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Youth Skill Development Loans (YSDL) and Good Governance in Bangladesh: A Logit Model Analysis

Saleh Shahriar¹, Lu Qian¹, Airin Rahman¹, Md. Mahedi Hasan², Sokvibol Kea¹, and Nazir Muhammad Abdullahi¹

¹College of Economics and Management, Northwest A&F University, Yangling, Shaanxi, China;

²Faculty of Business Studies, Bangladesh University of Professional, Dhaka, Bangladesh

ABSTRACT: The purpose of this study is to explore the nature and role of the Youth Skill Development Loans (YSDL) in the generation of livelihoods activities for the youth community of Bangladesh under the *Women's Empowerment and Livelihood Development "Nuton Jibon"*. The study is significant for a couple of reasons. First, our literature review shows a dearth of research on the youth beneficiaries of the project. Second, there is a 'youth bulge' in Bangladesh, a developing economy experiencing the demographic dividend. The default issue in the YSDL is largely ignored. We have, therefore, examined the YSDL utilization status of 105 youths by using the logit model. The results reveal that the size of the loan, due amount of payment and education are significant factors to determine whether the youth would be a loan defaulter or regular payer. In essence, it is vital to enhance the overall capacities and skills of the rural youths.

KEY WORDS: Bangladesh, Community- Driven Development Approach (CDD), good governance, micro-finance, rural development, rural youths, Social Development Foundation (SDF), sustainable livelihoods framework, women's empowerment, Youth Skill Development Loans (YSDL)

JEL: G 21, O12, O16, O 18

The purpose of this paper is to examine the nature of the Youth Skill Development Loans (YSDL) in the generation of livelihoods activities for the youth community of Bangladesh under the *Women's Empowerment and Livelihood Development "Nuton Jibon"* Project, financed by the World Bank and the government of Bangladesh. Established in 2000 as an autonomous and 'not-for-profit' organization by the government of Bangladesh, under the Ministry of Finance, Social Development Foundation (SDF) has grown to become one of the 25 most successful organizations of Bangladesh in poverty alleviation (Social Development Foundation, Annual Report 2013). This paper offers a case study of the works of the SDF. The success of microfinance in meeting the welfare needs of the poor across the globe has been documented elsewhere (Islam et al. 2016; Mia et al. 2017). Bangladesh's Social Investment Program Project (SIPP) is a government-led initiative funded by the World Bank. The SDF has conceptualized the program to address the extreme poverty as outlined in the Poverty Reduction Strategy Paper (PRSP) of the government of Bangladesh. SDF started implementing SIPP in Bangladesh in 2013, with the use of Community-Driven Development Approach (CDD). The program has been implemented with a holistic development approach geared towards inclusion using tools like the community finance, livelihood improvement, youth employment, infrastructure development, and women empowerment. In capturing the holistic aspects of rural development and livelihood activities, the *Women's Empowerment and Livelihood Development "Nuton Jibon"* Project is a very special project.

The main focus of this study is on the *Empowerment and Livelihood Improvement project* that was implemented in 3262 villages of 16 most vulnerable districts and 657,593 households. The design of

Address correspondence to Lu Qian, College of Economics and Management, Northwest A&F University, 3 Taicheng Road, Yangling, Shaanxi 712100, P.R. China. E-mail: luqian@nwfufu.edu.cn

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the project includes the demands and priorities of the rural communities, sustainable livelihood development, community finance, micro-enterprise development, employment generation, and vulnerability risk reduction. The objective was to improve the livelihoods of extreme poor communities and to strengthen community institutions in the selected districts of Bangladesh. The project was implemented in a total of 16 districts covering six divisions – Dhaka, Rangpur, Rajshahi, Khulna, Barisal and Sylhet that included 51 Upazilas (sub-districts), 266 Unions, and 3262 villages (See, the Supplementary Material Table S1 & Table S2 available online).

To the best of the authors' knowledge, there exists no study with regard to the youth beneficiaries of the project. This work will provide important insights into the roles of SDF in establishing the norms of good governance in Bangladesh. The project is composed of several components such as microfinance, youth development, environmental hazard management, training, and institutional capacity building. For brevity of this paper, we will focus on the youth skill development loan utilization aspects of this project component – youth and development. The YSDL is conducive to employment generations, capacity buildings, and improvements in the decision making of the rural poor youth.

The remainder of the paper is organized into several segments. The review of the literature is provided in section 2. The next section 3 elucidates the theoretical framework and the key project principles. The data sources and methods are explained in section 4. The results and discussions are presented in section 5 before conclusions are finally offered.

