



# Constraints Faced by Rural Women in Changing Livelihoods in Bangladesh: A Study on the Impact of Microcredit through PDBF

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## Authors' contributions

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

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## ABSTRACT

The main purpose of the study is to determine the extent of the constraints faced by the women beneficiaries of Palli Daridro Bimochon Foundation (PDBF) on their socio-economic development and to explore the relationship between the socio-economic characteristics of the beneficiaries and

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their constraints. A total of 3436 women beneficiaries of three upazilas under 55 districts of PDBF constituted the population of the study. A face-to-face interview survey was conducted to collect data from the randomly selected 346 respondents. Among the 13 selected problem items, 'high rate of interest' was ranked first (70.81%), 'more savings have to be deposited while taking the loan' was ranked second (68.69%) and third (68.40%) was 'various income generating activities and social development training are inadequate'. The findings revealed a significant relationship between training exposures, decision-making ability, savings deposit, income-generating activities, communication & network, and constraints faced by PDBF beneficiaries. Therefore, the PDBF authorities should consider significant factors in reducing the constraints faced by rural women to change their livelihoods.

*Keywords: Women beneficiaries; PDBF; constraints faced; socio-economic development; livelihood.*

## 1. INTRODUCTION

In many developing countries, women in rural communities play a role in meeting the needs of their families when they engage in income-generation activities (Nuryati, Djono, and Chotimah 2022; Zunaidi and Maghfiroh 2021) [1]. Rural economy is very important for the development of Bangladesh because three-fourth of the people still lives in rural areas and poverty rate is 18.7 percent in Bangladesh [2]. Rural financing is regarded as the growth engine that propels the economy and generates employment on a global scale. Their ability to promote economic growth, maintain the global economic recovery, creation of employments, and lower poverty has propelled them to the forefront of the sustainable development agenda. Agriculture provides livelihood for over 60% of Bangladesh's population. It is pivotal to provide food and income for the rural poor. At the same time, it is also crucial to reduce agriculture's high population density. Powerful social, economic, and natural forces are driving changes in agricultural systems. The agriculture sector must respond to these forces to improve livelihoods by balancing farm and non-farm activities.

Microcredit is now commonly referred to as microfinance and is considered a legitimate economic tool in the fight against poverty. The impact of giving credit to women has been a controversial issue. At one end of the spectrum, some argue that micro credit has positive impacts on gender equality, women's empowerment and households' well-being. Moreover, women participating into micro credit programs improve their ability to exercise agency in the intra-household processes, to increase women's welfare resulting in decreasing male bias in welfare outcomes in the household; to increase the contraceptive use by women [3]. Microfinance savings and Micro Finance

Institutions (MFIs) also potentially help families in developing countries to cope with financial risks from main illnesses resulting from the cost of medical care and loss of income during illness [4]. The current research addressed crucial issues which are faced by the rural women in Bangladesh. PDBF is the premier socio-economic development organization in the country. About 97% of the beneficiary members of PDBF are women [5]. It has been providing microcredit and women's enterprise loan facilities to generate more income and employment. Thus, women beneficiaries of PDBF have been facing a lot of problems like high interest rates, inadequate loan amounts, lack of training, poor network and communication, etc. PDBF plays an important role in bridging the gap between the loan program, microfinance, and institutional lending. PDBF has been providing microcredit and women enterprise loans to rural clientele for a long time. Therefore, the present study was undertaken considering the following objectives:

- i) To determine the role of PDBF in changing the livelihood of the rural women beneficiaries
- ii) To determine and describe some selected characteristics of the rural women beneficiaries;
- iii) To identify the constraints faced by the rural women beneficiaries in participation in PDBF activities.

## 2. METHODOLOGY

### 2.1 Study Area

The study was conducted in three upazilas out of 55 districts of PDBF in Bangladesh to objectively represent the entire working area. The study area was selected purposively. There has been observed active participation of the beneficiaries in these selected areas.

