



Impact of Small Enterprise Loan Programme of Palli Daridro Bimochon Foundation on the Beneficiaries Socio-economic Development: A Case of Bangladesh

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2022/v40i101677

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/91580>

Original Research Article

Received 13 July 2022
Accepted 20 September 2022
Published 26 September 2022

ABSTRACT

Various government and non-government organizations in Bangladesh are trying to socio-economic development of the rural poor through Small and Medium Enterprises (SMEs). In this context, the purpose of the study was to assess the impact of small enterprise loan programme (SELP) of Palli Daridro Bimochon Foundation (PDBF) on the socio-economic development of the beneficiaries. The study was conducted in four upazilas (sub-district) of Bangladesh. Face to face interview was conducted to collect relevant data from the randomly selected 271 respondents. The survey revealed that majority (69.40%) of the respondents developed their socio-economic conditions which ranged from medium to high level compared to 30.60 % of the respondents was at low level. The regression result showed that the socio-economic development of the beneficiaries is characterized by their higher age, higher education, longer experience in involvement, higher savings, lower loan availability, higher satisfaction and favourable attitude towards SELP. The findings may contribute to improving SELP beneficiaries' socio-economic condition through more effective policies.

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Keywords: Impact; small enterprise; socio-economic development; PDBF; beneficiaries.

1. INTRODUCTION

The role of Small and Medium Enterprises (SMEs) is indispensable for the overall economic development of a country particularly for developing countries like Bangladesh [1]. SMEs contribute to employment for 7.8 million people directly and provide livelihood for 31.2 million people in Bangladesh [2]. The growth Rate of GDP at current prices in manufacturing sub sector of Bangladesh in small, medium and micro industry is 18.18 [3]. Many small businessmen and entrepreneurs have not been able to collect the amount of money needed to build a new business or expand a business. Because the amount of money they need goes beyond the micro credit. Again, because the bank loan is a bit tricky, they are often unwilling to accept the loan from the bank. Palli Daridro Bimochon Foundation (PDBF) is the premier socio-economic development organization of the country. PDBF has been providing small entrepreneurial loan facility to generate more income and employment by providing technical benefits to these small businessmen and entrepreneurs. It plays an important role in bridging the gap between the loan program, microfinance and institutional lending.

A huge amount of credit provide by various government, private and non-government organizations each year for the socio-economic development of rural poor. In the context of getting loan, loan payment system and interest rate, public sectors organizations are preferable to rural clients. PDBF is one of the important public organizations that works for socio-economic development of rural poor through providing credit. Their providing amount of credit is higher than the NGOs micro-credit program.

The SELP of PDBF providing loan to the rural clientele since long. But what extent the impact of their loan program to the socio-economic development of the beneficiaries are not known. The factors responsible to influence the impact is also unknown. The hypothesis for the study is that there is a positive impact of SELP on the socio-economic development of the beneficiaries. Therefore, keeping this hypothesis in mind, the study was undertaken considering the following objectives:

- i. To assess the impact of small enterprise loan programme (SELP) of Palli Daridro Bimochon Foundation (PDBF) on the socio-economic development as perceived by the beneficiaries;
- ii. To describe some selected characteristics of SELP beneficiaries of PDBF; and
- iii. To explore the contribution of the selected characteristics of the SELP beneficiaries to their impact of SELP on the socio-economic development.

2. METHODOLOGY

2.1 Study Area

The study was conducted at four Upazilas (sub-district) drawn from one upazila in each from four districts of 55 districts of PDBF to objectively represent the entire working area. These four upazilas were Rajbari sadar under Rajbari district, Kaliakair upazlia under Gazipur district, Dhanbari upazila under Tangail district and Ramgati upazila in Lakshmipur district in Bangladesh. The area is selected purposively. There have been observed active participation of the beneficiaries in these selected areas.