1. Literature Review

The Community Operational Manual (COM) is comprised of the 15 Booklets to guide and help local/grassroots level implementation and management of the project. Voluminous works are produced with respect to the microfinance operations across the globe. There are, however, a few studies that analyzed the lending strategies of the youth related to the microfinance institutions. Our present study covers the institutional performance of the SDF and assess the vulnerability of the youth group who utilized loan from the above-mentioned project implemented by SDF, Bangladesh. Most of the studies on microfinance repayment behavior are focused on group lending system. Our study is also based on group lending system but the groups are homogenous in nature as all people are young. In the next section, we will briefly review some studies which were carried on the same research theme.

M. Godquin (2004), used 1,629 loan observations to analyze the performance of microfinance institutions to check the repayment status. The study was based on group lending, and the result showed that strong social ties have a negative impact on repayment behavior.

Sharma and Zeller (1997) examined group-based lending programs in Bangladesh. They used data for 128 groups from four programs. In that study, they found that where there are more relatives in the group create more default rate. It means when peoples are very much known to each other, they may feel less pressure to repay the loan.

Bassem (2008), explored that the group lending is successful in Tunisia. The results of the estimation of that study showed that, the internal rule of conduct, business type, peer pressure, knowledge about other members of the group, sex, education and non-financial services has an influence on repayment. The also explored, marital status and homogeneity affect negative where's the tie with the loan officer affect positively the repayment performance.

Fikirt (2011) in his study used t-test and chi-square analysis to compare the defaulters and non-defaulters' group. In that study, a binary logit model also was used to analyze the socio-economic factors that influence loan repayment.

Nawai and Sharif (2012) carried out a study in Malaysia on 309 respondents where they used multinomial logit regression model to analyze the factors affecting repayment performance and found that gender, formal religious education, distance to the lender office, business formality, total sales per month, total loan received, loan monitoring and loan disbursement lag have significantly affected borrower's repayment performance.

Wongnaa, Awunyo-Vitor (2013) analyzed the critical factors that affect the loan repayment performance of yam farmers in the Sene district of Ghana on 100 respondents. The researcher used probit model and the result showed that education, experience, profit, age, supervision, and off-farm income have positive effects on loan repayment performance whereas gender and marriage have negative effects on loan repayment while the effect of household size was found to be ambiguous.

Assfaw, Desta and Bahita (2015) examined group loan repayment rate in Mekelle where they found an increasing rate of default participants causes a decreased number of microfinance institutions. The study has applied a binary logistic regression model to analyze the factors influencing group loan repayment performance.

Shahriar (2015) studied SDF's *Women's Empowerment and Livelihood Improvement Nuton Jibon* project from the empowerment approach by analyzing data collected from the two northern villages of the district of Rangpur, Bangladesh. The study reported the well functioning of the village institutions and found the positive role of the project in developing rural leadership, employment opportunities of the poor and the hard-core poor. The researcher suggested to enhance the levels of coordination and balances among the village institutions and various project activities.

Corsi and Angelis (2016) reported gender discrimination in microfinance operations in the context of the evidence from Uganda. In a recent study on 619 microfinance institutions from 75 countries, several researchers conclude that government ideology is an important determinant of the performance of micro-finance (Gul, Podder, and Shahriar 2017).

Mallick and Nabin (2018) assesses the trade-off between poverty alleviation and cost-effectiveness encountered by NGOs by investing the factors determining the program location choice of NGOs in Bangladesh. The results suggest that cost-effectiveness and loan repayment concerns serve as barriers to reaching the poor. They also suggest the inability of the microfinance program to mitigate credit market imperfections in the presence of output market imperfections, and this implication can be generalized for the microfinance industry worldwide.

Using a nationally representative sample, Murshid and Ball (2018) have found a positive association ship between women's physical mobility and microfinance participation in Bangladesh. The paper also highlights the contradiction between the proliferation of empowerment programs and patriarchal social, cultural, and infrastructural barriers that prevent women from accessing such programs.

Using nationally representative survey data from rural Bangladesh, Sraboni (2018) examine the relationship between women's empowerment in agriculture and indicators of individual dietary quality. They have found that women's empowerment is positively and significantly associated with men's and women's dietary diversity and nutrient intakes.

Datta and Banerjee (2018) have focused on the entrepreneurial initiatives among rural women borrowers in Bangladesh. They conclude that micro-finance users primarily concentrate on expanding existing business and consumption expenditure, rather than taking extra risk to usher in searching, planning, and bricolage for a new venture. The study has shown how the micro-finance contributes to the improvement of the women's living conditions and the reduction of their consumption poverty.

