

# An Impact Measurement on the Loan Operation of Agricultural Marketing Goods by the Lenders: A Case Study of Bangladesh

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## Abstract

Bangladesh is predominantly agricultural country from the beginning of its invention. About 85% people are living in the rural society to sustain their life in the hard situation. To the rural economy finance is very potential to provide in the development of agricultural activities. Various banks are providing agricultural loan under the control of Bangladesh Bank in the development of agriculture sector. Among them BKB, RAKUB and four government bank played key role in the agriculture development besides private commercial banks and foreign commercial banks are also active in loan providing. The aim of this paper is to identify the relation of agricultural marketing goods loan to other loans. This study is confined to the loans on different agricultural sectors by five banks of Bangladesh named NCBs, BKB, RAKUB, BRDB and BSBL and the contribution to agricultural marketing goods loan by the agriculture sector by the lenders for the nine years period from 2005-2006 to 2011-2012. This paper shows that all the variables are not positively correlated to each other. Except the loan on marketing of agricultural goods, the correlation among the other loans is positive. On the basis of  $t$  statistics, we may conclude that the coefficient of the loan on Purchase of irrigation equipment, loan on Livestock and loan Poverty Alleviation are so statistically significant at 5 percent level of significance. Other coefficients of the independent variables considered in the study are statistically significant at 5 percent level of significance.

**Keywords:** Agricultural marketing goods loan, Lenders (NCBs, BKB, RAKUB, BRDB and BSBL), Bangladesh

## 1. Introduction

The view that agriculture plays only a passive role in development was swept aside by the dynamism of the green revolution in Asia during the late 1960s and early 1970s. The transformation of traditional agriculture into a modern sector revealed the potential of agriculture as a growth sector. Gollin, Parente, and Rogerson (2002) shows the importance of agriculture during the early stages of development. Using both cross-sectional and panel data for 62 developing countries for the period 1960 to 1990, the authors found that growth in agricultural productivity is quantitatively important in explaining growth in GDP per worker. This direct contribution accounts for 54 percent of GDP growth. Further, countries experiencing increases in agricultural productivity are able to release labor from agriculture into other sectors of the economy. This sectoral shift accounts for a further 29 percent of GDP growth. The remaining 17 percent is derived from nonagricultural growth. Simultaneously, it highlighted that science based technology adapted to a country's ecological conditions is fundamental for agricultural growth. Indeed, advances in mechanical and biological technology helped overcome endowment constraints, particularly in regard to land and labor. Based on this idea, Hayami and Ruttan (1985) espoused an "induced innovation model" that not only emphasized the importance of technical change for agricultural growth but also stressed that technical change is often endogenous to a country's economic system. In other words, successful agricultural innovation is a dynamic process that reflects natural endowments; the degree of demand and supply for agricultural inputs and outputs; and the incentive structure for farmers, scientists, and the public and private sectors. As both the green revolution and the induced innovation model revealed, agricultural productivity growth requires fostering the linkages between the agricultural and nonagricultural sectors. Growth in agriculture therefore does not occur independently of that in nonagricultural sectors, as theorists had originally supposed.

Bangladesh is predominantly agricultural country from the beginning of its invention. About 85% people are living in the rural society to sustain their life in the hard situation. To the rural economy finance is very potential to provide in the development of agricultural activities. Growth of agriculture sector declined to 2.5 percent in Financial Year 2012 from 5.1 percent in Financial Year 2011 (Bangladesh Bank Annual Report, 2011-2012). In Financial Year 2012 agriculture sector provide 19.3 percent contribution to the GDP. Government took

