is the error term.

2.2.2 HOUSEHOLD TOTAL EXPENDITURE MODEL

$$TE = \alpha_0 + \lambda Y + \delta I + \beta_1 X_1 + \beta_2 X_2 + \mu \qquad (3)$$

where TE is the change in the household total expenditure, X_1 is total land size and X_2 is the number of family members, other variables are as defined previously.

2.2.3 ESTIMATION OF WELL-BEING BASED ON THE CLIENTS' OPINION

The Logit model was selected in this study to find out the probability level that the clients would be well off due to the influence of a particular explanatory variable. In the Logit model, the dependent variable -"clients' well-being"- had two categories i.e. borrowers were well-off under the program coded as one, and otherwise coded as zero.

Researchers who had used the logit model in Bangladesh to assess the effect of the microcredit program on loan utilization, awareness towards living-standards and women empowerment, had found positive effects. (Begum, 1998; Zaman, 2001). Different studies used different dichotomous dependent variables in the logit model. For example: Mahmood (2006) used well-being of the microcredit clients; Begum (1998) used awareness of the borrowers; Zaman (2001) used women's empowerment. In this study, as mentiond above, the researcher used 'borrowers' well-being' as the dependent variable which was divided into two categories: (i) borrowers were well-off under the program, and (ii) borrowers were not well-off under the program. The model can be represented as follow:

$$Ln\left[P_i/(1-P_i)\right] = \beta_0 + \beta_3 EDU + \beta_4 FMIG + \beta_5 DBR + \beta_6 DOM + \beta_7 SFE + \beta_8 EHC + \beta_8 EAMC + \mu \quad (4)$$

where P_i is the probability that borrowers were well-off, *EDU* is the education dummy for the clients, *FMIG* is the number of family members involved in income generating activities, *DBR* is the distance of the branch from borrower's place, *DOM* is the duration of membership, *SFE* is the share of food expenditure to the total expenditure, *EHC* is the expenditure on health care and *EAMC* is the index of ethics and moral values of the clients.

2.2.4 ESTIMATION OF ETHICS AND MORAL VALUES OF CLIENTS

Opinions were sought from the clients about their awareness and practice of 10 different religious activities. Table 1 shows the different religious activities of the clients. A four-point Likert scale was used to evaluate the borrowers' moral and ethical development i.e., each statement had four options, which were: regular, very often, very rare and not at all. Points were given for each option: 10 for regular, 6 for very often, 4 for very rare and 0 for not at all. The points given were reverse for involvement with dowry, involved with interest and misunderstanding with husband.

The points were summed up from each statement and the total score obtained by each borrower was divided by seventy five (the highest score) in order to create an index of acceptability towards effectiveness of the microcredit program. The borrowers whose index was less than 0.75 were coded as zero and those with index that is greater than 0.75, were coded as one. This is similar with Mahmud et al. (2006) who created an acceptability index towards effectiveness of the ADIP program, where the borrower who received scores seventy five percent or above was coded as one to indicate that they were well-off under ADIP's microcredit program, and those otherwise, coded as zero. Begum (1998) created an awareness index and the borrowers who received a score fifty percent were coded as one, indicating that awareness level increased their living-standard, and if otherwise, coded as zero.

The Logit model was chosen in this study to find out the probability level that the borrowers would be morally and ethically well off due to the influence of particular explanatory variables. In the Logit model,

TABLE 1
Religious Activities Performed by the Clients

Statements	Regular	Very Often	Very Rare	Not At All
Score (no.)	10 (0)	6 (4)	4 (6)	0 (10)
Saying prayer	405	204	170	215
Able to recite the Holy Qur'Ɛn	643	-	-	351
Reciting the Holy Qur'Ɛn	139	164	136	655
Fasting	807	79	21	87
Inviting towards Islamic activities	324	289	311	70
Involvement with dowry	033	-	-	961
Maintain *Parda*	596	191	109	98
Involved with interest	111	71	29	783
Misunderstanding with husband	049	29	11	905
Involvement with social activities	007	305	372	310

Note: Figure in the parentheses are the score for dowry, interest and misunderstanding with husband.

the dependent variable -'client's moral and ethical development'- had two categories such as clients morally and ethically well-off'-coded as one, and otherwise coded as zero.

