The role of banks on agricultural development in Bangladesh is a crucial aspect that has been extensively studied. The aim of this study is to determine the role of banks on agricultural development. Agricultural development is determined in respect of crops, purchase and installation of irrigation equipment, livestock, marketing of agricultural goods, fisheries, poverty alleviation and income generating activities. A total number of 50 respondents were interviewed through semi-structure interview schedule for obtaining primary data. Secondary data was collected from annual reports of Bangladesh Bank during period from 2010 to 2014. The disbursement of agricultural credit on crop production is increased up to Tk. 71.31 billion in 2014 from Tk.33.19 billion in 2010. Subsequently, the disbursement of agricultural credit on purchase and installation of irrigation equipment, crop production, marketing of agricultural goods, fisheries are changed significantly with time. The credit on poverty alleviation increased up to Tk. 18.64 billion in 2014 from Tk.13.61 billion in 2010. The result indicates that bank plays on a significant role on agricultural development in Bangladesh. Timely flow of agricultural credit can meet farmers demand to ensure agricultural productivity. The study will help governmental policy makers and NGOs to address and analyze the issues of agricultural sector to provide loan to the farmers for promoting actual development in this sector.

Keywords: Agricultural Credit, agricultural development, poverty alleviation, crop production, fisheries, Bangladesh.

INTRODUCTION

The rural economy in Bangladesh depends on agriculture which considered as the life-blood of the country's economy. Commercial banks play an important role in accelerating the development of an economy. Country's development is not possible to achieve without the development of the agriculture sector. The instability in food production throughout the world is due to different natural calamities, and the special interest of developed nation in producing bio-fuel using crops and protectionist policy adopted by many former food exporting countries created a situation of urgency on ensuring food security ourselves through investment in the agriculture sector. Sufficient and timely supply of agricultural inputs including agricultural credit is necessary for ensuring more agricultural production. Agricultural credit refers to short-term, intermediate term and long term credit disbursed to meet the specific financial needs of farmers which are determined by planting, harvesting & marketing cycles. Short-term loans are provided for seasonal agricultural production activities, long term loans are provided for purchasing of irrigation equipments, agricultural machinery, livestock, horticulture, fisheries and establishment of agro based industries etc. Another way it can be said that agricultural credit refers to the amount of money that the farmers borrow to meet their production requirements as well as their current consumption needs. (Sarker et al. 2006).

At present, agricultural credit has turned as an essential input in agricultural development. For ensuring more agricultural production, it requires huge capital investment for purchasing improved agricultural inputs. Bangladesh is a country which bears more population than its capacity. The arable land of Bangladesh is...
appearing by 1% every year with 1.5% increase of population per year. So, it is a great challenge for Bangladesh in ensuring adequate food as opposed to growing population. In this situation we have only one option to increase agricultural production through intensive agriculture. Adoption of intensive agriculture requires huge capital investment but our poor and marginal farmers lack sufficient capital (Alauddin, 2014).

The rationale for agriculture credit in Bangladesh can be stated under the following three broad lines:

1. Almost 19.21% to the national GDP of Bangladesh comes from agriculture sector which comprises almost one fifth of the nation’s GDP. The trend of agricultural production can be maintained for ensuring sustainable GDP growth as well as economic development of the country. A proper concentration should be engaged for ensuring farmers accessibility to different sources of agricultural credit that might help them to a smooth continuation to agricultural production. Various research works of researchers has already been proved that availability of agricultural credit has a positive impact on agricultural productivity.

2. Most of the Farmers of Bangladesh are generally resource poor. 80 percent of the farming populations in Bangladesh are small and marginal farmers. But only 17 percent of the small farmers have direct access to institutional credit. 96 Percent of farmer in all size categories reported their need for agricultural credit to meet purchase cost of agro inputs (Sarker et al. 2006). Institutional credit coverage should be enhanced so that the neglected section of the farmer gets adequate access to agricultural credit in order to ensure more agricultural production.

3. A basic criterion for ensuring agricultural productivity is a convenient access to agricultural credit. For ensuring food security, more disbursement of agricultural credit is necessary to sustain agricultural growth. The poor and subsistence farmer are solely depending on their production for the food supplies throughout the year. The agricultural production and food security will be hampered if access to agricultural inputs of these farmers is hampered due to capital shortage (Alauddin, 2014).

