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## SWOT Analysis for Local NGOs: A Geo-spatial Analysis Evidence from Rural Bangladesh

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**Abstract:** The SWOT analysis is an operational tool for detail understanding of NGOs strengths, weaknesses, opportunities and threats in the rural areas of Bangladesh in terms of savers, borrowers, saving money and total loan outstanding. However, this study used 30 NGOs with 175 branches for SWOT analysis along the Jamuna River. BRAC, Grameen Bank, RDRS Bangladesh and ASA etc. are a few noteworthy micro-credit organizations, who are engaging specifically focusing on the poverty alleviation, empowerment and betterment of living standards of the rural poor. This study is conducted through questionnaire survey, involving 383 respondents using 95% confidence level with margin of error 5%, and Geographical Information System (GIS) to explore the strengths, weaknesses, opportunities and threats of each NGOs. Hereafter, it evaluated the NGOs concentration along with potential areas in need of such programs. Finally, this paper suggested that the SWOT of the NGOs area not similar. It indicates that the number of savers, borrowers, saving money, and total loan outstanding are depending on geographical location, commercial centers, communication and transportation facilities, and the size of the population in the study site.

**Keywords:** SWOT, Micro-credit, Poverty, Rural area, Bangladesh

### 1. Introduction

Non-governmental Organization (NGO) activities started in Bangladesh after the war of liberation in 1971 for the purpose of relief and rehabilitation (Hashemi, 1999). It is lawfully founded corporations generated by legal people for the betterment of the rural poor people that functions independently from any procedure of government in Bangladesh (Kamal, 1997). In the top thirteen underprivileged countries, NGOs have been an extensively debated topic right now, although the number of people without food, clothing, education and basic health care has been saved by NGOs. (Chowdhury et al., 2004). It is expected that approximately 13,000 NGOs are engaged in micro-credit operations, whereas nearly about 80% of the villages in Bangladesh are now sheltered under NGOs activities (Develtere and Huybrechts, 2002). The maximum number of NGOs are small and there are a few numbers of large NGOs specially Grameen Bank, RDRS Bangladesh, BRAC and ASA. Self-employment, agricultural training, health, sanitation, vocational training, economic empowerment, education both formal and non-formal, livelihood rehabilitation, women's rights, infrastructure development, disaster

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management, income-generating activities like a business using NGOs credit, rural plantation and other poverty reduction program are the key sectors in which NGOs have made numerous contributions to support remoter of Bangladesh (Hashemi, 1999).

In Bangladesh various formal financial institutions specialized government organizations and non-government financial institutions perform Microcredit programs (MCP) (Mahmud, 1996; Siddiqi, 1985). The majority of the institutions are working on improving the economic situation by building their business of the members (Rahman and Ahmed, 2001). In 2002 around the world, 67.6 million families have been reached with microcredit, whereas in Asia there are 59.6 million clients and Bangladesh covered a number of 13 million (22.6%) clients (Microcredit Summit Campaign Report, 2003). Women are the main focus of the microcredit programs in Bangladesh. NGOs are working to make empowerment of the women in the rural society (Milli, 1995; Rahman et al., 2002). Now they can take a decision on child marriage, buying and selling of properties, family planning and sending daughters to school (Khanam, 2007). Furthermore, in collaboration with savings facilities, non-productive loan facilities, insurance facilities, business growth such as production-oriented and management training as well as marketing support, welfare-related programs such as educational facilities, health facilities, human rights and eventually social consciousness training, NGOs have provided credits (Siddiqui et al., 2002; Roodman and Morduch, 2009; Rogaly, 1996).

In Bangladesh, the ongoing and vital issues are socio-economic development and poverty alleviation through the NGOs' provision in the rural parts of Bangladesh, whereas for poverty alleviation, the micro-credit is thought as one of the important tools along with community and individual development. The NGOs have been working in various sectors like education sectors, providing health and sanitation facilities, agricultural loan and tools, training on environment management, child protection, vocational training, economic empowerment both men and women, livelihood rehabilitation, human rights, NGOs credits combined with savings facilities, enterprise development like production oriented training and management training, marketing support, reduce child marriage, infrastructure development, disaster management, etc. However, the main aim of the study is to know the SWOT of local NGOs in the field of poverty reduction through micro-credit services to the rural poor along the Jamuna River, Bangladesh. To fulfill the aim, specific objectives are being set for this study includes; (1) evaluate the involvement of rural poor to micro credit program; and finally, (2) SWOT analysis for local NGOs using number of borrowers and total outstanding's along the river side of Jamuna, Bangladesh.

## **2. Relevant literature review**

A statistics of the socio-economic situation of the local poor is provided by Haider (2013) who were engaged in the NGOs microcredit program in his paper titled on the impacts of NGOs on the socio-economic situation of the poor: a case study in Rajshahi city, Bangladesh which was published in the international journal of community development. He used Rajshahi city as a case study. He describes that NGOs are commonly familiar with their unique ability to reach the grassroots poor people and bring sustainable improvement of the lives of the rural poor. The focus of this study had

been on the socio-economic condition of poor people in rural areas formed through local NGO programs. In the journal of information and knowledge management, Hasnain described the knowledge and socio-economic development of the rural poor in 2013. This paper is on the contribution of local NGOs to socio-economic development in Bangladesh. This paper revealed that in Bangladesh about 22,000 NGOs are in operations with a view to developing the living standard of their lifestyle. The NGO facility recipients are the main stakeholders who are involved in receiving the knowledge transferred by the NGOs. In recent years NGOs have put more attention and efforts on income generation that having an involvement with micro-credit program, employment generation in different sectors, giving formal and informal education of rural children and adults, health, nutrition, family planning, establishment of financial services at the grassroots level, environment, water supply and sanitation, women's rights, poultry and livestock, human rights and legal aid.