We are motivated to undertake this study for a couple of reasons. First, reviewed studies show a knowledge deficiency regarding Bangladesh's YSDL. Second, 170 million people live in 14.4 million hectares of land in Bangladesh. It is one of the most densely populated countries in the world with a total area of 147,570 square kilometers, a population density of 1062.5 per square kilometer and total cultivable land of 8.29 million hectares. Furthermore, there is an increase in the working age population. The presence of a relatively high percentage of young people is a reflection of a new reality in Bangladesh – a lower middle-income country with 'demographic dividend' (Islam 2016). There has been a 'youth bulge' in Bangladesh. The micro-financial issues in relations to the youth are, however, largely ignored in the existing literature. This paper intends to fill the research gap.

2. Theoretical Framework and Project Principles

2.1. CDD Approach

The project was based on the Community-Driven Development (CDD) Approach. The CDD is, according to the World Bank, viewed as ‘one way of achieving social and economic empowerment and inclusion and reducing vulnerability. It is a mechanism that can be used to enhance livelihood development and increase community control over resources and decision-making while developing their capacity to reach out to markets and services and manage risks’ (World Bank 2010, p.33).

2.2. Good Governance

Good governance is a widely used concept in the development literature. It is the manner in which power is exercised in the management of a country’s economic and social resources for development (World Bank, 1992).

- **Inclusion:** All project activities will ensure that extreme poor, poor, most vulnerable, disabled, destitute, women and youth are targeted and included in project support; At least 90% of the extreme poor and 70% of the poor identified in the villages will be direct beneficiaries of the Village Development Fund (VDF) envelope. ‘Nuton Jibon Groups’(NJS) are consisted of the project beneficiaries and the Village Credit Organizations (VCO) are empowered to run the ‘Swabalambi Loan’ activities. The project is based on the following principles of good governance.
- **Equity:** All decision-making positions in all the village institutions such as Gram Samiti, Social Audit Committee (SAC), and subcommittees of the Gram Samiti will be occupied by extreme poor, poor, women and youth. The following Figures 1 & 2 show the village institutions created under the project.
- **Participation:** All decisions and project activities undertaken followed a participatory approach with at least 70% of the poor being part of the process.
- **Transparency:** All project decisions were being taken in the Gram Parishad (Village Executive) in an open and transparent manner; Project information was displayed in the village and project documentation including minutes of accounts books, meetings, and other records will be maintained and made accessible to the village community.

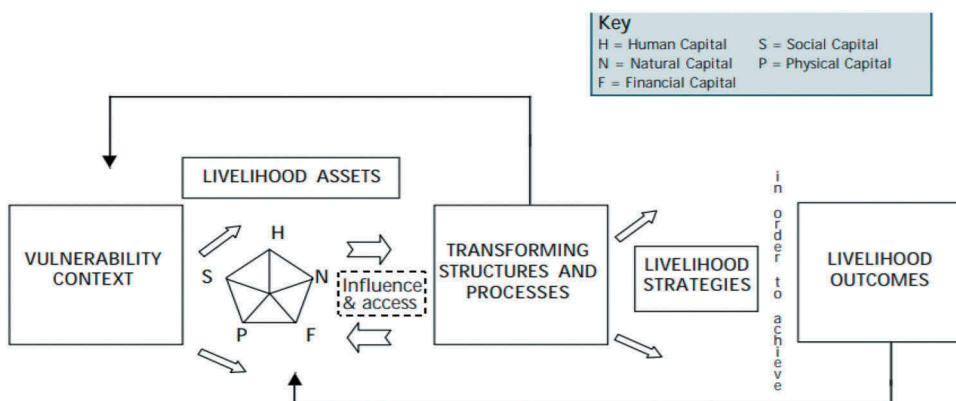


Figure 1. Adapted from the sustainable livelihoods framework.

Source: DFID, 1999, p.1. <https://www.ennonline.net/attachments/871/dfid-sustainable-livelihoods-guidance-sheet-section1.pdf>