## 2.2 Population and Sampling

Out of 3436 total populations, 346 women beneficiaries were selected as a sample based on the Yamane formula [6]. A reserve list of 35 respondents (about 10% of the sample) was also prepared in case of unavailability of the respondents. A simple random sampling technique was used to select respondents for the interviews.

## 2.3 Selection and Measurement of Variables

The extent of the constraints faced by the beneficiaries was the focus variable and fifteen socio-economic characteristics were selected as explanatory variables namely age, educational qualification, total dependency ratio, farm size, involvement with PDBF, training exposure, savings deposit, loan availability, loan utilization, loan repayment behavior, decision making ability, income generating activities, innovativeness and communication and network. The study employed descriptive statistics, specifically mean, standard deviation, and percent, to measure the socioeconomic characteristics of the beneficiaries. The study's variables were operationalized by direct questioning, the researcher's creation of pertinent scales, and the use of scales created by others. Table 1 indicates the study's measuring unit.

## 2.4 Measurement of Dependent Variable

Constraints faced by the women beneficiaries in socio-economic development were the

dependent variable of this study. The interview schedule contained sixteen items. Each item was rated on a four-point rating scale: no problem, less problem, moderate problem, and severe problem. A score of 0, 1, 2, and 3 was given to each item, accordingly. By aggregating the respondents' scores over sixteen criteria, the issues that the beneficiaries encountered could be ascertained. Therefore, the farmers' issues might be ranked from 0 to 42. Based on the acquired score, the beneficiaries were divided into four categories: no constraint faced, low constraint faced, medium constraint faced, and high constraint faced.

The constraints faced index (CFI) for each of the items was measured using equation 1 [7,8,9].

$$CFI = Cs \times 3 + Cm \times 2 + Cl \times 1 + Cn \times 0 \dots \dots \dots (1)$$

In the given context, CFI stands for Constraints Faced Index, Cs for the number of respondents who experienced severe constraints, Cm for those who experienced a moderate constraint, Cl for those who experienced a smaller constraint, and Cn for those who experienced no constraint. Then, the Standardized Constraints Faced Index (SCFI) was measured to compare the constraints of the items. SCFI was measured for each constraint item by using the following equation 2.

Standardized Constraints Faced Index (SCFI)

$$\frac{CFI \text{ of each item}}{\text{Highest possible CFI}} \times 100 \dots \dots \dots (2)$$

**Table 1. Summarized operationalization of the variables of the study with measuring unit**

Variables	Measuring Unit	Operationalization
Age	Actual years	Direct question
Educational qualification	Schooling year(s)	Direct question
Dependency ratio	Percent	Used (TDR) formula
Farm size	Hectares	Direct question
Length of involvement	Score (1 for one year)	Direct question
Training exposure	months (1 for one month)	Scale developed for this study
Savings deposit	'000' Taka	Direct question
Loan availability	Percent	Used (LA) formula
Loan utilization	Percent	Used (LU) formula
Loan repayment behavior	Percent	Used (LRB) formula
Decision-making ability	Score	Scale developed by Ali (2008) [8,11] used for this study
Income generating activities	Score	Direct question
Innovativeness	Score	Direct question
Network and communication	Score	Direct question

## 2.5 Data Collection and Analysis

The primary responsibility for achieving the goals of the study was interviewing 346 respondents from the study areas in order to obtain data. To ensure that the respondents would not hesitate to provide accurate information, the researcher did everything within her authority to develop the necessary rapport with them. To ensure that they could provide accurate information with a clear mind, the respondents were interviewed during their free time. Data were collected from 05 August 2023 to 15 October 2023.

After completion of the field survey, the data was collected and modified to make it ready for analysis. Statistical treatments were performed, including percent, mean, standard deviation, range, and frequency. Equation 3 was used to calculate Pearson's product-moment coefficient of correlation (r) in order to investigate the correlations between the study's chosen elements [10]. The SPSS (Statistical Package for Social Science) software program (version 23) was used for this purpose. In the present study, a probability level of five percent was adopted.

$$r_{xy} = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}} \dots \dots \dots (3)$$

rx<sub>y</sub> = Pearson's product-moment correlation coefficient

x and y mean = Means of the variables x and y, respectively.