REVIEW OF LITERATURE

Islam et al. (2014) observed that adequate availability of credit on time is an important requirement for the rural people, particularly under conditions of scarcity of resources and uncertainty. Convenient and saving facilities are perhaps even more important to smooth out the peaks and troughs in incomes and expenditures in the rural arena. Lack of savings facilities also force families to rely on inefficient, inconvenient and costly alternatives. Agricultural credit can be a solution for this perspective. In Bangladesh most of the agricultural credits are the small-scale loans for the poor entrepreneurs. It allows them to access in the lending institutions to borrow fund and start their own business for rural development. Several financial institutions developed several strategies, including provision of small loans to the rural poor without collateral. These loans are repayable in predetermined installments. Borrowers are organized into groups, which reduces the risk of being default. These credits also help disseminating valuable information about the borrowers and their living standards. In Bangladesh mainly nationalized Banks and specialized Banks are currently burdened with classified loans. But the collateral free financing offers a new opportunity to invest their funds with little risk.

Alauddin et al. (2014) revealed that formal sector has flourished in recent years in disbursing agricultural credit where previously informal sector dominated the rural credit market for agriculture. NGOs have a stronger network throughout the country and many local private commercial banks and foreign banks use these channel to provide agricultural credit. Although PCBs (which includes domestic and foreign commercial banks) contributes a significant amount to total agricultural credit from formal sector, their percentage contribution to agricultural credit remain almost stagnant since the time they started to disburse agricultural loan.

Sharmeen et al (2013) observed that GoB have already provided a significant amount of funds by few specialized banks to the development of agriculture and also has taken some useful initiatives to get more fund from outside sources like IMF. A major part of this credit goes to the poor farmers as loan and also for buying necessary input supports such as seed, irrigation, fertilizer etc. Along with government, some other organizations (NGOs, MFIs, PCBs, FCBs etc.) are encouraged to extend their lending facilities to these farmers. In the last several years, the growth in the broad agricultural sectors seems steady as well as upward sloping and their contribution in GDP is quite significant. A positive correlation has been found between available agri-credit and greater production in the context of Bangladesh.

Khanam et al. (2013) found that the credit delivery procedure and services of the bank do not satisfy the expectations of the borrowers. More over BKB faces a huge amount of non-performing loans which affects its profitability and productivity.

Chowdhury et al. (2011) observed that both agricultural banks are able to achieve a steady growth in terms of employees, branches, deposits, loans and advances during the period 2004-2008.
Rahman et al. (2011) have shown a high level of correlation (.938; with statistical significance 1%) between agricultural credit accessibility and greater production. In addition to this, food grain production, fisheries production have higher correlation (.948); whereas livestock products like milk, meat and eggs have been found to have a correlation of 0.772, 0.938, 0.688 respectively, all of which is statistically significant at 1% level. Agricultural Credit also has a positive impact on household income and GDP growth rate.

Chowdhury and Islam (2007) stated that deposits and loan and advances of Specialized Banks (SBs) are more sensitive to interest rate changes than those of Nationalized Commercial Banks (NCBs). So SBs should not make abrupt change in lending rate and deposit rate by following the NCBs. If NCBs change their lending rate or deposit rates, their deposits and loan and advances will be affected less than those of SBs. However, SBs offer higher deposit rate and charge higher lending rates than NCBs. That is why the interest rate spared of SBs was higher than that of NCBs.

Jahangir et al. (2007) observed that the traditional measure of profitability through stockholder’s equity is quite different in banking industry from any other sector of business, where loan to deposit ratio works as a very good indicator of bank’s profitability as it depicts the status of asset liability management of banks. But bank’s risk is not only associated with asset liability management, but also related to growth opportunities.

Mahmud (2006) observed that the rural poor generally have low income to sustain their livelihood. They do not have the capacity to start any income generating activities due to lack of financial capital. They also have very limited access to the formal financial institutions because of the inability to fulfill formal collateral requirement. Thus in order to widen rural poor access to finance, micro credit program has been launched which require no collateral to obtain funds.

Miah et al. (2006) found in its research that agricultural credit users in Bangladesh receive 1.21 times higher rice yield compared to noncredit users. In case of India empirical analysis reveals that the agricultural credit has a positive and statistically significant on agricultural output (Das and Ghosh. 2009

Chowdhury (2002) observed that banking industry of Bangladesh is a mixed one comprising nationalized, specialized, private and foreign commercial banks. Many efforts have been made to explain the performance of these banks. Understanding the performance of banks requires knowledge about profitability and the relationship between variables like market size, bank’s risk and bank’s market size with profitability.