initiatives various techniques to ensure food security so that food production encourages. It is the basis need for the people. Various banks are providing agricultural loan under the control of Bangladesh Bank in the development of agriculture sector. Among them BKB, RAKUB and four government bank played key role in the agriculture development besides private commercial banks and foreign commercial banks are also active in loan providing. The total outstanding loan in the agricultural sector (including all banks) in FY12 increased by Taka 4.83 billion or 1.89 percent to Taka 259.75 billion from FY11 (Bangladesh Bank Annual Report, 2011-2012). Bank play as a life blood to run the economy which hampers by the political unrest so sound politics is essential. Bank is a well known institutional framework that has achieved considerable success in improving the socioeconomic conditions of the rural poor (Mahumud, Rashidul Alam et al., 2013). Rural finance is extremely important in the rural development so agriculture bank should be initiated by the Government with the eagerness. Lack of banks in the rural areas and low disbursement of credit to the agricultural sector by the private commercial banks have led to the inadequacy of finance in the credit market for the small and marginal farmers in the rural areas (Chowdhury, et al., 2012). Rural finance helps to reduce rural poverty from the society by the increasing living standard for the remote farmers. Despite increasing allocation of agricultural credit overtime, the percentages of allocation over total credit advances were considerably low (4-5%) pointed to note that hone of the year (since 1981 to 2010) actual credit disbursement attained the defined target of agricultural credit disbursement (Rahman, et al., 2011). A significant portion of rural credit is not spent in rural areas, but in urban areas. That means that the loan is not utilized for the purpose for which it was granted. This happens due to lack of proper supervision and other reasons (Ahmed, Shaker and S. M. Jasimuddin, 1988). Bank credit should be become on the basis of supervision. Principles of supervision and coordination should be carried out so that concerned persons or organizations can perform their responsibilities in a more befitting manner (Hossain and Md. Amir, 1987). The aim of this paper is to identify the relation of agricultural marketing goods loan to other loans.

## 2. Literature Review

Agriculture in many parts of the world is the major source of income to the households. Many scholars consider agriculture an important factor for development. Agricultural growth benefits the rural poor as well as urban poor through reduced prices of agricultural food products and has a trickledown effect (Mellor, 1999). Agricultural growth has an enormous effect on the industrial growth because this sector is providing raw material (Thirtle, et al, 2001). Theodore Schultz was an American economist who was awarded Nobel Prize in Economic Sciences in 1979 has commented about the importance of agriculture and poverty at the Nobel Prize ceremony in the following words; "Most of the people in the world are poor, so if we knew the economics of being poor we would know much of the economics that really matters. Most of the world's poor people earn their living from agriculture, so if we knew the economics of agriculture we would know much of the economics of being poor".

Mina Md. Shahjahan, (1980), has been done a study on "Involvement of Banking Sector in Rural Development of Bangladesh". Bangladesh is predominantly an agricultural country with 92.8 percent rural area and 93.7 percent rural people became independent in 1971. Again 85 percent of the total populations are maintaining their livelihood by agricultural activities which are the main vocation and source of income of these rural people and contributing 60 percent to 70 percent of the GDP and 80 percent to the export earnings. As ours is a rural based economy, rural development should be emphasized to all possible extent. By development we mean the economic well-being of the people, increase in the per capita income, proper utilization of all factors of production like land, manpower, capital etc. Rural development encompasses the development of: (a) agriculture consisting of crops, fisheries, forest livestock, etc. (b) household or cottage and small industries in rural areas, (c) rural export, (d) rural housing, (e) rural employment etc. If all the above sectors and sub-sectors of rural areas can be developed, rural development and ultimately economic development is possible. This calls for adequate financing which could possibly be ensured through proper banking activities in the rural areas. The aim of this paper was at focusing attention to identify how banking activities have played and still are playing their role in the rural development of this country. In the above discussion an endeavor has been made to find out the role being played "by different banking institutions like BKB, BSBL, NCBs in different fields of rural development of our country by mobilizing rural deposits, extending rural credit for different purposes, rendering advisory services, creating employment opportunity etc. But their activities are being disturbed by some reasons. Among those reasons institutional set up problems, reluctance of the official to work in rural areas, lack of knowledge of the bank officials about documents and papers relating to land, defective allocation of unions to bank branches, inadequacy of staff, their knowledge and experience of participating banks, lack of follow-up of the projects by bankers, etc. are very much dominant. Other constraints of rural development by banking sector come from the rural people, like reluctance to repay loan, complicated land tenure system, misutilization of credit due to extreme poverty of rural people etc. Differential and higher interest rate on credit, difficulties in getting

agricultural inputs by farmers from agricultural office, little access of the farmers to credit institutions, lack of co-ordination among bank branches, agricultural offices, fertilizer dealers, seed suppliers, local government etc., corruption and nepotism in sanctioning and disbursement of loan, exploitation of the farmers by village touts etc. are also creating problems for the purpose.