2.2 Population and Sampling

A total of 838 SELP respondents of four upazilas under four districts of PDBF were constituted the population of the study. According to the Yamane formula [4], sample size was calculated [5,6]. The given formula is stated as:

$$n = N / 1 + N (e)^2$$

Where, n= sample size
N= population size
e=margin of error

A total number of 271 respondents were finally selected as a sample from the population size of 838 using the above formulae. A reserve list of 27 SELP respondents (about 10 % of the sample) was prepared so that these respondents could be used for interview in case any respondent included in the original sample was not available in spite of utmost effort during collection of data. The distribution of population, sample was shown in Table 1.

Table 1. Distribution of population, sample and number of SELP beneficiaries including in reserve list

Sl. No.	Name of District	Name of Upazila	Total SELP respondents considered as population	SELP respondents selected as sample	SELP respondents including in reserve list
1	Rajbari	Rajbari Sadar	235	76	8
2	Gazipur	Kaliakair	198	64	6
3	Tangail	Dhanbari	207	67	7
4	Lakshmipur	Ramgati	198	64	6
Total			838	271	27

2.3 Selection and Measurement of Variables

The variables of the study had been selected after a systematic searching of literatures and discussion with the relative experts and academicians. An organized research usually contains at least two identical elements viz. independent variable and dependent variable. Considering study nature, location of study, time and other logistic support, the researchers selected twelve independent variables for the study. These were age, educational qualification, dependency ratio, training exposure, length of involvement, savings deposit, loan availability, loan utilization, loan repayment behavior, satisfaction towards loan received condition, decision making ability and attitude towards SELP of PDBF. In the same way, the impact of small enterprise loan programme (SELP) of Palli Daridro Bimochon Foundationon (PDBF) on socio-economic development as perceived by the beneficiaries is the only dependent variable was considered combined changes of socio-economic status. The measurement techniques of both independent and dependent variables are discussed as follows.

2.4 Measurement of Independent Variables

We selected 12 independent variables for the study through literature review. The variables are age, educational level, dependency ratio, training exposure, length of involvement, saving deposit, loan availability, loan utilization, loan repayment behavior, satisfaction towards loan received condition, decision making ability and attitude towards SELP.

The age of the respondents was measured in terms of actual years from his/her birth to the time of interview. The educational qualification was measured on the basis of completed years of schooling by a respondent in the educational

institutions [7]. Dependency ratio was measured of the number of dependents aged zero to 14 and over the age of 64, compared with the total population aged 15 to 64. Training exposure was measured by the total number of months of small entrepreneurial training received by the respondents in his/her life from different GO and NGO organizations. Length of involvement was measured considering the period of time of involvement of the respondents with SELP of PDBF to the time of interview. It was calculated in terms of years on the basis of the respondent's response. Savings deposit was measured by accounting the total savings of the respondents from different sources during a year. It was expressed in thousand taka. Loan availability of a respondent was defined as the percent (%) to which his/her loan requirement was fulfilled by the amount of loan actually was received by his/her. Utilization pattern of loan was measured by using ppercent (%) of amount used in desired purpose. Loan repayment behavior of the respondents was determined by the amount of loan repaid against the loan repayable amount. It was expressed in percent (%). Satisfaction towards loan received condition was measured through the degree of perceived satisfaction of each condition introduced by PDBF. A four point scale was used for measuring satisfaction level of each respondent such as 'Highly Satisfied', 'Satisfied', 'Moderately Satisfied', and 'Not Satisfied'. Decision making ability of a respondent was measured by using a 3 point rating scale. Each respondent was asked to indicate the extent of his/her decision making ability in each of the five selected items by checking any one of the responses viz. 'decision made by own', 'decision made by family members' and 'decision made by outsiders of the family'. Finally, attitude towards SELP of PDBF scale in the present study was a combination of the Thurston's technique of equal appearing interval scale and Likert's technique of summated ratings scale with slight modification [8].