Microcredit is known as a way of reducing poverty operationally. There are, however, critical debates on the feasibility of the microcredit scheme and the profiles of beneficiaries benefiting from the credit program of local NGOs (Chowdhury et al. 2004). The recent literature has established that microfinance has various impacts on the livelihoods of rural poor people. Microcredit has taken millions of poor people out of poverty and stimulated economic sustainability, particularly women, who are likely to be able to increase their household income, minimize economic insecurity and, in some situations, eradicate poverty altogether (Glazer, 2010; Bansal, 2011). In addition, with the help of microfinance activities, they have experienced improved healthcare, health services, and greater empowerment (Bauer et al. 2008; Swope, 2005). Their arguments are supported by Yunus, 2004 in his paper titled on expanding microcredit outreach to reach the millennium development goals: some issues for attention in the journal of attacking poverty with microcredit. He said microcredit has a lot of positive effects on families earning credit from local NGOs. Murdock and Haley (2002) have performed a widespread study of the effects of microfinance on poverty reduction, and the loan scheme has a sufficient positive impact on rural villagers' poverty reduction as well as millennium development goals. These interpretations were approved by the results of an evaluation study commissioned by the Asian Development Bank (ADB, 2007) on the effect of microcredit programs on rural families and the position of women of Bangladesh, Philippines, and Uzbekistan.

The study showed that the microfinance program had a positive effect on the status of rural poor people through higher volumes of household currency, a formal and non-formal food education program, greater involvement in big purchasing decisions and investments, the potential to gain more money by the use of credit by NGOs, a higher position in business decision-making, gaining new expertise and developing their network of friends and help networks, and gaining more money. In addition, countries such as Bangladesh, Nepal, India, Vietnam, China and the Philippines have appointed for avaluation of MFIs (Microfinance Institutions). These assessments examined the benefits of the NGO micro-credit scheme, such as improved food and nutrition protection, housing and wellbeing, school enrollment for children and adults, higher levels of literacy, food for school-going children, empowerment and mobility for women, focus on higher average household income, building human resources and assets and community engagement, self-employment and employment of family members (Bedson, 2009).

Panjaitan-Drioadisuryo et al. (1999) had conducted a research titled on Gender, self-employment and microcredit programs and published it in the journal of the Quarterly Review of Economics and Finance. They found that 90% of Bank Rakyat Indonesia (BRI) participants in the study raised their income by entering the credit program of NGOs and these families crossed the poverty line by developing various sources of income. Income of only 10 % participants did not increased because of mishandling the credit by their husbands. Furthermore, Hossain in 2008 had analyzed the community development and livelihood security and in their analysis, this paper presented at the Tokyo Peace Builders' Symposium, 2008 and Ghalib et al. (2011) undertook to analyze whether microcredit minimized poverty and to what degree and to what extent poverty mitigated.. Their study confirmed that microfinance programs improved deliberately in education, agricultural system, household income, improved the facilities on health care, clothing, water supply and sanitation as well as building a quality of dwelling house.

Hossain (2012) studied measuring the impact of BRAC microfinance operations, which had published in the journal of International Business Research. He sought to measure the effect of BRAC's microfinance operations on the livelihoods of rural village borrowers. Since joining the loan scheme of NGOs, the revenue of the Borrower's and their contribution to family spending grew dramatically. Besides that, he also found that the volume of monthly savings was not significant, but the approach of the borrowers towards savings was noticeable. Besides that, Reddy had revealed that microfinance makes the socio-economic conditions better for the rural poor people in 2000. He found that “the credit program of MFIs is highly successful, which is evidenced by the high repayment rate, awareness generated among the target group and beneficial developmental impact created on the receivers of the credit”. However, there are some critics disagreeing because poverty cannot be removed with a small amount of money provided by NGOs. The answer of criticism had found in a statement given by Adam Smith, 2010 and Ahmed, 2004 in their research. They said “when you have got a little, it is often easy to get more. The great difficulty is to get that little”. The economic condition of the needy poor people in the rural areas is so terrible that they do not have enough opportunities to get little amounts. In addition, this tiny sum is the need for the vulnerable to support them in revenue producing operations at the right time. (Ahmed, 2004; Ahsan, 2005).

### **3. Methodology**

#### **3.1 Study area**

There are 126 unions in the research area in 5 districts along the river side of Jamuna and 30 NGOs working on the study site with 175 sub-branches. Sirajganj, Bogura, Jamalpur, Gaibandha and the district of Kurigram are part of the study area. The study area covers the Old Brahmaputra, Jamuna (Young Brahmaputra) floodplain and Ganges River floodplain which are highly productive for agricultural activities. Floodplains can facilitate access to fresh water, the fertility of agricultural floodplain land, cheap transportation and the ease of flat land expansion.