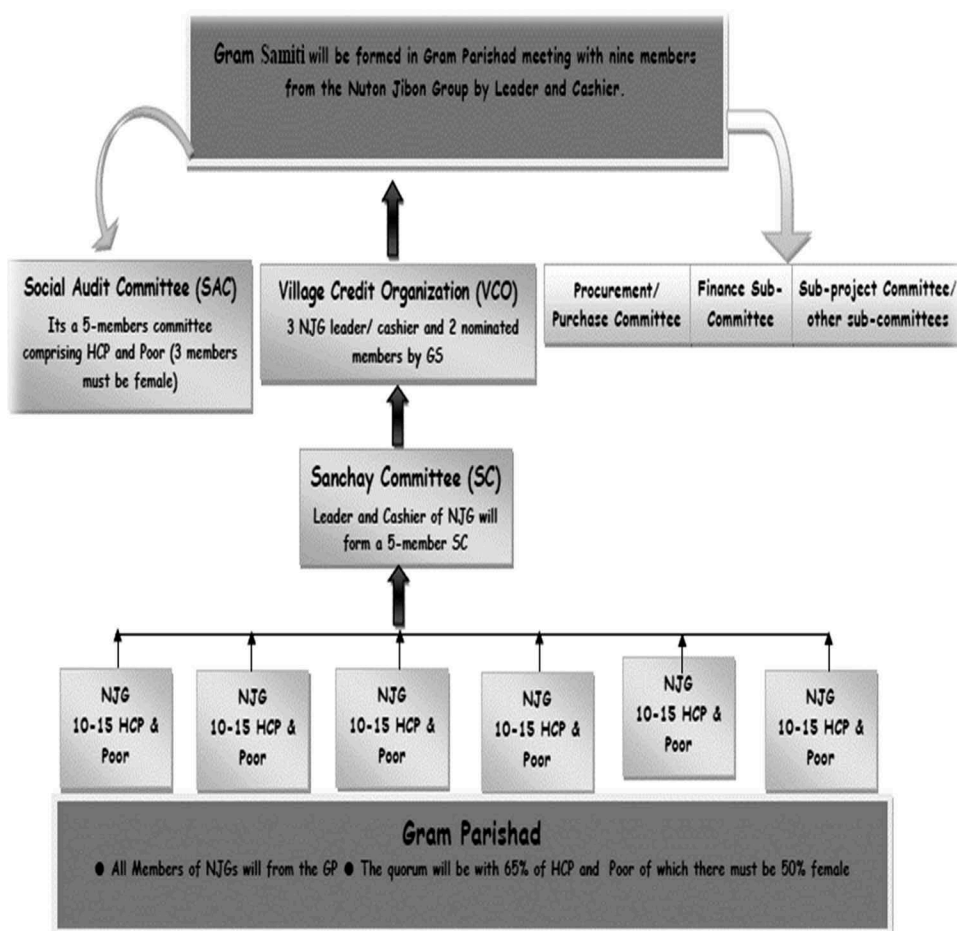


Figure 2. Summary of the village institutions. Source: Community Operational Manual (COM) Booklet Part 1, p.15. <https://www.sdfbd.org/index.php?id=251>

- **Accountability:** At least 80% of all Gram Samitis (Village Councils) received all the installments of the Village Development Fund and had to be rated satisfactory by village communities during the community assessment process.

2.3. Sustainable Livelihoods Approach

The concept of ‘Sustainable Livelihoods’ constitute the basis of different ‘Sustainable Livelihood Approaches’ (SLA) and has been adapted by different development agencies such as the British Department for International Development (DFID). The DFID has developed a ‘Sustainable Livelihood Framework’ (SLF) which is one of the most widely used livelihoods frameworks in development practice. The SLF was integrated in its program for development cooperation in 1997. DFID adapts a version of Chambers Conway’s definition of livelihoods: “A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.” (DFID, 1999, p. 1.)

2.4. Vulnerability Contexts

The vulnerability context frames the external environment in which people exist. Vulnerability emerges when human beings have to face harmful threat or shock with inadequate capacity to respond effectively. The difference between risk and vulnerability is of crucial relevance for assessing causes of poverty. The risk is defined as the likelihood of occurrence of (external) shocks and stresses plus their potential severity, whereas vulnerability is the degree of exposure to risk (hazard, shock) and uncertainty, and the capacity of households or individuals to prevent, mitigate or cope with risk. As the livelihoods approach is concerned first and foremost with people, it seeks to gain an accurate and realistic understanding of people's strengths (here called "assets" or "capitals"). It is crucial to analyze how people endeavor to convert these strengths into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes. Therefore, the SLF identifies five types of assets or capitals upon which livelihoods are built, namely human capital, social capital, natural capital, physical capital, and financial capital.

2.5. Policies, Institutions, and Processes

The importance of policies, institutions, and processes cannot be overemphasized, because they operate at all levels, from the household to the international arena, and in all spheres, from the most private to the most public. They effectively determine access (to various types of capital, to livelihood strategies and to decision-making bodies and source of influence), terms of exchange between different types of capitals, and returns to any given livelihood strategy (DFID, 1999). Policies, institutions, and processes have a direct impact upon whether people are able to achieve a feeling of inclusion and well-being. Policies, institutions, and processes can determine access to assets and influence decision-making processes.