Khan A. R., (1985), found that some of the sample rural branches did not start any loaning operation even after two years of operation. Further, 25 percent of those who were involved in loaning operations were found not to have disbursed any loan till then for farm activities. It is also observed that despite Government emphasis, only 3 percent of the farm loan was disbursed for dairy, poultry, fisheries etc. It is further noticed that a lion's share of the non-farm credit was disbursed for trade. Of the disbursed amount of loan, the proportion of term loan was around 0.1 only and the major portion of which went to non-farm sector. It is ascertained from the survey that while per branch deposit performance was better in the case of large and older branches; per branch credit performance was better in the case of medium sized and middle aged branches. It is further ascertained that Dhaka division though mobilized lowest proportion of deposit but grabbed the highest proportion of credit. On the other hand, a sizeable portion of credit disbursed in Dhaka division has gone to farm activities while in the Chittagong division they received a very small proportion. This suggests that a realistic credit policy should be formulated and followed in order to determine both the structure of credit disbursed among the different sectors and its regional distribution in a planned way.

Rahman, M. Lutfur, (1987), judging the nature of objectives and loan operation procedure, there is hardly any credit programme now in operation in Bangladesh which can be termed strictly as supervised credit programme. The various credit programmes designed for the small farmers and landless poor, however, contain some of the elements of supervised credit, although these programmes cannot be treated strictly as supervised credit programmes. Therefore, at least a few supervised credit programmes should be launched in some areas for the overall upliftment of the rural people most of who live in abject poverty. Rural credit supervision has become synonymous to loan recovery activity offending institutions. Results of different studies, as shown earlier, suggest that credit supervisors are more concerned for the recovery of loans, rather than supervising the credit utilization process by the borrowers. This is not only true in the case of normal credit operations carried out by rural bank branches, but also in the case of the special rural credit programmes for the landless poor and disadvantaged groups. Most of the rural bank branches are poorly staffed with supervisory personnel who are not adequately trained. This has resulted in poor performance in terms of credit utilization by the borrowers and rate of recovery of overdue loans by the bank. The integrated approach, implicit in credit supervision, requires that field officers have some competence in a number of spheres, the most important of which are the dispensing of credit, the techniques of agriculture, the preparation of production plans and farm budgets, and extension work in agriculture. The high officials of banks should give due consideration to this point. Rural credit supervision entails some elements of cost which the NCBs and BKB should be prepared to shoulder. This is more important in case of special credit programmes designed for the landless and rural poor. The strict banking principle of cost-benefit ratio has to be sacrificed to some extent for greater social objective. The farmers of our country perceive great risk in agricultural activity. Average losses for paddy were 2.7 percent and for jute 2.3 percent of production. These represent average losses at a national level for major disasters, and exclude the frequent local losses. Loan utilization and consequent recovery are certainly influenced by the environmental risks faced by the farmers. With many households at or below the margin of subsistence and facing constant threat of one type of natural disaster or another, it is understandable that loan repayment is a constant worry to many borrower households. However, with 70 percent of farmer borrowers repaying their loans within five years, it may be concluded that farmers are generally willing to repay, but often cannot, due to the high risk of dropping below subsistence. For any amount of success, a credit supervisory programme must recognize these environmental risk factors and should be able to deal with these cases more energetically and humanly.

Ahmed Ziauddin, (1987), says that Credit plays an important role for accelerating economic growth in any developing country. But for achieving this economic growth, credit money has to be utilized in a process which repays it in scheduled time. On the other hand repayment process in any credit operation depends upon wide varieties of factors the social situation, income level of people, mode of living, chopping patterns, communication, marketing opportunity etc. Unless these factors are properly identified and appropriate credit programme is undertaken, desired result in economic growth cannot be achieved. Rather, credit operation in such cases leads to various undesirable problems and ultimately, the whole purpose of credit programme becomes frustrated. In Bangladesh, about 85-87 percent of the total population lives in rural area, they are mostly illiterate and agriculture is considered the main source of livelihood. Out of these rural populations, about 40 percent are landless and more 18-20 percent are marginal farmers having lend 0.5-2.5 acre. The remaining population have lends beyond 2.5-8.5 acre where they produce various agricultural crops in different seasons and can have some surplus annual income after meeting their daily food requirements.