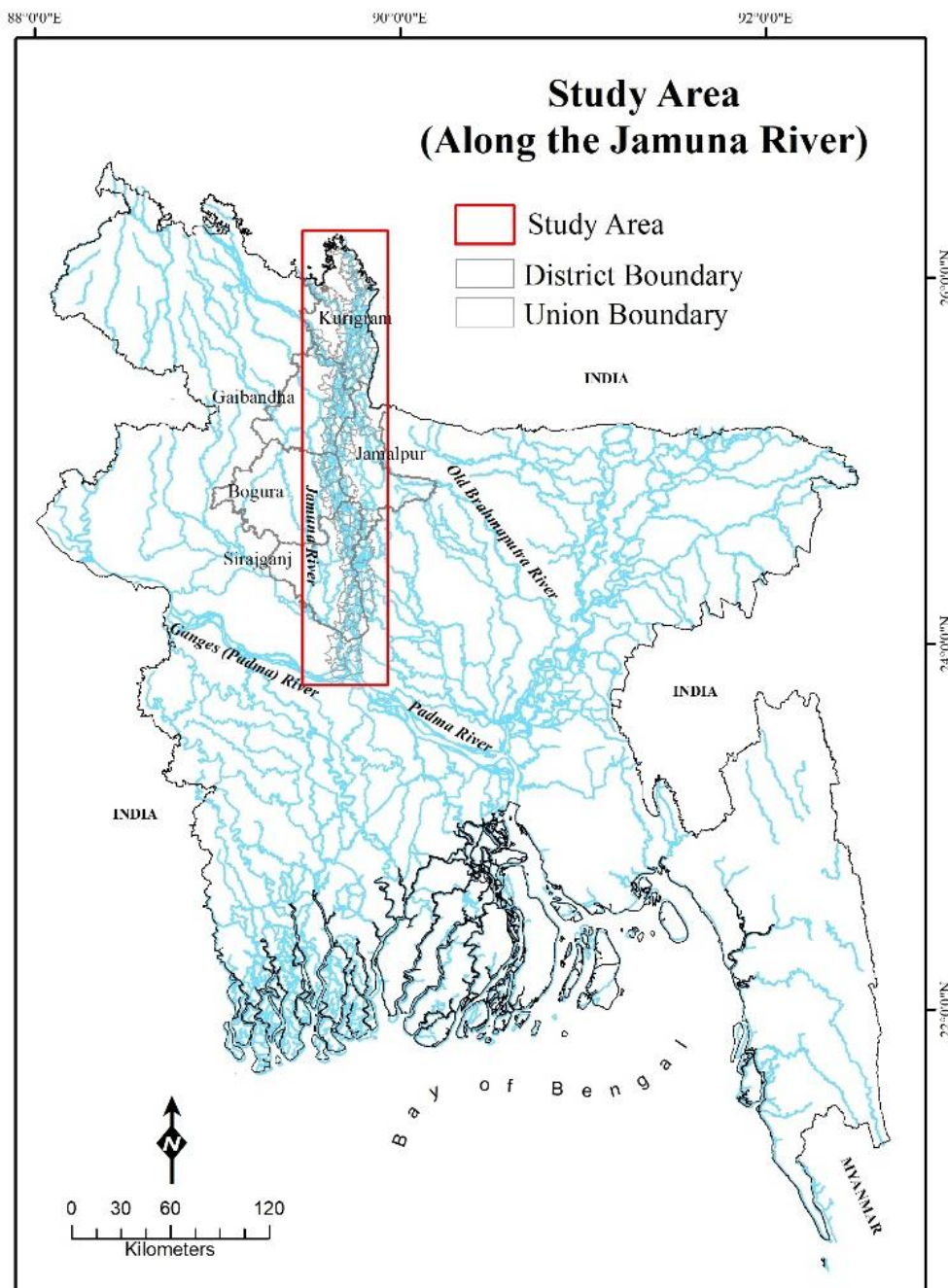


Figure 1: Study area along the river bank of Jamuna, Bangladesh

Source: Made by the authors, 2020

Numerous non-governmental organizations active in almost every field were located in the study area. The purpose and scope of their work differ, along with the type of project they receive funds for. NGOs such as ASA, BRAC, Grameen Bank, RDRS Bangladesh are NGOs at the national level and operate exclusively throughout the region (Mollah,

T.H. et al., 2019). In household surveys and Focused Group Discussions (FGD), as well as in current government studies, a full list of all NGOs currently operating in our research area is listed below in Table 1.