2.5 Measurement of Dependent Variable

Impact of SELP of PDBF on socio-economic development was the dependent variable of this study. It was measured by the addition of the extent of changes occurred in ten selected dimensions of PDBF activities for the socio-economic development of the beneficiaries. Change of each dimension was determined by the difference between before and after involvement with SELP of PDBF situation. Changes of the dimensions were determined by the following ways:

$$Y=Y_1+Y_2+Y_3+Y_4+Y_5+Y_6+Y_7+Y_8+Y_9+Y_{10}$$

Where,

Y = Total change score of socio-economic impact of SELP beneficiaries through SELP of PDBF activities

Y₁= Changes in food consumption

Y₂= Changes in the dressing habit

Y₃= Changes in Sanitation Condition

Y₄= Changes in Participation in Health Activities

Y₅= Changes in drinking water sources

Y₆= Changes in treatment of diseases

Y₇= Changes in income

Y₈= Changes in saving

Y₉= Changes in wealth possession

Y₁₀=Changes in expansion of business

2.6 Collection and Processing of Data

The prime task in materializing objectives of the study was to collect data by interviewing 271 respondents from the study areas. Data for this study were collected by the researcher himself. A structured interview schedule containing open and closed form of question was prepared to collect necessary and relevant information in accordance with the objectives of the study. Appointments with the interviewees were made in advance with the help of PDBF officials. In case of failure due to their pre-occupation a revisit was made with prior appointment. The researcher was taken all possible efforts to establish desired rapport with the respondents so that the respondents did not feel any hesitation to furnish proper information. The respondents were interviewed at their leisure time so that they could give accurate information in a cold mind. Data were collected in local unit and these were subsequently converted into appropriate standard units. The researcher faced no serious problem in collecting data. Rather he obtained excellent co-operation from the SELP beneficiaries of PDBF, Upazila Daridro Bimochoh

Officer (UDBO), Assistant Daridro Bimochoh Officer (SELP) and Field Officers (SELP) during collection of data. However, it was not possible to collect data from 12 respondent beneficiaries in the original sample due to their unavailability at the time of interview despite several attempts to contact them. Therefore, the researcher had to collect data from 12 beneficiaries of the reserve list. Data were collected during six months from October, 2021 to March, 2022.

After completion of the field survey, the collected data were summarized to find out the errors and omission and to make sure that they were entered as complete as possible and well arranged to facilitate coding and tabulation. Appropriate scoring technique was followed to convert the qualitative data into quantitative data. Finally the data obtained from the respondents were transferred into a master sheet. For describing the independent and dependent variables, the respondents were classified into different categories in respect of each variable. These categories were developed according to the score obtained by the respondents. However, the researcher was guided by the nature of data and prevailing social research system for categorization.

2.7 Analysis of Data

Descriptive statistical measures including number, percent, range, mean and standard deviation were used in this study. To find out the contribution of the independent variables on the socio-economic development through SELP of PDBF, linear regression analysis was used [9,10]. The model used for this analysis can be explained as follows:

$$Y_i=a+b_1X_1+b_2X_2+b_3X_3+b_4X_4+b_5X_5+b_6X_6+b_7X_7+b_8X_8+b_9X_9+b_{10}X_{10}+b_{11}X_{11}+b_{12}X_{12}+e$$

Where, Y_i= Combined contribution of the independent variables on the socio-economic development through SELP of PDBF; X₁ is age; X₂ is education; X₃ is total dependency ratio; X₄ is training exposure; X₅ is length of involvement; X₆ is saving deposit; X₇ is loan availability; X₈ is loan utilization; X₉ is loan repayment behavior; X₁₀ is satisfaction towards loan received condition; X₁₁ is decision making ability and X₁₂ is attitude towards SELP of PDBF of the respondent beneficiaries. b₁, b₂, b₃, b₄, b₅, b₆, b₇, b₈, b₉, b₁₀, b₁₁, b₁₂ are regression coefficients of the corresponding independent variables and 'e' is random error.

3. RESULTS AND DISCUSSION

3.1 Impact of SELP of PDBF on the Socio-economic Development of the Beneficiaries

Respondent’s participation with SELP of PDBF has played a vital role in changing their socio-economic condition. Salient features such as possible range, observed range, mean, standard deviation (SD) of the total change of ten dimensions have been presented in Table 2. Change in socio-economic development of the respondents through SELP of PDBF was found to range from 10 to 22, mean was 14.90 with standard deviation 2.34.

Data revealed from the Table 2 that majority (69.40 percent) of the respondents increased their socio-economic development which was ranged from medium to high level compared to 30.60 percent of the respondents was increased at low level socio-economic development. It means that PDBF was very active to involve their SELP beneficiaries for socio-economic development activities.