## 3. RESULTS AND DISCUSSION

### 3.1 Socio-economic Characteristics of the Rural Women Beneficiaries

Table 2 demonstrates the socioeconomic characteristics of rural women beneficiaries. Table 2 shows some of the beneficiaries' notable features, such as the number, percent, mean, and standard deviation (SD) of the selected characteristics. Respondents with middle-aged and secondary school education comprised the majority of the sample [11]. The majority of total dependency ratios, training exposures, and savings deposits were in the low category [12]. Most respondents fell into the medium category regarding their length of involvement with PDBF, decision-making abilities, ability to income-generating activities, innovativeness, and network and communication. The majority of loan availability, loan utilization, and loan repayment behavior were in the high category [12] (Table 2).

### 3.2 Constraints Faced by the Rural Women Beneficiaries of PDBF in Socio-economic Activities

Constraints faced by the rural women beneficiaries in socio-economic development were considered as dependent variable of the study. It was assessed based on how well they responded to the selected 13 issues. Constraints faced by the small enterprise beneficiaries range from 7 to 27 against the possible range of 0 to 39 with the mean and standard deviation of 16.61 and 4.49 respectively. Based on the constraint scores of the beneficiaries, they were classified into four groups namely, no, low, medium, and high constraints faced. The distribution of the respondents according to the constraints faced by the rural women under the study is given in Table 3.

Table 3 indicates that the highest proportion (60.11 percent) of the women beneficiaries faced medium constraints in their socio-economic activities, while 20.23 percent faced high and 19.66 percent faced low problems. Most respondent beneficiaries use their extensive experience and knowledge from regular credit and savings activities to address their problems. The findings indicate that women beneficiaries in the research area struggled with socioeconomic activities. Some factors, including a lack of training facilities and low deposits, cause those problems. According to Islam et al. [12], the primary constraint to beneficiaries' success is a lack of necessary skills and training. Moreover, they claimed that inadequate capital, training, and poor education are the main reasons for microcredit activities' failure.

### 3.3 Item-Wise Comparative Severity of the Constraints Faced by the Women Beneficiaries of PDBF in Socio-economic Activities

Table 4 shows the Rank order, the Standardized Constraints Faced Index (SCFI), and the Constraints Faced Index (PFI) score. The observed CFI scores of the items ranged from 183 to 735 against the possible range of 0-1038. Table 4 and Fig. 1 showed that based on the Standardized Constraint Faced Index (SCFI) among the 13 selected constraint items 'high rate of interest' was ranked first (70.81%), 'more savings have to be deposited while taking the loan' was ranked second (68.69%) and third (68.40%) was 'inadequate training on social

awareness building and income generating activities'. The next five important problems in descending order were 'due to short repayment period the loan cannot be utilized properly', 'loan disbursements are delayed due to lengthy loan process', 'no capacity to use credit in the proper trade', 'new loans are not available until all installments of the previous dues cleared', 'loans are not available for starting new income generating activities'. However, 'loans are not available on time' was ranked last (36.13%).