Table 1: List of NGOs in the study area

No	Branch Name	Frequency	No	Branch Name	Frequency
1	AKOTA	2	16	PRODIPON	1
2	ARBAN	1	17	PROGRESS	1
3	ARCHES	3	18	RDRS Bangladesh	22
4	ASA	35	19	RSDA	1
5	Atto Mohila Unnaion Somity	1	20	Sajida Foundation	1
6	Bhomukhi Mohila Unnaion Somity	1	21	SAP	1
7	BRAC	31	22	SATU	1
8	DORP	1	23	SKS	7
9	GKS	1	24	SSS	6
10	Grameen Bank	31	25	Thangara Mara Mohila Sabuj Songo	1
11	GUK	9	26	TMSS (Thakurgan Mohila Sobuj Sango)	4
12	MMS	2	27	UDDIPAN	1
13	NDP	3	28	Uddog	1
14	PDBF	1	29	UDPS	2
15	Porosh	1	30	US	2
Total					175

Sources: Made by the authors, 2020; data collected from Bangladesh Bureau of Statistics (BBS), Char livelihood Program (CLP), census report 2011 and field survey, 2020

### 3.2 Data sources and methods

There were relevant maps both hard copy and soft copy of the study sites, information's on micro-credit sectors and data published by the local or national authorities in Bangladesh were collected and photocopied. For instance, the researchers intended to conduct a detailed survey on 126 unions of 5 districts during the field work. The union maps were available in the DLRS (Directorate of Land Records and Surveying) of Bangladesh. These maps were purchased at that time. The data and information were collected using questionnaires and interviewing of the selected focus group (e.g. elderly local people, local community, members of the union parishad, employers and manager of each NGOs, borrowers and savers of the NGOs), observation and other related methods. A standard land use map and current crop calendar were prepared of the areas with the help of local people's perceptions.

There were 383 questionnaires survey (95% confidence level and 5% margin of error) conducted randomly and 10 focus group discussions at different levels. Therefore, this paper makes one common questionnaire sheet, which includes all information's of micro-credit sectors. The research interviewed certain groups who participated

- a. Local community and individuals (total 383 questionnaire statistically and 10 FGDs- each group consists 7-8 persons where 5/6 are males and 3/2 are female,

and information gathered includes; strengths, weaknesses, opportunities and threats of the local NGOs, monthly income of them before and after joining to local NGOs credit program, distance from the NGOs to the respondents and facilities had provided by local NGOs).

- b. Employees of local NGOs who invest in the credit facilities of 126 unions (focused group discussions and interviews with 175 branches of 30 NGOs and provided services to rural poor people).

This study also analyzed the correlation among savers, borrowers, saving deposits and total loan outstanding. Furthermore, the causes of strength and weakness of each NGOs were explained by geographical factors as the responsible indicator for the change of up and downward economic condition.

#### **4. Major findings of SWOT analysis for local NGOs**

##### **4.1 Evaluate the involvement of rural poor to micro credit program**

Four noteworthy NGOs are working along the river bank of Jamuna like Bangladesh Rural Advancement Committee (BRAC), Association for Social Advancement (ASA), Grameen Bank and RDRS Bangladesh (Rangpur Dinajpur Rural Service). Each branch of local NGOs run by six people: a branch manager, an assistant branch manager, and four loan officers. The branch manager is specified with the right to accept all transactions within the branch. Each branch is a profit center and is estimated to fully recoverable costs between 9 and 12 months. There were total three NGOs information's like a number of savers, borrowers, total savings and total outstanding missing because the branch manager had no information on it and only local NGOs had no borrowers and outstanding information. In the association for social advancement (ASA), there are 57,085 savers and 56,531 borrowers involve with NGOs credit program and the total saving deposits and total outstanding's were 30,561,697 BDT and 353,805,656 BDT accordingly (1 USD = 78.7353 BDT). It means that the digits of savers and borrowers are almost equal and the total outstanding is bigger than the total saving deposits. Therefore, rural poor people had got more loans and in various income-generating activities such as business, agricultural sectors, kitchen gardening and poultry farming, they capitalized money and improved their economic situation and standard of living. On the other hand, Grameen Bank is facilitating the rural poor with the loan to alleviate the poverty of individual or group of rural poor people. There are 96,516 savers and 84,5931 borrowers involve with Grameen Banks credit program and the total saving deposits and total outstanding's were 269,509,755 BDT and 484,849,111 BDT accordingly (1 USD = 78.7353 BDT). However, BRAC encourages rural poor people to involve in microcredit programs. There are 103,647 savers and 89,050 borrowers involve with BRACs credit program and the total saving deposits and total outstanding's were 104,759,268 BDT and 284,864,091 BDT accordingly (1 USD = 78.7353 BDT).



