

# Chapter - I

## The Rural Economy, Credit & Agricultural Development

### 1.1 Economics of Rural Development

'Food' has been identified by Adam Smith as the factor conditioning the growth of an economy.<sup>1</sup> Technical advance in agriculture thus serves as the pivot for generating development in the other sectors of the economy. The importance of agriculture in economic development was also recognised by other classical writers later on, and it is now well known that Adam Smith's basic growth model or the 'Wage-Fund Doctrine' refers to this pivotal role of the agricultural sector.<sup>2</sup> A recent report by the Organization for Economic Cooperation and Development [OECD] outlines how agriculture contributes to economic growth by increasing the efficiency of production and releasing resources to other sectors.<sup>3</sup> As more contemporary writers have commented, "the role of agriculture as a major source of surplus for primitive accumulation, prior to the self-sustaining accumulation of industrial capital"<sup>4</sup> becomes a major reason for this focus, along with its importance as a 'home market' for industrial products.

#### 1.1.1 Agriculture and Economic Development

Agriculture thus forms the base for economic development. It is the oldest and most widely practiced form of production activity in the world and has evolved gradually with the passage of time. Agriculture contributes significantly to overall economic growth all over the world.<sup>5</sup> Development of agriculture still holds paramount importance today, not merely because it provides food, fodder and other agro-products to a rising population, but because it also ensures a strong base for the extension of markets and investible resources. Agriculture also provides many of the raw materials used by industry. The fate of the textile industry, for instance, is crucially linked with the supply of raw cotton, and the food processing and tobacco manufacturing industries are equally dependent on agricultural products.

Many economists have concurred on the importance of agriculture in the process of economic development. As early as the eighteenth century, the Physiocrats had argued that only agriculture produced an economic surplus over and above the costs of production and thus played the most strategic role in the economy.<sup>7</sup> It was observed much later by B.Sen in 1967 that "agriculture is the natural base for the overall development of the majority of the developing countries and the industries based on agriculture are a natural stepping stone towards industrial development on a large scale."<sup>8</sup> B.Datta also noted that "industrialisation is possible only when agriculture has reached a high level of prosperity so as to provide self-sufficiency in food, to create a surplus for capital formation and to increase the demand for secondary products."<sup>9</sup> Nicholls argued that "the existence of a substantial agricultural surplus is a pre-condition for industrial development."<sup>10</sup>

In many developing countries, agriculture must also generate exportable surpluses in order to earn the foreign exchange required to finance the import of capital goods and industrial raw materials. However, agriculture is not only a supplier of goods for domestic and export needs but is also indirect determines the supply of factors of production such as capital and labour. J.W.Mellor notes, therefore, that the need for food and the extremely low efficiency of agricultural production in low-income countries where nearly two-thirds of the world's population presently resides demands that most of their labour force and land resources be engaged in agriculture.<sup>11</sup>

In Asia and other developing regions, agriculture is thus the *sine qua non* of economic development. The development of agriculture depends upon a number of factors including physical, human and natural resources, entrepreneurship and the availability of agricultural credit. Any entrepreneur is a catalyst or dynamic agent of change, who transforms physical, natural and human resources into corresponding production possibilities.<sup>12</sup> As such, entrepreneurship is indispensable for the growth of agriculture in any society. Commenting on the causes of 'backwardness' of many Asian and African nations, J.K.Galbraith observes that their people are poor because they lack in ambition, and thus lag behind the people of other nations in economic development. The part played by entrepreneurship in the development of the Western

nations has made developing nations conscious about the importance of entrepreneurship in a programme for rapid economic development.<sup>13</sup> Entrepreneurship is also perceived now as a concept that is not only vital industrial progress but also for the development of agriculture.<sup>14</sup>

Generally in developing countries, the farmer constitutes the weakest agent of production because of the widespread practice of traditional agriculture. A shift from traditional agriculture to modern agriculture through the induction of advanced technology requires radical innovation in almost every aspect of farming. Commenting on the differences in farming practices between the developed and developing nations, T.W.Schultz has pointed out that differences in land are least important, differences in the quality of material capital are substantially important and differences in the capabilities of the farming population are most important.<sup>15</sup> Schultz further illustrates this point by comparing trends in agricultural production in different parts of the world. Thus, Western Europe with its poor endowment of farmland and a population density much greater than Asia's has been able to increase agricultural production at a rate that would have been thought impossible only a couple of decades ago. Italy, Austria and Greece, for example, with less per capita arable land and with farmland inferior in quality to that available in the developing countries have increased agricultural production tremendously. The same is true for Israel and Mexico which stand as the best examples for many low-income countries to emulate.<sup>16</sup> Even in Asia, the experience of Japan provides a similar example. Economic development in its early stages in Japan was based on interlinkages between the agricultural and industrial sectors.

Agricultural development may be defined in terms of the increasing production of crops and other farm products, and higher incomes and better standards of living among the farm families.<sup>17</sup> Elaborating these further, Mellor comments that higher living standards essentially include higher purchasing power, improved health, education and communications, and also increasing leisure derived from more efficient use of labour resources in production of material goods.<sup>18</sup> The general objective of economic development is thus closely related to agricultural development. In the light of the foregoing arguments, development of agriculture is seen to be a prerequisite for overall development of the economy.

### 1.1.2 Importance of Credit in Agriculture

The word 'credit' is derived from the Latin word 'creditum' which means 'that which has been entrusted' by one person or institution to another person or institution for a particular period of time for use with the belief that it will be returned.<sup>19</sup> Credit refers to some form of capital, usually in terms of money. Generally, it is given by one person or institution called the lender or creditor to another person or institution called the borrower or debtor who uses it for a particular period of time in return for a fee known as interest. Many later writers have defined 'credit' in various other ways. The most comprehensive definition holds that credit is the transfer of assets or wealth, or of the right to acquire assets or wealth, from a person who possesses to one who does not. This transfer is done against a promise to repay with interest, after a specified period of time, the value of what was borrowed with the rate of interest being fixed beforehand.<sup>20</sup>

Credit is the lifeblood of all economic activity. In the production of commodities, the requirement for capital credit arises for the purchase of land, the construction of buildings, the purchase of raw materials, machinery and other inputs, and for the hire of labour. However in the case of agriculture, credit refers to the amount of money that the farmers borrow to meet their production requirements as well as their current consumption needs. Farmers may borrow to purchase new agricultural land or to release mortgaged lands, to make permanent improvements on land, to purchase production inputs or agricultural machinery, etc. Farmers may also borrow to meet consumption expenses. The money that is borrowed by farmers to meet all such requirements is termed as 'agricultural credit'.

Agricultural credit is among the most indispensable production inputs in agricultural development. Finance is required in every productive enterprise including agriculture, finance because productive operations have to be started and expenditure incurred on them in anticipation of actual production. Writing more than a century ago in his report on 'Land and Agricultural Banks' [1895], Sir Frederick Nicholson had noted in this regard that "the lesson of universal history from Rome to Scotland is that an essential of agriculture is credit. Neither the condition of the country nor the position of agriculture affects the one great fact that agriculturist must borrow".<sup>21</sup>

It is clear therefore that credit plays a vital role in accelerating agricultural production. Provision of

technical services alone is not enough to attract farmers to modern agricultural technology. They also need financial support for the shift from low-yielding traditional agriculture to more costly but highly productive modern agriculture. Modern agriculture comprises the use of improved inputs like HYV seeds, chemical fertilizers and pesticides, irrigation, mechanical power and so on, all of which require capital investment. Even after new production techniques have been adopted, agricultural credit also has the potential to remove many of the economic constraints that continue to be faced by the rural population, including small farmers. This is true for both farm and non-farm activities. Thus a similar approach towards supporting small farmers through credit had been advocated by Robert McNamara when he was President of the World Bank in 1973:

‘The miracle of the Green Revolution may have arrived, but for the most part, the poor farmer has not been able to participate in it. He simply cannot afford to pay for the irrigation, the pesticide, the fertilizer.... For the smallholder operating with virtually no capital, access to credit is crucial. No matter how knowledgeable or well motivated he may be, without such credit he cannot buy improved seed, apply the necessary fertilizer and pesticide, rent equipment, or develop his water resources. Small farmers generally spend less than 20 percent of what is required on such inputs because they simply do not have the resources.’<sup>22</sup>

In developing countries, the majority of poor farmers cannot afford to undertake this investment. The only solution that can benefit them is the smooth flow of agricultural credit in adequate amounts. T.W.Schultz has noted that the low productivity of farm labour in such countries was more attributable to the absence of credit to finance specific factor inputs, and the supply of new agricultural inputs to them through credit was seen by him as the most practical way to increase agricultural productivity.<sup>23</sup>

Agricultural production can be raised in two possible ways: firstly, through *extensive* agriculture that brings more land under cultivation, and secondly, through *intensive* agriculture involving the introduction of improved technology into agriculture. In most developing countries, the scope for expanding the area of agricultural lands is limited since almost all cultivable land has already been brought under cultivation. Thus, the use of modern scientific methods of agriculture on a wider scale is the only way for increasing production. Adoption of modern agricultural methods including crop rotation and multiple cropping involves huge capital investment. Since the vast majority of the farmers in developing countries are extremely poor and cannot undertake the required capital investment from their personal savings, adequate credit has to be provided to them.