Chowdhury, A. H. and M. Nurul Islam, (1987), review and evaluate the performance of both the credit

programmes on the basis of the findings from various empirical studies. Considering the nature of purposes of credit and categories of beneficiaries, rural credit programmes may broadly be divided into two groups—one for agricultural sector and the other for activities in the non-farm sector for the rural poor. Agricultural credit is provided to the farmers for increasing agricultural production. Credit for the rural poor is aimed at increasing income, savings and generating self-employments. While credit for agriculture is without supervision, credit for the non-farm activities is, on the other hand, closely supervised by the field workers and group members. As such productive utilization of loans and timely recovery under the programme are highly satisfactory as against the non-supervised agricultural credit programme. It is, therefore, felt that adequate and timely credit should be associated with supervision. Without proper supervision, credit in the rural sector is not likely to be properly utilized and the recovery of credit will not be satisfactory.

Ali A. F. M. Ashraf, (1989), recommended that sanctioning of loan to the large farmers be restricted up to a certain limit, and more loan be sanctioned to the poor as one of the objectives of the BKB is to sanction more loans to the rural poor. This study showed that the Bargachhi village got the highest amount of loan in Rajshahi District (as per bank records). Here only 40.92 percent credit need of the loanees could be supplied by the institutional source. The author, therefore, strongly feels that the quantum of rural credit be increased many times to satisfy the needs of the rural poor. They have been observed that the Branch Managers and the supervisors have been given responsibility without appropriate authority and as such they cannot function well. It is the considered opinion of the author that they should be given some definite administrative power under check and balance to compel the unscrupulous and shrewd loanees to repay the loan in time. If all these suggestions are accepted and implemented, it is expected that the rural credit operation will run smoothly (by the BKB) and rural output will ultimately increase.

W. M. H. Jaim and M. L. Rahman, (1990), identified that from both credit institutions and farmers, there are some important factors which are responsible for failing to achieve disbursement targets as well as satisfactory recovery performance of agricultural credit over the past years, it is suggested that disbursement targets should be fixed after consultation with Bangladesh Bank and the- credit agencies. The manpower in relation to volume of credit to be disbursed within a specific time and also effective demand of the borrowers should be considered in fixing disbursement targets." For improving repayment performance, supervision of the use-of credit should be strengthened and at the more qualified and trained credit personnel should be employed particularly in the rural bank branches. The bank officers should also have administrative power to take legal action against defaulters, particularly against the willful defaulters. The volume of agricultural credit supplied over the years although seems to be substantial in monetary terms it is not really so considering it in real terms. Over the years, the prices of agricultural inputs have been increased by many times. Further, a considerable portion of agricultural credit is allotted for agro-business, tea-estates, etc. which ultimately help the large farmers. Even access to the credit allocated for crop and irrigation is also limited for the small/marginal farmers due to cumbersome administrative procedures of loan disbursement. Almost every year the Government has failed to achieve disbursement targets although higher targets were fixed. The credit targets should be fixed after discussion with Bangladesh Bank and other credit institutions considering the manpower of the credit institutions in relation to volume of credit to be disbursed in a specific year and also effective demand of the borrowers. Credit terms and conditions of the same type of loan should be maintained by the different lending agencies. The credit institutions are largely dependent on refinance from Bangladesh Bank and the volume of outstanding borrowing from Bangladesh Bank has increased substantially over the years. The credit institutions should depend largely on own fund rather than on refinance. They showed that over the years, loan recovery performance of all the credit institutions has decreased, Further, they found that loan recovery percentage of medium and long-term credit is much less than that of short-term credit. Since medium and large farmers mainly receive medium and long-term loan they are the main defaulters of loan. Further effective measure should be taken in the case of willful default by the influential borrowers. The Bank officers should have power to take administrative action against defaulters. However, they should have good training and educational background regarding agricultural credit operation Banker's efficiency should be judged on the basis of both the amount deposited and the amount recovered by them. Further, the Government should not circulate contradictory loan recovery policies which have long-term damaging effect on recovery of loan by the credit institutions.