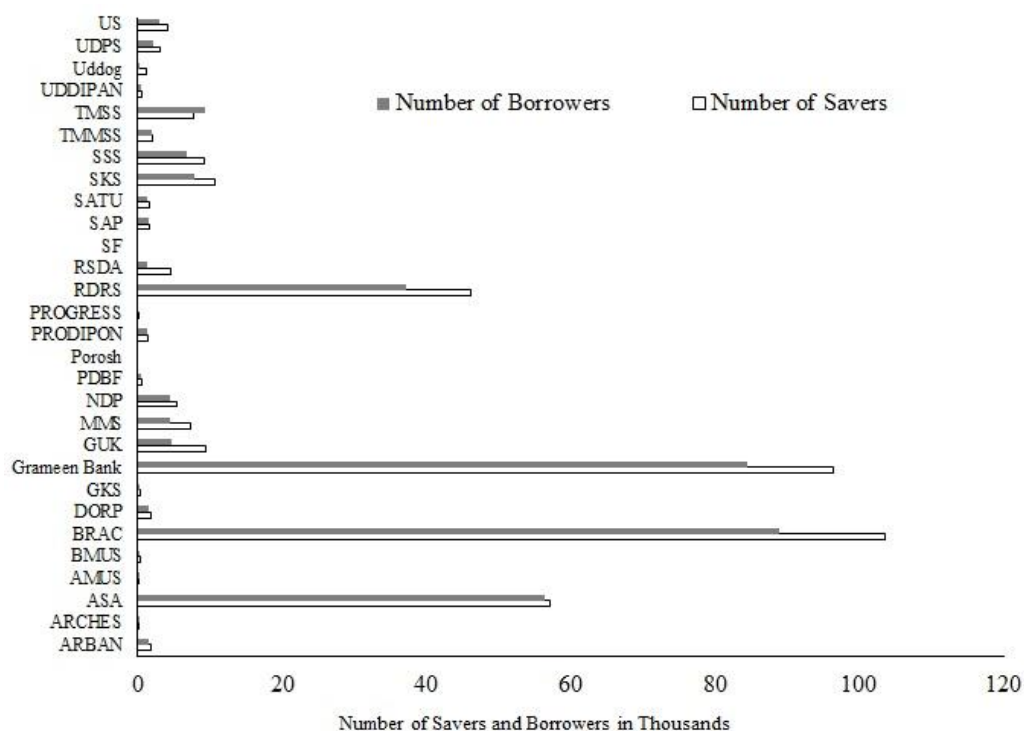


Figure 2: Total number of savers and borrowers along the river side of Jamuna, Bangladesh, 2020

Sources: Made by the authors, 2020; data collected from Bangladesh Bureau of Statistics (BBS), Char livelihood Program (CLP), census report 2011 and field survey, 2020

It means that the number of savers and borrowers are almost equal and the total outstanding is bigger than the total saving deposit that is same as Grameen Bank. BRAC is investing more money in the socio-economic improvement of the rural poor people along the riverside of Jamuna, Bangladesh. Therefore, rural poor people had got more opportunities to capitalize money in various income yielding activities like the business and other purposes as well as improved their economic condition and standard of living.

RDRS Bangladesh (Rangpur Dinajpur Rural Service) is working for poverty reduction and empowerment with rural poor's economic development by the NGOs credit program in northern areas of Bangladesh. There are 46,130 savers and 37,115 borrowers involve with RDRS Bangladesh credit program and the total saving deposits and total outstanding's were 53,851,944 BDT and 109,182,834 BDT accordingly (1 USD = 78.7353 BDT).

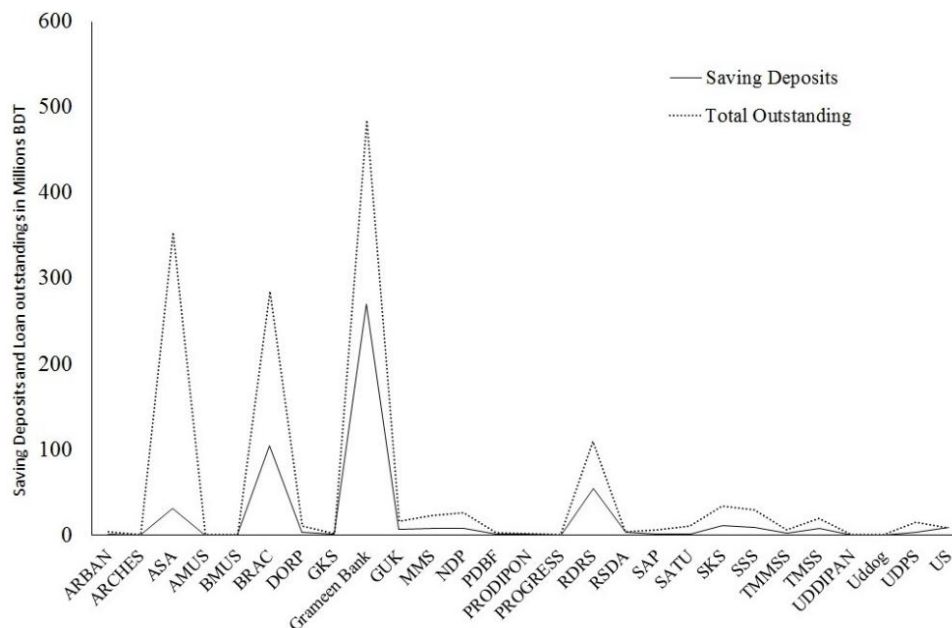


Figure 3: Total savings and outstanding of all NGOs along the river side of Jamuna, Bangladesh, 2020

Sources: Made by the authors, 2020; data collected from Bangladesh Bureau of Statistics (BBS), Char livelihood Program (CLP), census report 2011 and field survey, 2020

It indicates that the number of savers and borrowers are almost equal whereas the total outstanding is bigger than the total saving deposit, which is same as Grameen Bank, ASA, and BRAC. RDRS Bangladesh is also investing more money in the socio-economic growth of rural poor people, especially in the northern regions of Bangladesh.

#### 4.2 SWOT analysis for local NGOs using number of borrowers and total outstanding's

This section shows the member coverage using bubble maps. The MFIs are classified here into 3 categories (i.e. 3 sizes of Bubbles) based on their total outstanding loans. The large bubble illustrates the value of outstanding loans more than 10 million taka while middle and small MFIs represent groups between 5-10 and less than TK 5 million respectively. Therefore, each bubble also indicates the strength or weakness of the respective MFIs in terms of borrowed money.