Studies undertaken by Saha and Dutta,<sup>24</sup> S.N.Rai *et al.*,<sup>25</sup> Colyer and Jimenez<sup>26</sup> and R.C.Vogel,<sup>27</sup> in many different countries show that adequate supply of credit has positively influenced the growth of agricultural output and farm incomes. The history of agricultural development in all the advanced countries also confirms that an integrated system of credit provisioning has led each country to the path of agricultural prosperity. Referring to the developing countries of Asia, Kim has noted that the population living in the Asia-Pacific region alone constitutes much more than half the world's population, and the agricultural population comprises almost 70 percent of the agricultural population in the world. However, the region's agriculturists control only about 24 percent of the world's arable land, and thus cultivate average farmland of 0.3 ha against the world average of 0.7 ha. More concentrated effort is therefore called for on the part of these countries to initiate agricultural and rural development through the strengthening of credit services to farmers and particularly to small farmers.<sup>28</sup> Agricultural credit thus assumes great significance in an agrarian country that is trying to modernise traditional agriculture.

## 1.2 Role of Institutional Credit in Agricultural Development

The credit avenues accessible to farmers living in rural areas may be classified under the two functional categories of *formal* credit and *informal* credit. Some sources in the literature have used the alternative terminology of *institutional* credit for *formal* credit, and *non-institutional* credit for *informal* credit which is not adopted here.<sup>29</sup> The formal credit sector includes government banks, commercial banks, credit bureaus, etc., as well as the specialised banks set up in countries like Thailand, the Philippines and India, that cater especially to the credit needs of rural production.<sup>30</sup> The informal credit sector includes professional moneylenders, traders, rich farmers, landlords, shopkeepers, etc., as well as the relatives and friends of the borrowers, who collectively form the traditional sources of credit in rural areas and still remain dominant.

Although the informal credit market is an important constituent of the financial system in many Asian countries, in several countries it has remained unorganised and fragmented in structure and has allegedly played a exploitative role.<sup>31</sup> Daulatunnaheer Khanam remarks in the context of Bangladesh that credit from

informal sources does not help the farmers in the desired manner, since informal credit is generally inadequate and is only available at high interest charges.<sup>32</sup> Thus, while the normal rates of interest on formal credit did not exceed 17.5 percent p.a., the rate of interest on informal credit ranged between 50-100 percent p.a., sometimes rising to 150 percent p.a. or even more.<sup>33</sup> In addition, the frequent adoption of unscrupulous methods of credit administration by the informal credit agents often has other serious implications. The usual collateral accepted in lieu of credit by professional moneylenders is land. In such cases, the farmer signs or makes a thumb-impression on some document that binds the borrowers' land to the lender. Because of high interest costs, the farmer often defaults on the timely repayment of the loan which, under the compound interest system, almost doubles in course of time. The ultimate consequence is that the debt has to be liquidated by making over the pledged land. In the process, many small and marginal farmers gradually become landless, which aggravates the problems of rural unemployment, poverty and income-inequality, etc. Describing this situation as it applied to India, H. Wolff had remarked earlier that "the country is in the grips of Mahajans. It is the bond of debts that shackle agriculture".<sup>34</sup> Strictly speaking, therefore, the informal credit market has limited the process of agricultural development. Examining the role of rural moneylenders in India, the Agricultural Finance Sub-Committee had also commented in 1945 that the credit dispensed by the moneylenders acted as a serious drag on agricultural development instead of contributing to it.<sup>35</sup> For such reasons, agricultural credit provided by the informal sector cannot help in raising agricultural production either to the desired extent or in the desired manner.

In Bangladesh, the well-known Grameen Bank and the other NGOs of the country, which have otherwise proved to be effective semi-formal institutions for reaching the poor, do not extend sustained credit to the agricultural sector to any significant extent. Banik has noted that most activities of Grameen Bank are of the 'point-input continuous-output type', where the key to the success of Grameen Bank has been the system of weekly repayment of loans. In contrast, agricultural operations are of the 'point-input point-output type' and cannot be made to yield continuous income.<sup>36</sup> Therefore, the role of semi-formal agencies in the provision of agricultural credit remains insignificant.

The formal credit sector includes all institutions which supply agricultural credit to farmers under certain statutory conditions. While non-institutional credit sources, as private agencies, are based on the profit motive and can sometimes be highly exploitative in nature, formal credit institutions are required to alleviate the exploitation of farmers by informal credit agencies by providing credit to these farmers at much lower cost. Greater involvement of formal credit institutions in rural credit markets is essential to release farmers from the clutches of professional moneylenders.

Thus the transition from moneylenders' credit to formal credit is a process concurrent with the transformation of traditional agricultural to modern agriculture and is also a process for breaking down the bonds of poverty in the developing countries. The success achieved by formal banks in certain Asian countries<sup>37</sup> in this respect are recounted in Box 1 and Box 2 below.

### Successful Asian Formal Credit Institutions

#### Box 1

**Bank for Agriculture and Agricultural Co-operatives [BAAC], Thailand** BAAC, a state-owned financial institution, was founded in 1966. It replaced the Bank for Cooperatives, which failed for several reasons including poor delivery and enforcement problems. BAAC's primary objective is to provide financial services to the agricultural sector. BAAC enjoys certain privileges aimed at stimulating lending to agriculture. For example, it continues to have preferential borrowing rates from the central bank, it is exempted from certain taxes and reserve requirements, and commercial banks are required to invest at least 20 percent of their deposits in agriculture, either directly or through BAAC. BAAC has considerable operational and financial autonomy, with the exception of pressure to keep interest rates 1-2 percent below the commercial bank rates reflecting its preferential status with the central bank. It aims at low-medium income farmers and uses progressive interest rates on loans and lends to small farmers without traditional collateral. BAAC has achieved significant success in outreach (77 percent of farming households) and has been consistently profitable since 1975. (Source: World Bank [1996]: *Bangladesh Rural Finance*, p.20)

**Box-2**

**Bank Rakyat, Indonesia [BRI]** BRI started its network of 3600 unit banks in 1970 as part of the national rice intensification programme. Until 1983, the bank primarily channeled subsidized credit. Low interest rates (12 percent) made loans desirable and were often allocated to the elite. Poor programme design and misguided implementation produced high arrears and declining participation of the villagers due to the lack of trust in banks. During 1983, BRI's unit banks suffered a loss of \$28 million. Therefore, government started financial sector reforms, such as - initiated a general rural credit programme at market-based interest rates, programme design including autonomy, profit-sharing for employees, interest rebates for prompt repayment, etc. Henceforth, the performance of BRI unit banks has been very impressive with low arrears and the units are now consistently profitable. (Source: World Bank [1996]: *Bangladesh Rural Finance*, p.20)

Certain other formal banking institutions and credit programmes, such as the National Bank for Agriculture and Rural Development [NABARD] of India, the National Rural Support Programme [NRSP] in Pakistan, Small Farmer Development Programme [SFDP] of Agricultural Development Bank [ADB] in Nepal, etc. also stand testimony to the importance of the role that formal credit can play in agricultural advancement,<sup>38</sup> showing clearly that the potential developmental role of formal sector banks in extending agricultural credit is tremendous.