Islam, A. F. M. Mafizul, (1993), says that on the available historical and empirical evidence lends credence to the thesis that no country could have developed and reached its current state of economic development without a sound agricultural development. Thus agricultural development is a must for economic development. The fact is that the agricultural development in recent years requires HYV seed-fertilizer-modern irrigation technology which calls for a considerable amount of investment. As the farmers in an underdeveloped country like Bangladesh are poor and they have no surplus farm families use three-fourth of their volume of credit for consumption purpose. We should re-think about the credit delivery and effective use of credit to promote agricultural development. The supply of credit to agriculture must be substantially stepped up. Moreover, credit

should be made available adequately, timely and on the security of productive capacity of land, or the farmer, rather than that of the size, or value of land. Provision of consumption credit can be justified as credit to labor input particularly for the small farmers. To protect the interest of the small farmers, they should be specially favored, so that in the shortest possible time, they become credit-worthy in terms of their commercial operations. To implement the policy objectives in respect of raising the supply of funds, and their proper allocation to agriculture, as also to enforce the conditions of loans, and to ensure their productive use, a suitable alternative set-up in the banking sector is needed. Bangladesh is overwhelmingly an agricultural economy. The predominance of agriculture becomes obvious from its contribution to the GDP and overall employment it supports. In 1990, for example, industrial sector accounted for about 10 percent of the GDP and 20 percent of employment, and trade and services sector provided about 40 percentage to GDP and around 18 percent of total employment, Agriculture's corresponding shares were 51 percentage of the GDP and 61 percentage overall employment. Agriculture has also to provide food and is the major supplier of some basic raw materials for the domestic industry while at the same time it makes substantial contribution to the nation's trade balance particularly through export earnings. The other side of the picture is that during the fifties the rate of growth of agricultural output in Bangladesh was very low, but there was enough to feed the people and meet their other needs. From the sixties, the situation changed, Bangladesh began importing food grains and the import of food grains rose progressively over time. Many programmes have been adopted during the last quarter century to accelerate the production of agricultural crops. In spite of all such efforts the growth of output in this sector has not kept pace with the growth of population. This has become a matter of concern for the government and the people of the country. There is no denying the fact that the growth rate of the agricultural sector decelerated during the eighties. Given the limited opportunity for expanding net cropped land, the sources of growth in production have to be increased yields and cropping intensities, which call for more investment in the agricultural sector. The principal potential source of increased productivity per acre is switching from local variety to HYV. This would require not only development of water resources but also a credit policy which would offer more incentive and extend more investable resources to the farmers. Let us now see what has been happening to the rural credit, particularly credit availability to farmers in Bangladesh.

### 3. Methodology of the Study

The present study has been directed to know the impact on the agricultural and rural finance by the using of loan operation. This study is exploratory nature and uses secondary data which are collected from the Bangladesh Bank Annual Report, Bangladesh Bureau of statistics (BSS) and relevant web sites. This study is confined to the loans on different agricultural sectors by five banks of Bangladesh named NCBs, BKB, RAKUB, BRDB and BSBL and the contribution to agricultural marketing goods loan by the agriculture sector by the lenders for the nine years period from 2005-2006 to 2011-2012.

### 4. Results and Discussion

Bangladesh bank requires all lender banks (NCBs, BKB, RAKUB, BRDB and BSBL) to disburse agriculture loan into this sector. About 68.80 percent of disbursement was short term lending and the rest 31.20 percent was in the form of long term loans for irrigation equipment, agricultural machinery livestock etc. The credit for production of crops and poverty alleviation programs constitute 70.57 and 17.14 percent respectively of the total short term loans (BB Annual Report, 2011- 2012).

**Table 1,** Descriptive statistics of a loan in different sectors of agriculture provided by the lenders

	Crops	Purchase of irrigation equipment	Livestock	Fisheries	Poverty Alleviation	Other agricultural activities	Marketing of agricultural goods
Mean	27.561	0.169	3.343	3.042	12.750	16.163	2.224
Standard Deviation	7.665	0.203	0.844	1.358	2.135	9.545	2.788
Kurtosis	-1.025	0.659	-0.653	-1.201	-0.566	-1.695	-0.116
Skewness	0.631	1.570	0.915	-0.069	0.272	-0.031	1.195
Minimum	18.450	0.030	2.480	1.110	9.810	4.040	0.220
Maximum	40.380	0.530	4.870	4.930	16.290	29.180	7.550

The average loan on marketing of agricultural goods is 2.224 billion taka (taka means Bangladeshi currency). The minimum loan on marketing of agricultural goods was 0.22 billion taka where as maximum loan was 7.55 billion taka. On the other hand on the average the maximum loan is provided for crops which is 40.38 billion taka by lenders and the minimum loan is given for purchase of irrigation equipment which is 0.53 billion taka [Table 1].