2.6. Livelihood Strategies

Livelihood strategies comprise the range and combination of activities and choices that people make/undertake in order to achieve their livelihood goals. Livelihood strategies are directly dependent on asset status and policies, institutions and processes. Hence, that poor people compete and that the livelihood strategy of one household might have an impact (positive or negative) on the livelihood strategy of another household. Livelihood outcomes are the achievements or outputs of livelihood strategies, such as more income, increased well-being, reduce vulnerability, improved food security and more sustainable use of natural resources. When thinking about livelihood outcomes, the aims of a particular group, as well as the extent to which these are already being achieved, has to be understood. The sustainable livelihood framework is summarized in [Figure 1](#).

2.7. Main Principles of the Project

The village institutions are organized on the basis of the following ten principles:

- We will unite and work together for development
- We will maintain transparency and accountability in all kinds of activities
- We will first try to solve our problems by ourselves. We will seek outside help only when it is needed
- We will take all of our decisions on the basis of majority's opinion
- All in our village communities have the equal rights and opportunities
- We will be honest in our activities
- We will save as much as we can and repay our loans on time
- We will complete our activities as per agreed plans

- We will use our resources wisely
- We will take shelter and help others take shelter in a safe place during any disaster.

3. Methodology

3.1. Data

Two fundamental questions guided the data collection strategy. First, what is the nature of the utilization of the youth skills development loan provided under the Women's Empowerment and Livelihood Improvement project? Second, what are the institutional frameworks of the projects? The data on which the paper is based were collected from the quarterly process monitoring reports released from 2013 to 2015. The process monitoring reports were prepared by the Center for Natural Resource Studies (CNRS), Dhaka, Bangladesh, a third-party process-monitoring agency stationed at the different areas of the project. The first author of this paper worked as a field research officer of the process-monitoring team from 2013 to 2015 and visited a large number of villages under the project. Our datasets are, therefore, unique in several aspects. First, for the first time, we have collected and utilized the data for research purpose. Second, the data cover a wide range of issues including rural development, women's empowerment, livelihoods activities, and poverty alleviations. Third, the youth as a major group of stakeholders received little research attention. The youth constitute one-third of the labor force in Bangladesh. In 2013, the youth unemployment rate was 8.1%, which increased to 10.6% in 2016–17. The youth are under-studied in the existing literature. That is why it is significant to have a closer look at the problems encountered by the youth population as a group.

Up to June 2013, Taka 363,000.00 (Bangladesh's money is known as taka, 1US dollar is roughly equivalent to 80 Taka) was disbursed as youth skill development loan among 107 youths of 12 villages under the district of Jamalpur, Bangladesh. It is here to be noted that Jamalpur is one of the vulnerable districts in Bangladesh in terms of income and poverty. Up to June 2013, taka 121,830.00 (33%) was recovered against the disbursement, and current outstanding stood at taka 54,390.00 (21%) and overdue outstanding is Tk. 2, 04,600.00 (79%). Our original sample size consisted of 107 youths from the covered villages, but we dropped 2 youths from the sampling frame due to the lack of adequate information. As a result, the present sample size consisted of 105 youths from 12 villages from the Jamalpur district of Bangladesh.

The selection of explanatory variables is an old and important problem in econometrics. As Amemiya suggested that: "selection of regressors should be based on economic-theoretic considerations as well as on statistical evidence. Economic theory can often indicate what regressors should be included in any equation, and sometimes, but less often, a class of functional forms that should be considered" (Amemiya 1980, 331). The omitted variable bias is a problematic issue in econometrics (Wooldridge 2016). We have, therefore, relied on theories, frameworks, and prior empirical studies to select the related variables for the analysis.

For the analytical purpose, we classified the repayment status into two categories where's paid on time called repaid and default for that type of borrowers who doesn't paid on due time. The independent variables which affect the repayment status were as:

In this study, we use the logit model to identify the factors that affect the borrowers' loan repayment status. This model is relevant in the sense that we are discussing about the default loans. The model is designed to identify the key factors affecting the repayment behaviors of the young borrowers. After all, it will be convenient for us to recommend the way forward to the policy-makers and further research.

The dependent variable was, accordingly, divided into two categories defined as $y_i = 1$ if there is default and $y_i = 0$ if there is repaid on time. There was delinquent respondent also but we merge delinquent and default as the same category after checking the payment due status because it shows if we get the chance to collect the data after the loan cycle the delinquent borrowers will be ultimately default borrowers.

3.2. The Binary Logistic Model

The dependent variable has two responses, namely “1” treated as the youth is default in payment and “0” is indicating the youth is not default:

$$y = \begin{cases} 1 & \text{Default} \\ 0 & \text{Not Default} \end{cases} \quad (1)$$

Logistic regression models work with odds rather than proportions. The odds are just the ratio of the proportions for the two possible outcomes. If \hat{p} is the proportion of one outcome, then $1 - \hat{p}$ is the proportion for the second outcome and the odds of occurring of the first outcome is $\frac{\hat{p}}{1-\hat{p}}$.