### 1.2.1 Potential for Agricultural Credit and Agricultural Development in Bangladesh

Bangladesh is a predominantly rural country, with most of its population dependent on agriculture.<sup>39</sup> Agriculture is thus the most important sector of the national economy, generating 33 percent of the country's GDP and 30 percent of its exports, while employing 68 percent of the labour force in 1997.<sup>40</sup> Development of the rural economy is thus central to Bangladesh's development strategy, as a result of which agriculture continues to play a pivotal role in rural growth. Agricultural growth is also required for food security reasons, since the farmers depend entirely on agriculture for their livelihoods, it is only through the development of the agricultural sector that they can increase their earnings and enhance their standard of living.

Agricultural credit is among the most essential inputs for agricultural development. However, the socioeconomic situation of farmers in Bangladesh today is such that the resource-poor farmers, particularly those belonging to the small and marginal classes, can hardly form any capital to meet their investment needs. Thus most farmers have to meet their capital needs by taking recourse to credit. Nevertheless, the small and marginal farmers who together constitute approximately 80 percent of the farming population in Bangladesh do not receive adequate agricultural credit from the formal sector,<sup>41</sup> and the credit presently allocated to the agricultural sector by the formal institutions falls far short of the actual requirements. The institutions that presently provide agricultural credit are also saddled with many procedural drawbacks and deficiencies, which hinder the timely flow of agricultural credit to the farmers. At the other extreme, the rate of loan-recoveries by formal sector banks in Bangladesh has been very low.<sup>42</sup> The lending activity of a bank is greatly influenced by the availability of loanable funds with the bank, which to a large extent are determined by the rate of recovery of past loans advances. Because of poor loan-recovery rates, the formal sector banks have been suffering from liquidity problems to a significant extent.

The absence of a conducive financial environment has thus become a serious constraint on further economic development, especially in terms of agricultural growth. Efficient and cost-effective financial services are thus essential to Bangladesh's longterm development strategy, in the sense that these enable farm innovation and productivity increases to occur. From the point of view of the small and marginal farmers who live in a precarious condition, development of agriculture is even more important, since a slight fall in agricultural production would be a deathblow to them. Economic protection has therefore to be extended to them in a way that can facilitate an increase in their productivity. The only manner to accomplish this is to ensure the smooth and adequate flow of agricultural credit.

It is in this context that the present agricultural situation in Bangladesh needs to be studied. No formal attempt has so far been made to study the particular problems faced by small and marginal farmers, who form four-fifths of the farming population of the country, in securing agricultural credit. In view of the great

importance that the development of agriculture holds as a solution to the problems of poverty and unemployment in Bangladesh, an attempt of this nature is made by the present study.

### 1.3 Review of Literature

A brief review of research work already conducted in this field will help in spelling out the fundamental objectives behind the present study. The main body of extant literature on institutional agricultural credit has emanated from official and semi-official studies conducted under the auspices of Government or donor agencies. Private contributions to this literature also exist in the form of research publications in journals, Ph.D theses and books. Relevant research areas covered in this literature include the development needs of agriculture and agricultural credit; the supply, utilisation and impact of agricultural credit; problems associated with the supply and recovery of credit; and issues relating to agricultural credit policy. A qualitative review of some of these studies is made below.

#### 1.3.1 Agriculture, Credit and Economic Development

Substantial research has been undertaken to assess the need for agricultural growth in developing countries and to estimate the agricultural credit needs of farmers. Several studies also have specific focus on different aspects of the agricultural economy, including agricultural production, which directly affect small farmers.

As noted in OECD [1965] and Akhunji [1982], agriculture has been recognized by both classical writers as well as modern writers as having contributed significantly to overall economic growth across the world. Sadhu & Singh [1983] point out that that it was Adam Smith's Wage-Fund theory that laid down the principle that technical improvements in agriculture could initiate economic development by increasing the efficiency of production and releasing resources for the development of other sectors in the economy. Mathur [1974]), Datta [1987] and Breman & Mundle [1991] express similar opinions, demonstrating that the development of industry only becomes possible after agriculture has attained a level of development that ensures self-sufficiency in food and creates a substantial agricultural surplus that can be utilized for capital formation, increasing the demand for secondary products. As noted by Khanam [1989], agriculture forms a natural base for development in most developing countries, and agro-based industries become natural stepping stones for national industrialisation on a wider scale.

In a major study of the process of transformation that traditional agriculture underwent during economic development, Schultz [1970] described the experiences of many countries across the world which had been able to transform and modernise their economies by increasing agricultural production and productivity. Considering the benefits that can be derived from agricultural transformation, Mellor [1970] shows that such transformation implies increased farm outputs as well as higher farm incomes, which lead in turn to higher standards of living, higher purchasing power, improved health and educational standards, as well as increasing leisure as a result of more efficient use of labour resources in the production of material goods. As shown in Roy [1996], agricultural development has assumed paramount importance today. Besides securing the food, fodder and raw material needs of a growing economy and population, agriculture also provides a base for the application of capital and the extension of markets. The objectives of economic development thus coincide strongly with agricultural development.

The importance of agricultural credit was increasingly noted by international donor agencies from the 1970s onwards. Bathric [1981] makes reference to the Nairobi Conference of the Board of Governors of the World Bank in 1973, in which great emphasis was laid on raising the productive capacity of small farmers. The then World Bank President, Robert S. McNamara noted that programs in this direction could '...be initiated quickly by governments and will make a major contribution to the goal of a 50 per cent growth rate in the output of small-scale agriculture by 1985.' He observed further that '...without rapid progress in small-holder agriculture throughout the developing world, there is little hope either of achieving long-term stable economic growth or of significantly reducing the levels of absolute poverty.' Bawn [1981] reports on the comprehensive review of agricultural credit that was subsequently initiated by the Agency for International Development (AID) in 1973, under which 63 evaluations were conducted on AID-funded and non-AID-funded agricultural credit programs in 36 countries, which the study under reference described as being the "largest collection of field studies ever assembled". Similar reviews of agricultural lending programs were

also undertaken by the World Bank and the Food and Agricultural Organization of the United Nations (FAO) in 1974 and 1975. All international reviews concurrently identified common policy issues that needed to be considered by national credit institutions and international donor agencies in order to improve programs that addressed the credit needs of small farmers. Commenting on the need to involve public financial institutions such as NCBs in strengthening agricultural credit programs in India and Bangladesh, empirical studies by the RBI [1968] and Ahmad & Ahmed [1982] noted the utility of this approach in increasing institutional credit flows to the agricultural sector, since the NCBs were observed to have rapidly expanded their branch networks in both countries.

Echoing the views of Nicholson [1985] on the classic interrelations between agricultural credit and agricultural development, Padmanabhan [1988] cites the World Bank's advocacy of credit support to small farmers as an essential device for agricultural progress. Several studies including Elias [1988], Alam & Nath [1989], Rahman [1990] and Haq [1993], which have reviewed the agricultural contexts of Bangladesh, have observed that the need for bank finance has grown with the introduction of technological innovation in agriculture, especially in the crop sector. Concurring that the HYV technology in agriculture is capital-intensive by nature, these studies stress that a wideranging network of credit programs can help increasing numbers of farmers to reap benefits from this technology. The studies have also found that once new production techniques have been established, agricultural credit has the potential to remove many of the technological constraints faced by rural populations, especially small farmers. Outlining the nature of credit dependence within agriculture, Ray [1998] remarks that the adoption of modern agricultural technologies requires current investments to precede future payoffs. Thus, even ongoing productive activity requires advance provision of inputs in advance, while the revenues realized from this only accrue at a later point of time.