**Table 2. Distribution of respondents according to their characteristics (n=346)**

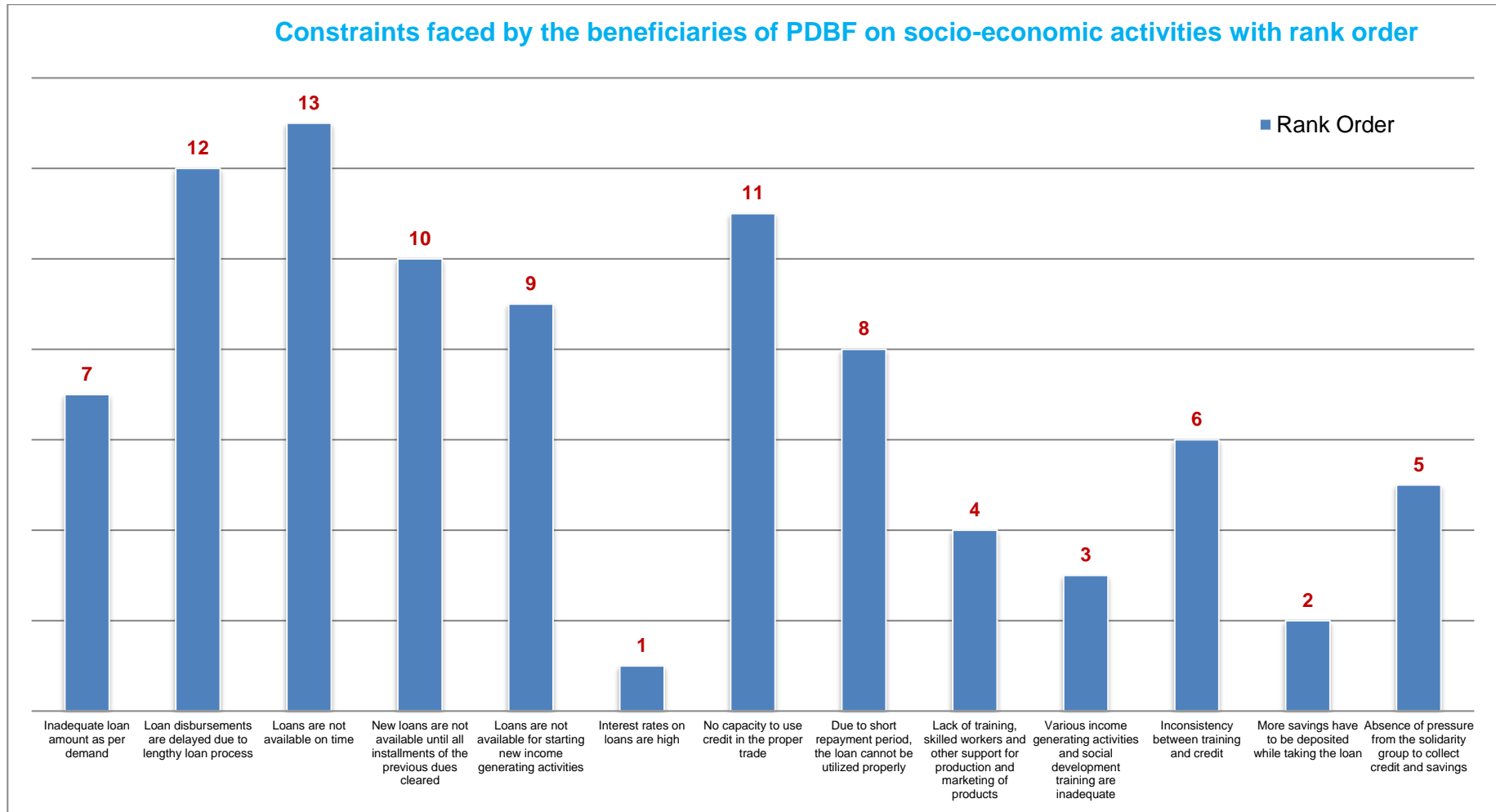
Characteristics	Categories	Respondent		Mean	SD
		Number	Percent		
Age (years)	Young aged (18- 35)	148	42.77	37.79	9.13
	Middle aged (36- 55)	188	54.34		
	Old aged (>55)	10	2.89		
Education (schooling years)	Can sign only (0.5)	119	34.39	5.03	3.97
	Primary level (1-5)	74	21.39		
	Secondary level (6-10)	132	38.15		
	Higher secondary level (11-12)	16	4.62		
	Bachelor level (>12)	5	1.45		
Total dependency ratio (percent)	Low total dependency ratio (0-50)	227	65.61	48.99	45.71
	Medium total dependency ratio (51-100)	101	29.19		
	High total dependency ratio (> 100)	18	5.20		
Farm size (Hectares)	Landless (up to 0.02 hec.)	80	23.12	0.19	0.264
	Marginal (>0.02 - 0.2 hec.)	154	44.51		
	Small (>0.21 – 1.0 hec.)	102	29.48		
	Medium (>1.01 – 3.0 hec.)	10	2.89		
	Large (> 3.0 hec.)	0	0.00		
Length of involvement (years)	Low involvement (Up to 2)	59	17.05	7.06	4.84
	Medium involvement (3-7)	146	42.20		
	High involvement (>7)	141	40.75		
Training exposure (months)	No training (0)	101	29.19	5.64	12.77
	Low training (1-4)	123	35.55		
	Medium training (5-15)	109	31.50		
	High training (>15)	13	3.76		
Decision making ability (score)	Low decision making ability (up to 8)	3	0.87	9.85	1.00
	Medium decision making ability (9-12)	328	94.80		
	High decision making ability (>12)	15	4.33		
Saving deposit (1 for '000' Tk.)	No savings deposit (0)	0	0.00	30.55	40.29
	Low savings deposit (up to 20)	206	59.54		
	Medium savings deposit (21-80)	111	32.08		
	High savings deposit (>80)	29	8.38		
Loan availability (percent)	Low loan availability (up to 80%)	45	13.01	94.84	10.31
	Medium loan availability (81%-95%)	44	12.71		
	High loan availability (>95%)	257	74.28		
Loan utilization (percent)	Low loan utilization (up to 50%)	94	27.17	87.54	13.59
	Medium loan utilization (81% - 95%)	123	35.55		
	High loan utilization (>95%)	129	37.28		
Loan repayment behavior (percent)	Low loan repayment behavior (up to 50%)	22	6.36	95.00	11.46
	Medium loan repayment behavior (81% - 95%)	58	16.76		
	High loan repayment behavior (>95%)	266	76.88		
Income generating activities	Low income generating activities (up to 8%)	74	21.39	12.53	4.51
	Medium income generating activities (9% -16%)	207	59.83		
	High income generating activities (>17%)	65	18.78		
Innovativeness	Low innovativeness (up to 12)	95	27.46	19.05	6.99
	Medium innovativeness (13-24)	160	46.24		
	High innovativeness (>24)	91	26.30		
Network & communication	Low network & communication (up to 7)	67	19.36	19.05	6.99
	Medium network & communication (8-15)	225	65.03		
	Highly network & communication (>15)	54	15.61		