3.2 Selected Characteristics of the SELP Beneficiaries of PDBF

The characteristics of the SELP beneficiaries were classified into suitable categories for description and interpretation in relation to impact of SELP of PDBF. Some of the salient features such as measuring unit, possible range and observed range, mean, standard deviation (SD) of the selected characteristics of the beneficiaries have been presented in Table 3.

The highest percent of respondents were middle aged and the secondary level of education [11,12,13]. In case of dependency ratio, training exposure and savings deposit, the dominant portion were in the low category. Most of the respondents were medium category in case of

their length of involvement with PDBF and decision making ability. In case of loan availability, loan utilization, loan repayment behavior, satisfaction towards PDBF loan received condition and attitude towards SELP of PDBF, the majority portion were in the high category (Table 3).

3.3 Contribution of the Selected Characteristics of the SELP Beneficiaries to their Impact of SELP on the Socio-economic Development

The impact of small enterprise loan programme (SELP) of Palli Daridro Bimochon Foundationon (PDBF) on the socio-economic development of the beneficiaries is the dependent variable (Y) which was measured combined changes in various socio-economic status. To determine the contribution of the independent variables on the impact of SELP, multivariate regression analysis was done (Table 4). Before running the regression analysis, multicollinearity was checked among the independent variables and no high collinearity found among them.

Data present in Table 4 indicated the adjusted R² in the multiple regression analysis were 0.516 and the corresponding F-ratio 24.975 which was significant at 0.000 level. This value indicates the accuracy of the analysis.

Results of multiple regression analysis indicated that the education (X₂) of the SELP beneficiaries was so far the most important characteristic which strongly and positively influenced on their socio-economic development through SELP of PDBF. Satisfaction towards loan received condition (X₁₀), age (X₁), length of involvement (X₅) and saving deposit (X₆) and attitude towards SELP(X₁₂) had a positive and significant influence on their socio-economic development through SELP of PDBF. Loan availability (X₇) had a negative and significant influence on their socio-economic development.

Table 2. Distribution of the respondents according to their total changes in socio-economic development due to the involvement with SELP of PDBF

Categories	Respondents		Possible range	Observed range	Mean	SD
	Frequency	Per cent				
No change: (0)	0	0				
Low change: (1-10)	83	30.60				
Medium change: (11-20)	128	47.20	0-30	10-22	14.90	2.34
High change: (21-30)	60	22.20				
Total	271	100.00				

Table 3. Distribution of respondents according to their characteristics (n=271)