Parthasarathy [1971] in a districtwise case study of the Indian state of Andhra Pradesh, had analyzed the magnitude of agricultural problems confronted by small cultivators. While serious problems of longrun survival were observed to exist among cultivators who owned less than 2 acres of land, the study also revealed that farmers in this class showed evidence of actively seeking improvement in agricultural incomes, which could be assisted by a policy of liberal agricultural credit. With reference to Schultz's view that low labour productivity in traditional agriculture arises from the lack of credit finance for the application of complementary factor inputs, strengthening of input support through credit has been seen widely as the most practical means for achieving increased agricultural productivity. Assessing the comparative experience in several developing economies, Padmanabhan [1988], found that low penetration levels of formal credit commonly existed among small agriculturists, even though the economies depended on them for the production of food and raw materials. Analysing the present crisis in Asian agriculture, Kim [1993] thus stressed the importance of harnessing rural credit as a means for accelerating agricultural production and rural development. The capital needs of agriculture have been compared to the industrial need for capital by Mamoria & Tripathi [1989] and Sadhu & Singh [1989]. However, due to peculiarities inherent to agriculture, including high rents, low returns and agricultural uncertainty, many cultivators are unable to carry out agricultural operations without access to outside sources of finance, and high levels of poverty and indebtedness consequently existed among such cultivators. Only the adequate and timely provision of cheap credit to farmers would stimulate the tempo of agricultural production. Several empirical studies including those by Saha & Dutta [1971], S.N.Rai *et al.* [1975], Colyer & Jimenez [1971] and R.C.Vogel [1981] provide strong evidence of the positive association between adequate credit availability and rising agricultural outputs and farm incomes in several country contexts.

A large literature exists that makes references to agriculture in the region that now forms Bangladesh. In the early period, Ahmad [1962] had made a longterm study of agriculture over a period of 29 years from 1932 to 1961 in the 17 districts of what was then the province of East Pakistan. The study observed that prevailing living standards in agricultural countries like Pakistan were the sum of living standards among individual cultivators. Finding considerable scope for increasing crop production and improving the economic lot of cultivators, the study stressed that even slight improvements in the economic condition of the cultivators could contribute to a considerable raising of economic standards in the country as a whole. More recent reviews of the development experience of Bangladesh, such as Abdullah & Shahabuddin [1996], Census of Agriculture [1996] and CDF [1999] have noted that the country still has to import several million tonnes of foodgrains in order to meet domestic food requirements. These studies deem it essential therefore that agricultural production in Bangladesh be raised to meet the food needs of the growing population, noting

that the corresponding requirements of agricultural credit are likely to be very high because of the low rural incomes that prevail in Bangladesh.

Hossain [1984] and CDF [1999] have also established that the agricultural sector in Bangladesh has become dominant as a supplier of raw materials to non-farm activities and as a source of demand for their goods and services since the 1980s. Although targeted credit flow to the non-farm economy may appear to contribute effectively towards alleviation of poverty in the country, concomitant growth of agriculture is also required for further expansion of the non-farm economy. Strong backward and forward linkages between agricultural and non-agricultural activities are observed to exist in the rural areas of Bangladesh. Similarly strong and highly elastic responses of non-agricultural output and employment to increased agricultural output have been measured in Taiwan and the Philippines by Stewart & Rains [1990].

APO [1988] noted in its Bangladesh Country Paper that savings levels among farmers were very low because of the subsistence nature of farming in Bangladesh. Farmers thus had to depend either on institutional or private financing sources for the provision of loans for carrying out farming operations. Although credit from private sources was costly and the credit terms were unfavourable to borrowers, institutional credit sources met only 25-30 percent of the total agricultural credit requirement in the country. For effective development of agriculture in Bangladesh, a strong effort needed to be mounted to increase the flow of institutional credit. The comparative roles of agricultural and non-farm credit programs in Bangladesh were subsequently assessed by Rahman & Khandker [1994], which was based on an empirical survey of 1798 sample households. Survey results revealed that NGO-based credit programs such as those conducted by the Grameen Bank and BRAC had benefited the non-agricultural sector much more than the agricultural sector.

A more recent effort to quantify institutional credit needs among small and marginal farmers has been made in the study conducted in three Bangladesh districts by Khan [1999]. Small and marginal farmers required cash to purchase improved agricultural inputs, such as HYV seeds, fertilizers and pesticides, and to pay for irrigation water. They also required institutional support for investments in irrigation pumpsets, other farm implements and equipment, and draught animals, etc. The study concluded that the credit needs of these farmers have become even more compelling with the technological advancement and the increasing commercialization of agriculture. Exploring the relationship between farm sizes and agricultural yields in Bangladesh, Mandal [1980] had earlier observed rising agricultural productivity upto a certain level after which productivity decreased as farm size increased. The explanations advanced for higher productivity on small farms related mainly to the intensive use of family labour on small farms and qualitative differences in inputs. Khan [1999] provides more recent corroboration that small farmers in Bangladesh use more labour-intensive methods of cultivation, devote more time and care to land preparation and harvesting, and are more inclined to intercultural operations. The relatively high agricultural yields of small farms thus make small farmers a priority target-group for agricultural development in the country.

### 1.3.2 Availability & Impact of Agricultural Credit

A brief review is made below of literature that deals with agricultural credit availability by sources, the uses and impact of agricultural credit and the relative accessibility of small and marginal farmers to credit from the NCBs. Some studies on the credit structure and the credit delivery systems that exist in different countries are also reviewed here.

It had already been pointed out in Heady & Jensen [1958], in the context of the economics of farm management, that the use of short-term credit increases farming efficiency by assuring adequate and timely supplies of feed, fuel, fertilizer, labour and other inputs required for efficient farm production. Farmers with access to credit can therefore increase incomes and accumulate capital at a faster rate than if such credit were not available.

Extending the analysis to rural credit markets in developing countries, Ray [1998] adopts the definitions used by the US Department of Agriculture [USDA, 1965], under which the main markets for agricultural credit may be classified as formal or informal. While formal credit markets are more important as a source of agricultural credit in economically advanced countries, informal credit markets are the dominant source of credit in developing countries. Nearly two-thirds of all agricultural loans in India, Pakistan, Thailand and Philippines, are thus made by non-institutional credit agencies. The existing agricultural credit structure in several Asian countries was also surveyed in Akhunjji [1982]. Non-institutional credit sources were found to

have been dominant in Sri Lanka (84.2 percent in 1969), India (75 percent in 1971-72), Malaysia (65 percent) and Pakistan (53 percent in 1976-77). In comparison, such sources were less dominant in the Philippines (10 percent in 1973) and in Indonesia and Burma (20 percent). Among the Asian countries, institutional credit markets were found to be most developed in Japan. Recent studies by the World Bank [1996] and Subrahmanyam [1999] have shown that formal sector banks can participate effectively and profitably in the agricultural credit market, citing the examples of several Asian banks such as BAAC in Thailand, NABARD in India, NRSP in Pakistan and ADB-SFDP in Nepal.

A study of small farmers' credit problems under the cooperative credit system in India was made in Sen [1973]. The study pointed out that such problems arose because small and marginal farmers were not considered creditworthy, since they could not offer collateral security in the form of the tangible assets desired by the system. The Crop Loan System introduced during the Second Five-Year Plan had thus sought to change the criterion for judging the creditworthiness of rural borrowers from their possession of tangible assets to their productive potential. However, the evaluation pointed to "considerable gap between accepted principles and actual practice," which left the credit needs of poorer farmers outside the formal credit market.

It was noted in Akhunji [1982], Rahman [1986] and Khanam [1989] that the unorganized and fragmented structure of informal credit markets does not assist the farmers in a positive way and leaves them open to exploitation. Thus informal credit markets are generally inadequate as credit sources and moreover offer credit at very high interest charges. The perverse effect this has in depressing agricultural growth has also been identified in Islam [1982], Ghosh [1985] and Khanam [1989] as the cause of increasing landlessness among small and marginal farmers. Several separate surveys carried out after the independence of Bangladesh, including Rahman [1972], Akhunji [1982] and World Bank [1983], have evaluated the relative performance of the institutional credit agencies in meeting the credit needs of farmers. These studies noted a sharp increase in agricultural credit requirements between the pre-independence and post-independence periods, with a much larger proportion of the agricultural credit needs being met from institutional sources throughout the 1970s. Subsequently, however, a proportionate decline is found to have occurred, with agricultural credit now constituting a much smaller component of total institutional credit. More recently, MOP [1991] has reported an even sharper reduction in the proportionate share of the agricultural sector in institutional lending. The case of India presents certain similarities. It has been reported in Mishra & Puri [1996] and Nair [2000] that a major portion of farm credit is now delivered through institutional sources and that formal credit institutions have been able to significantly increase their presence in rural credit markets. Thus from the meagre level of 7.2 percent in 1951, the share of institutional sources in rural credit rose to 61.2 percent in 1981, following which a mild decline brought the share to 55 percent in 1994-95. The studies however remark that despite remarkable growth in deposits and advances by the credit institutions, rural credit advances have not been able to make much of a dent in the rural economy. Thus institutional credit is able to meet only around 30 percent of the credit needs of rural families, and the credit needs of small and marginal farmers who constitute the target group for the rural institutional credit system continue to be inadequately attended to.