2.3 JUSTIFICATION OF RETAINING VARIABLES IN THE STUDY

The factors which are responsible for the impact of microcredit on the rural poor have been reviewed. Girish and Mehta (2003) and Asanoy (2004) observed that age of the family head and family size were important factors for economic decisions such as in production and consumption. Latif (2002) also observed that family size had an influence on consumption and calorie intake of rural Bangladeshi households. Shrestha and Shivakoti (2003) mentioned that family labour was one of the important sources of human capital. Rural farmers largely depended on their family labour for pursuing economic activities. Khandaker (2000) reported that microcredit programs had increased production, consumption, and employment opportunity and reduced informal borrowing, and it had also increased the ability of the poor borrowers to save regularly for building financial and physical capital. Asanoy (2004) indicated that educated borrowers had a higher level of knowledge and skills as compared to less educated borrowers in case of performing their economic activities. Latif (2002) observed that the establishment of rural infrastructure had reduced production as well as transportation cost and it had created easy access to markets for inputs and outputs. Shrestha and Shivakoti (2003) mentioned that physical infrastructure facilities helped in distributing inputs and output, adding value and enhancing production. Latif (2002) identified land size as an important factor for permanent income and consumption of rural households.

It is hypothesized that all of these variables would influence the households' livelihood. Therefore, age, education, family size, financial capital, savings and asset base have influence on clients' livelihood, hence, have been considered in this study as important factors.

2.4 SOURCES OF DATA

The primary data was directly collected from fieldwork conducted from December 2006 to April 2007, through interviewing 1020 clients across the country. The impact of investment on ethics and moral development

of the RDS clients were also our major interest. Therefore assessment was made comparing the clients' present position (31 December, 2006) with their base (information at the time of becoming member).

Using the stratified sampling approach, the selection procedure for the RDS clients considered several factors, and involved multiple stages. The first step involved dividing the RDS executing branches of IBBL into seven administrative zones defined by IBBL. In order to capture diversity, the 34 branches were randomly selected from 7 administrative zones (Table 2) following the probability proportionate to size (PPS) method (Appendix-1; Bangladesh Map).

Two subsequent stratifications were made within each branch on the basis of time of becoming a client of the RDS. Of the selected branches, 30 RDS investment clients from each branch were randomly selected. The total clients for the study were 34 x 30 = 1020 (Table 2).

TABLE 2
Distribution of the Samples

Sample Types	No of Branch		Sample per Branch	Total Sample
Clients	Dhaka north	4	30	1020
	Dhaka south	3		
	Chittagong	3		
	Comilla	5		
	Bogra	9		
	Khulna	8		
	Sylhet	2		
	Total branch	34		

The data were collected from the clients using a set of semi-structured and pre-tested questionnaires prepared for the purpose. Thirty four well trained enumerators (one for each branch), collected the data under the supervision of the researcher.

2.5 ANALYTICAL FRAMEWORK

A major concern of this study was to assess the impact of the RDS on the investment ability of the client. So, comparison was made between the status at present (up to December 2006) to that upon joining (joining

time of the individual clients) . In total 1020 clients were interviewed. Of them, interview of 26 clients were incomplete and hence have been dropped from the analysis.

3. RESULTS AND DISCUSSION

The study was intended to explore the true picture of poverty alleviation through micro-investment in the livelihood of the RDS clients. The results are presented below.

3.1 BASIC CHARACTERISTICS OF THE RESPONDENTS

One of the prime objectives of this study was to uplift the living-standard of the poor clients. Improvement of living-standard does not depend only on providing micro investment facilities, but also on the socioeconomic background of the clients. Therefore, this section focuses on the following socioeconomic aspects.

3.1.1 AGE OF THE CLIENTS

Microfinance had not been granted to the economically deprived population below the age of 18 years. Majority of the clients (41%) were in the age group of 18 to 30, followed by 31-40 year age group (37%). This result means that microfinance providers preferred younger groups of clients rather than the older groups. Only 22% came from those above 40.