Characteristics	Categories	Respondents		Mean	SD
		Number	Per cent		
Age (years)	Young aged (18- 35)	60	22.10	40.24	10.167
	Middle aged (36- 55)	201	74.20		
	Old aged (>55)	10	3.70		
	Total	271	100.00		
Education (schooling years)	Can sing only (0.5)	6	2.20	7.63	2.812
	Primary level (1-5)	27	10.00		
	Secondary level (6-10)	160	59.00		
	Higher secondary level (11-12)	56	20.70		
	Bachelor level (>12)	22	8.10		
	Total	271	100.00		
Dependency ratio (per cent)	Low dependency ratio (0-50)	172	63.50	54.62	45.66
	Medium dependency ratio (51-100)	78	28.80		
	High dependency ratio (> 100)	21	7.70		
	Total	271	100.00		
Training exposure (months)	No training (0)	42	15.50	6.26	5.91
	Low training (1-6)	138	50.90		
	Medium training (7-12)	58	21.40		
	High training (>12)	33	12.20		
	Total	271	100.00		
Length of involvement (years)	Low involvement (Up to 2)	64	23.60	4.70	3.00
	Medium involvement (3 - 5)	125	46.10		
	High involvement (>5)	82	30.30		
	Total	271	100.00		
Decision making ability (score)	Low decision making ability (up to 8)	3	1.10	11.72	1.58
	Medium decision making ability (9-12)	187	69.00		
	High decision making ability (>12)	81	29.90		
	Total	271	100.00		
Saving deposit (1 for '000' Tk.)	No saving deposit (0)	5	1.80	187.46	153.58
	Low saving deposit (up to 40)	122	45.00		
	Medium saving deposit (41-160)	89	32.80		
	High saving deposit (>160)	55	20.30		
	Total	271	100.00		
Loan availability (per cent)	Low loan availability (up to 80 %)	62	22.90	87.98	14.29
	Medium loan availability (81 %-95 %)	84	31.00		
	High loan availability (>95 %)	125	46.10		
	Total	271	100.00		
Loan utilization (per cent)	Low loan utilization (up to 50 %)	59	21.80	89.95	13.41
	Medium loan utilization (81 % - 95 %)	89	32.80		
	High loan utilization (>95 %)	123	45.40		
	Total	271	100.00		
Loan repayment behavior (per cent)	Low loan utilization (up to 50 %)	59	21.80	89.95	13.41
	Medium loan utilization (81 % - 95 %)	89	32.80		
	High loan utilization (>95 %)	123	45.40		
	Total	271	100.00		
Satisfaction towards loan received condition(score)	Low satisfaction (up to 12)	38	14.00	23.55	8.00
	Medium satisfaction (13-24)	91	33.60		
	High satisfaction (>24)	142	52.40		
	Total	271	100.00		
Attitude towards SELP of PDBF (score)	Highly unfavorable attitude (0-16)	10	3.70	45.65	13.41
	Low unfavorable attitude (17-32)	10	3.70		
	Low favorable attitude (33-48)	78	28.80		
	Highly favorable attitude (49-64)	173	63.80		
	Total	271	100.00		

Table 4. Regression analysis showing the contribution of 12 independent variables on the beneficiaries' socio-economic development

Dependent variable	Independent variable	β	ρ	R^2	F
Impact of SELP of PDBF on socio-economic development	(Constant)	-559.389			
	Age (X ₁)	.212	.000**		
	Education (X ₂)	.391	.000**		
	Dependency ratio (X ₃)	.008	.861		
	Training exposure (X ₄)	-.026	.552		
	Length of involvement (X ₅)	.129	.005**		
	Savings deposit (X ₆)	.139	.002**		
	Loan availability (X ₇)	-.102	.020*	.537	24.975
	Loan utilization (X ₈)	.009	.850		
	Loan repayment behavior (X ₉)	-.022	.614		
	Satisfaction towards loan received condition (X ₁₀)	.215	.000**		
	Decision making ability (X ₁₁)	-.025	.565		
Attitude towards SELP of PDBF (X ₁₂)	.107	.036*			

** Significant at $p < 0.01$; * Significant at $p < 0.05$

The higher the education, the higher the impact of the loan on the beneficiaries' socio-economic development. Education may help the beneficiaries to broaden their outlook towards utilizing of SELP loan. Similar findings were observed in the case of [14,15] who mentioned that education is an important factor to uplift socio-economic condition of the rural farmers through the use of smart adaptation strategies. With the increase of age, a man increases his experience and knowledge which might help to utilize SELP loan more effective way to increase their socio-economic condition [16, 17]. Likewise, age, the length of experience with SELP of PDBF has a positive and significant relationship with beneficiaries socio-economic development. Long duration regarding attaching the program may help the beneficiaries to utilize the loan properly. Savings and loan availability also had positive and significant contributions to increase respondents' socio-economic condition. It is worthy to mention that higher the amount of loan received and savings, the higher the scope to increase socio-economic development of the respondents. Finally, some psychological issues like satisfaction and attitude towards the loan program helped them to uplift their socio-economic condition.