Hossain [1977] had earlier observed that 17 percent of the small farmers in Bangladesh had access to institutional loans and received 28 percent of the total credit advanced to the agricultural sector. In contrast, 61 percent of the large farmers in the country had received loans amounting to 67 percent of the total agricultural credit sanctioned in 1973-74. It was hoped then that the Special Agricultural Credit Program would increase the access of the small and marginal farmers to credit from the formal sector banks. Yunus [1981] however found that the current volumes of agricultural credit in Bangladesh continued to remain very low in comparison to the volumes of agricultural output in the country, with the formal credit portfolio constituting less than 2 percent of the net contribution made by the agricultural sector to GDP over the period between 1972 to 1977. Though GDP increased substantially by the year 1991, Hossain [1991] found that the allocation of bank credit resources between urban and rural areas had continued to remain disproportionate. Thus, while the rural sector contributed around 50 percent of GDP, it had received only 12 percent of bank credit on the average. A subsequent study by Roy & Roy [1993] analysed the role played by bank credit in financing the technological transformation of agriculture in Bangladesh. It was shown by this study that the share of agricultural advances to total advances had continued to decrease, despite higher resource allocations each year to the annual agricultural credit programme.

Several independent studies, including Nathan [1979], and the surveys by the Agricultural Credit Department (ACD) of the Bangladesh Bank reported in the Joint Review by GOB and the World Bank [1983] and the World Bank [1984], had revealed that the proportion of borrowers cultivating upto 2.5 acres of land under the SACP programs of the NCBs was exceedingly low and that the main beneficiaries of the SACP program were farmers cultivating between 3-9 acres of land. The Joint Review by GOB and the World Bank [1983] also showed that the credit performance of public sector banks had remained very poor in terms of rural outreach and in the credit access afforded to small and marginal farmers. In subsequent studies, Solaiman [1992] and Rahman & Hossain [1995] analysed the data from a large-sample study of spanning 64 Bangladesh villages, which covered one village drawn from each Bangladesh district. It was found by these studies that in June 1989 when the survey was conducted, only 23-24 percent of the rural households had reported access to institutional credit. While the proportionate access to institutional credit among the poor, who constituted half of the rural households, was only 17 percent, the large and medium land owning groups constituting only a fifth of the households, accounted for almost 50 percent of all institutional borrowing. A more recent evaluation of rural credit utilization in Bangladesh has been made in Salimuddin & Mahiuddin [1999], using both secondary and sampling data. This revealed that while 54.7 percent of rural borrowers made full utilization of institutional loans, 64.1 percent of the borrowers made full utilization of non-institutional loans.

Examining the role of financial institutions in relation to the overall availability of rural credit in Bangladesh, studies by Saha [1985], Murshed & Karim [1992] and Roy & Roy [1993] have found that medium and large farmers have a much better credit access than the small and marginal farmers who need credit support the most. It is observed that the agricultural credit institutions indirectly assist the rural rich in consolidating their advantaged position, by making institutional credit relatively inaccessible to the rural poor. MOP [1991] revealed that the access of small and marginal farmers to credit advances by the NCBs and specialized banks such as Bangladesh Krishi Bank and Rajshahi Krishi Unnayan Bank remains very limited. Once again it was found that the dominance of better-off farmers as borrowers in the institutional credit markets depressed the credit shares of small and marginal farmers.

Investigating the potential role of semi-formal credit institutions in rural finance, the monograph by Hossain [1984] on the credit performance of the Grameen Bank showed that 40 percent of the loans issued in 1983 had been utilized for trading and shopkeeping activities, 26 percent for processing and manufacturing activities and another 26 percent for livestock and poultry raising. This effectively left less than 2 percent of the GB loans for disbursement to the agricultural sector. Identifying the reasons why Grameen Bank had not been able to extend its lending to support farming operations, Banik [1993] observed that the system of weekly loan repayment that was the key to the Grameen Bank's success required that the investment of capital received on credit by the borrower should generate a steady stream of income that would sustain regular debt repayments. In the case of agriculture, capital investment at the point of commencement of agricultural operations was followed by income yields at the end of the cropping season, rendering the weekly loan-repayment mode unsuitable for the needs of small agriculturists whose income from farming was discontinuous.

### 1.3.3 Problems of Credit Access & Recovery

Because of the circular dependence of credit with the cycle of loan advances and repayments, the empirical literature on rural credit access and recovery has special relevance to the present study. A brief review is presented below of several studies that deal with the patterns of credit access and problems of loan-recovery that pertain to agricultural credit.

A recent structural controversy that had developed around farm finance in low-income countries was reported in Egaitso [1988]. The controversy centred around the desirability of continuing to subsidize credit for the purpose of agricultural development, as had been traditionally advocated under the farm finance (FF) approach. The modern view that had appeared as a successor advocated what is known as the Rural Financial Market [RFM] approach, under which the balancing of demand and supply for rural credit was to be left to competition within the credit markets. Confidence in the competitive market mechanism thus characterized the RFM approach. Fulfilment of competitive conditions by the RFM would make it necessary that rural borrowers should be undifferentiated and should constitute a homogeneous class. However, while looking into problems concerning collateral security, Sen [1973] had pointed out that the small farmers

did not constitute a homogenous group, but included owner-operators, tenants, mixed tenants and sharecroppers. Among these subgroups, only the owner-operators could offer land as collateral security, while tenant farmers and sharecroppers had access to formal credit only if records were available to identify the tenancy terms and the lands they had leased-in. In many cases, such records were unavailable or were not updated regularly.

The repayment behaviour of farmers also tended to differ by ownership class. The impact of bank finance on borrower-farmers was assessed by Raõ & Mallya [1980] on data drawn from a sample of 100 such farmers belonging to South Kanara district in India. This study revealed that the smaller farmers were generally more conscientious of timely repayments, while loan-repayments by the larger farmers were more often subject to payback lags. While trying to assess the impact of 'Urban Organized Banks' into agricultural lending, the study by Virmani [1984] found that these banks had well-developed procedures for dealing with established clients in the organized sector of the economy. When forced to transact in rural credit markets, the banks were confronted by completely different informational constraints and therefore tended to seek out their rural clients from among large farmers who had also had some education. As a result of such preferences, tenants and small farmers were unable to secure adequate institutional credit. As noted by Mamoria & Tripathi [1989], farmers are unable to exercise complete control over their outputs or income, because of uncertainties relating to agricultural yields and incomes from the sale of agricultural produce. This feature made ordinary credit agencies unwilling to lend to farmers except at interest rates higher than those charged to other industries. Consequently, agricultural credit was often not easily available as and when needed.

Studying the institutional credit situation in Bangladesh, the report by the Commonwealth Secretariat [1982] revealed that availing of credit from institutional sources involved considerable paperwork, for which intending borrowers had to make several visits to the institutions and also had to wait for long periods before being able to get sanction for their loan applications. This transactional delay involved extra expenses both in terms of money spent as well as time and labour expended, which disadvantaged rural farmers who were not in a position to commit prior to obtaining loans. The real problems associated with credit programs for small rural producers in Bangladesh were evaluated in Ahmad & Ahmed [1982] and more recently in Banik [2000]. The studies found that the institutional credit programs in Bangladesh still catered largely to better-off farmers, since even after two decades of lending, regular government credit programs had only managed to reach between 3-5 percent of the small borrowers. Since the small farmers were unable to offer collateral, they were perceived by the lending agencies as being risky clients who would not be in a position to repay loans. The studies therefore concluded that conventional banking practices would not work when lending to the rural poor, since the requirement for land collateral and the enormous amount of paperwork required effectively put bank loans beyond their reach.

Reviewing the cooperative credit sector and the performance of Bangladesh Rural Development Board [BRDB] in this context, as reported in MOP [1991], the Planning Advisor's Task Force found that benefits accruing to the Krishi Samabay Samity [KSS] within the structure of BRDB-facilitated cooperatives tended to be monopolized by landed members. The study therefore concluded that, given the existing property-based structure of rural power, it appeared unlikely that farmers' cooperatives would be able to work in a way that brought equal benefits to small farm households. In spite of their unequal credit access, evidence has been accumulating that small farm households make better borrowers. While studying the impact of deregulation of rural credit on Bangladeshi farm households disaggregated by holding-size, Ahmed & Kennedy [1994] reported that many small-farm households were able to borrow for crop production and non-farm activities and also to repay such loans within one year. On the basis of this, the study suggested that single-minded institutional focus on crop loans only as the best means for promoting income growth and welfare among small farm households may have been misplaced.