OBJECTIVES OF THE STUDY

The specific objectives of the study are as follows:
1) To find out the role of Banks on agricultural development in Bangladesh.
2) To find out the barriers of Bank on agricultural development in Bangladesh.
3) To offer some suggestions on the basis of findings for policy implication on agricultural credit.

METHODOLOGY OF THE STUDY

The present study has been carried out to evaluate the performance of agricultural loan on the economic and agricultural development in Bangladesh. This study has been based mainly on the data from secondary sources. The relevant data and information were collected from annual reports of Bangladesh Bank and websites of various banks in Bangladesh. Relevant articles and literature in this context have also been reviewed. The researcher also interviewed 50 respondents among them 35 agricultural loan borrower and 15 credit officers of different banks for acquiring primary data related to agricultural loan to determine the problems of agricultural loan. In this article we have analyzed the different data of agricultural loan in Bangladesh during the period from 2010 to 2014.

RESULTS AND DISCUSSION

The role of bank on Agricultural development through loan disbursement in Bangladesh:

The commercial banks working in Bangladesh were disbursed the agricultural loan in the following sectors:
1. Crops / food grains (other than tea).
2. Purchase and installation of Irrigation Equipment.
3. Livestock
5. Fisheries
6. Poverty alleviation and income generating activities.
7. Other agricultural activities.

Crops / food grains (other than tea).

The farmers of our country receives loan mainly for agricultural crop cultivation. The table 1 shows that the disbursement of agricultural credit on crop production in 2010 is Tk.33.19 billion. The amount of disbursement of agricultural credit on crop production is increasing gradually up to Tk. 71.31 in 2014. The disbursement of agricultural credit on crop production has rising significantly in its magnitude realizing the importance in more agricultural production. A similar finding was obtained by Alauddin, (2014).
Table 1. Disbursement of loan on Crops Production (other than tea)

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crops loan (other than tea) (Fig in Billion Taka)</td>
<td>33.19</td>
<td>36.88</td>
<td>53.5</td>
<td>64.34</td>
<td>71.31</td>
</tr>
</tbody>
</table>

Source: Agricultural credit and financial inclusion department, Bangladesh Bank.

Table 2. Disbursement of loan on purchase and installation of irrigation equipment

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase and installation of Irrigation Equipment (Fig in Billion Taka)</td>
<td>0.52</td>
<td>0.53</td>
<td>3.29</td>
<td>2.79</td>
<td>2.39</td>
</tr>
</tbody>
</table>

Source: Agricultural credit and financial inclusion department, Bangladesh Bank.

Table 3. Disbursement of loan on Livestock

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock (Fig in Billion Taka)</td>
<td>4.08</td>
<td>4.27</td>
<td>12.44</td>
<td>18.03</td>
<td>19.96</td>
</tr>
</tbody>
</table>

Source: Agricultural credit and financial inclusion department, Bangladesh Bank.

Table 4. Disbursement of loan on marketing of agricultural goods

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing of Agricultural goods (Fig in Billion Taka)</td>
<td>0.62</td>
<td>0.30</td>
<td>2.75</td>
<td>2.26</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Source: Agricultural credit and financial inclusion department, Bangladesh Bank.

**Purchase and installation of Irrigation Equipment**

The farmers of our country receives loan for purchasing and installing of irrigation equipment for increasing agricultural crop cultivation. The table 2 shows that the disbursement of agricultural credit on purchase and installation of irrigation equipment in 2010 is Tk.0.52 billion. The amount of disbursement of agricultural credit on purchase and installation of irrigation equipment is increasing gradually up to Tk. 3.29 in 2012. The disbursement of agricultural credit on purchase and installation of irrigation equipment has decreasing slightly in 2013 and 2014. Islam et al (2014) obtained similar findings.

**Livestock**

Livestock is a major part of agriculture. The farmers rearing livestock for managing agriculture and as like liquid money. The table 3 shows that the disbursement of agricultural credit on livestock in 2010 is Tk.4.08 billion. The amount of disbursement of agricultural credit on livestock is increasing gradually up to Tk. 19.96 in 2014. The disbursement of agricultural credit on livestock has rising significantly in its magnitude realizing the importance in more agricultural production. A similar finding was obtained by Sharmin et al (2014).