**Table 2,** Correlations among the loans of different sector of agriculture initiated by lenders

	Crops	Purchase of irrigation equipment	Livestock	Fisheries	Poverty Alleviation	Other agricultural activities	Marketing of agricultural goods
Crops loan	1						
Purchase of irrigation equipment	.569	1					
Livestock	.980**	.563	1				
Fisheries	.959**	.571	.902**	1			
Poverty Alleviation	.128	.627	.069	.259	1		
Other agricultural activities	.890**	.720*	.821**	.921**	.296	1	
Marketing of agricultural goods	-.637	-.387	-.546	-.709*	.076	-.807**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed), \* . Correlation is significant at the 0.05 level (2-tailed).

Table 2, display the correlation matrix of different loans in agriculture sector provided by lenders considered in this study. Except the loan on marketing of agricultural goods, the correlation among the other loans is positive. Loan on marketing of agricultural goods only positively correlated with loan on poverty alleviation. On the other hand loan on marketing of agricultural goods are negatively correlated with other sectors loan. Among them the correlation between loan on marketing of agricultural goods and loan on fishery is significant at 5 percent level of significance and the correlation between loan on marketing of agricultural goods and loan on other agricultural activities is significant at 1 percent level of significant.

**Table 3,** Different estimates of the multiple regression model.

Variable	$\beta$	Std. Error	$t$	$P$ value	Other estimates
(Constant)	-11.846	3.395	-3.4890	0.0082	$R = 0.957$ , $R$ Square = 0.917, Adjusted $R$ Square = 0.667, Durbin-Watson = 2.349, $F = 3.668$ $P$ value = 0.23
Crops ( $X_1$ )	.240	.119	2.0112	0.0791	
Purchase of irrigation equipment ( $X_2$ )	-3.905	4.828	-0.8089	0.442	
Livestock ( $X_3$ )	2.478	6.012	0.4122	0.691	
Fisheries ( $X_4$ )	-2.479	1.044	-2.3740	0.045	
Poverty Alleviation ( $X_5$ )	.912	.535	1.7044	0.1267	
Other agricultural activities ( $X_6$ )	-.263	.103	-2.5585	0.0337	

The regression coefficient and the other estimates are presented in Table 3. The dependent variable is the loan on marketing of agricultural goods by agriculture loan of five banks consider in this study and the independent variables are loans on Crops ( $X_1$ ), Loans on purchase of irrigation equipment ( $X_2$ ), Loans on Livestock ( $X_3$ ), Loans on fisheries ( $X_4$ ), Loans on poverty alleviation ( $X_5$ ), Loans on other agricultural activities ( $X_6$ ). The  $R^2$  value indicated that the fitted model is quite well i.e., we can explain 91.7 percent variation of the loan on marketing of agricultural goods by five banks considered in the study by the independent variables which considered in this study. In this study we are not able to reject the null hypothesis that all the coefficients are not statistically significant since the value of  $F$  statistic is 3.668 with the  $P$ -value 0.23. On the basis of  $t$  statistics, we may conclude that the coefficient of the loan on Purchase of irrigation equipment, loan on Livestock and loan Poverty Alleviation are so statistically significant at 5 percent level of significance. Other coefficients of the independent variables considered in the study are statistically significant at 5 percent level of significance [Table 3]. The value of Durbin – Watson is 2.349, which indicates there is no autocorrelation problem.

## 5. Conclusion

Agriculture is the very potential to improve in the Bangladesh economy because its basis is rural base. Again, 85 percent of the total populations are maintaining their livelihood by agricultural activities which are the main vocation and source of income of these rural people and contributing 60 percent - 70 percent of the GDP and 80 percent to the export earnings. (Mina Md. Shahjahan, 1980). The NGO-based Micro Finance Institutions (MFIs) have been playing a pivotal role in reaching micro-credit to poor households even in different remote areas and vulnerable groups of Bangladesh. The price of marketing of agricultural goods is comparatively lower than other products so the farmers do not show their interest undertaking this loan. We may conclude that all the variables are not positively correlated to each other. Except the loan on marketing of agricultural goods, the correlation among the other loans is positive. On the basis of  $t$  statistics, we may conclude that the coefficient of the loan on Purchase of irrigation equipment, loan on Livestock and loan Poverty Alleviation are so statistically significant at 5 percent level of significance. Other coefficients of the independent variables considered in the study are statistically significant at 5 percent level of significance.

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