3.1.2 FAMILY SIZE

43% of the borrowers were having medium family sizes with family members less than five, which are almost two times higher than clients having larger family sizes (21%) with more than 5 family members. Small family size take up 36%.

3.1.3 EDUCATION

Clients who were illiterate accounted for 42.8% of the total client base. Only 2.9% of the respondents had completed SSC examination, which clearly manifested the link of education with poverty, while 30.6% have primary and 23.7% have secondary education.

3.1.4 OCCUPATION

Microfinance has shown its power because it has enabled the borrower to establish their own micro-enterprises According to the definition of micro investment, women were supposed to engage with this income generating activities. Seventy-nine per cent clients were housewives having very irregular secondary occupation. However, a small percentage of the clients were running home based income generating activities such as, poultry, dairy, sewing and knitting. Some were also running shops selling vegetables, fruits and general stores with the borrowed money.

3.1.5 LAND HOLDING STATUS

The highest portion (68%) of the respondents had marginal holdings (up to 50 decimals of land). 13 percent have 51 to 100 decimals of land. There are some clients having more than 1,000 decimals of land, indicating that some clients were wrongly selected ignoring the condition of having less than 50 decimals of land required for becoming RDS clients.

3.1.6 INVESTMENT DISBURSEMENT AND RECOVERY

Most of the clients who have taken investment within the range of 5,000 to 10,000 taka have mostly invested their money into income generating activities. Some clients who have taken a big amount of investment (10,000 to 20,000 taka) have diverted their money into some activities like house repairing and marriage ceremonies for their children.

3.1.7 MARITAL STATUS OF THE RESPONDENTS

Most of the RDS clients (92.8%) were married, while only a few clients (7.2%) were unmarried, divorced and widowed. It may be mentioned here that microfinance providers preferred to provide investment facilities to those who were married since the migration rate of this group was much less than any other groups, hence making it easier to monitor their investment activities.

3.1.8 INVESTMENT RECEIVED

About 34% of the clients received 5,001 to 10,000 taka investment; while the second largest group (28%) is in the range of 10,001 to 15,000

Only 7 per cent of clients have taken more than 20,000 taka. These results indicate that microinvestment providers only disbursed small amounts of investment to the clients, probably due to the convenience in supervising the disbursed money and to reduce the risk of bad debt.

3.1.9 ETHICAL INFORMATION OF THE RESPONDENTS

Religious and ethical development of the clients was one of the important objectives of the RDS programme. Results show that most of the clients do fasting, while almost 85 percent clients maintained *parda* (covering the head). Although 85 percent clients avoided taking interest this information is dubious as 15 per cent clients have involvement with other interest based NGO's. The reason of providing misinformation could be that some of the clients are not still clear about the difference between interest and profit.

3.2 RESULTS OF OLS ESTIMATIONS

One of the prime objectives of the study was to assess the factors influencing households' income, expenditures, well being and ethical and moral development of the clients. The OLS technique was used to estimate the model for assuming the effects of different factors of the model. Regression equation estimation of similar functions involving more variables, the model would have suffered from low degrees of freedom and multicollinearity problems resulting in inefficient estimates. The test for multicollinearity was conducted to see if some independent variables were not significant The regression model was re-estimated; dropping some variables (like, several education dummies, age dummies and distance of bank branches dummies) whose level of significance was very low. The results were significantly improved.

3.2.1 OLS RESULTS FOR THE HOUSEHOLD INCOME MODEL

It was expected that the amount of investment taken by the borrowers would increase their household income. Therefore, this study examined the influence of microinvestment on the households' income (Equation 2). However, household income does not depend on only one factor like amount of investment. It also depends on other socioeconomic factors. That is why, variables like borrower's age, borrower's educational background, involvement of family members in farming, total land size of the households, distance to bank branch from the

borrowers' place and ethics and moral values of the clients are considered as independent variables. Table 3 shows the results of OLS for the households' income. As can be seen, the sign of all the variables are plausible- but only four of them- namely borrowers' age, amount of investment taken by the borrowers, number of family members involved in earning and clients' ethics and moral values-had a positive and significant influence on household income. The value of *R*-square was 0.693. It indicates that about 69 percent of the total variation of the dependent variable was explained by the independent variables.