The general logistic regression model is shown in equation (1):

$$E(y) = \frac{e^{\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k}}{1 + e^{\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k}} \quad (2)$$

where $E(y) = p$, the probability of success

The x_i 's are independent quantitative or qualitative variables. Transformation of the odds $P/1 - P$ using the natural logarithm gives the log odds or logit form of odds.

Then, the model is the log odds as a linear function of the explanatory variable and as follows:

$$y = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k \quad (3)$$

The parameters associated with the explanatory variables gives the dependency rates to the response variable.

4. Results and Discussion

The mean age of the respondents is 24.31 where's 38 respondents are male and 67 are female. The average loan size is Bangladeshi Tk. 3376.19. The descriptive statistics presented in Table 1 shows that the only 21% of respondents repaid the loan, 47.6% are delinquent and 31.4% are default borrowers. Training was a very good factor that affects loan repayment status. In this logistic regression model, the dependent variable is converted into a binary response variable. Table 2 demonstrates that our estimated model can correctly classify 91.4% of the default prediction with the considered independent variables.

Table 1. Descriptive statistics of the YSDL.

Variables	Categories	N	Percentage	Mean	SD
Gender	Male	38	36.2		
	Female	67	63.8		
Repayment Status	Default	33	31.4		
	Delinquency	50	47.6		
	Repaid	22	21.0		
Age				24.31	3.32
Loan size				3376.2	1130.9
Due Payment				1900.3	1735.7

Source: Authors' estimation

Table 2. Repayment status of the YSDL.

Observed		Predicted		
		Repayment status		Percentage Correct
		Not Default	Default	
Repayment status	Not Default	71	1	98.6
	Default	8	25	75.8
Overall Percentage				91.4

Source: Authors' estimation

It is revealed from [Table 3](#) that overall five independent variables are considered into the estimation parameters for the binary logit model. Three of the independent variables are quantitative in nature, namely; the age of the respondents, the amount of loan disbursed to them, amount of payment due. On the other hand, two variables are categorical; namely, gender and, education levels. Data on education level was collected on years of education but due to less amount of variation amongst the levels of education, it is converted into three groups. The respondents who have no level of education is termed as “illiterate”, on the other hand, those who have education levels up to five years, considered as “Primary”, and above five years of education as the third category. The findings of the binary logistic regression model are showing that out of five independent variables, size of the loan, due amount of payment and one category of education is significant to determine whether the youth will be a loan defaulter or not. It is found that if the size of the loan is increased then the chance of becoming defaulter is also increased significantly ($p\text{-value} = 0.000$) and this is the same for the due amount of payment. Youth with an increased due amount of payment is at higher chance to become a defaulter. In case of education, the illiterate category has been considered as the reference category. It is found that the illiterate youth are likely to become defaulters. Moreover, compared to the illiterate youth, the primary education completed population has been higher chance to be the defaulter. But the other variables, gender, the age of the respondents are found not significant to determine the issue of the defaulter.

It has often been observed that the repayment status can also be categorized into three groups, as, default, delinquency, and repaid (Nawai and Shariff, 2012). Keeping that categories in the current analysis, a multinomial logit model has been run to compare the predictability of the fitted model as well as the significance of the parameters. The finding of the multinomial logit model reported in [Table 4](#) shows that the correct predictability rate is 85.7% which is lower than the binary logit model.

Table 3. Estimation results of the binary logistic regression model.

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
<i>Age of the respondents</i>	0.06	0.11	0.34	1.00	0.560	1.07
<i>Loan size</i>	0.00	0.00	10.15	1.00	0.001	1.00
<i>payment due</i>	0.00	0.00	16.56	1.00	0.000	1.00
<i>Gender (Female)</i>	0.03	0.60	0.00	1.00	0.967	1.03
<i>Education (Illiterate)</i>			7.06	2.00	0.029	
<i>Education (Primary)</i>	-2.08	0.90	5.34	1.00	0.021	0.13
<i>Education (Above Primary)</i>	-0.16	1.29	0.02	1.00	0.899	0.85
<i>Constant</i>	0.27	2.89	0.01	1.00	0.927	1.30

Source: Authors' estimation

Table 4. Multinomial logit model result.

Classification				
Observed	Predicted			Percent Correct
	Default	Delinquency	Repaid	
Default	27	6	0	81.80%
Delinquency	9	41	0	82.00%
Repaid	0	0	22	100.00%
Overall Percentage	34.30%	44.80%	21.00%	85.70%

Source: Authors' estimation

Table 5. Parameter estimation results.