4. CONCLUSIONS AND RECOMMENDATIONS

From the above findings and discussion, it may be concluded that the majority of the SELP respondents increased their socio-economic development at moderate to high level. It means that PDBF was very active to involve their SELP

beneficiaries for socio-economic development activities. The education of SELP beneficiaries was so far the most important characteristic followed by age, length of involvement, savings, loan availability, satisfaction and attitude towards SELP for their socio-economic development. The educated beneficiaries used the loan in more profitable way and improved their socio-economic condition. At the same time, the beneficiaries with higher age, longer experience in organizational involvement, higher satisfaction and favourable attitude towards the program helped them to improve their socio-economic condition. The PDBF authority should monitor and motivate more the beneficiaries who are young aged, lower educational background, lower length of involvement, less savings, dissatisfaction and unfavourable attitude towards SELP of PDBF. This might help to strengthen their activities towards socio-economic development of the beneficiaries. The present study was conducted in four sub-districts and beneficiaries selected 12 factors. Thus, a further study should be conducted covering other locations and variables.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Islam KA, Miajee MR. Small and Medium Enterprises (SMEs) Financing in Bangladesh: A Review of Literature. *International Journal of Small and Medium Enterprises*. 2018;1(1):11-5.
2. Voluntary National Reviews (VNRs). Accelerated action and transformative pathways: realizing the decade of action and delivery for sustainable development. Government of the People's Republic of Bangladesh; 2020.
3. BBS. Bangladesh Bureau of Statistics. Statistics & Informatics Division (SID), Ministry of Planning, Government of the People's Republic of Bangladesh; 2021.
4. Yamane T. *Statistics: An Introductory Analysis*. 2nd Edition, Harper and Row, New York; 1967.
5. Kabir MH, Rainis R. Adoption and intensity of integrated pest management (IPM) vegetable farming in Bangladesh: an approach to sustainable agricultural development. *Environ. Dev. Sust.* 2015; 17(6):1413- 1429.
6. Khan I, Lei H, Shah IA, Ali I, Khan I, Muhammad I. Farm households' risk perception, attitude and adaptation strategies in dealing with climate change: Promise and perils from rural Pakistan. *Land Use Policy*. 2020;91:1-9.
7. Mishuk PS, Kabir MH, Alam MM. Assessing the Effectiveness of Department of Agricultural Extension (DAE) Services to Increase Farmers' Skill. *Asian Journal of Agricultural Extension, Economics & Sociology*. 2021;39(6):68-75.
8. Edwards AL. *Techniques of Attitude Scale Construction*. New York: Appleton Century Crafts, Inc; 1957.
9. Nasrin S, Kabir MH, Alam MM, Islam MS. Farmers knowledge on pesticide application in vegetable cultivation. *International Journal of Applied Agricultural Science*. 2019;5(6):144-151.
10. Kabir MH, Azad MJ, Islam MN. Exploring the determinants and constraints of smallholder vegetable farmers' adaptation capacity to climate change: A case of Bogura District, Bangladesh. *Journal of Agricultural and Crop Research*. 2020; 8(9):176-186.
11. Alam MZ, Islam MS, Kabir MH. Problems faced by the bean farmer in selected areas of Pabna district in Bangladesh. *Research in Agriculture, Livestock and Fisheries*. 2018;5(1):11-18.
12. Islam MS, Kabir MH, Ali MS, Sultana MS, Mahasin M. Farmers' knowledge on climate change effects in agriculture. *Agricultural Science*. 2019a;10:386-394.
13. Islam MS, Islam MS, Kabir MH, Alam MZ, Nur-e-Alam SM. Use of communication media by the Bean farmers. *International Journal of Science and Business*. 2019b; 3(2):126-137.
14. Kabir MH, Islam, MS, Ali MS, Abdullah MM. Farmers' perception towards harmful effects of climate change on agriculture. *Asian Journal of Agricultural Extension, Economics & Sociology*. 2018;27(1):1-8.
15. Mazumder MSU, Kabir MH. Farmers' adaptations strategies towards soil salinity effects in agriculture: The interior coast of Bangladesh, *Climate Policy*. 2022;22(4): 464-479.
16. Islam MM, Bari MA, Ali MS and Rahman MM. Contribution of Palli Daridro Bimochon Foundation activities on socio-economic development of the beneficiaries in Bangladesh. *IOSR Journal of Agriculture and Veterinary Science*. 2014;7(1):01-07.
17. Basu S, Roy A, Karmokar S. Effectiveness of microfinance on household income generation strategy in the southwest region of Bangladesh. *Asian J. Soc. Sci. Leg. Stud.* 2020;2(3):56-62.

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