It was found that the amount of investment taken by the borrowers had a positive and significant influence on the household income. This collateral free investment-money had increased their opportunity to start up income generating activities. It had also increased their ability to invest more on the existing economic activities, resulting in more earnings from their investment. All these reasons had assisted them in increasing their household income. Household income would increase by 1.21 percent due to an additional one percent investment by the borrower from the microinvestment providers.

The study shows that the borrowers' age variable was positively and significantly related with household income. As age increases, borrowers acquire more experience, which would ultimately assist them to increase their household income level. Many researchers used age as an independent variable in their regression analysis in order to assess its influence on borrowers savings, agricultural production, household income and consumption (Khandaker, 2000) and found significant influence.

This study shows that the number of earning family members' had positive and significant influence on their households' income. This result implies that higher the number of earning family members, the higher the family income. This expected result is also supported by Mahmood (2006).

It may be mentioned here that ethics and moral development had positive contribution on household income. This result is quite logical as it is assumed that the clients who are bearing good moral and ethical values are honest and sincere, and hence, did not divert their borrowed money to any unproductive sector. Besides, their sincerity in their activities might have generated more income in itself.

The results show that the distance of the bank branch from the borrowers' home had no significant effect on the households' income level. However, the sign for the dummy variable (10 to 16 km distance from the branch) was negative, meaning that further increasing dis-

tance between the branch and borrowers' home would decrease the income earning opportunities. Education also did not show any significant influence on household income as there was a small variation of education among the clients.

TABLE 3
Estimated OLS Results for the Household Income

Variables	Co-efficient	t-value	Sig
Constant	4.079	38.384	0.000**
I	1.210	2.612	0.019**
X_1	0.101	0.408	0.684
X_2	1.160	1.990	0.024**
X_3	-0.030	-0.115	0.108
X_4	0.201	2.646	0.018**
X_5	0.120	0.738	0.460
X_6	0.090	1.847	0.055*
R^2: 0.603			

Note: ** Significant at 1% level, and * Significant at 5% level

3.2.2 OLS RESULTS FOR THE HOUSEHOLD EXPENDITURE MODEL

Total household expenditure includes expenditure on food items and non-food items[2]. This study assessed the influence of the amount of investment on households' total expenditure. It also estimated the model (Equation 3) to assess the influence of socio-economic variables on total household expenditure. Table 4 shows that three variables had significant influence on total expenditure. The significant variables were household income, total land size and family size. All the variables in the model had shown the expected signs. The R-square value for the total expenditure model was 0.683 indicating that 68 percent of the total variation of the clients' expenditure was explained by the independent variables.

TABLE 4
Estimated OLS Results for the Household Expenditure

Variables	Co-efficient	t-value	Sig
Constant	1.697	11.343	0.000**
I	0.006	1.009	0.313
Y	0.464	7.692	0.001**
X_1	0.139	6.091	0.002**
X_2	0.032	5.186	0.000**
R^2: 0.683			

Note: ** Significant at 1% level and * Significant at 5% level

It is expected that due to increase in income, purchasing power of the households would increase and eventually poor people would spend more. The results show that household income had significant and positive effect on total expenditure. This study had shown that an increase in the land size would increase borrowers' ability to spend on food and non-food items, leading them to a higher level of living standards. The reason could be that households having more land are in a better position to invest in income generating activities, hence they were more likely to obtain more returns from their investment as compared to households having little assets.

Table 4 also shows that family size was positively and significantly related to total expenditure of the household. This result indicates that an increase in the number of family members would increase household expenditures.

It was observed that the amount of investment taken by the borrowers had a positive relationship with total expenditure, but had failed to create any significant impact, hence are not discussed here.