While analysing the performance of the Small Farmers Landless Labourers Development Project, it had been noted in Karim [1995] that more than 53 percent of the credit released to support various income-generating activities went into cattle rearing, followed by 35 percent that went into small business. Very little of this credit directly supported agricultural activity. However, the study also pointed out that no small farmer was included as a member in the landless group, or vice versa. It may be noted that the landless and functionally landless classes among the rural poor have constituted the target group for micro finance institutions operating in Bangladesh. However, as reported by Khan [1999], another substantial group among

the rural poor comprise small and marginal farmers who own between 0.5-2.5 acres of land and generally live below the absolute poverty line. This group was usually left out of micro-finance programs. Without reasonably priced institutional credit support, this farming group continues to remain in the rank of landless poor. With support from institutional credit, CDF [1999] concluded that the processes of increasing landlessness among small and marginal farmers in Bangladesh could be weakened considerably. Thus the problem and priorities of small and marginal farmers were deserving of immediate attention, under the principle that preventive action was better than future cure.

#### 1.3.4 Agricultural Credit Policy Issues

Given the many problems that have confronted rural credit situations and programs, both in Bangladesh and elsewhere, the issue of credit policy naturally comes to the fore. Several changes in credit policy thinking and implementation have occurred over the long period of the time that is under review, especially concerning the policy issue of promoting agricultural credit among farmers. A brief review of some of these as they have arisen in the literature is presented below.

As noted above, the fragmented nature of RFMs in developing countries limits the credit services they can provide to the farming population. The studies by Akhunji [1982], Adams [1984], Rahman [1986] and Khanam [1989] had also noted that additional distortions crept in because of the intrusions made by local politics, which had sometimes brought institutional lenders to the edge of bankruptcy. The study of Asian RFMs by Egaitu [1988] had shown their credit performance to have been fairly adequate in terms of their contribution to the rural development process criterion, but unquestionably poor in terms of longterm viability. It was noted that the core of recent developments in Asian RFMs lay in the infusion of external funds into domestic agriculture, in the form of cheap loans channeled by government-related special lending institutions. Both the successes and failures that had been achieved in credit extension were therefore largely due to these government interventions. Under the new RFM approach, it was therefore being widely argued that the dismantling of government institutional interventions in rural credit markets would prove more beneficial in achieving high efficacy and longterm viability within the rural credit programs.

However, such reasoning was by no means universal. Analyzing the role of credit policy in the context of agricultural growth, the studies by Raju [1993] and APO [1996] had pointed to the positive influence that bank nationalization in India had exercised on the expansion of formal credit activities in rural areas. Expansion of the rural banking network had been achieved by the policy intervention that linked the licensing of urban branches to the opening of new bank branches in rural areas. Another important act of the government had been to stipulate fixed commitment of a given proportion of total bank advances to the account of the agricultural sector, while a distinct change in economic policies at the national level had also created additional pressure for increasing institutional lending to agriculture by the nationalised banks. Thus, as acknowledged in Padmanabhan [1988], the alternative argument held that rural credit would continue to be a powerful mechanism in most developing countries for stimulating development, particularly among the disadvantaged rural classes. It was pointed out in this context that the effectiveness of rural institutional lending lay in the quality of loan appraisal and loan approval procedures, the commitment of field animators, the incidence of transaction costs, and soundness of monitoring and evaluation systems. Thus an institutional spirit of enquiry, experimentation and flexibility in the rural credit market would be able to ensure better results. A similar position had been taken during an earlier study of agricultural finance in West Bengal by Pal [1973]. After analyzing the demand and supply situation of agricultural credit in the context of rapid modernization of agriculture, this study had recommended that an integrated credit policy was required in which all existing financial institutions including commercial banks, cooperatives and other public-sector lending organizations would all have assigned roles to play.

Considering the problem of increasing the efficiency of rural credit administration in Bangladesh, Akhunji [1982] drew attention to the procedural need for correct assessment of actual credit requirements as the principal credit policy issue. A manual on loan operations, and the accompanying systems of monitoring and evaluation to be followed by BKB is described in Maldia [1986]. While dealing with the procedures and formats relating to different aspects of BKB lending operations, the existing operational inadequacies of the credit system were discussed frankly, with notes on how these could be avoided in future. Solaiman [1992] also advocated the possibility of adopting easier lending procedures under the institutional credit system, since the experiences of Grameen Bank and Small Farmers Development Programmes [SFDP] had amply shown that easier credit procedures worked to the benefit of the target groups.

Poor performance on the part of public sector banks in Bangladesh had been reported in World Bank [1996]. While pointing out that an inefficient credit-delivery mechanism had limited their outreach, and the overwhelming amount of loan arrears had made them unsustainable, the study also concluded that many serious policy, institutional and structural issues affected the performance of public sector credit institutions. Investigating the habit of loan-defaulting which has grown among borrowers, and the frequent interest-waivers and writing-off of loan under government instruction, Rahman [1990] noted that this had fostered an impression among borrowers that such debt-reliefs would continue to be available in the near future. The study however noted the credit programs announced by government were often not linked realistically to the manpower available at the banks, leading to increasing default. As a consequence of such continued imbalances, the banks gradually became more and more focused on the recovery of existing loans, rather than on the disbursement of new loans to the agricultural sector. Taking critical note of the same, the Planning Advisor's Task Force had pointed out in MOP [1991] that politically-motivated tendencies towards loan forgiveness and interest remissions encouraged delinquent behaviour among borrowers. With time, this led to an increasing volume of loan overdues that constantly squeezed the refinancing capability of lending institutions.

Studying the delivery cost of credit in Bangladesh, Hulterstrom *et al.* [1996] identified three cost components, viz. *operational costs* (personnel costs, depreciation and other operational expenses), *funding costs* (interest charges, loan-loss provisions and managers' commissions) and *overhead cost* (office costs at the headquarters and district offices). Assessing the high level of such costs in six rural projects conducted by the Bangladesh Rural Development Board [BRDB], the study found the interest rate-structures of different projects to be too disproportionate for any breakeven loan volume to be arrived at, since breakeven loan volumes require interest rates to be hiked in the range of 20-25 percent.

While identifying the major hindrances such as procedural delays and collateral difficulties faced by small and marginal farmers in securing credit access, the studies by Kim [1993] and CDF [1999] had also pointed to the sizeable commissions that had often to be paid by the borrowers to middlemen and loan-agents. All these increased the effective cost of borrowing substantially, making real interest charges much higher than the official rates of interest. Small and marginal farmers were often not welcome to the banks because of their lower social stratification and illiteracy. These non-operational barriers were often the principal causes that led small and marginal farmers to informal credit sources for fulfilling agricultural credit needs. It was also found that while the prices of agricultural products remained relatively low at harvest time, internal procurement of foodgrains by the government which had previously helped in stabilizing producers' price, has declined sharply in recent years. In spite of such adverse circumstances, small and marginal farmers were compelled to sell their produce at the going price soon after harvest, in order to repay past loans and to meet immediate consumption needs. Such studies concurred that financial help for the upliftment of their economic status must come through government interventions that enabled them to increase production and income. The reorganization of rural institutional credit was regarded as a prerequisite for ensuring coordination of the agricultural credit program with complementary arrangements for marketing and processing, as well as other economic activities of the cultivators.

## **1.4 Justification for the Present Study**

### **1.4.1 Gaps in the Literature**

While revealing the vast range of issues relating to institutional and agricultural credit covered in the existing literature sources, the foregoing review has also exposed less explored areas in this field where more work needs to be done. Considerable work relating to the general nature of credit needs among rural borrowers, the quantum of agricultural credit requirements, and the credit delivery systems and credit recovery systems functioning within institutional credit markets has already been done by international consultants as well as individual researchers for specified purposes, both in Bangladesh and elsewhere. However, no in-depth study on the credit needs of small and marginal farmers in Bangladesh and their relative access to credit from formal sector banks has yet been carried out. The present study will seek to fill this knowledge gap.