**Table 3. Distribution of the women beneficiaries of PDBF according to constraints faced on socio-economic activities**

Categories (Scores)	Respondents of beneficiaries		Mean	SD
	Number	Percent (%)		
Low problem (Mean - SD)	68	19.66	16.61	4.49
Medium problem (Mean ± SD)	208	60.11		
High problem (Mean + SD)	70	20.23		
<b>Total</b>	<b>346</b>	<b>100.00</b>		

**Table 4. Constraints faced by the women beneficiaries of PDBF on socio-economic activities with rank order**

Sl. No.	Item of Constraints	Extent of Constraints faced				Total	CFI scores	SCFI (%)	Rank order
		Severe constraint (3)	Moderate constraint (2)	Less constraint (1)	No constraint (0)				
1.	Inadequate loan amount as per demand	11	34	86	215	346	402	38.73	7
2.	Loan disbursements are delayed due to lengthy loan process	11	37	86	212	346	193	18.59	12
3.	Loans are not available on time	1	46	88	211	346	183	17.63	13
4.	New loans are not available until all installments of the previous dues cleared	27	63	88	168	346	295	28.42	10
5.	Loans are not available for starting new income generating activities	37	94	70	145	346	369	35.55	9
6.	Interest rates on loans are high	138	137	47	24	346	735	70.81	1
7.	No capacity to use credit in the proper trade	4	63	70	209	346	208	20.03	11
8.	Due to short repayment period, the loan cannot be utilized properly	21	103	106	116	346	375	36.13	8
9.	Lack of training, skilled workers and other support for production and marketing of products	122	100	106	18	346	672	64.74	4
10.	Various income generating activities and social development training are inadequate	130	131	58	27	346	710	68.40	3
11.	Inconsistency between training and credit	51	134	83	78	346	504	48.55	6
12.	More savings have to be deposited while taking the loan	143	126	32	45	346	713	68.69	2
13.	Absence of pressure from the solidarity group to collect credit and savings	103	126	41	76	346	602	58.00	5