**Marketing of agricultural goods**

Marketing of agricultural goods is a major part of agriculture. The table 4 shows that the disbursement of agricultural credit on marketing of agricultural goods in 2010 is Tk.0.62 billion. The amount of disbursement of agricultural credit on marketing of agricultural goods is increasing gradually up to Tk. 2.75 in 2012. It is decreasing gradually. Due to developed communication facilities it requires less money with time. A similar finding was obtained by Alauddin (2014).

**Disbursement of loan on Fisheries**

Fisheries is a major part of agriculture. The farmers are cultivating fisheries for managing agriculture and as like liquid money. The table 5 shows that the disbursement of agricultural credit on fisheries in 2010 is Tk.3.99 billion. The amount of disbursement of agricultural credit on fisheries is increasing gradually up to Tk. 13.78 in 2014. The disbursement of agricultural credit on fisheries has
Table 6. Disbursement of loan on poverty alleviation

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Alleviation (Fig in Billion Taka)</td>
<td>13.61</td>
<td>16.29</td>
<td>16.09</td>
<td>16.58</td>
<td>18.64</td>
</tr>
</tbody>
</table>

Source: Agricultural credit and financial inclusion department, Bangladesh Bank.

Table 7. Disbursement of loan on other agricultural activities

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other agricultural activities (Fig in Billion Taka)</td>
<td>26.77</td>
<td>29.18</td>
<td>32.99</td>
<td>29.46</td>
<td>32.62</td>
</tr>
</tbody>
</table>

Source: Agricultural credit and financial inclusion department, Bangladesh Bank.

Disbursement of loan for poverty alleviation

Poverty is a particular situation of human life. It is related to the standard of living and the socio-economic aspects of living. Although apparently it seems that the concept of poverty is primarily linked with money income; the disbursement of loan on alleviating poverty plays a key role on rural economic development. Table 6 shows that the disbursement of agricultural credit for poverty alleviation in 2010 is Tk.13.61 billion. The amount of disbursement of agricultural credit on poverty alleviation is increasing gradually up to Tk. 18.64 in 2014. Similar findings were obtained by Mahmud (2006) and Alauddin (2014).

Disbursement of loan on other agricultural activities

Various income generating activities are included in other agricultural activities. So, other agricultural activities play a vital role on rural economic development. The table 7 shows that the disbursement of agricultural credit on other agricultural activities in 2010 is Tk.26.77 billion. The amount of disbursement of agricultural credit on other agricultural activities is increasing gradually up to Tk. 32.18 in 2012. It is decrease in 2013 and increased in 2014. The trend is more or less stable up to 2014. Islam et al (2014) and Chowdhury (2002) obtained similar findings.

PRESENT PROBLEMS OF AGRICULTURAL CREDIT

The researcher studied existing literatures, interviewed farmers and bank officials’ and identified various causes of agricultural loan problems. The researcher also interviewed to a number of agricultural loan borrower, credit officers of different banks for acquiring primary data related to agricultural loan to determine the problems of agricultural loan. Most of the respondents mentioned the following causes of the problem agricultural loans.

i. The main difficulties faced by farmers in securing agricultural credit from the formal sector as like banks are the long institutional procedure.

ii. A tendency is not to pay the loan from the beginning of loan borrowing and waiting for discharge loan by government in case of small loan.

iii. Lower price of agricultural products and bi-products at harvesting period.

iv. No training facilities and guidance for utilizing agricultural loan.

v. Lack of proper installment size and credit collection method.

vi. Very time consuming for documentation in obtaining loan.

vii. Diversion of agricultural loan to other sector or personal use.

viii. Loan amount is insufficient than required amount.

ix. Lack of knowledge for proper utilization of loan.

x. Lack of proper investigation before lending agricultural loan.

xi. Lack of good communication facilities.

xii. Crop damages due to natural disaster.

xiii. Most of the modern bank operation has not extended adequately in the rural areas.

xiv. Some of the farmers default the loan willfully.

xv. Institutional credit is not allocated according to the relative efficiency of the cultivator but according to the economic and political power of credit recipients.

xvi. Inadequate supervision due to shortage of field officer of Bank.