ASA (Association for Social Advancement) is one of the prominent NGO in Bangladesh. Among the 30 NGOs, ASA is working for social and economic development by providing credit facilities amid rural poor. For detail understanding of ASA's strength in terms of loan outstanding and the number of borrowers in the study sites; the loan outstanding is categorized into three classes such as less than TK 5 million / MFI, between TK 5 and 10 million / MFI and the last one is more than Tk 10 million. Besides that, the total number of borrowers is also sorted into three major groups like (400 to 1,281), (1,282 to 1,789) and last is (1,790 to 2,379). Among 126 unions, a total number of savers, borrowers, savings deposits and loan outstanding are 57,085, 56,531, 30,561,697 and 353,805,656 respectively. There are 35 branches of ASA are working

along the river Jamuna. Association for Social Advancement (ASA) is covering 15.07% savers and 17.53% borrowers respectively among the 30 NGOs in the study sites. The capacity of ASA along the Jamuna River is not same in terms of providing loans and their number borrowers. The distribution pattern of loan outstanding is different from district to district. ASA predominantly provides a loan in the district of Kurigram than the other districts of the study sites. The loan distribution pattern of ASA is some sort of uneven in Kurigram district. The loan outstanding of the three branches is more than Tk 10 million, whereas the number of borrowers is only 1,282 to 1,789. Besides that, in the northern part of Kurigram, the number of borrowers is higher, but the loan amount is lower that shows inequality in loan distribution. It indicates that once the less number of borrowers takes a high amount of loan from NGOs, they might drive for bigger investment in business sectors where economic opportunities are higher than other study sites. In the middle part of Jamuna River, the number of the borrower is 400 to 1,281 where the loan outstanding is less than Tk 5 Million / MFI. This might happen because, in the middle part of Jamuna, population density is lower than upper and lower part of Jamuna River. As a result, the number of NGOs and NGOs activities in credit sectors also lower. Furthermore, in the lower part of Sirajganj district, the amount of the loan (more than Tk 10 million) and the number of borrowers (1,790 to 2,379) is higher. It also shows that the numbers of borrowers are strongly linked with the loan outstanding in the study sites. In Gaibandha and Jamalpur district, there is some branches borrower number is higher (1,790 to 2,379), but the loan amount is lower (between TK 5 and 10 million per MFI) in comparison to the other branches of ASA. Finally, it can be said that higher number of borrower and outstanding indicates a very high frequency of growth/commercial centers are situated in the sites where the rate of money transaction is higher. There is also a risk of returning the allocated loan to the borrowers as the amount loan per borrowers is very high in comparison to other NGOs (Figure 4a).

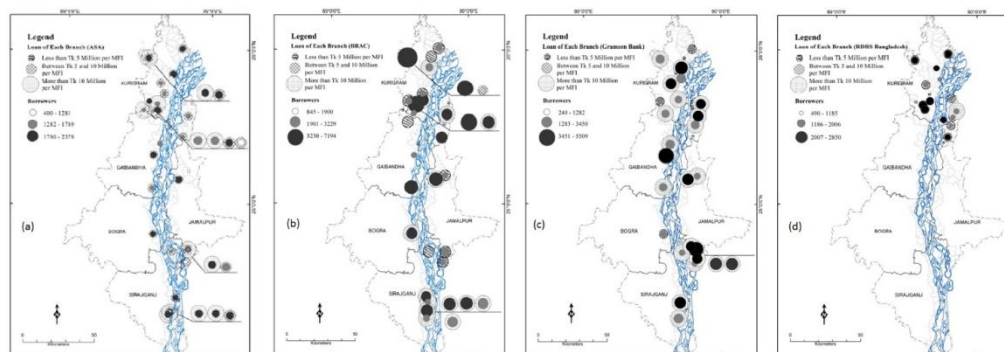


Figure 4 (a-d): Comparison between total outstanding and borrowers (ASA, BRAC, Grameen Bank and RDRS Bangladesh) along the river bank of Jamuna, Bangladesh

Sources: Made by the authors, 2020; data collected from Bangladesh Bureau of Statistics (BBS), Char Livelihood Program (CLP), census report 2011 and field survey, 2020

Figure 4b demonstrates the BRACs (Bangladesh Rural Advancement Committee) capacity in terms of loan outstanding and the number of borrowers in the study sites. The BRAC (Bangladesh Rural Advancement Committee) is one of the prominent and the famous NGO in Bangladesh that made an enormous contribution to the social and