### **1.4.2 Objectives & Scope of the Study**

The broad objective of the present study is to examine and evaluate the performance of formal sector

banks in agricultural credit operations in Bangladesh with particular reference to the credit needs of small and marginal farmers in the country. The specific purposes of the study are

- (a) to analyse the working of the rural economy and rural financial markets in Bangladesh;
- (b) to examine, in the historical perspective, the agricultural credit situation currently prevailing in Bangladesh;
- (c) to evaluate the performance of formal sector banks in agricultural credit operations;
- (d) to highlight the need for incorporating small and marginal farmers into special agricultural credit programmes;
- (e) to identify the problems currently faced by the banks and their borrowers while dealing with agricultural credit;
- (f) to suggest policy measures that would help in improving the present agricultural credit situation in Bangladesh.

In the light of these objectives, a study would be made of the working of rural financial markets [RFMs] in Bangladesh which, in their present form, include the *formal*, *semi-formal*, and *informal* credit sectors. The credit institutions functioning in the formal sector include all public sector banking institutions, including the NCBs, the specialised agricultural banks, and the Samabaya Bank or cooperative bank. The semi-formal sector includes micro-credit institutions and micro finance programs, most of which are administered and run by non-governmental organisations [NGOs]. The informal sector includes all private credit transactions falling outside the purview of the regulated banking framework.<sup>43</sup> Past studies in Bangladesh have documented the dominance of the informal credit sector in rural finance with a proportionate share of around 57 percent), followed by formal banking institutions with a share of 35 percent, and semi-formal micro-credit organisations with a share of 8 percent.<sup>44</sup>

However the domination of the informal sector in financial intermediation is an unhealthy indicator for rural finance, since this sector charges higher interest rates and does not adhere to any banking regulations, and is therefore least sustainable as a sound financial market. Since numerous studies on the informal credit sector already exist, the present study excludes this sector from its empirical investigation. The semi-formal credit institutions which have now proliferated all over Bangladesh still cover a limited section of the rural population, and rely heavily on the mobilization of loan capital from foreign sources, which is not conducive to longterm financial sustainability. Since their lending patterns do not address the needs of agriculture and are directed towards non-formal rural activities, the semi-formal credit sector is also excluded from the empirical investigation.

Hence, the present study concentrates its attention on the formal credit sector, mainly comprising public sector banks, which are relatively large in size, have a broad institutional base and provide wide loan coverage, while remaining accountable to the citizens. Tremendous scope still exists for improving the working of these formal credit institutions if they are efficiently managed and provided adequate financial support by the Government and by other agencies. The principal focus of the empirical study is on identifying how public sector banks can operate more effective crop credit programs that can meet the credit needs of small and marginal farmers in Bangladesh. The credit needs of allied village activities such as animal husbandry and fisheries are not directly addressed by this study because of the insignificant contribution they presently make to the GDP of Bangladesh.

### 1.4.3 Justification for the Study

Among the major socioeconomic objectives of national development policy in Bangladesh is to ensure that developmental benefits do not accrue only to privileged sections in the community but percolate to the underprivileged social sections as well. However, the working of the institutional credit structure has yet to be evaluated against this principle in order to ascertain the extent to which the credit flow to agriculture has reached unprivileged sections of the rural community, comprising the country's small and marginal farmers.

The Census of Agriculture conducted in Bangladesh in 1996<sup>45</sup> had revealed the existence of a total of 1,17,98,242 farm holdings in the country. Among these, 79.87 percent were marginal or small holdings ranging between 0.05-2.49 acres in size, 17.61 percent were medium holdings ranging between 2.50-7.49

acres in size, and only 2.52 percent were large farm holdings with a size exceeding 7.50 acres. The high concentration of small and marginal farmers in Bangladesh shows that special attention needs to be given by the formal credit sector to farmers in this class when extending institutional credit support to agriculture. Despite their collective importance, however, small and marginal farmers in Bangladesh presently do not receive adequate credit from formal sources. The reasons that underlie this neglect are many, and include administrative inefficiency and the lack of proper coordination between formal credit institutions, procedural red-tape within the credit institutions, the financial constraints faced by the formal credit institutions, as well as their collective failure to attract adequate credit responses from small and marginal farmers.

A large number of studies on the role of agriculture in the economy, the functioning of RFMs and the banking sector in Bangladesh, and the pressing need for agricultural development and agricultural credit have been conducted over the past 25 years, including those by Khanam,<sup>46</sup> Quasem,<sup>47</sup> International Fertilizer Development Center,<sup>48</sup> Government of Bangladesh and World Bank,<sup>49</sup> However, studies that specifically address the role of financial intermediation by public sector banks in the intensification of agriculture in Bangladesh, and in the diversification of credit operations to rural areas to benefit small and marginal farmers are found to be largely absent in the economic literature on the Bangladesh economy. As a result, the access of small and marginal farmers to rural institutional credit remains a little-researched issue. The present study, which is the first of its kind, will address these issues from the perspective of cost-effectiveness of the financial services presently rendered to rural areas in Bangladesh.

The study will also evaluate the performance of the formal rural financial institutions, and make recommendations on alternative policies and institutional changes that would improve their performance. Since the study focuses on a section of the rural farm population which currently has little or no access to such services, the study can claim immense significance. Hence the findings of the study are expected to be of great use to Government policy planners and bankers in Bangladesh in formulating an effective agricultural credit policy that can guide the rural credit operations of formal sector banks in the country.

## 1.5 Methodology of the Study

### 1.5.1 Operational Definitions and Research Hypotheses

Concepts and operational definitions are explained below in the sense that they have been used in the study.

*Rural* means "characteristic of and suitable for the countryside",<sup>50</sup> or "pertaining to the countryside".<sup>51</sup> Thus a rural area is essentially an area characterized by non-urban modes of life in its occupational structure, social organization and settlement patterns. Elaborating on this definition, Mishra & Sundaram state that in a geographical sense, "rural is essentially agricultural, its settlement system consists of villages or homesteads; socially it connotes greater interdependence among people, more deeply rooted community life and a slow moving rhythm of life built around nature and natural phenomenon; and occupationally it is highly dependent on crop farming, animal enterprises, tree crops and related activities".<sup>52</sup>

*Rural finance* and *agricultural finance* are often considered to be synonymous, because of the relatively high importance that agriculture has in the rural economy. However, many other potential activities exist in rural areas which need financial support. The present study confines its attention to agricultural finance alone, which includes the funds borrowed by farmers to finance the purchase of new land or to release hypothecated lands, to make permanent improvements on land, or to purchase agricultural inputs and equipment, etc., and to meet consumption expenses. The terms 'finance', 'credit' and 'loans' are used interchangeably in the study.

*Formal Sector Banks* are a principal constituent of the rural credit sector in Bangladesh. Besides them, the RFMs include *informal* and *semi-formal credit agencies*.<sup>53</sup> The present study deals mainly with the performance of the formal sector banks in Bangladesh, which include NCBs such as Sonali Bank, Janata Bank and Agrani Bank, and specialized rural and agricultural banks such as the Bangladesh Krishi Bank [BKB], the Rajshahi Krishi Unnayan Bank [RAKUB] and the Bangladesh Samabaya Bank Ltd. [BSBL].

*Households* are the basic unit of inventory in the Agricultural Censuses of Bangladesh. For the purpose of the present study, a household refers to a group of persons including dependants, relatives, servants, etc.,

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who normally live together and have common cooking arrangements.<sup>54</sup> In this sense, a household may be a one-person household or a multi-person household. In certain cases, more than one household may dwell in a single house, or a single household may occupy more than one house or dwelling space.

*Family Structures* in Bangladesh include both unitary and joint families. The typical unitary family comprises a married couple and their unmarried offspring, although in individual families, one or more other relatives may occasionally reside with them. The typical joint family comprises more than one married couple, and may include both their married or unmarried offspring as well as the offspring of later descendants and other additional relatives.

*Agricultural holding* is a technoeconomic unit of agricultural production held under single management, and comprises all land and livestock holdings used wholly or partly for farm production, without regard to title, legal form or size. Thus the definition embraces practically all holdings and all households engaged in agricultural production and animal husbandry.