CONCLUSIONS

The disbursement of agricultural credit on crop production is increased up to Tk. 71.31 billion in 2014 from Tk.33.19 billion in 2010. Subsequently, the disbursement of agricultural credit on purchase and
installation of irrigation equipment is increased up to Tk. 3.29 billion in 2012 from Tk.0.52 billion in 2010. The amount has decreasing slightly in 2013 and 2014. The disbursement of agricultural credit on crop production is increased up to Tk. 19.96 billion in 2014 from Tk.4.08 billion in 2010. The disbursement of agricultural credit on marketing of agricultural goods is increased up to Tk.2.75 billion in 2012 from Tk.0.62 billion in 2010. The amount has decreasing slightly in 2013 and 2014 due to developed communication facilities. The disbursement of agricultural credit on fisheries is increased up to Tk. 13.78 billion in 2014 from Tk.3.99 billion in 2010. The disbursement of agricultural credit on poverty alleviation is increased up to Tk. 18.64 billion in 2014 from Tk.13.61 billion in 2010. The disbursement of agricultural credit on other agricultural activities is increased up to Tk. 32.62 billion in 2014 from Tk.26.77 billion in 2010. The disbursement of agricultural loan over time indicates that bank plays on a significant role on agricultural development in Bangladesh. Several research works supports the positive association between agricultural credit and agricultural production.

Since government and NGOs put their efforts to boost up agricultural production. Government also had given subsidy in every year to farmer for increasing more agricultural production and Bangladesh Bank given direction to all commercial banks in Bangladesh to lend their money to farmer so that we can achieve food security. So it was necessary to find out how commercial bank contributes in agricultural production in Bangladesh. This study showed that significant agricultural production could be achieved by adopting our suggestions and removing mentioned constraints.

POLICY RECOMMENDATIONS

Considering the pattern and present trend of agricultural credit, we suggested some policy recommendation that can be adopted to unlock the potential in agricultural sector:
1. Long institutional procedures for taking loan should be removed by authorities. Since agricultural production is based on short time so its loan disbursement must be in a short time. If we ensure short time loan disbursement in agriculture sector, it would be more profitable and we can achieve food security.
2. It is our responsibility to pay attention on farmers’ interest. Therefore, the bank must make sure the availability of agriculture credit by advancing the private banks so that the farmers can have access to agriculture inputs during the required production period.
3. The loans may be extended to off-farm activities which are related to agriculture.
4. Women farmers should have priority for agricultural loan to empower women in decisions making on choice of crops, crop management and children’s education, to improve housing condition and to access to more and better quality food.
5. Sharecroppers should spend most of their loans to purchase modern inputs like fertilizers, diesel for irrigations as well as for quality seeds. They express their desire to rent-in more land in future upon receiving higher loan amount.
6. The monitoring by Bangladesh bank should continue especially for agricultural credit program since the poorest of the villages get the opportunity for improving economic condition by utilizing borrowed money.
7. Agricultural credit has to be offered under government declared rebate facility to reduce import dependence on agriculture by growing agricultural products such as lentils, oilseeds, corns including spices (onion, ginger, garlic etc).
8. As an agriculture supporting sector irrigation, ploughing and harvesting machineries have to be provided with necessary credit. Each bank branch should be advised to take initiative for disbursement of agricultural credit for purchasing at least one threshing machine.
9. Concerned banks have to ensure effective monitoring system so that only the real farmers get necessary amount of agricultural credit in a timely and hassle-free manner and the targeted amount of agricultural credit is disbursed. Bangladesh Bank is also preparing a comprehensive agricultural credit monitoring strategy.
10. Women entrepreneurs should get priority in agricultural/rural credit disbursement. Attainment of targeted amount of agricultural credit will be deemed as a plus point in getting permission for opening new bank branches.
12. Banks will be encouraged to use modern Information and Communication Technology (ICT) including mobile phone in agricultural credit disbursement programs. A few banks have already opened Small and Medium Enterprise (SME) centers which may also play a supportive role in disbursing agricultural credit.
13. To ensure fair prices of agricultural products, banks and financial institutions should be directed to disburse agricultural credit to genuine farmers as well as in favor of local small businessmen in the crop storage and marketing sectors under agricultural credit program so that small/large crop depots can be built.
15. Governance of the BKB and RAKUB should be transformed to protect them from political interference. They should also be recapitalized and restructured so that they can provide cost effective, well designed financial service.
16. Group lending approach is so successful in Bangladesh, hence it is proposed to adopt group guarantee approach same as NGO-MFIs to expedite the agricultural credit disbursement.
17. Agricultural loans should be advanced at the beginning of crops farming, livestock and poultry raising,
fish farming etc. and repayment should be made after getting returns from the investment with low interest rate.

18. Allocation of agricultural credit should be increased considering growing demand and importance of agricultural credit.

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