Repaystat ^a		B	Std. Error	Wald	df.	Sig.	Exp(B)
Delinquency	<i>Intercept</i>	2.295	2.325	0.975	1	0.324	
	<i>age</i>	-0.117	0.093	1.577	1	0.209	0.889
	<i>Loansize</i>	0.001	0	7.328	1	0.007	1.001
	<i>paydue</i>	-0.001	0	10.562	1	0.001	0.999
	<i>eduyears</i>	0.091	0.106	0.729	1	0.393	1.095
Repaid	<i>Intercept</i>	1021.349	0	.	1	.	
	<i>age</i>	-0.042	8468.615	0	1	1	0.959
	<i>loansize</i>	-0.248	50.663	0	1	0.996	0.78
	<i>paydue</i>	-2.086	854.207	0	1	0.998	0.124
	<i>eduyears</i>	20.568	10505.77	0	1	0.998	856039146.2

Source: Authors' estimation

About the significance of the parameters, loan size and payment due is significantly affecting the repayment behavior of the youth. The parameters are estimated in [Table 5](#).

4.1. Case Study of Taluk Habu Village: A Model of Development

This section consists of experiences and insights gained from the first authors' fieldwork in Bangladesh. Taluk Habu is a village under the Cluster # 03 of Rangpur District. Majority of the people in this village is poor and hardcore poor where poverty and discrimination are prevalent. In fact, it is a Monga-prone village. Monga (seasonal starvation) is a severe form of poverty that occurs and recurs during the lean period of mid-September to November and tends to trigger high chronic poverty due to lack of available income sources. Most of the people hardly get three square meals a day during the Monga.

SDF started its 'NutonJibon' project in 2011 at this Taluk Habu village.

Poor and hardcore poor households, identified by the PIP process, were 131 and 104, respectively. The project started with forming 16 'Nuton Jibon' Groups (NJGs) that includes 230 members with a view to start savings and internal lending activities among the members. Through this program, their savings currently raises in total to a significant amount of Tk. 287,320. The villagers framed a participatory plan to change their fortune, and they decided initially to construct some infrastructures which would be played an important role for their earnings and livelihood development.

According to the plan, 02 roads, 01 office building, 02 culvers, and 25-meter long Palasading was decided to be constructed. A sub-project committee was formed for the implementation of that plan. The villagers built an office on their purchased land (See, the Supplementary Material Figure S3 available online).

SDF provided Tk. 1,249,155 for building the office. The NJG members gave Tk. 65,745 as 5% community contribution. An office building was constructed with the amount of Tk. 1,203,540. On the other hand, SDF further provided Tk. 318,386 and the Nuton Jibon Group members also gave Tk. 15919 for the sub-projects like as; roads, culverts, and Palasading as planned. The villagers completed the sub-project works successfully. The water-logging problem was removed by the culvert (See the Supplementary Material Figures S1 & Figure S2 available online). The villagers are now in a convenient position regarding the road communication for which students now can easily go to Gangachara for attending schools and colleges. These roads have linked up the villagers with the main road towards the greater district of Rangpur.

In addition, an amount of more Tk. 5,948,000 was disbursed among the poor and hardcore women as SF. Villagers' now have a wide diversification of work to support their livelihood such as running poultry farm and Pisciculture, making sanitary ring, weaving Benaroshi Shari, preparing vermin compost, etc.. They have also received various capacity building trainings like institutional & leadership development; training on COM; community financing; Income-generating activities (IGA) training; procurement training; and training on disaster management, risk reduction, and environment. As a consequence, their socio-economic prestige is enhanced. Below are the documentations of a couple of success stories in Bangladesh.

4.2. Success Story-1

Mrs. Mabuda Begum is a landless hardcore poor woman who's PIP # 30. She became a member of the Group, Bokul, in 2011. She is also the cashier of the Savings Committee. Since then, she has been depositing her savings, attending meetings and receiving various trainings. She took Tk. 500 as internal loan and started poultry rearing. In the meantime, the village received the SF. She took Tk. 10,000 as SF loan on the 12th November 2011 and bought a cow and profited Tk. 16,000 after a year. Mrs. Mabuda's husband is a rickshaw puller and they have 03 daughters and 01 son. At a stage, Mabuda decided to start a poultry farm for which she needed a relatively large amount of money. She applied to the Village Credit Organization (VCO) and got a loan of Tk. 50000. With that money, she built a tin shed house to run her poultry business. Her husband, Abul Kashem, also help in the farm. They got all three daughters married now. Also, Mabuda has successfully recovered the loan and took again Tk. 50000 as SF. With this 3rd cycle loan, she built another tin shed house on a leased land to expand her poultry business. She has started a poultry shop from where broiler hens are supplied to the buyers. Mabuda said, "I have eradicated poverty with my hard work and proper business plan. I am grateful to the SDF". She added, "Working hard for earning is more prestigious than begging". In this way, Mabuda changed her life (See the Supplementary Material Figure S4 available online).