3.3 RESULTS OF THE LOGIT MODEL FOR CLIENTS' WELLBEING

The Logit model was selected in this study to find out the probability level that the clients would be well off due to the influence of a particular explanatory variable (Equation 4).The rural poor lead a low quality of life and it was expected that microfinance programs would bring a positive change in the overall living-standard of the borrowers by improving their economic activities. Therefore, an attempt was made to investigate the influence of socioeconomic variables on the dependent variable 'Borrowers welfare'. Based on the borrowers' perception, the dependent variable was coded as one if the borrowers answered 'well-off under the microinvestment program', otherwise, it was coded as zero. The Logit model was used in order to find out the probability

level that the borrowers would be well-off due to the influence of a particular independent variable.

Table 5 shows that the duration of RDS membership, number of income generating family members, share of food expenditure to total expenditure, household health expenditure and clients ethics and moral development, had a positive and significant contribution to clients' well-being.

Table 5 also shows that the odd ratio exponential for the variable 'expenditure on health' was 1.010 and it was positively and significantly related with the dependent variable. It indicates that more expenditure on health care would increase the likelihood for the borrowers to be well-off. Due to the low level of purchasing ability, borrowers had a low level of expenditure, indicating a lower quality of living. They had to struggle even to meet their expenditure on food items. Microfinance program takes the effort to increase borrowers' ability to spend more on food items, hence raising living standards. Once again Table 3.3 shows that the odd ratio exponential for the independent variable 'share of food expenditure to the total expenditure' was 1.014, and was found significantly and positively related with the dependent variable.

Ethics and moral development also had a positive contribution on clients' well-being. As mentioned earlier, this result is quite logical as clients bearing good moral and ethical characteristics would be honest enough to not divert their borrowed money to any unproductive sector.

TABLE 5
Estimated Results of the Logit Model

Variable	(B)	Standard error	wald	Sig	Odd ratio EXP (B)
Constant	-0.954	0.823	1.344	0.246	0.385
DOM	0.238	0.062	14.64	0.000**	0.788
EDU	0.014	0.251	0.201	0.986	0.996
FMIG	0.208	0.073	13.67	0.00**	0.768
AGE	-0.060	0.556	0.011	0.916	0.942
SFE	0.014	0.006	5.746	0.017**	1.014
EHC	0.017	0.020	3.031	0.054*	1.010
EAMC	0.164	0.243	3.476	0.050*	0.846
Cox and Snell R square: 0.198					
log likelihood: 667.280					
Overall accuracy: 82.8					

Note: ** Significant at 1% level and * Significant at 5% level

3.4 CLIENTS' OPINION ABOUT THE FACTORS THAT CONTRIBUTED TOWARDS THEIR WELL-BEING

Study results revealed that there is a significant development of the clients' skill, social and economic well-being. Therefore, an attempt was been made to assess the factors contributing to their well-being and the results found that the RDS investment have mostly contributed to their well-being (Table 6).

TABLE 6
Clients Opinion about Increasing Their Well-being

Items	1	2	3	4	5	6
RDS Investment	51.1	64.6	65.9	43.0	69.0	68.3
Other Family Income	28.0	24.6	15.4	34.3	15.0	23.9
Presentation	00.5	00	01.6	11.3	1.8	03.4
Inherent Property	09.1	04.0	01.6	02.0	7.1	00.5
Khas Land	01.0	00	00	00	00	00
From Dowry	01.5	01.4	15.2	01.7	7.1	01.5
Others	08.8	05.4	00.3	07.7	00	02.4
Total	100	100	100	100	100	100

Note: 1. Land Property
2. House
3. Livestock & Poultry
4. Electric & Electronics
5. Gold & Silver
6. Other Assets

3.5 MAJOR PROBLEMS AND SUGGESTIONS STATED BY THE CLIENTS

Like other credit programs, the RDS microinvestment clients also faced problems participating in the microfinance program. Their problems were diverse in nature and varied depending on time, space, socioeconomic aspects, and the nature of the program. Success of the programs largely depended on identifying and solving the problems on time. Therefore, in order to improve the operations of the program, it is important to identify clearly the borrowers' problems.

Table 7 shows that a majority (90.65%) of the borrowers had problems with investment size. They mentioned that the amount of investment they had received from the micro-investment providers was

inadequate for them to pursue their income generating activities (IGAs) smoothly. Lack of training facilities to upgrade their skills and knowledge was also an important problem mentioned by 86 per cent clients. About 85 per cent respondents mentioned that delays in receiving the investment payments was also a problem. This was followed by the very short gestation period for repaying investment. Some respondents (78%) mentioned that some times they needed to start repaying their borrowed money even before investing the money.