*Farm holding* is a small agricultural production unit that includes all lands operated under single management and used wholly or partly for agricultural purposes, without regard to title, size or location. In the present study, farm holdings have been classified as the land under the operational possession of the rural household. However, households holding less than 0.05 acres of cultivated area are treated as non-farm household.<sup>55</sup> Lands measuring upto 0.04 acres that are generally utilized as kitchen gardens within the homestead area are excluded from the definition. Thus the qualifying size of operated land for classification as a farm holding is 0.05 acres or more. Cultivable land exceeding 0.05 acres that may be held in smaller parcels spread over several villages but remains under singular operational control qualifies as a single farm holding.

*Owned land* refers to the lands held under title by their holder or his or her family members, with the right to determine the nature and extent of use and transfer of lands. Other categories of land over which the holders have owner-like possession are included within the definition of owned land.

*Homestead area* refers to the area within which the landholder's household resides, including all courtyards and structures, as well land occupied by passages for entrance and egress. However lands adjacent to the holdings which are assigned to the cultivation of temporary or perennial crops, or are ponds and tanks or compact plantation are excluded from the homestead area.

*Fallow land* means the land which the farmers do not usually employ for cultivation, which may include land that has been kept fallow as a grazing ground for livestock.

*Cultivated area* is the area of land that is actually being cropped, regardless of the type or number of crops grown. It includes land that is under temporary crops and permanent crops.

*Operated area* is the land owned by the holder or rented by him or her from others minus any owned land that has been given to others on rent. It also includes uncultivated lands held by the holder, including homestead areas.

*Irrigated area* includes cultivated lands where irrigation has been artificially provided either through mechanical or manual means for raising crops. The source of irrigation may comprise surface water sources such as rivers, canals and ponds, or underground water sources, such as tubewells, etc.

*Agricultural work* on the holding refers to all agricultural activities of the holder and his or her labour force involving the planning, management and operation of the holding. Such activities include the preparation of land; sowing, tending and harvesting of crops; feeding and tending livestock and poultry; working on the fields or kitchen gardens; supervising agricultural workers; processing agricultural products for the market through either manual or mechanical means; repairing farm equipment and machinery; constructing farm buildings and fences; and engaging in land reclamation and improvement and related activities. They exclude all work relating to the operation of the home, including domestic work and other family work.

*Agricultural labour* is defined as the labour exchanged in lieu of wages in cash or in kind that is engaged in agricultural activities on land operated by other holders. Agricultural labourer households are households whose major source of income is the hired agricultural labour performed by their members.

### 1.5.2 Research Methodology

The word method originates in the Greek words *meta* and *hodos* which mean "a way",<sup>56</sup> and methodology is thus defined as "the underlying principles and rules of organization of a philosophical system or inquiry procedure".<sup>57</sup> The methodologies of social research may differ from one research study to another, depending on the principal objectives of the study. The present study is undertaken with a diagnostic outlook, and hence uses a descriptive methodology with an analytical base. The method of comparison over time and space has frequently been adopted while investigating the evolution of agricultural credit in Bangladesh and analyzing changes therein. Data used in the study have been collected from various published sources as well as through field investigation in Bangladesh.

### 1.5.3 Data Types and Sources

Secondary materials used in the study included various administrative orders, reports and planning documents of the Government of Bangladesh as well as manuals and guidelines used by the different banks. Statistical information was culled from statistical yearbooks, annual banking reports and departmental publications. Several academic sources including published papers, dissertations and books were consulted in the course of the study.

In order to acquire first-hand knowledge of RFMs in Bangladesh, three micro level field surveys using structured questionnaires [see *Appendices B, C & D*] were undertaken in Daudkandi upazila (literally, subdistrict) located in Comilla district in eastern Bangladesh. The purposive selection of Comilla district as the site for field investigation was done in view of its importance as a prominent agricultural district in Bangladesh. During these field studies, financial ledger information was collected from 14 branches of the formal sector banks functioning in Daudkandi upazila through a simple branch questionnaire that was sent to individual bank branches [see *Appendix-A*], in order to assess the broad patterns of rural credit disbursement and recovery. After making the assessment, selected field and branch staff of these bank branches and bank officers from the divisional and regional offices of the banks were interviewed in order to elicit their opinions regarding the policies, objectives and strategy of agricultural credit, and the difficulties encountered by the banks in terms of organizational limitations, and staff and fund inadequacies.

The third part of the field study interviewed a sample of farmers belonging to different operational size-classes who lived in a selected sample village served by the Daudkandi banks. In policy terms, these sample farmers were supposed to be direct beneficiaries of agricultural credit. The interviews of farmers enabled the identification of their family structure and status, the lands they operated and the cropping patterns practised, the incomes and creditworthiness of farm families and their credit requirements for various purposes, and the difficulties they currently encountered in obtaining institutional credit from banks. Comparison of the survey results enabled a diagnosis to be made about problems that currently characterize RFMs in Bangladesh, and suggest means for their redress.

## 1.6 The Primary Study

### 1.6.1 Selection Criteria

For empirical investigation of problems that afflict the rural institutional credit sector in Bangladesh, the area chosen for intensive study was the village of Maligaon in Daudkandi upazila. The main reason for locating the empirical study in Comilla Zila was related to its long historical background as a well-cultivated rice-growing area in the erstwhile Tippera district<sup>58</sup> and later in Bangladesh. With its vast endowment of water resources,<sup>59</sup> Comilla is densely settled, as a result of which the principal economic activity comprises smallholder agriculture. The high proportionate concentration (90.74 percent) of small and marginal farmers in the district gave the empirical study special importance, in view of the relatively strong presence of formal sector banks in the district [cf. *Appendix-E*]. The study village was selected purposively within the district so that representative sample results might be obtained.

### 1.6.2 Survey Methodology

The branch questionnaire schedule [*Appendix-A*] was used to gather financial information from 14 branches of the formal sector banks functioning in Daudkandi upazila in order to assess their rural credit performance. A structured questionnaire [*Appendix-B*] used during the interviews of bank personnel covered

30 bankers belonging to official, managerial and supervisory grades. The second structured questionnaire [Appendix-C] was used during the complete census enumeration of all households residing in Maligaon village. Of the 516 household heads interviewed in the study village, 282 were found to be engaged in the farming. A sample of 100 farming households was selected on random basis from these 282 households and the household heads were interviewed with a detailed and rigorously-structured questionnaire [Appendix-D] seeking information about social and economic conditions, agricultural patterns and agricultural credit needs. All questionnaires used for the empirical study were pretested on the field before finalisation and execution.

### 1.6.3 Analysis of Data

All data and other information collected from primary and secondary sources was compiled, computer-tabulated and analysed. The tables compiled from the secondary primary data have been widely used throughout the present dissertation, and comprehensively analyzed in order to draw instructive inferences about the rural credit structure in Bangladesh. Standard numerical techniques such as ratio analysis and averaging and the analysis of variance have been widely used for data analysis and presentation. The use of structured tables and graphs helped the exposition of insights gained from the study.

### 1.7 Organisation of the Thesis

The study has been organized under nine chapters. The present chapter or Chapter-1 has dealt with the importance of agriculture and agricultural credit as a background to the study, the current rural credit situation in Bangladesh and problems of agricultural credit. These have been followed by an investigation of issues found in relevant literature which underlie the research hypotheses and methodology of the study. Chapter 2 provides an overview of the rural economy and current state of rural financial markets in Bangladesh. Chapter 3 makes an investigative analysis of the present banking system in Bangladesh. Chapter 4 explores the present agricultural credit situation in Bangladesh and analyzes its problems. Chapter 5 deals mainly with the operational performance of formal credit institutions in Bangladesh in terms of their agricultural credit operations in rural areas.

With the background to the empirical investigation being laid out in the earlier chapters, Chapter 6 makes a descriptive exploration of the selected study region and study village, and takes special notes on the working of existing formal credit institutions located in the study area. Chapter 7 outlines the activities of the NCBs and Agricultural Banks [BKB] that operate in the study area, and the operational attitudes among bank officials with regard to agricultural credit operations. Chapter 8 deals with an investigation based on existing credit facilities available in the study area and their impact on the farmers. The problems and the opinions of other residents in the study area have already been discussed in this chapter. Chapter 9 makes a summary of the findings of the study, and concludes by making specific suggestions and recommendations.

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