**Fig. 1. Constraints faced by the rural women beneficiaries of PDBF on socio-economic activities with rank order**

**Table 5. Pearson’s product moment co-efficient of correlation showing relationship between beneficiaries’ characteristics and constraints**

Dependent variable	Independent variables	Value of co-efficient correlation
Constraints faced by the women beneficiaries in socio-economic activities	Age	0.041
	Education	0.073
	Total dependency ratio	-0.063
	Farm size	-0.042
	Length of involvement	-0.060
	Training exposure	0.148**
	Decision-making ability	-0.150**
	Savings deposit	-0.103*
	Loan availability	0.064
	Loan utilization	-0.006
	Loan repayment behavior	-0.072
	Income generating activities	-0.127**
	Innovativeness	-0.072
	Communication & network	-0.259**

\*=Significant at 0.05 level of probability; \*\*= Significant at 0.01 level of probability

### 3.4 Relationship between the Selected Characteristics of the Women Beneficiaries and Their Constraints Faced in Socio-economic Activities

Relationships of fourteen selected characteristics (age, education, dependency ratio, farm size, length of involvement, training exposure, decision-making ability, savings deposit, loan availability, loan utilization, loan repayment behavior, income generating activities, innovativeness and communication & network towards of the women beneficiaries and their constraints faced in socio-economic activities have been shown in Table 5. Data in Table 5 revealed a significant relationship between training exposures, decision-making ability, savings deposit, income-generating activities, communication & network, and constraints faced by PDBF beneficiaries. Only one of these five significant variables, training exposures and problems faced by PDBF women beneficiaries demonstrated a positive significant relationship. The remaining four variables showed a significant negative relationship with the constraints faced by PDBF women beneficiaries.

Training improves their performance, facilitating them to work more efficiently and effectively. By providing training, the beneficiaries know how to adapt to new technology, new production processes, and new marketing arrangements while continuing to take calculated risks and have sound business and financial management skills [13]. Beside this, other research findings indicate that women’s education,

occupation, income, and gender-based awareness have a significant effect on household decision-making power [14]. Findings indicate that the decision-making ability, communication, and network of the beneficiaries lower the problem faced by socioeconomic development activities.

### 4. CONCLUSIONS

According to the above findings and discussion, the vast majority (81.18%) of women beneficiaries of PDBF faced medium to severe constraints. It can be said that to maximize socio-economic development, the problems of rural women beneficiaries is a serious issue. Women beneficiaries in the study area experienced several constraints, of which a high rate of interest, more savings have to be deposited while taking the loan, inadequate training on social awareness building and income generating activities due to the short repayment period the loan cannot be utilized properly, loan disbursements are delayed due to lengthy loan process were significant. Therefore, it is highly recommended that the respective authority provide better interventions like low loan interest rates, ensuring minimum savings-credit equity, providing adequate training according to beneficiaries’ needs, establishing training-credit linkage, and optimum loan amount that would increase the overall profitability of the women’s beneficiaries. Otherwise, interest dealers, new moneylenders, and other businessmen may engage in rural financing and attempt to harm rural women in the



name of development. The most promising aspect is that PDBF has the opportunity to contribute to the advancement of women across the country. Moreover, similar study might be conducted by other related leading organizations of the country in order to obtain more insights.

### DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

### CONSENT

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

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### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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