TABLE 7
Major Problems Stated by the Clients

Problems	Percent
Amount of investment is very small	90.65
Do not have any training program	85.60
Investment getting period is very long	84.70
Gestation period for repaying investment is too short	78.55
Insufficient time for meeting	72.00
There is no place for organizing meeting	70.65
Needs to produce false voucher	33.65
Tenants are ignored for getting investment	26.08
No Islamic school for their children	23.26
Woman has no control on their borrowed money	15.66

4. CONCLUSION AND RECOMMENDATIONS

Microcredit is now a well established poverty alleviating program which is being implemented across the world. All these institutions working in Bangladesh provide interest based credit which is a violation of the *shar¥c ah*. These institutions also do not care about the ethical development aspects of the rural poor, although it is obligatory, not only in the business sector, but also in all aspects of life. Business and ethics should be interrelated.

The study revealed that around 79 per cent of clients were housewives who had very irregular involvement with income generating activities. Therefore, emphasis should be given to making such a large group productive through involving them in income generating activities.

It was observed that 78 per cent of the clients were below 40 years of age which is good, as younger members are more informative and

receptive to new ideas and exhibit greater courage in venturing into experiments. There are some clients who were very old, and were not that productive. Hence, it may be necessary to set an age ceiling for clients.

Although, 65 per cent of the clients have land sizes within the range of 50 decimals, the rest have much more than 50 decimals of land, and are basically not poor. Therefore, priority should be given to targeting and selecting eligible and hardcore poor.

The study shows that 93 percent of clients are married. This is encouraging since they are settled in a particular place, making the investment more secure. Only 2 per cent of clients are divorcees and widows. Since the RDS programme is more welfare concerned than profit earning, priority may be given to select more widows and divorcees.

The results show that most of the clients have utilized their borrowed money but the reality is that not all the clients have invested their borrowed money in income generating activities. Instead, some of them have utilised their investment in house repairing, children's marriage ceremony and furniture purchase etc.. Therefore, proper monitoring and supervision should be done so that they use their money primarily, or even exclusively, in income generating activities.

A majority of the borrowers opined that the investment size was inadequate to pursue income generating activities properly. Besides, the model estimation result shows that size of the investment had significant impact on their income. Therefore, size of investment should be increased based on the nature of the IGAs. Investment should also be provided to the clients on time.

The rural poor usually utilize their investment in crop production, which is a seasonal phenomenon and consequently they would not be able to repay their investment before the end of the season: Therefore, a product based periodic investment system may be developed for the clients. Besides, crop cultivation fully depends on nature, therefore there can be natural damage of crops. Hence, farmers may have to re-plant their crops immediately after damage and may require supplementary investment. Therefore, a supplementary investment sanctioning system may need to be developed.

Increased family members' involvement with income generating activities (IGAs) would increase the probability for the borrowers' well-being. In rural areas, people have very limited access to start up capital to continue their IGAs. Lack of opportunity to pursue IGAs in the rural areas is one of the major causes of poverty for rural people. Therefore,

measures should be taken to create adequate income generating activities for the poor by establishing small and cottage industries and other non-farm activities in the rural areas. Necessary financial and technical support may also be provided to the rural entrepreneurs.

Poor borrowers are not aware of modern technology. They depend much on the traditional method of farming, resulting in low production. Therefore, provision should be made to provide demand-led and effective training on different aspects of on-farm and off-farm activities, credit management, environmental pollution, legal rights, nutrition and health care. It is observed that field supervisors are not well trained, and hence, they find it difficult to motivate the rural people towards the RDS and also to manage the RDS centres. Frequent training should therefore be organized to improve field supervisors' knowledge, skill, moral and ethical values.

Although, level of participation in religious activities by the clients has greatly been improved after joining the RDS program, there is still room to improve these activities, especially knowledge about interest, its consequence, and how to get rid of it. Therefore, in the weekly meetings, effective lectures may be organized on this issue.

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