economic development by providing credit facilities amid rural poor. The loan outstanding is categorized into three classes such as less than TK 5 million / MFI, between TK 5 and 10 million / MFI and the last one is more than Tk 10 million. Besides that, the total number of borrowers is also sorted into three major groups like (845 to 1,900), (1,901 to 3,229) and last is (3,230 to 7,194). There are 31 branches of BRAC are working along the river Jamuna. BRAC is covering 27.38% savers and 27.61% borrowers respectively, among the 30 NGOs in the study sites. It indicates that along the river Jamuna, BRAC reaches to the higher number of rural poor who are willing to join in the BRACs credit program. BRACs credit service from the upper to lower stream is almost equal, except for the district of Kurigram. In Kurigram there are a large number of branches of BRAC, which provides a loan to the rural people for their economic purposes. There are only three branches that have a higher loan outstanding (more than Tk 10 million) along with the higher number of borrowers (3,230 to 7,194). On the other hand, in between Gaibandha and Kurigram district, there are some branches where higher concentrations of borrowers (3,230 to 7,194) are located but the loan outstanding is comparatively poor (less than TK 5 million / MFI). Besides that, in the middle of Kurigram district where the loan outstanding is higher, but the number of borrowers is less (1,901 to 3,229). It indicates that, in Kurigram district, there is no proper relation to loan outstanding and borrowers. In the middle stream of Jamuna, where part of Gaibandha, Bogura, and Jamalpur districts are located, the number of BRAC branches is very limited. This might be because here population density is a bit lower with a lack of transportation and communication facilities. The scenario changes drastically when it comes to Sirajganj district where the number of borrowers and the loan outstanding are higher. In some cases, the number of borrowers is medium (1,901 to 3,229) but the loan amount is higher. There are some areas (middle part of Sirajganj district) that have a minimum number of the borrower, but the outstanding level belongs in between Tk 5 and 10 million / MFI. The number of branches for BRAC is some sort of satisfactory, but their spatial distributions are not equal. Finally, it indicates that in Kurigram and Sirajganj district where the numbers of growth centers are higher, the concentration of NGOs' is higher in term of their loan distribution. This step will help to establish new branches of NGOs in the unserved areas to serve rural poor people who are suffering from poverty and daily basic needs.

Figure 4c illustrates that the Grameen Banks capacity also in terms of the loan outstanding and the number of borrowers in the study sites. The loan outstanding of Grameen Bank is categorized into three classes such as less than TK 5 million / MFI, between TK 5 and 10 million / MFI and the last one is more than Tk 10 million. Besides that, the total number of borrowers is also sorted into three major groups like (240 to 1,282), (1,283 to 3,450) and last is (3,451 to 5,509). There are 31 branches of Grameen Bank are working along the river Jamuna. It covers 25.49% savers and 26.24% borrowers respectively, among the 30 NGOs in the study sites. In the upper, middle and lower part of Jamuna River, the number of branches (Grameen Bank) is 15, 6 and 10 respectively. It indicates that in the middle part of Jamuna, Grameen Banks concentration is less than upper and lower parts. However, in the upper part, the concentration of Grameen Banks is higher where they disburse loans among borrowers (1,283 to 3,450) is more than Tk 10 million within 9 branches. Other rest of 6 branches, the amount of the loan outstanding is between TK 5 and 10 million / MFI and the borrowers are varied 1,283 to 3,450 in the study sites. This is because a higher number of population and commercial centers are situated in the upper part of Jamuna River especially in the Kurigram district. On the other hand, in the part of the Jamuna, the

number of branches of GB is lower (6 branches in total) but in the 5 branches, the loan outstanding is more than Tk 10 million where the number of borrowers is also higher (3,451 to 5,509). There is only one branch loan outstanding and borrowers are between TK 5 and 10 million / MFI and 1,283 to 3,450 distinctly. Furthermore, in the lower part of Jamuna (upper and lower part of Sirajganj district), the services of GB seem to be very operational and effective as well. Among the 10 branches of GB in the upper and lower part of Sirajganj district, all branches have better strength in terms of their borrower (3,451 to 5,509) number and total loan outstanding (more than Tk 10 million).

Figure 4d shows that the RDRSs capacity also in terms of its loan outstanding and the total number of borrowers in the study sites. The loan outstanding of RDRS is categorized into three major classes such as (1) less than TK 5 million / MFI, (2) between TK 5 and 10 million / MFI and the last one is (3) more than Tk 10 million / MFI. Besides that, the total number of borrowers is also categorized into three major classes like (490 to 1,185), (1,186 to 2,006) and last is (2,007 to 2,850). There are 22 branches of RDRS are working along the river Jamuna. It covers 12.18% savers and 11.51% borrowers respectively, among the 30 NGOs in the study sites. In the lower portion of Kurigram district, the number of borrowers is higher ranging in between 2,007 to 2,850 per MFI. In several branches of RDRS in Kurigram district, the loan outstanding is not very high in comparison to other NGOs as it has been mentioned earlier. The loan outstanding in several branches is lower (less than TK 5 million / MFI) than the number of borrowers (2,007 to 2,850). In terms of outstanding, there is only one branch that was located in the southern part of Kurigram where loan outstanding is higher (more than Tk 10 million / MFI), but the borrower's number is medium (1,186 to 2,006). It indicates that once a huge amount of loan taken by the borrower for bigger investment is a sign of great progress for the economic development of individuals. But at the same time, it is also considered a higher risk for both the NGO and the borrower, if there have a chance to fails to return the loan.