4.3. Success Story-2

Mrs. Jayeda Begum now involving with preparing and marketing of sanitary ring. She took Tk. 30,000 as 3rd cycle of SF loan from the project. With the support of the loan, she with her husband makes the ring. She has now many buyers of these rings in and out of her villages. Most of the people of 'Taluk Habu' village now use sanitary latrine. This improved sanitary system has contributed to the development of the public health situations at Taluk Habu village.

Our current study contradicts with Uddin's (2014) conclusion that micro-credit programme fails to promote women's social capital or community mobilization. Recent work from Cambodia reveals the similar kind of negative impact of micro-credit on household poverty alleviation (Senk 2018). On the other hands, Imai and Azam (2012) finds positive impact on income and poverty-reducing effects of micro-credit in Bangladesh. Similarly, Orso and Fabrizi (2016) finds that microcredit interventions in

Bangladesh have positive achievements such as income generation, mobilities, women's access to the informal channels of education, partner's attitudinal change, and empowerments. Rahman, Khanam, and Nghiem (2017) reported the positive impacts of microfinance on women's decision-making and empowerment. Our current study also finds that the rural youth are positively mobilized through the use of YSDL. Benerjee (2013) provides a detailed review of the concerns, problems, and prospects of the micro-credit in the last few decades with an urge to focus on the detailed behaviors of the borrowers and lenders and on the question of whether bigger loans can make a big difference. In fact, the contradictory studies urged scholars to make a call for a 'new paradigm' of microfinance with a 'rethinking of financial factors in real-world economic models' (Chen and Hou 2017).

Peters (2017) finds that microfinance programs in Bangladesh enhance the likelihoods of female group action against domestic violence and spousal abandonment. Our study confirms that education plays a big role in lending behaviors of the youth. It is, therefore, extremely important to educate the rural youths for bringing about a positive change in their behavior patterns. This is in line with the findings of Indian women's empowerment issues wherein it was reported that 41% were illiterate (Chakrabarti and Biswas, 2012).

In some cases, there are questions in relations to the transparency of the microfinance institutions (Tadele, Roberts, and Whiting 2017). A study suggests that the quality of governance is the most consistent driver of economic growth both in the long and short-run (Mamun, Sohag, and Hassan 2017). So, it is essential to establish the norms of good governance both at the beneficiary and grass-roots levels.

5. Conclusion

From the above findings and analyses, we may conclude that the YSDL plays a major role in the creation of employment opportunities and skill development of the rural poor youth in Bangladesh. There are probabilities that the illiterate youths are likely to be unable to pay their loans within the time-frame. The SDF, as an implementing institution, could pay more attention to the educational advancements of the rural youths. Of course, the diversification of livelihood activities and proper utilization of the YSDL are mutually interlinked. The village level community institutions are working on the basis of the ten core principles. Nowadays, the poor people are familiarized with the norms of good governance at the grass roots levels. The implications of our study are highly policy relevant. The understanding of the responsiveness of youth issue is crucial when designing poverty reduction strategies, policies, and programs.

This study contributes to further lines of research. The first one is related to enriching the spectrum of pro-poor and pro-youth factors, evaluating, for example, the effects of youth illiteracy and unemployment on the poverty elasticity to growth. Then, complementing the macro-based evidence here provided with micro-empirical work would be of great importance to understand why some youths can take advantage of the opportunities brought by economic growth while others cannot. There is also a need for efficiency analysis of the youth training program to find out the actual gaps in the utilization of the YSDL. The time-series and panel econometric methods could be applied in future. Also, the welfare analysis of the project might contribute to our to a deeper understanding of the micro-credit programs in Bangladesh. The future research endeavors would depend on the availability, quality, and coverage of data.

Like any empirical work, however, this study had some limitations. Due to time and resource constraints, we could not increase our sample size and cover more districts under the project. We hope the future researchers may overcome the limitations and undertake more empirical studies on the various dimensions of the project.

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ORCID

Saleh Shahriar  <http://orcid.org/0000-0001-5199-3258>

Sokvibol Kea  <http://orcid.org/0000-0003-0950-3336>

Nazir Muhammad Abdullahi  <http://orcid.org/0000-0003-2149-0638>

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