Apart from the four major NGOs, there are 26 NGOs along with 56 branches were located who are working for the economic improvement of the poor by providing credit services to the poor in the study sites. They cover 19.86% savers and 17.10% borrowers in the study sites respectively. It indicates that the major four NGOs (Grameen Bank, ASA, BRAC and RDRS Bangladesh) are covering 80.14% of the savers and 82.90% of the borrowers in the study sites. In Kurigram, there are five NGOs that have a borrower in between 859 to 2,258, whereas the concentration of NGOs is lower, apart from major four NGOs. It has been also noticed that very limited number of branches are working in the middle stream of the Jamuna. In the lower part of Sirajganj district, there are very few numbers of NGOs are working with the lower number of borrowers and loan outstanding.

#### **4.3 Correlation analysis and the geographical factors of SWOT analysis**

This paper presents a correlation analysis among savers, borrowers, savings deposits, total loan outstanding (dependent variables) and the remoter's annual income (independent variables) to show the relationship between the variables. The analysis of the correlation shows that the coefficient correlation for savers ( $r$ ) is equal to 0.731, indicating a significant relationship between savers and their income ( $r = 0.731$ ,  $p < 0.001$ ). This may be because higher-income persons tend to save money with high interest for the future crisis mainly for the disaster mitigation period. Besides that,

geographical location is also another reason for saving money and to improve their social status among the rural community. The correlation coefficient is for borrowers ( $r$ ) equals to 0.534 ( $r = 0.534$ ,  $p < 0.001$ ) indicating a cabalistic relationship between borrowers and increase of income. Along the Jamuna, savers are mainly borrowers. As a result of joining the credit program of NGOs, they borrowed money for the business purpose where geographical location of the commercial/ growth centers are contributing a lot to encourage local people to borrow money from the local NGOs. On the contrary, the correlation coefficient is for saving deposits and total loan outstanding( $r$ ) equals to 0.119 and 0.182 accordingly. This results indicate that the relationship between saving deposits and total loan outstanding with remoter annual income is slightly significant. Finally, the overall result reveals that geographical location, demographic characteristics of the local people, spatial distribution of local NGOs and establishment of commercial/ growth centers are playing acabalistic role to make a better lifestyle of the remoter.

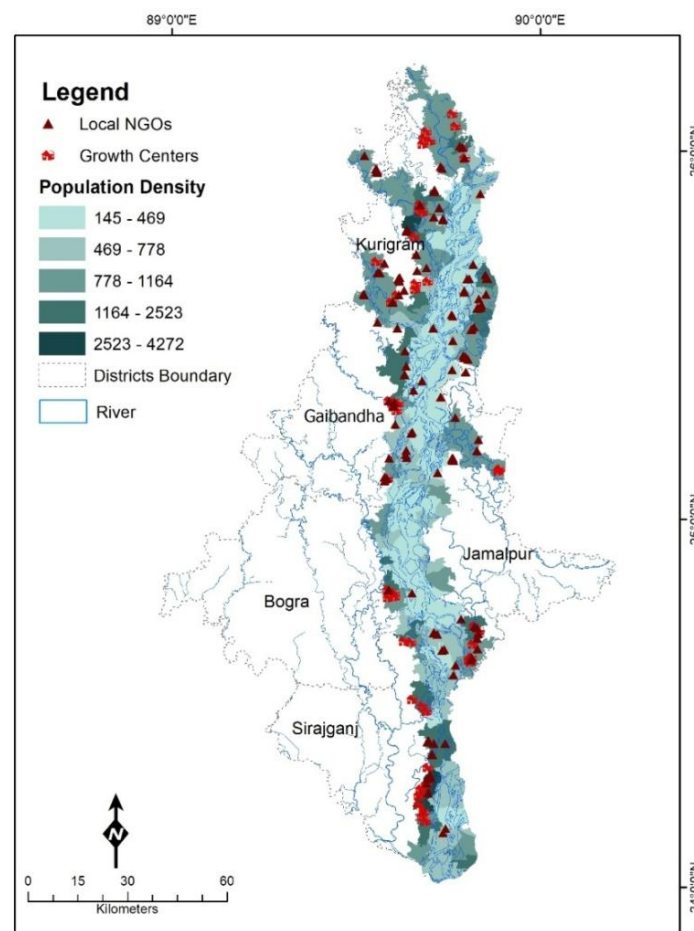


Figure 5: Geographical and anthropogenic factors for the distribution of local NGOs and their strength and weakness in terms of savers, borrowers, saving deposits and total loan outstanding'along the river bank of Jamuna, Bangladesh.

Sources: Made by the authors, 2020; data collected from Bangladesh Bureau of Statistics (BBS), Char Livelihood Program (CLP), census report 2011 and field survey, 2020

## 5. Conclusion

The discussions lead us to a conclusion that amount of NGOs is not sufficient to serve a large number of populations in the study sites. In the study sites, it takes proper management along with equal distribution of local NGOs according to the population density. Besides that, a total number of borrowers and loan outstanding illustrate the strength and weakness of the NGOs capacity. Apart from major four NGOs, rest of 26 NGOs of 56 branches need to increase their capacity by involving more savers and borrowers in the study sites. A number of growth centers are also a backdrop for the development of the rural economy in the study sites. NGOs are providing more loans to borrowers habituated close to the near growth centers. But the people habituated far away from the growth centers are missing from the services of NGOs. If these organizations establish new growth/commercial centers by providing loans to the poor people in the remote areas, then the integrated development will have resulted.

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